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COUNTY PROFILE

CLAY COUNTY

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

Local Planning Team

Table CLA.1: Clay County Local Planning Team

Name	Title	Jurisdiction
Tim Lewis	Emergency Manager	Clay County

Location, Geography, & Climate

Clay County is located in southwest Nebraska and is bordered by Hamilton County, Fillmore County, Nuckolls County, and Adams County. Clay Center is the county seat.

The total area of Clay County is 573 square miles. Major waterways within the county include the Little Blue River, Big Sandy Creek, Little Sandy Creek, Pawnee Creek, School Creek, and Turkey Creek. The county is not heavily forested, nor is located in a geographic area of the state prone to landslides. Most of Clay County lies in the plains topographic region, with the vast majority of the county's land characterized by agricultural fields.

Climate

The average high temperature in Clay County for the month of July is 87.2 degrees and the average low temperature for the month of January is 13.9 degrees. On average, Clay County gets 29 inches of rain and 15 inches of snowfall per year. The following table compares these climate indicators with those of the entire nine-county planning area. Climate data is helpful in determining if certain events are higher or lower than normal. For example, if the high temperatures in the month of July are running well into the 90s, high heat events may be more likely which could impact vulnerable populations.

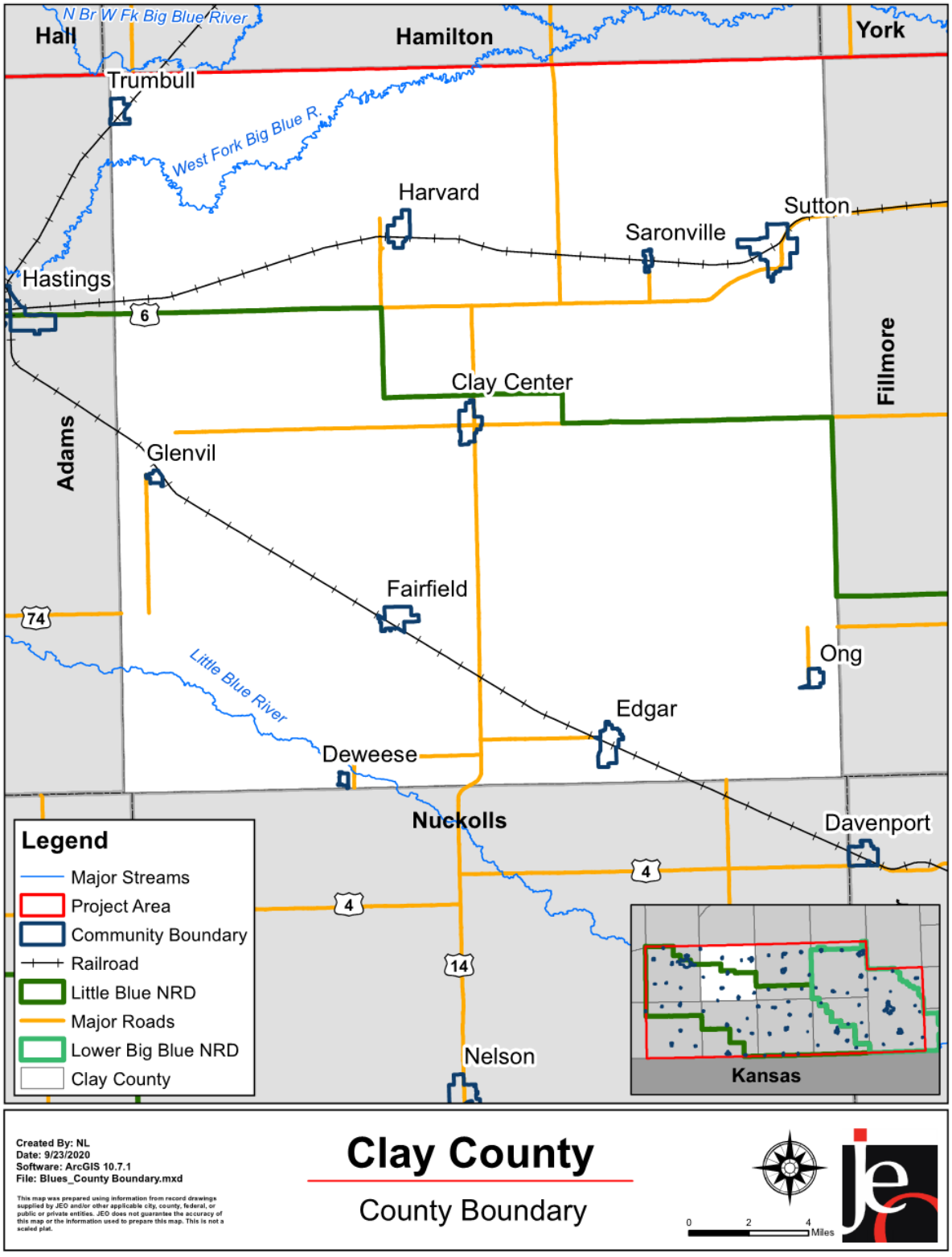
Table CLA.2: Clay County Climate Normals

	Clay County	Planning Area Average
July Normal High Temp	87.2°F	88.5°F
January Normal Low Temp	13.9°F	14.2°F
Annual Normal Precipitation	28.78"	29.37"
Annual Normal Snowfall	14.7"	21.63"

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

1 NOAA National Centers for Environmental Information. August 2020. "Data Tools: 1981-2010 Normals." [datafile]. https://www.ncdc.noaa.gov/cdo-web/datatools/normals.
2 High Plains Regional Climate Center. 2020. "CLIMOD." http://climod.unl.edu/.

Figure CLA.1: Clay County Jurisdictional Boundary



Transportation

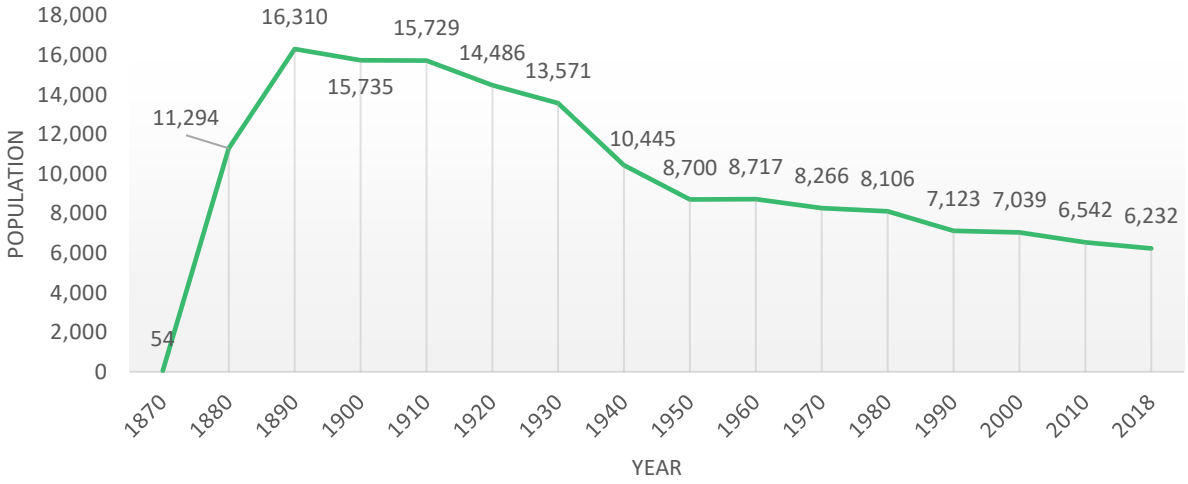
Clay County's major transportation corridors include State Highway 6, which runs east-west through the center of the county, State Highway 14, which runs north-south to highway 6, and State Highway 14 which runs north from highway 6. Highway 74 passes through the lower half of the county, running east-west. Highway 41 also runs east-west to highway 14. The county also has two railroads, one owned by BNSF and the other by UPRR, and has a number of air landing strips dispersed throughout the county.

The local planning team noted specific concerns exist for train crossings and critical facilities along major transportation routes including Sandy Creek Unified School District (Hwy 14) and residential homes. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Demographics

The following figure displays the historical population trends from 1870 to 2018 (estimated). This figure indicates that the population of Clay County has declined slowly since the 1950s. This is notable for hazard mitigation as communities with declining population have a higher probability of unoccupied housing that is not being maintained and may be less prone to pursuing residential/commercial development, which may reduce the number of structures vulnerable to hazards in the future.

Figure CLA.2: Clay County Population 1870-2018



Source: U.S. Census Bureau[3]

The following table indicates the State of Nebraska has a slightly higher percentage of people under the age of 5 and between the ages of 5 and 64 than Clay County. Clay County has a higher median age percentage of people over the age of 65. This is relevant to hazard mitigation insofar as the very young and elderly populations may be at greater risk from certain hazards than others. For a more elaborate discussion of this vulnerability, please see *Section Four: Risk Assessment*.

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

Table CLA.3: Population by Age

Age	Clay County	State of Nebraska
<5	6.6%	6.9%
5-64	73.9%	78.1%
<64	19.6%	15%
Median Age	42.5	36.2

Source: U.S. Census Bureau[4]

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

Table CLA.4: Housing and Income

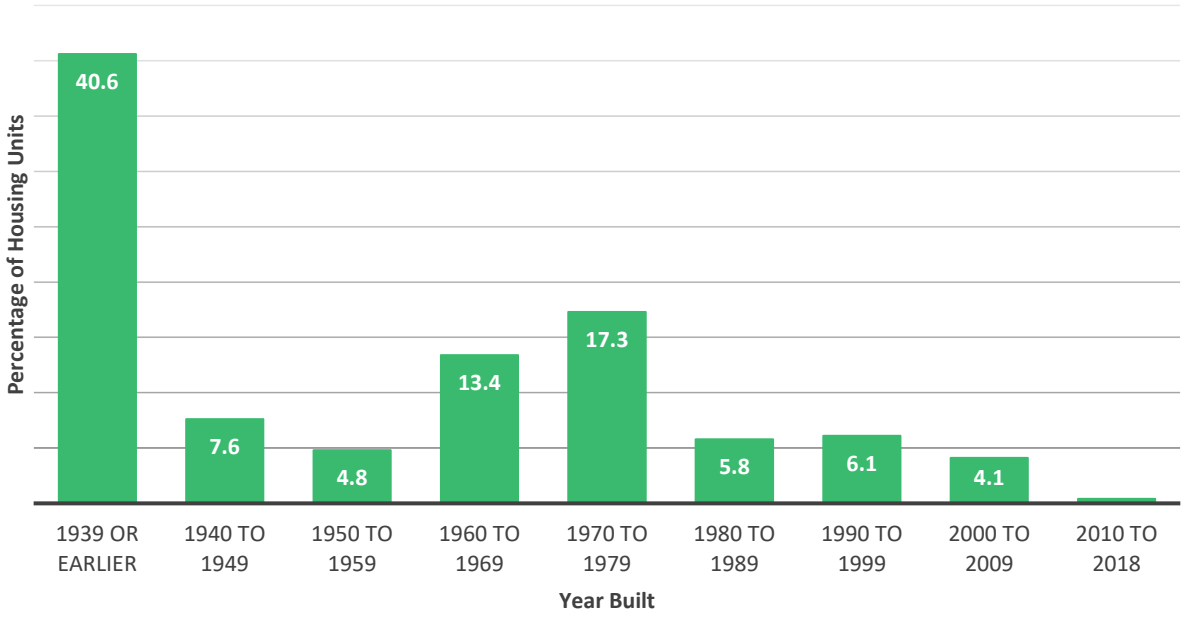
Age	Clay County	State of Nebraska
Median Household Income	$56,316	$59,116
Per Capita Income	$27,297	$31,101
Median Home Value	$88,300	$147,800
Median Rent	$602	$805

Source: U.S. Census Bureau[5,6]

The following figure indicates that the majority of the housing in Clay County was built prior to 1940. According to Census Bureau, the county has 3,023 housing units; with 85.1 percent of those units occupied. Approximately 3.3 percent of the county's housing is classified as mobile homes and over 83 percent of the county's housing was built before 1980. The local planning team noted mobile homes are a small part of community housing. Trumbull has a cluster of six mobile homes while other communities have one or two. Additionally some farms throughout the county may have additional mobile homes. Housing age can serve as an indicator or risk as structures built prior to state building codes being developed may be at greater risk. The State of Nebraska first adopted building codes in 1987, the state currently has adopted the 2018 International Building Code. Finally, communities with a substantial number of mobile homes may have a higher number of residents vulnerable to the impacts of high winds, tornados, and severe winter storms.

4 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
5 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]
6 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Figure CLA.3: Housing Units by Age



Source: U.S. Census Bureau[7]

Table CLA.5: Housing Units

Jurisdiction	Total Housing Units					Occupied Housing Units			
	Occupied		Vacant			Owner		Renter	
	Number	Percent	Number	Percent		Number	Percent	Number	Percent
Clay County	2,574	85.1%	449	14.9%		2,024	78.6%	550	21.4%
Nebraska	754,063	90.8%	76,686	9.2%		498,567	66.1%	255,496	33.9%

Source: U.S. Census Bureau[8]

Employment Factors

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

Table CLA.6: Businesses in Clay County

	Total Businesses	Number of Paid Employees	Annual Payroll (in thousands)
Total for All Sectors (2012)	184	930	$34,323
Total for All Sectors (2016)	185	1,118	$39,783
Total for All Sectors (2018)	190	1,113	$41,575

Source: U.S. Census Bureau[9]

7 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]
8 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]
9 United States Census Bureau. 2020. "2018 County Business Patterns and Nonemployer Statistics Combined Report."

Agriculture is also important to the economic fabric of Clay County, and the state of Nebraska as a whole. Clay County's 344 farms cover 251,763 acres of land. Both the number of farms and acres of harvested cropland have decreased since 2012. Crop and livestock production are the visible parts of the agricultural economy, but many related businesses contribute as well by producing, processing and marketing farm and food products. These businesses generate income, employment and economic activity throughout the region.

Table CLA.7: Clay County Agricultural Inventory

	2012 Census	2017 Census	Percent Change
Number of Farms with Harvested Cropland	457	344	-32.8%
Acres of Harvested Cropland	330,534 acres	251,763 acres	-31.3%

Source: USDA Census of Agriculture[10,11]

Future Development Trends

In the past five years several buildings have been demolished and removed due to hazardous materials and some new homes were constructed on existing lots in communities across the county. No new structures were developed in the floodplain. The population in Clay County has declined in recent years which the local planning team attributed to a lack of available jobs and an aging population. No additional residential or commercial developments are planned for the next five years.

Parcel Improvements and Valuation

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

Table CLA.8: Clay County Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Percent of Improvements in Floodplain	Value of Improvements in Floodplain
8,130	2,652	$234,382,635	341	13%	$39,705,765

Source: County Assessor, GIS Workshop

Table CLA.9: Clay County Flood Map Products

Type of Product	Product ID	Effective Date	Details
LOMA	19-07-0134A-310425	10/31/2018	Portion of property removed from SFHA
LOMA	19-07-0159a-310425	12/10/2018	Structure removed from SFHA

Source: FEMA Flood Map Service Center

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."

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

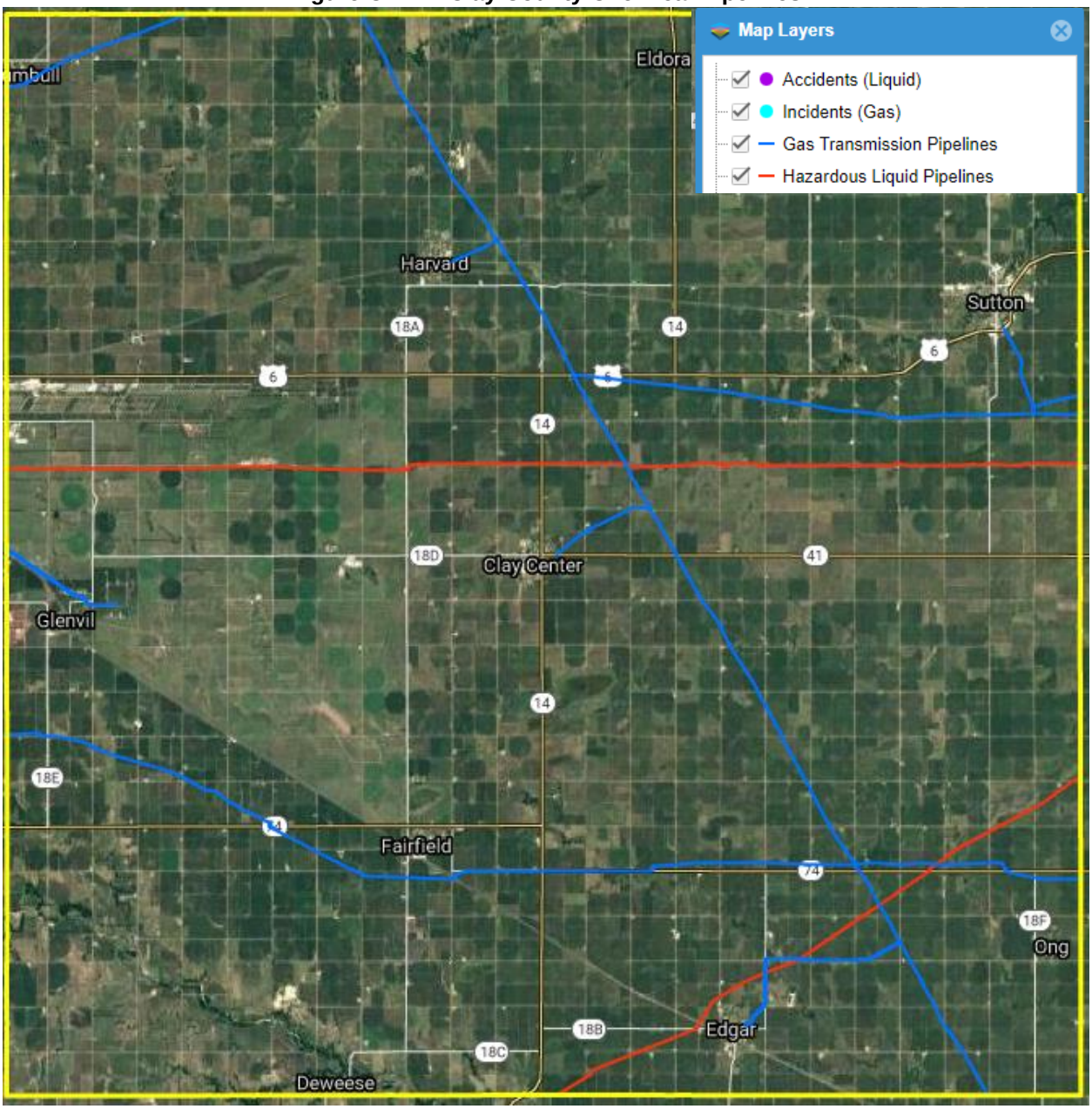
According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy in 2019, there 28 chemical storage sites throughout Clay County which house hazardous materials. Anhydrous ammonia plants are on the edge of or within municipal city limits of Sutton, Harvard, Trumbull, Glenvil, Fairfield, Edgar, and Clay Center. Local concerns exist for aged residents in homes that could be at risk by leaks or transportation spills. Past events from nurse tank leaks and transfer spills have created gas clouds that drifted into Harvard, Trumbull, and Clay Center causing shelter in place orders for protection. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. For a description and map of chemical sites located in incorporated areas, please see the jurisdiction's participant section.

Chemical Transportation

Hazardous materials, particularly anhydrous ammonia, are commonly transported through the county on major transportation routes. The county has two railroads, one owned by BNSF and the other by UPRR. The BNSF runs east-west passing through Inland, Harvard, Saronville, and Sutton before exiting into Fillmore County. The UPRR railroad runs northwest to southeast, passing through Glenvil, Anon, and Edgar before exiting into Nuckolls County. Past spill events have occurred including when a highway fire destroyed 150 gallons of diesel fuel, a tractor, and trailer. Drought conditions were present at the time and water resources used to contain the fire were quickly absorbed into the soil and contaminated the area. Local Hazmat Recovery Teams removed contaminated soils in the area. Another event spilled 40 tons of dry fertilizer on roadway and right of ways. NDEE assisted with chemical clean up.

The type and quantities of chemicals transported through the county is unknown. While incident proximity will always occur near or on transportation methods, it is not possible to predict precise locations of possible future events. Proximity of pipelines, rail lines, and highways near critical facilities or vulnerable population centers, including schools, daycares, nursing homes, and/or hospitals, increases overall vulnerability to chemical transportation spills. Private entities, local emergency response units, and state resources have strict regulatory oversight and emergency action plans in place to respond to significant chemical spills.

Figure CLA.4: Clay County Chemical Pipelines



Critical Facilities

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

Critical facilities for Clay County are located primarily in the county's incorporated communities. All critical facilities for Clay County are located outside of the established floodplain The National Register of Historic Places lists six entries for Clay County. These entries are located in Sutton, DeWeese, Clay Center, Glenvil, Fairfield, and Inland. Numerous shelter locations have also been identified across the county.

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

Table CLA.10: Clay County Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Safety and Security	Clay County Courthouse	Y	N	N
2	Safety and Security / Communications	Jail / Clay County 911 Center	Y	Y	N
3	Communications	Emergency Communication Tower	Y	Y	N
4	Transportation	County Highway Building	N	N	N
5	Other	Weed Department	N	N	N
6	Safety and Security	Clay County EOC	N	N	N
7	Shelter	Fair Grounds	Y	N	N

Figure CLA.5: Clay County Critical Facilities

Historical Occurrences

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

Table CLA.11: Hazard Risk Assessment – Clay County

Hazard		Count	Property Damage	Crop Damage[3]
Agricultural Disease	Animal Disease[2]	23	207 animals	N/A
	Plant Disease[3]	23	N/A	$188,306
Dam Failure[7]		0	$0	N/A
Drought[8]		493 out of 1,504 months	$0	$15,872,852
Earthquakes[11]		0	$0	$341
Extreme Heat[9]		Avg 3 days/yr	$400,000	$3,804,808
Flooding[1]	Flash Flood	7	$333,000	$66,580
	Flood	5	$645,000	
Grass/Wildfire[4]		122	1,983 acres	$12,215
Hazardous Materials	Chemical Fixed Site Spills[5]	6	$0	N/A
	Chemical Transportation Spills[6]	0	$0	N/A
Levee Failure[12]		0	$0	N/A
Public Health Emergency[13]		~690 cases, 11 deaths	$0	N/A
Severe Thunderstorms[1]	Hail	188	$4,132,000	$23,825,368
	Heavy Rain	31	$35,000	$2,483,556
	Lightning	4	$405,000	N/A
	Thunderstorm Wind	104	$14,759,000	N/A
Severe Winter Storms[1]	Blizzard	11	$25,000	$586,029
	Extreme Cold/Wind Chill	2	$0	
	Heavy Snow	4	$0	
	Ice Storm	6	$2,044,000	
	Winter Storm	47	$220,000	
	Winter Weather	28	$5,000	
Terrorism[10]		0	$0	N/A
Tornadoes and High Winds[1]	High Winds	19	$1,007,080	$2,711,180
	Tornadoes	16	$22,635,000	$100,701
Totals		**646**	**$46,645,080**	**$49,651,936**

1 – NCEI, Jan 1996-April 2020
2 – USDA, 2014-June 2020
3 – USDA RMA, 2000-Aug 2020
4 – NFS, 2000-2020

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

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 CLA.12: Clay County and Communities Hazard Matrix

Jurisdiction	Agricultural Animal and Plant Disease	Dam Failure	Drought & Ex Heat	Earthquakes	Flooding	Grass/ Wildfire	Hazardous Materials	Levee Failure	Public Health Emergency	Severe Thunderstorms	Severe Winter Storms	Terrorism	Tornadoes and High Winds
Clay County					X	X	X			X	X		X
Clay Center	X									X			X
Deweese										X	X		X
Edgar							X			X			X
Fairfield					X		X			X			X
Glenvil	X					X	X						X
Ong						X	X			X	X		X
Saronville			X							X	X		X
Sutton					X			X		X			X
Trumbull							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. For more information regarding regional hazards, please see *Section Four: Risk Assessment*.

Flooding

Clay County's main concern for flooding is in the area north of Highway 6. The waterways of most concern are School Creek near Sutton, the West Fork of the Big Blue River near Trumbull, and Little Sandy Creek. Creeks often cause problems for roads during heavy rain events and thunderstorms in the area have produced four to five inches of rain in the past. In June 2015, flooding caused $600,000 in road and culvert damage throughout the county. The March 2019 flood produced minor flood damages in the county, particularly to county roads and agricultural land. The county indicated that historical changes in agricultural practices have contributed to flood risk. A new "no till" practice allows water to wash into overfilled culverts. Culverts are also regularly clogged with agricultural debris. The Little Sandy Creek has silted in and vegetative growth has blocked the channel north of Clay Center in the right of way of Highway 14. During heavy rain events this area becomes inundated and flow is restricted. This impacts residences, businesses, and the storm drains for the City of Clay Center which have backed up. Damages to this system also cause rusting pipes to burst, create geysers, and wash out areas. break through the rusting pipes creating geysers and wash outs.

The County is currently working towards putting box culverts and bigger culverts where possible. The County does currently participate in the NFIP. The Upper Little Blue watershed and the West Fork Big Blue watershed are currently working to update maps as a part of a NeDNR Risk Map process. The DNR is the lead contractor on this project and are conducting new flood map studies for Clay County.

Grass/Wildfire

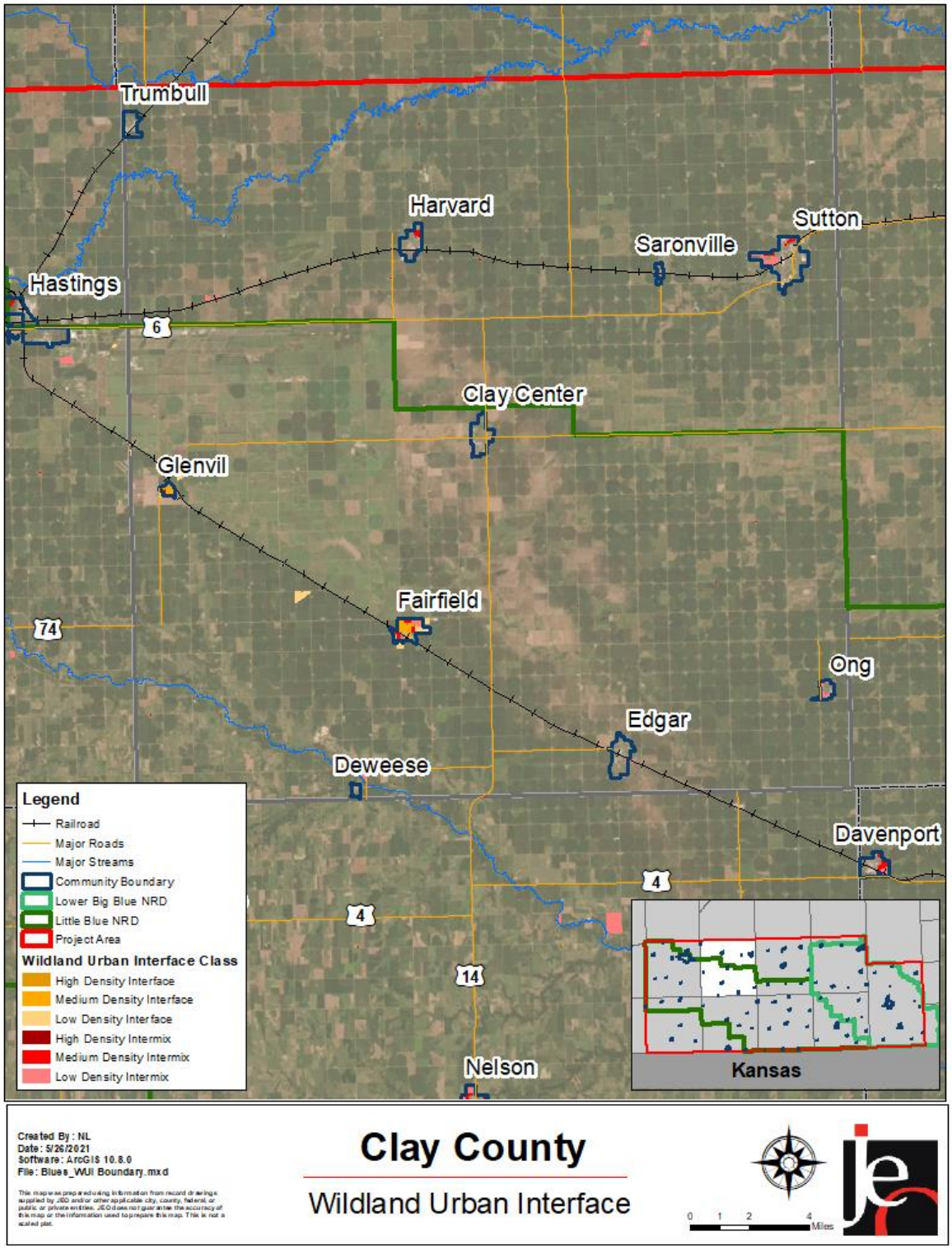
Grass fires and wildfires are major concerns for the county, especially during drought periods. Access to water is a particular concern, as a rolling grass fire being pushed by winter requires six to eight firefighters to extinguish, who must drive up to 15 miles to refill their tankers. The county has expressed interest in developing four wells for water access for tankers in strategic areas around the county. Also concerning to the county are problems with the ability of firefighters to communicate during operations and residents who inadvertently start fires in shelter belt areas.

A fire in 2013 burned six square miles of grass and cropland, pushed by 45 mph winds. Fires in 2012, near the golf course, reached seven miles wide and was exacerbated by 55 mph winds. The most significant fire events burned 408 acres in 2017 when powerlines sparked a fire during dry conditions and a lightning sparked fire in 2000 which burned 200 acres and caused $28,000 in property damages.

The County LEOP has designated evacuation routes, although there was some concern that the public may not be aware of what the routes are. Villages, towns, and cities have their own fire departments, with 20 personnel in Clay Center, five in Dewesse, 25 in Edgar, 10 in Fairfield, 22 in Harvard, three in Marshall Township, 25 in Sutton, and 10 in Trumbull.

The county has gas rigs and truckers, but some are old and are a minor concern, as weight limits on some roads will not support certain types of large fire equipment. The county does not have a Wildland Urban Interface Code, and property owners in the county are not encouraged or required to have defensible space around structures. There are no incentive programs for landowners to use ignition-resistant material during construction.

Figure CLA.6: Clay County WUI



Hazardous Materials

Clay County has experienced ammonia tank leaks in recent years, and four trail derailments in the past 20 years that includes tanks leaking chemicals in the middle of fields. Also, in 2014, a truck spilled 100 gallon of diesel fuel in a ditch. Transportation routes in the county are heavily traveled and often see large loads of hazardous materials. Communities in Clay County are clustered around main corridors and spill events can put these communities at risk. The City of Harvard passed an ordinance in fall 2020 to prevent new anhydrous plants or storage locations from being constructed within the city.

Railroads, and Highways 6 and 74 are the main routes of concern for leaks or spills of transported chemicals. The intersection of Highway 14 with Highway 6, Highway 41, and Highway 74 are not wide enough for the smooth and effective movement of wind turbine blades being transported through the county. During transport, roadways can be blocked or delayed and transportation incidents involving hazardous materials are a concern for the local planning team. Overall, two railroads and four major highways transit the county, with several loads of chemicals and agricultural products passing through communities daily. Many of these cities and villages would be affected if a rail car or other vehicle experienced a major release.

Other concerns exist for waterways in the county which feed directly in river systems or transportation corridor access issues. Detours in the county can add additional hours to traveling residents' trips. Additional traffic detours from highways onto county roads also damage roads. The County's 911 Committee has developed new protocols for hazmat calls to utilize mutual aid agreements. In case of a major incident, the county would need to summon the Nebraska Hazardous Incident Team (NHIT) and/or State Emergency Response Team (SERT) for assistance. The planning team noted an emergency exercise is currently being planned for early 2021.

Severe Thunderstorms

Clay County frequently experiences damaging storms – at least three to five major storms per year, the county reports. Hail in particular is a major concern. A storm with 90 mph winds struck Ong on May 27, 2013, causing $6 million in damage and destroyed 45% of the county's crops. Another storm that struck Edgar on August 1, 2013 with 80 mph winds and half-dollar to golf ball size hail caused more than $3 million in damage, and possibly several million dollars more in crop damage. Other storms affecting Inland, Trumbull, and Fairfield on June 14, 2014 generated 80 mph winds and golf ball size hail, and caused more than $1.2 million more in damage. In 2015, 15-20% of the county's crops were destroyed by a hail event and a straight line wind storm in 2019 reported winds in excess of 100 mph across the county. Severe property damages included roofs, walls, doors collapsed on warehouses, crop and tree damage was extreme. Power loss occurred throughout the county due to downed power lines.

While the majority of farmers do have crop insurance, this insurance does not allow any farmers to make a profit, and as such economic impacts are of high concern. Following hail events, the USDA and the Nebraska extension office conduct crop damage estimates. Recent storm damage in the county has included damage to buildings, power outages lasting up to three days, major tree damage, and a destroyed grain elevator.

The county's main concerns about this hazard are the economic impacts, damage to crops, not having enough crews to quickly restore electric power and clean up, and the safety of people inhabiting old buildings, that may especially be prone to storm damage. There are four county owned facilities in Clay Center: the Highway Department, Sheriff's Office, courthouse, and Weeds Superintendent Building. The county has five maintainer sheds in villages around the county which house snow removal equipment.

Some county critical records are backed-up by an on-site server in the courthouse, but not all of the country's critical records are backed-up, or surge-protected. About five percent of the power lines in the county are buried underground. The new county office complex has a generator in case of power outages, as do the sheriff's office, jail, and public safety answering points (PSAPs). There are hazardous trees in the county that need removal. County critical facilities have weather radios.

Severe Winter Storms

The county's main concerns regarding winter storms are the potential for power outages, losses of livestock, and caring for the elderly or people with medical needs who may be negatively impacted by the loss of power or mobility. There are no hospitals in the county and during winter storms visibility is poor, endangering residents when traveling out of the county. Past events have stranded motorists which required assist. Power outages last three to four days on average, although they may be up to a week in some places. The most recent long-term power outages occurred in 2005 and 2007. The courthouse and sheriff's office have suffered roof damage from winter storms in recent years.

The county clears snow from gravel roads, while the state clears 80 percent of the asphalt roads (Highways 41, 74, and 14) in the county. The county's highway department clears about 30 miles of roads (along state highways), while individual villages and cities are responsible for clearing their own roads. The county owns blades on front of 10-ton dump trucks, and maintainers, and is in the process of updating of the snow removal trucks located in the maintainer sheds around the county. These resources are sometimes insufficient for snow removal. In 2005, the county had to employ contractors following a severe ice storm, to clear the roads within three days. The county is currently leasing the old potion of the middle school to serve as another county office, and has purchased a generator for this facility. The county uses snow fences along major intersections. There are no designated snow routes in the county. Fewer than 10 percent of the power lines in the county are buried. The county has identified the need to update ambulances with more reliable units.

