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COUNTY PROFILE

BOONE COUNTY

Lower Loup Natural Resources District Hazard Mitigation Plan 2022

Local Planning Team

Table BOO.1: Boone County Local Planning Team

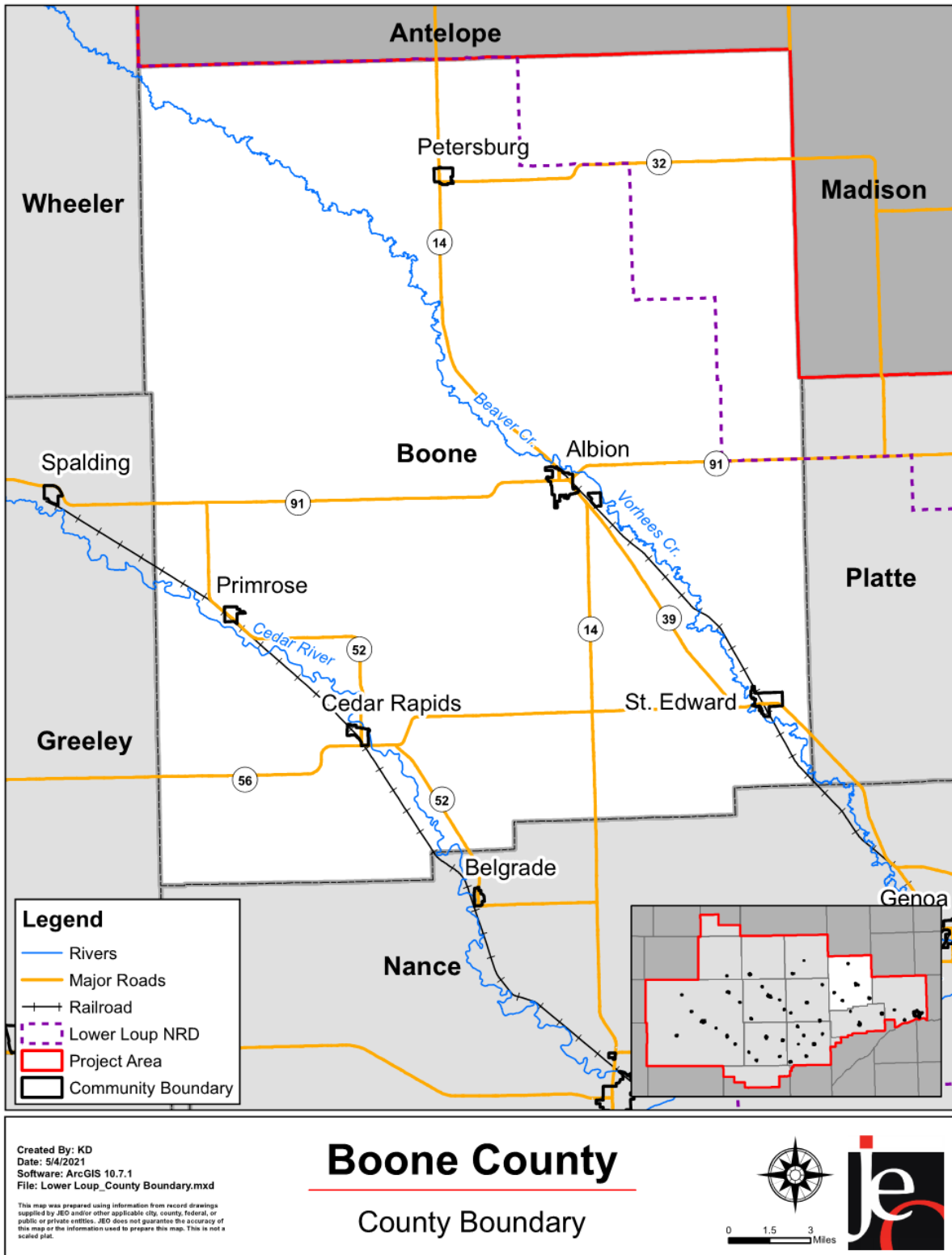
NAME	TITLE	JURISDICTION
MARY ZIEMBA	Boone County Zoning/Flood-plain Administrator	Rural Boone County, Cedar Rapids, Petersburg
SARAH ROBINSON	County Clerk	Boone County
ANGELA MILLER	St. Edward Village Clerk, Zoning Administrator	Village of St. Edward
ANDY DEVINE	City Administrator/ Zoning Administrator	City of Albion
JENNA CLARK	Region 44 Emergency Manager	Boone, Nance, and Merrick Counties

Location, Geography, & Climate

Boone County is located in eastern and central Nebraska and is bordered by Nance County, Greeley County, Antelope County, Platte County, and Madison County.

The total area of Boone County is 687 square miles. Major waterways within the county include Cedar River, and Beaver Creek. The county is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Most of Boone County lies in the dissected plains topographic region, with the vast majority of the county's land characterized by agricultural fields.

Figure BOO.1: Boone County Jurisdictional Boundary



Climate

The average high temperature in Boone County for the month of July is 84.8 degrees and the average low temperature for the month of January is 11.1 degrees. On average, Boone County receives over 27 inches of rain and 26 inches of snowfall per year. The following table compares these climate indicators with those of the entire 11-county planning area and the state. Climate data is helpful in determining if certain events are higher or lower than normal. For example, if the high temperatures in the month of July are running well into the 90s, high heat events may be more likely which could impact vulnerable populations.

Table BOO.2: Boone County Climate Normals

	BOONE COUNTY	PLANNING AREA	STATE OF NEBRASKA
JULY NORMAL HIGH TEMP	84.8°F	62.7°F	87.4°F
JANUARY NORMAL LOW TEMP	11.1°F	12.1°F	13.9°F
ANNUAL NORMAL PRECIPITATION	27.23 inches	26.36 inches	24.0 inches
ANNUAL NORMAL SNOWFALL	26.6 inches	28.6 inches	28.2 inches

Source: NCEI 1991-2020 Climate Normals¹

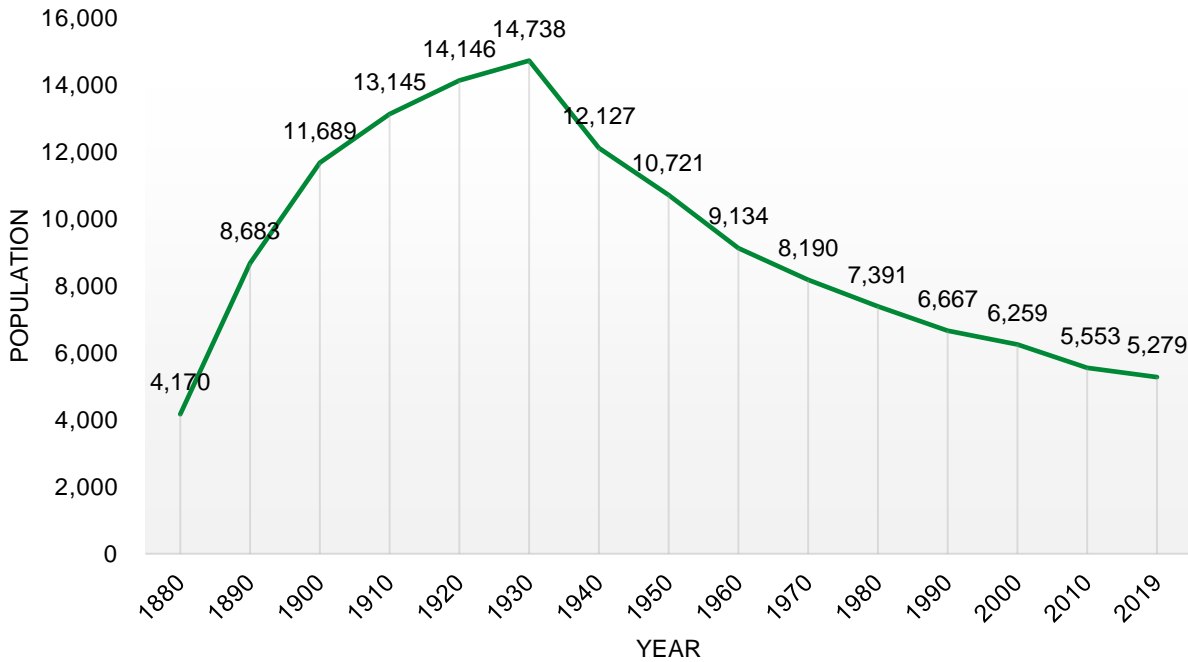
Precipitation includes all rain and melted snow and ice.

Demographics

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

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

Figure BOO.2: Boone County Population 1880-2019



Source: U.S. Census Bureau²

The following table indicates the State of Nebraska has a slightly higher percentage of people under the age of 5 than Boone County. Boone County’s median age is much older than the state average. This is relevant to hazard mitigation insofar as the very young and elderly populations may be at greater risk from certain hazards than others. For a more elaborate discussion of this vulnerability, please see *Section Four: Risk Assessment*.

Table BOO.3: Population by Age

AGE	BOONE COUNTY	STATE OF NEBRASKA
<5	6.2%	6.9%
5-64	71.6%	78.1%
>64	22.2%	15.0%
MEDIAN AGE	44.8	36.4

Source: U.S. Census Bureau³

The following table indicates that median household income is slightly lower than that of the state’s as a whole; however, per capita income is slightly greater. Boone County has a lower median home value and median rent than compared to the state. These economic indicators are relevant to hazard mitigation because they indicate the relative economic strength compared to the state as a whole. Areas with economic indicators which are relatively low may influence a county’s level of resiliency during hazardous events.

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

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

SECTION SEVEN: BOONE COUNTY PROFILE

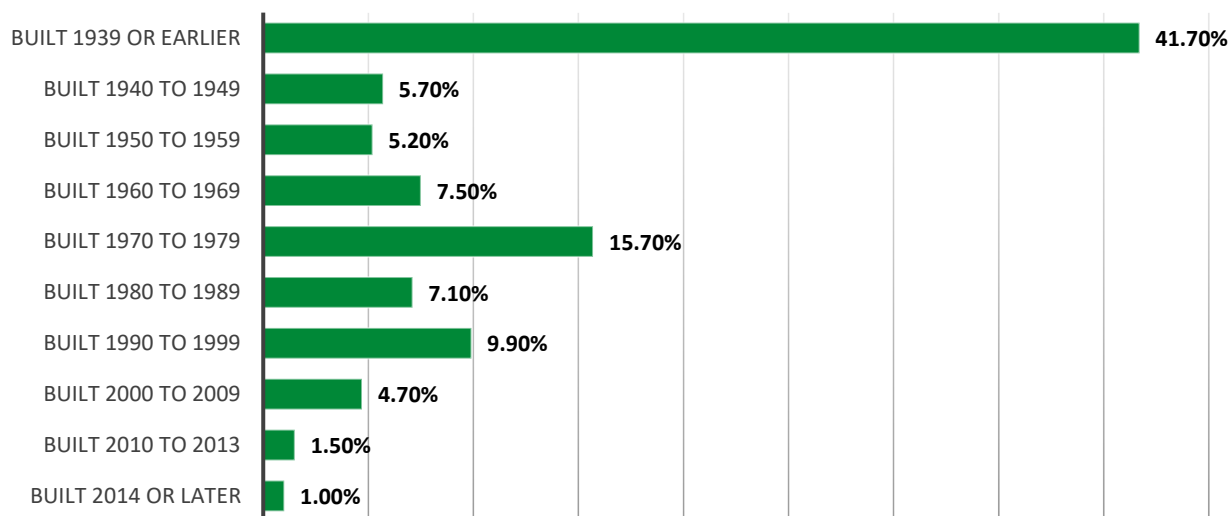
Table BOO.4: Housing and Income

AGE	BOONE COUNTY	STATE OF NEBRASKA
MEDIAN HOUSEHOLD INCOME	\$54,979	\$59,116
PER CAPITA INCOME	\$33,027	\$31,101
MEDIAN HOME VALUE	\$118,400	\$147,800
MEDIAN RENT	\$572	\$805

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

The following figure indicates that the majority of the housing in Boone County was built prior to 1940. According to the United States Census Bureau 2019 ACS 5-year estimates, the county has 2,644 housing units; with 87.4 percent of those units occupied. Approximately two percent of the county’s housing is classified as mobile homes. According to the local planning team, there are two mobile homes located in Primrose and one mobile home located in the unincorporated community of Boone. Housing age can serve as an indicator or risk as structures built prior to state building codes being developed may be at greater risk. The State of Nebraska first adopted building codes in 1987, with the International Building Code adopted in 2010. The current edition of the IBC was updated in 2018. Finally, communities with a substantial number of mobile homes may have a higher number of residents vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

Figure BOO.3: Housing Units by Age



Source: U.S. Census Bureau⁶

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

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

6 United States Census Bureau. "2019 American Fact Finder: SP04: Selected Housing Characteristics." [database file]

Table BOO.5: Housing Units

JURISDICTION	TOTAL HOUSING UNITS				OCCUPIED HOUSING UNITS			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
BOONE COUNTY	2,311	87.4%	333	12.6%	1,760	76.2%	551	23.8%
NEBRASKA	754,063	90.8%	76,686	9.2%	498,567	67.1%	255,496	33.9%

Source: U.S. Census Bureau⁷

Employment Factors

According to 2018 Business Patterns Census Data, Boone County had 203 business establishments. The following table presents the number of establishments, number of paid employees, and the annual payroll in thousands of dollars. Communities which have a diverse economic makeup may be more resilient following a hazardous event, especially if certain industries are more impacted than others.

Table BOO.6: Businesses in Boone County

	TOTAL BUSINESSES	NUMBER OF PAID EMPLOYEES	ANNUAL PAYROLL (IN THOUSANDS)
TOTAL FOR ALL SECTORS (2014)	811	1,120	\$29,075
TOTAL FOR ALL SECTORS (2016)	203	1,471	\$49,367
TOTAL FOR ALL SECTORS (2018)	203	1,449	\$53,121

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

Agriculture is also important to the economic fabric of Boone County, and the state of Nebraska as a whole. Boone County's 524 farms cover 432,231 acres of land. Crop and livestock production are the visible parts of the agricultural economy, but many related businesses contribute as well by producing, processing and marketing farm and food products. These businesses generate income, employment and economic activity throughout the region.

Table BOO.7: Boone County Agricultural Inventory

	2012 CENSUS	2017 CENSUS	PERCENT CHANGE
NUMBER OF FARMS WITH HARVESTED CROPLAND	646	524	-18.89%
ACRES OF HARVESTED CROPLAND	434,370	423,231	-2.56%

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

Governance

A community's governance structure impacts its capability to implement mitigation actions. The county is governed by a three-member board of supervisors. The county also has the following

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

8 2016 County Business Patterns and 2016 Nonemployer Statistics. <https://www.census.gov/programs-surveys/cbp/technical-documentation/methodology.html> and <https://www.census.gov/programs-surveys/nonemployer-statistics/technical-documentation/methodology.html>.

9 2018 County Business Patterns and 2018 Nonemployer Statistics. <https://www.census.gov/programs-surveys/cbp/technical-documentation/methodology.html> and <https://www.census.gov/programs-surveys/nonemployer-statistics/technical-documentation/methodology.html>.

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

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

offices or departments: assessor, attorney, clerk, county court, district court, emergency management, planning and zoning, register of deeds, roads, sheriff, treasurer, veterans office, and weed control. Other agencies which may assist with hazard mitigation planning or project implementation include Region 44 Emergency Management, Boone County Agricultural Society, East Central Nebraska COAD, Boone County Sheriff, Boone County Highway Superintendent, Albion City Clerk, St. Edward Village Clerk, Albion Fire Department, Cedar Rapids Fire Department, Petersburg Fire Department, Primrose Fire Department, St. Edward Fire Department, and the County UNL Extension Office.

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 BOO.8: Capability Assessment

SURVEY COMPONENTS		YES/NO
PLANNING & REGULATORY CAPABILITY	Comprehensive Plan	Yes
	Capital Improvements Plan	Yes
	Economic Development Plan	Yes
	Local Emergency Operational Plan	Yes
	Floodplain Ordinance	Yes
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes, since 1997
	Building Codes	Yes
	Floodplain Management Plan	Yes, since 1997
	Storm Water Management Plan	Yes
	National Flood Insurance Program	Yes
	Community Rating System	No
	Other (if any)	
ADMINISTRATIVE & TECHNICAL CAPABILITY	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	Yes
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	Yes
	Mutual Aid Agreement	Yes
	Other (if any)	
FISCAL CAPABILITY	1 & 6 Year Plan	Yes
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No

SURVEY COMPONENTS		YES/NO
	Water/Sewer Service Fees	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	
EDUCATION AND OUTREACH	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	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 BOO.9: Overall Capability

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

Plan Integration

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

Grants and Funding

The county's budget is primarily limited to maintaining current facilities and systems. Local funds have remained relatively stable over the past decade. Currently funds are primarily dedicated to maintaining current equipment or road improvement projects.

Comprehensive Plan

Boone County has a comprehensive plan that was amended in 2014, and last updated in 1999. The plan incorporates hazard mitigation in the following ways: directing development away from the floodplain, directs development away from chemical fixed sites, encourages infill development, encourages elevation of structures located in the floodplain, and encourages the preservation of open space in hazard-prone areas. In future updates of the comprehensive plan, areas in need of emergency shelters will be identified, and the strengthening retrofits to historic structures will be encouraged.

Ordinances and Regulations

The Boone County Zoning Ordinance was last updated in 2014. The zoning ordinance discourages development in the floodplain, identifies floodplain areas as parks or open space, requires more than one-foot of elevation above Base Flood Elevation in the floodplain, prohibits development within the floodway, prohibits the filling of wetlands, and discourages development near chemical storage sites.

The Boone County Subdivision Regulations were last updated in 2000. The regulations restrict subdivision of land within or adjacent to the floodplain. The regulations also allow for density transfers to avoid building in natural hazard areas. There are currently no plans to further integrate hazard mitigation into the subdivision regulations.

Boone County Local Emergency Operations Plan

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

Middle Northeast Nebraska Community Wildfire Protection Plan

The Nebraska Forest Service updated the Middle Northeast Community Wildfire Protection Plan (CWPP), which includes Boone County in October 2021. The purpose of the CWPP is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. This document is updated every five years.

Future Development Trends

In the past five years, residential housing increased in the county by approximately 200 residences. The county saw numerous road and bridge improvements due to the major flooding in 2019. The community of Petersburg had a new business, a new vehicle repair garage, a new fire station, and three new annexed subdivisions for housing in the northwest part of the village. In St. Edward, a new home was constructed in the floodplain according to floodplain regulations, and the village is planning to dredge Beaver Creek/Vorhees Creek. The NRD and village are splitting the cost of the project that will help mitigate against flooding in the village. According to the census data, Boone County's population is declining. Factors contributing to the decline is an

aging population and lack of job opportunities. In the next five years, county commissioners are seeking to rezone an area in the county close to the city of Albion.

Community Lifelines

Transportation

Boone County's major transportation corridors include Highway 91, Highway 39, and Highway 14. Boone County has two Nebraska Central Railroad Company rail lines that run through the southern half of the county. Albion Municipal Airport is also located within the county. The local planning team also identified Highway 52 near Cedar Rapids and St. Edward as another transportation corridor of concern. The major flooding in 2019 also caused major damage to county roads and closed many corridors. Specifically, Highways 52 and 56 were damaged and inaccessible to the communities of Cedar Rapids and St. Edward. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the county, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy for 2019, there are 15 chemical storage sites throughout Boone County which house hazardous materials. Local concerns focus on the potential for chemical release due to transportation in and around these facilities and the participation of these Tier II facilities in the Local Emergency Planning Committee (LEPC). Critical facilities and vulnerable populations located near chemical fixed sites are located in the LEOP and not shared publicly. No Hazardous Material (Hazmat) teams are located in the County. Grand Island or Columbus are the nearest Hazmat Teams; 45 mins to 1 ½ hours to respond to area. LEPC is working to develop partnerships in equipment and resources. Residents near chemical storage fixed sites are not currently educated about the threat and appropriate response but may soon be by the LEPC. Past spill events in the county include a fertilizer spill at the Country Partners Coop. The incident was investigated by NDEE with no impacts found.

For a description of chemical sites located in incorporated areas, please see the jurisdiction's participant section.

Critical Facilities

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

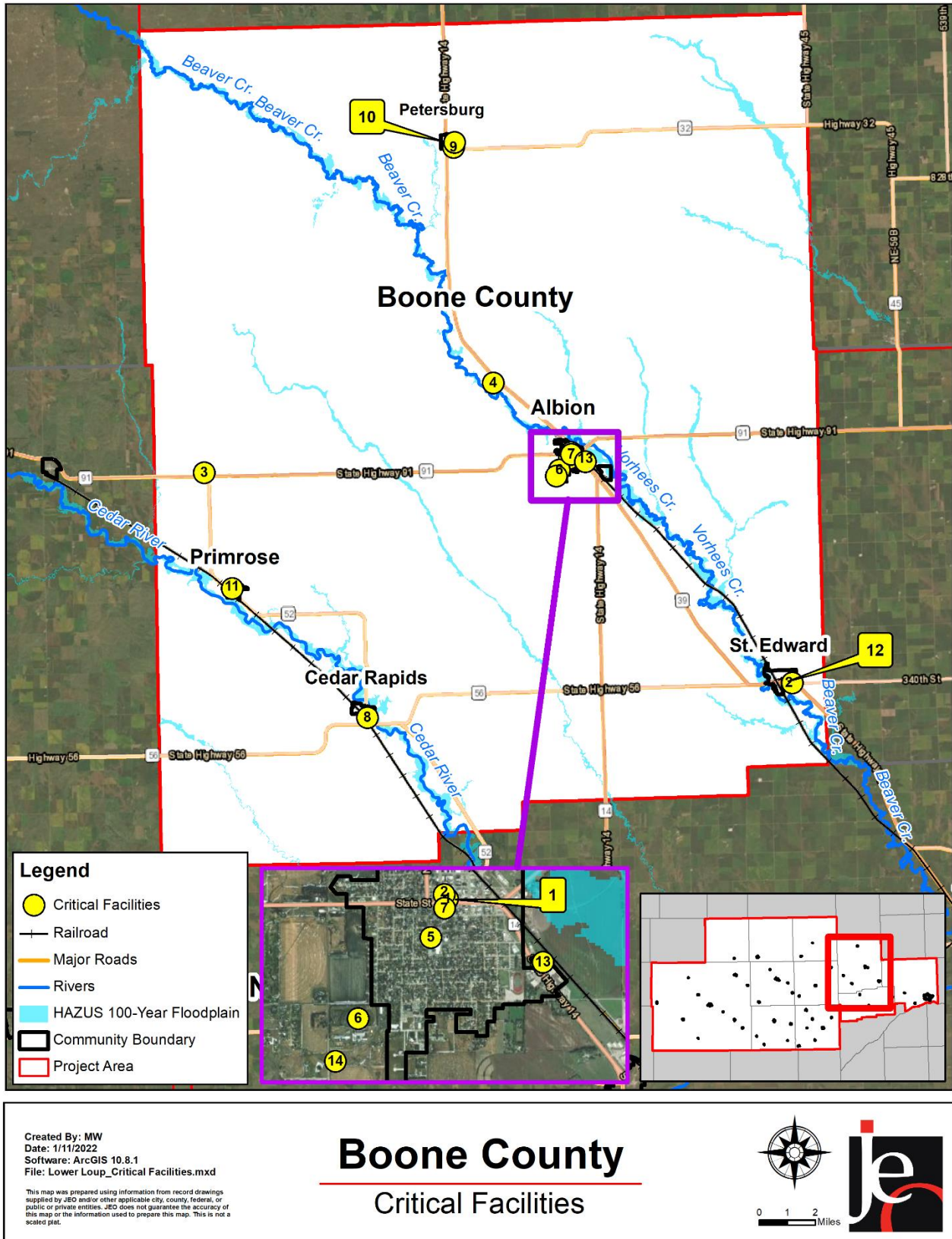
The following table and figure provide a summary of the critical facilities for the jurisdiction.

