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County Profile

Merrick County

Central Platte NRD
Hazard Mitigation Plan Update

2022

Local Planning Team

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

Table MER.1: Merrick County Local Planning Team

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Jenna Clark	Region 44 Emergency Manager	Merrick County	-	Central City
Scott Stuhr	Zoning Administrator	Merrick County	-	Central City - Virtually
Edward Dexter	County Supervisor	Merrick County	Central City	-
Mike Meyer	Highway Superintendent/Surveyor	Merrick County	-	-
Clifford Yrkoski	Board Supervisor	Merrick County	Central City	-
Jan Placke	Board Supervisor	Merrick County	-	Central City
Roger Wiegert	Board Supervisor	Merrick County	Central City	-

Location and Climate

Merrick County is located in east-central Nebraska and is bordered by Nance, Polk, Platte, Hamilton, Hall, and Howard Counties. The total area of Merrick County is 494 square miles. Major waterways within the county include the Platte River, Prairie Creek, Silver Creek, Moores Creek, and Warm Slough. Most of Merrick County lies in the valleys and plains topographic region with some Sandhill topographic features. The vast majority of the county's land is characterized by agricultural fields.

Climate

The average high temperature in Merrick County for the month of July is 87.1 degrees and the average low temperature for the month of January is 16.2 degrees. On average, Merrick County receives over 28.8 inches of rain and 28.6 inches of snowfall per year. The table below compares climate indicators with those of the entire state. Climate data is helpful in determining if certain events are higher or lower than normal. For example, if the high temperatures in the month of July are running well into the 90s, high heat events may be more likely which could impact vulnerable populations.

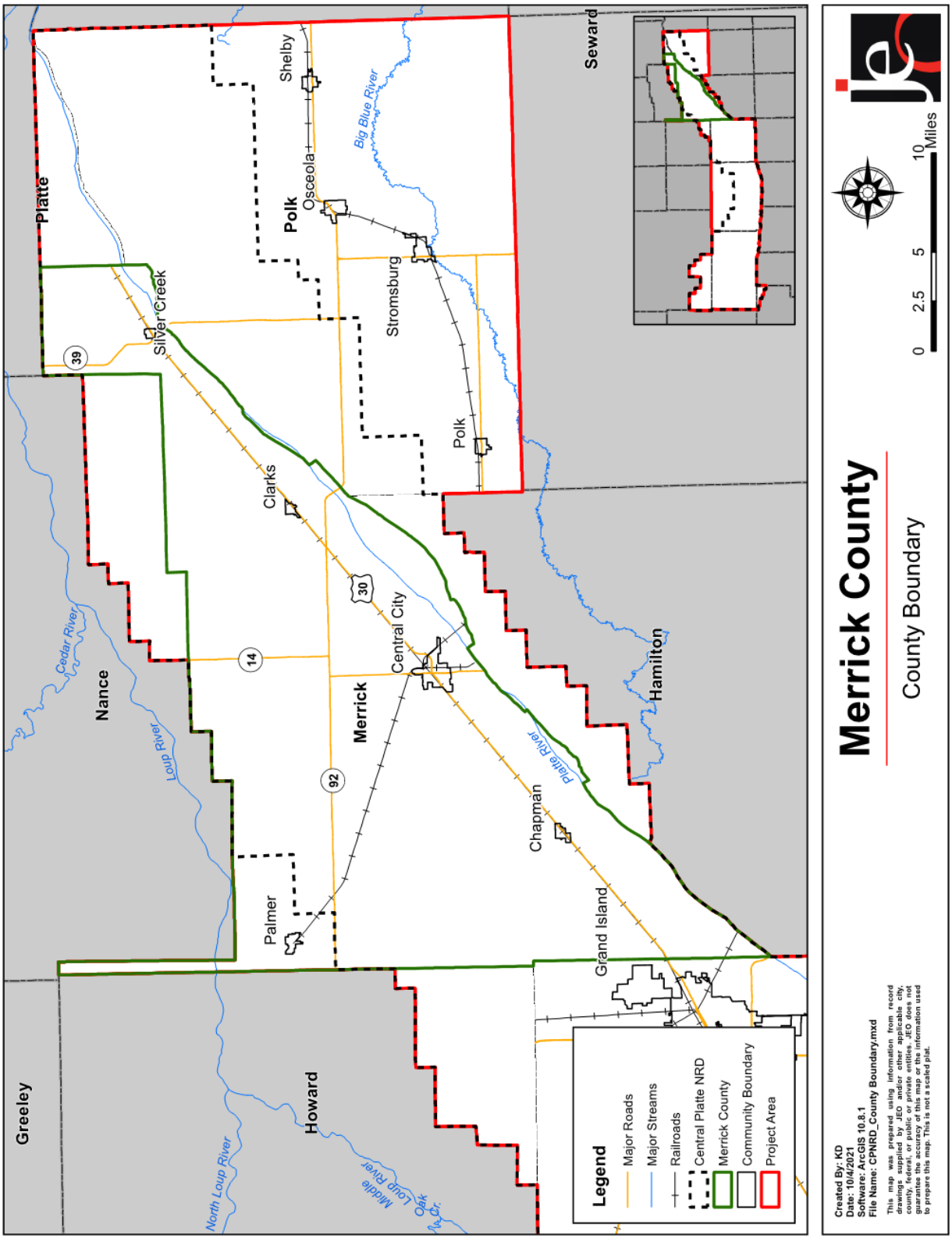
Table MER.2: Merrick County Climate

	Merrick County	State of Nebraska
July Normal High Temp[1]	87.1°F	87.4°F
January Normal Low Temp[1]	16.2°F	13.8°F
Annual Normal Precipitation[2]	28.8"	23.8"
Annual Normal Snowfall[2]	28.6"	25.9"

Source: NCEI 1981-2010 Climate Normals[1], High Plains Regional Climate Center, 1981-2010[2]
Precipitation includes all rain and melted snow and ice.

1 National Centers for Environmental Information. "1981-2010 U.S. Climate Normals." Accessed June 2021. https://www.ncdc.noaa.gov/cdo-web/datatools.
2 High Plains Regional Climate Center. "Monthly Climate Normals 1981-2010 – Central City, NE." Accessed June 2021. http://climod.unl.edu/.

Figure MER.1: Merrick County

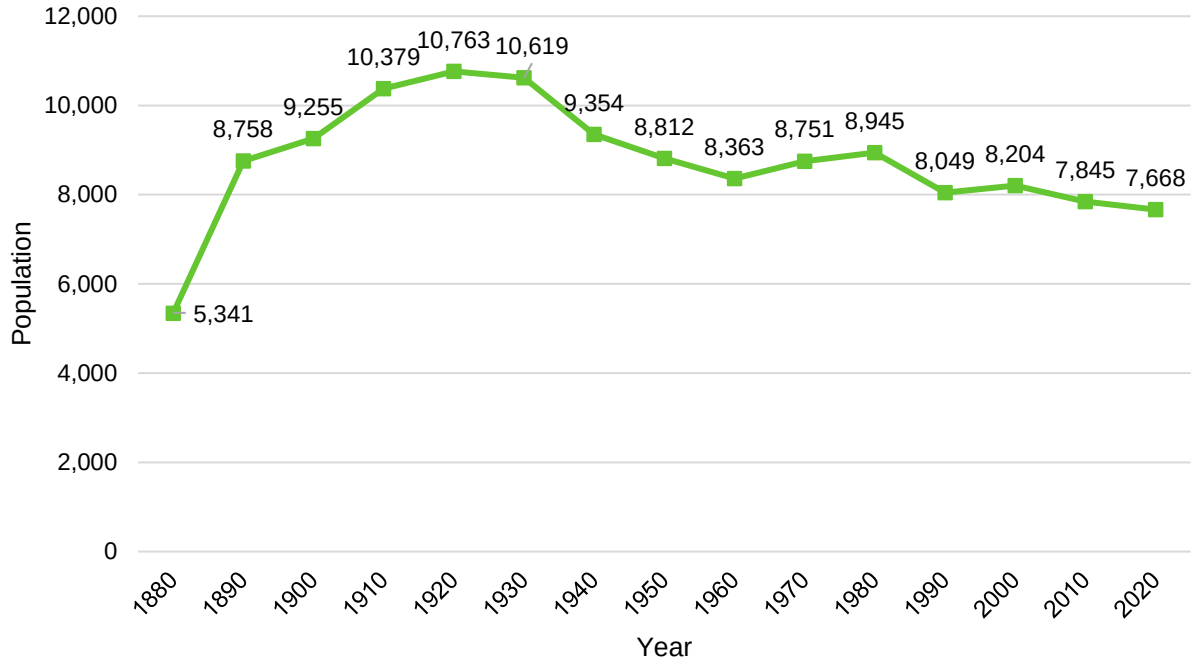


Demographics, Economics, Housing, and Employment

Demographics

The following figure displays the historical population trend from 1880 to 2020. This figure indicates that the population of Merrick County has been decreasing since 2000 to 7,668 people in 2020.[3] A declining population can lead to more unoccupied housing that is not being maintained and is then at risk to high winds and other hazards. Furthermore, with fewer residents, there is decreasing tax revenue for the county, which could make implementation of mitigation projects more fiscally challenging. Merrick County's population accounted for 0.4% of Nebraska's population in 2020.

Figure MER.2: Population 1880 - 2020



Source: U.S. Census Bureau

The following table indicates Merrick County has a higher percentage of people between the ages of five and 64. This is relevant to hazard mitigation because the very young and elderly populations may be at greater risk from certain hazards than others. For a more elaborate discussion of this vulnerability, please see *Section Four* | *Risk Assessment*.

Table MER.3: Population by Age

Age	Merrick County	State of Nebraska
<5	6.3%	6.9%
5-64	73%	77.7%
>64	20.6%	15.4%
Median	43.6	36.5

Source: U.S. Census Bureau[4]

3 United States Census Bureau. "2020 Decennial Census: P1: DEC Redistricting Data." https://data.census.gov/cedsci/.
4 United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." https://data.census.gov/cedsci/.

Economics and Housing

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

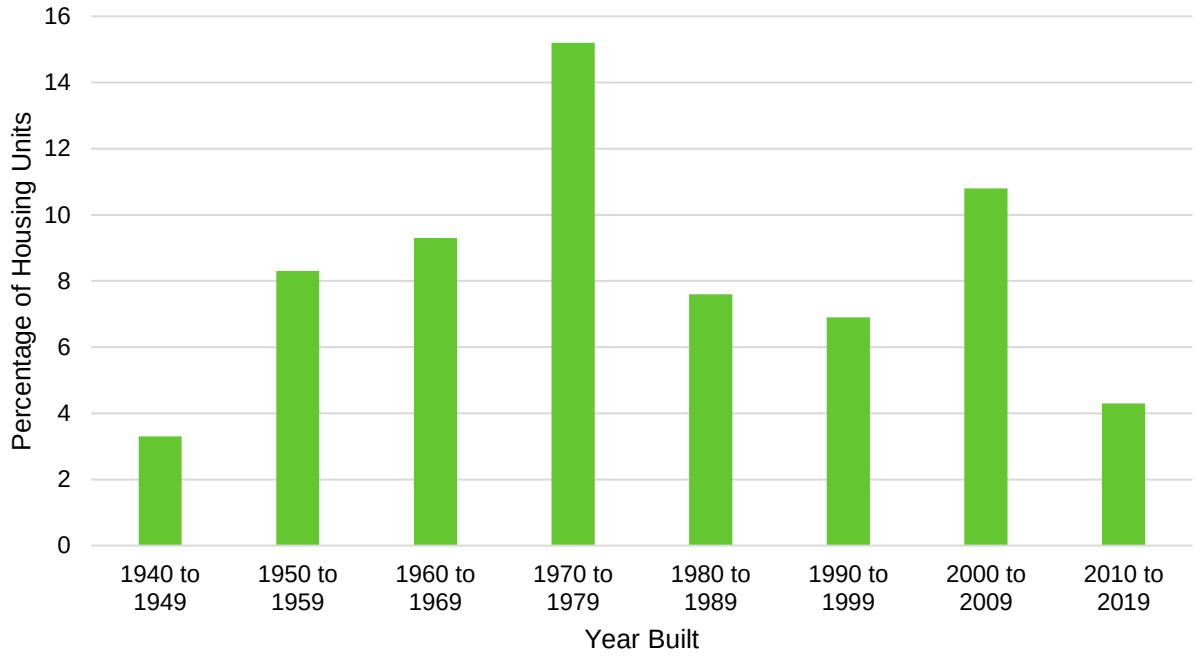
Table MER.4: Housing and Income

	Merrick County	State of Nebraska
Median Household Income	$55,649	$61,439
Per Capita Income	$28,795	$32,302
Median Home Value	$115,400	$155,800
Median Rent	$689	$833

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

The following figure indicates that most of the housing in Merrick County was built between 1970 to 1979 (15%). Housing age can serve as an indicator of risk, as structures built prior to the development of state building codes may be at greater risk. The State of Nebraska first adopted building codes in 1987, with the International Building Code adopted in 2010. The current edition of the IBC was updated in 2018. According to the 2019 American Community Survey, the county has 3,821 housing units with 88.3 percent of those units occupied. There are approximately 227 mobile homes in the county. Counties with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe thunderstorms if those homes are not anchored correctly.

Figure MER.3: Housing Units by Year Built



Source: U.S Census Bureau[5]

5 United States Census Bureau. "2019 Bureau American Community Survey: DP04: Selected Housing Characteristics." https://data.census.gov/cedsci/.

6 United States Census Bureau. "2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." https://data.census.gov/cedsci/.

Table MER.5: Housing Units

Jurisdiction	Total Housing Units				Occupied Housing Units			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Merrick County	3,373	88.3%	448	11.7%	2,514	74.5%	859	25.5%
Nebraska	759,176	90.7%	78,300	9.3%	501,679	66.1%	257,497	33.9%

Source: U.S. Census Bureau[5]

Employment

According to 2018 Business Patterns Census Data, Merrick County had 237 business establishments. The following table presents the number of establishments, number of paid employees, and the annual payroll in thousands of dollars.