Tornadoes and High Winds

Clay County has experienced 16 confirmed tornadoes since 2000, with notable events including the May 11, 2014 event in which an EF-3 tornado struck Fairfield and caused $12.5 million in damage; a May 27, 2013 EF-2 tornado that caused $4 million in damage in Edgar; a Spring Ranch F-2 tornado on May 22, 2004 that caused $4.5 million in damage; and an F-3 storm on September 22, 2001 that caused $1.25 million in damage in Edgar. Homes, farmsteads, irrigation pivots, power poles, outbuildings, a grain elevator, train cars, and other structures and property have been damaged or destroyed by high winds and tornadoes in Clay County. In 2013, tornado damage included damage to the roofs of the county courthouse and the sheriff's department.

County municipal records are backed-up on-site, in the county courthouse. Newer records are backed-up electronically, and older records are kept in a vault. The county does not have a community safe room, so residents must rely on their own or a neighbor's basement or storm shelter for safety. Another options is for residents to take shelter at one of the local churches, which sometimes open up to provide shelter. Clay County's emergency management agency does offer text alerts for severe weather, but due to staffing limitations, is not always able to do this during an emergency. The county promotes emergency preparedness in local communities by making presentations to community clubs, and by providing information about emergency preparedness at the county fair, and via local newspapers. The county has mutual aid agreements in place with Hastings and the South Central Nebraska Forest Service district. The local planning team noted concerns for tree damage due to lack of tree mitigation and care funding availability for communities.

Governance

A community's governance structure impacts its capability to implement mitigation actions. The county is governed by a seven-member board of supervisors. The county also has the following offices or departments: assessor, attorney, clerk, county court, district court, election commissioner, emergency management, extension office, highway department, health department, local fire chiefs, planning and zoning, register of deeds, sheriff, treasurer, veterans office, and weed control.

Capabilities

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

Table CLA.13: Capability Assessment

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

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

Table CLA.14: Overall Capability

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

Plan Integration

The county has applied for grants in the past including EMPG and HMGP. The local planning team noted the annual municipal budget is generally limited to maintaining current facilities. Any new capital projects would require additional bonds or grant funding.

The LEOP for Clay County, which was updated in November 2019, is an all-hazards plan that provides a clear assignment of responsibility in case of an emergency. Specific hazards are addressed in the LEOP including Agricultural Disease, Dam Failure, Debris Management, and Hazardous Chemical Spills. It includes, as annexes, EOPs for the Cities of Clay Center, Edgar, Fairfield, Harvard, and Sutton, and the Villages of Deweese, Glenvil, Ong, Saronville, and Trumbull.

The county has a Comprehensive Plan which was last updated in 2021. The plan addresses specific hazards including flooding, hail, high winds, and tornadoes. The plan is geared towards safe growth practices by limiting development in known hazardous areas, encourages infill development, and identifies areas in need of emergency shelters. The Zoning Regulations were completed in 2006, and last updated in January 2021. The regulations do not specifically address mitigation of any hazards. The regulations cover Clay County, and the Villages of Clay Center, Deweese, Edgar, Fairfield, Glenvil, Harvard, Saronville, and Trumbull, and the unincorporated villages of Eldorado, Inland, and Verona. It does not cover the Village of Ong or the City of Sutton. The Clay County Board of Supervisors works with a Planning Committee and have a full time employee who helps manage the county's zoning and implementations.

The South Central Economic Development District has developed a Comprehensive Economic Development Strategy (CEDS) which includes Adams, Clay, Nuckolls, and Webster counties and their communities. The plan was originally developed in 2013 and was updated in 2018. The 2018 CEDS identified several key findings of economic development in the area including:

- The region is characterized by strong agricultural natural resources including ground and surface water supplies, a developed water management and distribution system, and fertile soils. This combination supports the strong agricultural sector within the region.
- The region generally offers strong transportation infrastructure that is well developed for agricultural and manufacturing exports. The technological resources are heterogeneously distributed throughout the region and while higher education institutions are present, enrollment remains flat over the last 10 years.
- Although there is population growth in the region and the educational attainment of those 25 years and older is increasing, like the statewide trend, there is evidence that the SCEDD region is experiencing an inflow of less educated people and an outflow of more educated people. As a result, workforce-related issues exist and are affecting the economic performance of the region.
- The labor composition of the region is generally toward lower wage industries (e.g., agriculture and manufacturing) when compared to the state. Lower farm incomes and lower wage and employment growth are other trends for the SCEDD region. It appears that the region is moving toward a less dynamic, lower education, slower growth, and lower wage work force.
- The industry analysis shows how tightly linked the core industries are within the region. Specifically, Manufacturing, Agriculture, Transportation & Warehousing, and Wholesale Trade are tightly connected and play a critical role within the local economy. Weakening service industries within the area include Health Care & Social Assistance and Retail Trade.
- Finding qualified workers remains a significant challenge within the region.... Rural counties have reported that a significant challenge with recruiting and retaining workers is the quality of housing stock. New housing is largely concentrated in higher populated areas and the quality of housing is declining on average in rural counties.

The plan identified and outlined objectives related to three main priority areas: Industry Growth & Innovation, Workforce Development, and Housing. Currently identified objectives do not address natural hazards. Future updates and project implementation should consider integrating hazard mitigation goals and objective.

Plan Maintenance

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

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the Emergency Manager, Planning and Zoning, County Clerk, and LEPC. The local planning team will review the plan no less than annually and will include the public in the review and revision process by: sharing social media posts, newspapers, email notifications, and sharing information at city council meetings open to the public.

Mitigation Strategy

Completed Mitigation Actions

MITIGATION ACTION	BACK-UP GENERATOR
DESCRIPTION	Provide a portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations, and other critical facilities and shelters. Obtain a backup power generator for Clay County Highway Department shop
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
STATUS	A new backup generator has been purchased and installed at the 911 center.

Continued Mitigation Actions

MITIGATION ACTION	ALERT NOTIFICATION SYSTEM
DESCRIPTION	Install Reverse 911 System for Clay County 911 Center
HAZARD(S)	All hazards
ESTIMATED COST	$4,000/yr
FUNDING	Homeland Security Grant Program (HSGP) and local funds
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	EMA
STATUS	This project has been updated as the county works towards an E-911 project plan.

MITIGATION ACTION	ALERT SIRENS
DESCRIPTION	Perform an evaluation of existing alert sirens in order to determine sirens that should be replaced or the placement of new sirens
HAZARD(S)	All hazards
ESTIMATED COST	$15,000+
FUNDING	City and village revenue, HMGP, BRIC
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Clay County EMA
STATUS	The county EM has delegated evaluation of sirens to appointed local Ems and Civil Defense members.

Removed Mitigation Actions

MITIGATION ACTION	BRIDGE REPLACEMENTS
DESCRIPTION	Conduct replacement of condemned Clay County Highway Department bridges (8-10)
HAZARD(S)	Flooding
REASON FOR REMOVAL	This project was identified as no longer a priority for the county.

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

MITIGATION ACTION	SAFE ROOMS
DESCRIPTION	Design and construct safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, and other areas.
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
REASON FOR REMOVAL	This project was removed as it was not adopted at the local level.

MITIGATION ACTION	WATER SYSTEM IMPROVEMENTS
DESCRIPTION	Water system improvements to include additional fire hydrants to increase supply and pressure.
HAZARD(S)	Grass/wildfire
REASON FOR REMOVAL	This project was identified as no longer a priority.

COMMUNITY PROFILE

CITY OF CLAY CENTER

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

Local Planning Team

Table CEN.1: City of Clay Center Local Planning Team

Name	Title	Jurisdiction
Haley Roemmich	Deputy Emergency Manager	Clay County
Mitzi Messenger	City Clerk	Clay Center
Tim Lewis	Emergency Manager	Clay County

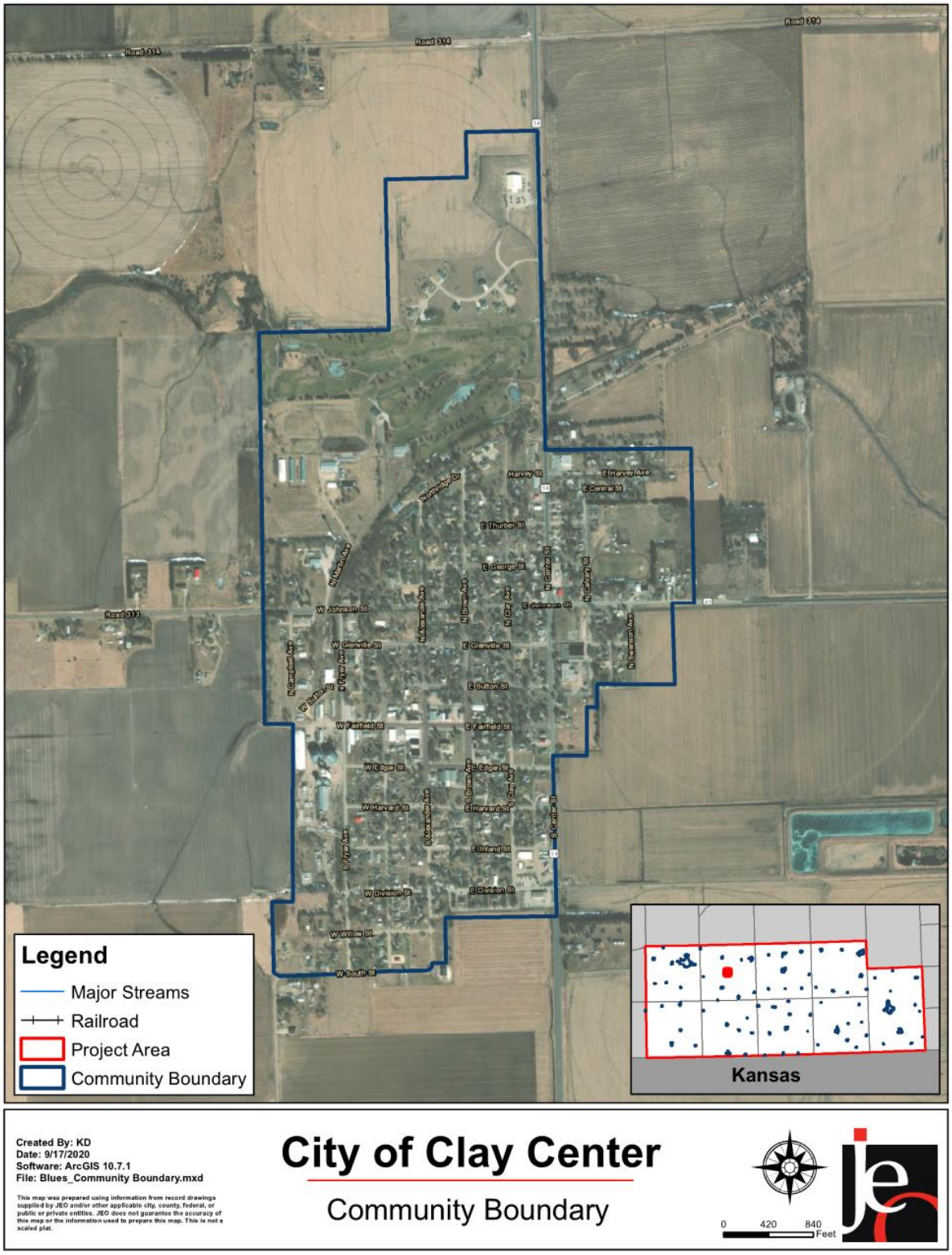
Location and Geography

The City of Clay Center is located in the central portion of Clay County and covers an area of 0.72 square miles. There are no major waterways within the area, although there is a small retention pond approximately 1000 ft east of the city. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. The city lies in the plains topographic region and is surrounded by agricultural fields.

Transportation

Clay Center's major transportation corridors include Nebraska Highway 14, which runs north-south through Clay Center. Highway 14 accommodates on average 1,845 vehicles per day, 345 of which are heavy commercial vehicles. Highway 41 runs east-west, just east of Clay Center, and accommodates 780 vehicles per day, 85 of which are heavy commercial vehicles. There are no railroads in Clay Center, however hazardous chemicals are commonly transported through the city via highway. Critical facilities including the SCPPD district operations office, low-income housing, and the county highway department sit along Highway 14. Additionally the sole gas station in Clay Center is located on the highway and there is an extensive amount of single family housing along these routes. In 2019 a spill was reported at the local anhydrous ammonia bulk facility. A 8' x 20'patch was reported from a spill by a passerby that was not located when responders arrived. It was surmised that it came from an off load to or from the plant. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

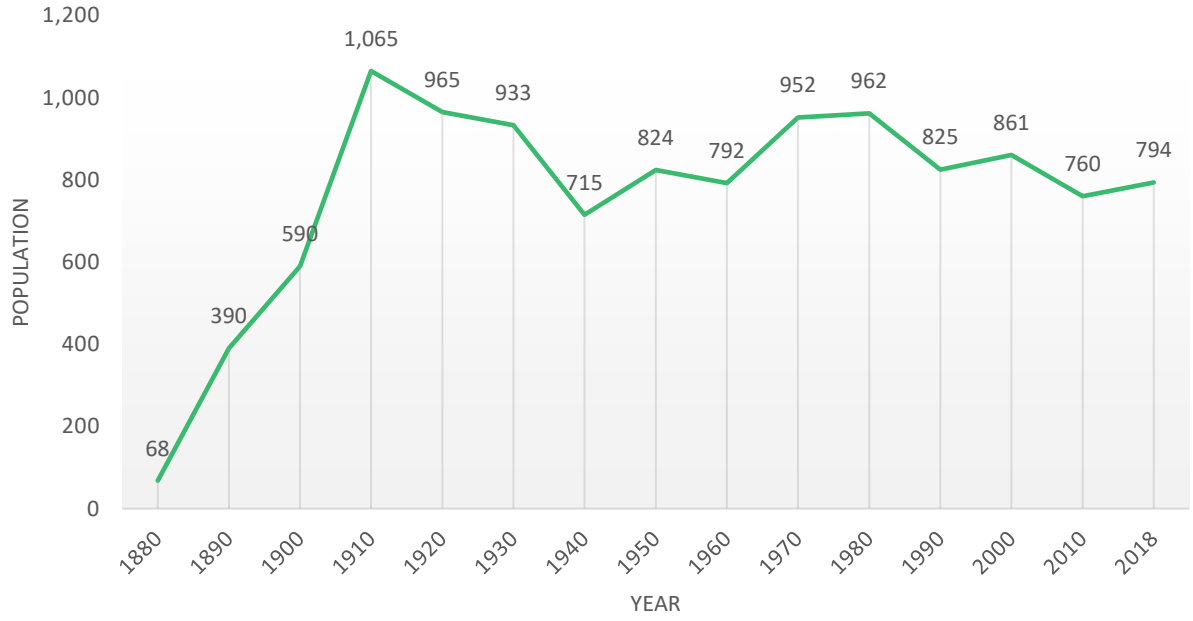
Figure CEN.1: City of Clay Center Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1880 to 2018 (estimated). This figure indicates that the population of Clay Center has been a steady decline since the 1980s with a previous historical decade declines from 1910 to 1940 and a previous steady incline from 1960 to 1980. This is relevant to hazard mitigation because communities with a growing population may be more prone to developing additional land and building new structures, while communities with declining populations may lack adequate funds to pursue mitigation projects. Net population growth may increase the number of people and properties vulnerable to hazards. The city's population accounted for 13% of Clay County's population in 2018.

Figure CEN.2: Clay Center Population 1880-2018



Source: U.S. Census Bureau[12]

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

- **Younger.** The median age of Clay Center was 34.6 years old in 2018, compared with the county average of 42.5 years. Clay Center's population has grown older since 2018, when the median age was 42.7 years old. Clay Center had a larger proportion of people under 20 years old (27.6%) than the county (26.0%).[13]
- **Less ethnically diverse.** In 2010, 2% of Clay Center's population was other races and 2% was two or more races. By 2018, about 1% of Clay Center's population was other races while 5% was two or more races. During that time, Clay County had declined 5% to 1% (other races) and grew 1% to 2% (two or more races) from 2010 to 2018 respectively.[14]
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Clay County (10.9%) was lower than the county (11.4%) in 2018.[15]

12 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
13 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
14 United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]
15 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

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

- **Similar mix of industries**. Employment sectors accounting for 10% or more of employment in Clay Center included Construction and Education. In comparison Clay County's included Agriculture, Construction, Manufacturing, and Education.[16]
- **Similar household income**. Clay Center's median household income in 2018 ($55,875) was similar to the county ($56,316).[17]
- **Fewer long-distance commuters**. About 11.3% percent of workers in Clay Center commuted for fewer than 15 minutes, compared with about 39.3% of workers in Clay County. About 60% of workers in Clay Center commute 30 minutes or more to work, compared to about 30.0% of the county workers.[18]

Major Employers

The major employers in the City of Clay Center include the Aurora Co-Op, CPI, Clay County (government), and Sandy Creek Schools. Approximately 40% of residents also commute to either Hastings or Grand Island for work.

Housing

In comparison to Clay County, Clay Center's housing stock was: [19]

- **Less owner occupied.** About 74.1% of occupied housing units in Clay Center are owner occupied compared with 78.6% of occupied housing in Clay County in 2018.
- **Smaller share of aged housing stock**. Clay Center has a similar share of houses built prior to 1970 as the county (65.4% compared to 66.4%).
- **Fewer multi-family homes**. The predominant housing type in the city is single family detached and Clay Center contains fewer multifamily housing with five or more units per structure than the county (0.9% compared to 1.7%). About 82.5% of housing in Clay Center was single-family detached, compared with 86.2% of the county's housing. Clay Center has a larger share of mobile and manufactured housing (3.6%) compared to the county (3.3%). The local planning team noted mobile homes are dispersed on lots throughout the city.

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

16 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
17 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
18 United States Census Bureau. "2018 American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]
19 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Future Development Trends

In the past five years a large hog facility was constructed three miles north of town, with 1,000 hogs. No new residential or commercial development is planned in the city for the next five years. The population in Clay Center has declined in recent years which the local planning team attributed to an aging population and low economic opportunities in the area.

Parcel Improvements and Valuation

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

Table CEN.2: Clay Center 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
551	318	$26,460,750	4	1%	$643,550

Source: County Assessor, GIS Workshop

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are two chemical storage sites throughout Clay Center which house hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. The local planning team noted concerns due to the storage of anhydrous ammonia in town.

Table CEN.3: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
US Meat Animal Research Center	844 Road 313	Y
Aurora Co-op Elevator Company	401 W Fairfield St	N

Source: Nebraska Department of Environment and Energy[20]

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.

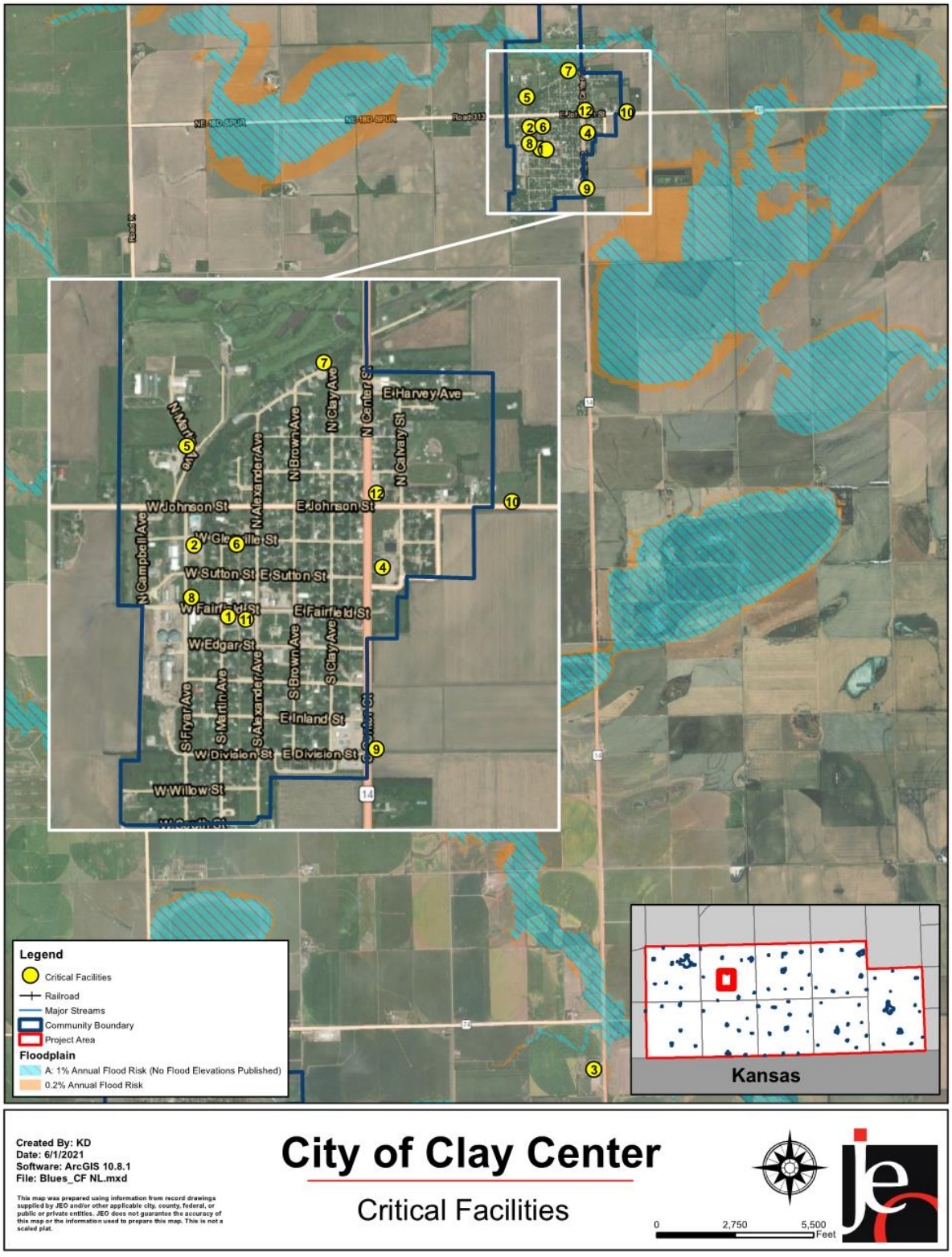
The following table and figure provide a summary of the critical facilities for the jurisdiction.

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

Table CEN.4: Clay Center Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Safety and Security	City Office/Fire Station	Y	Y	N
2	Health and Medical	Aurora Memorial Clinic	N	N	N
3	Food, Water, and Shelter	Sandy Creek Middle School	Y	N	N
4	Health and Medical	Clay County Health Department	N	N	N
5	Food, Water, and Shelter	Water Tower	N	N	N
6	Food, Water, and Shelter	Well	N	Y	N
7	Food, Water, and Shelter	Well	N	N	N
8	Energy	Substation	N	Y	N
9	Food, Water, and Shelter	Sewer Station	N	N	N
10	Energy	Substation for Natural Gas	N	N	N
11	Food, Water, and Shelter	Grocery Store	N	N	N
12	Energy	Gas Station	N	N	N

Figure CEN.3: Clay Center Critical Facilities



Historical Occurrences

See the Clay County community profile for historical hazard events.

Hazard Prioritization

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

Agricultural Animal Disease

Clay Center's main concerns with this hazard involve indirect economic impacts. Clay Center is a bedroom community with a large animal research center that employs several hundred people. The facility was built in 1970 after appropriating farmland in the late 1960s. Farmland surrounding Clay Center primarily includes corn and beans, with some wheat. A large hog facility has also been constructed three miles north of town, with 1,000 hogs.

If a disease outbreak were to occur at the facility, Clay Center could be in involved in a disaster isolation zone. Likewise, Clay Center would also be asked to respond to this event. There have been no known historical impacts of agricultural animal disease in Clay Center. The facility and the city have developed an Agricultural Disease Outbreak Response Plan and regular bio-hazard planning and preventative measures are part of operations at the facility. City officials continue to monitor and address code violations that present concerns for animal health, safety and welfare.

Severe Thunderstorms

Severe thunderstorms include significant impacts from heavy rain, lightning, hail, and strong winds and are common across the planning area. Major storms with strong winds downed powerlines to homes, damaged siding, and caused significant debris removal needs in 2019 and 2020. Specifically, Clay Center is concerned about power line and roof damage due to severe thunderstorms and hail. SCPPD provides power to Clay Center. There is one substation in town. Hail has caused power outages in the past, with downed lines along Highway 14 near Johnson Street. The lines have been damaged multiple times in the past. About 10 percent of severe thunderstorms in the city result in a power outage. The city hires people to cut and maintain trees and SCPPD has a contract arborist who maintains trees along main transmission lines in the city to remove threats. Seventy-five percent of the trees in the community are well-maintained.

Tornadoes and High Winds

High winds and tornadoes are frequent occurrences in Nebraska. One major event occurred on May 22nd, 2004 when a F2 tornado spanned 20 miles from northwest of Spring Ranch to southeast Clay Center. No injuries were reported but the tornado hit approximately 15 residences, derailed 38 rail cars, and damaged or destroyed over 100 center pivots. Other tornadoes have passed through the golf course causing insignificant damage, with crop damage beyond municipal boundaries.

There are no public safe room facilities or storm shelters in the community that people could use during a tornado event. Approximately 25 percent of homes have basements, which could be used for personal shelters during a tornado event if necessary. There are four sirens in in Clay Center, three of which are battery-operated. Most of these sirens are in good working order. Sirens are tested every first and third Thursday of the month. Clay Center has no weather radios in any facilities. Clay Center remarked that Code Red does work well in the community.

Flooding

The City of Clay Center did not identified flooding as a hazard of top concern. However, floodplain areas are located along the northern portion of town and to the west and south east near major transportation routes. Clay Center participates in the NFIP and as of November 2020 has one policy in-force for $350,000. According to NeDNR as of February 2020 Clay Center had no repetitive flood loss properties.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Clay Center has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The city has a mayor and an four member council and the following offices: clerk/treasurer, attorney, chief of police, homeland security, fire chief, street/water department, Clay County Planning Office, and Clay County Emergency Management.

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 CEN.5: 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	*No*
	Building Codes	*No*
	Floodplain Management Plan	*No*
	Storm Water Management Plan	*No*
	National Flood Insurance Program	*Yes*
	Community Rating System	*No*
	Other (if any)	
	Planning Commission	*No*
	Floodplain Administration	*Yes*

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

Table CEN.6: Overall Capability

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

Plan Integration

The city's Comprehensive Plan is aimed at smart growth in the future and discourages development in hazardous areas but does not specifically address hazard events. The city also

has a zoning ordinance and floodplain ordinance. The Zoning Ordinance discourages development in the floodplain. The planning team indicated that municipal funds are currently limited to maintaining city facilities and systems.

The Local Emergency Operations Plan (LEOP) for Clay Center, which was last updated in 2019, is an annex of Clay County's LEOP. It is an all hazards plan that does not address specific natural and man-made disasters. It provides a clear assignment of responsibility in case of an emergency.

The South Central Economic Development District has developed a Comprehensive Economic Development Strategy (CEDS) which includes Adams, Clay, Nuckolls, and Webster counties and their communities. The plan was originally developed in 2013 and was updated in 2018. The 2018 CEDS identified several key findings of economic development in the area including:

- The region is characterized by strong agricultural natural resources including ground and surface water supplies, a developed water management and distribution system, and fertile soils. This combination supports the strong agricultural sector within the region.
- The region generally offers strong transportation infrastructure that is well developed for agricultural and manufacturing exports. The technological resources are heterogeneously distributed throughout the region and while higher education institutions are present, enrollment remains flat over the last 10 years.
- Although there is population growth in the region and the educational attainment of those 25 years and older is increasing, like the statewide trend, there is evidence that the SCEDD region is experiencing an inflow of less educated people and an outflow of more educated people. As a result, workforce-related issues exist and are affecting the economic performance of the region.
- The labor composition of the region is generally toward lower wage industries (e.g., agriculture and manufacturing) when compared to the state. Lower farm incomes and lower wage and employment growth are other trends for the SCEDD region. It appears that the region is moving toward a less dynamic, lower education, slower growth, and lower wage work force.
- The industry analysis shows how tightly linked the core industries are within the region. Specifically, Manufacturing, Agriculture, Transportation & Warehousing, and Wholesale Trade are tightly connected and play a critical role within the local economy. Weakening service industries within the area include Health Care & Social Assistance and Retail Trade.
- Finding qualified workers remains a significant challenge within the region.... Rural counties have reported that a significant challenge with recruiting and retaining workers is the quality of housing stock. New housing is largely concentrated in higher populated areas and the quality of housing is declining on average in rural counties.

The plan identified and outlined objectives related to three main priority areas: Industry Growth & Innovation, Workforce Development, and Housing. Currently identified objectives do not address natural hazards. Future updates and project implementation should consider integrating hazard mitigation goals and objective.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and

Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms.

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the Mayor, City Clerk, Local Emergency Manager, and County Emergency Management. The local planning team will review the plan no less than bi-annually and will include the public in the review and revision process by sharing information at city council meetings open to the public.

Mitigation Strategy

Completed Mitigation Actions

MITIGATION ACTION	AGRICULTURAL DISEASE RESPONSE ACTION PLAN
DESCRIPTION	Coordinate with farmers, USDA, UNL, and other local actors to develop a plan of action to contain or respond to animal disease outbreaks.
HAZARD(S)	Agricultural Animal Disease
ESTIMATED COST	An action plan has been developed for the city and was integrated into the County LEOP in 2019.

Continued Mitigation Actions

MITIGATION ACTION	HIGHER BUILDING CODES AND STANDARDS
DESCRIPTION	Encourage the use of hail resistant roofing for any new construction
HAZARD(S)	Severe Thunderstorms
ESTIMATED COST	$2 per square foot
FUNDING	General Funds, HMGP
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	City Council
STATUS	This action has not yet been started.

Removed Mitigation Actions

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

MITIGATION ACTION	SAFE ROOM/STORM SHELTER
DESCRIPTION	Design and construct storm shelters and safe rooms in highly vulnerable areas such as schools, and other areas
REASON FOR REMOVAL	City lacked local interest, support, and financial ability for this project and thus has been removed.

COMMUNITY PROFILE

VILLAGE OF DEWEESE

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

Local Planning Team

Table DEW.1: Village of Deweese Local Planning Team

Name	Title	Jurisdiction
Paul Hansen	Board Chairperson	Village of Deweese
Lana Svoboda	Village Clerk	Village of Deweese
Eric Nejezchleb	Board Member	Village of Deweese

Location and Geography

The Village of Deweese is located in the southern portion of Clay County and covers an area of 0.13 square miles. Major waterways within the area include Liberty Creek, which runs east to west just north of the village. Liberty Creek feeds into the Little Blue River, which runs east west north of the community. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. The village lies in the plains topographic region and is surrounded by agricultural fields.

Transportation

Deweese's major transportation corridors include Nebraska Highway Spur 18C, which runs east-west to connect Deweese to Highway 14. Highway Spur 18C accommodates on average 245 vehicles per day, 20 of which are heavy commercial vehicles. Deweese does not have any rail lines. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Demographics

The following figure displays the historical population trend from 1920 to 2018 (estimated). This figure indicates that the population of Deweese has declined since the 1930s. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. The village's population accounted for approximately 1% of Clay County's population in 2018.

Figure DEW.1: Village of Deweese Jurisdictional Boundary

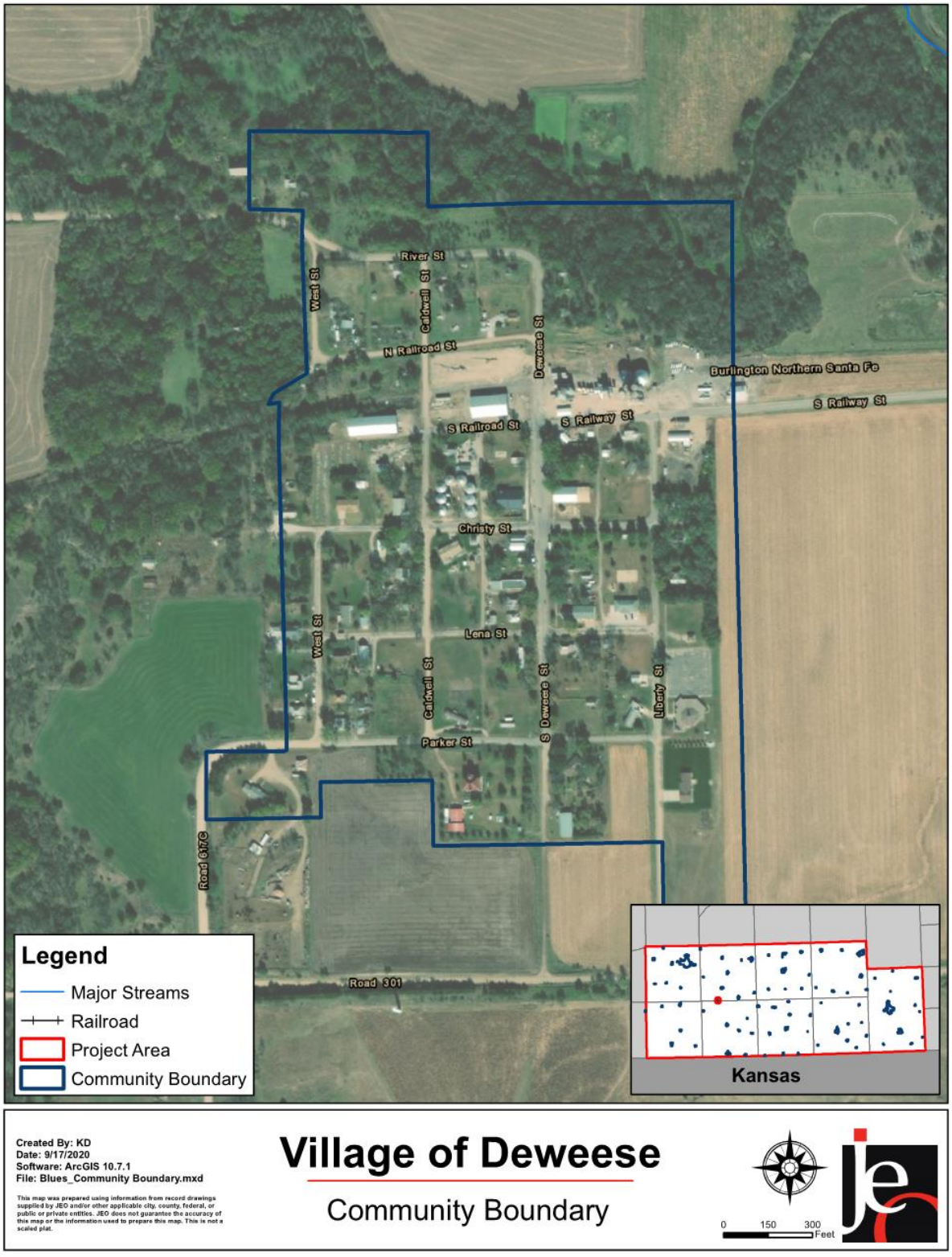
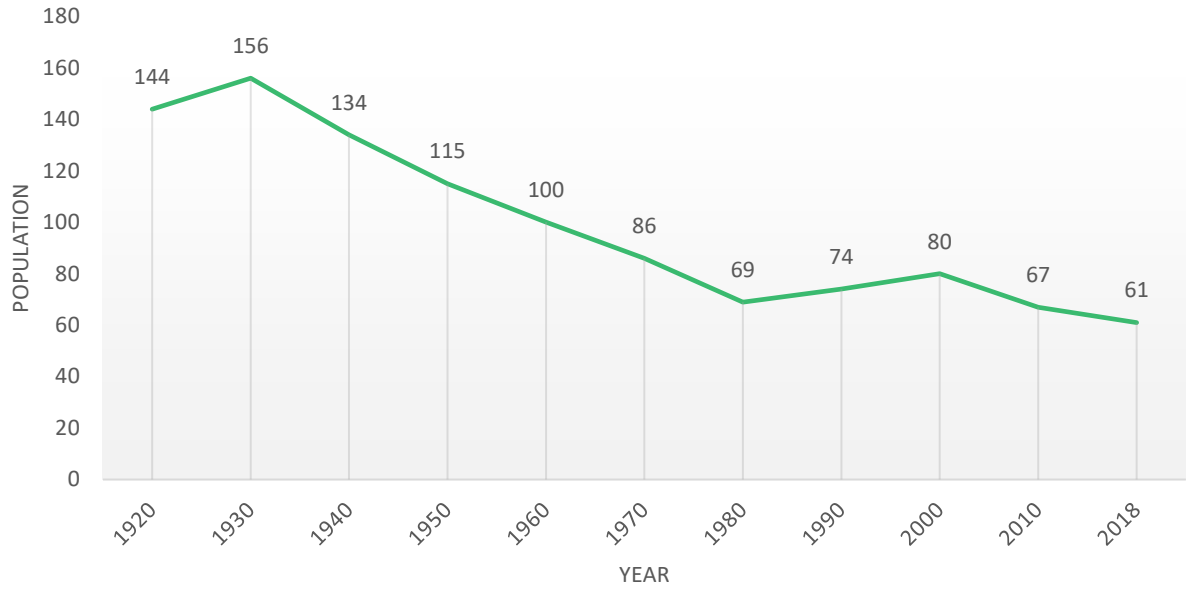


Figure DEW.2: Deweese Population 1920-2018



Source: U.S. Census Bureau[21]

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

- **Younger.** The median age of Deweese was 35.7 years old in 2018, compared with the county average of 42.5 years. Deweese's population has grown younger since 2018, when the median age was reported as 78.5 years old. Deweese had a smaller proportion of people under 20 years old (24.7%) as the county (26.0%).[22]
- **Less ethnic diversity.** Between 2010 and 2018, 100% of Deweese's population was White, non-Hispanic. During that time, Clay County had declined 5% to 1% (other races) and grew 1% to 2% (two or more races) from 2010 to 2018 respectively.[23]
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Deweese (1.6%) was lower than the county (11.4%) in 2018.[24]

Employment and Economics

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

- **Similar mix of industries**. Employment sectors accounting for 10% or more of employment in Deweese included Agriculture, Construction, Arts, and other services. In comparison Clay County's included Agriculture, Construction, Manufacturing, and Education.[25]
- **Similar household income**. Deweese's median household income in 2018 ($56,500) was similar to the county ($56,316) in 2018.[26]

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

- **More long-distance commuters**. About 21.3% percent of workers in Deweese commuted for fewer than 15 minutes, compared with about 39.3% of workers in Clay County. About 51.5% of workers in Deweese commute 30 minutes or more to work, compared to about 30.0% of the county workers.[27]

Major Employers

The two main employers in the village include C&M Supply and Down South Bar and Grill. According to the planning team, the vast majority of residents commute to other communities for work.