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Table BOO.10: Boone County Critical Facilities

CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Safety and Security	County Courthouse	N	N	N
2	Safety and Security	Sheriff's Office	N	Y	N
3	Hazardous Materials	Midway Elevator	N	N	N
4	Transportation	Albion Airport	N	N	N
5	Food, Water, and Shelter	Boone Central High School	Y	N	N
6	Food, Water, and Shelter	Fairgrounds	Y	N	N
7	Food, Water, and Shelter	Zion Lutheran Church	Y	N	N
8	Safety and Security	Cedar Rapids Fire Hall	Y	N	N
9	Food, Water, and Shelter	Boone Central Middle School	Y	N	N
10	Safety and Security	Petersburg Fire Hall	Y	N	N
11	Food, Water, and Shelter	Primrose Community Room	Y	N	N
12	Safety and Security	St. Edward Fire Hall	Y	N	N
13	Safety and Security	Albion Fire Hall	N	Y	N
14	Communications	Boone County Tower	N	Y	N
15	Hazardous Materials	Tall Grass Pipeline Valve*	N	N	

Figure BOO.4: Boone County Critical Facilities



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

Health and Medical Facilities

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

Table BOO.11: Boone County Critical Facilities

TYPE OF FACILITY	FACILITY NAME	COMMUNITY	NUMBER OF LICENSED BEDS
Assisted Living	Good Samaritan Society - Samaritan Estates	Albion	28
Hospital	Boone County Health Center	Albion	25
Long Term Care	Clovelodge Care Center	St. Edward	47
Long Term Care	Good Samaritan Society - Albion	Albion	46

Source: DHHS Care Rosters, 2021

Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

Table BOO.12: Boone County Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
6,367	2715	293,727,675	707	26,963,460	26.04%

Source: County Assessor, GIS Workshop

Table BOO.13: Boone County Flood Map Products

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
LOMA	01-07-582A-310008	9/28/2001	Portion of property removed from SFHA
LOMA	08-07-0273A-31008	1/22/2008	Portion of property removed from SFHA
LOMA	17-07-0049A-31008	11/09/2016	Portion of property removed from SFHA
LOMA	17-07-0782A-31008	2/16/2017	Portion of property removed from SFHA
LOMA	18-07-0508A-31008	1/2/2018	Structure (residence) removed from SFHA
LOMA	18-07-2134A-310008	10/9/2018	Structure (garage) removed from SFHA
LOMA	21-07-0123A-310008	12/08/2020	Structure removed from SFHA

Source: FEMA Flood Map Service Center

Historical Occurrences

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

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

Table BOO.14: Hazard Risk Assessment – Boone County

Hazard Type		Boone County		
		Count	Property	Crop
Agricultural Disease	Animal Disease ²	24	2,920 Animals	N/A
	Plant Disease ³	15	N/A	\$160,594
Dam Failure ⁷		0	\$0	N/A
Drought ⁸		444 out of 1,512 Months	\$0	\$26,548,268
Earthquakes ¹¹		0	\$0	\$0
Extreme Heat ⁹		Avg 2 Days per Year	\$0	\$6,055,601
Flooding ¹	Flash Flood	19	\$210,000	\$297,590
	Flood	10	\$157,000	
Grass/Wildfires ⁴ <i>1 injury</i>		150	3,864 Acres	\$7,049
Hazardous Materials	Chemical Spills (Fixed Site) ⁵	2	\$0	N/A
	Chemical Spills (Transportation) ⁶	0	\$0	N/A
Levee Failure ¹²		0	\$0	N/A
Public Health Emergency ¹³		~584 Cases, 4 Deaths	N/A	N/A
Severe Thunderstorms ¹	Hail <i>Average: 1.11"</i> <i>Range: 0.75"-3.0"</i>	134	\$0	\$17,542,590
	Heavy Rain	0	\$0	\$3,326,666
	Lightning	2	\$77,000	N/A
	Thunderstorm Wind <i>Average: 55.4mph</i> <i>Range: 50-70mph</i>	54	\$183,000	N/A
Severe Winter Storms ¹	Blizzard	8	\$0	\$456,848
	Extreme Cold/Wind Chill	6	\$0	

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Hazard Type		Boone County		
		Count	Property	Crop
	Heavy Snow	7	\$0	
	Ice Storm	2	\$0	
	Winter Storm	29	\$8,000,000	
	Winter Weather	6	\$0	
Terrorism ¹⁰		1	\$0	N/A
Tornadoes & High Winds ¹	High Winds <i>Average: 50.1mph Range: 35-57mph</i>	22	\$2,000	\$3,688,881
	Tornadoes <i>Average: EF0 Range: EF0/F0</i>	7	\$15,000	\$38,143
Totals		498	\$8,644,000	\$58,122,230

1 - NCEI, Jan 1996-Dec 2020

2 - USDA, 2014-2020

3 - USDA RMA, 2000-2020

4 - NFS, 2000- April 2020

5 - NRC, 1990-2020

6 - PHSMA, 1971- Jan 2021

7 - NeDNR Dam Safety Division, 2021

8 - NOAA, 1895-2020

9 - HPRCC & NOAA Regional Climate Center, 1983-2021

10 - Global Terrorism Database, 1970-2017

11 - USGS, 1900-2021

12 - USACE, 2021

13 - NE DHHS, May 12, 2021(COVID only)

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

Table BOO.15: Boone County and Communities Hazard Matrix

JURISDICTION	AG DISEASE	DAM FAILURE	DROUGHT & EXTREME HEAT	EARTHQUAKES	FLOODING	GRASS/ WILDFIRE	HAZARDOUS MATERIALS	LEVEE FAILURE	PUBLIC HEALTH EMERGENCY	SEVERE THUNDERSTORMS	SEVERE WINTER STORMS	TERRORISM	TORNADOES & HIGH WINDS
BOONE COUNTY	X	X	X	X	X	X	X	X	X	X	X	X	X
ALBION	X	X	X	X	X	X	X	X	X	X	X	X	X
CEDAR RAPIDS	X	X	X	X	X	X	X		X	X	X	X	X
PETERSBURG	X	X	X	X	X	X	X		X	X	X	X	X
PRIMROSE	X		X	X	X	X	X		X	X	X	X	X
ST. EDWARD	X	X	X	X	X	X	X		X	X	X	X	X

Hazard Prioritization

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

Dam Failure

There are 20 dams in Boone County. Of these, one dam has been identified as a high hazard dam. According to the Boone County LEOP, if the Kohtz-Albion Dam were to fail, it would impact a swath northeast of the dam. This would impact approximately 15% of Albion. There is the potential for up to 18 homes and Fuller Park in southwest Albion to experience substantial flooding if the dam were to fail. Most of the streets within the City of Albion including Highways 14/39 and 91 could experience dangerous levels of flooding. In addition, the Boone County Health Center, Boone Central Schools, St. Michael's School, Albion City Hall, Albion City Police Department, up to 110 homes, and several downtown businesses may experience shallow flooding.

An upstream dam that could affect the county, is the Spalding Dam. If this upstream dam were to fail, it would affect the Cedar River in all of Boone and Nance County until it drains into the Loup River. The affected area would be slightly greater than the 100-year flood plain with the greatest effect on Primrose and Cedar Rapids.

In June 2010, Ericson Dam failed caused an overtopping of Spalding Dam. This increase in water caused a bridge near Primrose to be destroyed, and low land areas to be flooded along the Cedar River.

Table BOO.16: Dams in Boone County

	NUMBER OF DAMS	MINIMAL	LOW	SIGNIFICANT	HIGH
BOONE COUNTY	20	1	18	0	1
PLANNING AREA	135	5	119	6	5

Source: NeDNR, 2017

Table BOO.17: High Hazard Dams

NIDID	DAM NAME	LOCATION
NE00153	Kohtz City of Albion Dam	Southwest of Albion

Source: NeDNR, 2017

Drought

Drought has the potential to cause significant economic impacts throughout the county as the economy is reliant on the agricultural sector. Main concerns with this hazard for the county are the potential for dry conditions to start fires in rural pasture, sandhill areas, farmland, and residential areas. Drought is defined in the county as a lack of rain. Most communities in the county have water system controls and monitoring capabilities in their water holding structures and pumps. According to the USDA, drought has caused \$26,201,580 in crop damages in Boone County from 2000 to 2014.

Flooding

The initial FIRM for Boone County was identified in September 1987. Unincorporated areas of Boone County have five NFIP policies in-force for \$475,000. There are no repetitive flood loss properties in unincorporated areas of Boone County. According to the NCEI, there have been 28 flooding events in Boone County from 1996 to 2015. These events have caused a total of \$265,000 in property damages and \$277,507 in crop damages. The main concerns around this hazard is the potential for floodwaters to cause damage to property such as buildings, land, and crops. The major flooding in 2019 resulted in a major loss of land, creeks, tributaries, crops, housing, businesses, and livestock. Evacuations were necessary in the Village of St. Edward, which experienced significant damages to houses and roads. Highways 56 and 52 were damaged and made transportation impossible in some places for the villages of St. Edward and Cedar Rapids.

In the future the county seeks to increase education on floodproofing structures and rainwater management in fields through planting cover foliage in the valleys and fields. The county would also like to educate landowners on maintain trees and vegetation on land to reduce rainwater runoff and flooding.

Hazardous Materials (Fixed Sites)

The potential for a chemical release near populated areas and along main transportation routes led this to be selected as a top concern for the local planning team. Some critical facilities are located near chemical fixed sites including the Courthouse and Sheriff's Office which are located one kilometer from Helena Chemical and Country Partners Co-op, and 2.3 kilometers from Valero Ethanol Plant.

Vulnerable populations are also located near chemical fixed sites. The Riverside High School is located near Country Partner Co-op. St. Michaels School is located within one kilometer of Helena

Chemical and Country Partners Co-op. Valero Ethanol Plant is 2.3 kilometers from the Assisted Living Center. Residents near chemical storage sites are not currently educated about the threat and appropriate response in the event of a chemical release. However, the Local Emergency Planning Committee (LEPC) has developed information packets to discuss actions during a chemical release and is working to educate the public.

First responders in the area are trained in Hazmat Awareness but have minimal protective gear to handle hazardous materials. Hazardous Material Technicians are located 45 minutes away from the county.

Severe Thunderstorms (includes Hail)

Local concerns regarding severe thunderstorms focus on the potential for power outages and wildfires, and damages to residential properties, agriculture, and communication systems. From June 1 through August 29th, 2010, heavy rains caused high waters in Beaver Creek. The high waters led to damages to three bridges (FEMA Disaster #1924-DR-NE). Lightning struck the Boone County Communications Tower in March 2016, causing damage to communications equipment and the on-site generator. Local concerns regarding hail focus on the hazard's potential to cause damage to public and private properties, crops and agricultural property, and communication systems. In April 2012, reports of baseball sized hail in Petersburg caused damage to vehicles, windows, siding, and roofs. Critical facilities are not fitted with hail resistant building materials; however, they are insured for hail.

The Sheriff's Office and Communication Tower have backup generators on site. The Courthouse and NRIN Midway Elevator have been identified as needing backup generators. Weather radios are located at the Courthouse and Sheriff's Office.

Severe Winter Storms

Local concerns regarding severe winter storms include utility loss, fuel shortage, property damage, closures of transportation routes (inhibiting first responders and supplies), and damage to communication systems. Boone County suffered from a disastrous ice storm that occurred on December 30th, 2006. This storm caused severe damage to public and private properties, disrupted utility services, and endangered the health and safety of residents. The event included an extended power loss throughout the county and activated emergency sheltering procedures.

Similar to the rest of the state, Boone County has only a small percentage of power lines buried (8-10% estimated). This leads to an additional vulnerability as severe winter storms can damage power lines.

The county utilizes snow fences. However, the local planning team indicated that locations need to be prioritized as the extent of roads and open area in the county makes the current effort futile. The county has a large amount of snow removal equipment, including: 12 plows on motor graders, 3 snow blowers that attach to pay loaders, and access to 2 CAT dozer blades in the emergency situations. Snow removal resources were determined to be sufficient for current needs.

Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	HAIL INSURANCE
DESCRIPTION	1. Ensure critical facilities have insurance for hail damage
HAZARD(S) ADDRESSED	Hail, Severe Thunderstorms
STATUS	County properties have insurance.

OBJECTIVE	EMERGENCY OPERATIONS CENTER
DESCRIPTION	1. Identify and establish an Emergency Operations Center
HAZARD(S) ADDRESSED	All Hazards
STATUS	EOC has been identified as the basement of the Boone County Sheriff's Office.

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate current backup and emergency generators 2. Obtain additional generators based on identification and evaluation 3. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$20,000 - \$75,000+
POTENTIAL FUNDING	Boone County General Fund, HMGP, PDM
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Region 44 Emergency Management
STATUS	County Courthouse and NRIN Midway Elevator have been identified as needing backup generators.

OBJECTIVE	BACKUP MUNICIPAL RECORDS
DESCRIPTION	1. Develop protocol for backup of critical county records
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$0-\$100 for external hard drive
POTENTIAL FUNDING	Boone County General Fund
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	County Safety Committee, Region 44 Emergency Management
STATUS	This project has not yet been started.

OBJECTIVE	CIVIL SERVICE IMPROVEMENTS
DESCRIPTION	<ol style="list-style-type: none"> 1. Improve emergency rescue and response equipment and facilities by providing additional, or updating existing, emergency response equipment. 2. Includes developing backup system for emergency vehicles and identifying and training additional personnel for emergency response
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	Varies by need
POTENTIAL FUNDING	Boone County General Fund
TIMELINE	2-5 years
PRIORITY	Low
LEAD AGENCY	Region 44 Emergency Management
STATUS	This project has not yet been started.

OBJECTIVE	CONTINUITY PLANNING
DESCRIPTION	<ol style="list-style-type: none"> 1. Develop continuity plans for critical community services. 2. Encourage businesses to do the same
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$5,000+, Staff Time
POTENTIAL FUNDING	Boone County General Fund
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	County Safety Committee
STATUS	This project has not yet been started.

OBJECTIVE	DEVELOP A DROUGHT MANAGEMENT PLAN
DESCRIPTION	<ol style="list-style-type: none"> 1. Work with relevant stakeholders to develop a drought management plan 2. Identify water monitoring protocols, outline drought responses, identify opportunities to reduce water consumption, and establish the jurisdictional management procedures
HAZARD(S) ADDRESSED	Drought
ESTIMATED COST	\$25,000+
POTENTIAL FUNDING	Boone County General Fund, Water Sustainability Fund
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Region 44 Emergency Management
STATUS	This project has not yet started. Boone County should participate as a stakeholder in the LLNRD Drought Plan; however, this plan does not include specific actions for the county.

SECTION SEVEN: BOONE COUNTY PROFILE

OBJECTIVE	DEVELOP EMERGENCY SNOW & EVACUATION ROUTES
DESCRIPTION	<ol style="list-style-type: none"> 1. Develop/Improve snow/evacuation route and program to include parking, snow/ice and debris removal, etc. 2. Obtain and install snow emergency route/evacuation signs 3. Provide information on emergency routes to public
HAZARD(S) ADDRESSED	Severe Winter Storms
ESTIMATED COST	\$1,000, Staff Time
POTENTIAL FUNDING	Boone County General Fund
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Road Department
STATUS	This project has not yet been started.

OBJECTIVE	EMERGENCY EXERCISE: HAZARDOUS SPILL
DESCRIPTION	<ol style="list-style-type: none"> 1. Utilize exercise to prepare for potential explosions or hazardous spills 2. Ensure that nearby business and residents have appropriate plans in place
HAZARD(S) ADDRESSED	Chemical Fixed Sites, Chemical Transportation
ESTIMATED COST	\$5,000+
POTENTIAL FUNDING	Boone County General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Local Emergency Planning Committee Members/ Region 44 Emergency Management
STATUS	This project has not yet been started.

OBJECTIVE	EMERGENCY FUEL SUPPLY PLAN
DESCRIPTION	<ol style="list-style-type: none"> 1. Plan to ensure adequate fuel supply is available during an emergency 2. Prioritization and rationing plans for gasoline and diesel uses in extended loss of fuel supply or electric power supply; plans to purchase local fuel supply; etc.
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$1,000+ Staff Time
POTENTIAL FUNDING	Boone County General Fund
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Region 44 Emergency Management
STATUS	This project has not yet been started.

OBJECTIVE	FACILITY FLOOD PROOFING
DESCRIPTION	<ol style="list-style-type: none"> 1. Explore possibility of flood proofing facilities which fall within HAZUS 1% flood inundation areas 2. Conduct flood proofing feasibility study for structures and implement identified measures
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Varies by Structures
POTENTIAL FUNDING	Boone County General Fund, FMA
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Region 44 Emergency Management
STATUS	This project has not yet been started.

OBJECTIVE	FIRST AID TRAINING
DESCRIPTION	<ol style="list-style-type: none"> 1. Promote first aid training for all residents
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$100 per person
POTENTIAL FUNDING	Boone County General Fund
TIMELINE	2-5 years
PRIORITY	Low
LEAD AGENCY	Region 44 Emergency Management
STATUS	This project has not yet been started.

OBJECTIVE	IMPACT RESISTANT ROOF COVERINGS
DESCRIPTION	<ol style="list-style-type: none"> 1. Use roofing materials that are resistant to hail impacts for new buildings 2. Retrofit existing buildings with hail resistant roofing 3. Encourage the use of hail resistant roofing for any new constructions
HAZARD(S) ADDRESSED	Hail, Severe Thunderstorms
ESTIMATED COST	Varies by project
POTENTIAL FUNDING	Boone County General Fund
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Region 44 Emergency Management
STATUS	This project has not yet been started.

SECTION SEVEN: BOONE COUNTY PROFILE

OBJECTIVE	IMPROVE ELECTRICAL SERVICE
DESCRIPTION	<ol style="list-style-type: none"> 1. Work with local Public Power Districts or electric departments to identify vulnerable transmission and distribution lines and plan to bury lines undergrounds or retrofit existing structures to be less vulnerable to storm events 2. Evaluate hardening, retrofitting, looping and/or burying of power lines and related infrastructure and/or comparable protection measures 3. 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 4. Implement measures to improve electrical service 5. Electrical utilities should be required to use underground construction methods where possible for future installation of power lines
HAZARD(S) ADDRESSED	Severe Thunderstorms, High Winds, Severe Winter Storms, Flooding, Tornadoes
ESTIMATED COST	\$2M per mile
POTENTIAL FUNDING	Boone County General Fund, Electrical Rates, Bond
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Region 44 Emergency Management, Planning & Zoning
STATUS	This project has not yet been started.

OBJECTIVE	IMPROVE EMERGENCY COMMUNICATIONS
DESCRIPTION	<ol style="list-style-type: none"> 1. Develop/Improve Emergency Communication Action plan 2. Implement Emergency Communication Action Plan 3. Establish inner-operable communications 4. Obtain/Upgrade Emergency Communication Facilities/Equipment 5. Obtain/Upgrade/Distribute Weather Warning Radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$50,000+
POTENTIAL FUNDING	Local Jurisdiction Funds, Department of Homeland Security Grants
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Region 44 Emergency Management, Local Entities
STATUS	This project has not yet been started.

OBJECTIVE	IMPROVE EMERGENCY RESPONDER ACCESS DURING HAZARDS/EMERGENCIES
DESCRIPTION	<ol style="list-style-type: none"> 1. Conduct structural integrity and vulnerability study to evaluate bridges used by emergency responders 2. Implement measures to upgrade/replace bridges that are vulnerable or have compromised structural integrity
HAZARD(S) ADDRESSED	Tornadoes, Severe Thunderstorms, Severe Winter Storms, Grass/Wildfire, Flooding
ESTIMATED COST	\$5,000+ for study; varies by structure
POTENTIAL FUNDING	Boone County General Fund, HGMP, PDM
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Road Department, Region 44 Emergency Management
STATUS	The county has replaced/repared numerous roads and bridges following March 2019 flood events. A full assessment of all roads/bridges is still needed.

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate current warning systems 2. Improve warning systems/develop new warning system 3. Obtain/Upgrade warning system equipment and methods 4. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 5. Identify location of weather warning radios 6. Improve weather radio system 7. Obtain/Upgrade weather radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	Varies by Project
POTENTIAL FUNDING	Local Jurisdiction Funds, COAD, Private Donations, HMGP, PDM
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Region 44 Emergency Management
STATUS	County and Emergency Management are currently evaluating siren needs for upgrades/replacements.

SECTION SEVEN: BOONE COUNTY PROFILE

OBJECTIVE	LAND USE REGULATIONS (CHEMICAL SPILLS)
DESCRIPTION	1. Develop land use ordinances and regulations to prevent storage of chemicals near residential developments
HAZARD(S) ADDRESSED	Chemical Fixed Sites
ESTIMATED COST	\$0
POTENTIAL FUNDING	Boone County General Fund
TIMELINE	2-5 years
PRIORITY	Low
LEAD AGENCY	Planning and Zoning
STATUS	This project has not yet been started.

OBJECTIVE	PUBLIC EDUCATION ON HAZARD EVENTS AND PREPAREDNESS
DESCRIPTION	<ol style="list-style-type: none"> 1. Obtain or develop materials about hazards 2. Conduct multifaceted public education 3. Distribute fact sheet at community events, schools, other venues 4. Conduct scheduled siren/warning system tests 5. Prepare/distribute educational materials listing safe room and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$0 - \$5,000+
POTENTIAL FUNDING	Region 44 Emergency Management Budget, Hazardous Materials Emergency Planning Grant
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Region 44 Emergency Management
STATUS	The county identified the need to share information with local landowners on maintaining trees and vegetation.

OBJECTIVE	PUBLIC SAFE ROOMS & POST-DISASTER STORM SHELTERS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate existing safe rooms and/or storm shelters 2. Improve and/or construct safe rooms and/or storm shelters 3. Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$150/sf for retrofit; \$300/sf for new construction
POTENTIAL FUNDING	Boone County General Fund, HMGP, PDM
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Region 44 Emergency Management
STATUS	This project has not yet been started.

OBJECTIVE	REDUCE DAMAGES IN FLOODPLAIN
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate repetitive loss or potential loss structures located in floodplain 2. Acquire and relocate or demolish flood prone property or elevate flood prone property 3. Elevate equipment vulnerable to flooding
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Varies by Structure
POTENTIAL FUNDING	Boone County General Fund, FMA
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Boone County Planning & Zoning, Floodplain Administrator
STATUS	The county is currently in a mapping process with NeDNR to evaluate floodplain areas across the county.

OBJECTIVE	REDUCE TREE DAMAGE & DAMAGES FROM TREES
DESCRIPTION	<ol style="list-style-type: none"> 1. Conduct tree inventory 2. Develop tree maintenance/trimming program 3. Implement tree maintenance/trimming program 4. Remove hazardous limbs and/or trees
HAZARD(S) ADDRESSED	Grass/Wildfire, High Winds, Severe Thunderstorms, Severe Winter Storms, Tornadoes
ESTIMATED COST	Varies
POTENTIAL FUNDING	Boone County General Fund, LLNRD
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Road Department
STATUS	This project has not yet been started.

OBJECTIVE	REDUCE WATER DEMAND/IMPROVE DROUGHT EDUCATION
DESCRIPTION	<ol style="list-style-type: none"> 1. Conduct water use study to evaluate/implement methods to conserve water/reduce consumption 2. Evaluate/implement water use restriction ordinance 3. Identify/evaluate current/additional potable water sources 4. Develop or obtain drought education materials to conduct multi-faceted public education and awareness program
HAZARD(S) ADDRESSED	Drought
ESTIMATED COST	Study \$5,000+; Education \$1,000+
POTENTIAL FUNDING	Boone County General Fund, Water Sustainability Fund
TIMELINE	2-5 years
PRIORITY	Low
LEAD AGENCY	Region 44 Emergency Management
STATUS	This project has not yet been started.

SECTION SEVEN: BOONE COUNTY PROFILE

OBJECTIVE	SHELTER IN PLACE
DESCRIPTION	1. Provide shelter in place training to facilities housing vulnerable populations (nursing homes, childcare facilities, schools, etc.)
HAZARD(S) ADDRESSED	Chemical Fixed Sites, Chemical Transportation
ESTIMATED COST	\$100 per person, Staff Time
POTENTIAL FUNDING	Hazardous Material Emergency Planning Grant
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Local Emergency Planning Committee
STATUS	This project has not yet been started.