Table MER.6: Business in Merrick County

	Total Businesses	Number of Paid Employees	Annual Payroll (In Thousands)
Total for All Sectors	237	1,674	$66,670

Source: U.S Census Bureau [7]

Agriculture is important to the economic fabric of the State of Nebraska. Merrick County's 483 farms cover 242,865 acres of land, about 77% of the county's total area. Crop and livestock production are the visible parts of the agricultural economy, but many related businesses contribute to agriculture by producing, processing and marketing farm products. These businesses generate income, employment and economic activity throughout the region.

Table MER.7: Agricultural Inventory

	Agricultural Inventory
Number of Farms with Harvested Cropland	483
Acres of Harvested Cropland	242,865

Source: USDA Census of Agriculture, 2017[8]

Governance

The county's governmental structure impacts its capability to implement mitigation actions. Merrick County is governed by a seven-member board of supervisors. The county also has the following offices and departments:

- County Assessor
- County Attorney
- County Clerk/Registry of Deeds
- County Treasurer
- Emergency Management
- Highway Superintendent
- County Surveyor
- Planning and Zoning
- Floodplain Administrator
- Sheriff's Department
- Local Emergency Planning Committee

7 United States Census Bureau. 2018. "County Business Patterns and 2018 Nonemployer Statistics" [database file]. https://factfinder.census.gov.

8 U.S. Department of Agriculture. "2017 Census of Agriculture." https://www.nass.usda.gov/Publications/AgCensus/2017/.

- County Extension Offices
- Central District Public Health
- Parks and Recreation Department

Capability Assessment

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

County funds are sufficient to pursue new capital projects with a large portion already dedicated to a bridge project. Funds have stated the same over recent years.

Table MER.8: Capability Assessment

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

Survey Components/Subcomponents		Yes/No
	Authority to levy taxes for specific purposes such as mitigation projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	-
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	Yes
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
	Natural Disaster or Safety related school programs	Yes
	StormReady Certification	No
	Other (if any)	-

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

Plan Integration

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

Building Code (2018)

The building code sets standards for constructed buildings and structures. The county does not have its own building code but follows the State of Nebraska Building Codes based on the 2018 International Building Codes.

Central Platte Community Wildfire Protection Plan (2019)

The purpose of the Central Platte Community Wildfire Protection Plan (CWPP) is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county-specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. Wildfire projects and concerns from the 2017 HMP were

included in the CWPP and wildfire projects in the current HMP will included during the next CWPP update. This document is updated every five years.

Comprehensive Plan (2016)
The comprehensive plan is designed to guide the future actions and growth of the county. It contains goals aimed at safe growth, directs development away from the floodplain, encourages infill and clustering of development, encourages the elevation of structures in the floodplain, and encourages the preservation of open space. This plan is reviewed annually and updated every 10 years.

Floodplain Regulations, Zoning Ordinance, and Subdivision Regulations (2016)
The county's floodplain regulations, zoning ordinance, and subdivision regulations outline where and how development should occur in the future. These documents discourage development in the floodplain, limit density in the floodplain, identify floodplain areas as parks or open spaces, allow density transfers, restrict the subdivision of land within the floodplain, and include the ability to implement water restrictions.

Merrick County Local Emergency Operations Plan (2020)
The Merrick County Local Emergency Operations Plan (LEOP) establishes standardized policies, plans, guidelines, and procedures for emergency resources and governmental entities to respond and recover when a disaster event occurs. It contains information regarding direction and control, communications and warning, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelters, and resource management. Flooding and dam failure information from the LEOP was incorporated into this HMP update. This plan is updated every five years.

Wood River Watershed Flood Risk Reduction Plan (Under Development)
The primary purpose of the Wood River Watershed Flood Risk Reduction Plan is flood risk reduction within and near the communities of Riverdale, Kearney, Gibbon, Shelton, Wood River, Alda, and Grand Island. It will identify projects within the watershed to help reduce flood risk and damages to agricultural property, homes, and businesses. This plan is being funded by the Central Platte NRD and NRCS through the Watershed and Flood Prevention Operations (WFPO) Program. Projects identified in the plan with a positive benefit-cost ratio will be reviewed for inclusion in the HMP.

Wood River Watershed Study (2020)
This study was conducted by the Nebraska Silver Jackets to develop the 1% Annual Exceedance Probability (AEP) frequency flow data for the communities of Kearney, Gibbon, Shelton, Wood River, Alda, and Grand Island. Results reflect that the flow frequency is larger than the effective Flood Insurance Study for the Kearney to Alda reach of the Wood River. The results also estimate an 1% AEP peak discharge that is 15% less than the current design for the Grand Island diversion channel. This study will help support ongoing Watershed Flood Protection Operations studies and future NFIP mapping efforts in the region.

Future Development Trends
In the past five years, a new housing development of 27 homes was added on the east side of Central City. A new hospital was built in Central City, located off Highway 30. In the next five years, there are currently no planned housing or business developments.

Community Lifelines

Transportation

Merrick County's major transportation corridors include US Highway 30 and Nebraska State Highways 14, 39, and 92. The most traveled route is US Highway 30 with an average of 6,215 vehicles daily, 1,180 of which are trucks.[9] A Union Pacific rail line runs southwest to northeast through the county and a Nebraska Central Railroad Company rail line runs southeast to northwest. Chemicals are regularly transported along Highway 30 and the railroad. The county also has the Central City Municipal Airport. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors, as well as areas more at risk of transportation incidents.

Hazardous Materials

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are a total of 21 chemical storage sites throughout Merrick County which house hazardous materials (listed below). In the event of a chemical spill, the local fire departments and emergency response may be the first to respond to the incident.

Table MER.9: Chemical Storage Sites

Name	Address	Floodplain (Y/N)
Agricultural Services Inc	2132 Archer Rd, Archer, NE	Y (1%)
Aurora Co-op Elevator Company	1313 13th Ave, Central City, NE	Y (0.2%)
Aurora Co-op Elevator Company	1561 13th Rd, Central City, NE	N
NDOT Central City Yard	1406 6th St, Central City, NE	Y (0.2%)
Pump & Pantry 29	1110 G St, Central City, NE	Y (0.2%)
CenturyLink	1707 16th Ave, Central City, NE	Y (0.2%)
Green Plains Central City LLC	214 20th St, Central City, NE	Y (0.2%)
Central City Ready Mix Plant	1576 L Rd, Central City, NE	Y (0.2%)
Aurora Co-op Elevator Company	205 US Highway 30, Chapman, NE	N
Gavilon Grain LLC	2203 21st Rd, Clarks, NE	Y (1%)
Aurora Co-op Elevator Company	2341 23rd Rd, Clarks, NE	N
Sapp Bros Petroleum Inc	205 S Green St, Clarks, NE	N
WAPA Grand Island Substation	379 2nd Rd, Grand Island, NE	N
Dinsdale Brothers	901 Zurich St, Palmer, NE	N
Bosselman Energy Inc	2616 3rd Rd, Palmer, NE	N
Frontier Cooperative	3221 35th Rd, Silver Creek, NE	Y (1%)
Frontier Cooperative	308 Highway 30, Silver Creek, NE	N
Town Mart Convenience Store	212 Vine St, Silver Creek, NE	N
CenturyLink	306 Vine St, Silver Creek, NE	N
Frontier Cooperative	Rose St, Silver Creek, NE	Y (1%)
Frontier Cooperative	S Vine St, Silver Creek, NE	Y (1%)

Source: Nebraska Department of Environment and Energy[10]

Health and Medical Facilities

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

9 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." [map]. https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34.

10 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed June 2021. https://deq-iis.ne.gov/tier2/tier2Download.html.

Table MER.10: Health and Medical Facilities

Name	Type of Facility	Address	Number of Beds
CC Live	Assisted Living Facility	1307 16th St Central City, NE 68826	16
Central Assisted Living, Inc.	Assisted Living Facility	915 East 16th St Central City, NE 68826	20
Cottonwood Estates	Assisted Living Facility	2316 28th St Central City, NE 68826	50
Life Essentials Assisted Living	Assisted Living Facility	920 East 16th St Central City, NE 68826	8
Merrick Medical Center	Hospital	1715 26th Street Central City, NE 68826	20
Azria Health Central City	Long Term Care Facility	2720 South 17th Ave Central City, NE 68826	64
Litzenberg Memorial County Hospital	Long Term Care Facility	1715 26th St Central City, NE 68826	46
Central City Medical Clinic	Rural Health Clinic	2510 18th Ave Central City, NE 68826	0

Source: Nebraska Department of Health and Human Services[11,12,13,14]

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 part of this plan update. The following table and figure provide a summary of the critical facilities for the jurisdiction.

Although they may not be listed in the table below, critical infrastructure also includes power infrastructure, cell towers, alert sirens, water infrastructure, wastewater infrastructure, and roadways.

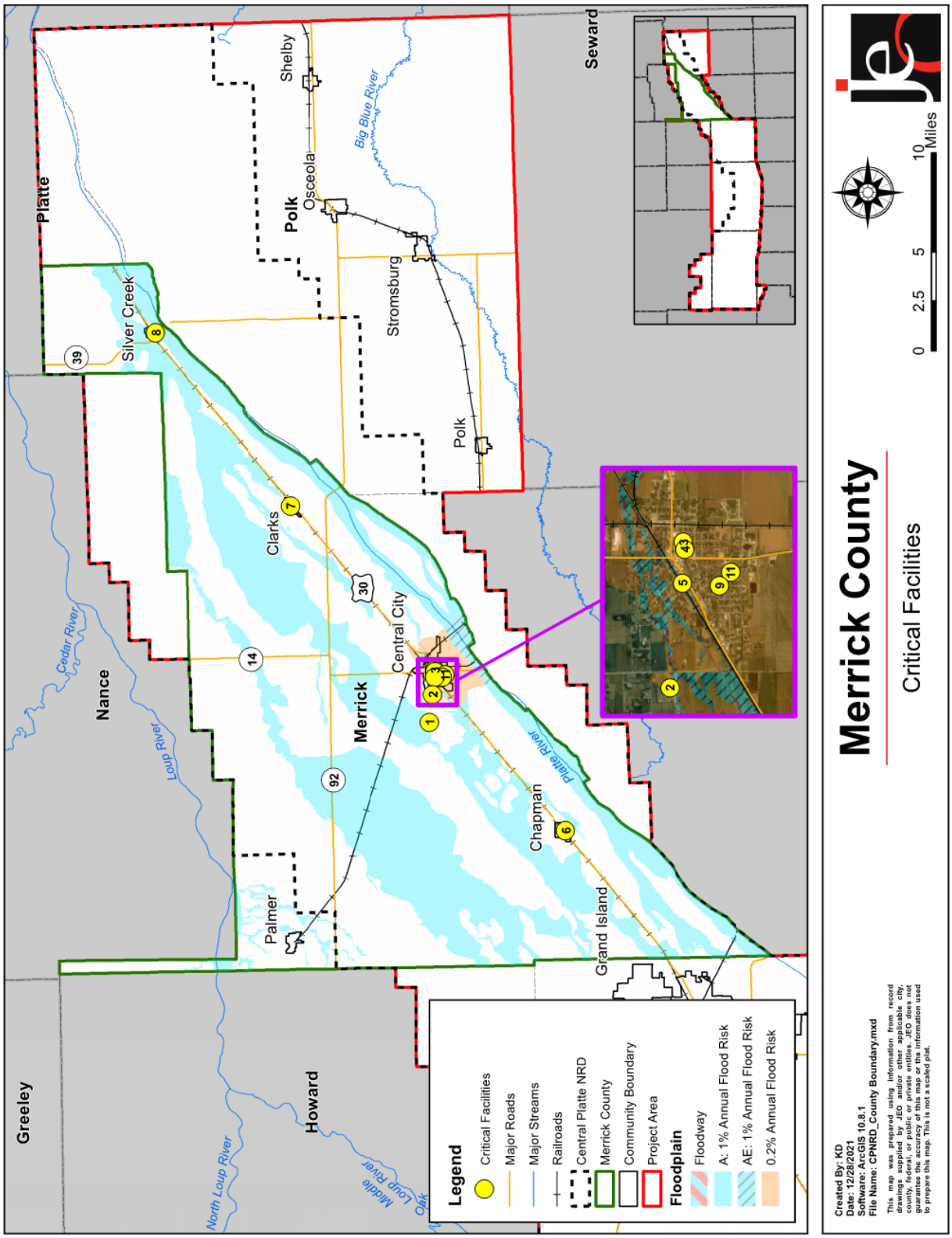
Table MER.11: Critical Facilities

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Central City Airport	N	N	Y (1%)
2	County Fair Grounds	N	N	Y (0.2%)
3	Merrick County Courthouse	N	N	Y (0.2%)
4	Merrick County Sheriff's Office	N	Y	Y (0.2%)
5	NRIN Site-Central City	N	N	Y (0.2%)
6	NRIN Site-Chapman WT	N	N	N
7	NRIN Site-Clarks WT	N	N	N
8	NRIN Site-SC WT	N	Y	N
9	St. Michael's Catholic	Y	N	Y (0.2%)
10*	Tall Grass Natural Gas Line Valves	N	N	-
11	United Methodist	Y	N	Y (0.2%)

*Not mapped as there are multiple locations.

11 Department of Health and Human Services. 2021. "State of Nebraska: Assisted Living Facilities." https://dhhs.ne.gov/licensure/Documents/ALF%20Roster.pdf.
12 Department of Health and Human Services. 2021. "State of Nebraska Roster: Hospitals." https://dhhs.ne.gov/licensure/Documents/Hospital%20Roster.pdf.
13 Department of Health and Human Services. 2021. "State of Nebraska Roster: Long Term Care Facilities." https://dhhs.ne.gov/licensure/Documents/LTCRoster.pdf.
14 Department of Health and Human Services. 2021. "State of Nebraska Roster: Rural Health Clinic." https://dhhs.ne.gov/licensure/Documents/RHC_Roster.pdf.