Housing

In comparison to Clay County, Deweese's housing stock was: [28]

- **More owner occupied.** About 80.8% of occupied housing units in Deweese are owner occupied compared with 78.6% of occupied housing in Clay County in 2018.
- **Greater share of aged housing stock**. Deweese has a greater share of houses built prior to 1970 as the county (73.0% compared to 66.4%).
- **Fewer multi-family homes**. The predominant housing type in the village is single family detached and Deweese contains fewer multifamily housing with five or more units per structure than the county (0.0% compared to 1.7%). About 91.7% of housing in Deweese was single-family detached, compared with 86.2% of the county's housing. Deweese has a greater share of mobile and manufactured housing (8.3%) compared to the county (3.3%). There is one mobile home in the community, near the schoolhouse, as noted by the local planning team.

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

Future Development Trends

There have been two houses demolished over the past five years in Deweese. One house was replaced, a vacant house is now occupied, and one house is in the process of being redone. No structures were developed in the floodplain. There are no new housing or businesses planned for the next five years.

Parcel Improvements and Valuation

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

27 United States Census Bureau. "2018 American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]
28 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Table DEW.2: Deweese 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
105	36	$1,350,380	1	3%	$156,690

Source: County Assessor, GIS Workshop

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one chemical storage site in Deweese which houses hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. According to the planning team, no chemical spills have occurred in the community. Additionally, there are no critical facilities or vulnerable populations located near chemical fixed sites.

Table DEW.3: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
C & M Supply Inc	210 S Deweese Ave	No

Source: Nebraska Department of Environment and Energy[29]

Critical Facilities

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

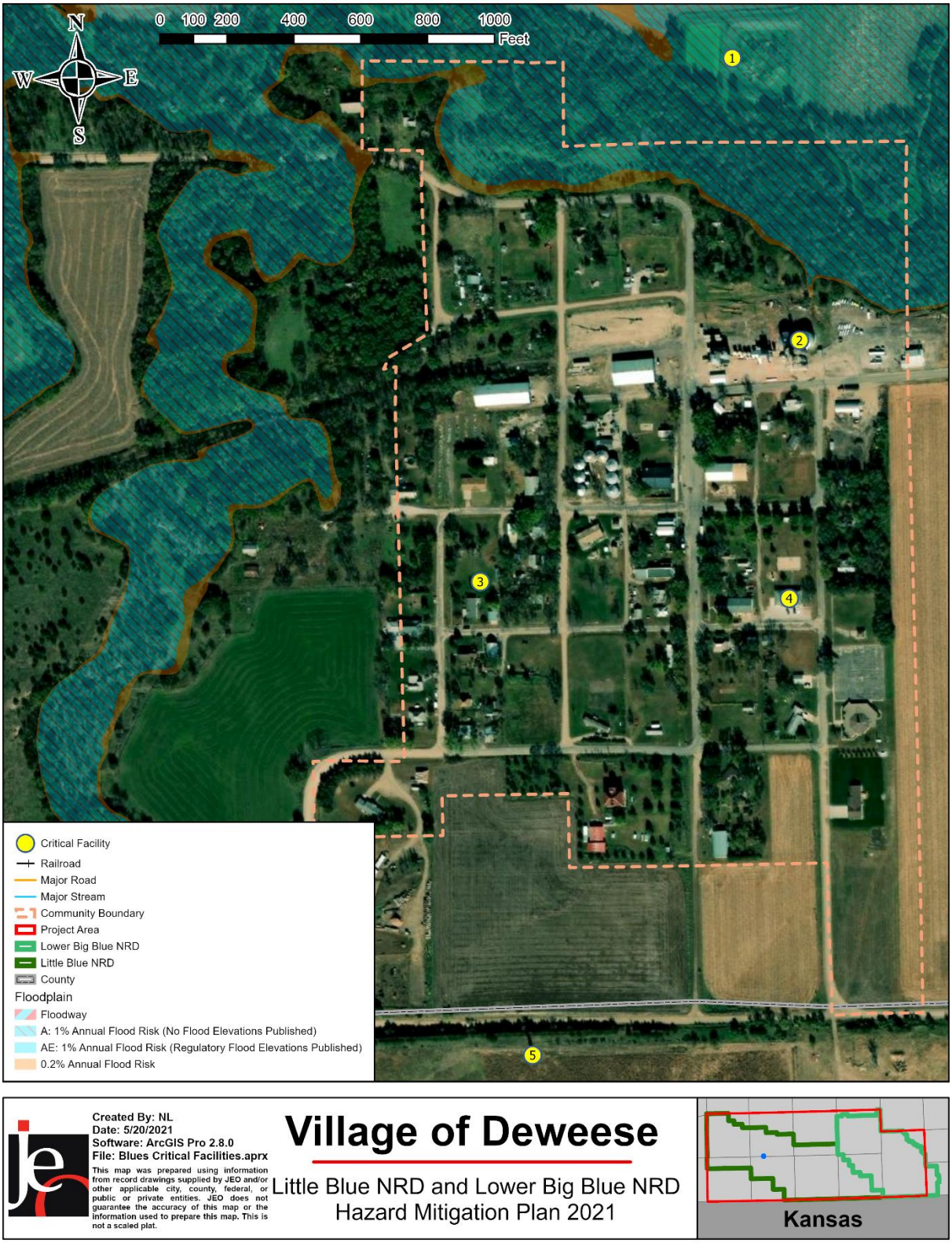
The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table DEW.4: Deweese Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Health and Medical	Lagoons	N	N	Y
2	Hazardous Materials	Elevator (privately owned, C&M)	N	N	N
3	Food, Water, and Shelter	Community Center	Y	N	N
4	Safety and Security	Fire/City Hall	N	N	N
5	Food Water and Shelter	Water Tower	N	Y	N

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

Figure DEW.3: Deweese Critical Facilities



Historical Occurrences

See the Clay County community profile for historical hazard events.

Hazard Prioritization

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

Severe Thunderstorms

Deweese, like all of Clay County, is prone to severe thunderstorms. The combination of heavy rain, high winds, lightning, and hail can often cause significant impacts to a community. According to the NCEI, there have been 25 severe thunderstorm events in Deweese from 1996 to April 2020, causing a total of $625,000 in property damage and $2,832,000 in crop damage. However, no injuries or deaths were reported. A June 1998 thunderstorm generated 80 mph winds that damaged buildings and trees within the village. Another storm in July 2011 produced 70 mph winds and knocked down three power poles. Multiple storms have produced hailstones ranging from 0.75 inches to 2 inches in diameter. The village's main concern about severe thunderstorms is damage to infrastructure and trees.

Critical electronic municipal records are protected with surge protectors. Critical facilities do have portable generators. Only about one percent of the power lines in the village are buried. There are currently no hazardous trees that need to be removed. Critical facilities have weather radios. The village has mutual aid agreements with Fairfield, Glenvil, and Lawrence. Identified mitigation actions for this hazard include obtaining power generators for critical facilities, and a backup system for records and files.

Severe Winter Storms

Severe winter weather is part of the regular climate for Deweese and the entire planning area. Severe winter storms include blizzards, ice accumulation, extreme cold, heavy snow, and winter storms. These storms can cause power outages during bitterly cold temperatures, road closures, and economic impacts. According to the NCEI, there were 98 severe winter storm events in Clay County from 1996 through April 2020, resulting in $2,294,000 in property damages. No injuries or deaths were reported. Particularly memorable in the village is a December 2006 ice storm that knocked out power to the village. Officials are concerned about loss of power and the safety of residents during power outages.

The village owns a tractor with a blade, and village board members are in charge of snow removal. The village believes these resources are insufficient for snow removal. The village does not utilize snow fences. There are designated snow routes in town. Only about one percent of the power lines in the village are buried. Identified mitigation actions for this hazard include obtaining power generators for critical facilities, and a backup system for records and files.

Tornadoes and High Winds

According to NCEI data, there have been 19 high wind events in Clay County from 1996 to April 2020. High winds are common across the region and can cause property and tree damage and brief power outages. While no significant tornados have affected the community in recent years, there was a brief EF-0 tornado that touched down near the village on May 11, 2014. No damages or injuries were reported. The village is concerned about damage to infrastructure and homes, and public safety. No critical facilities have experienced tornado damage in recent years.

The city does not have a community safe room, so residents must rely on their own or a neighbor's basement or storm shelter for safety. The village does back up its electronic municipal records periodically to a zip drive that is stored off-site. Clay County offers text alerts for severe weather. The village does not promote emergency preparedness in the community. The village has mutual aid agreements with Fairfield, Glenvil, and Lawrence. Identified mitigation actions for this hazard include obtaining an alert siren for the fire hall, power generators for critical facilities, and a backup system for records and files; and building a storm shelter for up to 200 people as part of a new structure for the village's fire vehicles.

Flooding

Although flooding was not identified as a top concern for Deweese, the community does have two creeks, Dry Creek and Liberty Creek, on the western and northern sides of the village. These creeks are identified as having flood risk areas associated with them by NeDNR. According to the NCEI, there has been one flood event in Deweese from 1996 to April 2020. No injuries were recorded, but the flood resulted in $15,000 in property damage and $250,000 in crop damage. The village does not currently participate in the NFIP.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Deweese has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The village has a four-member board and the following offices: clerk, attorney, and sewage plant operator.

Capabilities

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

Table DEW.5: Capability Assessment

Survey Components		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	*No*
	Capital Improvements Plan	*No*
	Economic Development Plan	*Yes*
	Local Emergency Operational Plan	*County*
	Floodplain Ordinance	*No*
	Zoning Ordinance	*No*

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

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

Plan Integration

The village has applied for and received grant assistance in the past, specifically a grant through NDEE was used to upgrade the lagoons. Lagoon capacity was increased, some seepage was addressed, and an emergency alert system was installed. The local planning team noted the municipal budget is limited to maintaining current infrastructure and most available funds are dedicated to the fire barn upgrade loan which is anticipated to be paid off by 2029.

The Local Emergency Operations Plan (LEOP) for Deweese, which was last updated in 2019, is an annex of Clay County's LEOP. It is an all hazards plan that does not address specific natural and man-made disasters. It provides a clear assignment of responsibility in case of an emergency.

The village follows all county and state zoning and building code requirements. No other planning mechanisms were identified for Deweese which incorporate hazard mitigation goals and objectives.

The South Central Economic Development District has developed a Comprehensive Economic Development Strategy (CEDS) which includes Adams, Clay, Nuckolls, and Webster counties and their communities. The plan was originally developed in 2013 and was updated in 2018. The 2018 CEDS identified several key findings of economic development in the area including:

- The region is characterized by strong agricultural natural resources including ground and surface water supplies, a developed water management and distribution system, and fertile soils. This combination supports the strong agricultural sector within the region.
- The region generally offers strong transportation infrastructure that is well developed for agricultural and manufacturing exports. The technological resources are heterogeneously distributed throughout the region and while higher education institutions are present, enrollment remains flat over the last 10 years.
- Although there is population growth in the region and the educational attainment of those 25 years and older is increasing, like the statewide trend, there is evidence that the SCEDD region is experiencing an inflow of less educated people and an outflow of more educated people. As a result, workforce-related issues exist and are affecting the economic performance of the region.
- The labor composition of the region is generally toward lower wage industries (e.g., agriculture and manufacturing) when compared to the state. Lower farm incomes and lower wage and employment growth are other trends for the SCEDD region. It appears that the region is moving toward a less dynamic, lower education, slower growth, and lower wage work force.
- The industry analysis shows how tightly linked the core industries are within the region. Specifically, Manufacturing, Agriculture, Transportation & Warehousing, and Wholesale Trade are tightly connected and play a critical role within the local economy. Weakening

service industries within the area include Health Care & Social Assistance and Retail Trade.

- Finding qualified workers remains a significant challenge within the region.... Rural counties have reported that a significant challenge with recruiting and retaining workers is the quality of housing stock. New housing is largely concentrated in higher populated areas and the quality of housing is declining on average in rural counties.

The plan identified and outlined objectives related to three main priority areas: Industry Growth & Innovation, Workforce Development, and Housing. Currently identified objectives do not address natural hazards. Future updates and project implementation should consider integrating hazard mitigation goals and objective.

Plan Maintenance

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

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

Mitigation Strategy

Completed Mitigation Actions

MITIGATION ACTION	FACILITY FOR FIRE VEHICLES AND SHELTER
DESCRIPTION	Construct facility for fire vehicles, and shelter for up to 200 people, with communication capabilities during an emergency, and backup power
HAZARD(S)	All hazards
STATUS	A new fire barn has been constructed to house vehicles. Residents can be sheltered at new fire hall or at the community center. Additional sheltering needs was not identified as a priority.

Continued Mitigation Actions

MITIGATION ACTION	ALERT SIRENS
DESCRIPTION	Perform an evaluation of existing alert sirens in order to determine sirens that should be replaced or the placement of new sirens
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	$20,000
FUNDING	General Funds, HMGP, BRIC
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Village Board, Village Engineer, County EMA
STATUS	Previous siren located on property now privately owned. The village needs to update and relocate siren to new fire hall. Updated siren should include a community access point for activation.

MITIGATION ACTION	BACKUP GENERATORS
DESCRIPTION	20K natural gas-fueled electric generators
HAZARD(S)	All hazards
ESTIMATED COST	$20,000
FUNDING	General Funds, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Village Engineer, Village Board
STATUS	Backup generators are needed at fire hall/city hall and the community center.

MITIGATION ACTION	BACKUP MUNICIPAL AND PROJECT RECORDS
DESCRIPTION	Purchase and utilize external hard drives and backup server for on-site storage
HAZARD(S)	All hazards
ESTIMATED COST	$2,000
FUNDING	General Funds
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Village clerk
STATUS	This project has not yet been started. Additional evaluation is needed for local municipal records.

COMMUNITY PROFILE

CITY OF EDGAR

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

Local Planning Team

Table EDG.1: City of Edgar Local Planning Team

Name	Title	Jurisdiction
Brad Brenenfoder	Mayor	City of Edgar
Chris Shuck	City Clerk	City of Edgar
Trent Poppe	Utilities Superintendent	City of Edgar
Tim Lewis	Director, Emergency Mgmt	Clay County

Location and Geography

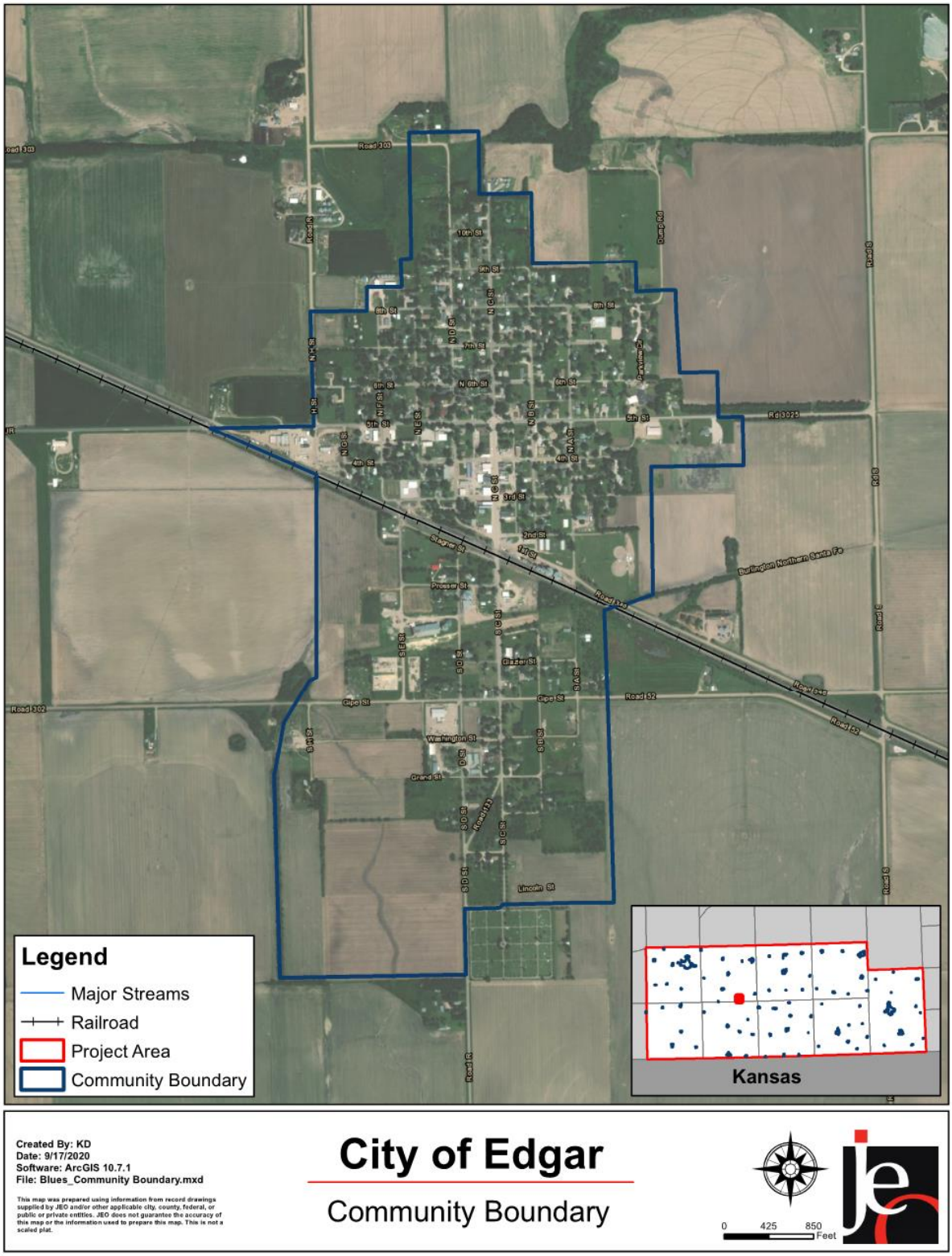
The City of Edgar is located in the southern portion of Clay County and covers an area of 0.79 square miles. Major waterways within the area include Big Sandy Creek, which is located approximately ine mile northeast of the community. There is also a small lake one mile northweast of the city. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. The city lies in the plains topographic region and is surrounded by agricultural fields.

Transportation

Edgar's major transportation corridors include Nebraska Highway Spur 18B, which connects Edgar to Highway 14, four miles west of the city. Highway Spur 18B accommodates on average 520 vehicles per day, 45 of which are heavy commercial vehicles. Edgar has one railroad, the Union Pacific line. At Edgar, the UPRR runs to the northwest and connects Edgar to Hastings. In the opposite direction, the line proceeds southeastward through Davenport on to Fairbury. Highway Spur 18B is the main access way for Edgar. According to the planning team, it has little to no shoulder and deep ditches in the right of way. Spur 18B also has a major UP railroad crossing at the east edge of the city. Most commercial deliveries enter Edgar on this route. The planning team also stated that chemicals such as anhydrous ammonia and dry fertilizer are regularly transported along this road. Critical facilities such as the fire hall, city hall, and local grocery store are located along this main transportation route.

A recent spill event occurred where 40 tons of dry fertilizer spilled south of Edgar when a semi-trailer rolled and released its load onto the road and into the right of way. The road was closed, and the Nebraska Department of Environment and Energy provided oversight of cleanup. Transportation information is important to hazard mitigation plans as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

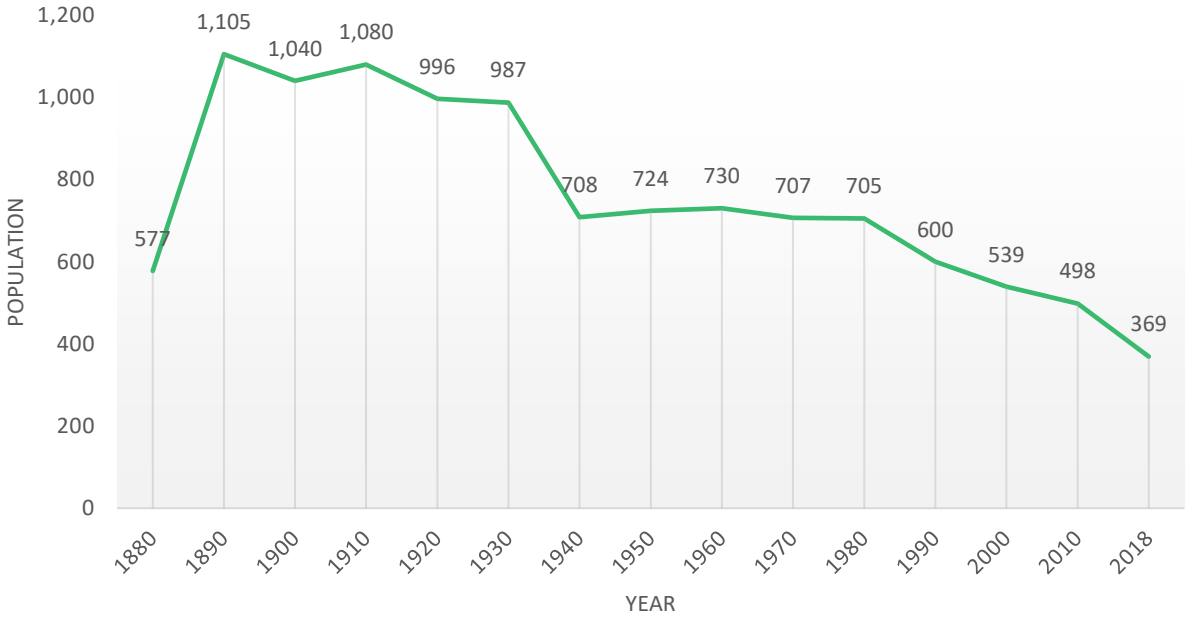
Figure EDG.1: City of Edgar Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1880 to 2018 (estimated). This figure indicates that the population of Edgar has been a steady decline since the 1940s. This is relevant to hazard mitigation because communities with a growing population may be more prone to developing additional land and building new structures, while communities with declining populations may lack adequate funds to pursue mitigation projects. Net population growth may increase the number of people and properties vulnerable to hazards. The city's population accounted for 6% of Clay County's population in 2018.

Figure EDG.2: Edgar Population 1880-2018



Source: U.S. Census Bureau[30]

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

- **Older.** The median age of Edgar was 49 years old in 2018, compared with the county average of 42.5 years. Edgar's population has grown older since 2018, when the median age was 46 years old. Edgar had a smaller proportion of people under 20 years old (17.4%) than the county (26.0%).[31]
- **Similar ethnic diversity.** In 2010, 1% of Edgar's population was other races and 1% was two or more races. By 2018, about 2% of Edgar's population was Asian while 2% was two or more races. During that time, Clay County had declined 5% to 1% (other races) and grew 1% to 2% (two or more races) from 2010 to 2018 respectively.[32]
- **More likely to be at the federal poverty line.** The poverty rate of all persons in Edgar (15.2%) was higher than the county (11.4%) in 2018.[33]

30 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
31 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
32 United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]
33 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

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

- **Similar mix of industries**. Employment sectors accounting for 10% or more of employment in Edgar included Retail, Education, and Arts and Entertainment. In comparison Clay County's included Agriculture, Construction, Manufacturing, and Education.[34]
- **Lower household income**. Edgar's median household income in 2018 ($39,750) was approximately $16,500 lower than the county ($56,316).[35]
- **Fewer long-distance commuters**. About 32.3% percent of workers in Edgar commuted for fewer than 15 minutes, compared with about 39.3% of workers in Clay County. About 10.8% of workers in Edgar commute 30 minutes or more to work, compared to about 30.0% of the county workers.[36]

Major Employers

Major employers in Edgar include Nutrien, Becks Auto Supply, Aurora Co-op, and Corner Market. According to the local planning team, approximately 40% of residents commute to other communities for work.

Housing

In comparison to Clay County, Edgar's housing stock was: [37]

- **Less owner occupied.** About 72.9% of occupied housing units in Edgar are owner occupied compared with 78.6% of occupied housing in Clay County in 2018.
- **Greater share of aged housing stock**. Edgar has a larger share of houses built prior to 1970 than the county (74.2% compared to 66.4%).
- **Fewer multi-family homes**. The predominant housing type in the city is single family detached and Edgar contains fewer multifamily housing with five or more units per structure than the county (0% compared to 1.7%). About 89.3% of housing in Edgar was single-family detached, compared with 86.2% of the county's housing. Edgar has a larger share of mobile and manufactured housing (4.1%) compared to the county (3.3%). The planning team stated that there are only a few mobile homes within the city and there is no specific mobile home park.

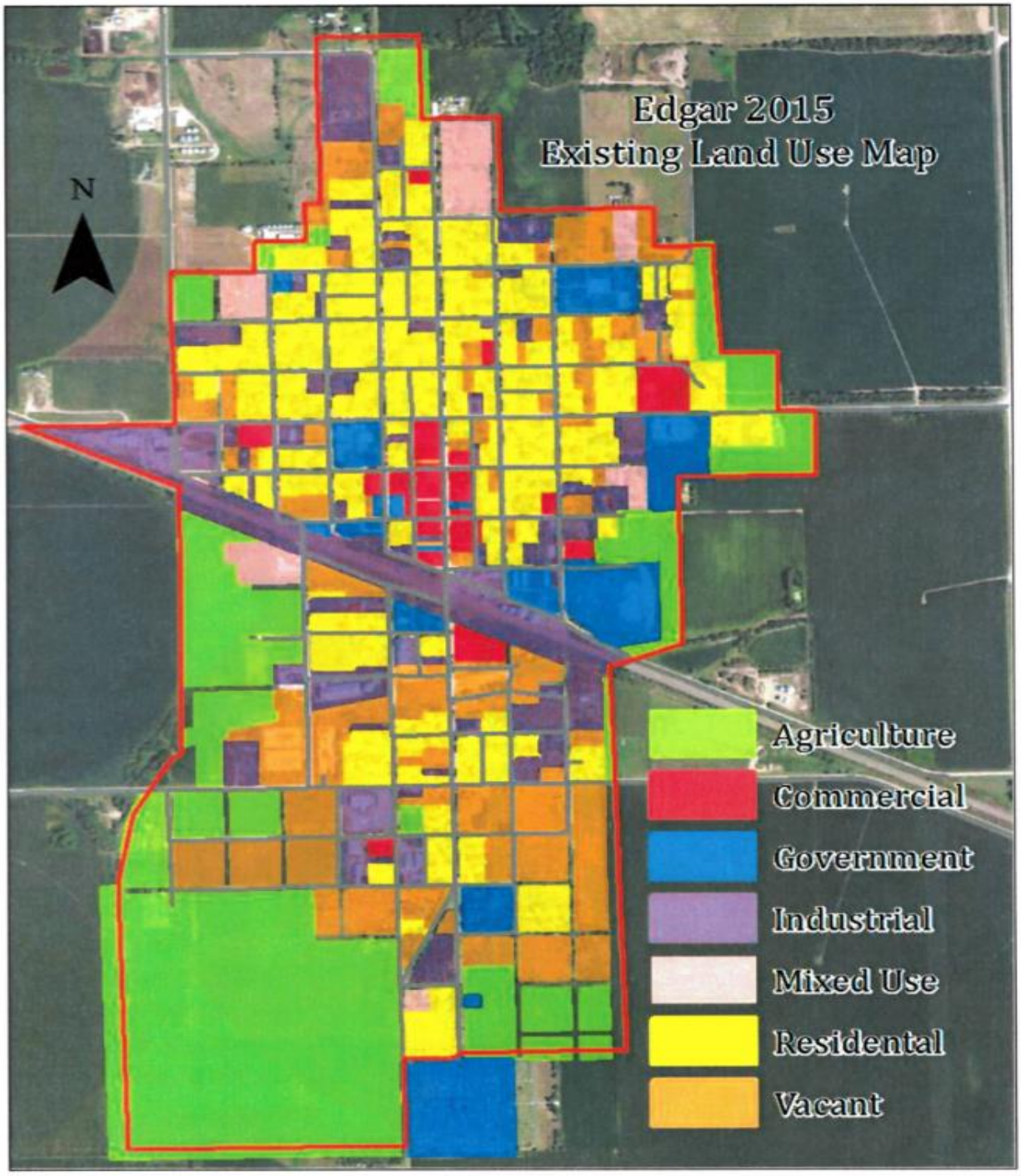
This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial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

34 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
35 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
36 United States Census Bureau. "2018 American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]
37 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Future Development Trends

Although several new structures were built in Edgar from 2011 to 2016, there has not been any residential or commercial development since then. According to census data, Edgar's population is declining. The local planning team attributes this to a lack of employment opportunities in the city. At this time there are no new developments planned for the next five years.

Figure EDG.3: Edgar Future Land Use Map



Parcel Improvements and Valuation

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

Table EDG.2: Edgar 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
495	206	$11,861,425	2	0%	$40,735

Source: County Assessor, GIS Workshop

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are two chemical storage sites throughout Edgar which house hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. The planning team expressed concern that because Edgar is a geographically small city, all homes and businesses are in danger if a significant chemical spill were to occur.

Table EDG.3: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
Nutrien Ag Solutions	30251 Road R	Y
Fairfield Non-Stock Co-op Assn	30491 Road Q	N

Source: Nebraska Department of Environment and Energy[38]

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.

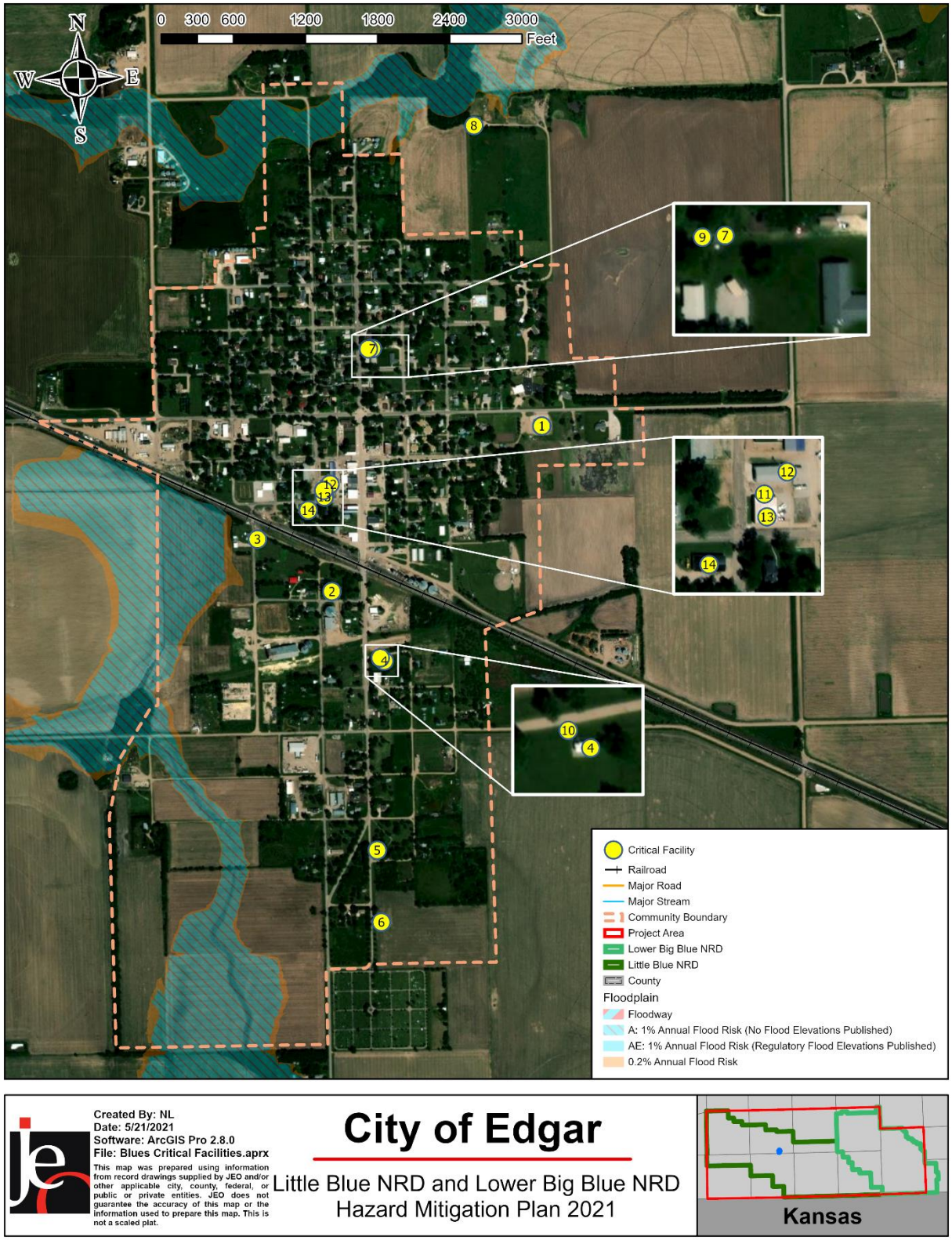
The following table and figure provide a summary of the critical facilities for the jurisdiction. The city indicated an additional portable generator is stored at the City Maintenance Shop which may be used during hazard events.