OBJECTIVE	SNOW FENCES
DESCRIPTION	1. Construct snow fences to protect main transportation routes and critical facilities from excessive snow drifting and road closure
HAZARD(S) ADDRESSED	Severe Winter Storms
ESTIMATED COST	\$50 per 100 linear feet
POTENTIAL FUNDING	Boone County General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Roads Department
STATUS	This project has not yet been started. The local planning team noted a need to share information with local landowners to leave trees and landscaping to protect from natural hazards – including heavy drifting snow.

OBJECTIVE	STATIC DETECTORS
DESCRIPTION	1. Utilize static detectors to detect lightning strikes, predict distance to lightning and monitor whether storms are approaching/moving away from the detector.
HAZARD(S) ADDRESSED	Severe Thunderstorms
ESTIMATED COST	\$250+
POTENTIAL FUNDING	Boone County General Fund
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Region 44 Emergency Management
STATUS	This project has not yet been started.

OBJECTIVE	SURGE PROTECTORS
DESCRIPTION	1. Purchase and install surge protectors on sensitive equipment in critical facilities
HAZARD(S) ADDRESSED	Severe Thunderstorms
ESTIMATED COST	\$25 per unit
POTENTIAL FUNDING	Boone County General Fund
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Region 44 Emergency Management
STATUS	This project has not yet been started.

OBJECTIVE	UPDATE COMPREHENSIVE PLAN
DESCRIPTION	1. Update comprehensive plan 2. Integrate plan with Hazard Mitigation Plan components
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$10,000+
POTENTIAL FUNDING	Boone County General Fund
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Planning & Zoning, Region 44 Emergency Management
STATUS	This project has not yet been started. Comprehensive Plan was last updated in 2014.

Removed Mitigation Actions

OBJECTIVE	IMPLEMENT HAZARD/EMERGENCY OPERATIONS/ACTION PLAN
DESCRIPTION	1. Identify and evaluate current hazards, response plan and procedures 2. Develop/Update multi-hazard emergency plan and procedures 3. Obtain additional response equipment and material 4. Train additional team members/maintain high training level for all team members
HAZARD(S) ADDRESSED	All Hazards
REASON FOR REMOVAL	This action is covered by components of County LEOP.

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.

SECTION SEVEN: BOONE COUNTY PROFILE

The local planning team is responsible for reviewing and updating this profile as changes occur or after a major event. The local planning team will include the County Board of Commissioners, County Clerk, Zoning Administration, and Highway Superintendent. The plan will be reviewed no less than annually and will include the public in the review and revision process by sharing information at local council meetings.

COMMUNITY PROFILE

CITY OF ALBION & ALBION FIRE AND RESCUE

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

Local Planning Team

The City of Albion and the Albion Fire and Rescue Department have a unique funding and service agreement. The Fire District services both the surrounding rural area and the City of Albion itself. Funding for the fire district is split between city funds and taxes from the rural areas. Due to this unique relationship, the Albion Fire and Rescue district profile has been integrated here.

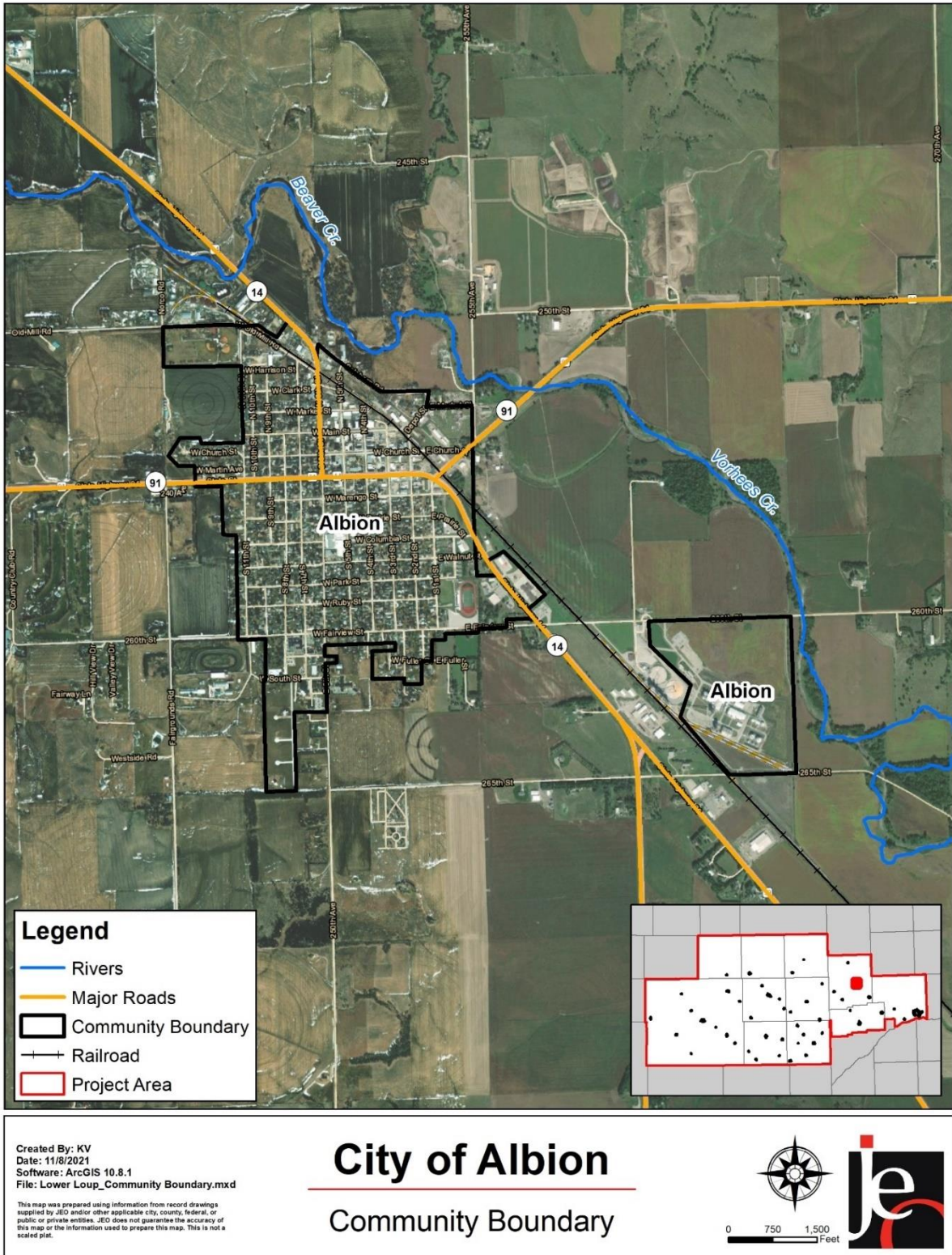
Table ALB.1: City of Albion Local Planning Team

NAME	TITLE	JURISDICTION
WARREN MYERS	Water Commissioner/Building Inspector	City of Albion
ANDREW DEVINE	City Administrator, Floodplain Administrator	City of Albion
BRUCE BENNE	Fire Chief	City of Albion

Location and Geography

The City of Albion is located in central Boone County. The City of Albion covers an area of 1.04 square miles. Beaver Creek runs north of the city. Most of Albion lies in the plains topographic region and is surrounded by agricultural fields. The Albion Fire and Rescue department services approximately 210 square miles in and around the city.

Figure ALB.1: City of Albion Jurisdictional Boundary

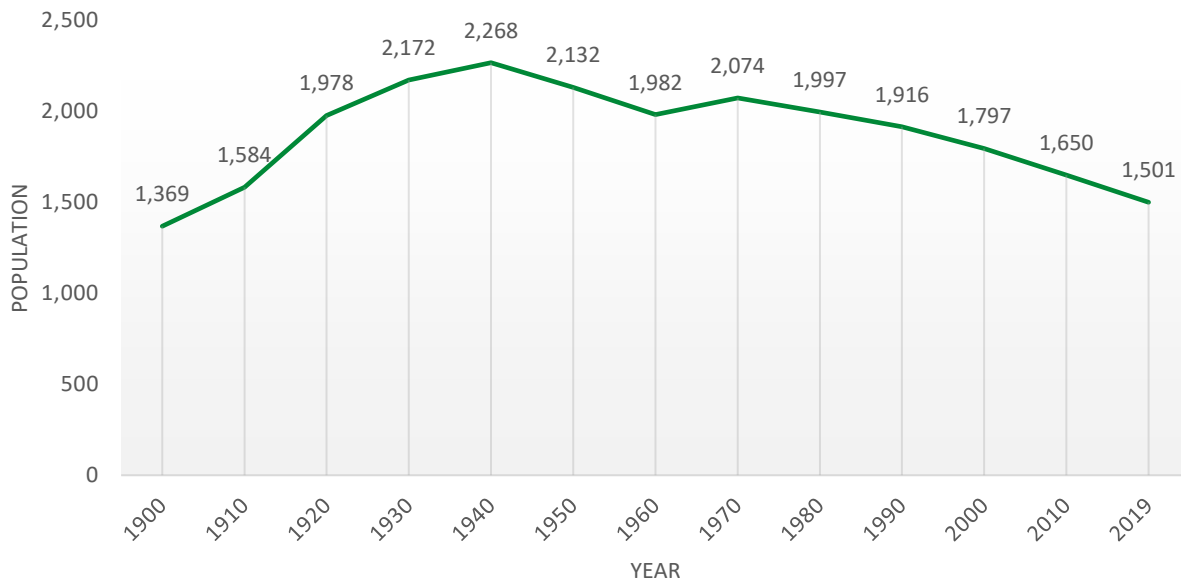


Demographics

The following figure displays the historical population trend from 1910 to 2019 (estimated). This figure indicates that the population of Albion has been declining since 1970. The local planning team noted there is a slow migration of residents to the surrounding extra-territorial jurisdictional area. While there is an opportunity for in-fill development in town, most available housing and developable land is available outside of town and drawing residents to them.

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 28% of Boone County's Population in 2019.

Figure ALB.2: Albion Population 1900-2019



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, Albion's population was:

- **Older.** The median age of Albion was 48 years old in 2019, compared with the County average of 44.8 years. Albion had a larger proportion of people under 18 years old (22.4%) than the County (23.3%).¹³
- **More ethnically diverse.** In 2019, 3.3% of Albion's population was Hispanic or Latino compared to 2.2% in Boone County.¹⁴

¹² United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]

¹³ United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]

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

- **More likely to be at the federal poverty line.** The poverty rate of all persons in Albion (6.6%) was higher than the County (5.8%) in 2019.¹⁵

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Albion and Boone County included Agriculture, Manufacturing, Retail, and Education.¹⁶
- **Similar household income.** Albion's median household income in 2019 (\$54,464) was similar to the County (\$54,979).¹⁷
- **Fewer long-distance commuters.** About 73.6% percent of workers in Albion commuted for fewer than 15 minutes, compared with about 58.1% of workers in Boone County. About 11.9% of workers in Albion commute 30 minutes or more to work, compared to about 18.7% of the County workers.¹⁸

Major Employers

Major employers in the City of Albion include: Boone County Health Center, Valero Energy, Boone Central Schools, Sentinel Building Systems, Boone County, Green Line Equipment, Kayton International, Inc., Wolf Good Samaritan Center, and Applied Connective Technologies. The local planning team noted approximately forty percent commute to the surrounding communities of Columbus and Norfolk for work.

Housing

In comparison to Boone County, Albion's housing stock was:¹⁹

- **More renter occupied.** About 71.9% of occupied housing units in Albion are owner occupied compared with 76.2% of occupied housing in Boone County in 2019.
- **Older.** Albion has more houses built prior to 1970 than the county (61.8% compared to 60.1%).
- **More multi-family homes.** Albion contains more multifamily housing with five or more units per structure than the County (8.3% compared to 4.7%). About 80.3% of housing in Albion was single-family detached, compared with 88.9% of the County's housing. Albion has a smaller share of mobile and manufactured housing (0.8%) compared to the County (2.0%)

The local planning team noted the city lacks quality affordable housing which limits immigration or growth for residential families. Several rentals have opened in town; however, rent prices are still prohibitive for some residents. 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

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

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

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

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

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

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

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Albion has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The city has a four-member council and the following offices: city administrator/clerk/treasurer, street department, police chief, water department, building and zoning, sewage/wastewater, Albion Fire and Rescue department, and parks and recreation.

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 ALB.2: Capability Assessment

		SURVEY COMPONENTS	YES/NO
PLANNING & REGULATORY CAPABILITY		Comprehensive Plan	Yes, 2021
		Capital Improvements Plan	Yes
		Economic Development Plan	Yes
		Local Emergency Operational Plan	County
		Floodplain Ordinance	Yes
		Zoning Ordinance	Yes, 2021
		Subdivision Regulation/Ordinance	Yes, 2021
		Building Codes	Yes, 2021
		Chief Building Official	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	Yes
		Civil Engineering	No
		Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
		Grant Manager	Coordinate with County Economic Development
		Mutual Aid Agreement	Yes
		Other (if any)	
FISCAL CAPABILITY		1 & 6 Year Plan	Yes
		Applied for grants in the past	Yes

SURVEY COMPONENTS		YES/NO
	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)	<i>Current levy in place for local pool</i>
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 City USA	No
	Other (if any)	

Table ALB.3: Overall Capability

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

Plan Integration

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

Comprehensive Plan

Albion’s Comprehensive Plan was last updated in 2021 and integrates hazard mitigation in the following ways: directs development away from the floodplain, encourages infill development,

encourages elevation of structures located in the floodplain, encourages strengthening retrofits to historic structures, and allows for emergency access to all areas of town. Future updates will incorporate additional mitigation efforts to address the following: directing development away from chemical storage facilities, limit density in areas adjacent to know hazardous areas, identify areas that need emergency shelters, and encourage preservation of open space in hazard-prone areas.

Emergency Operations Plan/Boone County Local Emergency Operations Plan

Albion has both an individual and annex to the county's emergency operations plan that integrates hazard mitigation in the following ways: addresses the hazards of greatest concern, assigns specific responsibilities to individual communities, identifies scenarios that would require evacuation, identifies critical evacuation routes, identifies routes vulnerable to flooding, identifies sheltering locations, identifies opportunities for mitigation following a disaster, and provides a clear assignment of responsibility during an emergency. These plans are updated every five years.

Zoning Ordinance and Subdivision Regulations

Albion's zoning ordinance was last updated in 2021 and integrates hazard mitigation in the following ways: discourages development in the floodplain, identifies floodplain areas as parks of open space, requires more than one-foot of elevation above Base Flood Elevation in the floodplain, prohibits development within the floodways or floodplains, encourages maintaining open space within the floodplain, limits development in the ETJ, accounts for current population trends, and limits population density in the floodplain. The zoning ordinance also includes a wellhead protection district and well setback requirements. As of winter 2020, the City also adopted a Vacant Property Ordinance and Property Maintenance Codes to help address vacant, abandoned, or derelict properties in city.

Building Codes (2012)

Albion has adopted the 2012 International Building Codes. The code integrates hazard mitigation in the following ways: requires elevation of structures in the floodplain, requires mechanical systems to be elevated for structures in the floodplain, requires onsite storm water detention for commercial structures, encourages the use of permeable surfaces, and requires a safe room in multiple dwelling units.

Annual Municipal Budget and Capital Improvements Plan

Albion has a capital improvement plan updated annually. The Capital Improvement Program includes: storm water projects, improving transportation routes for drainage, including widening roadways that would improve evacuations if they were required, installing new municipal wells, upsizing water distribution pipes, and installing emergency generators in critical facilities.

The city and fire district have applied for and received several grants in the past to assist with hazard mitigation project implementation or other improvements projects. These have included a CDBG grant for downtown revitalization, NRD grants for water meter replacement and installation, NRD grants for well decommissioning, State Revolving Fund loan forgiveness, and grants for the wastewater treatment facility.

Middle Northeast Nebraska Community Wildfire Protection Plan

The Nebraska Forest Service updated the Middle Northeast Community Wildfire Protection Plan (CWPP), which includes Boone County in October 2021. The purpose of the CWPP is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. This document is updated every five years.

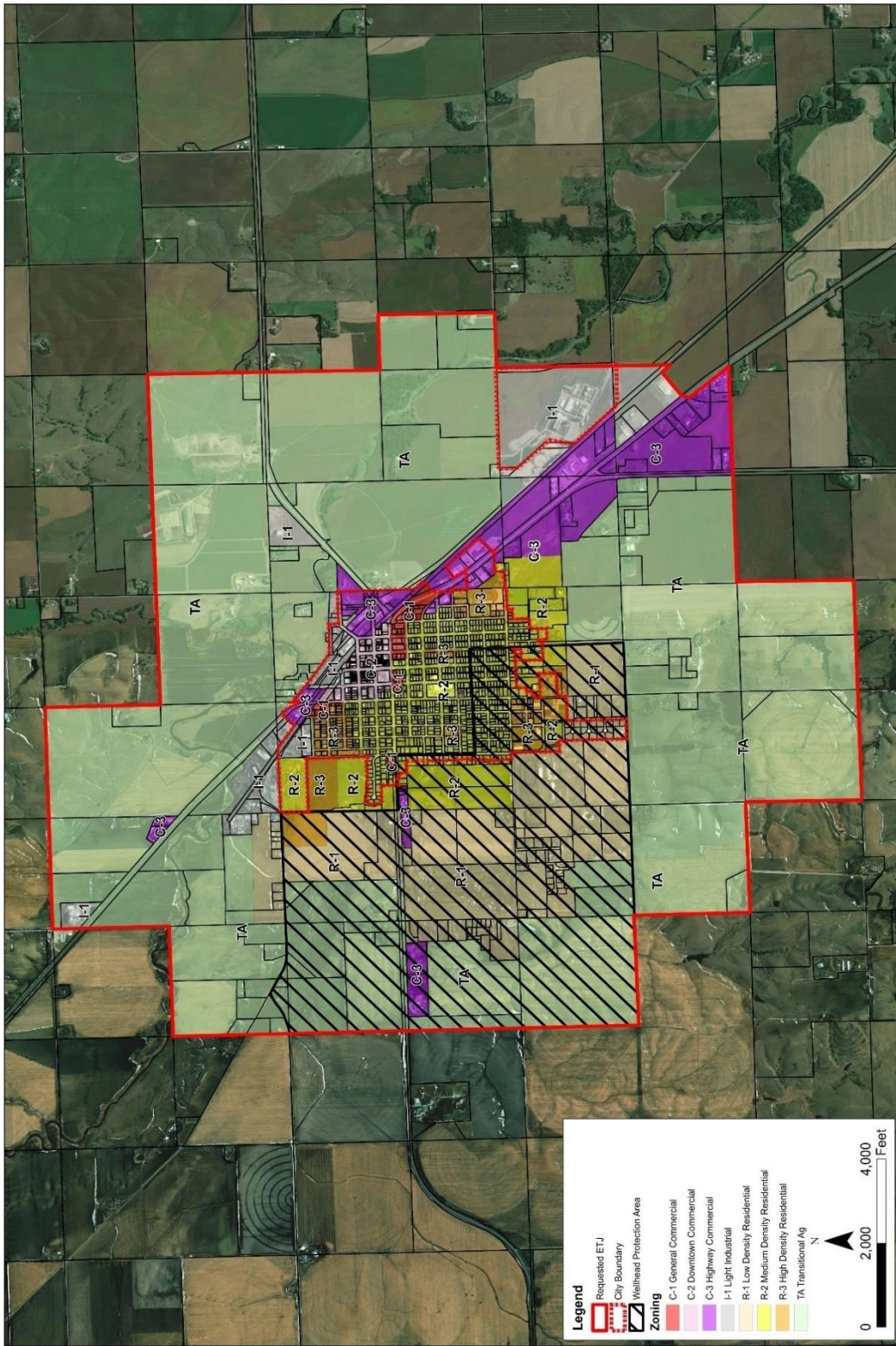
Future Development Trends

In 2017 Albion saw new developments including a new water well, wastewater treatment facility, aquatic center, and subdivision. Various employers expanded including: Boone County Schools, Wolf Memorial Good Samaritan Center, and Piller Milling. Since 2017 Kayton International and the local hospital have also expanded. The new middle school was built. The local ShopKo closed in 2018 and Applied Technologies expanded into that space. There is limited residential development occurring in the city; however, there is growth in the surrounding ETJ.

New development include a subdivision by the water tower which was recently sold. The city is working to promote growth in the downtown district. The city completed an effort to map all sanitary and sewer lines in the city via GIS. GIS will be used as an ongoing asset management tool. City leaders also completed fire hydrant flow testing, and has made GIS hydrant maps available to the Fire Department.

SECTION SEVEN: CITY OF ALBION & FIRE DEPARTMENT COMMUNITY PROFILE

Figure ALB.3: Albion Zoning Map



Created by: K. Dieck
 Updated by: A. Wehr
 Date: 1/12/2021
 Software: ArcGIS 10.7.1

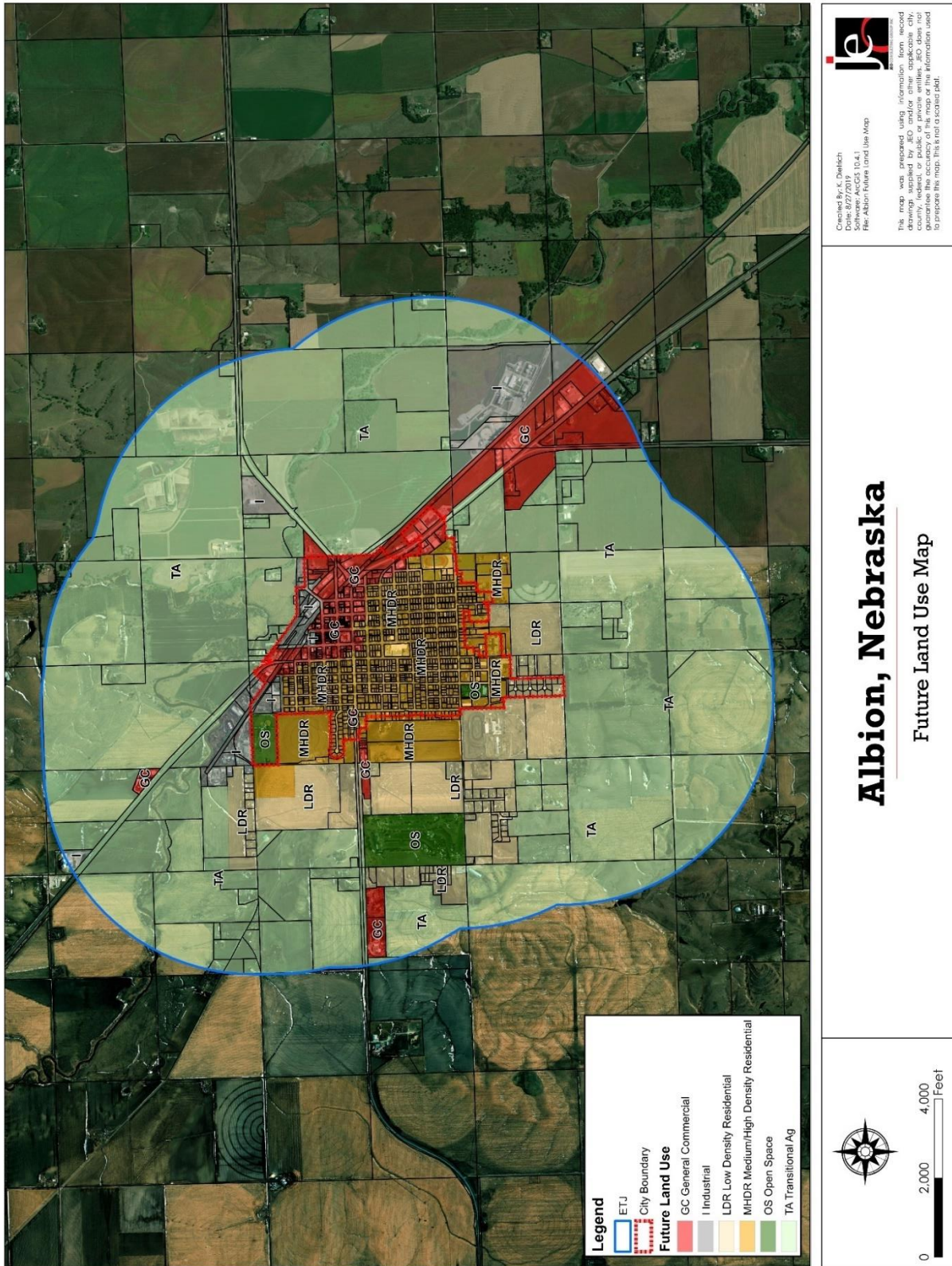
The map was prepared using information from records maintained by the City of Albion, Nebraska. JEC does not guarantee the accuracy of this map or the information used to prepare the map. This is not a cadastral plan.