Figure MER.4: Critical Facilities



Parcel Improvements and Valuation

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

Table MER.12: Parcel Improvements and Value in the 1% Annual Flood Risk Area

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
4,064	$506,965,716	1,350	$183,232,985	33.2%

Source: County Assessor, 2021

Table MER.13: Parcel Improvements and Value in the 0.2% Annual Flood Risk Area

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
4,064	$506,965,716	1,674	$177,653,596	41.2%

Source: County Assessor, 2021

Historical Occurrences

The following table provides a statistical summary for hazards that have occurred in the county. The property damages from the NCEI Storm Events Database (January 1996 – June 2021) should be considered only as broad estimates. Crop damages reports come from the USDA Risk Management Agency for Merrick County between 2000 and 2020.

Table MER.14: County Hazard Loss History

Hazard Type		Count	Property Damage	Crop Damage[2]
Animal & Plant Disease	Animal Disease[1]	19	1,129 animals	N/A
	Plant Disease[2]	12	N/A	$60,068
Dam Failure[5]		0	N/A	N/A
Drought[6]		444 of 1,513 months	$0	$5,348,049
Earthquakes[12]		0	$0	N/A
Extreme Heat[7]		Avg. 5 Days a Year	N/A	$4,308,509
Flooding[8]	Flash Flood	7	$3,360,000	$986,209
	Flood	10	$2,135,000	
Grass/Wildfires[9]		195	1,043 acres	$2,451
Hazardous Materials Release	Fixed Site[3]	13	$0	N/A
	Transportation[4]	0	$0	N/A
Levee Failure[11]		0	$0	N/A
Public Health Emergency		2	N/A	N/A
Severe Thunderstorms[8]	Thunderstorm Wind Range: 50-77 Average: 57	46	$3,418,000	$33,136,489
	Hail Range: 0.75-3.0 in. Average: 1.24 in.	127	$2,675,000	
	Heavy Rain	8	$0	
	Lightning	2	$112,000	

Hazard Type		Count	Property Damage	Crop Damage[2]
Severe Winter Storms[8]	Blizzard	9	$25,000	$343,910
	Extreme Cold/Wind Chill	3	$0	
	Heavy Snow	4	$0	
	Ice Storm	8	$4,095,000	
	Winter Storm	40	$170,000	
	Winter Weather	30	$15,000	
Terrorism[10]		0	$0	N/A
Tornadoes and High Winds[8]	Tornadoes Range: EF0-EF2 Average: EF0	9	$855,000	$100,000
	High Winds Range: 35-65 Average: 50	21	$1,314,080	$2,450,651
Total		**565**	**$18,174,080**	**$46,736,337**

N/A: Data not available
1 - NDA, 2014 – April 2021
2 - USDA RMA, 2000 – 2020
3 - NRC, 1990 – February 2020
4 - PHSMA, 1971 – June 2021
5 – DNR Communication, July 2021
6 - NOAA, 1895 – January 2021
7 - NOAA Regional Climate Center, 1878 – June 2021
8 - NCEI, 1996 – June 2021
9 - NFS, 2000 - 2020
10 - University of Maryland, 1970-2018
11 – USACE NLN, 1900 – June 2021
12 – USGS, 1900 – June 2021

Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the county. The local planning team prioritized the selected hazards based on historical hazard occurrences, potential impacts, and the county's capabilities. For more information regarding regional hazards, please see *Section Four* | *Risk Assessment*.

Drought

Agriculture is a primary economic driver in the county and long-lasting droughts would greatly impact this industry. Reduced water availability is also a concern during drought. The most recent drought occurred during the second half of 2012 through 2013. The Drought Monitor marked the county in exceptional drought from August 2012 through early April 2013, when it dropped down to extreme drought. By mid-summer, the drought had improved some and was labeled as a moderate drought. Crop yields were greatly diminished during this time period and water wells were lower than normal. The county works with the CPNRD on monitoring wells and addressing the high nitrates in the drinking supply. To help reduce water demand during times of drought, the county has a water conservation ordinance.

Flooding

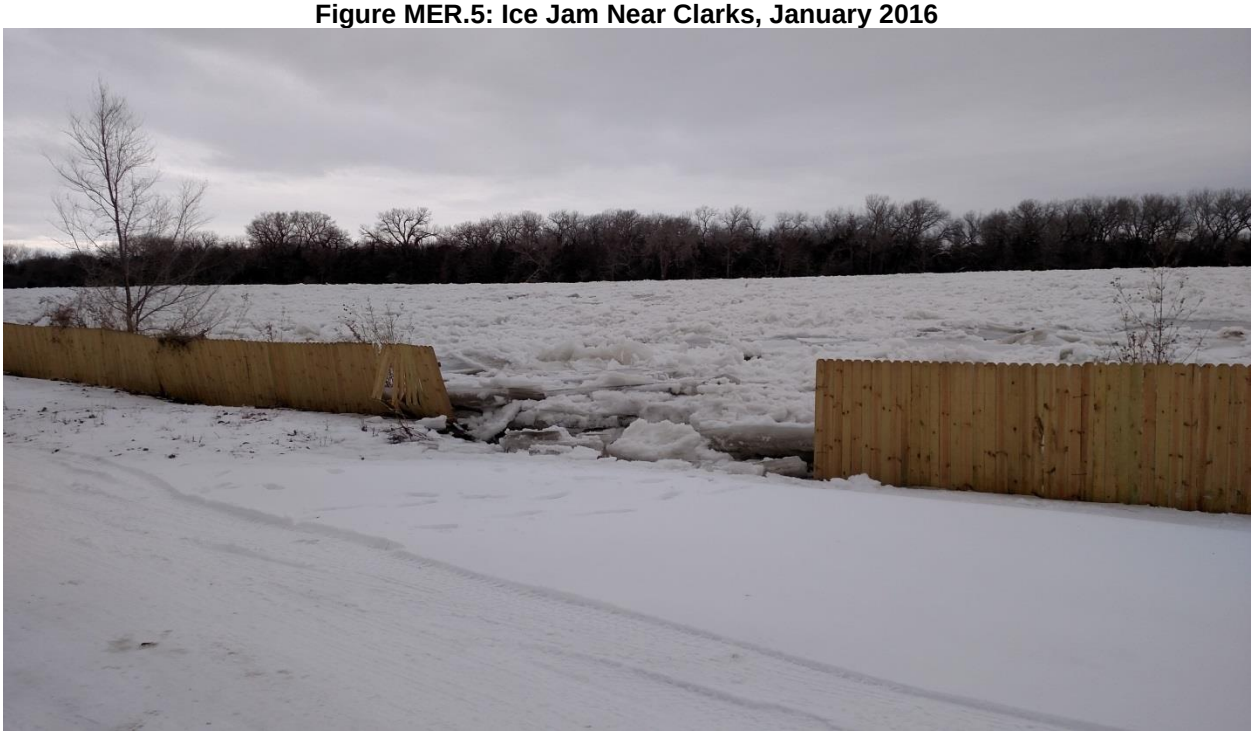
Flooding poses a threat to Merrick County, as the county has various streams and rivers, including the Platte River, meandering through it. Areas in the county identified as having poor stormwater drainage include the Platte River on Prairie Island Road and Lone Tree Road. Flood events including river flooding and flash flooding, have the potential to damage structures, down power lines, damage roads or bridges, crop damages, and potential loss of life. Ice jams can and have occurred along the Platte River. In May 2005, flooding damaged ten bridges in the county and caused $500,000 in damages. On January 11, 2016, flooding began to occur near the Highway 92 bridge south of Clarks due to an ice jam. A county disaster declaration was made on January

12 to request state support. Flood waters crossed private roads in the Summerwood Estates causing some damages, so a temporary earthen berm was constructed to keep flood waters out of residential areas. During the March 2019 flood event, the county sustained moderate to severe flooding with the majority of damages coming from county roads. Merrick County received a disaster declaration because of the event for Public Assistance – Categories A-G. For community specific concerns and damages from the event, see individual community participant sections.

Recently the Upper Prairie Silver Moores Project was completed. While the project is located in Hall County near Grand Island, it has downstream impacts and reduces some of the flooding risk for eastern Merrick County. A portion of the county falls under the Wood River Watershed Flood Risk Reduction Plan, which is currently under development. The plan will identify projects within the watershed to help reduce flood risk and damages to agricultural property, homes, and businesses. Projects deemed feasible in the plan will be added to this HMP once the planning process has concluded.

Merrick County is a member of the NIFP, and the county's Floodplain Administrator (Tracey Slagle) will oversee the commitments and requirements of the NFIP. The initial FIRM for the county was delineated in 12/2/1992 and the current effective map date is 1/6/2010. Over 74% of parcel improvements in the county are located in either the 0.2% or 1% annual flood risk areas (see tables in the Parcel Improvements and Valuation section) As of October 31, 2021, there are 56 NFIP policies in-force covering $10,930,600. Merrick County does not currently have any repetitive loss or severe repetitive loss structures.

Figure MER.5: Ice Jam Near Clarks, January 2016



Source: Region 44 Emergency Management Agency

Figure MER.6: Temporary Berm During Ice Jam, January 2016

Source: Region 44 Emergency Management Agency

Hazardous Materials Release

Chemical spills that occur during transportation are a concern to the county because Merrick County, along with its communities, do not have their own hazardous materials response capability. Highway 30 is a major highway that transects the entire county and regularly has chemicals transported along this route. Additionally, the Union Pacific Railroad transports hazardous materials directly through multiple communities. Furthermore, there are over a hundred miles of pipeline in the county, and a waste transfer location is located near Central City. There have been no transportation spills that have occurred according to PHMSA and County Emergency Management. Local fire departments are regularly trained on how to respond to a chemical spill, and as a mitigation action, the county will provide information to citizens about potential hazards in their community.

Severe Thunderstorms

Severe thunderstorms are a common occurrence in the region and have caused damage to property and crops. Power failure, potential wildfire from lightning strikes, and damages to property, agriculture, and communication systems are identified concerns as it relates to severe thunderstorms. 163 thunderstorm events, per the NCEI database, caused over $6 million in damages, and according to the RMA, nearly $33 million in crop damages. The most damaging event occurred in June 2011 when a thunderstorm caused $1 million in damages to power poles, trees, and a grain elevator. Weather radios are available in the County Courthouse and Sheriff's Office. To help mitigate the hazard warning systems are tested regularly, education of the public is performed, and the county works closely with the National Weather Service in Hastings.

Mitigation Strategy

Completed Mitigation Actions

Mitigation Action	Backup and Emergency Generators
Description	Identify and evaluate current backup and emergency generators; obtain additional generators based on identification and evaluation; provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters.
Hazard(s) Addressed	All Hazards
Status	Completed. Generators currently installed at Sherriff's Office and at NRIN site.

New Mitigation Actions

Mitigation Action	Project Scoping
Description	Evaluate potential flood risk reduction alternatives as identified through the NRCS WFPO including project scoping and implementation.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies by Project
Local Funding	General Fund, WFPO
Timeline	2-5 Years
Priority	Medium
Lead Agency	Floodplain Administrator, Emergency Management
Status	Wood River Watershed Flood Risk Reduction Plan is currently under development. No formal alternatives have yet been determined; however, several alternatives are under further review for each program with communities in the district.

Kept Mitigation Actions

Mitigation Action	Improve Flood/Dam Failure Warning Systems
Description	Evaluate current flood/water level alert and dam failure warning alert system, implement improved alert measures; increase stricter inspection of dams.
Hazard(s) Addressed	Flooding
Estimated Cost	$5,000+
Local Funding	General Fund
Timeline	2-5 Years
Priority	Medium
Lead Agency	Emergency Management, Dam Owners, Central Platte NRD
Status	Not Started

Mitigation Action	Improve Warning Systems
Description	Evaluate current warning systems (defined as alert sirens, weather radios, and television, telephone, and radio warning systems, etc.); improve warning systems/develop new warning system; obtain/upgrade warning system equipment and methods; conduct evaluation of existing alert sirens for replacement or placement of new sirens; identify location of weather warning radios; improve weather radio system; obtain/upgrade weather radios.
Hazard(s) Addressed	All Hazards
Estimated Cost	Varies
Local Funding	General Fund
Timeline	Ongoing
Priority	Medium
Lead Agency	Emergency Management
Status	Warning systems and weather radios are continuously being evaluated, tested, and updated as needed.

Mitigation Action	Public Awareness/Education
Description	Obtain or develop hazard education materials; conduct multi-faceted public education; distribute fact sheets or maps at community events, public schools, other venues and to public and private communication systems; conduct scheduled siren/warning system tests; prepare educational materials listing safe rooms and shelters and evacuation plans; distribute educational materials listing safe rooms and shelters; purchase equipment such as overhead projectors and laptops to facilitate presentation of information.
Hazard(s) Addressed	All Hazards
Estimated Cost	$1,000+
Local Funding	General Fund
Timeline	Ongoing
Priority	High
Lead Agency	Emergency Management
Status	Education about hazard risks is an ongoing annual action.

Mitigation Action	Reduce Damage from Floods, Stormwater, and Heavy Precipitation Events
Description	Conduct stormwater drainage study; evaluate and implement recommendations or comparable measures to improve drainage; evaluate and improve stormwater system.
Hazard(s) Addressed	Flooding
Estimated Cost	$10,000 - $100,000+
Local Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	Highway Department
Status	Not Started

Mitigation Action	Reduce Flood and Water Damage to Roads and Properties
Description	Evaluate current control grade structures; implement measures to add/improve grade control structures including bridges, approaches and culverts.
Hazard(s) Addressed	Flooding
Estimated Cost	Unknown
Local Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	Highway Department
Status	Not Started

Mitigation Action	Storm Shelter / Safe Room
Description	Identify and evaluate existing safe rooms and/or storm shelters; improve and/or construct safe rooms and/or storm shelters; design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Thunderstorms
Estimated Cost	$150 square ft for retrofit; $300 square ft for new construction
Local Funding	General Fund
Timeline	1 Year
Priority	Medium
Lead Agency	Emergency Management
Status	In Progress. Central City Public Schools is building a community shelter that also functions as a sports arena. The building can withstand wind gusts of up to 250 mph and safely shelter 3,000 people. Project is estimated to be completed by August 2022.