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

Table EDG.4: Edgar Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Safety and Security	Fire Hall	Y	Y	N
2	Food, Water, and Shelter	Water Tower	N	N	N
3	Health and Medical	Sewer Lift Station	N	N	N
4	Food, Water, and Shelter	Well #4	N	N	N
5	Food, Water, and Shelter	Well #6	N	N	N
6	Food, Water, and Shelter	Well #7	N	Y	N
7	Food, Water, and Shelter	Well #3	N	N	N
8	Health and Medical	Sewer Lift Station	N	Y	N
9	Communication	Siren	N	N	N
10	Communication	Siren	N	N	N
11	Communication	Siren	N	N	N
12	Transportation	City Road Shop	N	N	N
13	Safety and Security	Utility Office	N	N	N
14	Safety and Security	City Maintenance Shop and Storage	N	N	N
15	Safety and Security	City Hall	Y	Y	N

Figure EDG.4: Edgar Critical Facilities



Historical Occurrences

See the Clay County community profile for historical hazard events.

Hazard Prioritization

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

Hazardous Materials

Among the sites in Edgar where potentially hazardous materials are stored is the Nutrien Ag Solutions facility, which is located at 30251 Road R and contains gasoline, propane, anhydrous, and farm chemicals. While this is the main source or risk, there is also a gas station and an auto repair garage located in the central part of the city that house hazardous chemicals. At Nutrien, city officials do an annual walk-through and performs response exercises, including a tabletop exercise for facility spills.

A Union Pacific rail line crosses through the center of Edgar, crossing both Highway Spur 18B (5th Street) and C Street. Spur 18B extends east-west across the northern end of town and is blocks from churches, businesses, a post office, and a city park. Hazardous chemicals are regularly transported along these routes. The city has identified community emergency preparedness outreach and hazmat exercises as actions to mitigate the risk of a chemical spill. Although no projects are currently planned to reduce the city's risk, the planning team indicated that the Local Emergency Planning Committee needs to review threats within the city and determine next steps and plan for emergency responses.

Severe Thunderstorms

Due to previous occurrences, severe thunderstorms were identified as a top concern for the community. The combination of heavy rain, high winds, lightning, and hail can often cause significant impacts to the community. According to the NCEI, there have been 43 severe thunderstorm events in Edgar from 1996 to April 2020, resulting in $4,300,000 in property damage and $30,450,000 in crop damage. However, no injuries or deaths were reported. Multiple storms produced hailstones that ranged in size from 0.75 inches to 2.5 inches in diameter.

As part of these severe storms, thunderstorm winds have significantly impacted the community. The planning team indicated that some storms have ripped garages apart and caused extensive tree damage. One particularly damaging storm took place in August 2013 and generated 80 mph winds, causing $11 million in total damage. A storm on July 21, 2006 produced 92 mph winds and caused $1 million in damage. Other storms in 2007, 2010, and 2012 featured 60 mph winds in Edgar and caused additional damage, with several other damaging storms in 2003 and 2004.

The city has built and designated public safe rooms at the city hall and community center and obtained backup power generators for the city hall and sewer system. The planning team also

identified the need for an enhanced county-wide response plan for both heavy equipment response and coordinated neighborhood search and rescue.

Tornadoes and High Winds

The planning team identified Tornadoes and High Winds as a hazard of top concern for the city. According to NCEI data, there have been 19 high wind events in Clay County from 1996 to April 2020. High winds are common across the region and can cause property and tree damage and brief power outages. Edgar has experienced at least two damaging tornadoes in the past decade: an EF-2 event that caused at least $4 million in damage on May 27, 2013, with winds of 115 mph; and a stronger F-3 event on September 22, 2001 that was on the ground for 30 minutes and caused $1.25 million in damage. The planning team indicated that extensive damage from high winds occurs on a regular basis within the community. A gustnado occurred in 2020 east and south of the city. The vortex hit an empty west-bound coal train, derailing six train cars and damaging the tracks.

The city has built and designated public safe rooms at the city hall and community center and obtained backup power generators for the city hall and sewer system. The city plans to share additional emergency preparedness outreach at Sandy Creek Schools, and participating in severe weather spotter training, as actions to mitigate this hazard. It also installed two warning sirens on Main Street in the last decade. A county-wide search and rescue training for damaged structures is currently planned. An action identified as being needed in the future is a county-wide response plan for search and rescue (post-disaster).

Flooding

While flooding was not identified as a hazard of top concern, there are floodplain areas on the west/southwest portions of town. The village participates in the NFIP but has no policies in force as of November 2020.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Edgar has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The city has a mayor and a four-member council and the following offices: clerk/treasurer, attorney, fire chief, utility supervisor, emergency manager, general maintenance, and roads superintendent.

Capabilities

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

Table EDG.5: Capability Assessment

Survey Components		Yes/No
	Comprehensive Plan	*Yes*
	Capital Improvements Plan	*Yes*

Survey Components		Yes/No
Planning & Regulatory Capability	Economic Development Plan	*Yes*
	Local Emergency Operational Plan	*County*
	Floodplain Ordinance	*Yes*
	Zoning Ordinance	*County*
	Subdivision Regulation/Ordinance	*No*
	Building Codes	*County*
	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	*Contracted*
	Chief Building Official	*No*
	Civil Engineering	*Contracted*
	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	*Yes*
	Awarded a grant in the past	*Yes*
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	*Yes*
	Gas/Electric Service Fees	*No*
	Storm Water Service Fees	*No*
	Water/Sewer Service Fees	*Yes*
	Development Impact Fees	*No*
	General Obligation Revenue or Special Tax Bonds	*No*
	Other (if any)	
Education and Outreach	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	*Yes (COAD)*
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	*Yes (COAD)*
	Natural Disaster or Safety related school programs	*Yes*
	StormReady Certification	*No*
	Firewise Communities Certification	*No*
	Tree City USA	*No*
	Other (if any)	

Table EDG.6: Overall Capability

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

Plan Integration

The Local Emergency Operations Plan (LEOP) for Edgar, which was last updated in 2019, is an annex of Clay County's LEOP. The plan addresses all-hazards, with chemical releases, severe winter storms, severe thunderstorms, and tornadoes being of the highest concern. The plan provides a clear assignment of responsibility in case of an emergency, with the mayor and city council sharing responsibilities; and does not identify any gaps related to a particular hazard. All city departments are familiar with the EOP.

The city's Comprehensive Plan was last updated in 2016 and is aimed at smart growth in the future. It discourages development in hazardous areas but does not specifically address hazard events. The city also has a zoning ordinance and floodplain ordinance. The Zoning Ordinance was last updated on September 13, 2005 and discourages development in hazard areas. It contains natural hazard layers and discourages building in floodplain areas. The ordinance does not discourage development in the wildland-urban interface, which is a zone of transition between unoccupied land and human development that is most susceptible to wildfire impacts. The ordinance does account for population changes when considering future land uses and has zones that limit the density of developments in the floodplain. There are no requirements that floodplains be kept as open space. There are no rezoning procedures that limit changes that allow greater intensity or density in natural hazard impact areas, as density is not considered to be a problem in the city (with one structure allowed per lot).

The South Central Economic Development District has developed a Comprehensive Economic Development Strategy (CEDS) which includes Adams, Clay, Nuckolls, and Webster counties and their communities. The plan was originally developed in 2013 and was updated in 2018. The 2018 CEDS identified several key findings of economic development in the area including:

- The region is characterized by strong agricultural natural resources including ground and surface water supplies, a developed water management and distribution system, and fertile soils. This combination supports the strong agricultural sector within the region.
- The region generally offers strong transportation infrastructure that is well developed for agricultural and manufacturing exports. The technological resources are heterogeneously distributed throughout the region and while higher education institutions are present, enrollment remains flat over the last 10 years.
- Although there is population growth in the region and the educational attainment of those 25 years and older is increasing, like the statewide trend, there is evidence that the SCEDD region is experiencing an inflow of less educated people and an outflow of more educated people. As a result, workforce-related issues exist and are affecting the economic performance of the region.

- The labor composition of the region is generally toward lower wage industries (e.g., agriculture and manufacturing) when compared to the state. Lower farm incomes and lower wage and employment growth are other trends for the SCEDD region. It appears that the region is moving toward a less dynamic, lower education, slower growth, and lower wage work force.
- The industry analysis shows how tightly linked the core industries are within the region. Specifically, Manufacturing, Agriculture, Transportation & Warehousing, and Wholesale Trade are tightly connected and play a critical role within the local economy. Weakening service industries within the area include Health Care & Social Assistance and Retail Trade.
- Finding qualified workers remains a significant challenge within the region.... Rural counties have reported that a significant challenge with recruiting and retaining workers is the quality of housing stock. New housing is largely concentrated in higher populated areas and the quality of housing is declining on average in rural counties.

The plan identified and outlined objectives related to three main priority areas: Industry Growth & Innovation, Workforce Development, and Housing. Currently identified objectives do not address natural hazards. Future updates and project implementation should consider integrating hazard mitigation goals and objective.

According to the planning team, municipal funds are mostly limited to maintenance of current facilities and systems. The city has a high level of nitrates in its municipal water system, so the city is currently funding a new water pipeline to provide safe drinking water for the community.

Plan Maintenance

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

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the Mayor, Fire Chief, Emergency Manager, and City Council. The local planning team will review the plan no less than annually and will include the public in the review and revision process by sharing information through social media, mailings, and at board meetings.

Mitigation Strategy

Completed Mitigation Actions

MITIGATION ACTION	BACKUP GENERATOR FOR CITY HALL
DESCRIPTION	Provide a portable of stationary source of backup power to City Hall
HAZARD(S)	All hazards
STATUS	Generator was purchased.

MITIGATION ACTION	BACKUP GENERATOR FOR SEWER SYSTEM
DESCRIPTION	Provide a portable of stationary source of backup power to the sewer system
HAZARD(S)	All hazards
STATUS	Generator was purchased.

MITIGATION ACTION	SAFE ROOMS
DESCRIPTION	Design and construct safe rooms for city hall and the community center
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
STATUS	Safe rooms were added.

MITIGATION ACTION	TREE TRIMMING
DESCRIPTION	Conduct tree trimming for city-owned overhead power line maintenance
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
STATUS	The city contracted for hazardous tree removal in 2019. Remaining hazardous trees in town are maintained or removed on an as needed basis by South Central Power District. No other hazardous trees have been identified which are city owned.

Continued Mitigation Actions

MITIGATION ACTION	PUBLIC EDUCATION AND OUTREACH
DESCRIPTION	Conduct exercises, drills, and public education. Share additional information at local school districts.
HAZARD(S)	All hazards
ESTIMATED COST	$500+
FUNDING	Fire and ambulance funding, HMGP, BRIC
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Fire Department and EMS
STATUS	A new set of exercises are being developed in 2021.

New Mitigation Actions – 2021 Plan

MITIGATION ACTION	STORMWATER SYSTEM AND DRAINAGE IMPROVEMENTS
DESCRIPTION	Improve stormwater management and drainage throughout the community.
HAZARD(S)	Severe Thunderstorms, Flooding
ESTIMATED COST	$30,000+
FUNDING	Cost share and grants with NRDs, General Fund, HMA
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Utilities Superintendent
STATUS	Project are currently underway. An evaluation study was completed in 2019 and projects are being done to address poor drainage at 5th and G and 6th and F Street.

Removed Mitigation Actions

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

COMMUNITY PROFILE

CITY OF FAIRFIELD

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

Local Planning Team

Table FAI.1: City of Fairfield Local Planning Team

Name	Title	Jurisdiction
Miranda Ward	City Clerk/Treasurer	City of Fairfield
Chris Miller	City Engineer	City of Fairfield

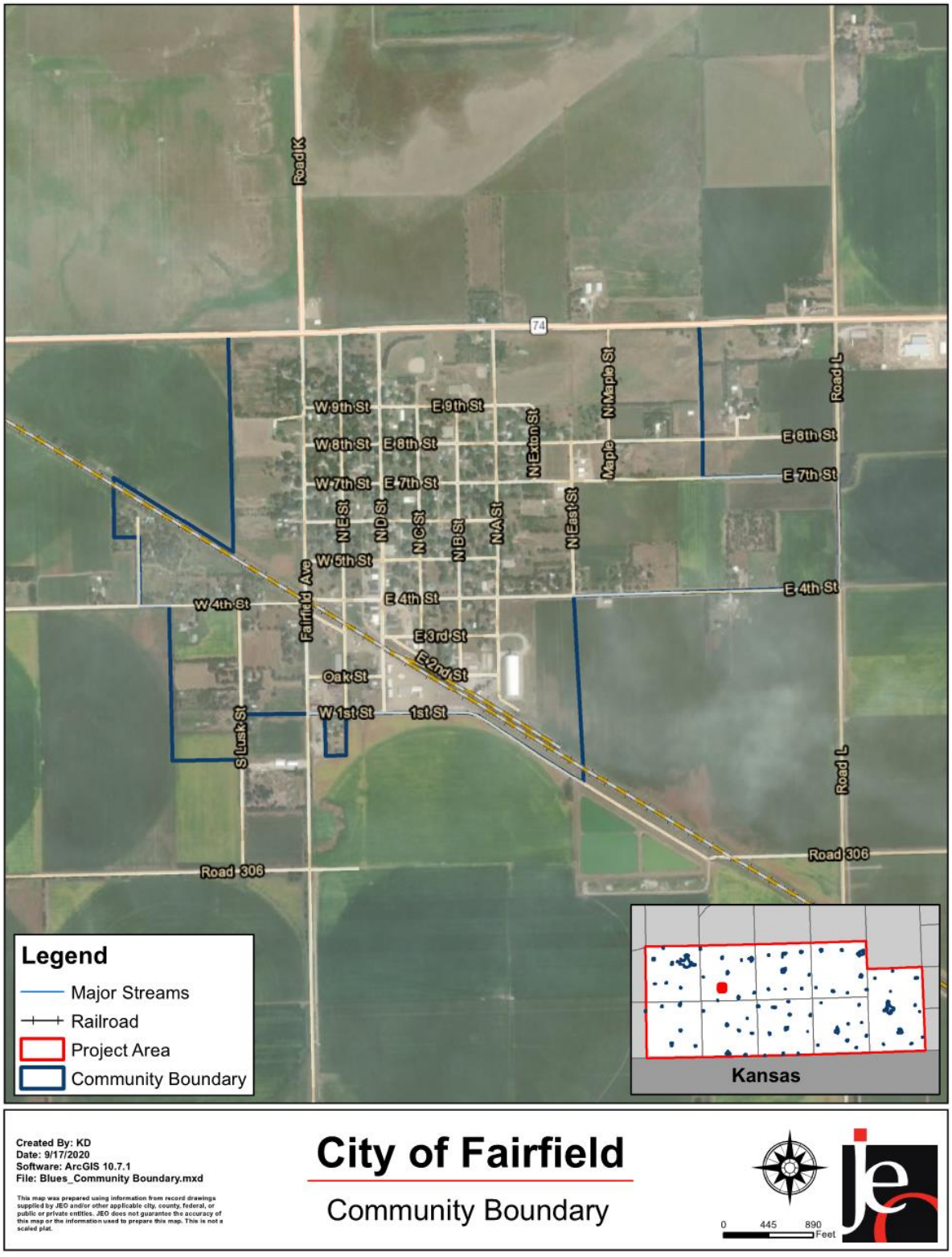
Location and Geography

The City of Fairfield is located in the south-central portion of Clay County and covers an area of 0.72 square miles. Major waterways within the area include the Kissinger Basin, which is large marsh water body just north of the city. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. The city lies in the plains topographic region and is surrounded by agricultural fields.

Transportation

Fairfield's major transportation corridors include Nebraska Highway 74, which runs east-west directly north of Fairfield. Highway 74 accommodates on average 1,120 vehicles per day, 95 of which are heavy commercial vehicles. Fairfield has one railroad, the Union Pacific line. At Fairfield, the UPRR runs east-west and connects Fairfield to Hastings to the northwest. At Hastings, the UPRR continues to Kearney, and then turns east-west again to connect Fairfield to the rest of the state. According to the local planning team, propane, gasoline, diesel fuel, and fertilizers are regularly transported on local routes. Critical facilities such as the Fairfield Co-op and Ken & Al's gas station are located along main transportation routes. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

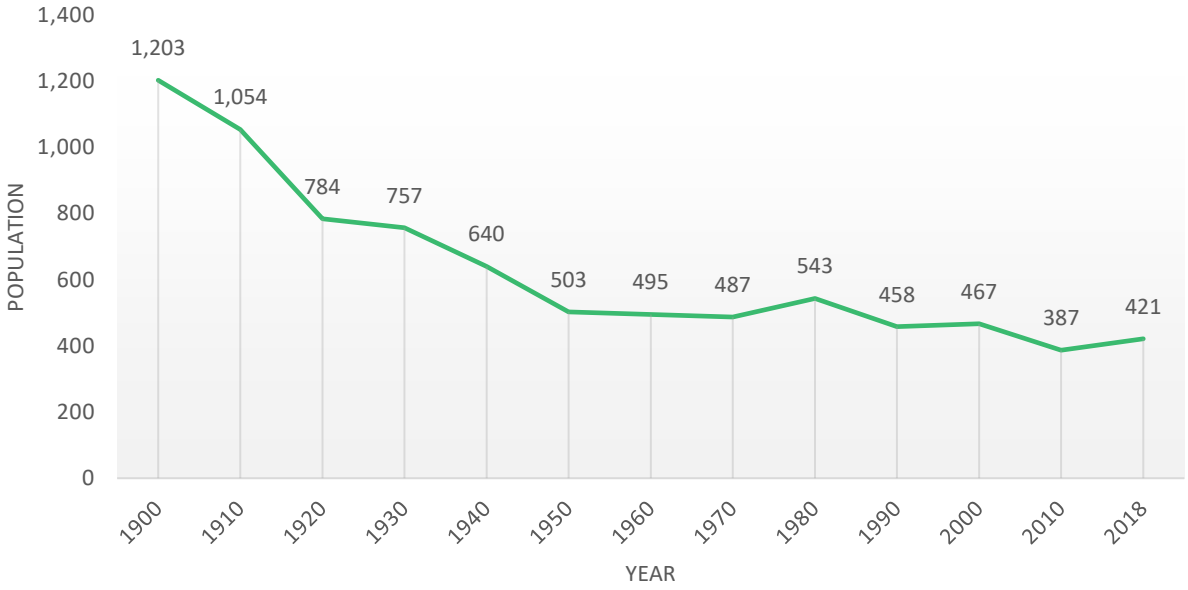
Figure FAI.1: City of Fairfield Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1990 to 2018 (estimated). This figure indicates that the population of Fairfield has been in a steady decline. This is relevant to hazard mitigation because communities with a growing population may be more prone to developing additional land and building new structures, while communities with declining populations may lack adequate funds to pursue mitigation projects. Net population growth may increase the number of people and properties vulnerable to hazards. The city's population accounted for 7% of Clay County's population in 2018.

Figure FAI.2: Fairfield Population 1900-2018



Source: U.S. Census Bureau[39]

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

- **Younger.** The median age of Fairfield was 41.8 years old in 2018, compared with the county average of 42.5 years. Fairfield's population has grown older since 2018, when the median age was 39.5 years old. Fairfield had a similar proportion of people under 20 years old (25.9%) as the county (26.0%).[40]
- **Greater ethnic diversity.** In 2010, 1% of Fairfield's population was two or more races. By 2018, 5% of Fairfield's population was two or more races. During that time, Clay County had declined 5% to 1% (other races) and grew 1% to 2% (two or more races) from 2010 to 2018 respectively.[41]
- **More likely to be at the federal poverty line.** The poverty rate of all persons in Fairfield (24.9%) was higher than the county (11.4%) in 2018.[42]

39 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
40 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
41 United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]
42 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

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

- **Varied mix of industries**. Employment sectors accounting for 10% or more of employment in Fairfield included Manufacturing, Retail, Transportation, and Education. In comparison Clay County's included Agriculture, Construction, Manufacturing, and Education.[43]
- **Lower household income**. Fairfield's median household income in 2018 ($37,321) was approximately $19,000 lower than the county ($56,316).[44]
- **Fewer long-distance commuters**. About 63.7% percent of workers in Fairfield commuted for fewer than 15 minutes, compared with about 39.3% of workers in Clay County. About 12.3% of workers in Fairfield commute 30 minutes or more to work, compared to about 30.0% of the county workers.[45]

Major Employers

Major employers in Fairfield include the Fairfield Co-op, Opera House restaurant, The Butcher Shop, Boots and Bose Daycare, Insurance Plus, Ken & Al's Service, and AGP. According to the planning team, most residents commute to other communities for work, including Hastings, Superior, and Clay Center.

Housing

In comparison to Clay County, Fairfield's housing stock was: [46]

- **More owner occupied.** About 82.6% of occupied housing units in Fairfield are owner occupied compared with 78.6% of occupied housing in Clay County in 2018.
- **Smaller share of aged housing stock**. Fairfield has a smaller share of houses built prior to 1970 than the county (62.4% compared to 66.4%).
- **More multi-family homes**. The predominant housing type in the city is single family detached and Fairfield contains more multifamily housing with five or more units per structure than the county (6.9% compared to 1.7%). About 88.1% of housing in Fairfield was single-family detached, compared with 86.2% of the county's housing. Fairfield has a smaller share of mobile and manufactured housing (2.8%) compared to the county (3.3%). The planning team indicated that mobile/manufactured houses are located on East 3rd Street and South Lusk Street.

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

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

Future Development Trends

Apart from two new wells, there has been no development in the city in the last five years, according to the planning team. Some buildings were demolished, however, such as the old lumber yard, a house by the storage units, and a house on Fairfield Avenue. According to census data, Fairfield's population is declining. The planning team attributes this to a lack of employment opportunities and the closing of the local grocery store. No new developments are planned for the next five years.

Parcel Improvements and Valuation

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

Table FAI.2: Fairfield 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
443	168	$9,696,540	0	0%	$0

Source: County Assessor, GIS Workshop

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are five chemical storage sites throughout Fairfield which house hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. The planning team noted that the Highway 74 & Fourth Street area could be severely impacted were a chemical spill to occur there.

Table FAI.3: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
Fairfield Non-Stock Co-op Assn	202 N D St	N
Ken & Al's Service Inc	308 N D St	N
AGP Grain Marketing LLC	201 W 2nd St	N
Fairfield Non-Stock Co-op Assn	Jct Fairfield Ave & Hwy 74	N
Ken & Al's Service Bulk Plant	N B St	N

Source: Nebraska Department of Environment and Energy[47]

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

Critical Facilities

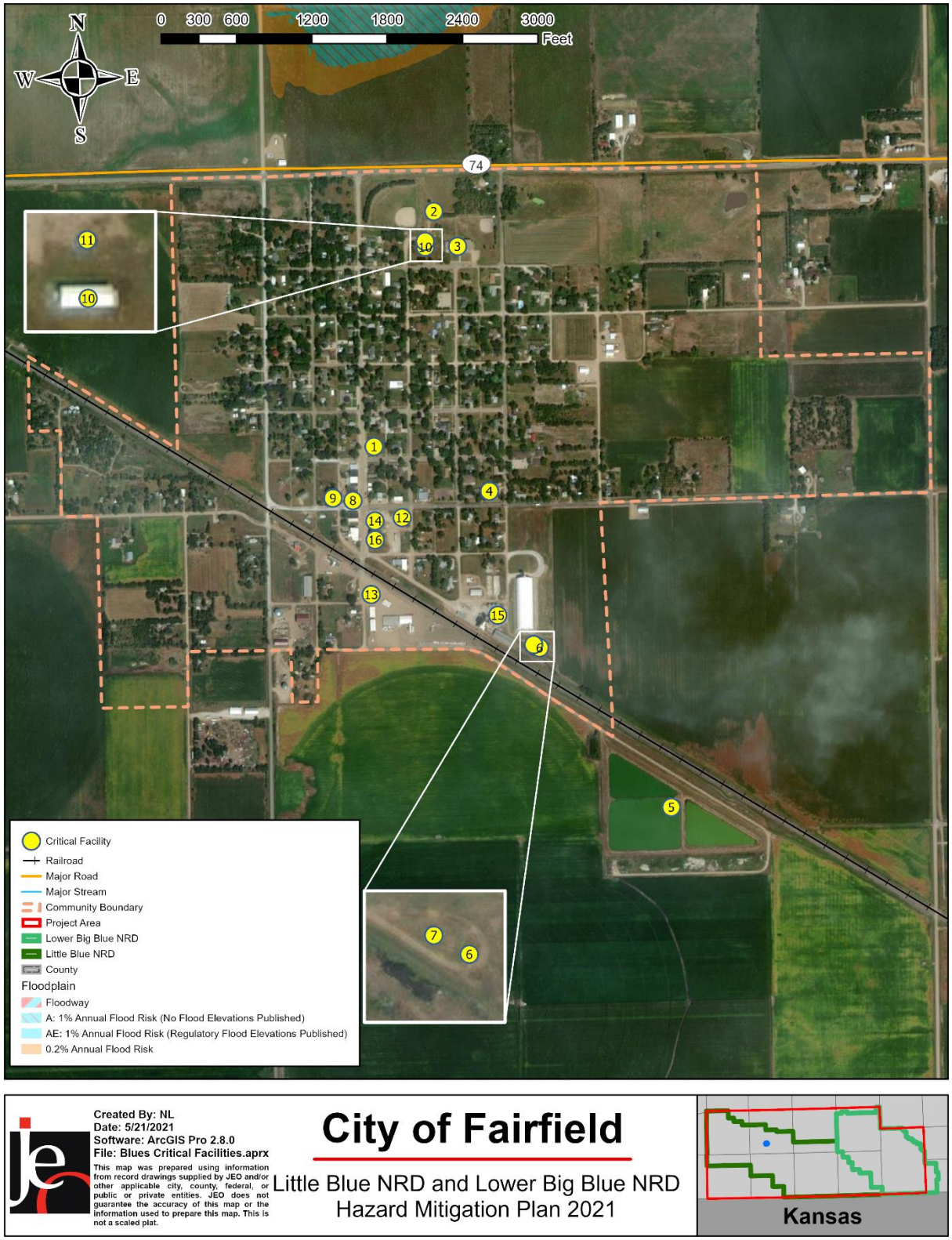
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during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

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

Table FAI.4: Fairfield Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Safety and Security	Fire Hall	Y	Y	N
2	Food, Water, and Shelter	Water Tower	N	N	N
3	Food, Water, and Shelter	Old School	Y	N	N
4	Other	Daycare	N	N	N
5	Health and Medical	Sewage Ponds	N	N	N
6	Health and Medical	Pump House-Sewer	N	Y	N
7	Energy	Generator for Sewer Pumps	N	Y	N
8	Safety and Security	City Hall	Y	N	N
9	Food, Water, and Shelter	Well #1	N	N	N
10	Food, Water, and Shelter	Well #2	N	Y	N
11	Energy	Generator for Well #2	N	Y	N
12	Safety and Security	City Shop	N	N	N
13	Hazardous Materials	Co-op	N	N	N
14	Energy	Gas Station	N	N	N
15	Hazardous Materials	Gas station storage	N	N	N
16	Food, Water, and Shelter	Fairfield Auditorium	Y	N	N

Figure FAI.3: Fairfield Critical Facilities



Historical Occurrences

See the Clay County community profile for historical hazard events.

Hazard Prioritization

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

Flooding

The city itself is not located in the floodplain, but there are nearby bodies of water that are identified as having flood risk, according to the NeDNR. Buffalo Creek is about two miles west of Fairfield and Big Sandy Creek is located about 3.5 miles north and east of the city. The Kissinger Basin sits just north of the city. According to the NCEI, there have been no flood events in Fairfield from 1996 to April 2020; however, the planning team noted that some flooding has occurred in the city as poor stormwater drainage is the largest issue. The culvert under the railroad tracks, ditches south of the railroad tracks, and nearby county ditches have filled up, resulting in water being pushed back to the city. The south side of town is especially prone to property damage from flooding. It was also noted that the basement of the old city hall and the adjacent street has seen flooding in the past. Flooding at the intersection of 4th and B streets and the intersection of 4th and C streets have caused cars to stall in high water. The city also expressed concern about storm water drainage and wastewater entering the nearby pond. As of January 2021, Fairfield did not participate in the NFIP.

According to the planning team, the city is looking to working with the railroad, county, and NRD about flooding near the railroad tracks. Projects the city has identified to mitigate this hazard include: drainage improvements on the south side of the community; cleaning out culverts and ditches; studying drainage in the city to identify and prioritize design improvements to address site-specific localized flooding and drainage issues; designing bridge improvements to reduce or alleviate flooding; and upgrading the sewer system.

Hazardous Materials (Transportation)

The local planning team identified hazardous materials as a hazard of top concern for the city. According to the Pipeline and Hazardous Materials Safety Administration, there have not been any reports of chemical spills during transportation in or near the City of Fairfield from 1990 to 2018. However, the planning team stated that an anhydrous ammonia spill did occur in 2014. No one was injured, but the city is concerned about the risk of a chemical spill occurring on the railroad, or from farmers transporting chemicals on the highway through town.

The city estimates about 10 percent of city residents - those on the south side of the tracks - might need to shelter-in-place if there is a spill or leak. The city building and auditorium is close to the co-op and railroad. The fire hall is three blocks from the railroad, and a day care center is three blocks from both the main route through town and the railroad. There are also some lower-income

neighborhoods near these routes. Liquid fertilizer, anhydrous ammonia, and dry fertilizer are transported chemicals of concern. In the past, the city has tried to re-route the transport of these chemicals around the city, where possible.

Severe Thunderstorms

Due to previous occurrences, severe thunderstorms were identified as a top concern for the city. The combination of heavy rain, high winds, lightning, and hail can often cause significant impacts to a community. According to the NCEI, there were 33 severe thunderstorm events in Fairfield from 1996 to April 2020, resulting in $887,000 in property damage and $2,775,00 in crop damage.

Hail and thunderstorm winds are a common occurrence during storms in Fairfield. The city has seen storms producing hailstones ranging from 0.75 to 1.75 inches in diameter between 1996 and 2020. Hailstorms in June and July 2009 alone resulted in $590,000 in damages. Two thunderstorms in May and June 1998 produced winds of 75-80 mph and caused a total of $1,100,000 in damage. One storm in the spring of 2015 damaged a building and its electronics from a lightning strike and toppled a tree. The planning team noted that an August 2019 storm produced winds reaching 85 mph, resulting in extensive damage. Multiple buildings were damaged, including the loss of an entire wall from the Co-op building. Trees and power lines were downed, with damaged pivots and a grain bin collapse also occurring.

The city's main concerns about severe thunderstorms are damaging lightning strikes and damage to trees. Recent storms have damaged the roofs of homes, dented vehicles, damaged businesses, and crushed crops.

The planning team indicated that electronic municipal records are currently protected with surge protectors. Critical facilities, such as the sewer plant and pumps, water tower, sewer and water monitors, and fire department have backup power generators. About 10 percent of the power lines in the city are buried. The auditorium, fire hall, maintenance hall, library, and old city hall are fitted with hail resistant building materials; and municipal facilities are insured against hail damage. The town does have a tree board and there are hazardous trees that need to be removed on Main Street and the city right of way. Many hazardous trees have been removed from the city park, according to the planning team. The city office has a weather radio and the city also uses a system of sirens and spotters to track and warn the public of dangerous weather. Cell phones are also used to track the weather and receive warning information. Residents receive information regarding hail resistant building materials from builders, per county ordinance.

Some projects the city has identified to mitigate this hazard are the construction of community shelters and safe rooms. The planning team noted that a new generator was recently added to the lift station, and one was added to one of the two new wells in town.

Tornadoes and High Winds

According to NCEI data, there have been 19 high wind events in Clay County from 1996 to April 2020. High winds are common across the region and can cause property and tree damage and brief power outages. Fairfield has been spared a direct tornado strike in recent years, but locations very close to town have been damaged by tornadoes. Most notably, an EF-3 tornado on May 11, 2014 touched down four miles north of the city, and tracked towards Sutton, causing $12.5 million in property damage along the way. An EF-0 tornado touched down and tracked to within a mile

of the city, and moved to the northwest, causing $60,000 in property damage. A third funnel touched down on May 22, 2004, two miles west of town. Rated F-1, winds of 105 mph were recorded by storm chasers. Critical facilities in the city have not been damaged by tornadoes in recent years.

The old school has a community safe room. Otherwise, residents must rely on their own or a neighbor's basement or storm shelter for safety. The city backs up its electronic municipal records via external hard drive. Clay County offers text alerts for severe weather. The city promotes emergency preparedness in the community via awareness campaigns at schools, in addition to a siren test every first Saturday of the month. The city has mutual aid agreements in place with multiple jurisdictions. Some projects the city has identified as being needed in the future include the construction of a storm shelter for 300-400 residents and a public hazard awareness campaign.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Fairfield has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The city has a mayor and a four-member council and the following offices: clerk/treasurer, attorney, utility superintendent, fire chief, and sewage plant operator. The Clay County emergency manager may also be available to help implement hazard mitigation actions.

Capabilities

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

Table FAI.5: Capability Assessment

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

Survey Components		Yes/No
	Chief Building Official	*No*
	Civil Engineering	*No*
	Local Staff Who Can Assess Community's Vulnerability to Hazards	*Yes*
	Grant Manager	*No*
	Mutual Aid Agreement	*Yes*
	Other (if any)	
Fiscal Capability	1 & 6 Year Plan	*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	*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 FAI.6: Overall Capability

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

Plan Integration

The City of Fairfield currently has a Comprehensive Plan, a Local Emergency Operations Plan (EOP), Zoning Ordinance, and Subdivisions Regulations. The Comprehensive Plan does not currently include information related to hazard mitigation, but the city understands the importance

of ensuring that it is integrated with its hazard planning in future updates. The planning team indicated that municipal funds are currently limited to maintaining city facilities and systems. Although the amount of funds has increased over recent years, so has the amount of debt. A large portion of funds are dedicated to making payments on loans for previous projects. The city has applied for multiple USDA grants over the last five years, as well as DWSRF funding. The city was awarded USDA grants for an alert siren, for cleaning drainage ditches, and for sewer projects and street improvement. The city also was awarded Drinking Water (DWSRF) funding from the EPA.