Albion, Nebraska
 Zoning Map

THIS IS TO CERTIFY THAT THIS IS THE OFFICIAL ZONING MAP REFERRED TO IN THE CITY OF ALBION, NEBRASKA. THIS OFFICIAL ZONING DISTRICT MAP SUPERSEDES AND REPLACES ANY OR ALL OTHER OFFICIAL ZONING DISTRICT MAPS ADOPTED ON THIS ____ DAY OF _____, 20__.

DATE	APPROVED BY	OFFICIAL TITLE	REMARKS

Figure ALB.4: Albion Future Land Use Map



Community Lifelines

Transportation

Albion's major transportation corridors include Highway 91 that experiences 2,040 vehicles per day, and Highway 14/State Street that experiences 3,220 vehicles per day. Other major corridors in town include 6th Street which extends south through town where Highway 14 and Highway 91 meet. The Albion Municipal Airport is located northwest of Albion. No major transportation incidents have occurred in the city. In the case of major accidents the fire department local law enforcement respond. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are five chemical storage sites throughout Albion which house hazardous materials. In addition to this list the local planning team noted Highway 91 Oil also stores chemicals of concern. In the event of a chemical spill, the Albion Fire and Rescue Department would be first to respond. Each member has Operational Training certifications and local resources are deemed sufficient. The nearest HAZMAT team is located in Columbus and Norfolk.

Table ALB.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
FERRELLGAS	405 N 6th St	N
HELENA AGRI-ENTERPRISES LLC	2493 State Highway 14	N
NDOT ALBION YARD	2664 State Highway 39	N
COUNTRY PARTNERS COOPERATIVE	2502 Old Mill Rd	N
VALERO RENEWABLE FUELS COMPANY	2615 260th St	N

Source: Nebraska Department of Environment and Energy²⁰

Critical Facilities

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

The American Red Cross has agreements with Zion Lutheran Church, Boone County Ag Society Fair Grounds, Boone Central Schools, and United Methodist in Albion to serve as mass care facilities during disaster events. The following table and figure provide a summary of the critical facilities for the jurisdiction.

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

Table ALB.5: Albion Critical Facilities

CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Safety and Security	Albion City Hall	N	N	N
2	Safety and Security	Albion Fire and Rescue	N	Y	N
3	Safety and Security	Albion Police Department	N	N	N
4	Food, Water, and Shelter	Boone Central Schools Grades Pre K – 12	Y	N	N
5	Safety and Security	City Shop	N	N	N
6	Safety and Security	City Shop	N	N	N
7	Food, Water, and Shelter	City Water Tower / Wells 4 and 5	N	Y	N
8	Food, Water, and Shelter	Fairgrounds	Y	N	N
9	Food, Water, and Shelter	Water Treatment Facility	N	Y	Y

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

Health and Medical Facilities

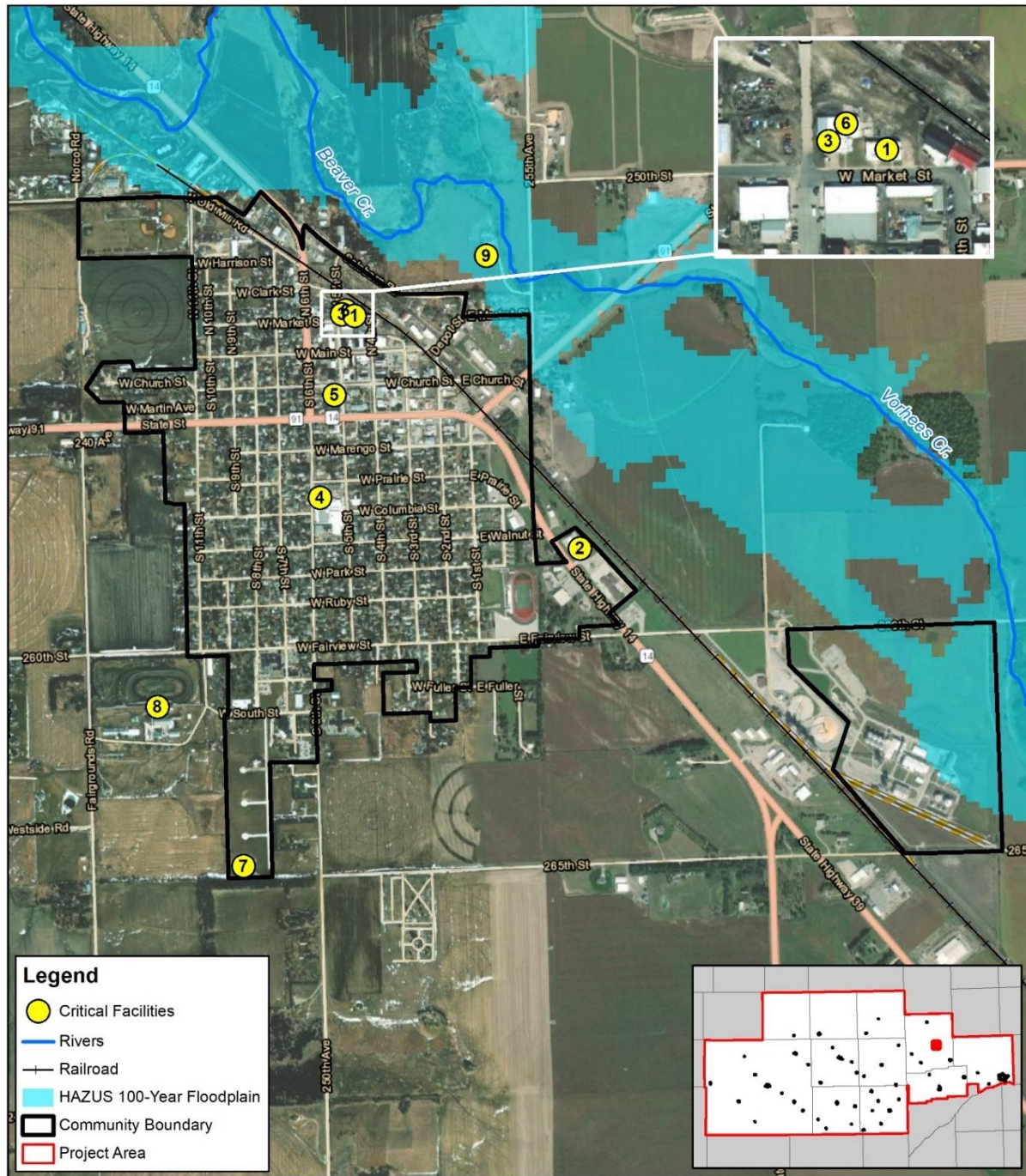
The following medical and health facilities are located within the community. These facilities house vulnerable populations which may require additional assistance to evacuate or restore utilities during and after a disaster event.

Table ALB.6: Albion Critical Facilities

TYPE OF FACILITY	FACILITY NAME	NUMBER OF LICENSED BEDS
Hospital	Boone County Health Center	25
Assisted Living Facility	Good Samaritan (Samaritan Estates) Society	28
Long Term Care Facilities	Good Samaritan Society	60
Rural Health Clinic	Boone County Health Center	N/A

According to the Nebraska Department of Health and Human Services there are 15 licensed childcare or preschool facilities in the City of Albion.

Figure ALB.3: Albion Critical Facilities

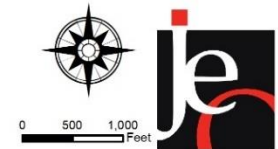


Created By: KV
 Date: 10/6/2021
 Software: ArcGIS 10.8.1
 File: Lower Loup_Critical Facilities.mxd

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City of Albion

Critical Facilities



Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

Table ALB.7: Albion 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
1,042	1,006	\$100,197,120	13	\$7,871,555	0.89%

Source: County Assessor, GIS Workshop

Table ALB.8: Albion Flood Map Products

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
LOMA	16-07-0312A-310009	12/22/2015	Structure (Bldgs 1-4) removed from SFHA

Source: FEMA Flood Map Service Center

Hazard Prioritization

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

Dam Failure

The high hazard Kohtz-Albion Dam is located southwest of the city on Beaver Creek. According to the Boone County LEOP, failure of the Kohtz-Albion Dam would impact approximately 15% of Albion. The figure below shows the location of the dam. The city now owns and maintains the dam; however, recent developments at the Boone County Fairgrounds caused damage to the structure. Boone County is providing repair work with anticipated completion by fall 2021.

During the March 2019 flood event the local planning team noted the dam was full but did not breach. This prevented inundation to the fairgrounds, some residential areas, and other portions of the city. The city and the fire department both maintain copies of the Emergency Action Plan.

Table ALB.9: High Hazard Dams

NIDID	DAM NAME	LOCATION
NE00153	Kohtz City of Albion Dam	Southwest of Albion

Source: NeDNR, 2017

Flooding

Flooding is a moderate risk or concern for the City of Albion. The current effective FIRM panels are dated December 6, 1999; however, remapping efforts across the county are currently being conducted by the Nebraska Department of Natural Resources. The city has one NFIP policy in force for \$60,600. According to NeDNR as of 2019, there are no repetitive flood loss properties in the City of Albion. Beaver Creek is the closest body of water of concern. The NCEI reported three flash flood events in Albion – 2005, 2007, and 2010. These events produced \$7,000 in damages but no injuries or fatalities.

The March 2019 flood event was not reported by NCEI; however, the local planning team noted several impacts from this storm event. All major transportation routes to the north, east, and south were blocked by floodwaters. Community buildings on the northeast side of town sustained some damages as floodwaters rose towards the railroad tracks. These corridors were blocked between two and three days, but no evacuations were required. The Fire District performed one rescue for a handicapped woman out of approaching floodwaters. These event caused some significant streambank erosion north of the city on the Highway 91 bridge; however this area falls under the responsibility of Boone County.

The City is currently working with NeDNR for floodplain mapping efforts and is mapping all water systems via GIS.

Grass/Wildfires

The Albion Fire and Rescue District serves both the City of Albion and the surrounding 200 acres. The district noted specific concerns for accessibility to areas and the available rural water supply. The largest fire in the district occurred on March of 2015 when a fire started east of town and burned an area approximately 1.5 miles at its widest point and extended south approximately 4-5 miles. That fire consumed 2,000 acres of grass, cornstalks, vegetation, trees, haystacks and one un-inhabited farmstead. The District reported 43 volunteers on its roster which has remained stable over the past five years. The Fire District has very active support in the community.

The Albion Fire Hall is well equipped to provide emergency services. The facility houses a training facility onsite to assist Albion Fire personnel and fire personnel of the surrounding areas with training certifications and drills. The district has two pumpers, two tankers, and three brush trucks for emergency use. When responding to events in the city, the district utilizes hydrants. The local planning team noted several hydrants are in need of repair or updates to ensure usability. The city and district are also currently conducting flow tests on hydrants to identify any undersized pipes. The oldest hydrants in town currently have a 4" pipe and are only used as emergency backup water resources.

The fire district identified the need to locate additional rural water resources. Currently a dearth of rural water resources require tankers to return to Albion to refill. Additionally, the fire department will be working with local downtown businesses and buildings to identify fire response needs. These will include locations of hydrants, sprinklers, maps of the buildings, and contact rosters for property owners and responders.

Hazardous Materials

Fertilizer, gasoline, propane, diesel fuel, ethanol, caustics, flammable gases, and anhydrous ammonia are all regularly transported along local roadways. A Nebraska Central rail line bisects the city to reach the ethanol plant southeast of the city. Ethanol is transported to the Valero Ethanol Plant along the rail lines. In 2015 a rail car derailed at the Valero Ethanol Plant. The spill was contained to the Valero site and there were no major impacts. There were no ruptures in the tank cars, only leaking vessels. Highways 14, 91, and 39 as well as the railroad are the transportation routes of most concern. The critical facilities, fire station and courthouse, are located next to Highway 14. The local planning team noted all chemical fixed site locations of active and operational. The Fire District would be first to respond to spills in the city and are trained to respond for chemical spills. The nearest HAZMAT team is located in Columbus or Norfolk. The Valero Plant has a specific Emergency Action Plan which is practiced annually with the city.

Severe Thunderstorms

Severe thunderstorms are common across the state and include impacts from heavy rain, lightning, hail, and heavy winds. The NCEI specifically recorded 68 hail, lightning, and/or thunderstorm wind events in Albion from 1996 to 2020 that caused \$37,000 in property damages. The local planning team described three recent significant severe thunderstorm events that occurred in July 2015, March 2016, and July of 2016. These storms caused localized nuisance flooding (no damage), hail damage to roofs and siding, and wind damage to trees. Critical facilities are insured for hail damage and critical municipal records are protected with surge protectors on electronic devices. All power lines in town are above ground and the fire hall, water tower, and wells have backup power generators. Loup Power District provides power to the city while Cornhusker Power provides service to the surrounding areas (including the ETJ). Weather radios are also located in critical facilities. Lightning rods are installed on the water tower.

Severe Winter Storms

A severe blizzard impacted Albion in February 2016. This winter storm closed most businesses within the community for 1-2 days and blocked most roads with heavy snow. The local planning team reported upwards of 16" of snow on some streets. Local concerns regarding this hazard focus on the ability to keep roadways clear in the event of an emergency response and loss of power. Power outages in the past have been limited to a few days and have typically occurred due to icing of power lines. Designated snow routes are 6th Street, 11th Street, and Fairview Street. Albion's Street Department uses various equipment for snow removal including: plows, shovels, snow blowers, loader tractor, and a Bobcat. If necessary, the city will employ a local dirt contractor for heavy equipment. Snow removal resources were determined sufficient for current local needs by the local planning team.

Tornadoes and High Winds

Tornadoes and high winds have the potential to cause significant property damages and loss of life. The state and city are prone to high winds and tornadoes. Albion has data backup systems for municipal records including locally on removable hard drives, and remotely with the service provider's storage. Albion has five warning sirens across the city which are activated by the Boone County Sheriff's Department. Albion maintains the sirens and noted several are in need of repairs or updates. There is a limited amount of shelter available to Albion residents in the event of a tornado; however, most residents have basements in town. In the event of a disaster, Albion and the Fire District have mutual aid agreements with neighboring communities.

Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	WELL IMPROVEMENT
DESCRIPTION	1. Improve community well system
HAZARD(S) ADDRESSED	Grass/Wildfire, Drought
LEAD AGENCY	Water Department
STATUS	The city developed a new well in 2020. It was funded through DWSRF and loan forgiveness.

Continued Mitigation Actions

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	<ol style="list-style-type: none"> 4. Evaluate current warning systems 5. Improve warning systems/develop new warning system 6. Obtain/Upgrade warning system equipment and methods 7. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 8. Identify location of weather warning radios 9. Improve weather radio system 10. Obtain/Upgrade weather radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	Varies by project
POTENTIAL FUNDING	HMGP, PDM, City General Fund
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Region 44 Emergency Management, Fire Department
STATUS	This project has not yet been started.

OBJECTIVE	FIRE PREVENTION PROGRAM/PLANNING AND TRAINING
DESCRIPTION	1. Participate in the Nebraska Forest Service Wildland Fire Protection Program (training in wildfire suppression training, equipment, pre-suppression planning, wildfire prevention, aerial fire suppression, etc.)
HAZARD(S) ADDRESSED	Grass/Wildfire
ESTIMATED COST	\$100 per person
POTENTIAL FUNDING	City General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Albion Fire Department
STATUS	Three fire department members are now Red Card Wildland Fire certified. The city is planning to train more crew members.

SECTION SEVEN: CITY OF ALBION & FIRE DEPARTMENT COMMUNITY PROFILE

OBJECTIVE	FIREWISE COMMUNITY
DESCRIPTION	<ol style="list-style-type: none"> 1. Work with the Nebraska Forest Service and US Forest Service to become a Firewise Communities/USA participant. 2. Develop a Community Wildfire Protection Plan 3. Train land owners about creating defensible spaces. 4. Enact ordinances and building codes to increase defensible space, improve building materials to reduce structure ignitability, and increase access to structures by responders. 5. Develop and implement brush and fuel thinning projects.
HAZARD(S) ADDRESSED	Grass/Wildfire
ESTIMATED COST	\$10,000+ annual, staff time
POTENTIAL FUNDING	City General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Albion Fire Department
STATUS	This project has not yet been started.

OBJECTIVE	HAZARDOUS FIRE FUELS REDUCTION
DESCRIPTION	<ol style="list-style-type: none"> 1. Participate in the Nebraska Forest Service Forest Fuels Reduction Program (creates strategically located corridors of thinned forests across the landscape to reduce fire intensity, improves fire suppression effectiveness, increase firefighter's safety, and better protects lives and property.)
HAZARD(S) ADDRESSED	Grass/Wildfire
ESTIMATED COST	Varies
POTENTIAL FUNDING	Fire Department General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Albion Fire Department
STATUS	This project has not yet been started.

SECTION SEVEN: CITY OF ALBION & FIRE DEPARTMENT COMMUNITY PROFILE

OBJECTIVE	WATER SYSTEM IMPROVEMENTS
DESCRIPTION	<ol style="list-style-type: none"> 1. Make water system improvements to include additional fire hydrants/increase supply and pressure to effectively fight fires and meet increasing demands 2. Update/improve water distribution system (identifying and replacing leaky pipes, assisting residents in identifying inefficiencies, transitioning to smart irrigation systems, etc.) 3. Upgrade water district infrastructure to decrease likelihood of damages and improve water system for emergency use
HAZARD(S) ADDRESSED	Grass/Wildfire, Drought
ESTIMATED COST	\$10,000+, varies by scope
POTENTIAL FUNDING	City General Fund, CDBG
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Administrator, Water Department
STATUS	Fire hydrants have been replaced and added; the city upgraded a water main along Salebarn Road and added a fire hydrant near the community burn site. The city is continuing to evaluate, replace, and upgrade fire hydrants; they are also planning to expand fire protection footprint by adding looped water transmission mains and hydrants within the one-mile ETJ.

OBJECTIVE	WILDFIRE EDUCATION
DESCRIPTION	<ol style="list-style-type: none"> 1. Develop a wildfire education program to inform citizens of actions they can take to reduce personal vulnerabilities
HAZARD(S) ADDRESSED	Grass/Wildfire
ESTIMATED COST	\$3,000+
POTENTIAL FUNDING	Fire Department General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Albion Fire Department
STATUS	This project has not yet been started.

SECTION SEVEN: CITY OF ALBION & FIRE DEPARTMENT COMMUNITY PROFILE

OBJECTIVE	IMPROVE AND REVISE SNOW/ICE REMOVAL AND RESCUE PROGRAM
DESCRIPTION	<ol style="list-style-type: none"> 1. Revise and improve snow and ice removal program for streets 2. Address situations such as plowing snow, ice removal, parking during snow, ice removal and removal of associated storm debris 3. Improve capabilities to rescue those stranded in blizzards and increase the capacity to which snow can be removed from roadways after an event
HAZARD(S) ADDRESSED	Severe Winter Storms
ESTIMATED COST	Snow Blower: \$800+ Truck Mounted Plow: \$2,000+ ATV Plow: \$1,500+
POTENTIAL FUNDING	City General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	City Administrator
STATUS	The city added a tractor and snowplow to their snow removal equipment. They would like to purchase a payloader and larger snow blower.

OBJECTIVE	SNOW FENCES
DESCRIPTION	<ol style="list-style-type: none"> 1. Construct snow fences to protect main transportation routes and critical facilities from excessive snow drifting and road closure
HAZARD(S) ADDRESSED	Severe Winter Storms
ESTIMATED COST	\$50 per 100 linear feet
POTENTIAL FUNDING	City General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	City Administrator
STATUS	This project has not yet been started.

SECTION SEVEN: CITY OF ALBION & FIRE DEPARTMENT COMMUNITY PROFILE

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate current backup and emergency generators 2. Obtain additional generators based on identification and evaluation 3. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$3,500+ depending on site requirements
POTENTIAL FUNDING	City General Fund, HMGP, PDM
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	City Council
STATUS	All production wells and the sewer plant have backup generation. However, the city needs larger and more permanent generation at the fire hall, lift stations, city hall, and the police station.

OBJECTIVE	IMPROVE DRAINAGE
DESCRIPTION	<ol style="list-style-type: none"> 1. Improve storm sewers and drainage patterns in and around the community 2. Deepen drainage ditches and clean out culverts
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$5,000+
POTENTIAL FUNDING	City General Fund
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Street Department
STATUS	The city has completed three out of four phases of the Fairview Storm Sewer Drainage Plan, which they began in 2015. Next, the city will evaluate the next stage of the Fairview Drainage Plan from west of town. The city plans to monitor and clean out open drainage ditches.

SECTION SEVEN: CITY OF ALBION & FIRE DEPARTMENT COMMUNITY PROFILE

OBJECTIVE	DRAINAGE STUDY/STORMWATER MASTER PLAN
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and prioritize design improvements with preliminary drainage studies and assessments 2. Address site specific localized flooding/drainage issues 3. Identify stormwater problem areas and potential drainage improvements with Stormwater Master Plans.
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$15,000+
POTENTIAL FUNDING	City General Fund, Sales Tax
TIMELINE	5+ years
PRIORITY	High
LEAD AGENCY	Street Department, Clerk
STATUS	A partial study/plan has been completed. They city still needs a master plan for the community.

OBJECTIVE	TRANSPORTATION DRAINAGE IMPROVEMENTS
DESCRIPTION	<ol style="list-style-type: none"> 1. Make improvements to roadways and drainage ways to prevent damage to key transportation routes. 2. Utilize geosystemic products for repair and mitigation of damages 3. Consider covering road washouts, culvert sizing headwalls, steep banks, slides, in-road springs, roadway edge armoring, low water crossings, pothole grading, weak foundations, gravel road maintenance, ditch linings, erosion protection, etc.
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$800,000
POTENTIAL FUNDING	Local Sales Tax, City Bonds
TIMELINE	5+ years
PRIORITY	High
LEAD AGENCY	City Council, Street Department, City Clerk
STATUS	The city has completed three out of four phases of the Fairview Storm Sewer Drainage Plan, which they began in 2015. Next, the city will evaluate the next stage of the Fairview Drainage Plan from west of town. The city plans to monitor and clean out open drainage ditches.

SECTION SEVEN: CITY OF ALBION & FIRE DEPARTMENT COMMUNITY PROFILE

OBJECTIVE	EDUCATION PROGRAM FOR CHEMICAL RELEASES
DESCRIPTION	1. Develop education program to inform residents of risks related to chemical releases (including direct outreach to residents living in the immediate vicinity of chemical storage sites).
HAZARD(S) ADDRESSED	Chemical Fixed Sites, Chemical Transportation
ESTIMATED COST	\$3,000+
POTENTIAL FUNDING	Partnership with County/State EMA and LEPC
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	City Administrator, Region 44 Emergency Management, LEPC
STATUS	This project has not yet been started. The city plans to bring this action additional focus from the LEPC.

OBJECTIVE	SHELTER IN PLACE
DESCRIPTION	1. Provide shelter in place training to facilities housing vulnerable populations (nursing homes, childcare facilities, schools, etc.)
HAZARD(S) ADDRESSED	Chemical Fixed Sites
ESTIMATED COST	Staff Time
POTENTIAL FUNDING	Partnership with County/State EMA and LEPC
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	City Administrator, Region 44 Emergency Management, LEPC
STATUS	This project has not yet been started. The city plans to bring this action additional focus from the LEPC.

OBJECTIVE	CRITICAL FACILITY SITING
DESCRIPTION	1. Prohibit the construction of critical facilities within the immediate radius of chemical storage facilities
HAZARD(S) ADDRESSED	Chemical Fixed Sites
ESTIMATED COST	\$0, Staff Time
POTENTIAL FUNDING	N/A
TIMELINE	1 year
PRIORITY	Medium
LEAD AGENCY	City Administrator
STATUS	This project has not yet been started.