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

Merrick County last reviewed their section of the HMP in 2019 and found no updates. The Region 44 Emergency Management Director and a County Supervisor will be responsible for reviewing and updating the plan in the future. These individuals will review the plan bi-annually. The public will be notified during county board meetings.

Community Profile

City of Central City

Central Platte NRD
Hazard Mitigation Plan

2022

Local Planning Team

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

Table CEN.1: Central City Local Planning Team

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Chris Anderson	City Administrator	Central City	Central City	Central City

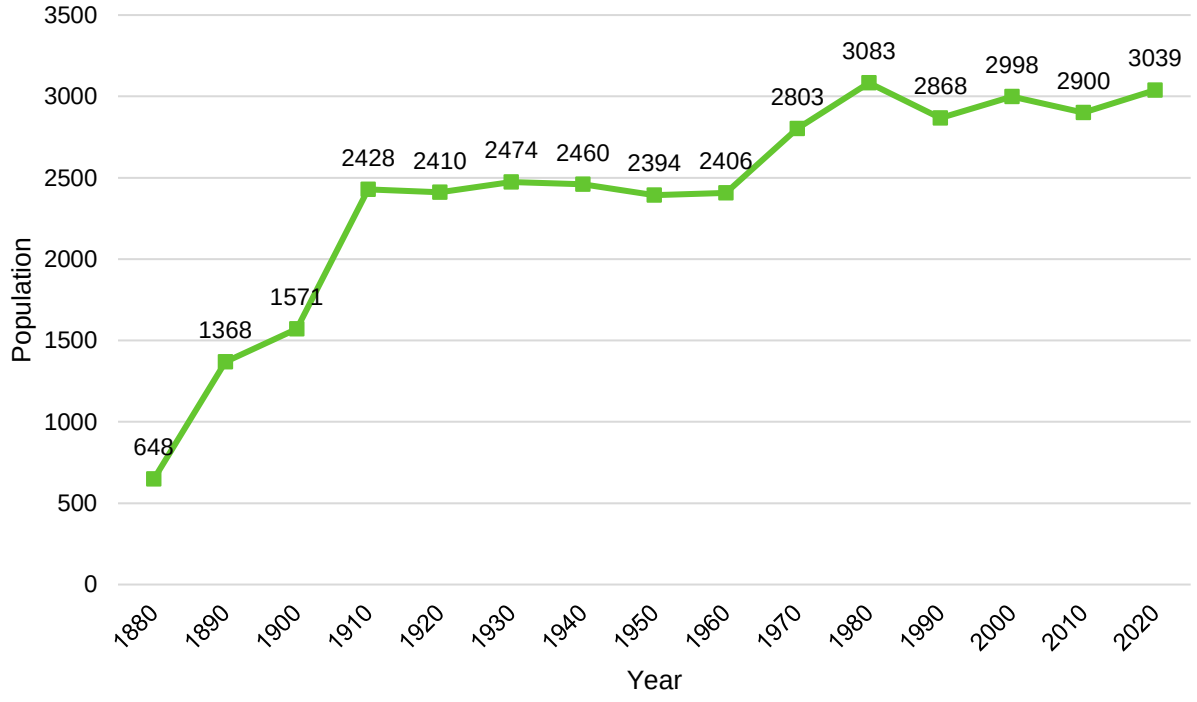
Location and Geography

Central City is in south-central Merrick County and covers an area of 2.32 square miles. Major waterways in the area include Silver Creek and Warm Slough.

Demographics

The following figure displays the historical population trend for the City of Central City. This figure indicates that the population of Central City has been increasing since 2010 to 3,039 people in 2020. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Increasing populations can also contribute to increasing tax revenues, allowing communities to pursue additional mitigation projects. Central City's population accounted for 40% of Merrick County's population in 2020.[15]

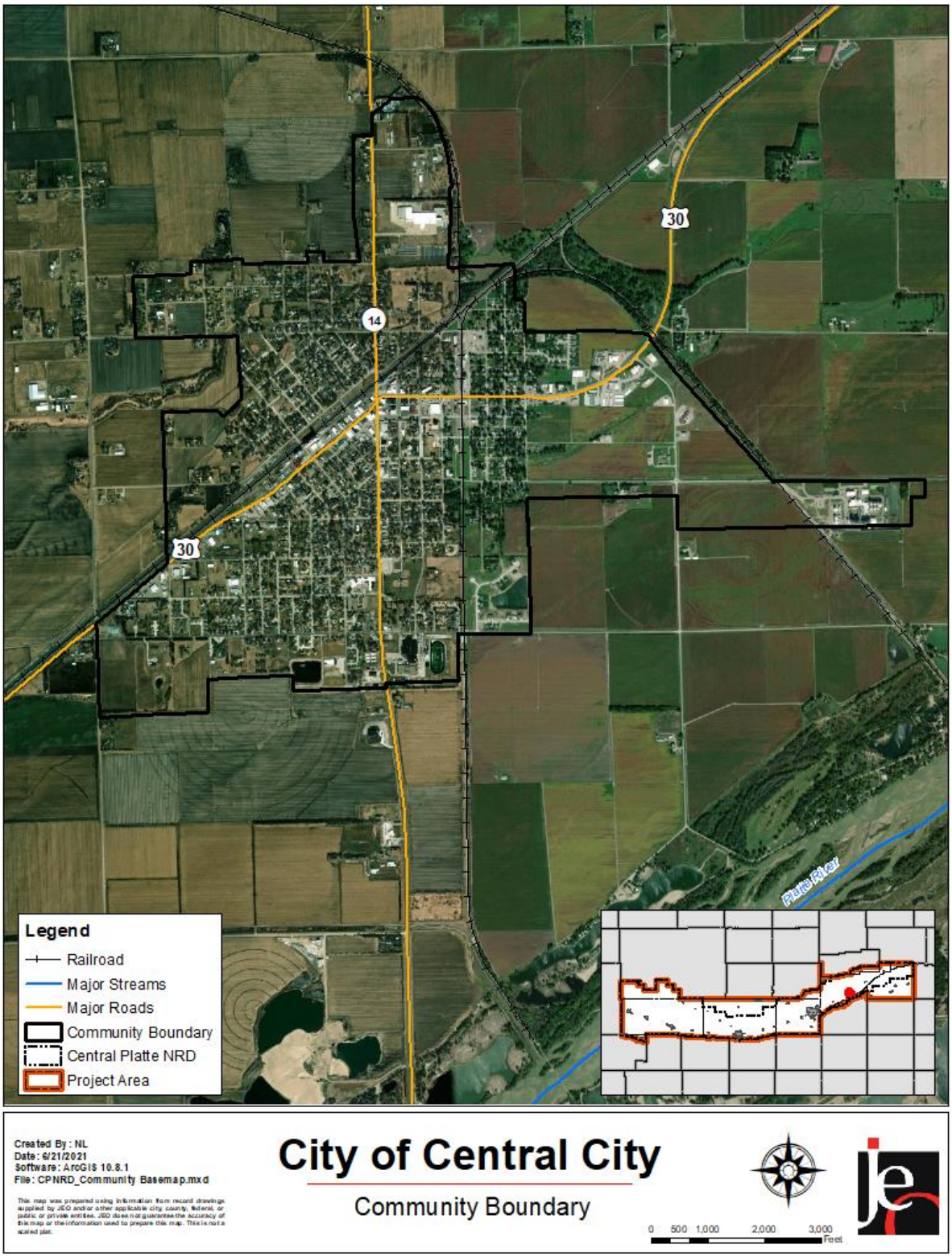
Figure CEN.1: Population 1880 - 2020



Source: U.S. Census Bureau

15 United States Census Bureau. "2020 Decennial Census: P1: DEC Redistricting Data." https://data.census.gov/cedsci/.

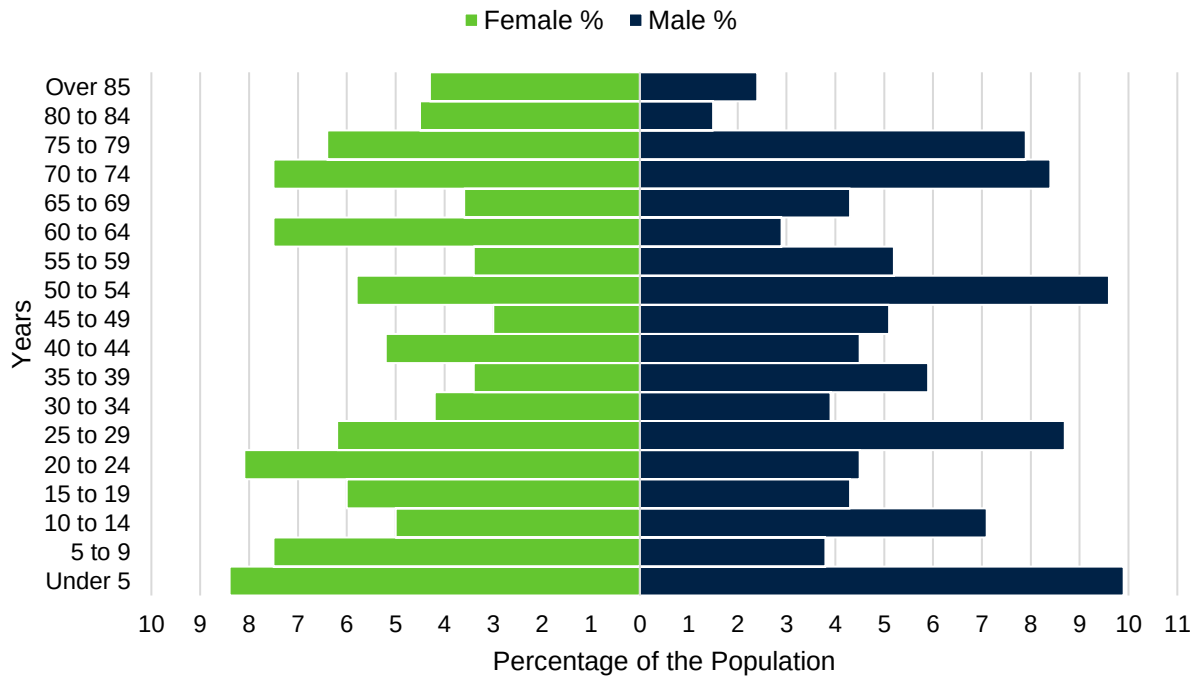
Figure CEN.2: City of Central City



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

- **9.5% is non-white.** Since 2010, Central City grew more ethnically diverse. In 2010, 3.8% of the Central City's population was non-white. By 2019, 9.5% was non-white.[16]
- **43.1 median age.** The median age of Central City was 43.1 years in old 2019. The population grew older since 2010, when the median age was 42.4.[17]

Figure CEN.3: Central City's Population Pyramid



The figure above shows Central City's population percentage broken down by sex and five-year age groups. Central City's population is younger with a higher percentage of the population below 50 years of age. This indicates a growing population in the years to come.

Employment and Economics

Low-income populations, long distance commuters, and the unemployed may be more vulnerable to certain hazards than other groups. Central City's population has:

- **17.6% of people living below the poverty line.** The poverty rate (17.6%) in the City of Central City was higher than the state's poverty rate (7.2%) in 2019.[18]
- **$48,447 median household income.** Central City's median household income in 2019 ($48,447) was $12,000 lower than the state ($61,439).[18]
- **1.9% unemployment rate.** In 2019 Central City had a lower unemployment rate (1.9%) when compared to the state (2.3%).[18]

16 United States Census Bureau. "2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates." https://data.census.gov/cedsci/.
17 United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." https://data.census.gov/cedsci/.
18 United States Census Bureau. "2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." https://data.census.gov/cedsci/.

- **30.3% of workers commuted 30 minutes or more to work.** Fewer workers in Central City commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (30.3% compared to 47%).[19]

Major Employers

The major employers in Central City are Litzenberg Hospital, the Central City Mall, Herks Welding, Green Plains Renewable Energy, and Bills Volume. A large percentage of residents commute to Grand Island for work.

Housing

The age of housing may indicate which housing units were built prior to the development of state building codes. Vacant housing stock may also be more vulnerable to hazard events if it is poorly maintained. Unoccupied housing may also suggest that future development may be less likely to occur. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe thunderstorms if those homes are not anchored correctly. Renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have flood insurance, or to know their risks to flooding and other hazards.

- **77.3% of housing built prior to 1970.** Central City has a larger share of housing built prior to 1970 than the state (77.3% compared to 46%).[20]
- **7.7% of housing units vacant.** Since 2010, Central City's vacancy rate decreased. In 2010 the vacancy rate was 12.7%. By 2019, 7.7% of housing units were vacant.[20]
- **1.6% mobile and manufacture housing.** The City of Central City had a smaller share of mobile and manufactured housing (1.6%) compared to the state (3.3%).[20]
- **40.2% renter-occupied.** The rental rate of Central City was 40.2% in 2019. The percentage went up since 2010, when renter occupied housing was at 35.3%.[20]

Governance

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

- Clerk/Treasurer
- City Administrator
- Building and Zoning
- Economic Development
- Streets Department
- Parks and Recreation Department
- Housing Authority
- Water and Sewer Department
- Police Department
- Volunteer Fire Department
- Floodplain Administrator

19 United States Census Bureau. "2019 Census Bureau American Community Survey: S0802: Means of Transportation to Work by Selected Characteristics." https://data.census.gov/cedsci/.

20 United States Census Bureau. "2019 Bureau American Community Survey: DP04: Selected Housing Characteristics." https://data.census.gov/cedsci/.

Capability Assessment

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

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

Table CEN.2: Capability Assessment

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

Survey Components/Subcomponents		Yes/No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	-
Education & Outreach Capability	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	Yes
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	Yes
	Other (if any)	-

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

Plan Integration

Central City has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan. In addition, the city has a partial building code that has not been integrated with the hazard mitigation plan. The city will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Comprehensive Plan (2012)

The comprehensive plan is designed to guide the future actions and growth of the city. It directs development away from the floodplain and encourages infill development. The comprehensive plan is due to be updated in 2022.