The Local Emergency Operations Plan (LEOP) for Fairfield, which was last updated in 2019, is an annex of Clay County's LEOP. The plan addresses all-hazards, with chemical releases, severe winter storms, severe thunderstorms, and tornadoes being of the highest concern. The plan provides a clear assignment of responsibility in case of an emergency, but does not identify any gaps related to a particular hazard.

The city's Zoning Ordinance was last updated in 2005 and does not discourage development in hazard areas. It does not contain natural hazard layers, and does not prohibits development within, or filling of wetlands, floodways, or floodplains. The ordinance does not discourage development in the wildland-urban interface, which is a zone of transition between unoccupied land and human development that is most susceptible to wildfire impacts. The ordinance does not have zones that limit the density of developments in the floodplain. There are no requirements that floodplains be kept as open space, and there are no rezoning procedures that limit changes that allow greater intensity or density in natural hazard impact areas.

The Subdivision Regulations were last updated in 2008 and does not provide for conservation subdivisions or cluster subdivisions to conservative environmental resources. There are no regulations that allow density transfers in hazard areas. The regulations don't restrict subdivisions of land within or adjacent to the floodplain. They don't allow for density transfers to avoid building in natural hazard areas.

The South Central Economic Development District has developed a Comprehensive Economic Development Strategy (CEDS) which includes Adams, Clay, Nuckolls, and Webster counties and their communities. The plan was originally developed in 2013 and was updated in 2018. The 2018 CEDS identified several key findings of economic development in the area including:

- The region is characterized by strong agricultural natural resources including ground and surface water supplies, a developed water management and distribution system, and fertile soils. This combination supports the strong agricultural sector within the region.
- The region generally offers strong transportation infrastructure that is well developed for agricultural and manufacturing exports. The technological resources are heterogeneously distributed throughout the region and while higher education institutions are present, enrollment remains flat over the last 10 years.
- Although there is population growth in the region and the educational attainment of those 25 years and older is increasing, like the statewide trend, there is evidence that the SCEDD region is experiencing an inflow of less educated people and an outflow of more educated people. As a result, workforce-related issues exist and are affecting the economic performance of the region.
- The labor composition of the region is generally toward lower wage industries (e.g., agriculture and manufacturing) when compared to the state. Lower farm incomes and

lower wage and employment growth are other trends for the SCEDD region. It appears that the region is moving toward a less dynamic, lower education, slower growth, and lower wage work force.

- The industry analysis shows how tightly linked the core industries are within the region. Specifically, Manufacturing, Agriculture, Transportation & Warehousing, and Wholesale Trade are tightly connected and play a critical role within the local economy. Weakening service industries within the area include Health Care & Social Assistance and Retail Trade.
- Finding qualified workers remains a significant challenge within the region.... Rural counties have reported that a significant challenge with recruiting and retaining workers is the quality of housing stock. New housing is largely concentrated in higher populated areas and the quality of housing is declining on average in rural counties.

The plan identified and outlined objectives related to three main priority areas: Industry Growth & Innovation, Workforce Development, and Housing. Currently identified objectives do not address natural hazards. Future updates and project implementation should consider integrating hazard mitigation goals and objective.

Plan Maintenance

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

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the City Clerk, City Engineer, and council. The local planning team will review the plan no less than annually and will include the public in the review and revision process by: sharing social media posts, newspapers, email notifications, and sharing information at city council meetings open to the public.

Mitigation Strategy

Continued Mitigation Actions:

MITIGATION ACTION	CREATE/UPDATE COMMUNITY WIDE MASTER PLAN TO PRIORITIZE ALL FLOOD RELATED PROJECTS
DESCRIPTION	Preliminary drainage studies and assessments can be conducted to identify and prioritize design improvements to address site-specific localized flooding and drainage issues to reduce and/or alleviate flooding.
HAZARD(S)	Flooding, Severe Thunderstorms
ESTIMATED COST	$15,000+
FUNDING	Roads budget, HMGP, BRIC, FMA
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Public Works
STATUS	This project has not yet been started.

MITIGATION ACTION	GRADE CONTROL STRUCTURES
DESCRIPTION	Install grade control structures such as sheet-pile weirs, rock weirs, ponds, and road dams, to sustain the channel beds south and east of town
HAZARD(S)	Flooding, Severe Thunderstorms
ESTIMATED COST	Varies by scope
FUNDING	Roads budget, HMGP, BRIC
TIMELINE	1 year
PRIORITY	Medium
LEAD AGENCY	Public Works
STATUS	The city is working with the county to get these structures built.

MITIGATION ACTION	INTERIOR DITCHES AND CULVERT IMPROVEMENTS
DESCRIPTION	Deepen drainage ditches and clean out culverts throughout the city
HAZARD(S)	Flooding, Severe Thunderstorms
ESTIMATED COST	$5,000+
FUNDING	Roads budget, HMGP, BRIC, FMA
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Public Works Director
STATUS	This project has not yet been started. Areas near 4th and B and 4th and C and near the pond need to be deepened.

MITIGATION ACTION	PUBLIC EDUCATION AND OUTREACH
DESCRIPTION	Through activities such as outreach projects, distribution of maps, and environmental education increase public awareness of natural hazards to the public.
HAZARD(S)	All hazards
ESTIMATED COST	$500+
FUNDING	General Fund
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	City Council
STATUS	This project has not yet been started.

MITIGATION ACTION	SAFE ROOMS/STORM SHELTERS
DESCRIPTION	Construct a tornado shelter for 300-400 residents
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	$500,000
FUNDING	Tax revenue, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	City Clerk
STATUS	This project has not yet been started.

MITIGATION ACTION	SHELTER-IN-PLACE TRAINING
DESCRIPTION	Provide shelter-in-place training to facilities housing vulnerable populations – particularly low-income housing on A Street
HAZARD(S)	Hazardous Materials (Transportation)
ESTIMATED COST	$5,000
FUNDING	General Fund
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	City Council
STATUS	Shelter-in-place training should be shared with residents south of the railroad tracks.

MITIGATION ACTION	STORMWATER SYSTEM AND DRAINAGE IMPROVEMENTS
DESCRIPTION	Improve storm sewers and drainage patterns in and around the community. Conduct drainage improvements on the south side of town, as part of street improvements. Specifically upgrade combined sewer system to improve storm water management
HAZARD(S)	Flooding, Severe Thunderstorms
ESTIMATED COST	$100,000
FUNDING	Tax revenue, Roads Budget, HMGP, BRIC, FMA
TIMELINE	5+ years
PRIORITY	High
LEAD AGENCY	City Council
STATUS	The city needs help from the NRD to assist with drainage improvements.

Removed Mitigation Actions

MITIGATION ACTION	BACKUP GENERATOR
DESCRIPTION	Provide a portable or stationary source of backup power for low-income housing development on A Street.
HAZARD(S)	All hazards
REASON FOR REMOVAL	The city no longer owns this low-income housing development.

MITIGATION ACTION	EMERGENCY SHELTER
DESCRIPTION	Establish a community safe room or safe areas for residents living in vulnerable structures/locations, along A Street
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
REASON FOR REMOVAL	The city no longer owns this low-income housing development. Developing storm shelters is also included in the "Storm Shelter/Safe Room" action.

MITIGATION ACTION	FACILITIES FOR VULNERABLE POPULATIONS
DESCRIPTION	Ensure that facilities that will house vulnerable populations are placed in the least vulnerable areas of the community – in particular, low-income housing on A Street. Harden existing facilities if applicable.
HAZARD(S)	All hazards
REASON FOR REMOVAL	This project was identified as no longer a priority. Current building codes and ordinances address this.

MITIGATION ACTION	REMOVE FLOW RESTRICTIONS
DESCRIPTION	Conduct a preliminary drainage assessment and/or design bridge improvements to reduce and/or alleviate flooding.
HAZARD(S)	Flooding
REASON FOR REMOVAL	This project was identified as redundant and local needs are addressed by the "Drainage Study/Storm Water Master Plan" action.

MITIGATION ACTION	STORM SHELTER
DESCRIPTION	Design and construct storm shelters and safe rooms in vulnerable areas, along A Street
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
REASON FOR REMOVAL	The city no longer owns this low-income housing development. Developing storm shelters is also included in the "Storm Shelter/Safe Room" action.

COMMUNITY PROFILE

VILLAGE OF GLENVIL

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

Local Planning Team

Table GLE.1: Village of Glenvil Local Planning Team

Name	Title	Jurisdiction
Matt Whitten	Board Member	Village of Glenvil
Kenneth Shaw	Utilities Superintendent	Village of Glenvil
Pam Johnson	Clerk,/Treasure	Village of Glenvil

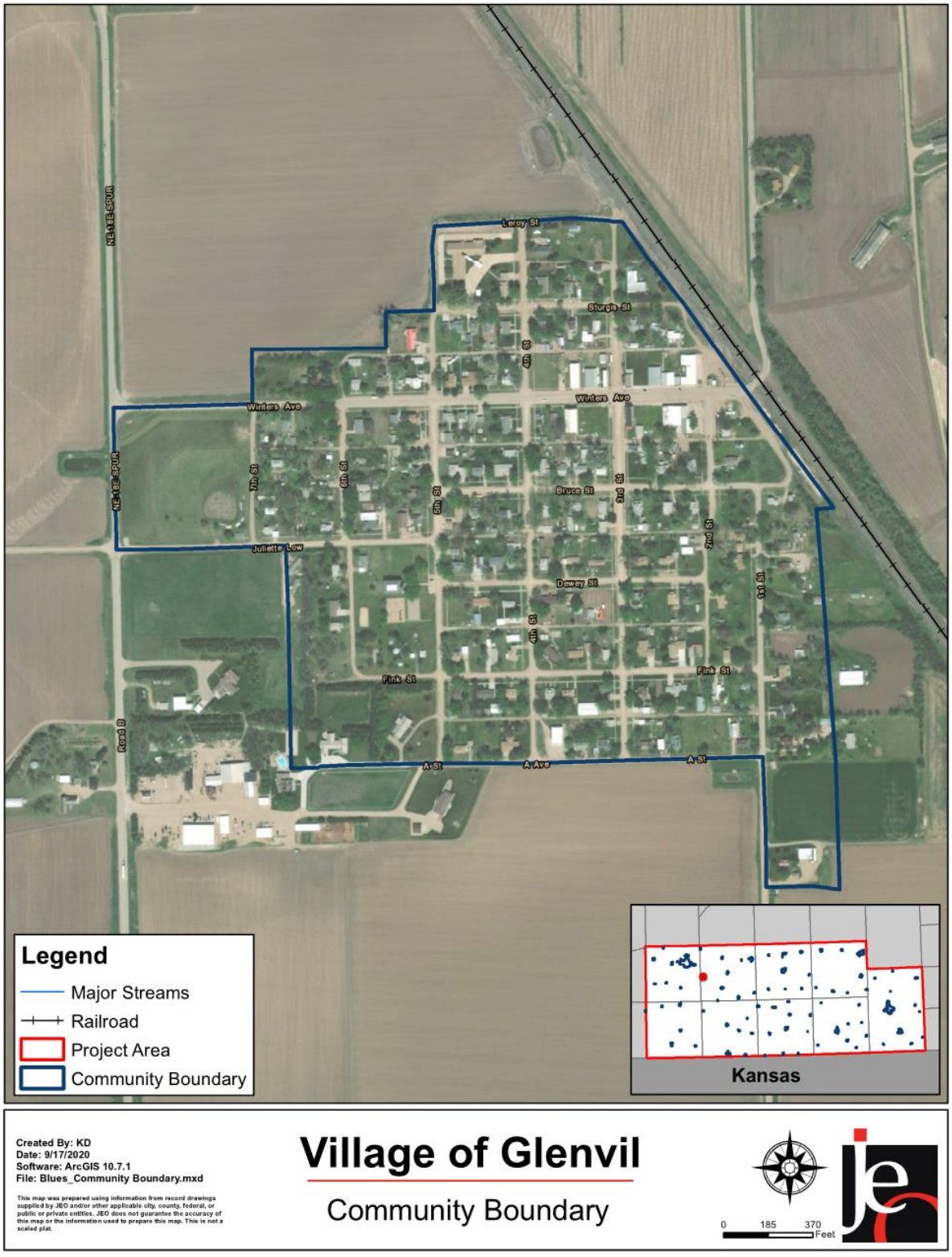
Location and Geography

The Village of Glenvil is located in the western portion of Clay County and covers an area of 0.17 square miles. There are no major waterways within the area. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. The village lies in the plains topographic region and is surrounded by agricultural fields.

Transportation

Glenvil's major transportation corridors include Nebraska Highway Spur 18E, which runs north-south and connects Glenvil to Highway 74. Highway Spur 18E accommodates an average of 520 vehicles per day, 40 of which are heavy commercial vehicles. Glenvil has one railroad, the Union Pacific line. At Glenvil the UPRR runs east-west and connects Glenvil to Hastings to the northwest. At Hastings, the UPRR continues to Kearney, and then turns east-west again to connect Glenvil to the rest of the state. Hazardous chemicals including anhydrous ammonia are commonly transported on Highway Spur 18E. The lagoons are located along the railroad. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

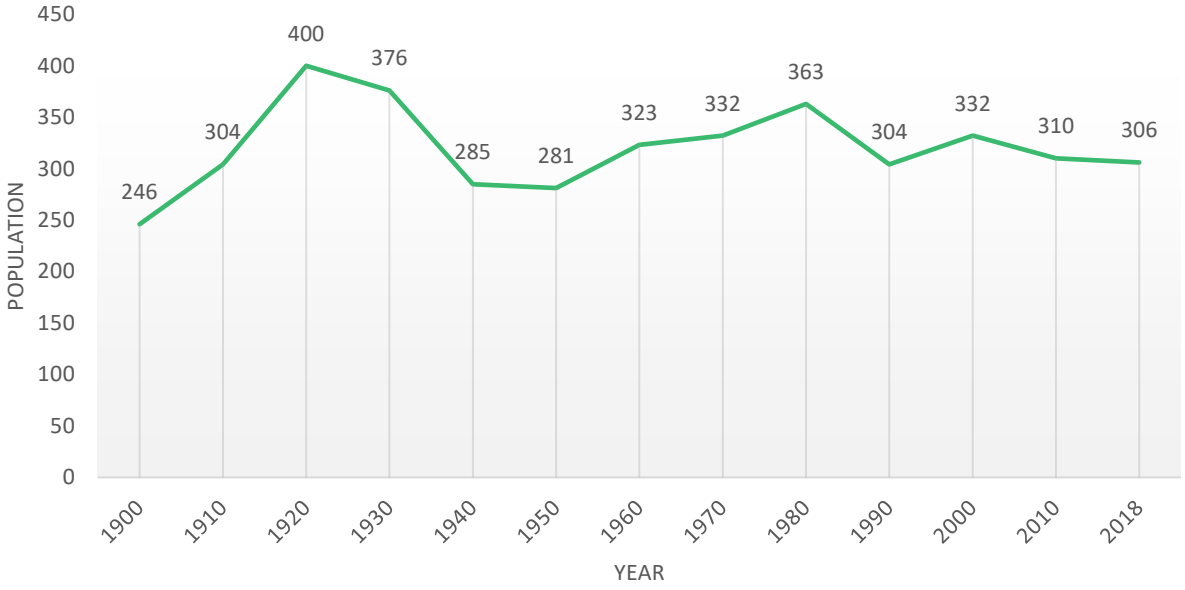
Figure GLE.1: Village of Glenvil Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1900 to 2018 (estimated). This figure indicates that the population of Glenvil has held relatively stable since the 1990s. Communities with stable populations are able to rely on sustainable local funding sources and can be more aware of areas at risk. The village's population accounted for 5% of Clay County's population in 2018.

Figure GLE.2: Glenvil Population 1920-2018



Source: U.S. Census Bureau[48]

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

- **Older.** The median age of Glenvil was 46 years old in 2018, compared with the county average of 42.5 years. Glenvil's population has grown older since 2018, when the median age was reported as 45.9 years old. Glenvil had a similar proportion of people under 20 years old (26.6%) as the county (26.0%).[49]
- **Greater ethnic diversity.** In 2010, 2% of Glenvil's population was Black, 1% American Indian, 2% other races, and 3% two or more races. By 2018 Glenvil's population was 0% Black, 2% American Indian, 1% Asian, 1% other races, and 1% two or more races. During that time, Clay County had declined 5% to 1% (other races) and grew 1% to 2% (two or more races) from 2010 to 2018 respectively.[50]
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Glenvil (6.9%) was lower than the county (11.4%) in 2018.[51]

48 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
49 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
50 United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]
51 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

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

- **Varied mix of industries**. Employment sectors accounting for 10% or more of employment in Glenvil included Manufacturing and Education. In comparison Clay County's included Agriculture, Construction, Manufacturing, and Education.[52]
- **Similar household income**. Glenvil's median household income in 2018 ($56,250) was similar to the county ($56,316) in 2018.[53]
- **Fewer long-distance commuters**. About 37.9% percent of workers in Glenvil commuted for fewer than 15 minutes, compared with about 37.3% of workers in Clay County. About 24.2% of workers in Glenvil commute 30 minutes or more to work, compared to about 30.0% of the county workers.[54]

Major Employers

Major employers in Glenvil include R&K's gas station and R-lazy K feedlot located just outside of town. The local planning team noted over 95% of residents commute to other communities for work.

Housing

In comparison to Clay County, Glenvil's housing stock was: [55]

- **More owner occupied.** About 91.3% of occupied housing units in Glenvil are owner occupied compared with 78.6% of occupied housing in Clay County in 2018.
- **Greater share of aged housing stock**. Glenvil has a greater share of houses built prior to 1970 as the county (71.0% compared to 66.4%).
- **More multi-family homes**. The predominant housing type in the village is single family detached and Glenvil contains more multifamily housing with five or more units per structure than the county (2.8% compared to 1.7%). About 82.8% of housing in Glenvil was single-family detached, compared with 86.2% of the county's housing. Glenvil has a greater share of mobile and manufactured housing (9.7%) compared to the county (3.3%). Mobile homes are located throughout the entire 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.

52 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
53 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
54 United States Census Bureau. "2018 American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]
55 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Future Development Trends

No new development, residential or commercial, has occurred in the past five years. One old barn in the village has been demolished. There are currently no plans for development in the next five years. According to census data, Glenvil's population is declining. The local planning team attributes this decline to a lack of economic and recreational opportunities.

Parcel Improvements and Valuation

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

Table GLE.2: Glenvil 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
189	129	$8,393,265	0	0%	$0

Source: County Assessor, GIS Workshop

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are three chemical storage sites in Glenvil which house hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. The local planning team noted primary concerns for hazardous spills pertain to available manpower to adequately respond to events and blocked transportation routes for emergency responders.

Table GLE.3: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
Fairfield Non-Stock Co-op Assn	31080 Road C	No
Ken & Al's Service LLC	200 Winters St	No
AGP Grain Marketing LLC	600 Road 309	No

Source: Nebraska Department of Environment and Energy[56]

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

Critical Facilities

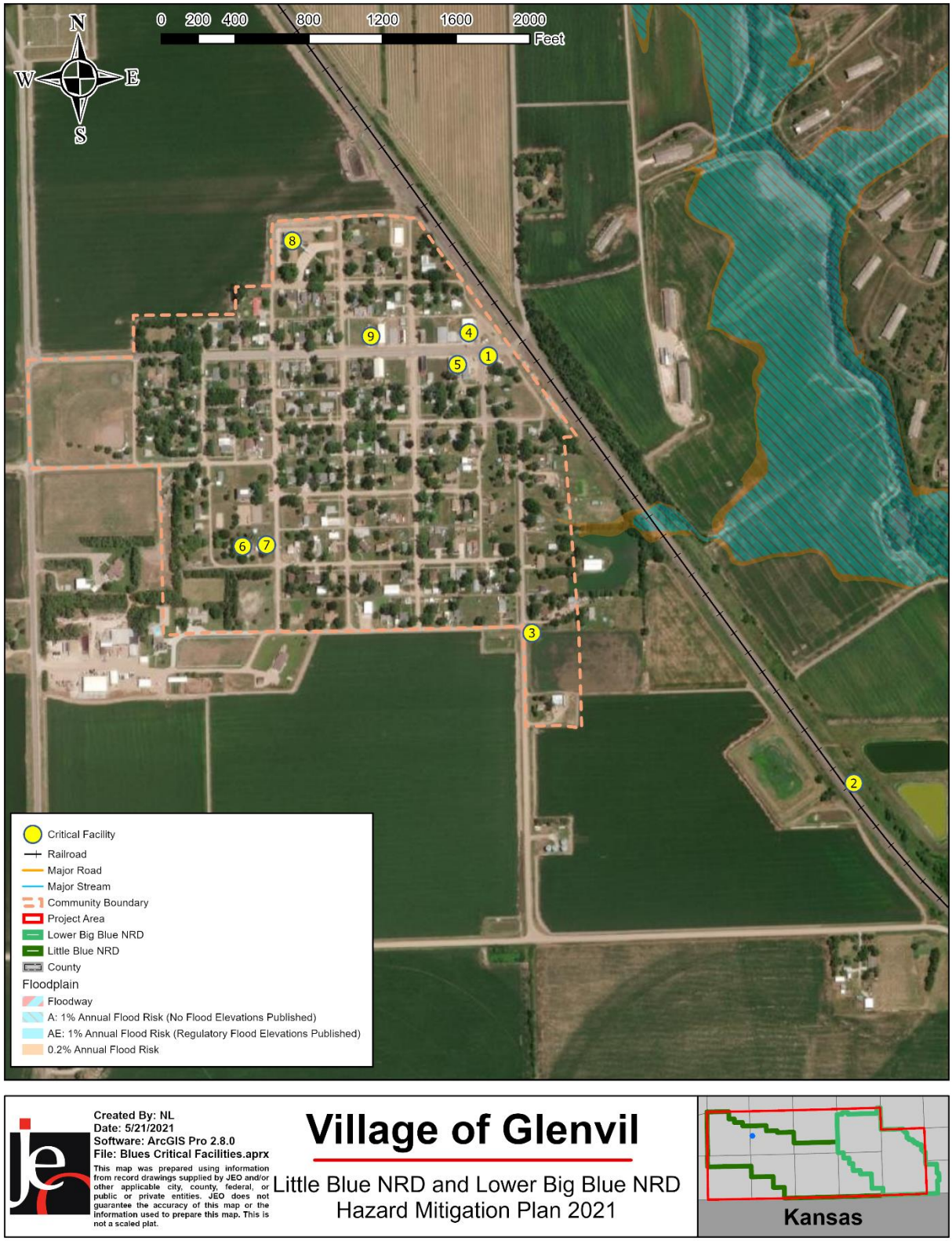
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during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

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

Table GLE.4: Glenvil Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Hazardous Materials	Underground Gas Tanks	N	N	N
2	Health and Medical	Sewer Lagoons	N	N	N
3	Health and Medical	Lift Station	N	Y	N
4	Safety and Security	Fire Hall	N	N	N
5	Safety and Security	City Hall / Legion Club	N	N	N
6	Food, Water, and Shelter	Water Tower	N	N	N
7	Food, Water, and Shelter	Water Wells	N	Y	N
8	Food, Water, and Shelter	Immanuel Lutheran Church	Y	N	N
9	Food, Water, and Shelter	Water Well	N	Y	N

Figure GLE.3: Glenvil Critical Facilities



Historical Occurrences

See the Clay County community profile for historical hazard events.

Hazard Prioritization

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

Agricultural Animal Disease

Glenvil is concerned that flooding could cause diseases and contamination from animal sources if flood waters reach the village, or that high winds can spread contaminants in the air. A large feet lot is located to the west of the village, and a dairy farm is located to the northwest. There are 20,000 livestock at the R Lazy K feedlot, and 6,000 Merman dairy cattle. Groundwater contamination is a concern, as one of the village's well was voluntarily taken offline due to high nitrates in the water. No major outbreaks have occurred in the county.

The village has no plans in case of an outbreak and offers no programs to educate the public or industry about the risk. However, the village is currently working to develop an Agricultural Disease Emergency Response Plan that will outline preventative measures, response options, and post debris cleanup procedures in case of disease outbreak.

Grass/Wildfire

Glenvil occasionally experiences small grass fires and is concerned about the risk of a larger event. The largest reported fire Glenvil Fire and Rescue has responded to burned 127 acres in 2014. No past events have led to injuries or fatalities. A grassland is located north of town, and fires there are occasionally sparked by passing rail cars along the adjacent railroad. The Naval Ammunition Depot, a large munitions plant during World War II, was also located northwest of town. There is a live-firing recreational opportunity at the depot which has led to fire events during dry periods.

Glenvil has a volunteer fire department with 15 volunteers. Glenvil and the local fire department have recently upgraded some equipment, but a new tanker is needed. The community does not have a Wildland Urban Interface Code, and property owners are not required to have defensible space around structures. There are no incentive programs for landowners to use ignition-resistant construction materials.

Hazardous Materials (Transportation)

While no significant chemical spills or leaks have occurred in Glenvil in recent years, there have been leaks of hazardous materials at the co-op plant in town. The village is concerned about similar or larger events in the future. The village is especially concerned about chemicals being transported via the Union Pacific railroad, which runs adjacent to the eastern end of town, and farmers with the Fairfield co-op travel with tanks through the community. Critical facilities including

the lagoons, fire hall, and village office are located along the transportation corridors and the local gas station at risk of hazardous material spills.

Tanks of anhydrous ammonia, and many other chemicals are carried through or near the village via automobile or rail. The fire hall and city office are close to the railroad tracks, and the tanks from the local gas station are located near the railroad, as well. To mitigate this hazard, Glenvil identified a project during this plan update to provide public education and awareness related to chemical spills

Tornadoes and High Winds

High winds and tornadoes can occur anywhere in the planning area. No tornado events have been reported in or near Glenvil; however, tornadoes have the potential to cause catastrophic damage. Local concerns pertain to public safety, damage to infrastructure and homes, and tree damage.

The village backs-up its municipal resources via a zip-drive that is kept off-site. The village does not have a community safe room, but the local church has a basement in which the public may shelter. Otherwise, residents must rely on their own or a neighbor's basement or storm shelter for safety. Clay County offers text alerts for severe weather. The village has mutual aid agreements in place with Fairfield, Hastings, and Lawrence.

The village has identified the need to install auxiliary power to the fire station and legion as shelters, and backup power on sewer system and two water wells. The village has also added a backup generator to the new well, but additional generators are needed for the village office.

Flooding

While flooding was not identified as a hazard of top concern, floodplain areas exist east of town. The village does not participate in the NFIP.

Governance

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

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.

In the past the village has applied for grants to purchase a new well. The local planning team noted the annual municipal budget's funds are limited to maintain current facilities and systems. Currently most available funds are used for a bond measure for the new well.

Table GLE.5: Capability Assessment

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

Survey Components		Yes/No
	StormReady Certification	*No*
	Firewise Communities Certification	*No*
	Tree City USA	*No*
	Other (if any)	

Table GLE.6: Overall Capability

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

Plan Integration

Glenvil has a Comprehensive Plan, which was completed in May 2009, and Zoning Regulations that were completed as of the same date. Neither specifically address hazards.

The Local Emergency Operations Plan (LEOP) for Glenvil, which was last updated in 2019, is an annex of Clay County's LEOP. The plan addresses all-hazards, with chemical releases, severe winter storms, severe thunderstorms, and tornadoes being of the highest concern. The plan provides a clear assignment of responsibility in case of an emergency but does not identify any gaps related to a particular hazard.

The South Central Economic Development District has developed a Comprehensive Economic Development Strategy (CEDS) which includes Adams, Clay, Nuckolls, and Webster counties and their communities. The plan was originally developed in 2013 and was updated in 2018. The 2018 CEDS identified several key findings of economic development in the area including:

- The region is characterized by strong agricultural natural resources including ground and surface water supplies, a developed water management and distribution system, and fertile soils. This combination supports the strong agricultural sector within the region.
- The region generally offers strong transportation infrastructure that is well developed for agricultural and manufacturing exports. The technological resources are heterogeneously distributed throughout the region and while higher education institutions are present, enrollment remains flat over the last 10 years.
- Although there is population growth in the region and the educational attainment of those 25 years and older is increasing, like the statewide trend, there is evidence that the SCEDD region is experiencing an inflow of less educated people and an outflow of more educated people. As a result, workforce-related issues exist and are affecting the economic performance of the region.
- The labor composition of the region is generally toward lower wage industries (e.g., agriculture and manufacturing) when compared to the state. Lower farm incomes and lower wage and employment growth are other trends for the SCEDD region. It appears that the region is moving toward a less dynamic, lower education, slower growth, and lower wage work force.
- The industry analysis shows how tightly linked the core industries are within the region. Specifically, Manufacturing, Agriculture, Transportation & Warehousing, and Wholesale Trade are tightly connected and play a critical role within the local economy. Weakening

service industries within the area include Health Care & Social Assistance and Retail Trade.

- Finding qualified workers remains a significant challenge within the region.... Rural counties have reported that a significant challenge with recruiting and retaining workers is the quality of housing stock. New housing is largely concentrated in higher populated areas and the quality of housing is declining on average in rural counties.

The plan identified and outlined objectives related to three main priority areas: Industry Growth & Innovation, Workforce Development, and Housing. Currently identified objectives do not address natural hazards. Future updates and project implementation should consider integrating hazard mitigation goals and objective.

Plan Maintenance

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

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

Mitigation Strategy

Continued Mitigation Actions

MITIGATION ACTION	ALERT SIRENS
DESCRIPTION	Perform an evaluation of existing alert sirens in order to determine sirens which should be replaced or the placement of new sirens.
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	$25,000+
FUNDING	General Fund, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

MITIGATION ACTION	BACKUP GENERATOR
DESCRIPTION	Provide a portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters.
HAZARD(S)	All hazards
ESTIMATED COST	$25,000+ depending on site requirements
FUNDING	General Funds
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	A new generator has been purchased for the well house. The village is currently exploring funding options for a generator for other critical facilities.

MITIGATION ACTION	DEVELOP AN AGRICULTURAL DISEASE RESPONSE ACTION PLAN
DESCRIPTION	Coordinate with farmers, USDA, UNL, and other local actors to develop a plan of action to contain or respond to disease outbreaks.
HAZARD(S)	Agricultural Plant and Animal Disease
ESTIMATED COST	$1,000+ Staff Time
FUNDING	General Funds, USDA
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	The village is currently collecting educational materials to share with residents.

MITIGATION ACTION	EMERGENCY EQUIPMENT PURCHASE AND/OR UPGRADES
DESCRIPTION	Purchase a larger tanker for wildfire response.
HAZARD(S)	Grass/Wildfire
ESTIMATED COST	$80,000+
FUNDING	General Funds
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board, Fire Department
STATUS	This project has been delayed until other equipment has been paid off with the local fire department.

MITIGATION ACTION	PROVIDE BACKUP POWER SYSTEMS AND REDUNDANCIES
DESCRIPTION	Install auxiliary power to run fire station and legion as shelters, and backup power on sewer system and two water wells. Provide looped distribution service and other redundancies in the electrical system as a backup power supply in the event the primary system is destroyed or fails.
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	$100,000
FUNDING	General Fund, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	Medium

LEAD AGENCY	Village Board
STATUS	The village is currently exploring funding opportunities for this project.

MITIGATION ACTION	PUBLIC EDUCATION AND OUTREACH
DESCRIPTION	Develop an education program to inform residents of risks related to chemical releases. This could include direct outreach to residents living in the immediate vicinity of chemical storage sites.
HAZARD(S)	Hazardous Materials
ESTIMATED COST	$3,000+
FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	The village is currently collecting educational materials to share with residents.

MITIGATION ACTION	SAFE ROOM/STORM SHELTER
DESCRIPTION	Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, school, and other areas.
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	$200-$250 per sq ft
FUNDING	Village Funds
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

New Mitigation Actions – 2021 Plan

MITIGATION ACTION	EMERGENCY WATER MAIN SHUTOFF VALVES
DESCRIPTION	Install additional water main shut off valves for both private residence areas and at the south well.
HAZARD(S)	All hazards
ESTIMATED COST	$100,000
FUNDING	Water/general fund, HMA
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Utilities Superintendent
STATUS	This is a new mitigation action.

COMMUNITY PROFILE

VILLAGE OF ONG

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

Local Planning Team

Table ONG.1: Village of Ong Local Planning Team

Name	Title	Jurisdiction
Tim Lewis	Emergency Manager	Clay County
Dennis Hansen	Board Chairman	Village of Ong
Robert Boettcher	Board Member	Village of Ong

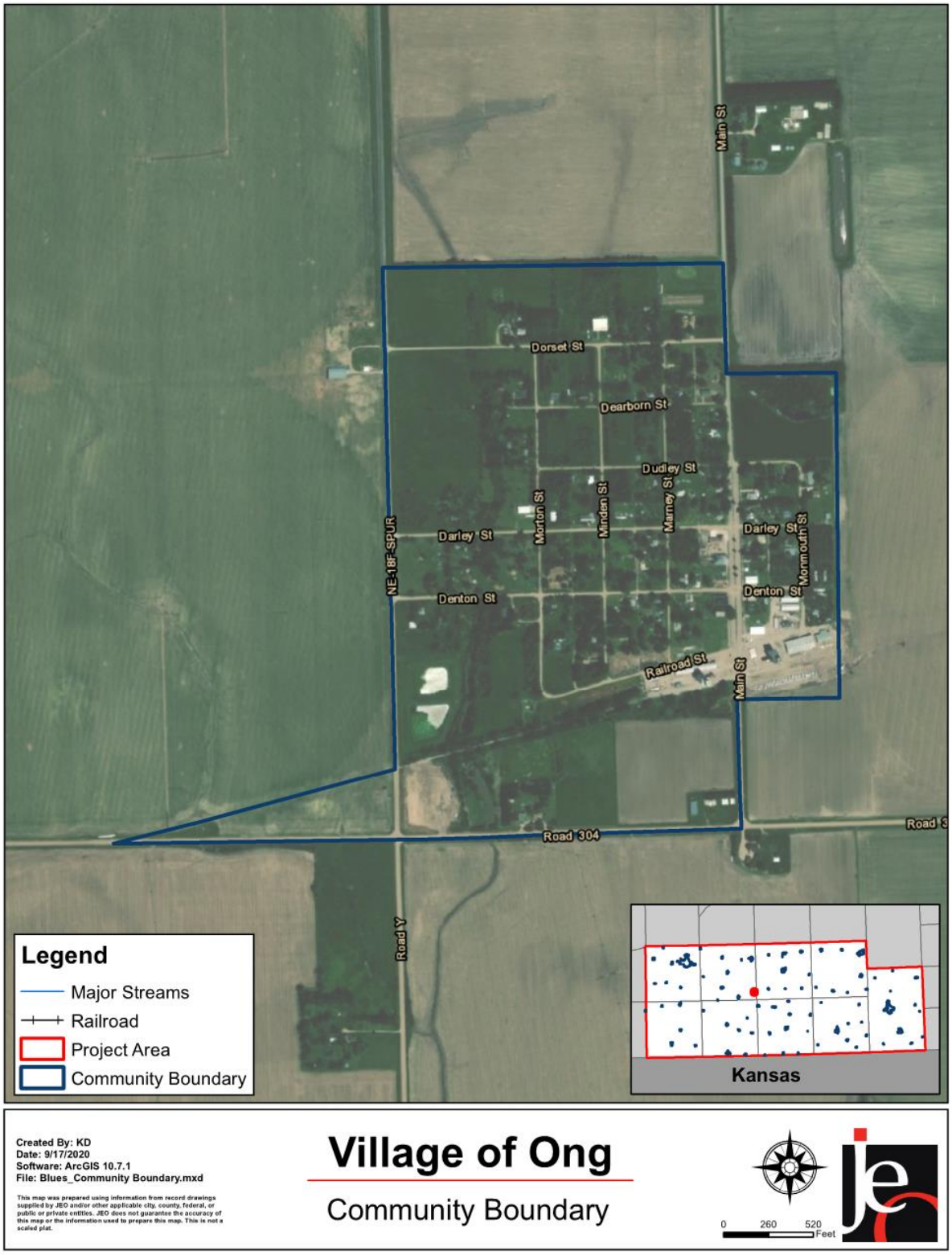
Location and Geography

The Village of Ong is located in the south eastern portion of Clay County and covers an area of 0.29 square miles. There are no major waterways within the area. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. The village lies in the plains topographic region and is surrounded by agricultural fields.