New Mitigation Actions – 2022 Plan

OBJECTIVE	REHABILITATE WELL #3
DESCRIPTION	1. Seal the annulus to prevent source point contamination.
HAZARD(S) ADDRESSED	Drought, Flooding
ESTIMATED COST	\$200,000
POTENTIAL FUNDING	Water Utility Funds, Sales Tax Funds
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	City Water Department
STATUS	This is a new mitigation action.

Plan Maintenance

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

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The city Administrator, Clerk, or Treasurer, as well as the Public Works Coordinator, Fire Chief, and Police Chief will annually review the city's profile. They will notify the public via public notices and at City Council public hearings.

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COMMUNITY PROFILE

VILLAGE OF CEDAR RAPIDS

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

Local Planning Team

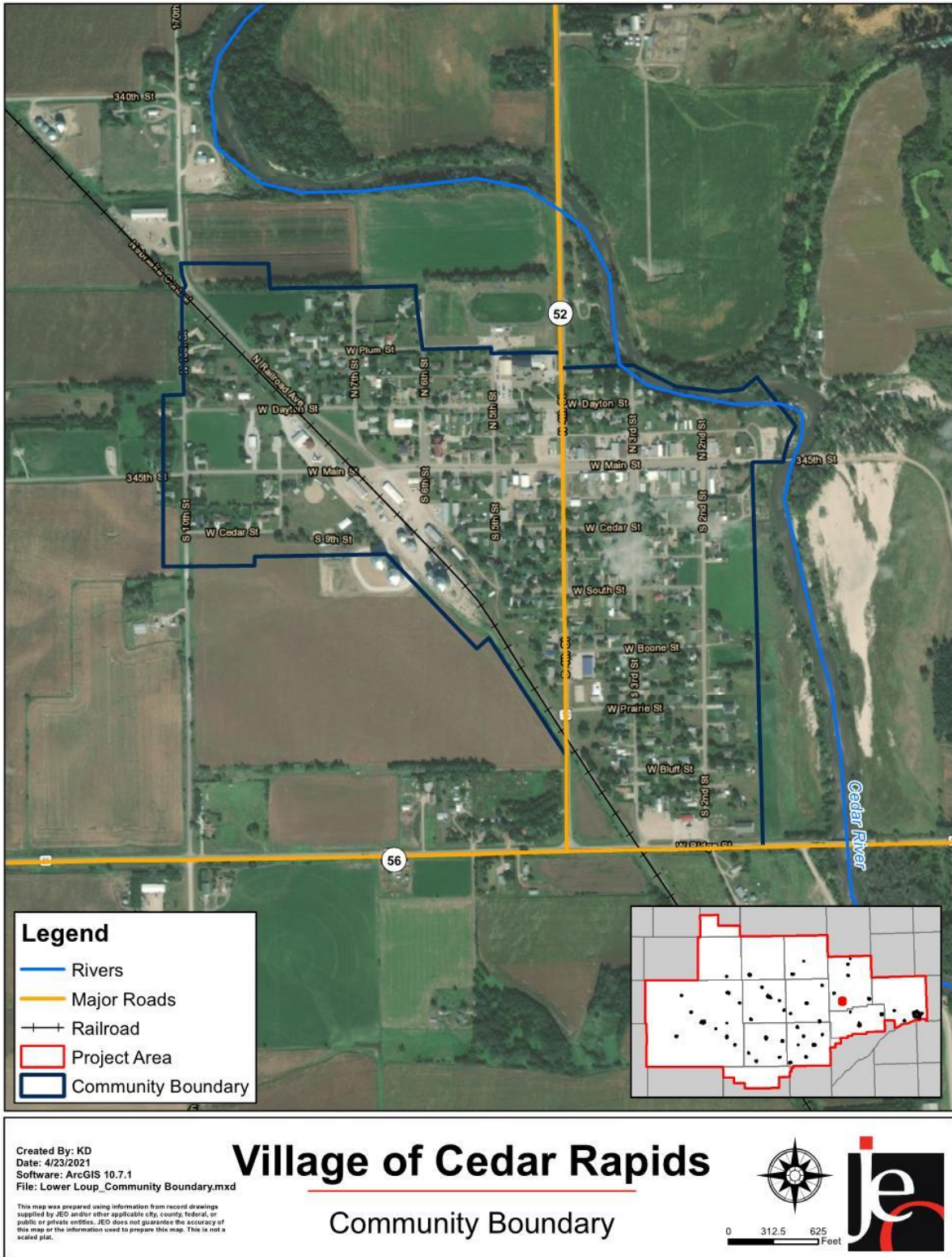
Table CED.1: Village of Cedar Rapids Local Planning Team

NAME	TITLE	JURISDICTION
BRADY YOSTEN	Cedar Rapids Civil Defense	Village of Cedar Rapids
MARY ZIEMBA	Boone County Zoning/Floodplain Administrator	Boone County/Village of Cedar Rapids
RITA ROBINSON	Cedar Rapids Village Clerk	Village of Cedar Rapids

Location and Geography

The Village of Cedar Rapids is located in southwestern Boone County and covers an area of 0.36 square miles. The Cedar River runs along the north and east sides of the village. The area is not heavily forested. Most of Cedar Rapids lies in the valleys topographic region, and is surrounded by agricultural fields.

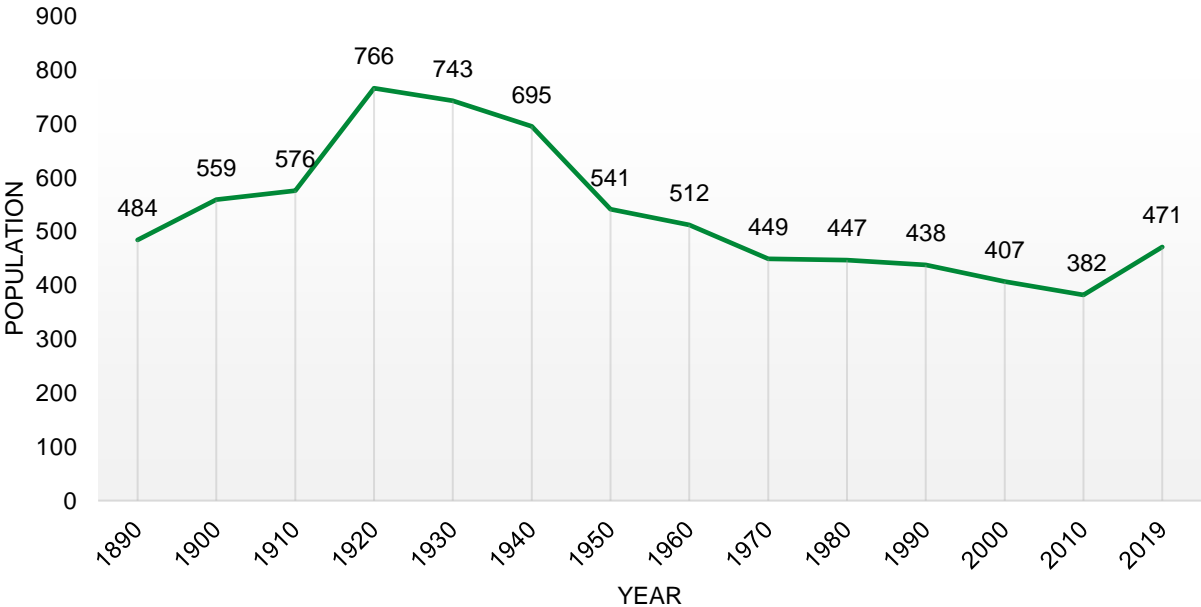
Figure CED.1: Village of Cedar Rapids Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1890 to 2019 (estimated). This figure indicates that the population of Cedar Rapids experienced a decline from 1920 through 2010. Since 2010, however, the population has been increasing. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Increasing populations can also contribute to increasing tax revenues, allowing communities to pursue additional mitigation projects. The Village’s population accounted for 9% of Boone County’s Population in 2019.

Figure CED.2: Cedar Rapids Population 1890-2019



Source: U.S. Census Bureau²¹

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

- **Younger.** The median age of Cedar Rapids was 39.7 years old in 2019, compared with the County average of 44.8 years. Cedar Rapids’ population has grown younger since 2010, when the median age was 43.3 years old. Cedar Rapids had a larger proportion of people under 20 years old (26.3%) than the County (25.2%).²²
- **More ethnically diverse.** In 2010, 0% of Cedar Rapids’ population was Black or African American, 0% was other races, and 0% were two or more races. By 2019, about 1.9% of Cedar Rapids’ population was two or more races. During that time, Boone County had 0% to 0.10% American Indian, 0% to 0% other races and 0.1% to 0.5% two or more races from 2010 to 2019 respectively.²³
- **More likely to be at the federal poverty line.** The poverty rate of all persons in Cedar Rapids (8.2%) was higher than the County (3.3%) in 2019.²⁴

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

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Cedar Rapids included Agriculture, Retail, and Education. In comparison Boone County's included Agriculture, Manufacturing, Retail, and Education.²⁵
- **Higher household income.** Cedar Rapids' median household income in 2019 (\$59,792) was about \$5,000 higher than the County (\$54,979).²⁶
- **Fewer long-distance commuters.** About 41.8% percent of workers in Cedar Rapids commuted for fewer than 15 minutes, compared with about 58.1% of workers in Boone County. About 21.3% of workers in Cedar Rapids commute 30 minutes or more to work, compared to about 18.7% of the County workers.²⁷

Major Employers

Major employers in the Village of Cedar Rapids includes Riverside Public Schools, Country Partners Co-op, and PST. According to the local planning team residents also commute to the nearby communities of Albion, Greeley, Fullerton, and St. Edward.

Housing

In comparison to the Boone County, Cedar Rapids' housing stock was:²⁸

- **More owner occupied.** About 85.0% of occupied housing units in Cedar Rapids are owner occupied compared with 76.2% of occupied housing in Boone County in 2019.
- **Larger share of aged housing stock.** Cedar Rapids has more houses built prior to 1970 than the county (76.3% compared to 60.1%).
- **Fewer multi-family homes.** The predominant housing type in the Village is single family detached and Cedar Rapids contains less multifamily housing with five or more units per structure than the County (0.0% compared to 2.0%). About 97.0% of housing in Cedar Rapids was single-family detached, compared with 88.9% of the County's housing. Cedar Rapids has a larger share of mobile and manufactured housing (2.2%) compared to the County (2.0%)

The local planning team noted that there are approximately six mobile homes located in the community. There is a mobile home park at 2nd and Dayton Streets and had four unoccupied units. Additionally, there is one unit at 2nd and South Streets, and one unit at 4th and Main Streets. According to a recent blight study, greater than fifty percent of the property is blighted within Cedar Rapids. 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.

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

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

²⁷ United States Census Bureau. "2019 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]

²⁸ United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Governance

A community’s governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Cedar Rapids has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The Village has a five-member village board and the following offices: clerk/treasurer, utility superintendent, civil defense director, volunteer fire department. Additionally Boone County Highway Superintendent, Boone County Zoning/Floodplain Administrator, Civil Defense Coordinator, Boone County sheriff, and Region 44 Emergency Management may assist the village in emergency response activities and mitigation activities.

Capabilities

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

Table CED.2: Capability Assessment

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

SURVEY COMPONENTS		YES/NO
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	
EDUCATION AND OUTREACH	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	Yes - LEPC
	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 Village USA	No
	Other (if any)	

Table CED.3: Overall Capability

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

Plan Integration

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

Grants and Funding

While some of Cedar Rapids’ municipal funds are available for new capital projects, a large portion of the village’s funds are slated for street projects. The village has applied for American Rescue Plan Act funds to be used for community upgrades.

Comprehensive Plan

The Village of Cedar Rapids plans to update their comprehensive plan within the next two years, or by 2023. The comprehensive plan limits development in areas adjacent to known hazard areas, primarily in the floodplain.

Capital Improvement Plan

Future projects to be considered within the village's capital improvement plan include drainage improvement and sewer system updates. The village's Capital Improvements Plan is reviewed and updated annually.

Building Codes (2018)

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

Boone County Local Emergency Operations Plan

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

Middle Northeast Nebraska Community Wildfire Protection Plan

The Nebraska Forest Service updated the Middle Northeast Community Wildfire Protection Plan (CWPP), which includes Boone County in October 2021. The purpose of the CWPP is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. This document is updated every five years.

Future Development Trends

In the past five years, Cedar Rapids has had two homes and one mobile home removed and replaced with new homes. Country Partners had a large bean storage expansion and fertilizer storage/mixing facility expanded. A new trucking shop was also built in the community. According to census data, Cedar Rapids' population is increasing. The local planning team attributes this to younger families moving to the community and additional housing stock becoming available. In the next five years, the village plans to demolish additional old houses and sell lots to develop additional housing.

Community Lifelines

Transportation

Cedar Rapids's major transportation corridors include Highway 52, which runs north-south, through the center of Cedar Rapids, and Highway 56, which runs west-east along the southern edge of the village. N-52 accommodates on average 480 vehicles per day, 35 of which are heavy commercial vehicles. N-56 accommodates on average 260 vehicles per day, 35 of which are heavy commercial vehicles. The local planning team noted that during the flooding in 2019, the bridges on Highway 52 and 56 were compromised and made transportation difficult. The Nebraska Central Railroad Company has a rail line along the western side of 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.

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 Cedar Rapids which houses hazardous materials. In the event of a chemical spill, Cedar Rapids Fire and Rescue and the Civil Defense Coordinator would be the first to respond to the incident. In the past, the Country Partners Cooperative had a fertilizer spill, but there were no impacts to the community.

Table CED.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
COUNTRY PARTNERS COOPERATIVE	605 W Main St	

Source: Nebraska Department of Environment and Energy²⁹

Critical Facilities

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

The American Red Cross has an agreement with the Cedar Rapids Fire Department to serve as a mass care facility during disaster events. The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table CED.5: Cedar Rapids Critical Facilities

CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Riverside High School	Y	Y	N
2	Safety and Security	Fire Hall	Y	Y	N
3	Food, Water, and Shelter	City Well	N	N	N

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

SECTION SEVEN: VILLAGE OF CEDAR RAPIDS COMMUNITY PROFILE

CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
4	Food, Water, and Shelter	Sewage Lagoon	N	Y	Y
5	Food, Water, and Shelter	Catholic Church	Y	N	N
6	Food, Water, and Shelter	Community Center	Y	N	N
7	Health and Medical	Medical Clinic	N	N	N
8	Food, Water, and Shelter	INS Agency	N	N	N

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

Health and Medical Facilities

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

Table CED.6: Cedar Rapids Health and Medical Facilities

NAME OF FACILITY	TYPE OF FACILITY	ADDRESS	NUMBER OF LICENSED BEDS
CEDAR RAPIDS MEDICAL CLINIC	Rural Health Clinic	106 S 3rd St, Cedar Rapids, NE 68627	N/A

Source: Nebraska Department of Health and Human Services^{30,31,32,33}

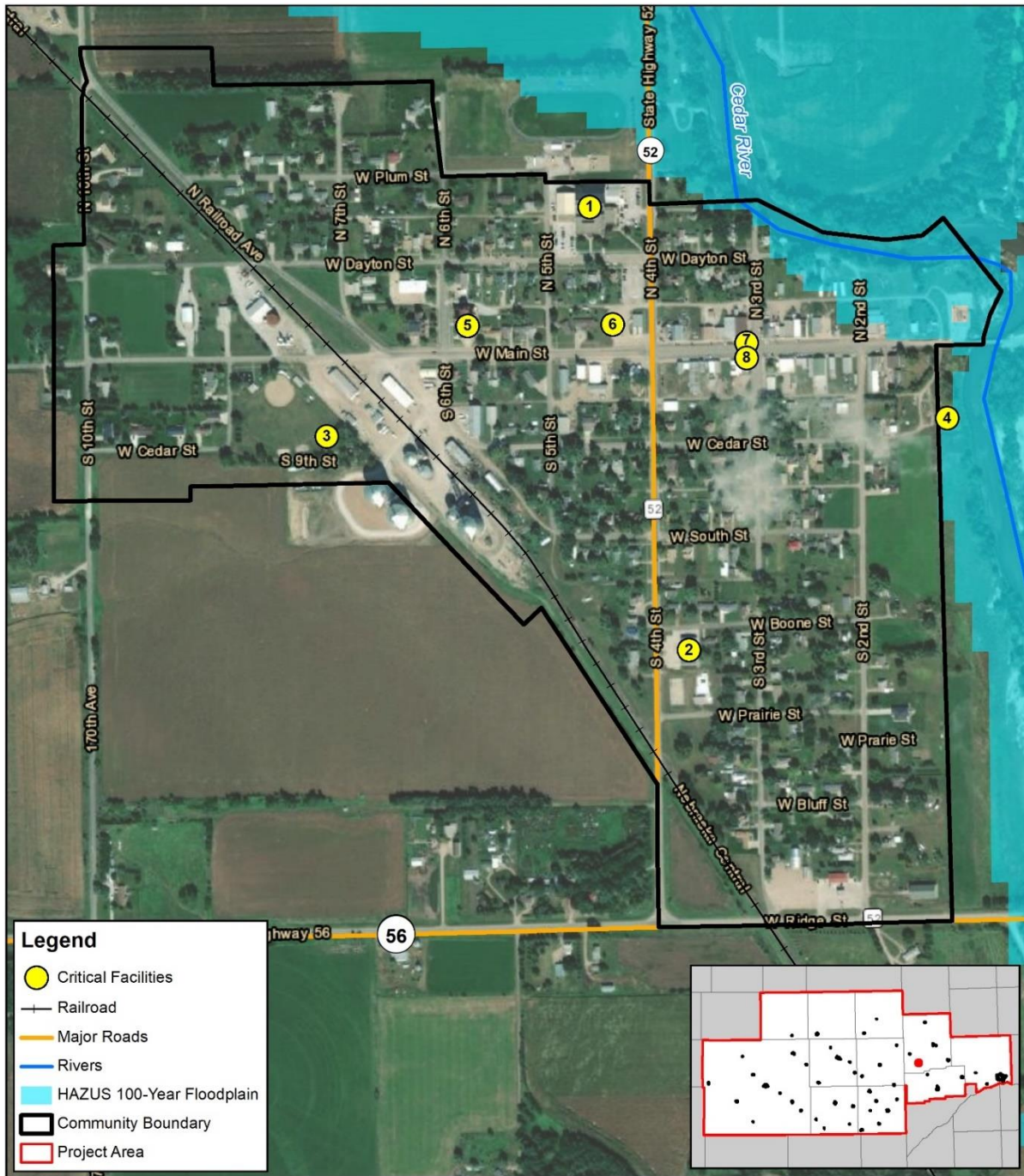
³⁰ Department of Health and Human Services. 2021. "State of Nebraska: Assisted Living Facilities." <https://dhhs.ne.gov/licensure/Documents/ALF%20Roster.pdf>.

³¹ Department of Health and Human Services. 2021. "State of Nebraska Roster: Hospitals." <https://dhhs.ne.gov/licensure/Documents/Hospital%20Roster.pdf>.

³² Department of Health and Human Services. 2021. "State of Nebraska Roster: Long Term Care Facilities." <https://dhhs.ne.gov/licensure/Documents/LTCRoster.pdf>.

³³ Department of Health and Human Services. 2021. "State of Nebraska Roster: Rural Health Clinic." https://dhhs.ne.gov/licensure/Documents/RHC_Roster.pdf.

Figure CED.3: Cedar Rapids Critical Facilities

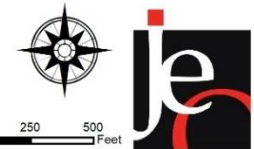


Created By: MW
 Date: 1/11/2022
 Software: ArcGIS 10.8.1
 File: Lower Loup_Critical Facilities.mxd

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

Village of Cedar Rapids

Critical Facilities



Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

Table CED.7: Cedar Rapids Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
320	314	14,104,315	15	123,600	4.78%

Source: County Assessor, GIS Workshop

Table CED.8: Cedar Rapids Flood Map Products

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
LOMA	02-07-252A-310258	2/1/2002	Residential structure removed from SFHA
LOMA	04-07-389A-310258	1/21/2004	Property removed from SFHA
LOMA	04-07-A020A-310258	5/6/2004	Portion of property removed from SFHA
LOMA	09-07-0247A-310258	1/27/2009	Structure removed from SFHA
LOMA	10-07-0888A-310258	4/13/2010	Structure removed from SFHA
LOMA	10-07-1201A-310258	5/6/2010	Structure removed from SFHA
LOMA	11-07-0980A-310258	3/2/2011	Structure removed from SFHA
LOMA	14-07-0318A-310258	11/19/2013	Property removed from SFHA
LOMA	14-07-1316A-310258	5/8/2014	Structure (residence) removed from SFHA
LOMA	16-07-1721A-310258	8/9/2016	Structure removed from SFHA
LOMA	18-07-1554A-310258	7/30/2018	Property removed from SFHA
LOMA	21-07-0538A-310258	2/16/2021	Property removed from SFHA
LOMA	22-07-0128A-310258	11/10/2021	Structure (residence) removed from SFHA

Source: FEMA Flood Map Service Center

Hazard Prioritization

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

Dam Failure

According to the Boone County LEOP, failure of the Spalding Dam would affect Cedar Rapids in an area slightly larger than the 100-year floodplain. However, the local planning team indicated that the failure of Spalding Dam would not affect Cedar Rapids. A study may be needed to determine the true inundation area of the dam. In the event of a dam failure, there may be high water through the north and east sides of town bordering the Cedar River. Major flooding in 2019 caused riverbank damage, street damage, and flood waters came in close proximity to the electric substation. The village completed a streambank stabilization program on two locations along the Cedar River in 2021. To mitigate this hazard, the village plans to maintain debris entering the waterway.

Table CED.9: High Hazard Dams

NIDID	DAM NAME	LOCATION
NE09926	NEBEL DAM	Northwest of Cedar Rapids
NE09927	PALMER DAM 9927	Northeast of Cedar Rapids

Source: NeDNR, 2017

Flooding

Cedar Rapids has three NFIP policies in-force for \$88,300. There are no repetitive flood loss properties in the Village of Cedar Rapids. The local planning team identified the north and east areas of the village along the Cedar River as the most prone to flooding. Major flooding in 2019 restricted access to the village and damaged riverbanks and roads. The school experienced damage to the football field, buildings, and equipment due to floodwaters. There were minor damages to homes and no evacuations were necessary. According to NCEI data, the flood event in 2019 caused approximately \$50,000 in property damages. To mitigate against this hazard in the future, the village plans to maintain debris removal from streams.

Severe Thunderstorms (includes hail)

Local concerns regarding severe thunderstorms focus on the potential for power outages, damages to trees, and property damages. The NCEI reported 8 severe thunderstorm wind events in Cedar Rapids from 1996 to 2021 and resulted in \$50,000 in property damages. The local planning team noted that severe thunderstorms occur in Cedar Rapids several times annually.

Hail was selected as one of the top concerns for Cedar Rapids due to the potential for widespread property damages. The NCEI reported 19 hail events in Cedar Rapids from 1996 to 2021. The NCEI did not report any property damages associated with these hail events; however, the local planning team indicated that hail events regularly result in minor damages to homes and property.

Some residential power lines are buried in the village. The sewer plant has a backup generator, and the village wells are setup for a PTO generator.

Tornadoes and High Winds

Local concerns regarding tornadoes include the potential for property damages and loss of life. Text alerts are offered by Region 44 Emergency Management. The village has a warning siren located next to city hall that is activated remotely by the Boone County Sheriff's Office but can also be activated manually by qualified individuals. The siren is faint in the south and east parts of town.

Mitigation Strategy

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate current backup and emergency generators 2. Obtain additional generators based on identification and evaluation 3. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
ESTIMATED COST	\$20,000 to \$75,000+ per generator
POTENTIAL FUNDING	Cedar Rapids General Fund, HMGP
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	Village Board, Fire Department, Region 44 Emergency Management
STATUS	This project has not yet been started.

OBJECTIVE	COMMUNITY EDUCATION AND AWARENESS
DESCRIPTION	<ol style="list-style-type: none"> 11. Establish a community education program to increase awareness related to household level mitigation actions 12. Utilize outreach projects and the distribution of maps 13. Purchasing equipment such as projectors and laptops to facilitate presentation of information
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$3,000+
POTENTIAL FUNDING	Region 44 Emergency Management Budget, East Central Nebraska COAD (Community Organizations Active in Disasters), Cedar Rapids General Fund
TIMELINE	2-5 years
PRIORITY	Low
LEAD AGENCY	Region 44 Emergency Management, Fire Department, Village Board
STATUS	This project has not yet been started.