Merrick County Local Emergency Operations Plan (2020)

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

Water System Emergency Response Plan
A water system emergency response plan serves as a guideline for water operators and city administration to minimize the disruption of normal services to consumers and to provide public health protection during an emergency event. The document identifies several natural and human-caused events and discusses the water system's response during those events.

Wellhead Protection Plan
The purpose of wellhead protection plans is to protect the public drinking water supply wells from contamination. It includes identifying potential sources of groundwater contamination in the area and managing the potential contaminant sources.

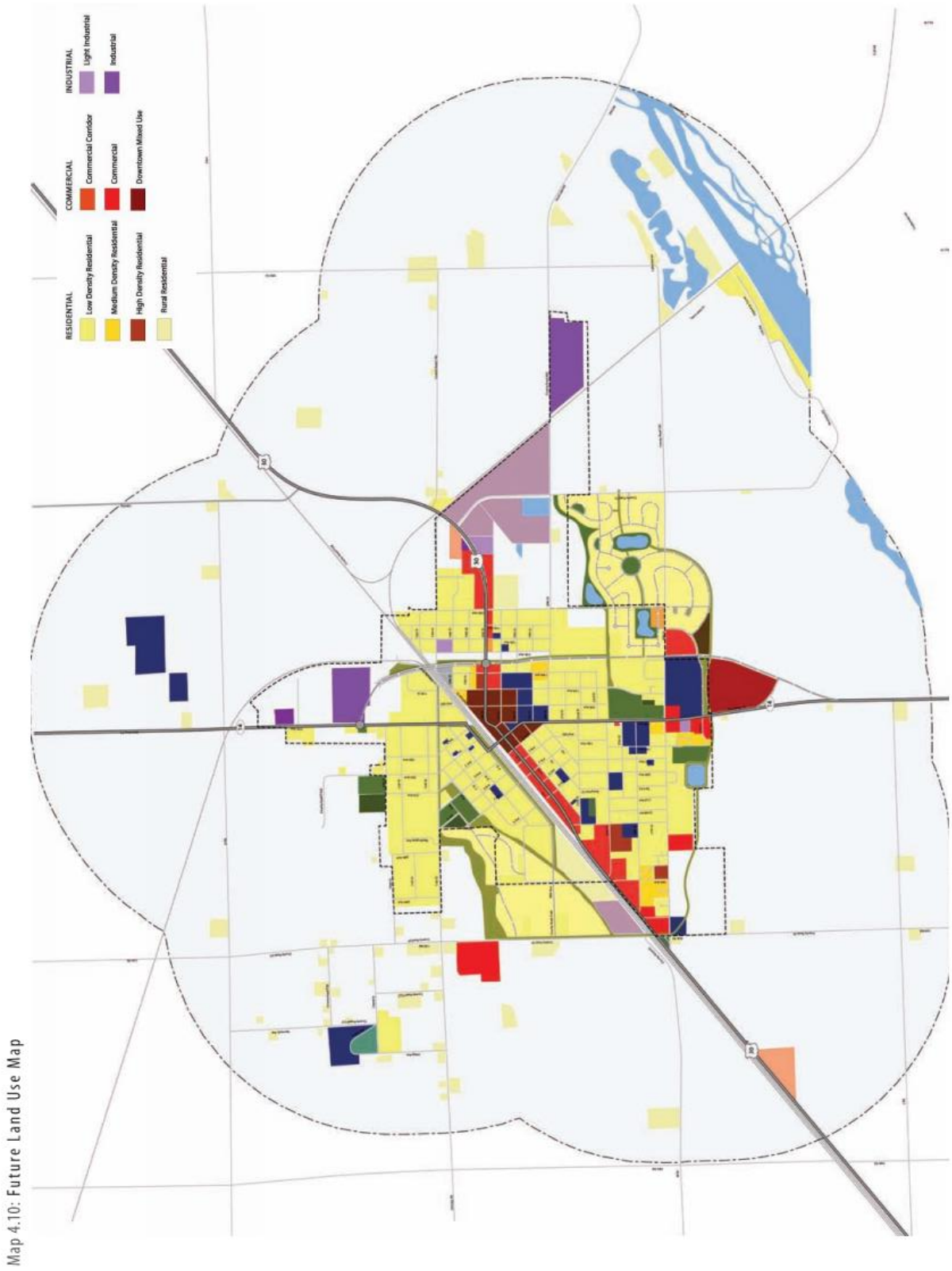
Zoning Ordinance (2012), Subdivision Regulations (2012), Floodplain Ordinance (2012)
The city's floodplain ordinance, zoning ordinance, and subdivision regulations outline where and how development should occur in the future. These documents contain floodplain maps, discourage development in the floodplain, limit population density in the floodplain, and require more than one foot elevation above base flood elevation for newly constructed buildings. The zoning ordinance and subdivision regulations will be updated in 2022.

Future Development Trends
Over the past five years, Central City has added approximately 25 new residences. None of the homes were constructed in the floodplain or other known hazardous areas. In the next five years, additional homes and businesses are planned to be built in the southwest area of the city. The figure below shows the future land use map for the city. Commercial property is located along the major highways with industrial areas located on the northeast section of the community.

Community Lifelines
Transportation
Central City's major transportation corridors include State Highway 14 and US Highway 30. The most traveled route is Highway 30, with an average of 6,555 vehicles daily, 785 of which are trucks.[21] Issues have occurred at the intersection of the highways due to poor intersection design. The city has one Union Pacific line traveling southwest to northeast travelling through the center of the community and one Nebraska Railroad line travelling east to west through the eastern portion of the community. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents. Bryan Hospital is currently located on Highway 14.

21 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." [map]. https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34.

Figure CEN.4: City of Central City



Hazardous Materials

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are seven chemical storage sites within or near Central City which house hazardous materials (listed below). In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

Table CEN.3: Chemical Storage Sites

Name	Address	Floodplain (Y/N)
Aurora Co-op Elevator Company	1313 13th Ave	Y (0.2%)
Aurora Co-op Elevator Company	1561 13th Rd	N
Central City Ready Mix Plant	1576 L Rd	Y (0.2%)
CenturyLink	1707 16th Ave	Y (0.2%)
Green Plains Central City LLC	214 20th St	Y (0.2%)
NDOT Central City Yard	1406 6th St	Y (0.2%)
Pump & Pantry 29	1110 G St	Y (0.2%)

Source: Nebraska Department of Environment and Energy[22]

Health and Medical Facilities

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

Table CEN.4: Health and Medical Facilities

Name	Type of Facility	Address	Number of Beds
Merrick Medical Center	Hospital	1715 26th Street	20
CC Live	Assisted Living Facility	1307 16th St	16
Central Assisted Living, Inc.	Assisted Living Facility	915 East 16th St	20
Cottonwood Estates	Assisted Living Facility	2316 28th St	50
Life Essentials Assisted Living	Assisted Living Facility	920 East 16th St	8
Azria Health Central City	Long Term Care Facility	2720 South 17th Ave	64
Litzenberg Memorial County Hospital	Long Term Care Facility	1715 26th St	46
Central City Medical Clinic	Rural Health Clinic	2510 18th Ave	0

Source: Nebraska Department of Health and Human Services[23,24,25,26]

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 part of this plan update. The following table and figure provide a summary of the critical facilities for the jurisdiction.

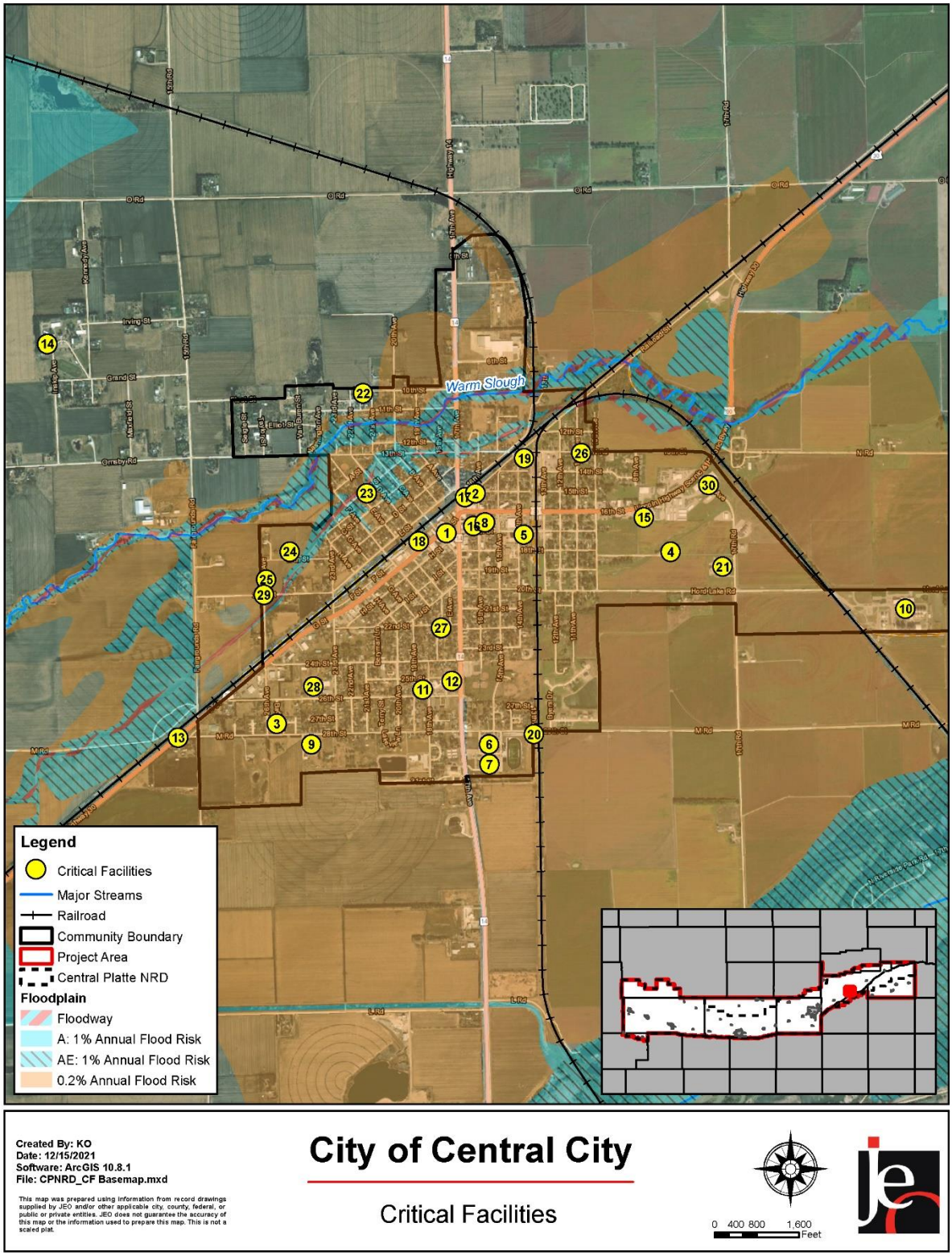
Although they may not be listed in the table below, critical infrastructure also includes power infrastructure, cell towers, alert sirens, water infrastructure, wastewater infrastructure, and roadways.

22 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed June 2021.
23 Department of Health and Human Services. 2021. "State of Nebraska: Assisted Living Facilities." https://dhhs.ne.gov/licensure/Documents/ALF%20Roster.pdf.
24 Department of Health and Human Services. 2021. "State of Nebraska Roster: Hospitals." https://dhhs.ne.gov/licensure/Documents/Hospital%20Roster.pdf.
25 Department of Health and Human Services. 2021. "State of Nebraska Roster: Long Term Care Facilities." https://dhhs.ne.gov/licensure/Documents/LTCRoster.pdf.
26 Department of Health and Human Services. 2021. "State of Nebraska Roster: Rural Health Clinic." https://dhhs.ne.gov/licensure/Documents/RHC_Roster.pdf.

Table CEN.5: Critical Facilities

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Ambulance Station	N	N	Y (0.2%)
2	Auditorium	N	N	Y (0.2%)
3	Bader Villa	N	N	Y (0.2%)
4	Cell Tower	N	Y	Y (0.2%)
5	Central City Elementary School	N	N	Y (0.2%)
6	Central City High School	N	N	Y (0.2%)
7	Central City Middle School	N	N	Y (0.2%)
8	City Hall	N	N	Y (0.2%)
9	Cottonwood Estates	N	N	Y (0.2%)
10	Ethanol Plant	N	N	Y (0.2%)
11	Litzenburg Hospital	N	Y	Y (0.2%)
12	Litzenburg Long Term Care	N	Y	Y (0.2%)
13	Natural Gas Town Border Station	N	N	Y (0.2%)
14	Nebraska Christian School	N	N	N
15	New Fire Barn	N	Y	Y (0.2%)
16	Police Department	N	N	Y (0.2%)
17	Southern Power District	N	N	Y (0.2%)
18	Substation Central	N	N	Y (0.2%)
19	Substation North	N	N	Y (0.2%)
20	Substation South	N	N	Y (0.2%)
21	Wastewater Treatment Plant	N	Y	Y (0.2%)
22	Well #1	N	N	N
23	Well #2	N	N	Y (0.2%)
24	Well #3	N	N	Y (0.2%)
25	Well #4	N	N	Y (0.2%)
26	Well #5	N	N	Y (0.2%)
27	Well #6	N	N	Y (0.2%)
28	Well #7	N	N	Y (0.2%)
29	Well #8	N	N	Y (0.2%)
30	Well #9	N	N	Y (0.2%)

Figure CEN.5: Critical Facilities



Parcel Improvements and Valuation

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

Table CEN.6: Parcel Improvements and Value in the 1% Annual Flood Risk Area

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
1,357	$175,640,126	137	$9,784,875	10.1%

Source: County Assessor, 2021

Table CEN.7: Parcel Improvements and Value in the 0.2% Annual Flood Risk Area

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
1,357	$175,640,126	1,280	$170,868,556	94.3%

Source: County Assessor, 2021

Historical Occurrences

See the Merrick County profile for historical hazard events, including the number of events, damage estimates, and any fatalities or injuries. Larger scale and more damaging events that impacted the community are discussed under Hazard Prioritization.

Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the community. The local planning team prioritized the selected hazards 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

Central City is located near the Platte River, and the majority of the city is impacted by the 0.2 percent flood risk area, with the one percent flood risk area confined to the northern parts of the community. The city has identified drainage ditches as being the most prone to flooding once they are unable to handle the stormwater runoff. According to the NCEI, there have been two flash flood events. The worst of the two events occurred on June 4, 2008. Six inches of rain caused flooding and $20,000 in property damages. The city was largely unimpacted by the 2019 floods, however some nearby gravel roads became very muddy due to high ground water. The city has identified a need for conducting a stormwater drainage study and implementing the study recommendations to reduce damages from floods in the community.

Central City is a member of the NFIP, and the city's Floodplain Administrator (Tracey Slagle) will oversee the commitments and requirements of the NFIP. The initial FIRM for the city was delineated in 8/15/1979 and the current effective map date is 1/6/2010. Over 10% of parcel improvements are located in the 1% annual flood risk area and 94.3% of parcel improvements are located in the 0.2% annual food risk area (see tables in the Parcel Improvements and Valuation section). As of October 31, 2021, there are six total NFIP policies in-force covering $466,900. Central City does not currently have any repetitive loss or severe repetitive loss structures.

Severe Thunderstorms

Damages from severe thunderstorms are a concern to the community whether from heavy rains, high winds, or large hail. On August 12, 2011, a severe thunderstorm with winds estimated at 70 mph resulted in tree damage across the city, which lead to an estimated $100,000 in damages. Most recently a thunderstorm wind event caused $25,000 of damage to trees on September 1, 2018. The local planning team estimated 20% of power lines are buried in the city, leaving it vulnerable to power loss form downed poles and limbs. The community regularly trims trees and has identified a need for a backup power generator at the police station. Very few identified critical facilities have been constructed with hail resistant building materials.

Severe Winter Storms

Every winter, Central City is vulnerable to the effects of winter storms. During periods of heavy snowfall, transportation can be treacherous and power outages can occur. There are no designated snow routes and snow removal is done by city staff using trucks with plows, skid steer, loader, and a motor grader. One of the more devastating winter storms caused significant ice accumulation on power lines, trees, and roadways during late December 2006. Ice accumulation was between half an inch to an inch, which caused widespread tree damage, downed power lines, and closed roadways. Many were without power for days during particularly cold weather. More recently on February 1, 2015, eight inches of snow fell causing most schools to close and some highways to become impassable. The extremely cold temperatures in February 2019 did not cause any damages but did raise the price for natural gas and caused higher residential gas and electric rates.

Terrorism

The local planning team identified terrorism, specifically cyber terrorism as a new top hazard of concern. A cyber-attack has not impacted the city in the past but is still a concern due to the rising number of events across the United States. The city has hired 5 Nines for comprehensive IT support. The company will also perform a cyber vulnerability assessment and upgrade all city computer related systems. Vital records are backed up every 15 minutes.

Tornadoes and High Winds

The city is vulnerable to property damages, power outages, and potential loss of life from tornadoes and high winds. Since 1996, two tornadoes came close to impacting the community. The first tornado occurred in May 2001 and was rated an F0 with no damage reported. Later that year in October, the second tornado touched down north of the community and was rated an F2. It caused damaged to a farmstead and several vehicles.

High winds are a regular part of the climate in this region and can occasionally cause power outages and property damage. One of the worst reported events was in July 2003 when winds up to 70 mph were reported across the County. These high winds caused widespread damage from downed trees and power lines. Damages were estimated at $200,000 across several counties.

To reduce the risk of power outages at critical facilities, the local planning team identified backup power generators as a mitigation action. In addition, a public safe room is under construction at the high school.

Mitigation Strategy

Kept Mitigation actions

Mitigation Action	Backup and Emergency Generators
Description	Identify and evaluate current backup and emergency generators; obtain additional generators based on identification and evaluation; provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters. The police station needs a backup generator.
Hazard(s) Addressed	All Hazards
Estimated Cost	$20,000-$75,000+ per Generator
Local Funding	Local Budget
Timeline	2-5 Years
Priority	High
Lead Agency	Police Department
Status	Not Started

Mitigation Action	Conduct Water Supply Study
Description	Evaluate the need to expand water storage capacity through new means (new water tower, stand pipe, etc.) or locate new water resources to provide a safe water supply for the community and nearby rural areas during periods of drought.
Hazard(s) Addressed	Drought
Estimated Cost	$50,000+
Local Funding	Local Budget
Timeline	2-5 Years
Priority	Medium
Lead Agency	Water and Sewer Department
Status	In Progress. Source water study with JEO is under contract.

Mitigation Action	Develop/Update Floodplain Information
Description	Conduct mapping/remapping of floodplains; revise floodplain/insurance maps.
Hazard(s) Addressed	Flooding
Estimated Cost	$75,000
Local Funding	Local Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	Floodplain Administrator
Status	Not Started

Mitigation Action	Drainage Study
Description	Conduct a stormwater drainage study to evaluate and improve the stormwater drainage system.
Hazard(s) Addressed	Flooding
Estimated Cost	$20,000+
Local Funding	Local Budget
Timeline	2-5 Years
Priority	Medium
Lead Agency	Water and Sewer Department
Status	Not Started

Mitigation Action	Improve Flood and Stormwater Detention/Retention Capacity
Description	Evaluate current stormwater and flood water capacity; implement measures to improve flood water and stormwater capacity.
Hazard(s) Addressed	Flooding
Estimated Cost	$10,000 - $100,000+
Local Funding	Local Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Water and Sewer Department
Status	Ditch and culvert projects are either completed or underway. Several more projects are scheduled for 2022.

Mitigation Action	Improve Warning Systems
Description	Evaluate current warning systems (defined as alert sirens, weather radios, and television, telephone, and radio warning systems, etc.); improve warning systems/develop new warning system; obtain/upgrade warning system equipment and methods; conduct evaluation of existing alert sirens for replacement or placement of new sirens; identify location of weather warning radios; improve weather radio system; obtain/upgrade weather radios.
Hazard(s) Addressed	All Hazards
Estimated Cost	$15,000+
Local Funding	Local Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	City Council, Fire Department, Emergency Management
Status	In Progress. New replacement siren has been ordered.

Mitigation Action	Storm Shelter / Safe Room
Description	Identify and evaluate existing safe rooms and/or storm shelters; improve and/or construct safe rooms and/or storm shelters; design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Thunderstorms
Estimated Cost	$150/sq ft for Retrofit; $300/sq ft for New Construction
Local Funding	Local Budget
Timeline	1 Year
Priority	Low
Lead Agency	Building and Zoning Department, County Emergency Management
Status	Under Construction. Project to be completed in September 2022.

Mitigation Action	Stormwater and Drainage Improvements
Description	Implement recommendations or comparable measures from the drainage study to improve drainage and improve the stormwater system.
Hazard(s) Addressed	Flooding
Estimated Cost	$10,000-$100,000+
Local Funding	Local Budget
Timeline	2-5 Years
Priority	Medium
Lead Agency	Water and Sewer Department
Status	Ditch and culvert projects are either completed or underway. Several more projects are scheduled for 2022.

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

The Mayor, City Administrator, and Police Chief will be responsible for reviewing and updating the plan in the future. These individuals will review the plan annually at council meetings and will notify the public via social media.

Community Profile

Village of Chapman

Central Platte NRD
Hazard Mitigation Plan

2022

Local Planning Team

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

Table CHA.1: Chapman Local Planning Team

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Francis McCulla	Fire Chief	Village of Chapman	-	Recording
Laurie Killin	Clerk/Treasurer	Village of Chapman	-	-
Chris Killin	Chairperson / Floodplain Administrator	Village of Chapman	-	-

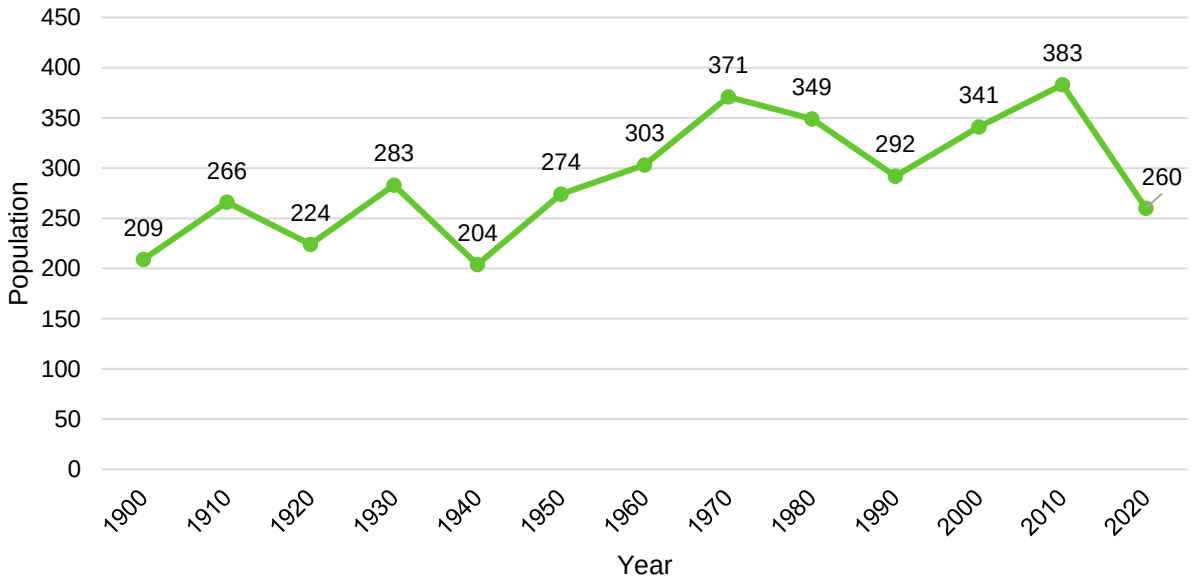
Location and Geography

The Village of Chapman is in southwestern Merrick County and covers an area of 0.45 square miles. The major waterways in the area include the Platte River and Warm Slough.

Demographics

The following figure displays the historical population trend for the Village of Chapman. This figure indicates that the population of Chapman has been declining since 2010 to 260 people in 2020. A declining population can lead to more unoccupied housing that is not being maintained and is then at risk to high winds and other hazards. Furthermore, with fewer residents, there is decreasing tax revenue for the community, which could make implementation of mitigation projects more fiscally challenging. Chapman's population accounted for 3.4% of Merrick County's population in 2020.[27]