Transportation

Ong's major transportation corridors include Highway Spur 18F runs north-south and connects Ong to Highway 74 to the north. Highway Spur 18F accommodates on average 120 vehicles per day, 15 of which are heavy commercial vehicles.The planning team indicates this is the main aterial to service Ong, and that both dry and liquid fertilizer as well as anhydrous ammonia is regularly transported along these routes. Ong does not have any rail lines. No significant transportation spills have occurred, but the planning team did note the community is in a small geographic area that the entire community is affected by one emergency event. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

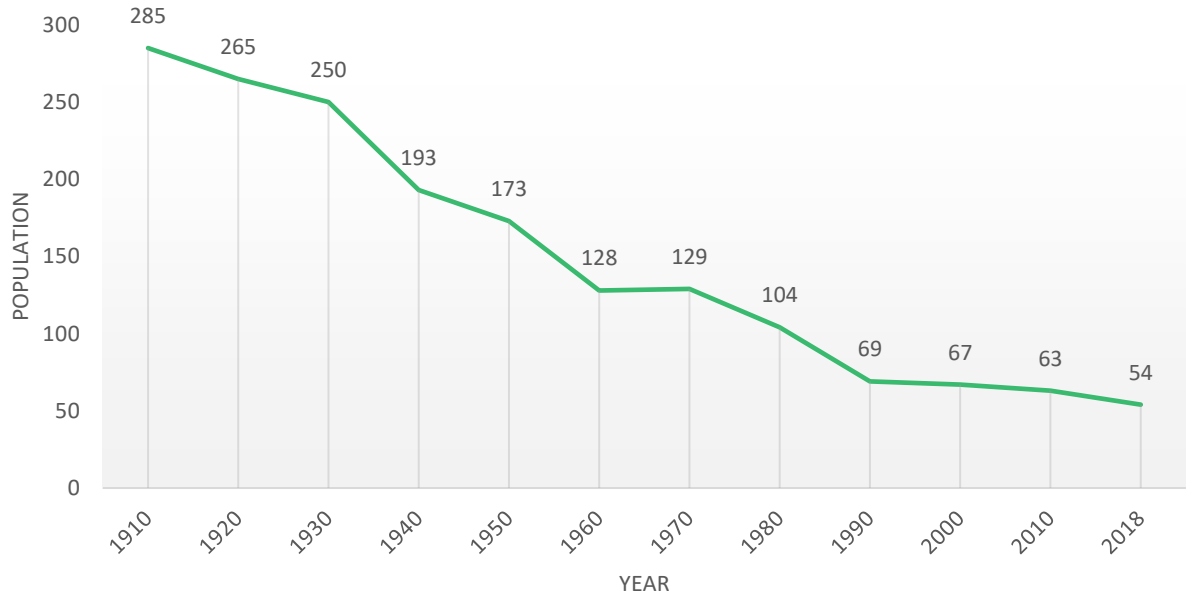
Figure ONG.1: Village of Ong Jurisdictional Boundary



Demographics

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

Figure ONG.2: Ong Population 1920-2018



Source: U.S. Census Bureau[57]

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

- **Older.** The median age of Ong was 53.5 years old in 2018, compared with the county average of 42.5 years. Ong's population has grown younger since 2018, when the median age was reported as 61 years old. Ong had a smaller proportion of people under 20 years old (13.0%) as the county (26.0%).[58]
- **Less ethnic diversity.** Between 2010 and 2018, 100% of Ong's population was White, non-Hispanic. During that time, Clay County had declined 5% to 1% (other races) and grew 1% to 2% (two or more races) from 2010 to 2018 respectively.[59]
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Ong (14.8%) was lower than the county (11.4%) in 2018.[60]

57 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
58 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
59 United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]
60 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

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

- **Varied mix of industries**. Employment sectors accounting for 10% or more of employment in Ong included Agriculture, Construction, Wholesale trade, Education, and Public Administration. In comparison Clay County's included Agriculture, Construction, Manufacturing, and Education.[61]
- **Lower household income**. Ong's median household income in 2018 ($41,250) was approximately $15,000 less than the county ($56,316) in 2018.[62]
- **More long-distance commuters**. About 19.4% percent of workers in Ong commuted for fewer than 15 minutes, compared with about 37.3% of workers in Clay County. About 36.2% of workers in Ong commute 30 minutes or more to work, compared to about 30.0% of the county workers.[63]

Major Employers

Major employers in the village include the Co-Op and the hardware store. Some residents commute to other communities for work including Geneva, Clay Center, or Hastings.

Housing

In comparison to Clay County, Ong's housing stock was: [64]

- **More owner occupied.** About 86.7% of occupied housing units in Ong are owner occupied compared with 78.6% of occupied housing in Clay County in 2018.
- **Greater share of aged housing stock**. Ong has a greater share of houses built prior to 1970 as the county (95.3% compared to 66.4%).
- **Fewer multi-family homes**. The predominant housing type in the village is single family detached and Ong contains fewer multifamily housing with five or more units per structure than the county (0% compared to 1.7%). About 95.2% of housing in Ong was single-family detached, compared with 86.2% of the county's housing. While the Census Bureau noted Ong had a greater share of mobile and manufactured housing (4.8%) compared to the county (3.3%), the local planning team indicated there are no mobile and manufactured homes located within the village.

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

61 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
62 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
63 United States Census Bureau. "2018 American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]
64 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Future Development Trends

In the past five years the village has not constructed any new residential or business structures. The village's population has experienced relatively steady decline which the local planning team attributes to an aging population and a lack of available employment options in town. As of 2020 there were no additional residential or industrial developments planned.

Parcel Improvements and Valuation

GIS parcel data as of December 2019 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

Table ONG.2: Ong 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
139	50	$896,660	0	0%	$0

Source: County Assessor, GIS Workshop

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one chemical storage site in Ong which houses hazardous materials. Additionally, there is bulk storage of grain, fertilizer and anhydrous ammonia located within the community. Chemical spills are a concern due to the small geographic proximity to the community and its residents. The village's community building is located near the agricultural elevator. No chemical spills have occurred locally. Ong does not have its own fire department. In the event of a chemical spill, the Edgar volunteer fire department and emergency response may be the first to respond to the incident.

Table ONG.3: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
Aurora Co-op Elevator Company	107 Main St	N

Source: Nebraska Department of Environment and Energy[65]

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

Critical Facilities

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

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

Table ONG.4: Ong Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Health and Medical	Lagoons	N	N	N
2	Safety and Security	Office/Community Center	N	N	N
3	Food, Water, Shelter	Pump House	N	N	N

Figure ONG.3: Ong Critical Facilities

Historical Occurrences

See the Clay County community profile for historical hazard events.

Hazard Prioritization

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

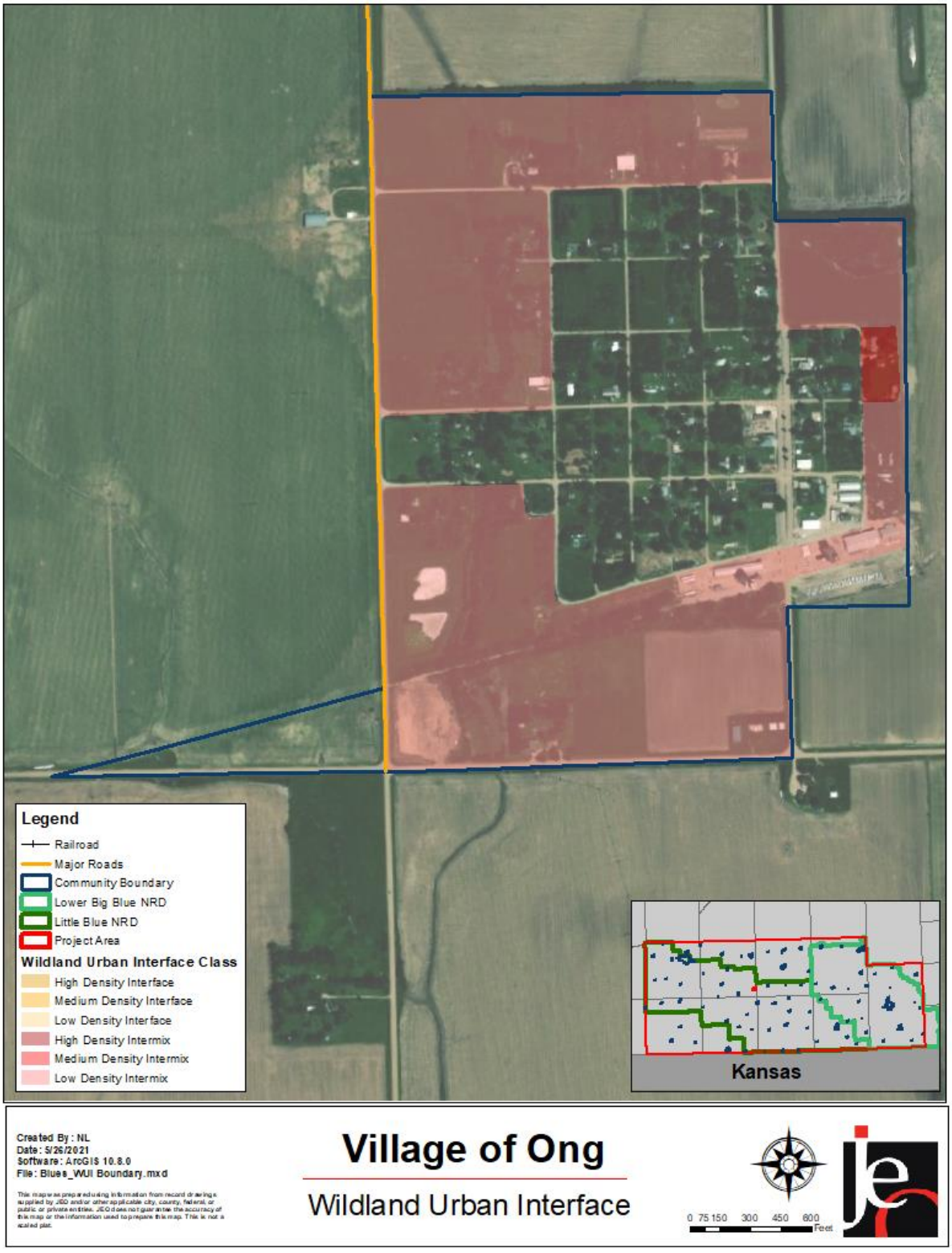
Grass/Wildfire

Crops are plentiful near the village, and there are a lot of abandoned buildings surrounded by tall grass. Both conditions pose fire dangers to the village. The planning team noted that environmental conditions have changed to produce more weeds and grasses, and less snow cover has increased the fire season, both of which keep concerns elevated. Ong does not have its own fire department and is protected by Edgar VFD.

A wildfire approached town in 2013, and while it did not enter the town, a couple of buildings near town were burned, and people reported illnesses from breathing the fire's smoke. In addition, there were accidents between vehicles and fire trucks that were responding to this incident, resulting in six injuries requiring hospitalization. In 2010, there was another notable wildfire.

To mitigate the risks of grass fires and wildfires, the Village of Ong follows state regulations about burning. The village believes it has adequate equipment on hand to combat fires through Edgar's fire department. Emergency management is currently developing a new notification platform to alert residents of dangers and update an evacuation plan for that community. To mitigate the risk of power outages due to fires, the village plans to install backup power generators for the sewer and water systems in town. The planning team indicated adopting Fire Wise programs and projects would set up defensible space for fires that occur and spread is needed.

Figure ONG.4: Ong WUI



Hazardous Materials (Fixed Site)

The Village of Ong is home to a large chemical plant in town, with an elevator. Agricultural chemicals are stored within village limits. This hazard is a concern because a spill would spread across the community quickly and impact all the residents of the community. There was a major chemical spill on Main Street circa 2010, and a major spill near the highway in 2016, about two miles outside of town. No other spills have occurred in recent years. The village's community center is two blocks away from a chemical storage site. Aurora Co-Op continues to focus on safety and currently works with Clay County Emergency Management to prevent spills. The planning team noted that in the future the village will continue to monitor the area and train responders to be familiar with conditions in Ong.

Severe Thunderstorms

Ong is at risk of experiencing powerful, damaging thunderstorms. Severe thunderstorms commonly occur in the state and include heavy rain, strong winds, lightning, and hail. The National Climate Data Center records several incidents of severe thunderstorm winds impacting the village. On September 1, 2018, Ong experienced flash flooding in a thunderstorm event and received up to 5 inches of rain in one night. On June 30 of the same year, severe thunderstorm winds of about 80 mph affected Ong and caused $150,000 in property damage in Clay County.

The village reports 15-20 occurrences per year, and common impacts are downed trees and damage to buildings. The planning team noted the severe summer storm season is starting earlier and lasting longer each year and that hail and straight winds are common and cause damage to aging homes and infrastructure.. Many of these storms are accompanied by heavy rain, including a recent storm that produced up to five inches of rain, leading to flash flooding in the village. Each of these kinds of impacts concern the village. Critical municipal records are stored on a personal computer in a residence and are not backed up. The town has a siren that has redundant power. The town does not have a community safe room or storm shelter. There are no weather radios in critical facilities. To mitigate this hazard, the village plans to install backup power generators for the sewer and water systems in town.

Severe Winter Storms

Per NCEI information, Ong and Clay County have experienced many severe winter storms in recent years, including impacts from heavy snow, extreme cold, ice accumulation, blizzards, and winter storms. Past events have caused whiteout conditions in the village and blocked major transportation routes. One particular storm of note was a severe ice and snowstorm on December 30, 2006, that affected Ong and caused $2 million worth of damage in the county. The planning team noted winter storms could isolate individuals who have minimal support systems and resources. The village doesn't own heavy equipment and relies on county resources to help clear roads in case of severe winter storm. The village doesn't have a database of vulnerable persons, such as senior citizens or people with medical needs, who may need assistance, in case they are stranded due to winter weather. There are no designated snow routes or snow fences in the village.

Tornadoes and High Winds

The last official event, according to the National Climatic Data Center, is an F-0 tornado that struck one mile northeast of town on May 5, 1994, and caused minimal damage. However, on May 17, 2017, Ong and Edgar farms were damaged by an EF-1 tornado which touched down north of the communities and caused damage to trees and irrigation pivots. Additionally, a tornado was

reported between Edgar and Ong moving southeast on Memorial Day 2019. It hit an empty coal train in Sedan just south of Ong and derailed 6 cars and damaged the tracks. Investigation by NWS officials in Hastings found that it was a "gustnado." The weather warning sirens were activated in Ong for this storm. Other damaging tornadoes and high wind events have affected neighboring communities of Clay County, and Ong remains at risk, due to its location in traditional Tornado Alley. The village does not have a community safe room, so residents must rely on their own or a neighbor's basement or storm shelter for safety. Currently, the village participates in monthly emergency siren testing.

Flooding

Flooding was not identified as a hazard of top concern for the village. A small area of recognized floodplain is mapped south of the village on Road 304; however, no parcels within the village fall within floodplain areas. The village does not participate in the NFIP.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Ong has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The village has a five member board and the following offices: clerk/treasurer, attorney, chief of police, sewage plant operator, and sewer/water commissioner, and engineer in Wahoo. Additionally, the county planning office assists with hazard 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 ONG.5: Capability Assessment

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

Survey Components		Yes/No
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
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	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
Education and Outreach	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	No
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No

Table ONG.6: Overall Capability

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

Plan Integration

Ong has a Comprehensive Plan which was completed in 2021. The plan addresses hazardous conditions including flood, hail, high winds, and tornadoes. The plan is aimed at safe growth for the village. The village follows the building and zoning codes as established by the county.

In the last five years, the village has not applied or been awarded any grants. The planning team indicated municipal funds are limited to maintaining current facilities and systems. The amount of

municipal funds has decreased in recent years thus future mitigation action implementation would require additional grant or funding assistance.

The Local Emergency Operations Plan (LEOP) for Ong, which was last updated in 2019, is an annex of Clay County's LEOP. The plan addresses all-hazards, with chemical releases, severe winter storms, severe thunderstorms, and tornadoes being of the highest concern. The plan provides a clear assignment of responsibility in case of an emergency but does not identify any gaps related to a particular hazard.

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- The region is characterized by strong agricultural natural resources including ground and surface water supplies, a developed water management and distribution system, and fertile soils. This combination supports the strong agricultural sector within the region.
- The region generally offers strong transportation infrastructure that is well developed for agricultural and manufacturing exports. The technological resources are heterogeneously distributed throughout the region and while higher education institutions are present, enrollment remains flat over the last 10 years.
- Although there is population growth in the region and the educational attainment of those 25 years and older is increasing, like the statewide trend, there is evidence that the SCEDD region is experiencing an inflow of less educated people and an outflow of more educated people. As a result, workforce-related issues exist and are affecting the economic performance of the region.
- The labor composition of the region is generally toward lower wage industries (e.g., agriculture and manufacturing) when compared to the state. Lower farm incomes and lower wage and employment growth are other trends for the SCEDD region. It appears that the region is moving toward a less dynamic, lower education, slower growth, and lower wage work force.
- The industry analysis shows how tightly linked the core industries are within the region. Specifically, Manufacturing, Agriculture, Transportation & Warehousing, and Wholesale Trade are tightly connected and play a critical role within the local economy. Weakening service industries within the area include Health Care & Social Assistance and Retail Trade.
- Finding qualified workers remains a significant challenge within the region.... Rural counties have reported that a significant challenge with recruiting and retaining workers is the quality of housing stock. New housing is largely concentrated in higher populated areas and the quality of housing is declining on average in rural counties.

The plan identified and outlined objectives related to three main priority areas: Industry Growth & Innovation, Workforce Development, and Housing. Currently identified objectives do not address natural hazards. Future updates and project implementation should consider integrating hazard mitigation goals and objective.

Plan Maintenance

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

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

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

Mitigation Strategy

Completed Mitigation Actions

MITIGATION ACTION	TREE TRIMMING AND DITCH CLEARING
DESCRIPTION	Conduct tree trimming and ditch clearing of debris
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
STATUS	Hazardous trees in town have been trimmed and debris has been removed. Future efforts will be done on an ongoing basis as part of regular maintenance.

Continued Mitigation Actions

MITIGATION ACTION	BACKUP GENERATOR
DESCRIPTION	Provide a portable or stationary source of backup power for the sewer and water systems in town.
HAZARD(S)	All hazards
ESTIMATED COST	$3,500+ depending on site requirements
FUNDING	Tax revenue, HMA
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

MITIGATION ACTION	SAFE ROOM/STORM SHELTER
DESCRIPTION	Construct a storm shelter for 70 people in addition to a back-up power generator
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	$148,000
FUNDING	Tax revenue, HMA
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

MITIGATION ACTION	WELL SYSTEM IMPROVEMENTS
DESCRIPTION	Construct a back-up water well, in addition to a new well with an underground pipe to water tank in water building
HAZARD(S)	Drought and Extreme Heat, Flooding, Severe Thunderstorms, Tornadoes and High Winds
ESTIMATED COST	$77,000
FUNDING	Tax revenue, General Fund, HMGP
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	The village is currently exploring funding options.

COMMUNITY PROFILE

VILLAGE OF SARONVILLE

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

Local Planning Team

Table SAR.1: Village of Saronville Local Planning Team

Name	Title	Jurisdiction
Dan Beahm	Board Chair	Saronville
Haley Roemmich	Deputy Emergency Manager	Clay County
Tim Lewis	Emergency Manager	Clay County

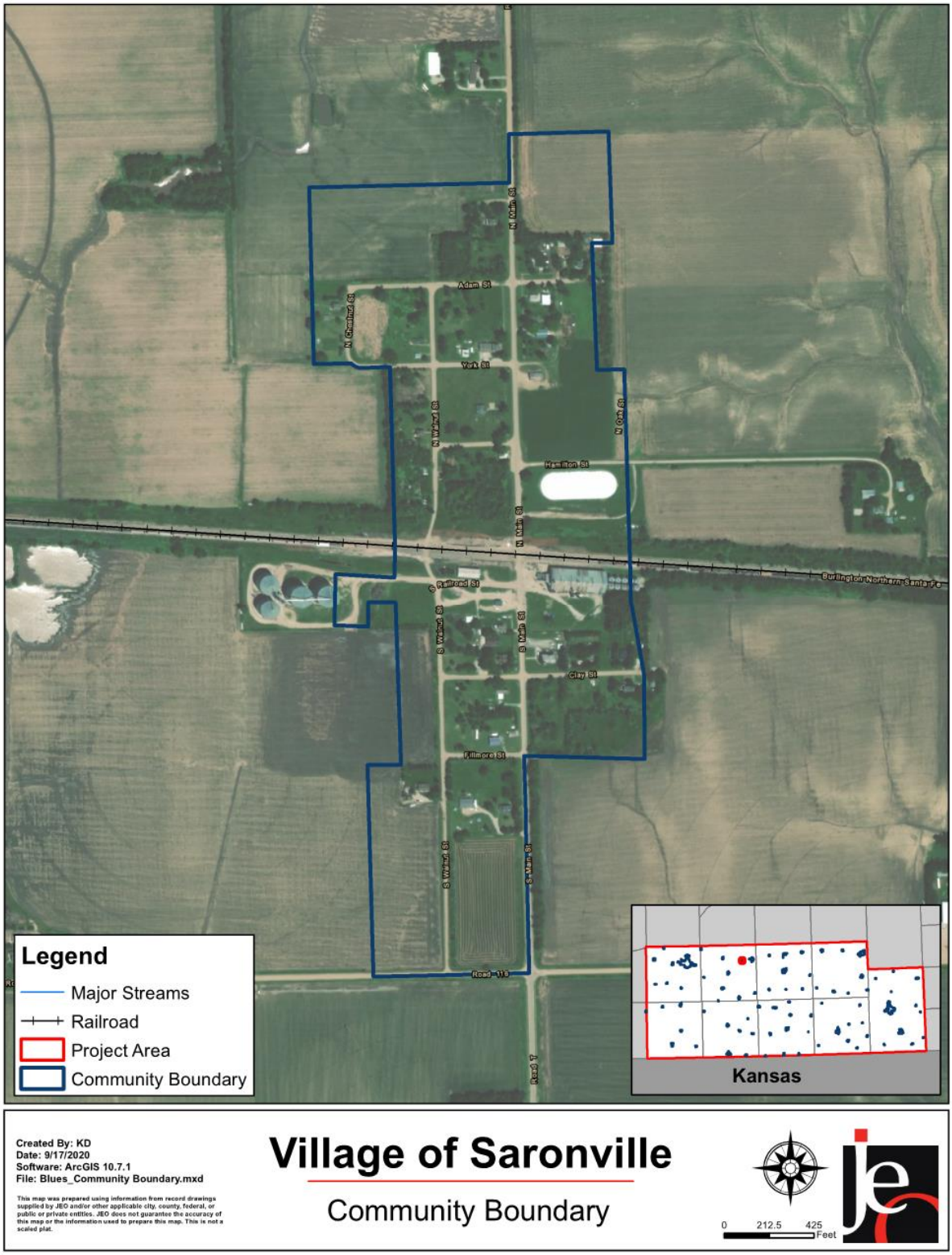
Location and Geography

The Village of Saronville is located in the north eastern portion of Clay County. The Village of Saronville covers an area of 0.15 square miles. There are no major waterways within the area, although the Percival-Erickson Reservoir is located approximately 2000 feet southeast of the village. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Most of Saronville lies in the plains topographic region, and is surrounded by agricultural fields.

Transportation

Saronville's major transportation corridors include State Highway 6 runs east-west, just south of Saronville. NE-6 accommodates on average 1,825 vehicles per day, 405 of which are heavy commercial vehicles. Spur 18G runs north-south and connects Saronville to NE-6. S18G accommodates on average 215 vehicles per day, 15 of which are heavy commercial vehicles. Saronville has two rail lines, Burlington Northern Santa Fe line, and Amtrak, which runs on the same line. At Saronville, the BNSF runs east-west headed into Lincoln and west to Hastings. The local planning team indicated that agricultural chemicals are regularly transported on the BNSF railline. Although there have been no chemical spills in the past, the planning team remains concerned about single-family housing located near transportation routes. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

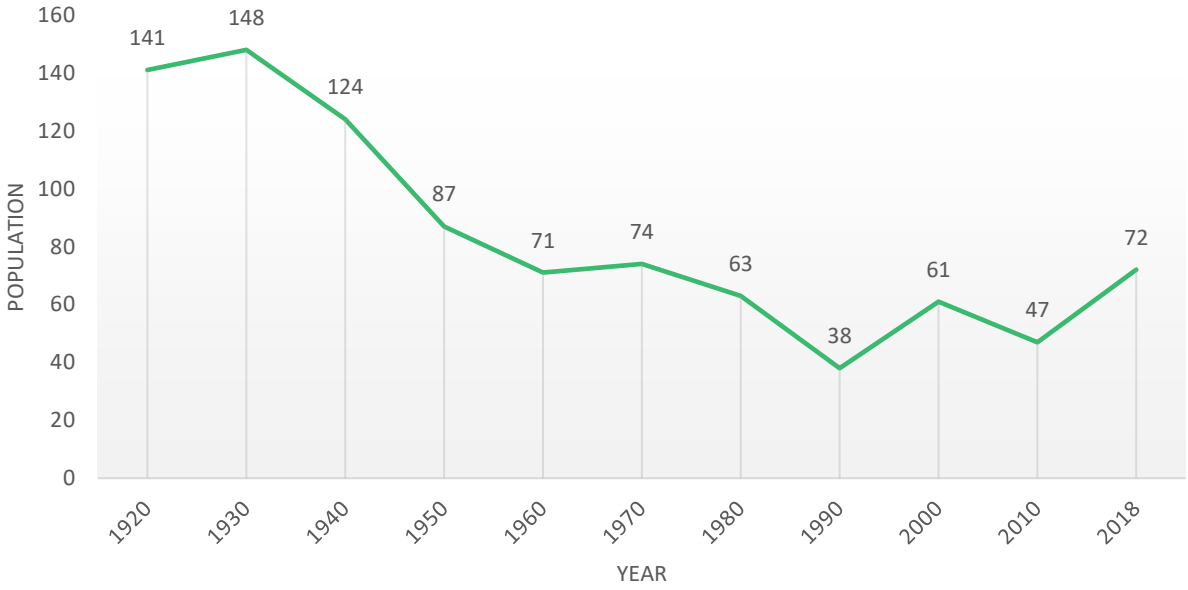
Figure SAR.1: Village of Saronville Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1920 to 2018 (estimated). This figure indicates that the population of Saronville has declined between 1930 and the 1990s, but has increased in recent years. Communities with declining population may have a higher level of unoccupied housing and may have decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. However, increasing populations may indicate additional development may be occurring. The Village's population accounted for approximately 1% of Clay County's Population in 2018.

Figure SAR.2: Saronville Population 1920-2018



Source: U.S. Census Bureau[66]

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

- **Younger.** The median age of Saronville was 20.7 years old in 2018, compared with the County average of 42.5 years. Saronville's population has grown younger since 2018, when the median age was reported as 47.8 years old. Saronville had a larger proportion of people under 20 years old (43%) as the County (26.0%).[67]
- **Less ethnic diversity.** In 2010, 2% of Saronville's population was two or more races. By 2018 this declined to 0% and 100% of Saronville's population was White, non-Hispanic. During that time, Clay County had declined 5% to 1% (other races) and grew 1% to 2% (two or more races) from 2010 to 2018 respectively.[68]
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Saronville (2.8%) was lower than the County (11.4%) in 2018.[69]

66 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
67 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
68 United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]
69 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

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

- **Varied mix of industries**. Employment sectors accounting for 10% or more of employment in Saronville included Agriculture, Manufacturing, Transportation, and Education. In comparison Clay County's included Agriculture, Construction, Manufacturing, and Education.[70]
- **Higher household income**. Saronville's median household income in 2018 ($76,458) was approximately $20,000 greater than the County ($56,316) in 2018.[71]
- **Fewer long-distance commuters**. About 68% percent of workers in Saronville commuted for fewer than 15 minutes, compared with about 37.3% of workers in Clay County. About 7% of workers in Saronville commute 30 minutes or more to work, compared to about 30.0% of the County workers.[72]

Major Employers

A major employer in Saronville is the Cooperative Producers, Inc. A large portion of residents also commute to communities in the surrounding area for work including Sutton, Aurora, and Hastings.

Housing

In comparison to Clay County, Saronville's housing stock was: [73]

- **More owner occupied.** About 100% of occupied housing units in Saronville are owner occupied compared with 78.6% of occupied housing in Clay County in 2018.
- **Greater share of aged housing stock**. Saronville has a greater share of houses built prior to 1970 as the county (96.4% compared to 66.4%).
- **Fewer multi-family homes**. The predominant housing type in the Village is single family detached and Saronville contains fewer multifamily housing with five or more units per structure than the County (0% compared to 1.7%). About 100% of housing in Saronville was single-family detached, compared with 86.2% of the County's housing. Saronville has a smaller share of mobile and manufactured housing (0%) compared to the County (3.3%)

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

Future Development Trends

Five structures have been built in Saronville since 2011, including grain bins, a storage unit, two residential buildings, and a greenhouse. This development took place in the northeast, northwest, and central parts of town. None of these structures were developed in floodplains or other

70 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
71 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
72 United States Census Bureau. "2018 American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]
73 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

hazardous areas. The village anticipates that up to six new buildings will be built in the village through 2020, including in the central, southwest, and central west parts of town. The population in Saronville is declining which the local planning team attributes to a lack of housing and employment opportunities.

Parcel Improvements and Valuation

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

Table SAR.2: Saronville 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
84	19	$1,159,130	0	0%	$0

Source: County Assessor, GIS Workshop

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one chemical storage site in Saronville which houses hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. The local planning team indicated that concerns exist for runoff contamination during flood events, groundwater contamination, chemical inhalation hazards, and transportation spills in the community. In the event of a chemical spill, transportation routes of concern include State 18G Spur and the village streets.

Table SAR.3: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
George Bros Propane & Fert	Road 315	N

Source: Nebraska Department of Environment and Energy[74]

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

Critical Facilities

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

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

Table SAR.4: Saronville Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Safety and Security / Food, Water, and Shelter	Village Office / Community Center	Y	N	N
2	Transportation	Village Shop	N	N	N
3	Transportation	County Roads Shop #11	N	Y	N

Figure SAR.3: Saronville Critical Facilities

Historical Occurrences

See the Clay County community profile for historical hazard events.

Hazard Prioritization

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

Drought and Extreme Heat

The community is primarily concerned with water availability from the village well and heavy usage from surrounding agricultural lands. Heavy irrigation during drought years may cause household wells to not pump water as well or as much. Saronville does not have a drought monitoring board nor a response plan. The water supply is at present sufficient but there are no alternative water sources currently identified.

Severe Thunderstorms

Severe thunderstorms are common and include impacts from hail, heavy rain, lightning, and strong winds. Saronville experienced downed branches and limbs due to a severe thunderstorm in July of 2015. According to NCEI data, a severe thunderstorm event on August 22, 2007 generated thunderstorm winds up to 80 mph. The winds toppled a newly constructed grain bin and resulted in approximately $1,500,000 in property damages. Additionally, on June 5, 2009 a severe thunderstorm event generated 2-inch hailstones that resulted in $100,000 in property damages.

Saronville is also concerned about power outages for this hazard. No municipal records are protected with surge protectors. There are no generators currently available for critical facilities. Less than 10 percent of power lines are buried. The community has not identified hazardous trees in the community, nor do they use weather radios. The village relies on electricity for outdoor warning sirens, water wells, pressure tanks, and Heat/AC. Power outages cause the community to not have access to water or utility services. Having a backup generator would allow for a shelter with power and utilities in the event of an outage or disaster.

Severe Winter Storms

In the past, winter storms have made it difficult for residents to leave the community due to snow accumulation. Power outages are also a concerned due to heavy, wet snow or ice on power lines. Heavy snow accumulations can cause problems for responding Fire, EMS, Law Enforcement in the event of an emergency. Heavy snowfall events in 2009 and 2015 caused power outages and stranded individuals. The county removes snow from the main street while all other streets are maintained by community members or the CO-OP. There are no snow fences in the community. The village recently purchased snow removal equipment and resources are currently sufficient. The village has identified the need for a backup generator for the community center and to trim trees throughout town.

Tornadoes and High Winds

Losses associated with high winds and tornadoes cause extensive damage to homes, businesses, and infrastructure. The local planning team indicated that tornadoes and high winds occur on a regular basis each storm season. In 2020, there were three small tornadoes in the Saronville area. Fortunately, these tornadoes did not cause any damages in the village.

The community is primarily concerned with downed trees and branches and the threat this poses to personal property. Additionally, the village is concerned about adequate shelter for residents and restoring electric power in case of a tornado. In 2014, a tornado came just south of the town but did not enter municipal limits. The community has a grain elevator which could be impacted or blown down due to high wind events. The community maintains a mutual aid agreement with Sutton to provide response services if a disaster were to occur. The community does not backup municipal records. The community center and the post office function as the only community safe shelter areas. To mitigate this hazard, the village plans to obtain a backup power generator for the community school building and look into a county-wide response plan for search and rescue after a disaster event.

Flooding

Flooding was not identified as a hazard of top concern as Saronville currently does not have an identified special flood hazard areas in or around the village. The village has opted to not participate in the NFIP to date. This decision will be revisited following the completion of the ongoing floodplain mapping studied in Clay County.