OBJECTIVE	DEVELOP/UPDATE FLOODPLAIN INFORMATION
DESCRIPTION	1. Conduct mapping/remapping of floodplain 2. Revise floodplain /insurance maps
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Unknown
POTENTIAL FUNDING	Cedar Rapids General Fund
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Zoning Department, NeDNR
STATUS	This project has not yet been started. Cedar Rapids is currently in the process of working with NeDNR for digital flood plain mapping efforts.

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 Clerk, Fire Chief, and Village Board will annually review the city's profile. They will notify the public via public notices and at board meetings.

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COMMUNITY PROFILE

VILLAGE OF PETERSBURG

Lower Loup Natural Resources District Hazard Mitigation Plan 2022

Local Planning Team

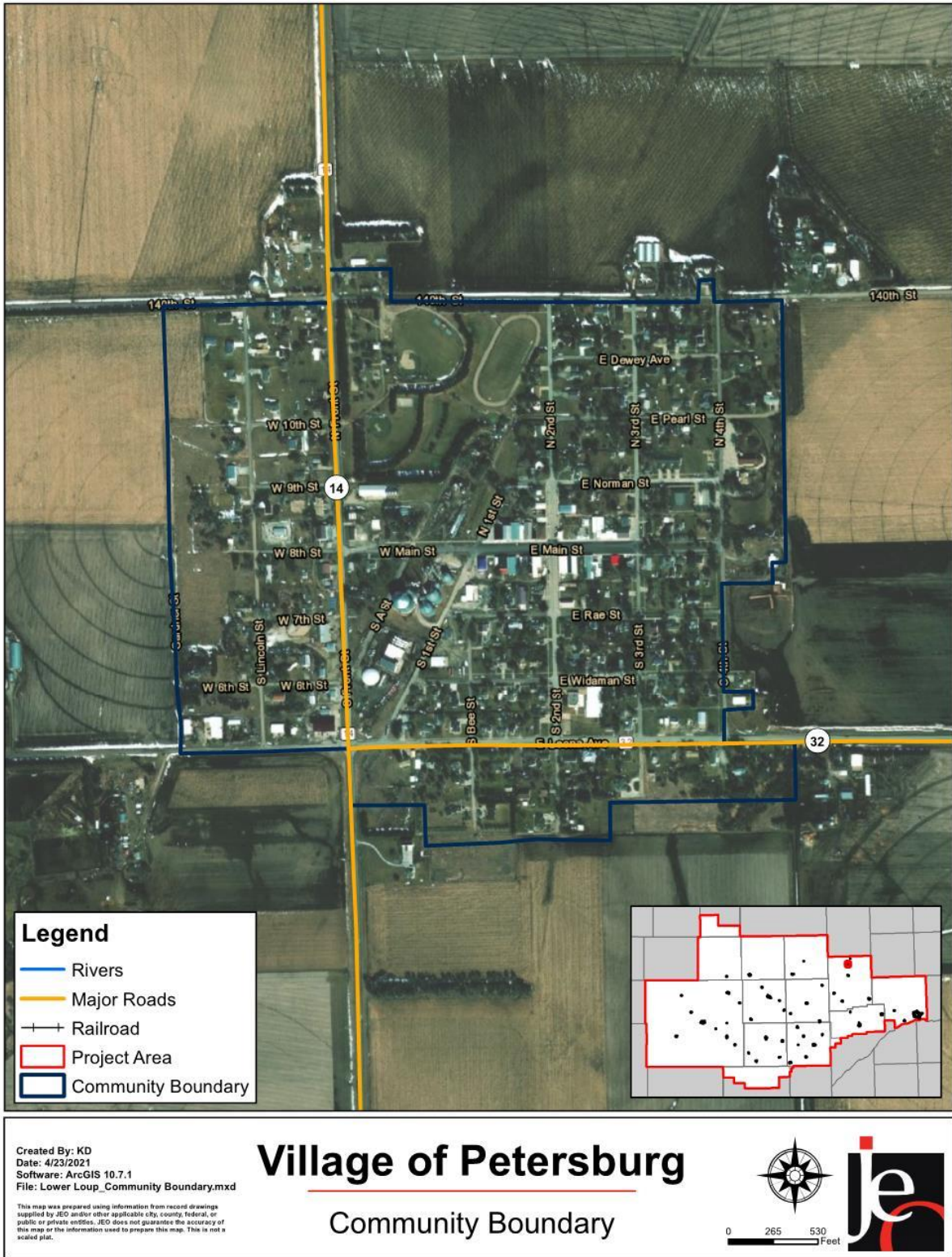
Table PET.1: Village of Petersburg Local Planning Team

NAME	TITLE	JURISDICTION
SUNDAE PROVENDER	Village Clerk	Village of Petersburg
COREY STOKES	Board Chairman	Village of Petersburg

Location and Geography

The Village of Petersburg is located in the northern portion of Boone County. The Village of Petersburg covers an area of 0.37 square miles. There are no major water ways near Petersburg. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Most of Petersburg lies in the sandhills and valleys topographic regions, and is surrounded by agricultural fields.

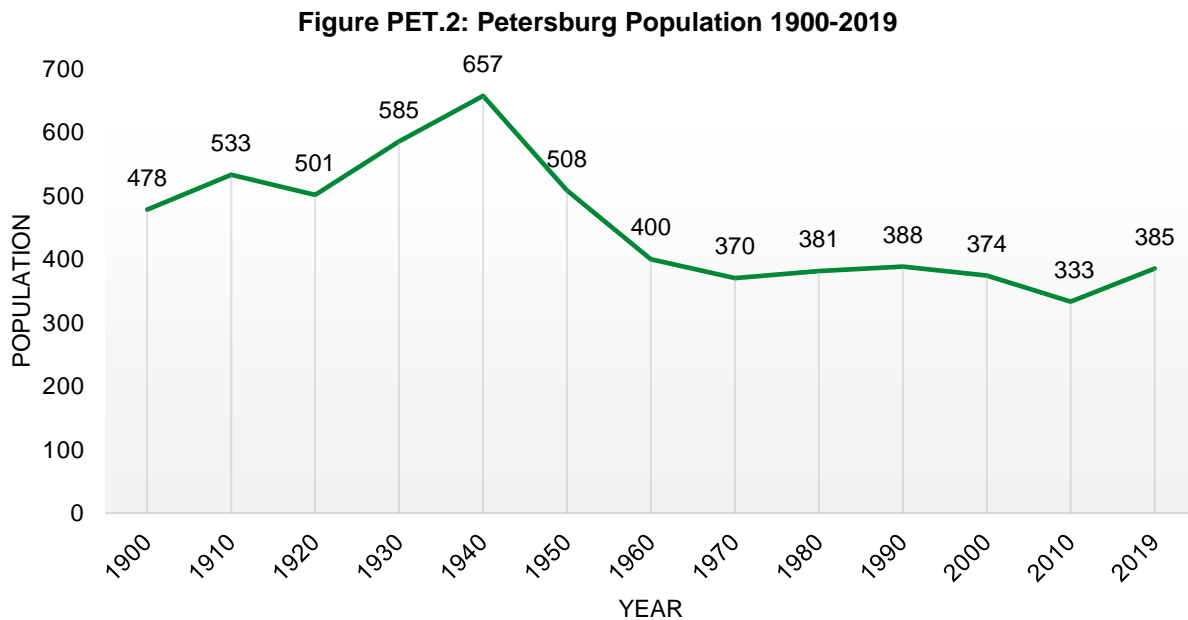
Figure PET.1: Village of Petersburg Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1900 to 2019 (estimated). This figure indicates that the population of Petersburg experienced a decline from 1940 through 1970. Between 1970 and 2010 the population fluctuated up and down, but has increased in recent years. However, the local planning team indicated the 2010 census number of 333 is most accurate for the village.

Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Increasing populations can also contribute to increasing tax revenues, allowing communities to pursue additional mitigation projects. The Village's population accounted for 7% of Boone County's Population in 2019.



Source: U.S. Census Bureau³⁴

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

- **Younger.** The median age of Petersburg was 47.3 years old in 2019, compared with the County average of 44.8 years. Petersburg's population has grown younger since 2010, when the median age was 47.9 years old. Petersburg had a larger proportion of people under 20 years old (27.7%) than the County (25.2%).³⁵
- **Less ethnically diverse.** Between 2010 and 2019, Petersburg's population grew from 0% two or more races to 0.7%. During that time, Boone County went from 0% to 0.10% American Indian, 0% to 0% other races and 0.1% to 0.5% two or more races from 2010 to 2019 respectively.³⁶
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Petersburg (2.7%) was lower than the County (3.3%) in 2019.³⁷

³⁴ United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]

³⁵ United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]

³⁶ United States Census Bureau. "2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

³⁷ United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Petersburg included Agriculture, Construction, and Education. In comparison Boone County's included Agriculture, Manufacturing, Retail, and Education.³⁸
- **Lower household income.** Petersburg's median household income in 2019 (\$44,464) was about \$10,000 lower than the County (\$54,979).³⁹
- **Fewer long-distance commuters.** About 45.2% percent of workers in Petersburg commuted for fewer than 15 minutes, compared with about 58.1% of workers in Boone County. About 14.7% of workers in Petersburg commute 30 minutes or more to work, compared to about 18.7% of the County workers.⁴⁰

Major Employers

Major employers in the Village of Petersburg include Helena Chemical Company, Knotty Pine restaurant and bar, Rae Valley grocery store, and the local bank. Many residents also commute to Albion or the surrounding areas for work.

Housing

In comparison to the Boone County, Petersburg's housing stock was:⁴¹

- **More owner occupied.** About 81.4% of occupied housing units in Petersburg are owner occupied compared with 76.2% of occupied housing in Boone County in 2019.
- **Larger share of aged housing stock.** Petersburg has more houses built prior to 1970 than the county (61.7% compared to 60.1%).
- **More multi-family homes.** The predominant housing type in the Village is single family detached and Petersburg contains more multifamily housing with five or more units per structure than the County (9.0% compared to 2.0%). About 91.0% of housing in Petersburg was single-family detached, compared with 88.9% of the County's housing. Petersburg has a smaller share of mobile and manufactured housing (0.0%) compared to the County (2.0%)

The local planning team noted there are a few vacant properties in town and several lots have recently sold. Some new homes on the west side of town have recently been constructed. 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.

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

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

40 United States Census Bureau. "2019 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]

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

Governance

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

Capabilities

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

Table PET.2: Capability Assessment

	SURVEY COMPONENTS	YES/NO
PLANNING & REGULATORY CAPABILITY	Comprehensive Plan	<i>Yes – updating in 2022</i>
	Capital Improvements Plan	<i>No</i>
	Economic Development Plan	<i>No</i>
	Local Emergency Operational Plan	<i>County</i>
	Floodplain Ordinance	<i>No</i>
	Zoning Ordinance	<i>Yes</i>
	Subdivision Regulation/Ordinance	<i>Yes</i>
	Building Codes	<i>No</i>
	Chief Building Official	<i>No</i>
	Floodplain Management Plan	<i>No</i>
	Storm Water Management Plan	<i>No</i>
	National Flood Insurance Program	<i>Yes</i>
	Community Rating System	<i>No</i>
Other (if any)		
ADMINISTRATIVE & TECHNICAL CAPABILITY	Planning Commission	<i>No</i>
	Floodplain Administration	<i>No</i>
	GIS Capabilities	<i>No</i>
	Civil Engineering	<i>No</i>
	Local Staff Who Can Assess Community's Vulnerability to Hazards	<i>Yes</i>
	Grant Manager	<i>No</i>
	Mutual Aid Agreement	<i>Yes</i>
	Other (if any)	
FISCAL CAPABILITY	1 & 6 Year Plan	<i>Yes</i>
	Applied for grants in the past	<i>Yes</i>
	Awarded a grant in the past	<i>Unknown</i>
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	<i>Yes</i>
	Gas/Electric Service Fees	<i>No</i>
	Storm Water Service Fees	<i>No</i>
	Water/Sewer Service Fees	<i>Yes</i>

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

Table PET.3: Overall Capability

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

Plan Integration

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

Grants and Funding

Petersburg’s municipal funds are limited to maintaining current facilities and systems and have remained relatively stable over the past decade. The majority of currently available funds are earmarked for future road construction and development plan; however, hazard mitigation projects including a new siren, communications tower, and generator are identified in the municipal budget.

The village has used grants in the past to assist with project implementation including a public water system security grant in 2020 and they have applied for a HMA grant for a generator.

Comprehensive Plan

Petersburg Comprehensive Plan was last updated in 1999 and is scheduled to be updated in 2022. The 1999 plan integrates hazard mitigation in the following ways: directs development away from chemical storage facilities, directs development away from major transportation routes, limits density in areas adjacent to known hazardous areas, encourages infill development, and encourages “clustering of development” in sensitive areas.

Ordinances and Regulations

Petersburg’s zoning ordinance was last updated in 1999 and is scheduled to be updated in 2022. The regulations integrate hazard mitigation in the following ways: requires more than one-foot of elevation above Base Flood Elevation in the floodplain and prohibits development within the floodways or floodplains. The zoning ordinance also includes well setback requirements. The village utilizes the City of Albion’s building codes and building official for all new development.

Boone County Local Emergency Operations Plan

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

Middle Northeast Nebraska Community Wildfire Protection Plan

The Nebraska Forest Service updated the Middle Northeast Community Wildfire Protection Plan (CWPP), which includes Boone County in October 2021. The purpose of the CWPP is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. This document is updated every five years.

Future Development Trends

In the past five years, Petersburg has experienced some commercial and housing development. An annex for Koch’s 3rd addition has added additional homes to the community. In the next five years the village anticipates some additional businesses and road improvements. The population in Petersburg has remained relatively stable over the past several years which the local planning team attributes to families passing down land and continuing to live and work in the area.

Community Lifelines

Transportation

Petersburg’s major transportation corridors include Highway 14, which runs north-south, through the center of Petersburg. N-14 accommodates on average 2,185 vehicles per day, 310 of which are heavy commercial vehicles. Petersburg does not have rail lines. The local planning team noted the road near Rae Valley grocery will be undergoing improvements by 2022. This

information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are five chemical storage sites throughout Petersburg which house hazardous materials. In the case of chemical spill the local rural fire district would respond. The fire district has about 35 active members.

Table PET.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
HELENA AGRI-ENTERPRISES LLC	113 Main St	N
ZABKA SERVICE	300 S Front St	N
TPW PETERSBURG LLC	2652 State Highway 32	N
LAREDO RIDGE WIND LLC	2443 State Highway 32	N
NDOT SALT BRINE STORAGE YARD	Jct Norman & A Sts	N

Source: Nebraska Department of Environment and Energy⁴²

Critical Facilities

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

The American Red Cross has agreements with the Petersburg Fire Department and Boone Central Middle School to serve as mass care facilities during disaster events. The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table PET.5: Petersburg Critical Facilities

CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Boone Central Middle School Grades 6-8	Y	N	N
2	Safety and Security	Fire Station	Y	Y	N
3	Food, Water, and Shelter	St. John Baptist Church	Y	N	N
4	Food, Water, and Shelter	Wastewater Treatment	N	Y	N
5	Food, Water, and Shelter	Water Tower	N	N	N
6	Food, Water, and Shelter	Well-1979	N	Y	N
7	Food, Water, and Shelter	Well-2000	N	Y	N

⁴² Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

SECTION SEVEN: VILLAGE OF PETERSBURG COMMUNITY PROFILE

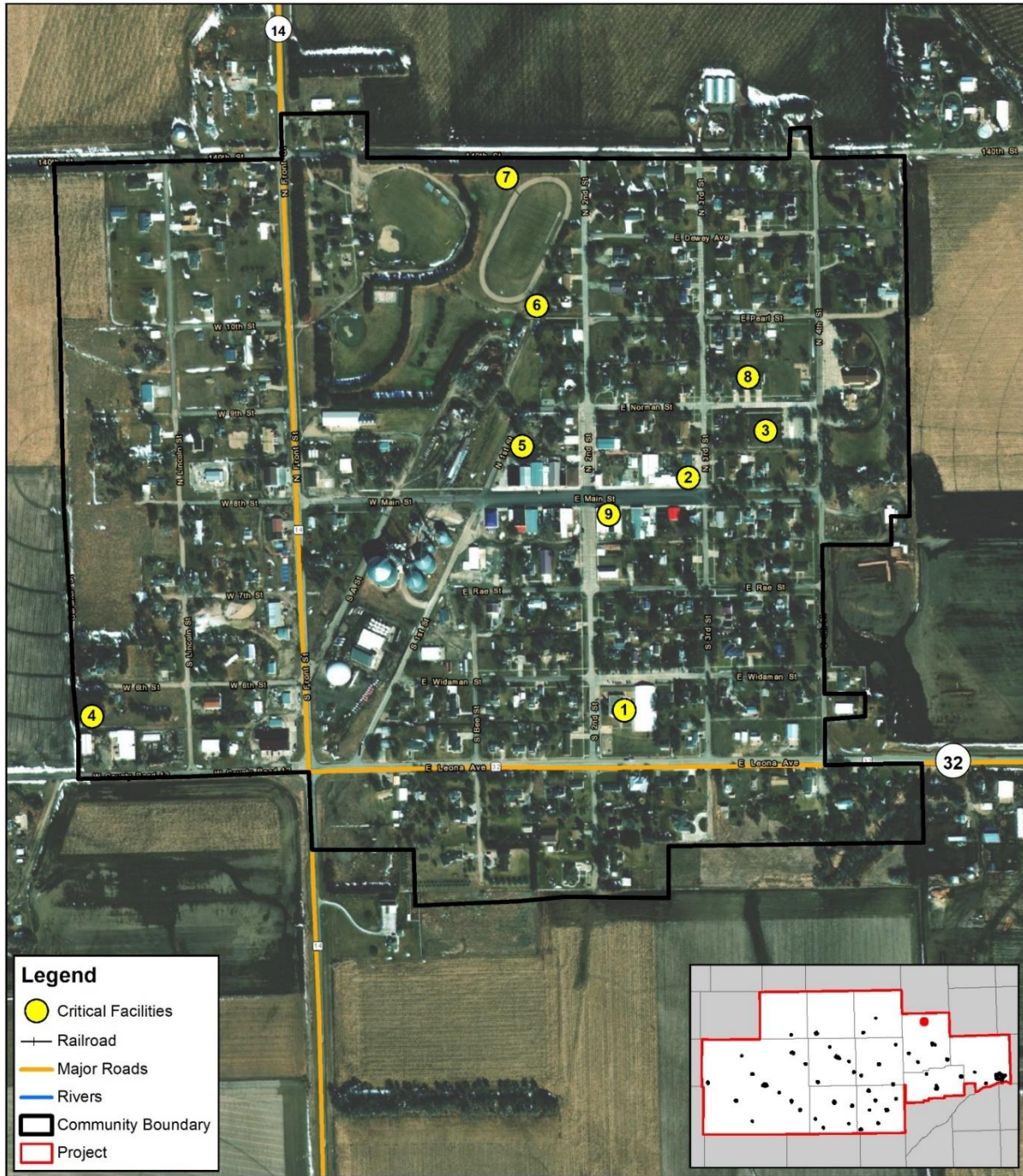
CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
8	Food, Water, and Shelter	Petersburg Country Cottages (Senior Low-Income Housing)	N	N	N
9	Safety and Security	Petersburg Village Office	N	N	N
10	Safety and Security	Village Shop	N	N	N

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

Health and Medical Facilities

According to the Nebraska Department of Health and Human Services there are no licensed childcare or preschool facilities in the Village of Petersburg. However, the local planning team noted there are two in-home daycares for local residents.

Figure PET.3: Petersburg Critical Facilities

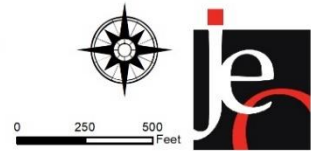


Created By: MW
 Date: 1/11/2022
 Software: ArcGIS 10.8.1
 File: Lower Loup_Critical Facilities.mxd

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

Village of Petersburg

Critical Facilities



Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table. The Village of Petersburg does not have any flood map service products currently.

Table PET.7: Petersburg Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
311	305	19,101,195	0	0%	0

Source: County Assessor, GIS Workshop

Hazard Prioritization

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

Severe Thunderstorms

Severe thunderstorms are common across the planning area and include heavy rain, lightning, hail, and strong winds. Local concerns regarding severe thunderstorms include the potential for property damages (specifically from hail) and the loss of power. In June 2012, a significant hail event caused widespread property damage across town. In 2013, a severe thunderstorm went through Petersburg, causing severe damage to all homes, businesses and facilities in town. Past lightning strikes have caused damage to the local water tower. Petersburg is currently updating the local stormwater system to install a generator connector. The village has a portable backup generators for water and sewer facilities stored at the village shop. Less than five percent of power lines are buried within the village. Loup Power District provides power to the village while Cornhusker Power provides service to the surrounding areas. Weather radios are located within the fire hall. Municipal critical facilities are insured for hail damage.

Severe Winter Storms

Severe winter storms include impacts from heavy snow, blizzards, ice storms, extreme cold, and winter storms. Severe ice and snow storms in 2007 and 2008 caused loss of power for days, and impassable roads. Local concerns regarding severe winter storms include the ability to open roads, move snow, and maintain fuel supply. The local Casey’s has run out of fuel in the past during severe storms which block transportation routes for several days. Many residents in town do not have personal backup generators in case of power outages. The utility superintendent and part time help remove snow within the community. The village has a snow truck, pay loader, and skid loader to remove snow. Petersburg’s snow removal equipment is very old and would need to be upgraded soon.

Tornadoes and High Winds

Local concerns regarding high winds and tornadoes include the potential for damage to power lines, knocking down sirens, and other tall structures. High wind events in 2012 and 2014 took down tree branches and took shingles off roofs. The local planning team noted some trees in Petersburg are damaged from Pine Blight or are overhanging streets. The village is currently working to remove these trees. Municipal records have a data backup system in place. The fire hall has a new reinforced cement safe room and shelter can be found in the bank building during work hours, as well as the St. John's Church basement. Region 44 Emergency Management offers text alerts.

Vulnerable populations include those in the low-income senior housing facility. Petersburg's municipal records are backed up weekly and additional backups are made on flash drives. Petersburg has three warning sirens that are activated manually, but there are areas of the village that are not reached by the current sirens. The sirens also go off for grass/wildfire events and continue to sound until local volunteers respond to an event. In the event of a disaster, Petersburg has mutual aid agreements with Elgin and Albion.

Flooding

Flooding was not identified as a hazard of top concern for the village. Boone County and the Village of Petersburg are currently in a remapping effort for DFIRMS with NeDNR. Currently there are no DFIRMS established for the county; however, identified floodplains are located to the west and east of the village according to the paper maps from 1999. Fairmont does not participate in the NFIP.

Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	IMPROVE SNOW REMOVAL AND RESCUE PROGRAM
DESCRIPTION	<ol style="list-style-type: none"> 1. Revise and improve snow and ice removal program for streets 2. Address situations such as plowing snow, ice removal, parking during snow, ice removal and removal of associated storm debris 3. Improve capabilities to rescue those stranded in blizzards and increase the capacity to which snow can be removed from roadways after an event
HAZARD(S) ADDRESSED	Severe Winter Storms
STATUS	The village has agreements in place for a bobcat for snow removal and purchased a new plow for a truck in 2017.

SECTION SEVEN: VILLAGE OF PETERSBURG COMMUNITY PROFILE

OBJECTIVE	PUBLIC SAFE ROOMS/STORM SHELTERS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate existing safe rooms and/or storm shelters 2. Improve and/or construct safe rooms and/or storm shelters 3. Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
HAZARD(S) ADDRESSED	All Hazards
STATUS	New storm shelter completed in 2019.

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	<ol style="list-style-type: none"> 4. Identify and evaluate current backup and emergency generators 5. Obtain additional generators based on identification and evaluation 6. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$20,000 to \$75,000+ per generator
POTENTIAL FUNDING	Petersburg General Fund, Fundraising
TIMELINE	1 Year
PRIORITY	All Hazards
LEAD AGENCY	Civil Defense, Region 44 Emergency Management, Village Board
STATUS	The village is currently exploring funding options for a backup generator.