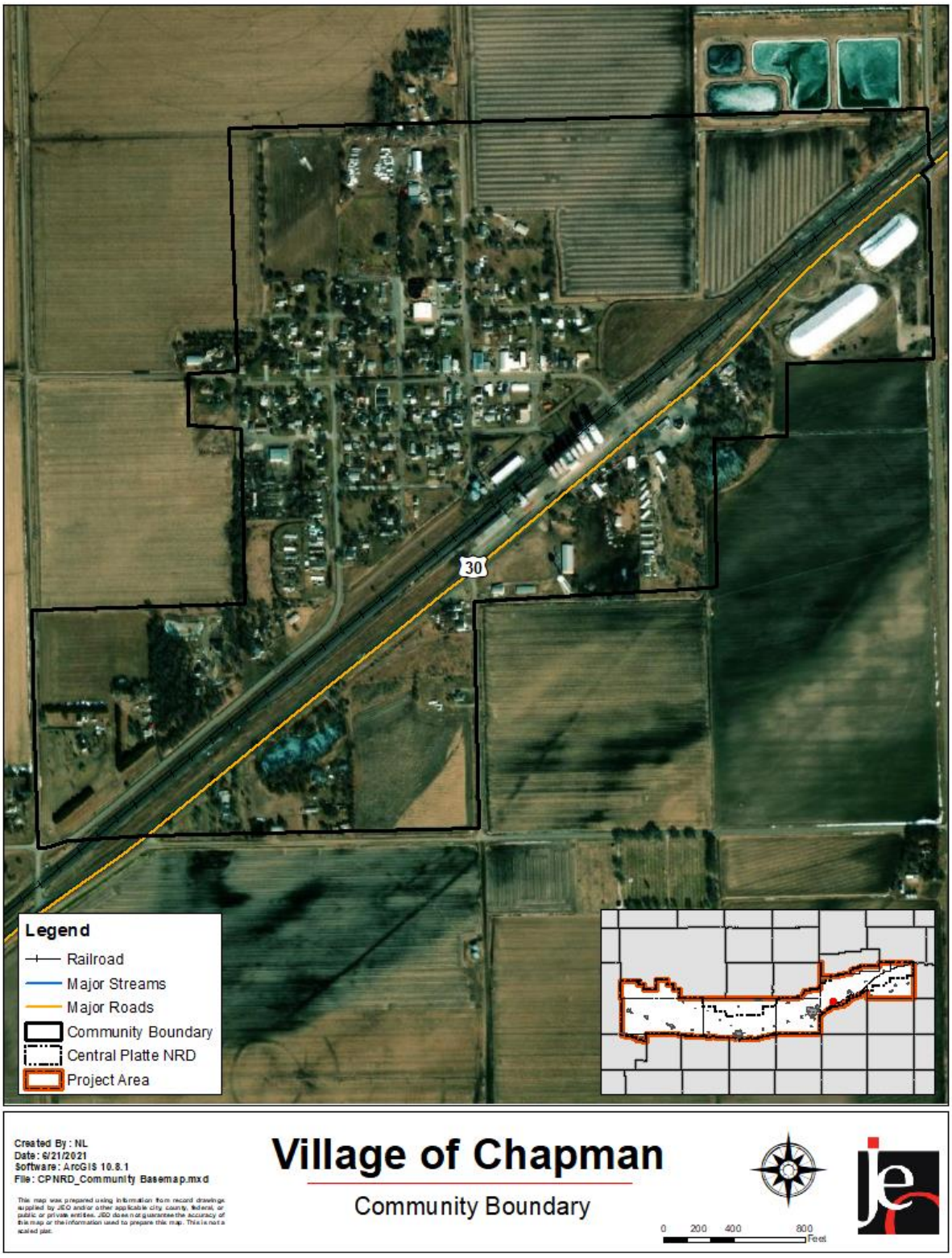
Figure CHA.1: Population 1900 - 2020



Source: U.S. Census Bureau

27 United States Census Bureau. "2020 Decennial Census: P1: DEC Redistricting Data." https://data.census.gov/cedsci/.

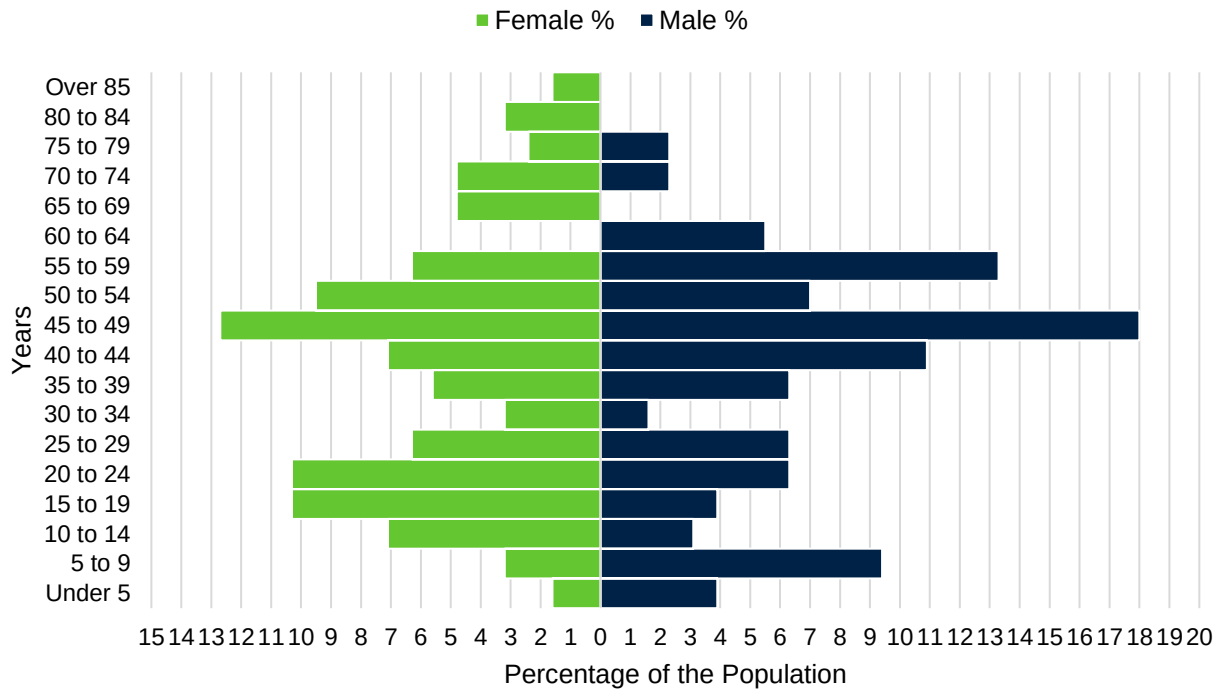
Figure CHA.2: Village of Chapman



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

- **7.1% is non-white.** Since 2010, Chapman grew more ethnically diverse. In 2010, 0% of the Chapman's population was non-white. By 2019, 7.1% was non-white.[28]
- **43.5 median age.** The median age of Chapman was 43.5 years in old 2019. The population grew older since 2010, when the median age was 42.6.[29]

Figure CHA.3: Chapman's Population Pyramid



The figure above shows Chapman's population percentage broken down by sex and five-year age groups. Chapman's population is likely to continue to decline in the coming years with a higher percentage of the population above 40.

Employment and Economics

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

- **5.8% of people living below the poverty line.** The poverty rate (5.8%) in the Village of Chapman was lower than the state's poverty rate (7.2%) in 2019.[30]
- **$46,000 median household income.** Chapman's median household income in 2019 ($46,000) was $15,000 lower than the state ($61,439).[30]
- **3.7% unemployment rate.** In 2019 Chapman had a higher unemployment rate (3.7%) when compared to the state (2.3%).[30]

28 United States Census Bureau. "2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates." https://data.census.gov/cedsci/.
29 United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." https://data.census.gov/cedsci/.
30 United States Census Bureau. "2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." https://data.census.gov/cedsci/.

- **14.8% of workers commuted 30 minutes or more to work.** Fewer workers in Chapman commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (14.8% compared to 25.9%).[31]

Major Employers

The major employers in the community are the Aurora Co-op, Preferred Popcorn, and Pump & Pantry. Many residents commute to Grand Island, Aurora, and Central City.

Housing

The age of housing may indicate which housing units were built prior to the development of state building codes. Those houses and vacant housing may be more vulnerable to hazard events if they are poorly maintained. Unoccupied housing may also suggest that future development may be less likely to occur. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe thunderstorms if those homes are not anchored correctly. Renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have flood insurance, or to know their risks to flooding and other hazards. Chapman's housing stock has:

- **40.7% of housing built prior to 1970.** Chapman has a smaller share of housing built prior to 1970 than the state (40.7% compared to 46%).[32]
- **11.3% of housing units vacant.** Since 2010, Chapman's vacancy rate grew. In 2010 the vacancy rate was 6.9%. By 2019, 11.3% of housing units were vacant.[32]
- **20.3% mobile and manufacture housing.** The Village of Chapman had a larger share of mobile and manufactured housing (20.3%) compared to the state (3.3%).[32] Most mobile homes are located near Highway 30 and 9th Street and the 600 block of Cora Street.
- **26.3% renter-occupied.** The rental rate of Chapman was 26.3% in 2019. The percentage went up since 2010, when renter occupied housing was at 25.4%.[32]

Governance

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

- Clerk/Treasurer
- Water and Sewer Department
- Volunteer Fire Department
- Floodplain Administrator
- Planning Commission

31 United States Census Bureau. "2019 Census Bureau American Community Survey: S0802: Means of Transportation to Work by Selected Characteristics." https://data.census.gov/cedsci/.

32 United States Census Bureau. "2019 Bureau American Community Survey: DP04: Selected Housing Characteristics." https://data.census.gov/cedsci/.

Capability Assessment

The capability assessment consisted of a review of local existing policies, regulations, plans, and programs with hazard mitigation capabilities. The following tables summarize the community's planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects. Municipal funds have stayed the same over recent years.

Table CHA.2: Capability Assessment

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

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

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

Plan Integration

Chapman has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan. In addition, the Chapman has a building code that has not been integrated with the hazard mitigation plan. The village will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Comprehensive Plan (2016)

The comprehensive plan is designed to guide the future actions and growth of the village. It directs development away from the floodplain and residential development away from major transportation routes and chemical storage locations. Additionally, it encourages infill development and clustering of development in sensitive areas. It also allows for emergency access to all areas of the community.

Floodplain Regulations, Zoning Ordinance (2016), and Subdivision regulations (2022)

The village's floodplain regulations, zoning ordinance, and subdivision regulations outline where and how development should occur in the future. These documents contain floodplain maps, discourage development in the floodplain, limit population density in the floodplain, include the ability to implement water restrictions, and identify floodplain areas as parks or open spaces.

Merrick County Local Emergency Operations Plan (2020)

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

Water System Emergency Response Plan

A water system emergency response plan serves as a guideline for water operators and village administration to minimize the disruption of normal services to consumers and to provide public health protection during an emergency event. The document identifies several natural and human-caused events and discusses the water system's response during those events.

Future Development Trends

Over the past five years, a couple of new houses were built, and a few homes were demolished. The school that was located in the community closed down as well. In the next five years, a new development two and half miles south of the village will have approximately 42 lots with new homes built. Chapman's future land use map shows mostly residential housing north of Highway 30 with some low-density housing south of the highway.

Community Lifelines

Transportation

Chapman's major transportation corridor includes US Highway 30, which has an average of 6,435 vehicles daily, 910 of which are trucks.[33] The village has one Union Pacific rail line traveling southwest to northeast on the eastern edge of the community. Chapman Road was also identified as a route of concern by the local planning team. No chemical spills have occurred within the community. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

Hazardous Materials

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one chemical storage site within or near Chapman which house hazardous materials (listed below). In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

Table CHA.3: Chemical Storage Sites

Name	Address	Floodplain (Y/N)
Aurora Co-op Elevator Company	205 US Highway 30	N

Source: Nebraska Department of Environment and Energy[34]

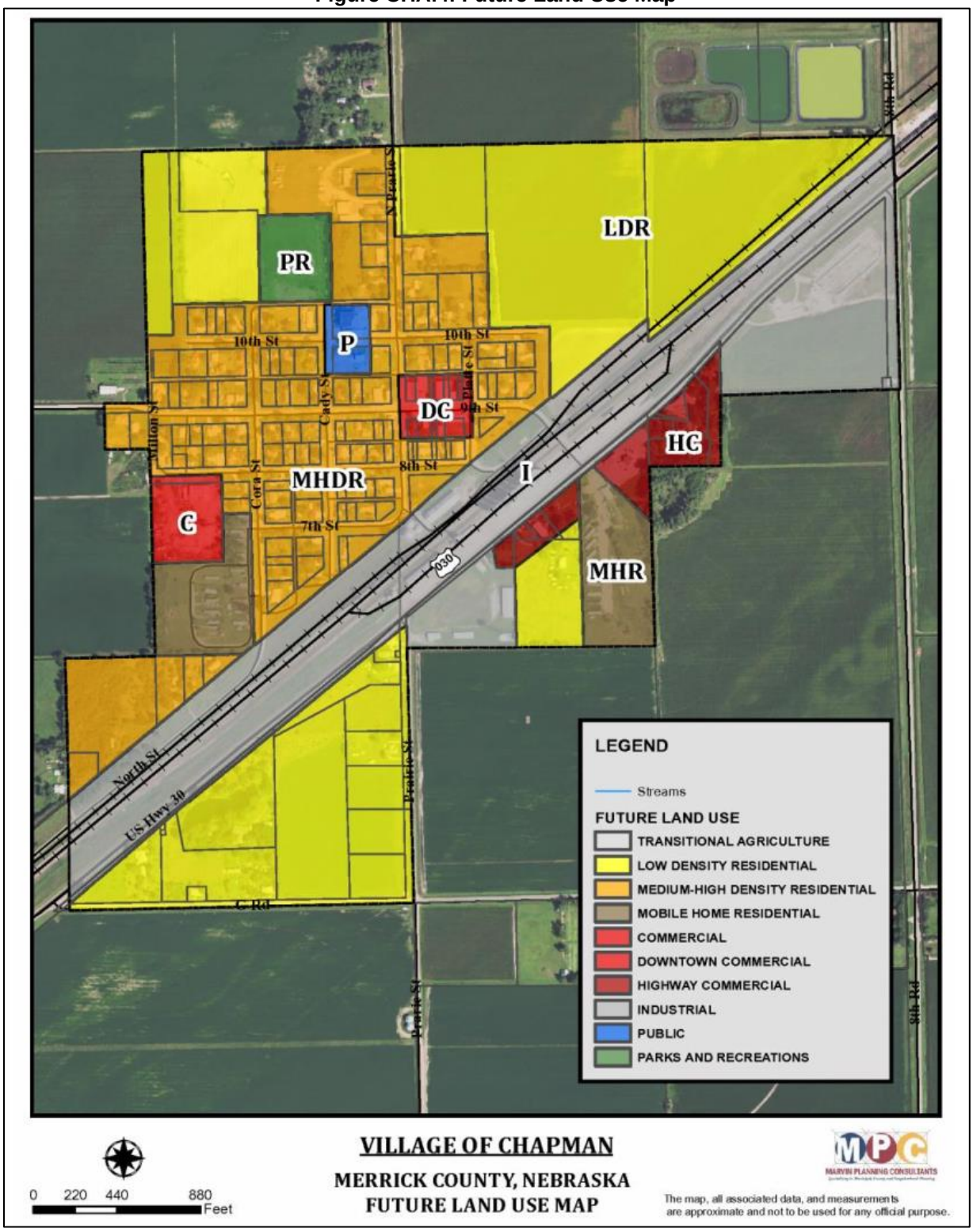
Health and Medical Facilities

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

33 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." [map]. https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34.

34 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed June 2021.