Governance

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

Capabilities

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

Table SAR.5: Capability Assessment

Survey Components		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	*No*
	Capital Improvements Plan	*No*
	Economic Development Plan	*Yes*
	Local Emergency Operational Plan	*County*
	Floodplain Ordinance	*No*
	Zoning Ordinance	*No*
	Subdivision Regulation/Ordinance	*No*

Survey Components		Yes/No
	Building Codes	*No*
	Floodplain Management Plan	*No*
	Storm Water Management Plan	*No*
	National Flood Insurance Program	*No*
	Community Rating System	*No*
	Other (if any)	
Administrative & Technical Capability	Planning Commission	*No*
	Floodplain Administration	*No*
	GIS Capabilities	*No*
	Chief Building Official	*No*
	Civil Engineering	*No*
	Local Staff Who Can Assess Community's Vulnerability to Hazards	*Yes*
	Grant Manager	*No*
	Mutual Aid Agreement	*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	*No*
	Development Impact Fees	*No*
	General Obligation Revenue or Special Tax Bonds	*No*
	Other (if any)	
Education and Outreach	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	*No*
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	*No*
	Natural Disaster or Safety related school programs	*No*
	StormReady Certification	*No*
	Firewise Communities Certification	*No*
	Tree Village USA	*No*
	Other (if any)	

Table SAR.6: Overall Capability

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

Plan Integration

In the past five years the village has not applied for any grants. The local planning team indicated that municipal funds are limited to maintaining current facilities and systems. In an effort to incorporate hazard mitigation planning, community leaders continue to review projects and scan their community for improvements that will help mitigate future issues.

Saronville has a Local Emergency Operations Plan (LEOP) as part of the county's plan. The LEOP for Saronville, which was last updated in 2019, is an annex of Clay County's LEOP. It is an all-hazards plan that does not address specific natural and man-made disasters. It provides a clear assignment of responsibility in case of an emergency.

The village adheres to county and state zoning and building code requirements but has not established their own ordinances. No other planning mechanisms were identified for the village which integrate hazard mitigation goals and objectives.

The South Central Economic Development District has developed a Comprehensive Economic Development Strategy (CEDS) which includes Adams, Clay, Nuckolls, and Webster counties and their communities. The plan was originally developed in 2013 and was updated in 2018. The 2018 CEDS identified several key findings of economic development in the area including:

- The region is characterized by strong agricultural natural resources including ground and surface water supplies, a developed water management and distribution system, and fertile soils. This combination supports the strong agricultural sector within the region.
- The region generally offers strong transportation infrastructure that is well developed for agricultural and manufacturing exports. The technological resources are heterogeneously distributed throughout the region and while higher education institutions are present, enrollment remains flat over the last 10 years.
- Although there is population growth in the region and the educational attainment of those 25 years and older is increasing, like the statewide trend, there is evidence that the SCEDD region is experiencing an inflow of less educated people and an outflow of more educated people. As a result, workforce-related issues exist and are affecting the economic performance of the region.
- The labor composition of the region is generally toward lower wage industries (e.g., agriculture and manufacturing) when compared to the state. Lower farm incomes and lower wage and employment growth are other trends for the SCEDD region. It appears that the region is moving toward a less dynamic, lower education, slower growth, and lower wage work force.
- The industry analysis shows how tightly linked the core industries are within the region. Specifically, Manufacturing, Agriculture, Transportation & Warehousing, and Wholesale Trade are tightly connected and play a critical role within the local economy. Weakening

service industries within the area include Health Care & Social Assistance and Retail Trade.

- Finding qualified workers remains a significant challenge within the region.... Rural counties have reported that a significant challenge with recruiting and retaining workers is the quality of housing stock. New housing is largely concentrated in higher populated areas and the quality of housing is declining on average in rural counties.

The plan identified and outlined objectives related to three main priority areas: Industry Growth & Innovation, Workforce Development, and Housing. Currently identified objectives do not address natural hazards. Future updates and project implementation should consider integrating hazard mitigation goals and objective.

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 Saronville profile was last reviewed by the local planning team in January 2021. The Board Chair, Emergency Manager, Fire Chief, and Village Board are responsible for reviewing and updating this community profile as changes occur or after a major event. The plan will be reviewed no less than annually and will include the public in the review and revision process by: board meetings, social media, and mailings.

Mitigation Strategy

Continued Mitigation Actions

MITIGATION ACTION	BACKUP GENERATOR
DESCRIPTION	Obtain a back-up power generator for community room
HAZARD(S)	All hazards
ESTIMATED COST	$20,000
FUNDING	General Funds, HMGP, BRIC
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

MITIGATION ACTION	REMOVE FLOW CONSTRICTIONS
DESCRIPTION	Conduct tree trimming and ditch clearing of major waterways at risk of flooding during high water events.
HAZARD(S)	Flooding, Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	$13,000
FUNDING	General Fund, HMGP
TIMELINE	2-5 years
PRIORITY	Low
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

MITIGATION ACTION	SAFE ROOMS/STORM SHELTERS
DESCRIPTION	Retrofit community building to serve as a public storm shelter
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	$20,000
FUNDING	General Fund, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not yet been started. Shelter would be located at community center

MITIGATION ACTION	STORMWATER SYSTEM AND DRAINAGE IMPROVEMENTS
DESCRIPTION	Conduct improvement of drainage on streets
HAZARD(S)	Flooding, Severe Thunderstorms
ESTIMATED COST	$2,000
FUNDING	General Funds, HMGP, BRIC
TIMELINE	1 year
PRIORITY	Low
LEAD AGENCY	Village Board
STATUS	The city has been identifying locations in need of this project. Currently, Walnut St on W side of road have been identified for this project.

COMMUNITY PROFILE

CITY OF SUTTON

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

Local Planning Team

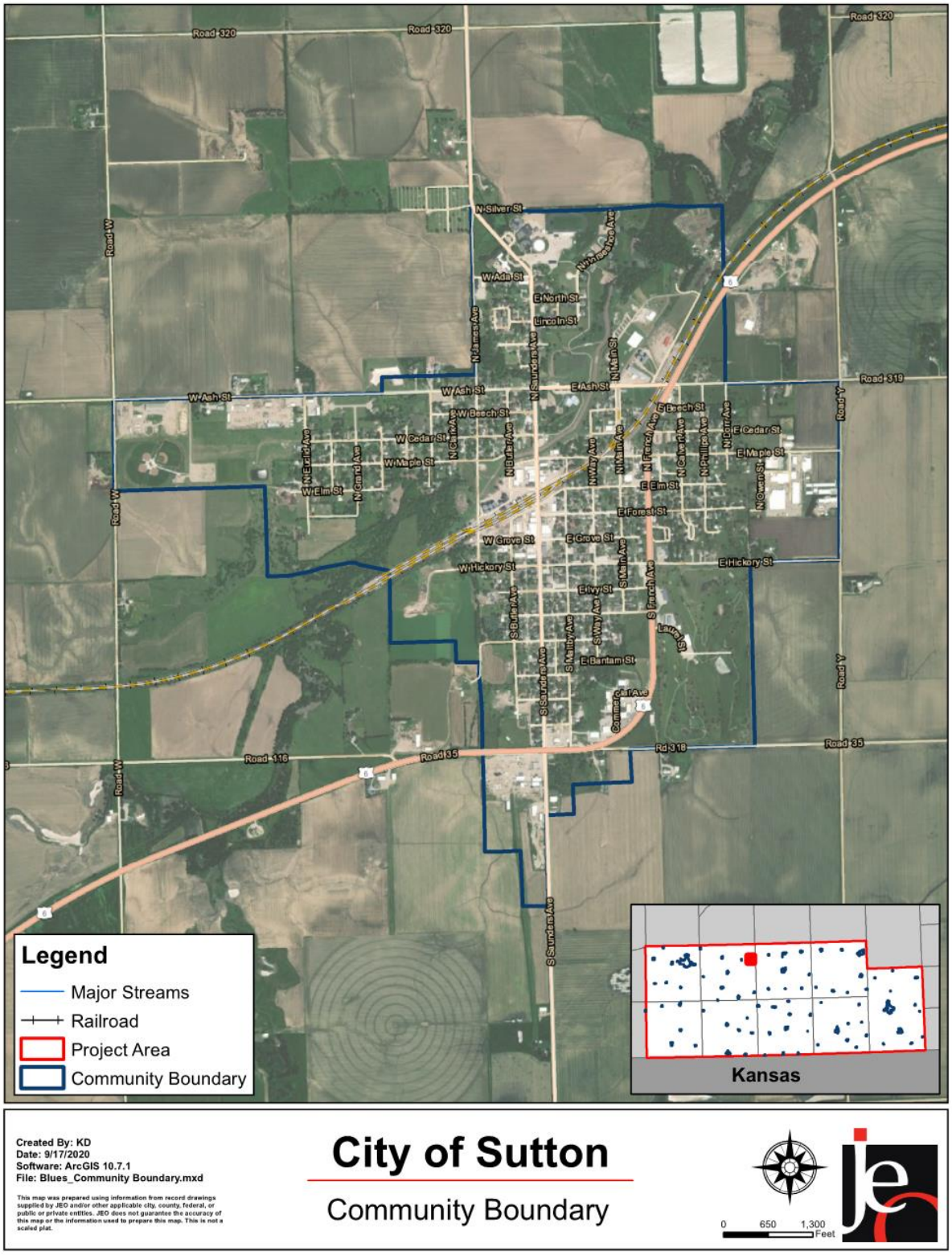
Table SUT.1: City of Sutton Local Planning Team

Name	Title	Jurisdiction
Todd Mau	Mayor	City of Sutton
Jeff Hofaker	City Administrator	City of Sutton
Larry Nuss	Council President – SVFD	City of Sutton
Marla Itzen-Newman	City Clerk and Treasurer	City of Sutton
Doug George	Owner Chairman	George Bros – Planning/Zoning Committee
A.J. Bergen	Vice President	Cornerstone Bank
Alan Quail	Emergency Management Manager / Officer	Sutton Volunteer Fire Department
Tim Lewis	EMA Coordinator	Clay County

Location and Geography

The City of Sutton is located in the north eastern portion of Clay County and covers an area of 1.99 square miles. The main waterway within the area is School Creek, which runs through the northeastern part of the city. Other waterways of note include retention ponds within the city. A retention pond sits in the northwestern part of the community and leads into a small retention pond in Clark's Park. A small retention pond also lies on the west of the residential area in the city. There is also a smaller retention dam and drain in southeast Sutton and located on the golf course property. This has runover into the natural tributary leading into School Creek. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. The city lies in the plains topographic region and is surrounded by agricultural fields.

Figure SUT.1: City of Sutton Jurisdictional Boundary



Transportation

Sutton's major transportation corridors include Nebraska Highway 6, which runs east-west just south of Sutton. Highway 6 accommodates on average 1,825 vehicles per day, 405 of which are heavy commercial vehicles. Saunders Avenue runs north-south and connects Sutton to Highway 6 to the south. Saunders Avenue accommodates on average 215 vehicles per day, 15 of which are heavy commercial vehicles. Sutton has two rail lines, Burlington Northern Santa Fe line, and Amtrak, which runs on the same line. At Sutton, the BNSF runs east-west headed into Lincoln and west to Hastings.

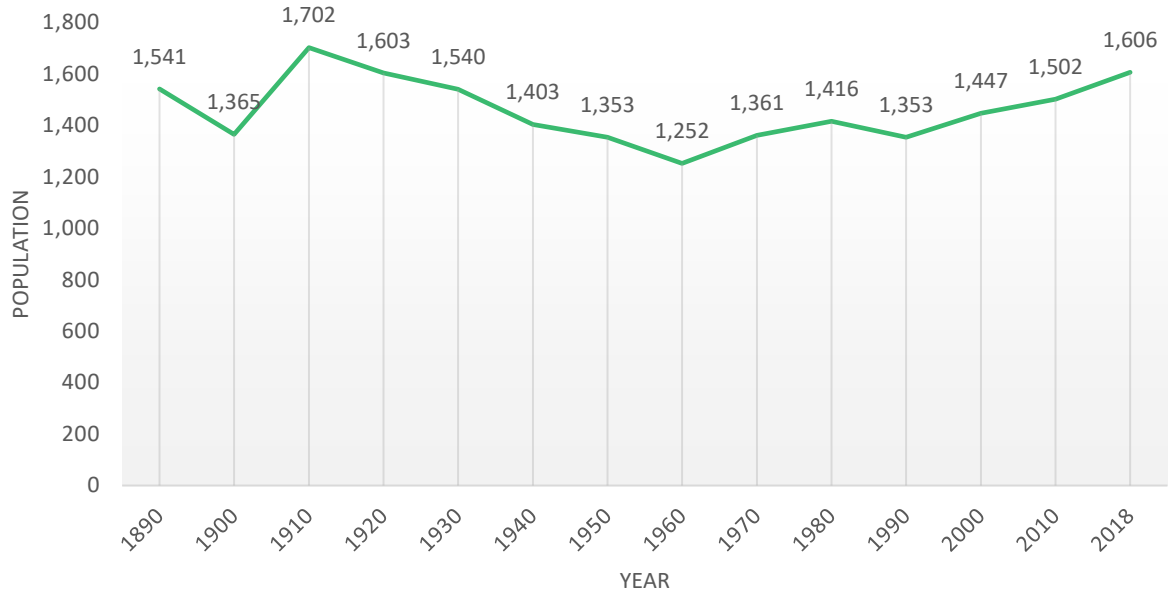
The planning team noted that Highway 6 experiences traffic all day and is an alternate route for Interstate 80 truckers and travelers moving east and west across the state. Saunders Avenue is a main transportation corridor for accessing downtown businesses as well as the school on the north edge of Sutton. An additional route of concern is the east-west corridor of Ash Street, which spans from Highway 6 on the east to Road 319 on the west. Ash Street provides an alternative route out of the city to Highway 14 to the west and is also used by emergency vehicles when Saunders Avenue is blocked by railcars or flooding.

Anyhdrous Ammonia is sometimes transported along the local routes of Highway 6 and Saunders Avenue. Two agriculture-related businesses are located in the city which provide the ammonia to farmers. The planning team also indicated that many critical facilities are located along main transportation routes. Critical facilities located along Saunders Avenue include the city hall, community center, city shop, police station, fire hall, electrical substation, south water well, north water well, American Legion, Cornerstone Bank, Astra Bank, Sutton Public Schools, Sutton Community Home – Assisted Living complex, and Saunders Bridge (levee-span). Critical facilities located along Ash Street include the city electrical pole yard, sewer lift pumping station, northwest retention pond, Ash Street Bridge (levee-span), and Christian School. George Bros. Fuel Station is located along Highway 6. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Demographics

The following figure displays the historical population trend from 1890 to 2018 (estimated). This figure indicates that the population of Sutton has held a relatively stable population and a gradual population increase since 1990. This is relevant to hazard mitigation because communities with a growing population may be more prone to developing additional land and building new structures and may have additional fiscal opportunities to pursue mitigation actions. The city's population accounted for 26% of Clay County's population in 2018.

Figure SUT.2: Sutton Population 1900-2018



Source: U.S. Census Bureau[75]

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

- **Younger.** The median age of Sutton was 39.4 years old in 2018, compared with the county average of 42.5 years. Sutton's population has grown younger since 2018, when the median age was 45.9 years old. Sutton had a larger proportion of people under 20 years old (29.1%) as the county (26.0%).[76]
- **Less ethnic diversity.** In 2010, 1% of Sutton's population was American Indian, 5% was other races, and 1% was two or more races. By 2018, only 1% of Sutton's population was other races and 1% was two or more races. During that time, Clay County had declined 5% to 1% (other races) and grew 1% to 2% (two or more races) from 2010 to 2018 respectively.[77]
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Sutton (7.8%) was lower than the county (11.4%) in 2018.[78]

Employment and Economics

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

- **Similar mix of industries**. Employment sectors accounting for 10% or more of employment in Sutton included Construction, Manufacturing, Retail, and Education. In comparison Clay County's included Agriculture, Construction, Manufacturing, and Education.[79]

75 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
76 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
77 United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]
78 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
79 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

- **Greater household income**. Sutton's median household income in 2018 ($58,929) was approximately $2,000 greater than the county ($56,316).[80]
- **More long-distance commuters**. About 29.4% percent of workers in Sutton commuted for fewer than 15 minutes, compared with about 39.3% of workers in Clay County. About 44.1% of workers in Sutton commute 30 minutes or more to work, compared to about 30.0% of the county workers.[81]

Major Employers

Major employers for the city include VanKirk Bros. Contracting, Central Nebraska Wood Preservers (CNWP), George Bros. Inc, Friesen Chevrolet, Black Hills, Sutton Public School District, and REMCO Inc. The planning team indicated that about 35% of residents commute to other communities for work. Some of these are Hastings, Grand Island, Harvard, Geneva, Clay Center, Henderson, Aurora, and York. The team also noted that a growing group of residents are employed by companies that allow them to work remotely from their home in Sutton.

Housing

In comparison to Clay County, Sutton's housing stock was: [82]

- **More owner occupied.** About 77.1% of occupied housing units in Sutton are owner occupied compared with 78.6% of occupied housing in Clay County in 2018.
- **Similar share of aged housing stock**. Sutton has a similar share of houses built prior to 1970 as the county (65.3% compared to 66.4%).
- **Fewer multi-family homes**. The predominant housing type in the city is single family detached and Sutton contains more multifamily housing with five or more units per structure than the county (3.3% compared to 1.7%). About 88.9% of housing in Sutton was single-family detached, compared with 86.2% of the county's housing. Sutton has a smaller share of mobile and manufactured housing (0%) compared to the county (3.3%). The planning team indicated that no mobile homes exist within the community, but a few manufactured homes have been placed on lots in residential zoned areas of the city.

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.

Future Development Trends

There has been a fair amount of development in Sutton over the past five years. The city built a new softball/baseball complex on the west side of town, near Ash Street, and a new playground facility was built in the main city park. Three new houses were built in the Horseshoe Subdivision with another house planned. A duplex and three new houses were also built in the Grandview Subdivision. A four-plex living residence near Ivy Street was also constructed. New homes that were built have incorporated either safe rooms or basements as storm shelters. Backup

80 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
81 United States Census Bureau. "2018 American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]
82 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

generators were incorporated into the water pumping system, city hall, and the community retirement home.

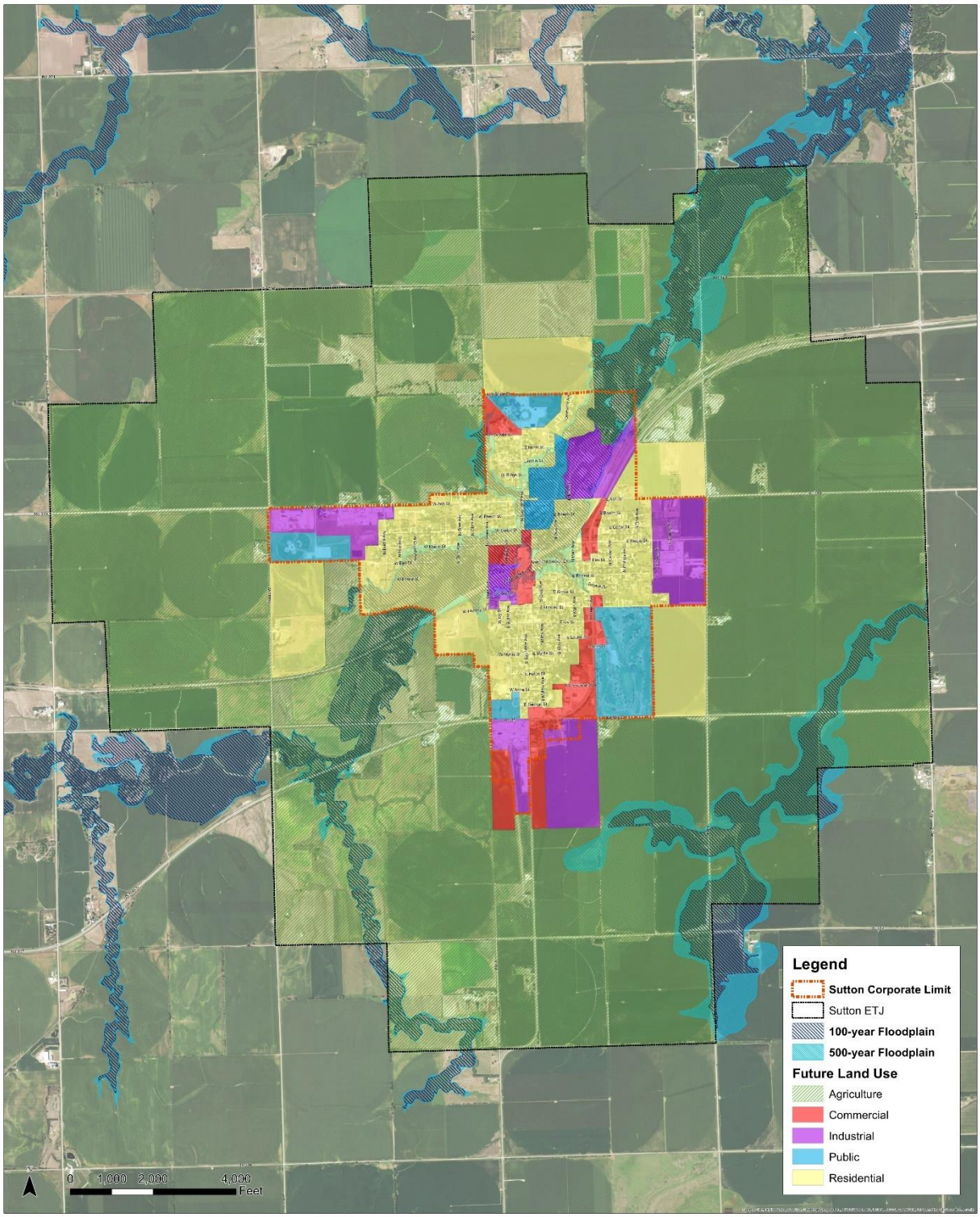
Multiple businesses expanded or opened a new location. These include VanKirk Bros. Contracting (expansion), Black Hills (new location – expansion), Perfect Circle (new location – expansion), Nebraska Central Wood Preservers (expansion), Friesen Chevrolet – Tire Repair (expansion), Jim's Agri-Air (expansion), and Western Select Genetics (new business).

Four houses were demolished after controlled training burns were completed. No new streets were built, but three blocks of Ash Street were replaced with concrete. A private communication company has started installing fiber across the city for both residential and business use. This will provide more reliable communication, ability to work remotely, and foster new entrepreneurship. The local planning team stated that no structures were developed in the floodplain or other hazardous areas.

According to U.S. Census data, the population in Sutton has steadily increased over the past few decades. The planning team noted that with the expansion of businesses in the community and the need for extra workforce in the region, it is presumed that the population will remain stable or increase. The team did say, however, that some factors may inhibit growth, such as the older population passing away or moving to senior living centers outside the community. Additionally, only a small number of high school graduates remain or have returned to the community in the last five years.

While there are no new housing developments in the works for the next five years, there are new areas of the city that were residentially zoned in the last comprehensive plan update in 2017. The planning team predicts that a new housing project will be developed in the next few years. The team also stated that there are no new businesses or industry planned for the next five years, but some industry may develop naturally on the northeast side of the city, outside city limits. A couple businesses have purchased ground in that area recently. Other business development will focus on assistance in helping existing businesses grow, entrepreneurial businesses get established, and/or encouraging youth entrepreneurs through the possibility of incubation space or a maker-space facility with locations yet to be determined.

Figure SUT.3: Sutton Future Land Use Map



Parcel Improvements and Valuation

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

Table SUT.2: Sutton 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
1,009	578	$61,007,870	102	18%	$10,380,230

Source: County Assessor, GIS Workshop

Table SUT.3: Sutton Flood Map Products

Type of Product	Product ID	Effective Date	Details
LOMA	19-07-0432A-310045	1/29/2019	Portion of property removed from SFHA
LOMA	20-07-1401A-310045	9/25/2020	Structure removed from SFHA
LOMA	20-07-1402A-310045	9/4/2020	Structure removed from SFHA

Source: FEMA Flood Map Service Center

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are six chemical storage sites in Sutton which house hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. The planning team noted that the Cooperative Producers Inc (CPI) is located within one hundred feet of Cornerstone Bank and four hundred and eighty feet from the American Legion. No spill events have occurred locally.

Table SUT.4: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
Cooperative Producers Inc	104 W Elm St	Yes
Central NE Wood Preservers Inc	105 N Owen Ave	No
Cooperative Producers Inc	1214 W Ash St	No
George's 66 Service	105 E Highway 6	No
George Bros Propane & Fert	1001 S Saunders Ave	No
Cooperative Producers Inc	Highway 41 W & Road T	No

Source: Nebraska Department of Environment and Energy[83]

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

Critical Facilities

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

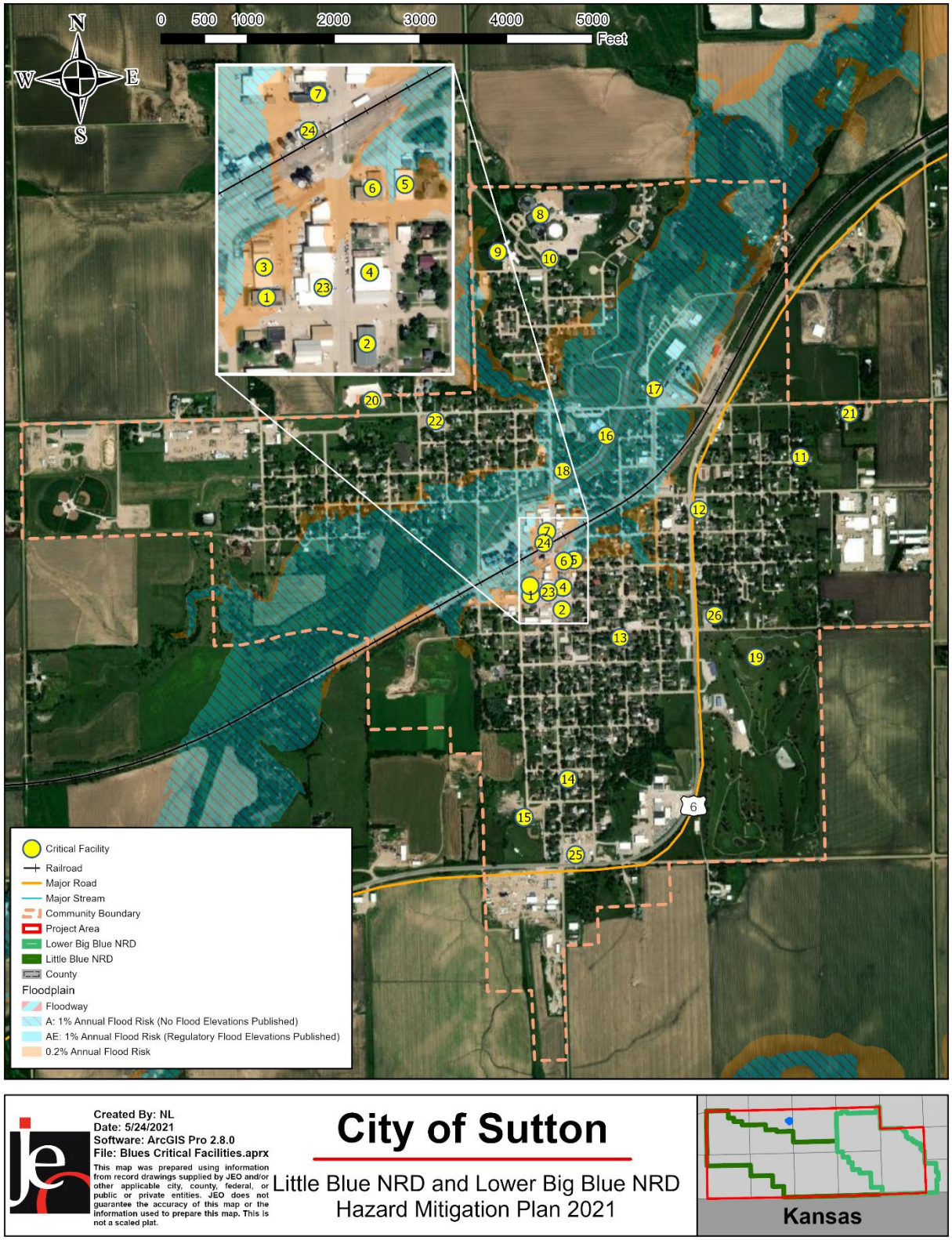
The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table SUT.5: Sutton Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Safety and Security	City Hall	N	Y	Y
2	Food, Water, and Shelter	Community Center / Sutton Senior Center	Y	N	N
3	Transportation	City Shop	N	Y	Y
4	Safety and Security	Police Station	N	Y	N
5	Safety and Security	Fire Hall	N	Y	Y
6	Food, Water, and Shelter	American Legion	Y	N	Y
7	Other	Cornerstone Bank	N	N	N
8	Food, Water, and Shelter	Sutton Public Schools	Y	Y	N
9	Health and Medical	Sutton Community Home/ Assisted Living	N	Y	N
10	Food, Water, and Shelter	North Well	N	Y	N
11	Food, Water, and Shelter	East Well	N	N	N
12	Health and Medical	Sutton Family Practice	N	N	N
13	Health and Medical	Quality Health Care Clinic	N	N	N
14	Food, Water, and Shelter	South Well	N	Y	N
15	Food, Water, and Shelter	Water Tower	N	N	N
16	Health and Medical	Pump Station	N	N	Y
17	Health and Medical	Sewer Pumping Station	N	N	Y
18	Energy	Sub Station -	N	N	Y
19	Other	City Dam	N	N	N
20	Health and Medical	Retaining Pond	N	N	N

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
21	Food, Water, and Shelter	Christian School	Y	N	N
22	Energy	City Pole/Supply Yard - Building	N	N	N
23	Food, Water, and Shelter	Browns Thrift Store & Grocery	N	N	N
24	Energy	Cooperative Producers Inc. – Fuel	Y	Y	N
25	Transportation	Georges 66 Service	N	Y	N
26	Transportation	BG's Corner (Fuel)	N	N	N

Figure SUT.4: Sutton Critical Facilities



Historical Occurrences

See the Clay County community profile for historical hazard events.

Hazard Prioritization

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

Flooding/Levee Failure

Flooding was identified as a hazard of top concern by the planning team. School Creek runs through the city and is bordered by a two-sided levee which extends approximately three blocks through the park area of town. This levee system is not currently certified by USACE. The primary areas which are protected by the levee system are locations to the north and south from Butler Avenue moving east (following School Creek) to Main Avenue in the industrial park area. This area includes residential and business locations within this general described area.

The planning team noted that during heavy rain events, the stream collects large amounts of water runoff, especially from the watershed as far as 13 miles to the west of the city. This area of town had historically always flooded, until the stream's flood area was moderately controlled by a levee. The trend of increased heavy rain events over the last few years provides additional cause for concern. Sutton participates in the NFIP and has thirteen policies in-force for $3,232,700. According to NeDNR as of February 2020, there are no repetitive flood loss properties in the city.

According to the NCEI database, there have been two reported flood events from 1996 to April 2020, resulting in $130,000 in property damage and $1,100,000 in crop damage. A July 2007 storm that dropped five inches of rain in the region caused flash flooding leading to $30,000 of damage in Sutton. On June 12, 2004, a sudden outburst of four inches of rain led to severe flooding in and near Sutton, including an overflowing creek in town, a nearby washed out bridge, $100,000 in property damage, and severe crop losses.

According to the planning team, a rain event in 2018 almost caused the levee to overtop. While overtopping did not occur, the drain inlets did experience erosion damage. The spring 2019 flooding caused additional maximum capacity events at the levee, resulting in more erosion. Several logs traveling down the stream struck support beams to the pedestrian bridge which spans the stream and levee sections. The city has performed some repairs to the levee recently, such as compacted fill to the drain inlets, and plans to replace the pedestrian bridge that is parallel to Saunders Avenue bridge.

The planning team indicated that projects needed in the future include cleaning of accumulated silt within the levee system, performing improvements to the existing levee for overtopping situations, and possibly extending the levee system to the west. Other projects discussed in the past include elevating pad-mounted transformers and switch gear above base flood elevation to

eliminate damages from flooding and promoting voluntary acquisition and demolition of flood-prone structures (especially structures prone to repetitive flooding).

Severe Thunderstorms

Due to previous occurrences, severe thunderstorms were identified as a top concern for the community. The combination of heavy rain, high winds, lightning, and hail can often cause significant impacts to the community. According to the NCEI, there have been 30 severe thunderstorm events in Sutton from 1996 to April 2020, resulting in $650,000 in property damage and $2,460,000 in crop damage. However, no injuries or deaths were reported. Storms producing thunderstorm winds more than 64 mph have caused $270,000 in damage Additionally, multiple storms have produced hailstones ranging from 0.75 inches to 1.75 inches in diameter. One July 2014 storm alone produced 1.75-inch hailstones and caused $2,050,000 in total damage. A year earlier on May 29, as part of an episode that included a tornado, 1.25-inch hailstones caused $25,000 in damage.

Impacts from these storms not only result in property and crop damage, but also disrupt basic services in the community when utility infrastructure and other buildings are damaged. The planning team indicated that the installation of impact resistant windows could reduce the city's risk to hail and high winds.

Tornadoes and High Winds

The planning team identified Tornadoes and High Winds as a hazard of top concern for the city. According to NCEI data, there have been 19 high wind events in Clay County from 1996 to April 2020. High winds are common across the region and can cause property and tree damage and brief power outages. The NCEI reported two small tornadoes in recent memory. An EF-0 tornado in May 2013 produced winds of 75 mph and caused damage to city hall and many businesses in the downtown area, including roof and structural damage. A brief EF-0 also touched down on April 4, 2009. Going back to March 13, 1990, a violent F-4 tornado resulted in $25,000,000 in damage in Fillmore County and caused severe damage to 11 homes in Sutton, tore down trees and power lines, injured at least four people in vehicles, and destroyed 20 farms in the adjacent rural area. The planning team also noted that several tornadoes touched down near Sutton in August 2020 but did not result in damage to the community.

To help mitigate this hazard, Sutton has backup generators installed at the city hall and city shop. Also, the city currently plans to conduct relocation of overhead power to underground; continue to promote first-aid training for all residents; perform an evaluation and potentially update the emergency siren system; provide a portable or stationary source of backup power for the school, community center, and other critical facilities; identify a location for a new safe room; design and construct storm shelters and safe rooms in highly vulnerable areas such as the RV park, and other areas; conduct a tree inventory and develop city tree planting and maintenance guidelines.

The planning team indicated that projects needed for the future include expanding the siren system to the city's newest annexed area, which includes the baseball/softball complex and adding secure shelters for residents and for those visiting during large sporting events.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Sutton has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The city has a mayor and a four-member council and the following offices: city administrator, clerk/treasurer, attorney, chief of police, fire chief, sewage plant operator, street maintenance, water operator, planning/zoning committee, tree committee, volunteer fire department, volunteer emergency manager, county emergency manager, and regional health district.