OBJECTIVE	COMMUNITY EDUCATION AND AWARENESS
DESCRIPTION	<ol style="list-style-type: none"> 1. Establish a community education program to increase awareness related to household level mitigation actions 2. Utilize outreach projects and the distribution of maps 3. Purchasing equipment such as projectors and laptops to facilitate presentation of information
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$3,000+
POTENTIAL FUNDING	Region 44 Emergency Management Budget, East Central Nebraska COAD (Community Organizations Active in Disasters), Petersburg General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Civil Defense, Region 44 Emergency Management
STATUS	This project has not yet been started.

SECTION SEVEN: VILLAGE OF PETERSBURG COMMUNITY PROFILE

OBJECTIVE	EMERGENCY FUEL SUPPLY PLAN
DESCRIPTION	<ol style="list-style-type: none"> 1. Plan to ensure adequate fuel supply is available during an emergency 2. Prioritization and rationing plans for gasoline and diesel uses in extended loss of fuel supply or electric power supply; plans to purchase local fuel supply; etc.
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$1,000+ Staff Time
POTENTIAL FUNDING	Petersburg General Fund
TIMELINE	1 Year
PRIORITY	High
LEAD AGENCY	Civil Defense, Region 44 Emergency Management
STATUS	This project has not yet been started.

OBJECTIVE	HAIL INSURANCE
DESCRIPTION	<ol style="list-style-type: none"> 1. Ensure critical facilities have insurance for hail damage
HAZARD(S) ADDRESSED	Hail
ESTIMATED COST	Varies by structure
POTENTIAL FUNDING	Petersburg General Fund
TIMELINE	1 Year
PRIORITY	High
LEAD AGENCY	Civil Defense, Village Clerk
STATUS	This project has not yet been started.

OBJECTIVE	IMPROVE EMERGENCY COMMUNICATIONS
DESCRIPTION	<ol style="list-style-type: none"> 1. Develop/Improve Emergency Communication Action plan 2. Implement Emergency Communication Action Plan 3. Establish inner-operable communications 4. Obtain/Upgrade Emergency Communication Facilities/Equipment 5. Obtain/Upgrade/Distribute Weather Warning Radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$1,000+ Staff Time
POTENTIAL FUNDING	Petersburg General Fund
TIMELINE	1 Year
PRIORITY	High
LEAD AGENCY	Civil Defense, Region 44 Emergency Management
STATUS	The village and county emergency management are currently working to install a new communications tower for emergency purposes.

SECTION SEVEN: VILLAGE OF PETERSBURG COMMUNITY PROFILE

OBJECTIVE	IMPROVE WARNING SIRENS
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate current warning systems 2. Improve warning systems/develop new warning system 3. Obtain/Upgrade warning system equipment and methods 4. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 5. Identify location of weather warning radios 6. Improve weather radio system 7. Obtain/Upgrade weather radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$15,000+
POTENTIAL FUNDING	Petersburg General Fund, HMGP, PDM
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Civil Defense, Region 44 Emergency Management
STATUS	The village and Region 44 are currently evaluating areas in need of a new siren.

OBJECTIVE	RELOCATE MUNICIPAL INFRASTRUCTURE
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate current placement and vulnerability of municipal infrastructure 2. Acquire Geographic Information System (GIS) to relocate municipal infrastructure (water lines, sewer lines, etc.)
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$1,500+ Single User; Staff Time
POTENTIAL FUNDING	Petersburg General Fund
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

OBJECTIVE	RESURFACE ROADS
DESCRIPTION	<ol style="list-style-type: none"> 1. Resurface County Road 12 West of Petersburg, as the road is currently too rough for ambulance/fire
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	Unknown
POTENTIAL FUNDING	County Road Fund
TIMELINE	2-5 Years
PRIORITY	High
LEAD AGENCY	County Roads Superintendent, Village Board
STATUS	The road has been temporarily fixed after major storms and will be repaved by 2024.

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 Fire Chief, Utility Supervisor, Chairperson, and Village Clerk will bi-annually review the community profile. They will notify the public via social media and the village's website.

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COMMUNITY PROFILE

VILLAGE OF PRIMROSE

Lower Loup Natural Resources District Hazard Mitigation Plan 2022

Local Planning Team

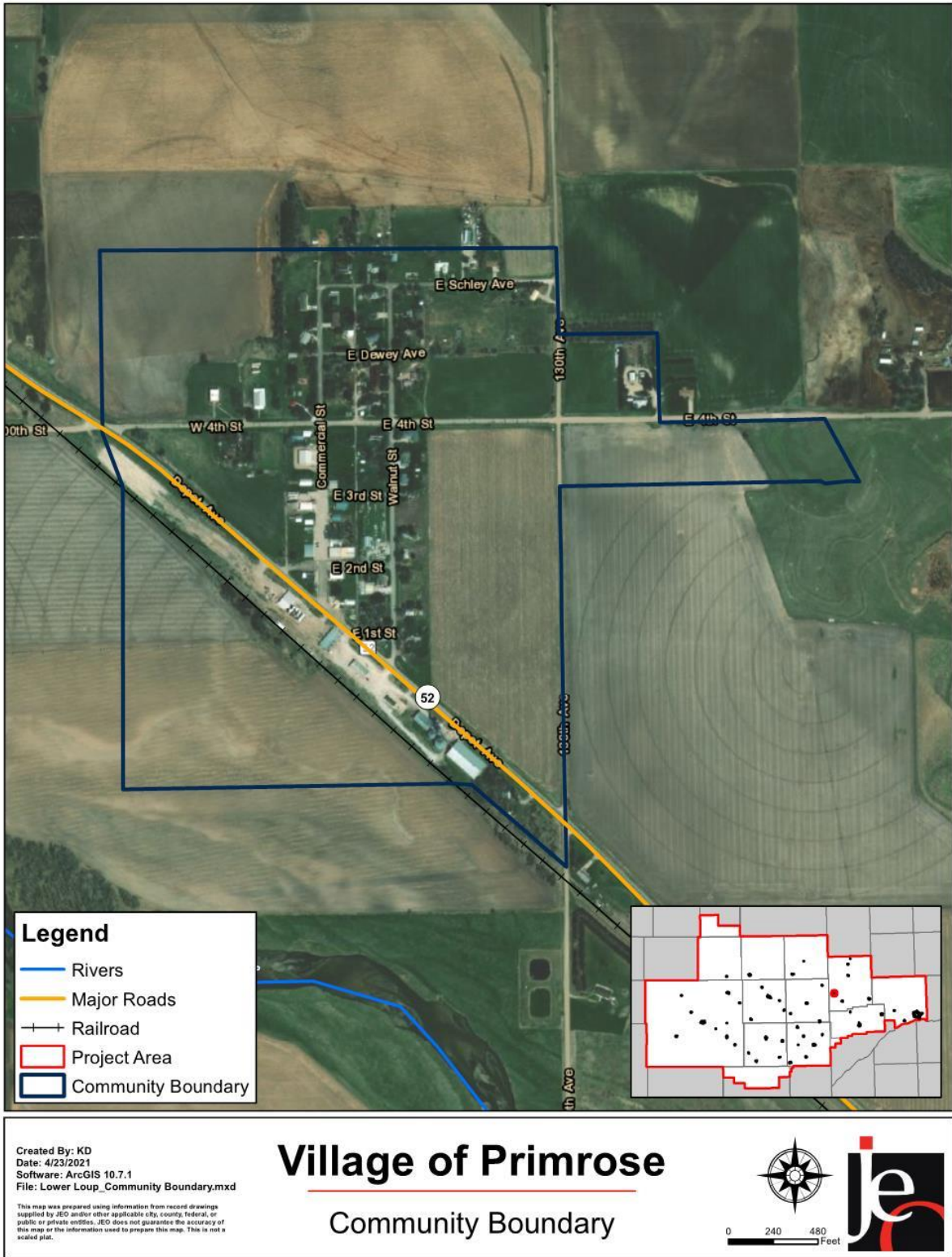
Table PRI.1: Village of Primrose Local Planning Team

NAME	TITLE	JURISDICTION
IRENE DRESCH	Village Clerk	Village of Primrose

Location and Geography

The Village of Primrose is located in the south western portion of Boone County. The Village of Primrose covers an area of 0.28 square miles. The Cedar River runs along the south side of the village. The area is not heavily forested. Most of Primrose lies in the dissected plains topographic region, and is surrounded by agricultural fields.

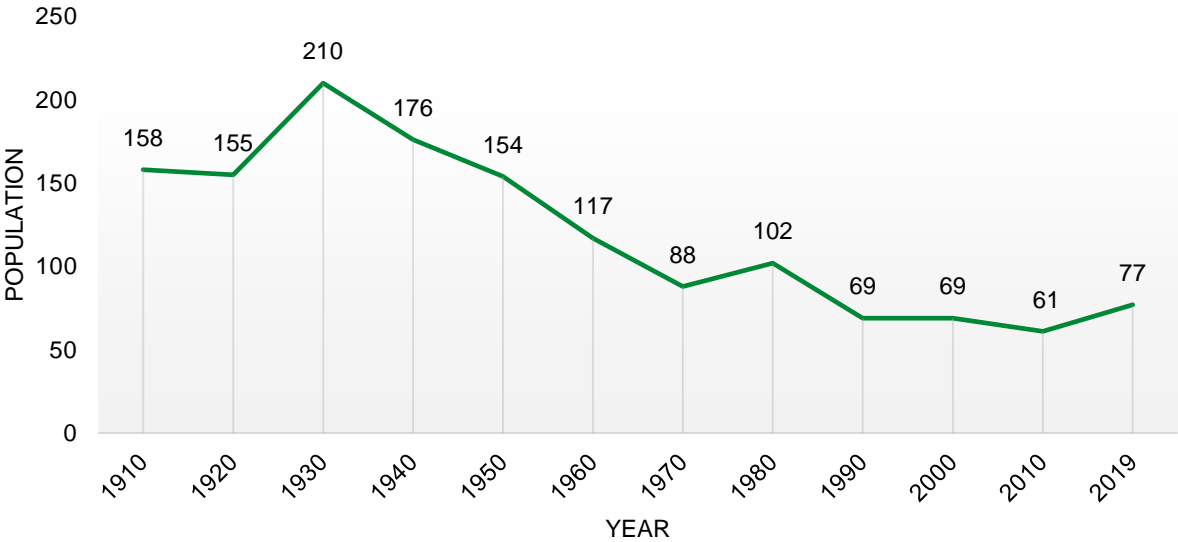
Figure DAY.1: Village of Primrose Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1910 to 2019 (estimated). This figure indicates that the population of Primrose experienced a decline from 1930 through 1970. During the 1980s the population grew, then declined again from 1990 to 2010. Since 2010, however, the population has been increasing. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Increasing populations can also contribute to increasing tax revenues, allowing communities to pursue additional mitigation projects. The Village’s population accounted for 15% of Boone County’s Population in 2019

Figure PRI.2: Primrose Population 1910-2019



Source: U.S. Census Bureau⁴³

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

- **Younger.** The median age of Primrose was 45.5 years old in 2019, compared with the County average of 44.8 years. Primrose’s population has grown younger since 2010, when the median age was 59.4 years old. Primrose had a smaller proportion of people under 20 years old (14.7%) than the County (25.2%).⁴⁴
- **Less ethnically diverse.** In 2010, 0% of Primrose’s population was Black or African American, 0% was other races, and 0% were two or more races. By 2019, only 0% of Primrose’s population was two or more races. During that time, Boone County had 0% to 0.10% American Indian, 0% to 0% other races and 0.1% to 0.5% two or more races from 2010 to 2019 respectively.⁴⁵
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Primrose (0%) was lower than the County (3.3%) in 2019.⁴⁶

⁴³ United States Census Bureau. “2019 American Fact Finder: S0101: Age and Sex.” [database file]
⁴⁴ United States Census Bureau. “2019 American Fact Finder: S0101: Age and Sex.” [database file]
⁴⁵ United States Census Bureau. “2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates.” [database file]
⁴⁶ United States Census Bureau. “2019 American Fact Finder: DP03: Selected Economic Characteristics.” [database file]

Employment and Economics

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

- **Different mix of industries.** Employment sectors accounting for 10% or more of employment in Primrose included Agriculture, Education, and Entertainment. In comparison Boone County's included Agriculture, Manufacturing, Retail, and Education.⁴⁷
- **Higher household income.** Primrose's median household income in 2019 (\$60,750) was about \$6,000 higher than the County (\$54,979).⁴⁸
- **Fewer long-distance commuters.** About 51.2% percent of workers in Primrose commuted for fewer than 15 minutes, compared with about 58.1% of workers in Boone County. About 19.4% of workers in Primrose commute 30 minutes or more to work, compared to about 18.7% of the County workers.⁴⁹

Major Employers

Since the Country Partners Co-op closed in 2019, there are no longer any major employers in the Village of Primrose. The local planning team noted that approximately 90% of residents commute for work to the following communities: Albion, Spalding, Cedar Rapids, Lindsey, and Grand island.

Housing

In comparison to the Boone County, Primrose's housing stock was:⁵⁰

- **More owner occupied.** About 81.8% of occupied housing units in Primrose are owner occupied compared with 76.2% of occupied housing in Boone County in 2019.
- **Smaller share of aged housing stock.** Primrose has fewer houses built prior to 1970 than the county (55.2% compared to 60.1%).
- **Fewer multi-family homes.** The predominant housing type in the Village is single family detached and Primrose contains more multifamily housing with five or more units per structure than the County (0.0% compared to 2.0%). About 92.1% of housing in Primrose was single-family detached, compared with 88.9% of the County's housing. Primrose has a smaller share of mobile and manufactured housing (7.9%) compared to the County (2.0%)

The local planning team noted that there are no mobile homes in the community, but that there are approximately five manufactured homes. 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.

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

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

49 United States Census Bureau. "2019 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]

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

Governance

A community’s governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Primrose has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The Village has a five-member village board. Other departments in the community that could assist with hazard mitigation related activities includes the Primrose Volunteer Fire Department and Rural Fire District #5.

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 PRI.2: Capability Assessment

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

SURVEY COMPONENTS		YES/NO
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	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 PRI.3: Overall Capability

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

Plan Integration

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

Grants and Funding

Primrose's municipal funds are generally limited to maintaining current facilities and systems and have remained relatively stable over the past decade. The majority of currently available funds are earmarked for maintenance of roads and community buildings.

Boone County Local Emergency Operations Plan

The Village of Primrose is an annex in the Boone County Local Emergency Operations Plan (LEOP). The LEOP establishes standardized policies, plans, guidelines, and procedures for emergency resources and governmental entities to respond and recover when a disaster event occurs. It contains information regarding direction and control, communications and warning, damage assessment, emergency public information, evacuation, fire services, health and human

services, law enforcement, mass care, protective shelters, and resource management. This plan is updated every five years.

Middle Northeast Nebraska Community Wildfire Protection Plan

The Nebraska Forest Service updated the Middle Northeast Community Wildfire Protection Plan (CWPP), which includes Boone County in October 2021. The purpose of the CWPP is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. This document is updated every five years.

Future Development Trends

There have been no new developments or businesses in the village in the past five years. According to census data, Primrose’s population is decreasing, which may be attributed to lack of job opportunities in the community.

Community Lifelines

Transportation

Primrose’s major transportation corridors include Highway 52, which runs southeast-northwest, along the southern portion of Primrose. N-52 accommodates on average 355 vehicles per day, 25 of which are heavy commercial vehicles. The Nebraska Central Railroad Company has a rail line that runs along Highway 52 on the southern side of 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.

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 Primrose which houses hazardous materials. In the event of a chemical spill, the Primrose Volunteer Fire Department be the first to respond to the incident. Primrose has mutual aid agreements in place with the Scotia, Spalding, Greeley, Cedar Rapids, and Wolbach Fire Departments.

Table PRI.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
COUNTRY PARTNERS COOPERATIVE	100 Depot Ave	

Source: Nebraska Department of Environment and Energy⁵¹

Critical Facilities

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

⁵¹ Nebraska Department of Environment and Energy. “Search Tier II Data.” Accessed August 2020.

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

Table PRI.5: Primrose Critical Facilities

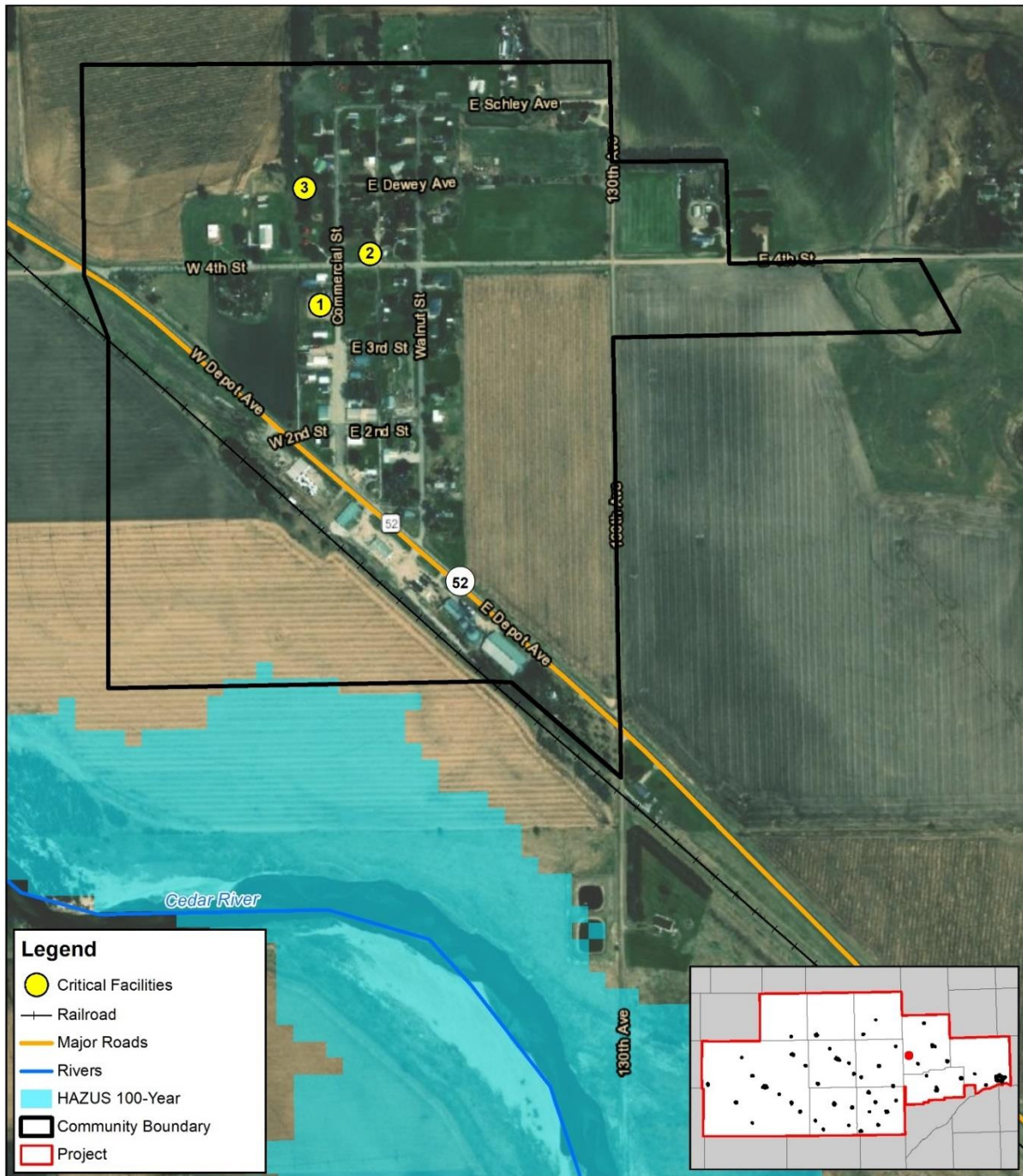
CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Safety and Security	Primrose Fire Department	Y	Y	N
2	Food, Water, and Shelter	Well Pump House	N	N	N
3	Food, Water, and Shelter	Well Pump House	N	N	N

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

Health and Medical Facilities

No medical and health facilities are located within the village.

Figure PRI.3: Primrose Critical Facilities



Legend

- Critical Facilities
- +— Railroad
- Major Roads
- Rivers
- HAZUS 100-Year
- Community Boundary
- Project

Created By: MW
 Date: 1/11/2022
 Software: ArcGIS 10.8.1
 File: Lower Loup_Critical Facilities.mxd

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

Village of Primrose

Critical Facilities

0 250 500 Feet

Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

Table PRI.7: Primrose Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
105	99	1,957,480	0	0	0.00%

Source: County Assessor, GIS Workshop

Hazard Prioritization

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

Flooding

Flooding was not identified as a hazard of top concern for the village. Boone County and the Village of Primrose are currently in a remapping effort for DFIRMS with NeDNR. Currently there are no DFIRMS established for the county; however, identified floodplains are located to the southwest and east of the village according to the paper maps from 1999. Primrose does not participate in the NFIP.

Severe Winter Storms

The local planning team identified severe winter storms as a hazard of top concern for the community. Severe winter storms have the potential to cause power outages, strand residents or motorists, and cause power outages. The village is in charge of removing snow in the community with local volunteers assisting when necessary. Snow removal resources are sufficient for the community at this time. No power lines are buried in town.

Tornadoes and High Winds

The NCEI reported no major past impacts. The local planning team identified tornadoes and high winds as a hazard of top concern for the community due to the potential for property damages, power outages, and resident safety. Community volunteers assist the village with debris cleanup and hazardous tree removal as needed. The fire hall has been identified as a shelter in the community but there are no safe rooms available.

Mitigation Strategy

New Mitigation Actions – 2022 Plan

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate current backup and emergency generators 2. Obtain additional generators based on identification and evaluation 3. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$20,000 to \$75,000+ per generator
POTENTIAL FUNDING	General Fund, HMA
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Village Board, County Emergency Management
STATUS	This is a new mitigation action. Well Pump houses do not have backup power.

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 Village Board and Village Clerk will bi-annually review the community profile. They will notify the public at local board meetings.