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 SUT.5: Capability Assessment

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

Survey Components		Yes/No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	
Education and Outreach	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	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	Yes
	Other (if any)	

Table SUT.6: Overall Capability

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

Plan Integration

The Comprehensive Plan, which was last updated in 2017, addresses the threat of flooding, and contains current and future land use maps. The future land use map, per the city, neither promotes nor discourages development inside the floodplain, but rather encourages development within zoned areas deemed appropriate for such development. Growth has trended to develop to the east of the city, due to a new baseball complex. No hazardous areas are outlined. Transportation systems are designed to function under disaster conditions under the plan, as there are routes out of all areas of the floodplain and community in case of future disasters.

The Capital Improvement Plan includes street improvements for city streets that are not paved with cement or asphalt. The plan does not address hazards or storm water projects. The plan does not include projects to extend roads or utilities to high hazard areas. It does include street improvements to better handle a high traffic of trucking for the industrial area.

The city's LEOP, which was last updated in 2019, is an annex of Clay County's LEOP. The plan addresses several hazards, including terrorism, natural disasters, major emergencies, and incidents of natural significance, with terrorism, floods, and severe storms being the hazards of highest concern in the plan. The plan provides a clear assignment of responsibility in case of an emergency and does not identify any gaps related to a particular hazard. City offices, the fire department, ambulance/rescue personnel, the electric utility, the public works department, and civil defense are all familiar with the EOP.

The zoning ordinances were updated in 2018 and discourage development in hazard areas. It contains natural hazard layers. Within the city limits, there is no wildland-urban interface, which is a zone of transition between unoccupied land and human development that is most susceptible to wildfire impacts. The ordinance does account for population changes when considering future land uses. The ordinance does not establish zones that limit the density of developments in the floodplain, but rather, rules that limit the density of development in specific population density areas. There are no requirements that floodplains be kept as open space, and there are no rezoning procedures that limit changes that allow greater intensity or density in natural hazard impact areas.

The Subdivision Regulations were last updated in 2018 and provide for conservation subdivisions or cluster subdivisions to conservative environmental resources. They allow heat pumps and solar pumps that minimize noise from operation. There are no regulations that allow density transfers in hazard areas. The subdivided land is not within the floodplain, but rather adjacent to it, and development within these plots is regulated, but not the land outside of these plots. There are no regulations to allow for density transfers to avoid building in natural hazard areas.

The South Central Economic Development District has developed a Comprehensive Economic Development Strategy (CEDS) which includes Adams, Clay, Nuckolls, and Webster counties and their communities. The plan was originally developed in 2013 and was updated in 2018. The 2018 CEDS identified several key findings of economic development in the area including:

- The region is characterized by strong agricultural natural resources including ground and surface water supplies, a developed water management and distribution system, and fertile soils. This combination supports the strong agricultural sector within the region.
- The region generally offers strong transportation infrastructure that is well developed for agricultural and manufacturing exports. The technological resources are heterogeneously distributed throughout the region and while higher education institutions are present, enrollment remains flat over the last 10 years.
- Although there is population growth in the region and the educational attainment of those 25 years and older is increasing, like the statewide trend, there is evidence that the SCEDD region is experiencing an inflow of less educated people and an outflow of more educated people. As a result, workforce-related issues exist and are affecting the economic performance of the region.
- The labor composition of the region is generally toward lower wage industries (e.g., agriculture and manufacturing) when compared to the state. Lower farm incomes and lower wage and employment growth are other trends for the SCEDD region. It appears that the region is moving toward a less dynamic, lower education, slower growth, and lower wage work force.
- The industry analysis shows how tightly linked the core industries are within the region. Specifically, Manufacturing, Agriculture, Transportation & Warehousing, and Wholesale

Trade are tightly connected and play a critical role within the local economy. Weakening service industries within the area include Health Care & Social Assistance and Retail Trade.

- Finding qualified workers remains a significant challenge within the region.... Rural counties have reported that a significant challenge with recruiting and retaining workers is the quality of housing stock. New housing is largely concentrated in higher populated areas and the quality of housing is declining on average in rural counties.

The plan identified and outlined objectives related to three main priority areas: Industry Growth & Innovation, Workforce Development, and Housing. Currently identified objectives do not address natural hazards. Future updates and project implementation should consider integrating hazard mitigation goals and objective.

The city understands the need to ensure that its economic planning is coordinated with its hazard planning. The planning team noted that the current economic plan outlines the goals and mission of development to help provide financial assistance to business owners and that a potential planning mechanism for the future could be to consider a stronger weighted support to a business that may build safety rooms within a building which could be used for the public.

The city applied for grants from the FEMA Assistance to Firefighters Grant Program to help assist with new equipment for the Sutton Volunteer Fire Department and Sutton Volunteer Ambulance Service in 2018 and 2019. Unfortunately, neither AFG applications were approved for award. The planning team indicated that most municipal funds are currently limited to maintenance of facilities and systems. The city has budgeted $4,000 specifically for matching funds toward a new emergency siren system, provided outside funding can be secured. The planning team also noted that municipal funds have remained the same over recent years within the budgets.

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 profile was last reviewed in 2017, but no changes were made at the time. The local planning team will include the Mayor, City Administrator, and City Clerk. The local planning team will review the plan no less than annually and will include the public in the review and revision process by sharing information through social media, local newspaper, and at board/council meetings.

Mitigation Strategy

Completed Mitigation Actions

MITIGATION ACTION	FIRST AID TRAINING
DESCRIPTION	Promote first-aid training for all residents
HAZARD(S)	All hazards
STATUS	EMT-First Aid training is currently provided to volunteers and others on an annual basis.

Continued Mitigation Actions

MITIGATION ACTION	ALERT SIRENS
DESCRIPTION	Perform an evaluation of existing alert sirens, to determine which sirens should be replaced or the placement of new sirens
HAZARD(S)	All hazards
ESTIMATED COST	$15,000+
FUNDING	General Budget, special fund, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Fire Department, City Council
STATUS	This will include expanding siren system to city's newly annexed areas. Funding is secured and project expected to be completed by end of 2021.

MITIGATION ACTION	BACKUP GENERATORS
DESCRIPTION	Provide a portable or stationary source of backup power for the school, community center, and other critical facilities
HAZARD(S)	All hazards
ESTIMATED COST	$3,500+, depending on site requirements
FUNDING	General Fund, HMGP, BRIC
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	City Clerk
STATUS	Smaller generators for pumps have been purchased for backup flood water evacuation of streets. Portable or stationary generators for other critical facilities have yet to be purchased and are needed at the school, community center, and other critical facilities.

MITIGATION ACTION	BURY POWER AND SERVICE LINES
DESCRIPTION	Conduct relocation of overhead power to underground, village-wide
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	$1 million
FUNDING	Tax revenue, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Electric Department
STATUS	New electrical lines have been laid in newer areas of the city. Some other residential areas have had their lines buried as well.

MITIGATION ACTION	DAM/LEVEE/FLOODWALL CONSTRUCTION AND IMPROVEMENTS
DESCRIPTION	Improvements to existing levees and floodwalls, designed to FEMA standards. Make improvements to the levee system around the City of Sutton. This would include cleaning out accumulation of wilt within the system.
HAZARD(S)	Flooding, Levee Failure
ESTIMATED COST	$50,000
FUNDING	General Funds, NRD cost share, HMA
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	City Council, Public Works
STATUS	Some major repairs were completed on the levee around inlet drains due to erosion from recent flooding events. The city is considering cleaning out collected silt from the levee as well as potential improvements or additions to the levee itself.

MITIGATION ACTION	ELEVATE PAD MOUNTED TRANSFORMERS SWITCH GEAR
DESCRIPTION	Elevate pad-mounted transformers and switch gear above base flood elevation to eliminate damages from flooding
HAZARD(S)	Flooding
ESTIMATED COST	Varies by scope
FUNDING	City funds, HMGP, BRIC, FMA
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Electrical Department
STATUS	Switch gear is currently surrounded by sandbags. The city would like to have a permanent barrier to protect from flooding in the long-term.

MITIGATION ACTION	IMPROVE OR ACQUIRE PROPERTY AT HIGH RISK TO FLOODING
DESCRIPTION	Voluntary acquisition and demolition of properties prone to flooding, especially repetitive loss structures
HAZARD(S)	Flooding
ESTIMATED COST	Varies by project
FUNDING	General Fund, HMGP, BRIC, FMA
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	City Council
STATUS	The city has contracted with an outside group to assist with severe nuisance issues on properties and vacant building registration. This should help encourage those with distressed properties in the floodplain area to consider selling. City would like to acquire them for additional parking in the downtown area.

MITIGATION ACTION	SAFE ROOMS/STORM SHELTERS
DESCRIPTION	Design and construct storm shelters and safe rooms in highly vulnerable areas such as the RV park, and other areas
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	$200-$250 per sq ft
FUNDING	General Funds, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	City Council
STATUS	This project has not yet started.

MITIGATION ACTION	STORM SHELTER IDENTIFICATION
DESCRIPTION	Identify a location for a new safe room
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	Staff Time
FUNDING	General Fund
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	City Council
STATUS	No location has been determined yet, but a potential new community center is an option.

MITIGATION ACTION	TREE INVENTORY AND PLANTING GUIDANCE
DESCRIPTION	Conduct a tree inventory, and develop city tree planting and maintenance guidelines
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	$500+, Staff Time
FUNDING	General Funds
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Tree Committee
STATUS	260 new trees were planted on public grounds over the last three years. Trees were planted by the walking trail, RV park, and baseball/softball complex. More than 300 trees were provided to residents on Arbor Day each of the last three years, accounting for approximately 900 new trees. A tree inventory has not been completed.

New Mitigation Actions – 2021 Plan

MITIGATION ACTION	FLOODPLAIN EARLY ALERT SYSTEM
DESCRIPTION	Install active measuring gauges for the levee and cooperate with the Clay County Emergency Management office to install a measuring gauge upstream (potentially Saronville) to predict more accurately the amount of water flow which will impact the School Creek levee system and the potential time of impact.
HAZARD(S)	Flooding
ESTIMATED COST	$25,000
FUNDING	County Funds, General Funds
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Clay County Emergency Management Office – in coordination with City of Sutton
STATUS	This is a new mitigation action.

Removed Mitigation Actions

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

COMMUNITY PROFILE

VILLAGE OF TRUMBULL

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

Local Planning Team

Table TRU.1: Village of Trumbull Local Planning Team

Name	Title	Jurisdiction
Bryan Bieck	Board Trustee	Village of Trumbull
Dorothy Thiel	Village Clerk/Treasurer	Village of Trumbull
Doug DeVries	Board Vice-Chairperson	Village of Trumbull
Jeremy Bartlett	Board Chairperson	Village of Trumbull
Dan Uden	Board Trustee	Village of Trumbull
Scott Bieck	Board Trustee	Village of Trumbull
Kurt Olena	Former Board Trustee	Village of Trumbull
Marilyn McWhirter	Former Board Trustee	Village of Trumbull

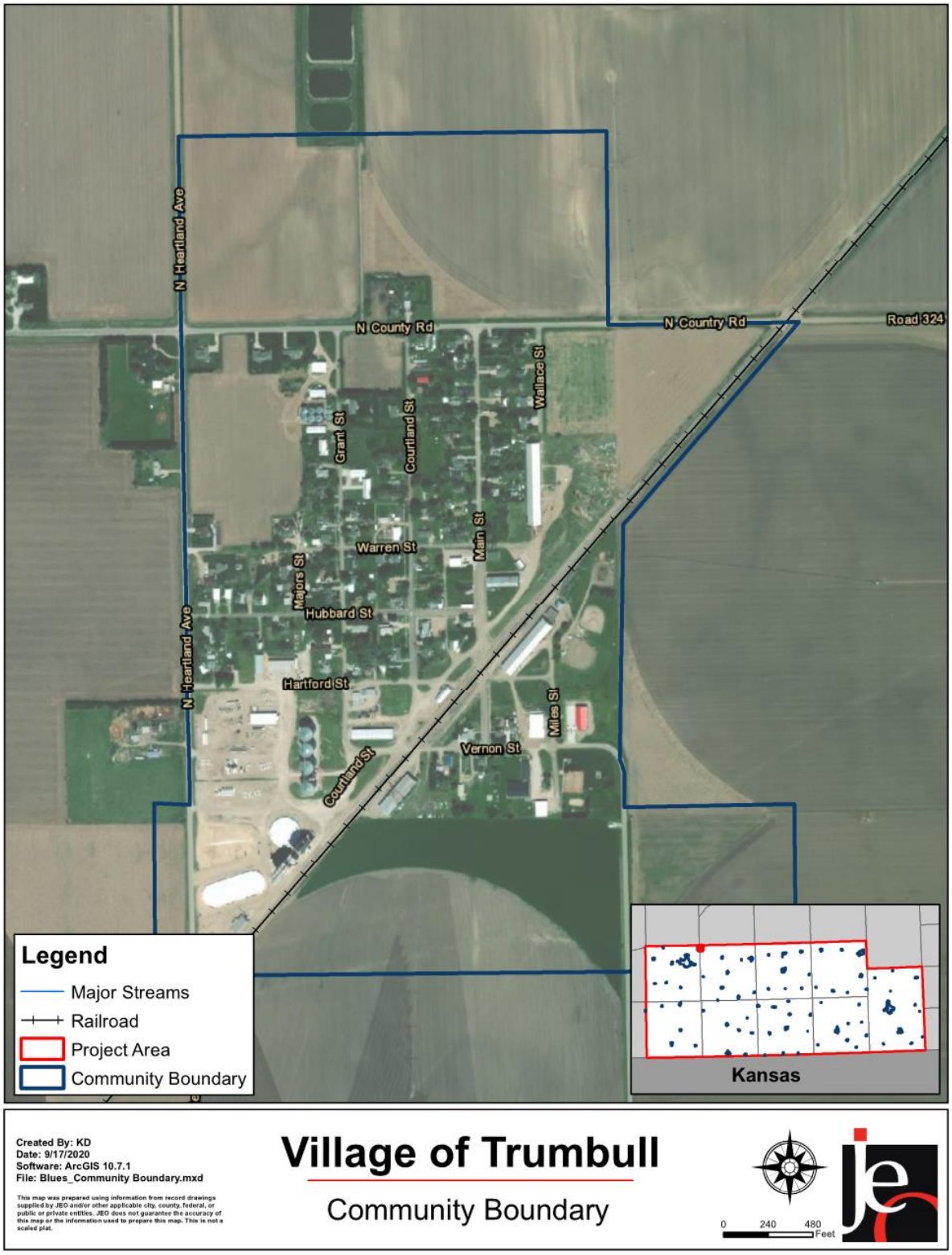
Location and Geography

The Village of Trumbull is located in the north western portion of Clay County and covers an area of 0.43 square miles. There are no major waterways within the area, although there are two small retention ponds just north of the village. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. The village lies in the plains topographic region and is surrounded by agricultural fields.

Transportation

Trumbull's major transportation corridors include Nebraska Highway Spur 1D, which runs east-west and connects Trumbull to US Highway 34. Highway Spur 1D accommodates on average 690 vehicles per day, 70 of which are heavy commercial vehicles. Trumbull has one railroad, the Burlington Northern Santa Fe line. The BNSF runs north-south passing Hastings. At Hastings, the rail runs east-west and ultimately connects Trumbull to Lincoln and Omaha. Although there have been no chemical spills in the past, the local planning team remains concerned about potential spills on Highway Spur 1D as it connects to other main trasnportation routes used by trucks transporting agricultural chemicals to Grand Island or Hastings. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

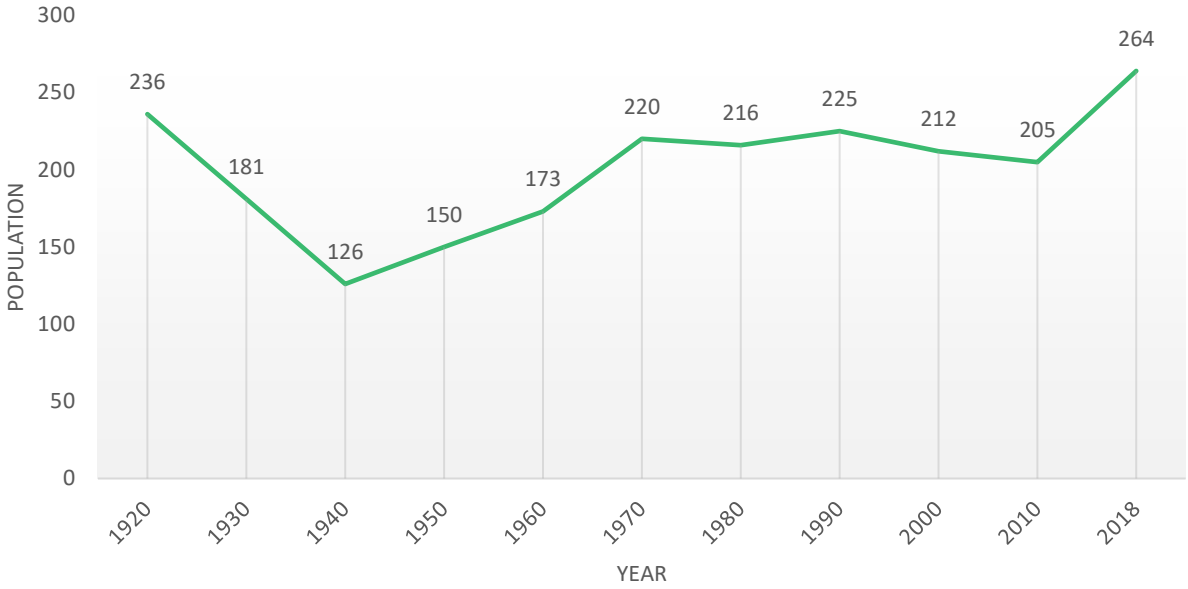
Figure TRU.1: Village of Trumbull Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1920 to 2018 (estimated). This figure indicates that the population of Trumbull has held relatively steady since the 1970s with a recent increase since 2010. Increasing populations may indicate additional development may be occurring and the community may have additional financial resources available to pursue mitigation actions. The village's population accounted for approximately 4% of Clay County's population in 2018.

Figure TRU.2: Trumbull Population 1920-2018



Source: U.S. Census Bureau[84]

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

- **Younger.** The median age of Trumbull was 31.3 years old in 2018, compared with the county average of 42.5 years. Trumbull's population has grown younger since 2018, when the median age was reported as 33.2 years old. Trumbull had a larger proportion of people under 20 years old (34.9%) as the county (26.0%).[85]
- **Less ethnic diversity.** In 2010, 3% of Trumbull's population was other races and 2% was two or more races. By 2018 this declined to 0% for other races and two or more races, but American Indian increased to 5% of the population. During that time, Clay County had declined 5% to 1% (other races) and grew 1% to 2% (two or more races) from 2010 to 2018 respectively.[86]
- **Equally likely to be at the federal poverty line.** The poverty rate of all persons in Trumbull (11%) was similar to the county (11.4%) in 2018.[87]

84 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
85 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]
86 United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]
87 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

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

- **Varied mix of industries**. Employment sectors accounting for 10% or more of employment in Trumbull included Wholesale, Transportation, Education, and other services. In comparison Clay County's included Agriculture, Construction, Manufacturing, and Education.[88]
- **Lower household income**. Trumbull's median household income in 2018 ($51,750) was approximately $5,000 lower than the county ($56,316) in 2018.[89]
- **More long-distance commuters**. About 17.2% percent of workers in Trumbull commuted for fewer than 15 minutes, compared with about 37.3% of workers in Clay County. About 57.1% of workers in Trumbull commute 30 minutes or more to work, compared to about 30.0% of the county workers.[90]

Major Employers

Major employers in the village include the United States Postal Service, Cooperative Producers, and the Village of Trumbull. A large portion of residents also commute to other communities for work. Those communities include Hastings and Grand Island.

Housing

In comparison to Clay County, Trumbull's housing stock was: [91]

- **More owner occupied.** About 96.4% of occupied housing units in Trumbull are owner occupied compared with 78.6% of occupied housing in Clay County in 2018.
- **Smaller share of aged housing stock**. Trumbull has a smaller share of houses built prior to 1970 as the county (57.1% compared to 66.4%).
- **Fewer multi-family homes**. The predominant housing type in the village is single family detached and Trumbull contains fewer multifamily housing with five or more units per structure than the county (0% compared to 1.7%). About 90.8% of housing in Trumbull was single-family detached, compared with 86.2% of the county's housing. Trumbull has a greater share of mobile and manufactured housing (9.2%) compared to the county (3.3%)

This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. There are mobile homes located on 927 & 925 North County Road, 754 Hartford Street, and 747 Hubbard Street. Manufactured homes are located on West County Road and 61 Wallace Street. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

88 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
89 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
90 United States Census Bureau. "2018 American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]
91 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Future Development Trends

In the past five years mobile homes located on Courtland Street have been removed and demolished. New businesses in the community include Maynard Inc, Circle P Properties, and a seed corn dealer. Clay County also put up a new county shop at 149 Main Street. The population in Trumbull is declining which the local planning team attributes to a lack of housing and loss of the school.

Parcel Improvements and Valuation

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

Table TRU.2: Trumbull 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
182	77	$7,528,905	0	0%	0

Source: County Assessor, GIS Workshop

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one chemical storage site in Trumbull which houses hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. The local planning team indicated that Main Street, Hartford Street, and West County Road would be at risk in the event of a chemical spill.

Table TRU.3: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
Cooperative Producers Inc	647 Hartford St	N

Source: Nebraska Department of Environment and Energy[92]

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.

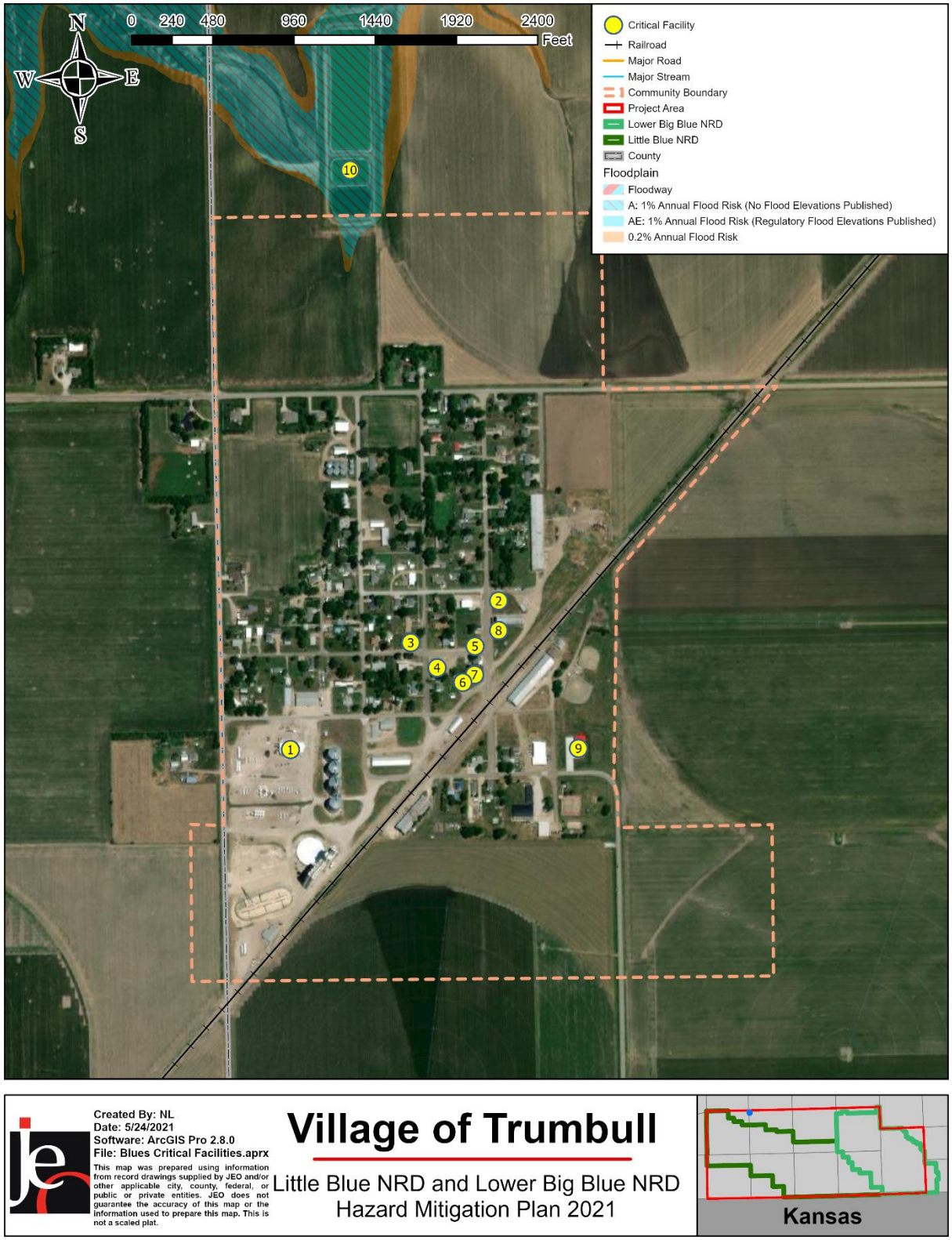
The following table and figure provide a summary of the critical facilities for the jurisdiction.

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

Table TRU.4: Trumbull Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Hazardous Materials	Co-Op	Y	Y	N
2	Safety and Security	Fire Hall	Y	Y	N
3	Food, Water, and Shelter	Methodist Church	Y	N	N
4	Food, Water, and Shelter	TCC Church	Y	N	N
5	Food, Water, and Shelter	Village Hall	Y	Y	N
6	Transportation	Village Shop	Y	N	N
7	Food, Water, and Shelter	Water Tower	N	N	N
8	Food, Water, and Shelter	Well House	N	Y	N
9	Food, Water, and Shelter	Community Center	Y	N	N
10	Health and Medical	Lagoons	N	N	Y

Figure TRU.3: Trumbull Critical Facilities



Historical Occurrences

See the Clay County community profile for historical hazard events.

Hazard Prioritization

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

Hazardous Materials (Transportation)

Trumbull is concerned about the risk of transportation chemical spills. While there have been no historical chemical spills in Trumbull, there is a rail line that runs diagonally through the village which is a source of concern. The local planning team is concerned about chemical spills occurring via transportation routes in the community. The rail line runs through the southeast corner of the village and could impact several nearby buildings in the event of a chemical spill.

To mitigate against this hazard, the village plans to work with the local fire department to determine best practices in dealing with chemical spills and develop a chemical response plan.

Severe Thunderstorms

Trumbull is prone to damaging winds from severe thunderstorms and has suffered damage from them in recent years. A significant regional severe weather outbreak on June 14, 2014 produced golf ball size hail in Trumbull, causing $25,000 in damage. This event caused $100,000 of damage in the village from 80 mph straight-line thunderstorm winds. And an event on July 20, 2003 caused $50,000 in damage, thanks to a severe thunderstorm with 70 mph winds. And a lesser storm on June 7, 2008 dropped half-dollar size hail and caused $5,000 in damaging. Falling trees is the village's biggest concern, in terms of impacts from thunderstorm winds, but few trees in the village are currently judged to be a problem.

The village's city hall and city shop are fitted with hail resistant materials, and no critical facilities have recently suffered hail damage. Municipal facilities are insured against hail damage. Trumbull has a portable, gas-powered generator stored in the well house. Also, surge protectors are used to protect critical electronic municipal records. No power lines in the city are buried underground, and critical facilities do not have weather radios. Two older warning sirens, activated by the City of Hastings, service the village. Since the last plan, the warning sirens in the village have had their batteries replaced and checked by a certified technician. The village is looking into eventually updating and replacing the warning sirens. There's no local tree board on Trumbull, but it's reported that homeowners do a good job of checking for tree hazards on their property, while city maintenance takes care of trees under their jurisdiction. Citizens do not receive information from the village on hail resistant building materials from.

Severe Winter Storms

Clay County experiences frequent winter snowstorms, and they affect Turnbull. A storm from January 31 to February 1, 2015, for instance, produced six to nine inches of snow in the county. Also, the county was hit hard by ice storms in 2006 and 2007. Per reports, the December 1, 2007 ice storm shut down the village for a week and caused the co-op to run out of gas. Concerns from severe winter weather in Trumbull include downed power lines, water shortages, broken water mains, and caring for the elderly, who may be stranded or without power for their medical devices. No power lines in the village are buried. Water to the village is supplied by the City of Hastings.

Main Street by the fire department is a designated snow route in the village. Snow removal equipment includes a tractor with a maintainer blade, and the village's maintenance department is responsible for clearing streets, with assistance from the county as needed. The village uses snow fences at the north end of 94th Street. These resources are believed to be sufficient for the town's snow removal needs.

Tornadoes and High Winds

Trumbull has experienced at least two tornadoes in the past decade: an EF-0 event with winds of 75 mph that caused negligible damage on May 29, 2013; and a brief EF-0 touchdown on April 4, 2009. While neither event caused significant damage, other, nearby parts of Clay County have experienced stronger and more damaging tornadoes and high winds. The safety of mobile home occupants in Turnbull is a concern during these events.

The village has mutual aid agreements with surrounding communities. While there is presently no community safe room, city hall has a basement and two churches have basements. Also, more than half of village residents have a basement. Since the last plan, the Christian Church in the village has agreed to be a place for shelter for residents. This shelter would be beneficial to residents who do not have basements, and for those who live in trailer houses or manufactured homes without basements. Trumbull would also like to assist in purchasing backup generator for this location.

Clay County emergency management offers text alerts for the village through its Code Red System. Municipal records are backed-up through the use of external hard drives, DVDs, and CDs. Two warning sirens, activated by the City of Hastings, service the village.

Flooding

Flooding was not identified as a hazard of top concern and Trumbull only has floodplain areas identified north of town which include the lagoons. As of November 2020, Trumbull does not participate in the NFIP. According to NeDNR as of February 2020 there are no repetitive flood loss properties in Trumbull.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Trumbull has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The village has a five-member board and the following offices: clerk/treasurer, sewage plant operator, water operator, and parks and recreation director.

Capabilities

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

Table TRU.5: Capability Assessment

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

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

Table TRU.6: Overall Capability

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

Plan Integration

The village does not have a comprehensive plan and utilizes the county's zoning and building code standards for development. The Local Emergency Operations Plan (LEOP) for Trumbull, which was last updated in 2019, is an annex of Clay County's LEOP. The plan addresses all-hazards, with chemical releases, severe winter storms, severe thunderstorms, and tornadoes being of the highest concern. The plan provides a clear assignment of responsibility in case of an emergency but does not identify any gaps related to a particular hazard.

In the past five years the village has not applied for any grants. The local planning team indicated that municipal funds are limited to maintaining current facilities and have stayed the same over recent years. The village plans to work on finding people in the community to assist with planning efforts as funds are limited.

The South Central Economic Development District has developed a Comprehensive Economic Development Strategy (CEDS) which includes Adams, Clay, Nuckolls, and Webster counties and their communities. The plan was originally developed in 2013 and was updated in 2018. The 2018 CEDS identified several key findings of economic development in the area including:

- The region is characterized by strong agricultural natural resources including ground and surface water supplies, a developed water management and distribution system, and fertile soils. This combination supports the strong agricultural sector within the region.
- The region generally offers strong transportation infrastructure that is well developed for agricultural and manufacturing exports. The technological resources are heterogeneously distributed throughout the region and while higher education institutions are present, enrollment remains flat over the last 10 years.
- Although there is population growth in the region and the educational attainment of those 25 years and older is increasing, like the statewide trend, there is evidence that the SCEDD region is experiencing an inflow of less educated people and an outflow of more

educated people. As a result, workforce-related issues exist and are affecting the economic performance of the region.

- The labor composition of the region is generally toward lower wage industries (e.g., agriculture and manufacturing) when compared to the state. Lower farm incomes and lower wage and employment growth are other trends for the SCEDD region. It appears that the region is moving toward a less dynamic, lower education, slower growth, and lower wage work force.
- The industry analysis shows how tightly linked the core industries are within the region. Specifically, Manufacturing, Agriculture, Transportation & Warehousing, and Wholesale Trade are tightly connected and play a critical role within the local economy. Weakening service industries within the area include Health Care & Social Assistance and Retail Trade.
- Finding qualified workers remains a significant challenge within the region.... Rural counties have reported that a significant challenge with recruiting and retaining workers is the quality of housing stock. New housing is largely concentrated in higher populated areas and the quality of housing is declining on average in rural counties.

The plan identified and outlined objectives related to three main priority areas: Industry Growth & Innovation, Workforce Development, and Housing. Currently identified objectives do not address natural hazards. Future updates and project implementation should consider integrating hazard mitigation goals and objective.

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 Trumbull profile was last reviewed by the local planning team in September 2020. The Village Board is responsible for reviewing and updating this community profile as changes occur or after a major event. The plan will be reviewed no less than annually and will include the public in the review and revision process by: board meetings, bulletin postings, social media, and mailings to residents.

Mitigation Strategy

Completed Mitigation Actions

MITIGATION ACTION	CHEMICAL RESPONSE PLAN
DESCRIPTION	Implement a plan to respond to transportation-related chemical spills and work with local fire department to determine best practices
HAZARD(S)	Hazardous Materials
STATUS	Procedures and guidelines for each chemical hazard are located in each fire truck and city vehicle. Local fire department is responsible for responding to local events. If necessary, neighboring HAZMAT teams or EPA would be called to provide additional assistance.

MITIGATION ACTION	STORM SHELTER COORDINATION
DESCRIPTION	Designate the basement of Trumbull Christian Church as a public tornado shelter
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
STATUS	Christian Church as said they will provide the food, shelter, and warmth to residents who need this help.

Continued Mitigation Actions

MITIGATION ACTION	ALERT SIRENS
DESCRIPTION	Replace two existing alert sirens
HAZARD(S)	Severe Thunderstorms, Tornadoes and High Winds
ESTIMATED COST	$15,000+
FUNDING	General Fund, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	In progress. Sirens were updated with new batteries and checked by a certified technician.

MITIGATION ACTION	BACKUP GENERATOR
DESCRIPTION	Obtain generator for community room and churches used as sheltering locations
HAZARD(S)	All hazards
ESTIMATED COST	$35,000
FUNDING	Community Facility funds, HMGP, BRIC
TIMELINE	1 year
PRIORITY	Medium
LEAD AGENCY	Village Board, Village Maintenance
STATUS	This project has not yet been started and is currently financially prohibitive.

New Mitigation Actions – 2021 Plan

MITIGATION ACTION	IMPROVE AND REVISE SNOW/ICE REMOVAL PROGRAM OR RESOURCES
DESCRIPTION	Purchase additional snow removal equipment for village use including trucks, blade, and/or v-plow.
HAZARD(S)	Severe Winter Storms
ESTIMATED COST	$10,000
FUNDING	Street Fund
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This is a new mitigation action.

Removed Mitigation Actions

MITIGATION ACTION	TREE CITY USA
DESCRIPTION	Work to become a Tree City USA through the National Arbor Day Foundation, to receive direction, technical assistance, and public education on how to establish a hazardous tree identification and removal program
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
REASON FOR REMOVAL	This action was identified as no longer needed for the community.