COMMUNITY PROFILE

CITY OF ST. EDWARD

Lower Loup Natural Resources District Hazard Mitigation Plan 2022

Local Planning Team

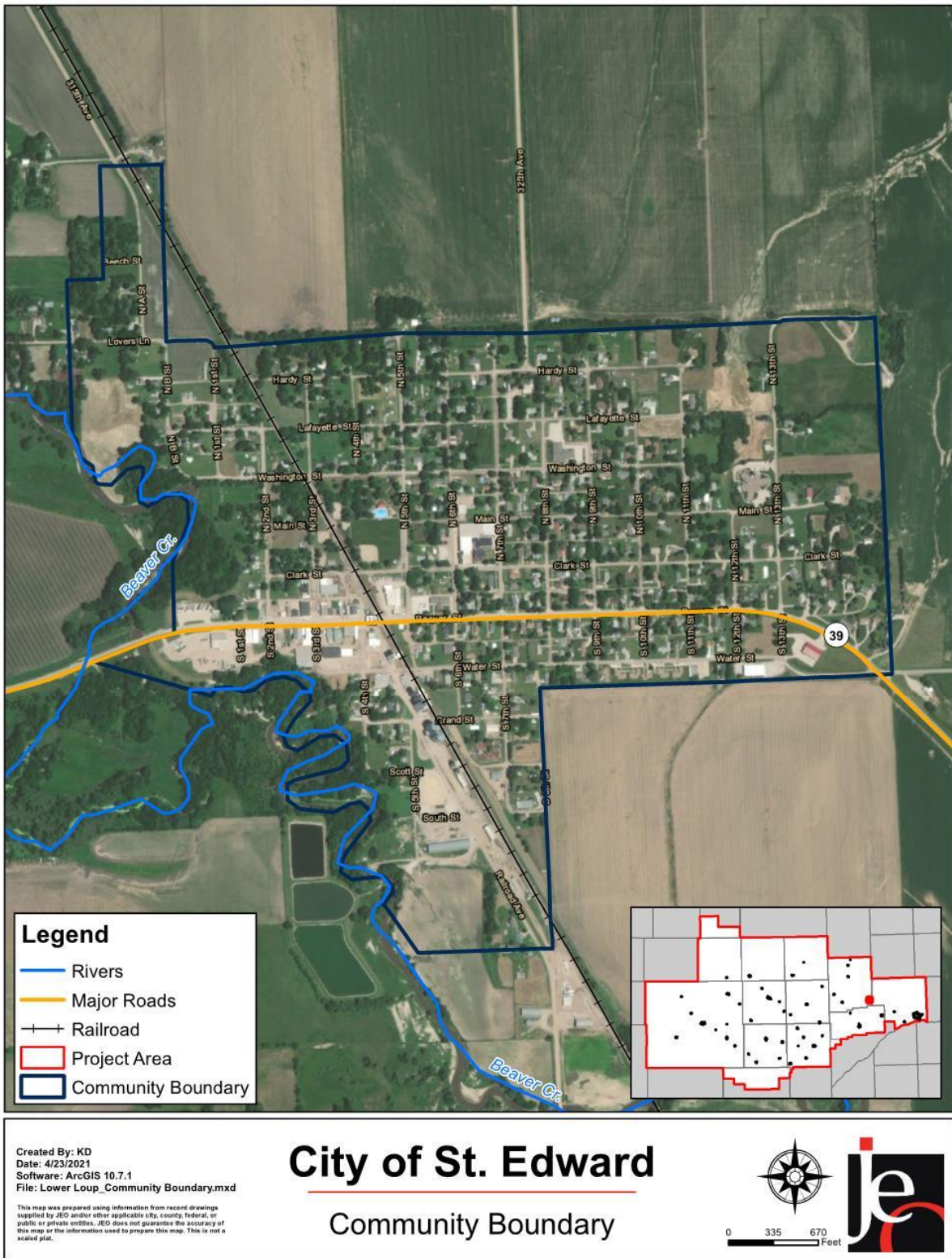
Table STE.1: City of St. Edward Local Planning Team

NAME	TITLE	JURISDICTION
ANGIE MILLER	City Clerk/Zoning	City of St. Edward
DEAN HAMLING	Mayor	City of St. Edward
MONTY OLSON	Chief of Police	City of St. Edward
CINDY SORENSEN	Council President (former)	City of St. Edward

Location and Geography

The City of St. Edward is located in the southeastern portion of Boone County. The City of St. Edward covers an area of 0.66 square miles. Beaver Creek runs along the western side of the city. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. St. Edward lies in the plains and sandhills topographic region, and is surrounded by agricultural fields.

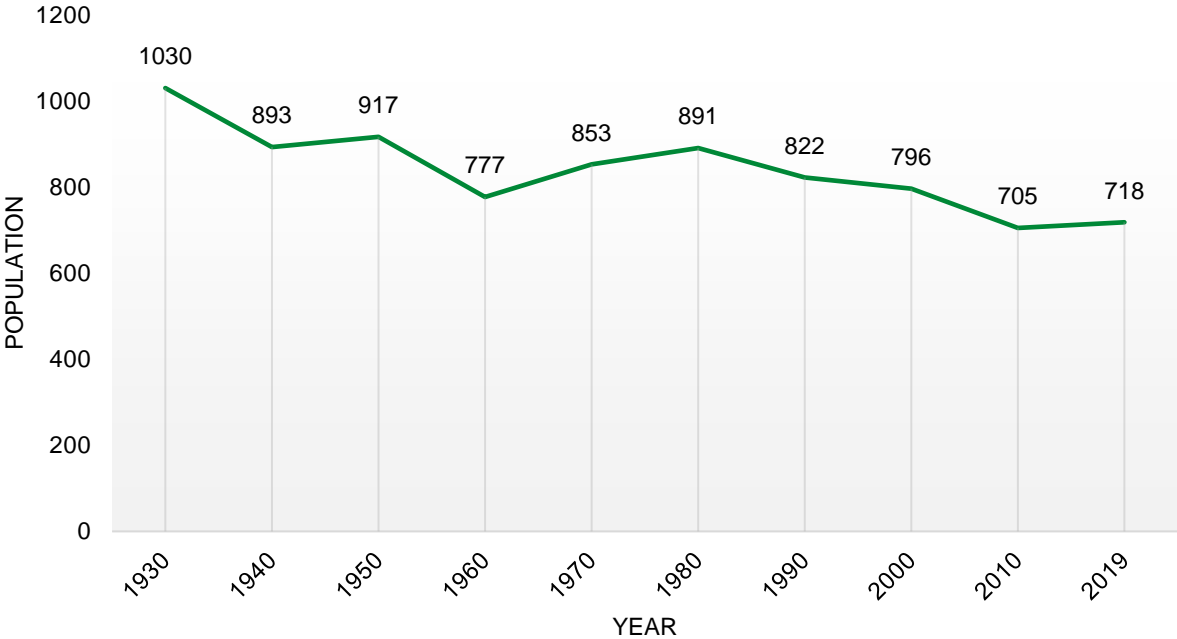
Figure STE.1: City of St. Edward Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1930 to 2019 (estimated). This figure indicates that the population of St. Edward experienced a very slight declining trend since 1930. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. The city’s population accounted for 14% of Boone County’s Population in 2019.

Figure STE.2: St. Edward Population 1930-2019



Source: U.S. Census Bureau⁵²

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

- **Remained the same.** The median age of St. Edward was 44.3 years old in 2019, compared with the County average of 44.8 years. St. Edward’s population has remained the same since 2010, when the median age was also 44.3 years old. St. Edward had a smaller proportion of people under 20 years old (19.6%) than the County (25.2%).⁵³
- **Less ethnically diverse.** In 2010, 0% of St. Edward’s population was Black or African American, 0% was other races, and 0% were two or more races. By 2019, 0.5% of St. Edward’s population was two or more races. During that time, Boone County had 0% to 0.10% American Indian, 0% to 0% other races and 0.1% to 0.5% two or more races from 2010 to 2019 respectively.⁵⁴

⁵² United States Census Bureau. “2019 American Fact Finder: S0101: Age and Sex.” [database file]
⁵³ United States Census Bureau. “2019 American Fact Finder: S0101: Age and Sex.” [database file]
⁵⁴ United States Census Bureau. “2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates.” [database file]

- **More likely to be at the federal poverty line.** The poverty rate of all persons in St. Edward (4.2%) was higher than the County (3.3%) in 2019.⁵⁵

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in St. Edward included Manufacturing, Education, and Entertainment. In comparison Boone County's included Agriculture, Manufacturing, Retail, and Education.⁵⁶
- **Lower household income.** St. Edward's median household income in 2019 (\$42,500) was about \$12,400 lower than the County (\$54,979).⁵⁷
- **More long-distance commuters.** About 47.3% percent of workers in St. Edward commuted for fewer than 15 minutes, compared with about 58.1% of workers in Boone County. About 21.9% of workers in St. Edward commute 30 minutes or more to work, compared to about 18.7% of the County workers.⁵⁸

Major Employers

Major employers in the City include Big Iron Auctions, Cloverlodge Care Center, Green Plains, Pillen Family Farms, and St. Edward Public School. The planning team noted that approximately sixty percent of residents commute to the surrounding communities of Lindsey, Albion, Columbus, Madison, Genoa, Fullerton, Norfolk, Cedar Rapids, and Grand Island.

Housing

In comparison to Boone County, St. Edward's housing stock was:⁵⁹

- **Less owner occupied.** About 70.3% of occupied housing units in St. Edward are owner occupied compared with 76.2% of occupied housing in Boone County in 2019.
- **Larger share of aged housing stock.** St. Edward has more houses built prior to 1970 than the county (68% compared to 60.1%).
- **Fewer multi-family homes.** The predominant housing type in the city is single family detached and St. Edward contains less multifamily housing with five or more units per structure than the County (1.5% compared to 2.0%). About 84.0% of housing in St. Edward was single-family detached, compared with 88.9% of the County's housing. St. Edward has a larger share of mobile and manufactured housing (5.6%) compared to the County (2.0%)

The local planning team noted that there are approximately 12 mobile homes located in the community. This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

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

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

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

58 United States Census Bureau. "2019 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]

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

Governance

A community’s governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. St. Edward has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The city has a four member city council and the following offices: clerk/treasurer, administrator, chief of police, sewer/water/street commissioner, volunteer fire department, and park and recreation.

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.2: Capability Assessment

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

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

Table BAR.3: Overall Capability

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

Plan Integration

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

Grants and Funding

St. Edward's municipal funds are primarily limited to maintaining current facilities and systems; however, the city has adopted a ½ cent sales tax in the past five years to pay off bonds used to construct the new community center. Additionally a 1-2% increase occurs per year on property taxes which is used to accommodate increasing maintenance costs. The current budget addresses needs for the community building and purchasing a tractor for redundant power on the water well.

The city has used grant funding in the past to accomplish projects including a Community Building Planning Grant (\$10,000), CDBG (\$435,000 for community building), and a PWS Security Grant.

Comprehensive Plan

The city's Comprehensive Plan was last updated in 2007. This plan addresses hazard mitigation with goals/objectives aimed at safe growth but does not directly address natural hazards.

Capital Improvement Plan

Future projects to be considered within the city's capital improvement plan include upsizing culverts and drainage structures. The Capital Improvements Plan is reviewed and updated annually and improvements are made based on priority and availability of funds.

Building Codes (2018)

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

Boone County Local Emergency Operations Plan

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

Middle Northeast Nebraska Community Wildfire Protection Plan

The Nebraska Forest Service updated the Middle Northeast Community Wildfire Protection Plan (CWPP), which includes Boone County in October 2021. The purpose of the CWPP is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. This document is updated every five years.

Future Development Trends

In the past five years, there have been four new homes and two duplexes built. The community also had over 90 blocks of streets repaired and improved. No new structures were developed in the floodplain. According to census data, St. Edward's population is increasing, which the planning team attributed to an increase in employment opportunities in St. Edward and the surrounding area. No new commercial or residential developments are planned for the next five years.

Community Lifelines

Transportation

St. Edward's major transportation corridor includes Highway 39, which runs east-west, through the south portion of St. Edward. N-39 accommodates on average 2,090 vehicles per day, 305 of which are heavy commercial vehicles. The Nebraska Central Railroad Company has a rail line along the western side of 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.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are three chemical storage sites throughout St. Edward which house hazardous materials. In the event of a chemical spill, the St. Edward Fire Department would be the first to respond to the incident. The planning team noted that Farmer's Pride Propane no longer has propane tanks at its location and Central Valley Ag also has anhydrous ammonia tanks located at 3450 325th Ave in St. Edward.

Table STE.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
CENTRAL VALLEY AG BULK FUEL	202 Beaver St	Yes
CENTRAL VALLEY AG	301 Water St	Yes
FARMERS PRIDE PROPANE	N/A	N/A

Source: Nebraska Department of Environment and Energy⁶⁰

Critical Facilities

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

The American Red Cross has an agreement with St. Edward Fire and Rescue to serve as a mass care facility during disaster events. The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table STE.5: St. Edward Critical Facilities

CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Hazardous Materials	Anhydrous Plant	N	N	N
2	Safety and Security	City Hall/Police Station	N	Y	N
3	Food, Water, and Shelter	Community Building	Y	N	N

⁶⁰ Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

SECTION SEVEN: CITY OF ST. EDWARD COMMUNITY PROFILE

CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
4	Safety and Security	Fire Station	N	Y	N
5	Communications	Great Plains Communication	N	Y	N
6	Food, Water, and Shelter	Grocery Store	N	N	N
7	Food, Water, and Shelter	Lift Station	N	Y	Y
8	Food, Water, and Shelter	Public School	N	N	N
9	Food, Water, and Shelter	Sewage Lagoon	N	Y	Y
10	Energy	Substation	N	N	N
11	Food, Water, and Shelter	Water Tower	N	N	N
12	Food, Water, and Shelter	Well (13 th Street)	N	N	N
13	Food, Water, and Shelter	Well (5 th Street)	N	N	N
14	Food, Water, and Shelter	Well (9 th Street)	N	N	N

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

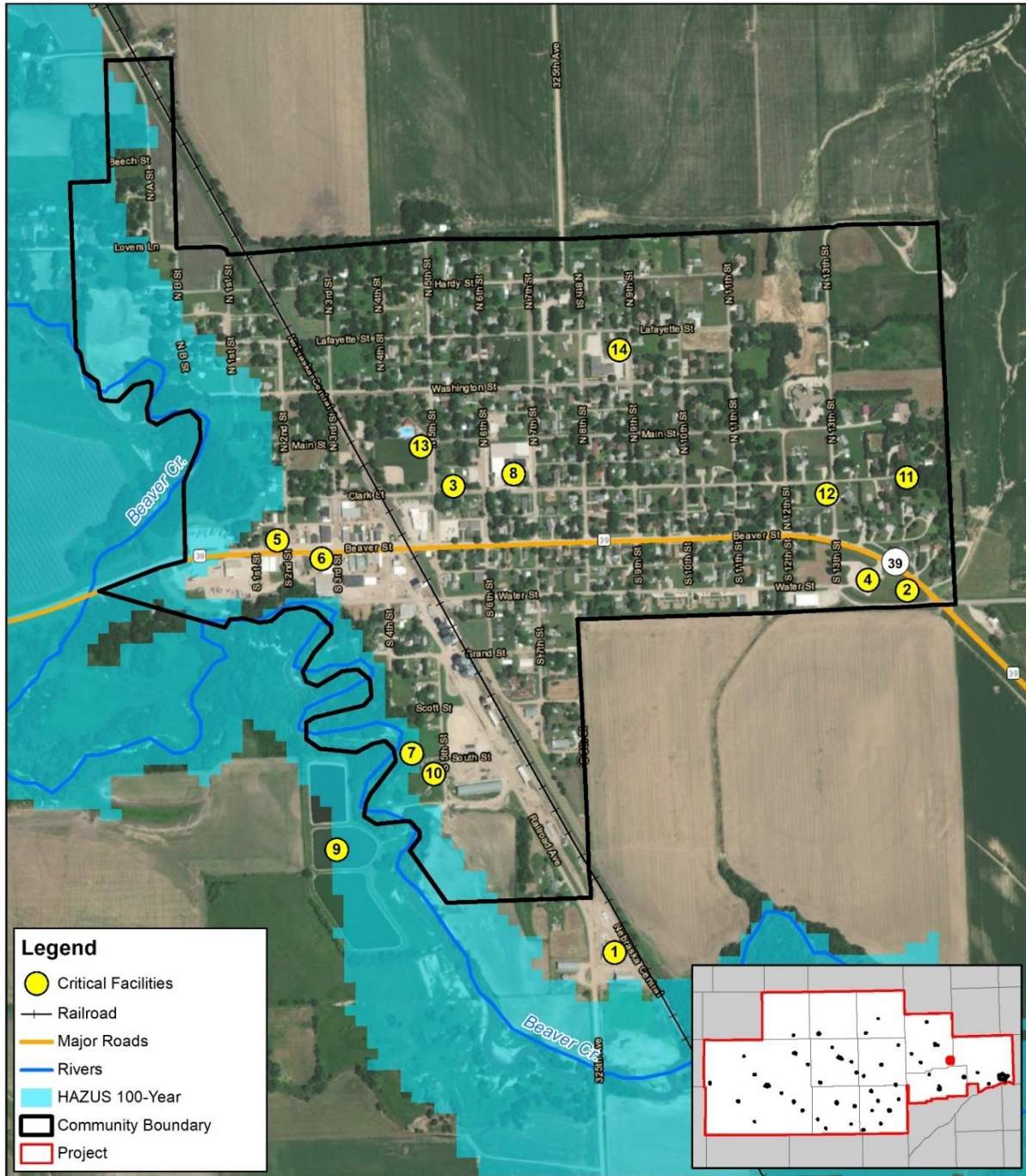
Health and Medical Facilities

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

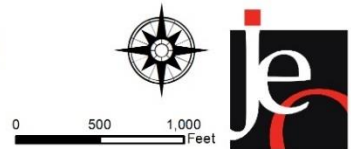
Table STE.6: St. Edward Critical Facilities

NAME OF FACILITY	TYPE OF FACILITY	NUMBER OF LICENSED BEDS
CLOVERLODGE CARE CENTER	Long Term Care Facility	47

Figure STE.3: St. Edward Critical Facilities



City of St. Edward
 Critical Facilities



Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

Table STE.7: St. Edward Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
516	502	22,021,010	55	1,289,230	10.96%

Source: County Assessor, GIS Workshop

Table STE.8: St. Edward Flood Map Products

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
LOMA	20-07-1569A-310010	11/5/2020	Structure (residence) removed from SFHA

Source: FEMA Flood Map Service Center

Hazard Prioritization

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

Flooding

Local concerns focus on the potential for flooding along the north side of town near the railroad tracks, as well as along Beaver Creek on the west side of town. St. Edward has eight NFIP policies in-force for \$699,700. There is one repetitive flood loss property, which is a single-family residence, in St. Edward. The community had extensive flooding in 2010 and 2019. During the 2019 flooding events, residents had to be evacuated and the majority of businesses downtown and residential areas on the west side of town flooded. A flood mitigation study was conducted after the 2019 flooding for the community and advised that Beaver Creek should be cleaned out and widened south of town. Improvements to Beaver Creek should help alleviate flood impacts to downtown businesses and residential areas. There is also a flood risk reduction structure located on the west side of town which was constructed by USACE for flood response. Currently this structure is unlisted in the USACE National Levee Database.

As of January 2021, the city was working with Kirkham Michael Engineers on a Beaver Creek Stabilization Drainage Report. The 60% reported key project components as: relocate a portion of the levee; relocate an existing railroad gate and replace with new swing gate; and realign Beaver Creek to its original 1930s location and use the resulting oxbow as a wetland. Recommended improvements included constructing a new primary channel, add riprap to the

bank lining, and add two 1-ft check structures. No official design plans have been made or recommendations for potential funding.

Grass/Wildfires

Local concerns regarding grass/wildfires is the potential for property damages and loss of life. The St. Edward Fire Department is responsible for responding to gras/wildfires in the area. In October 2012, wildfires burned approximately 58,000 acres across Nebraska. In Boone County, near St. Edward, a fire during that period burned approximately 160 acres.

Severe Thunderstorms

The main concerns regarding severe thunderstorms includes damages to trees and property. According to NCEI data, there have been 22 severe thunderstorm events in St. Edward from 1996 to 2020. The events did not result in any damages for the community. Critical municipal records are protected with surge protectors on electronic devices. The Fire Hall/City Hall and Cloverlodge assisted living facility have backup generators. Approximately 30 percent of power lines are buried in the community. The local planning team indicated that there are hazardous trees on residential properties in need of removal. The local planning team identified the community building, and both gas stations in town as facilities in need of back up generators.

Local concerns regarding hail focus on the potential for widespread property damages. Some critical facilities, such as the medical clinic, maintenance building, and Fire Hall, are fitted with metal roofs. Some critical facilities, such as the lift station, wells, library, clinic, and Fire Hall are insured for hail damage.

Tornadoes and High Winds

According to NCEI data, there was an F0 tornado in April 1999, that briefly touched down near St. Edward. This tornado caused \$15,000 in property damages to barns and outbuildings. St. Edward has a lot of large trees around town that could potentially cause damages if impacted by storm events. St. Edward has warning sirens that are activated by the Sheriff's office and reach all parts of the community. Region 44 Emergency Management offers text alerts. In the event of a disaster, St. Edward is a part of Mid-Nebraska Mutual Aid. St. Edward does not have any safe rooms, nor designated storm shelters. St. Edward utilizes an external hard drive to backup municipal records.

Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	PROVIDE ADEQUATE PUBLIC SAFE ROOMS & POST DISASTER STORM SHELTERS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate existing safe rooms and/or storm shelters 2. Improve and/or construct safe rooms and/or storm shelters 3. Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
HAZARD(S) ADDRESSED	High Winds, Severe Thunderstorms, Tornadoes
STATUS	New Community Building used as emergency shelter for residents.

OBJECTIVE	IMPROVE ELECTRICAL SERVICE
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate hardening, retrofitting, looping and/or burying of power lines and related infrastructure and/or comparable protection measures 2. Provide looped distribution service and other redundancies in the electrical system as a backup power supply in the event the primary system is destroyed or fails 3. Implement measures to improve electrical service 4. Bury power lines for future construction
HAZARD(S) ADDRESSED	High Winds, Severe Thunderstorms, Severe Winter Storms, Tornadoes
STATUS	City requires power lines to be buried for new construction. Electrical substation was removed from the floodplain.

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate current backup and emergency generators 2. Obtain additional generators based on identification and evaluation 3. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$25,000 to \$75,000+ per generator
POTENTIAL FUNDING	General Fund, Bond, HMA
TIMELINE	High
PRIORITY	2-5 Years
LEAD AGENCY	Region 44 EMA, City Council
STATUS	Added generator to Fire Hall in 2007. Currently identifying additional need.

SECTION SEVEN: CITY OF ST. EDWARD COMMUNITY PROFILE

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate current warning systems 2. Improve warning systems/develop new warning system 3. Obtain/Upgrade warning system equipment and methods 4. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 5. Identify location of weather warning radios 6. Improve weather radio system 7. Obtain/Upgrade weather radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$50/radio; \$5,000 to \$50,000 for radio/television broadcast system; \$15,000 to \$50,000 for sirens
POTENTIAL FUNDING	General Fund, Bond, USDA, HMA
TIMELINE	High
PRIORITY	2-5 Years
LEAD AGENCY	Region 44 Emergency Management, City Council
STATUS	This project has not yet been started.

OBJECTIVE	REDUCE DAMAGE IN FLOODPLAIN
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate repetitive loss or potential loss structures located in floodplain 2. Acquire and relocate or demolish flood prone property or elevate flood prone property 3. Elevate equipment vulnerable to flooding
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Varies by structure
POTENTIAL FUNDING	General Fund, Bond, FMA, LLNRD
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Region 44 Emergency Management, City Council
STATUS	Four single dwelling homes have been demolished in the floodplain. Three properties are currently in the works.

OBJECTIVE	FACILITY FLOOD PROOFING
DESCRIPTION	<ol style="list-style-type: none"> 1. Explore possibility of flood proofing facilities which fall within HAZUS 1% flood inundation areas 2. Conduct flood proofing feasibility study for structures and implement identified measures
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Varies by Structure
POTENTIAL FUNDING	General Fund, HMA
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	City Council
STATUS	St. Edward recently completed a flood study. The city has yet to implement flood proofing measures.

SECTION SEVEN: CITY OF ST. EDWARD COMMUNITY PROFILE

OBJECTIVE	REDUCE TREE DAMAGE & DAMAGE FROM TREES
DESCRIPTION	<ol style="list-style-type: none"> 1. Conduct tree inventory 2. Develop tree maintenance/trimming program 3. Implement tree maintenance/trimming program 1. Remove hazardous limbs and/or trees
HAZARD(S) ADDRESSED	High Winds, Grass/Wildfire, Severe Thunderstorms, Severe Winter Storms, Tornadoes
ESTIMATED COST	\$0 to \$500 to develop program; Implementation unknown
POTENTIAL FUNDING	General Fund
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	City Council
STATUS	The city is currently updating ordinances and sending letters to property owners to have hazardous trees removed or trimmed appropriately.

OBJECTIVE	IMPROVE STREAM BED/BANK STABILIZATION
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate current stream bed and bank stabilization needs 2. Implement stream bed and bank stabilization improvements including grade control structures, rock rip rap, vegetative cover, etc.
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$1,500,000
POTENTIAL FUNDING	General Fund, HMA
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Region 44 EMA, City Council
STATUS	Currently in the initial stages. Identified area behind Werner Services on Beaver Creek as a location in need of bank stabilization. City is currently exploring potential funding opportunities.

OBJECTIVE	PUBLIC EDUCATION ON HAZARD EVENTS & PREPAREDNESS
DESCRIPTION	<ol style="list-style-type: none"> 1. Obtain or develop materials about hazards 2. Conduct multifaceted public education 3. Distribute fact sheet at community events, schools, other venues 4. Conduct scheduled siren/warning system tests 5. Prepare/distribute educational materials listing safe room and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$0 to \$5,000+
POTENTIAL FUNDING	General Fund, Fire Department Fund
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Region 44 EMA, St. Edward Fire Department
STATUS	City working to share information about hazardous trees and new community building being used as a shelter location.

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 Mayor, City Clerk, and City Council will annually review the city's profile. They will notify the public via social media and at city council meetings.