Figure CHA.4: Future Land Use Map



Critical Facilities

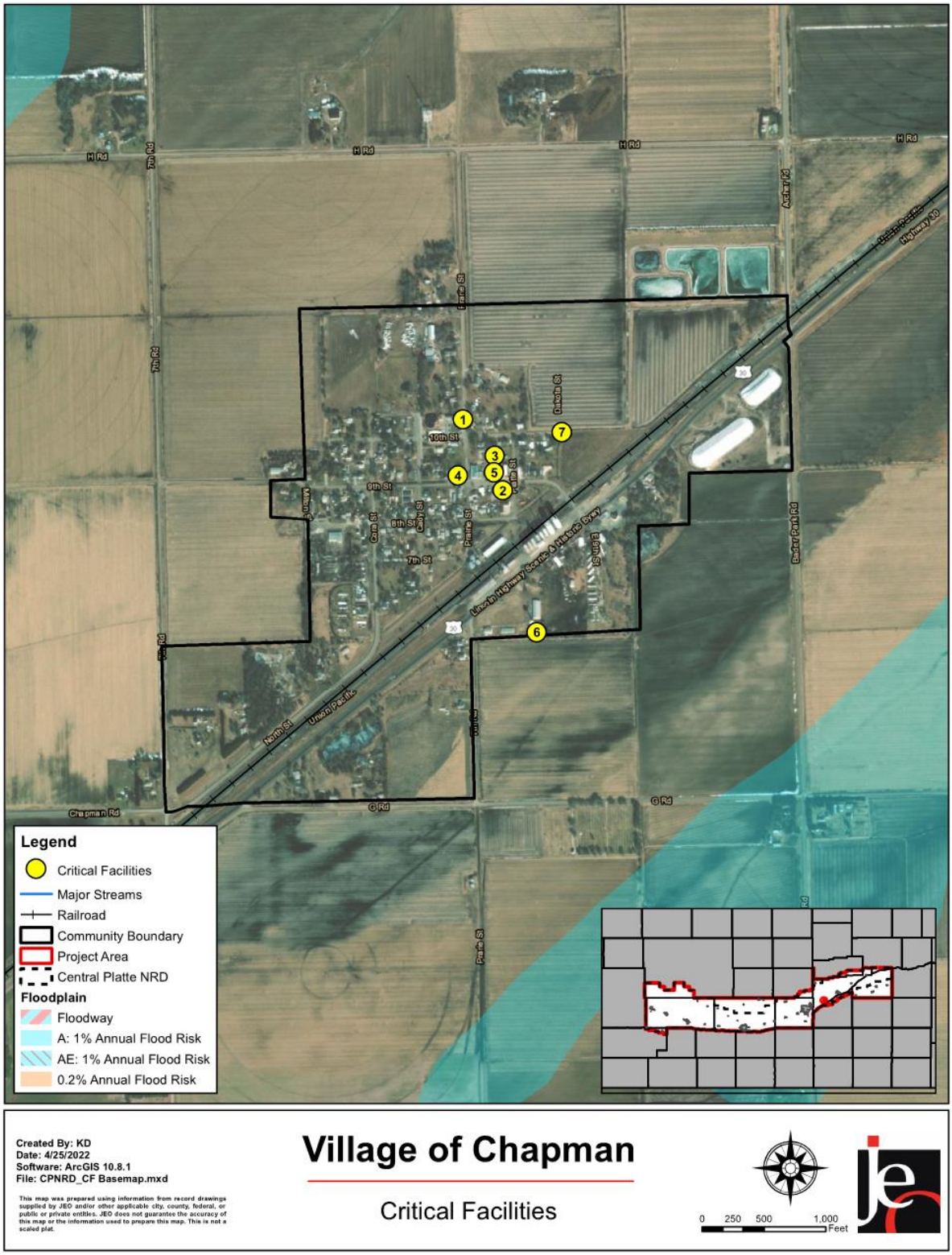
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during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

Although they may not be listed in the table below, critical infrastructure also includes power infrastructure, cell towers, alert sirens, water infrastructure, wastewater infrastructure, and roadways.

Table CHA.4: Critical Facilities

CF Number	Name	Mass Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Baptist Church	N	N	N
2	Community Center	N	N	N
3	Fire Station and Well #1	N	N (In Progress)	N
4	Methodist Church	N	N	N
5	Village Hall	N	N	N
6	Water Tower	N	N	N
7	Well #2	N	N	N

Figure CHA.5: Critical Facilities



Parcel Improvements and Valuation

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

Table CHA.5: Parcel Improvements and Value in the 1% Annual Flood Risk Area

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
123	$8,090,090	0	$0	0%

Source: County Assessor, 2021

Table CHA.6: Parcel Improvements and Value in the 0.2% Annual Flood Risk Area

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
123	$8,090,090	0	$0	0%

Source: County Assessor, 2021

Historical Occurrences

See the Merrick County profile for historical hazard events, including the number of events, damage estimates, and any fatalities or injuries. Larger scale and more damaging events that impacted the community are discussed under Hazard Prioritization.

Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the community. The local planning team prioritized the selected hazards 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 flood risk areas of concern for the Village of Chapman are located south, north, and west of the village, which have poor stormwater damage, and also along the Platte River. According to the NCEI, there were two flood events and one flash flood event since 1996. The flash flood event occurred in June of 2008 and caused $100,000 in property damage. The local planning team reported a flood in 2010 out of Prairie Creek and Moore's Creek. Houses suffered water damage, and a mobile home park on Cora Street was under water. In rural areas, some farmers' driveways were underwater, and the local Fire Department rescued those residents. In 2019 the flooding washed out roads surrounding the community. The local planning team reports that the village's main concerns about flooding are flash flooding and ditches flooding into farm fields. Flooding mitigation actions include conducting and implementing findings of a stormwater drainage study and deepening drainage ditches.

Chapman is a member of the NFIP, and the village's Floodplain Administrator (Chris Killin) will oversee the commitments and requirements of the NFIP. The initial FIRM for the village was delineated in 2/1/2002 and the current effective map date is 2/1/2002. As of October 31, 2021, there are no NFIP policies in place. Chapman does not currently have any repetitive loss or severe repetitive loss structures.

Severe Thunderstorms

NCEI reported 52 severe thunderstorm events since 1996, causing $1,510,000 dollars in damages. The local planning team reported several severe thunderstorms in 2015 and 2016 which downed trees and power lines, and broke one light pole. In June 2020, a thunderstorm wind event caused $500,000 in damages to center pivots and light poles. The village reports many hazardous trees in the community. The team noted concern for the potential of hail damage and power outages. Very few power lines in the community are buried, leaving the village at higher risk of power outages. The only critical facility that is fitted with hail resistant building materials is the community center, but all critical facilities are insured. Mitigation actions include providing emergency generators for all critical facilities, providing public safe rooms for the community, and improving electrical services during and after severe thunderstorm events.

Severe Winter Storms

The team noted that a severe winter storm occurred during the winter of 2015 which shut down the community for two days. The village is concerned with keeping the roads clear for emergency vehicles. There are no snow routes, and the community does not use snow fences. The County Roads Department does the first pass of snow removal, after which the village clears any leftover snow. The village utilizes a pickup truck with a blade for snow removal. Chapman plans to mitigate the impacts by providing snow routes for the community.

Tornadoes and High Winds

The NCEI reported one tornado in 2001, which caused $25,000 dollars in damages. The local planning team is concerned for the safety of residents since there are no safe rooms or shelters in the community. There is one warning siren is in Chapman, located at the Sheriff's Office, and text alerts are also offered. In the event of a disaster, the community has mutual aid agreements with Grand Island, Polk County, Nance County, Hall County, and Merrick County. Mitigation plans are in place to provide adequate public safe rooms to the community, improve citizen warning systems, and upgrade the emergency response communication system.

Mitigation Strategy

Kept Mitigation Actions

Mitigation Action	Backup and Emergency Generators
Description	Identify and evaluate current backup and emergency generators; obtain additional generators based on identification and evaluation; provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters.
Hazard(s) Addressed	All Hazards
Estimated Cost	$20,000-$75,000+ per Generator
Local Funding	General Fund, Fire Department Funds
Timeline	2-5 Years
Priority	High
Lead Agency	Village Board, Fire Department
Status	A backup generator has been purchased for the fire station, but it still needs to get delivered and installed. All other critical facilities could use a backup generator.

Mitigation Action	Develop Emergency Snow / Evacuation Routes
Description	Develop or improve snow and evacuation routes and programs to include parking, snow/ice/debris removal, etc.; obtain and install snow emergency route and evacuation signs; provide information on emergency routes to the public; construct snow fences where possible on main routes to prevent snow from disrupting transportation.
Hazard(s) Addressed	Severe Winter Storms
Estimated Cost	$1,000+
Local Funding	General Fund
Timeline	2-5 Years
Priority	High
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Drainage Study
Description	Conduct a stormwater drainage study to improve, evaluate, and improve the stormwater system.
Hazard(s) Addressed	Flooding
Estimated Cost	$10,000-$100,000+
Local Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	Village Engineer
Status	Not Started

Mitigation Action	Emergency Communication
Description	Upgrade Fire Department's and village's communication radio system to be compatible to the statewide radio system (the new system will allow for multiple agencies to communicate across the state, including fire departments, local police departments, Nebraska State Patrol, Nebraska Game & Parks, Fire Marshall, etc.).
Hazard(s) Addressed	All Hazards
Estimated Cost	$2,000,000-$3,000,000
Local Funding	General Fund, Fire Department Funds, Private Foundation Funds
Timeline	2-5 Years
Priority	Medium
Lead Agency	Village Board, Fire Department
Status	In Progress

Mitigation Action	Improve Drainage
Description	Improve storm sewers and drainage patterns in and around the community; deepen drainage ditches and clean out culverts.
Hazard(s) Addressed	Flooding
Estimated Cost	$5,000+
Local Funding	General Fund
Timeline	5+ Years
Priority	High
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Improve Electrical Service
Description	Evaluate hardening, retrofitting, looping and/or burying of power lines and related infrastructure and/or comparable protection measures; 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; implement measures to improve electrical service; bury power lines for future construction.
Hazard(s) Addressed	All Hazards
Estimated Cost	Unknown
Local Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	Village Board, Southern Power District
Status	Not Started

Mitigation Action	Improve Warning Systems
Description	Evaluate current warning systems (defined as alert sirens, weather radios, and television, telephone, and radio warning systems, etc.); improve warning systems/develop new warning system; obtain/upgrade warning system equipment and methods; conduct evaluation of existing alert sirens for replacement or placement of new sirens; identify location of weather warning radios; improve weather radio system; obtain/upgrade weather radios. The south side of the community is in need of a warning siren.
Hazard(s) Addressed	All Hazards
Estimated Cost	$10,000+
Local Funding	General Fund, Fire Department Funds
Timeline	5+ Years
Priority	High
Lead Agency	Village Board, Fire Department
Status	Not Started

Mitigation Action	Safe Rooms and Storm Shelters
Description	Identify and evaluate existing safe rooms and/or storm shelters; improve and/or construct safe rooms and/or storm shelters; design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Thunderstorms
Estimated Cost	$200-$250 per sq ft
Local Funding	General Fund, Fire Department Funds
Timeline	2-5 Years
Priority	High
Lead Agency	Village Board, Fire Department
Status	Not Started

Removed Mitigation Actions

Mitigation Action	Purchase Snow Removal Equipment
Description	Increase ability to remove snow/ice from community streets by augmenting equipment or supplies; including purchasing equipment such as snowplows, payloaders, trucks, or plow blades.
Hazard(s) Addressed	Severe Winter Storms
Status	The village would like to focus on other mitigation actions.

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

The Fire Chief, Clerk/Treasurer, and Chairperson/Floodplain Administrator will be responsible for reviewing and updating the plan in the future. These individuals will review the plan bi-annually and notify residents through letters to households.

Community Profile

Village of Clarks

Central Platte NRD
Hazard Mitigation Plan

2022

Local Planning Team

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

Table CLA.1: Clarks Local Planning Team

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Kari Podliska	Clerk / Treasurer / Floodplain Administrator	Village of Clarks	-	Lexington - Virtually

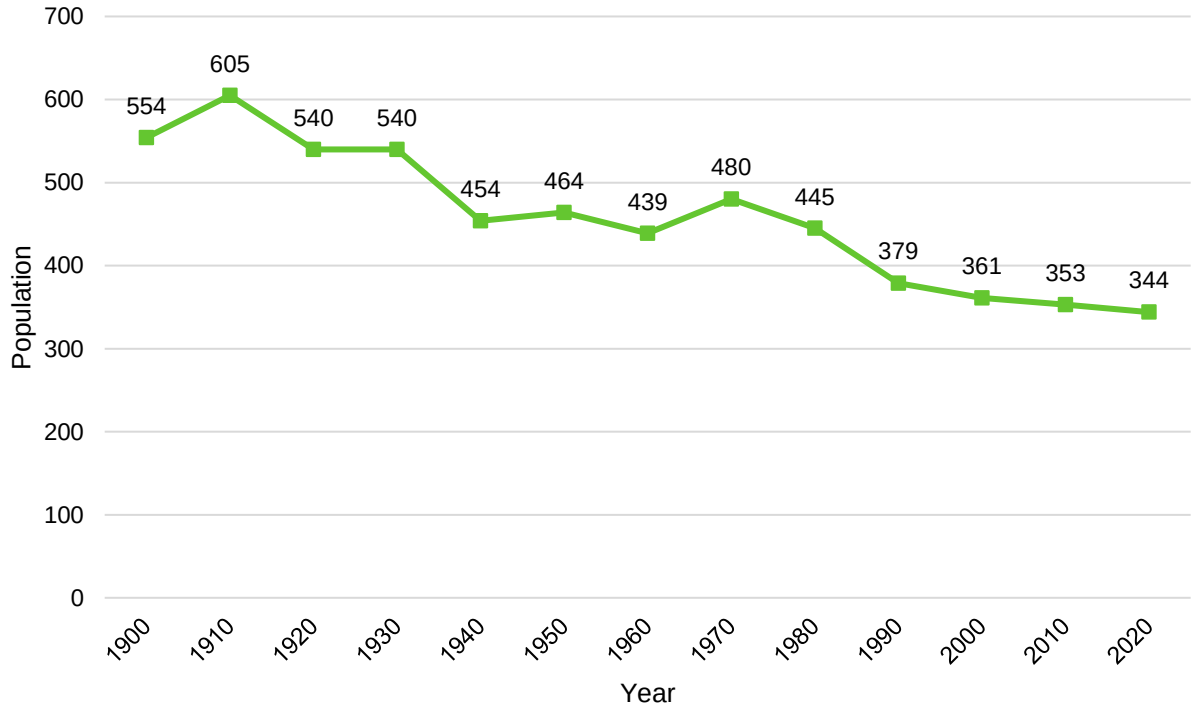
Location and Geography

The Village of Clarks is in eastern Merrick County and covers an area of 0.31 square miles. The closest major waterway in the area is the Platte River.

Demographics

The following figure displays the historical population trend for the Village of Clarks. This figure indicates that the population of Clarks has been declining since 1970 to 344 people in 2020. A declining population can lead to more unoccupied housing that is not being maintained and is then at risk to high winds and other hazards. Furthermore, with fewer residents, there is decreasing tax revenue for the community, which could make implementation of mitigation projects more fiscally challenging. Clarks' population accounted for 4.5% of Merrick County's population in 2020.[35]

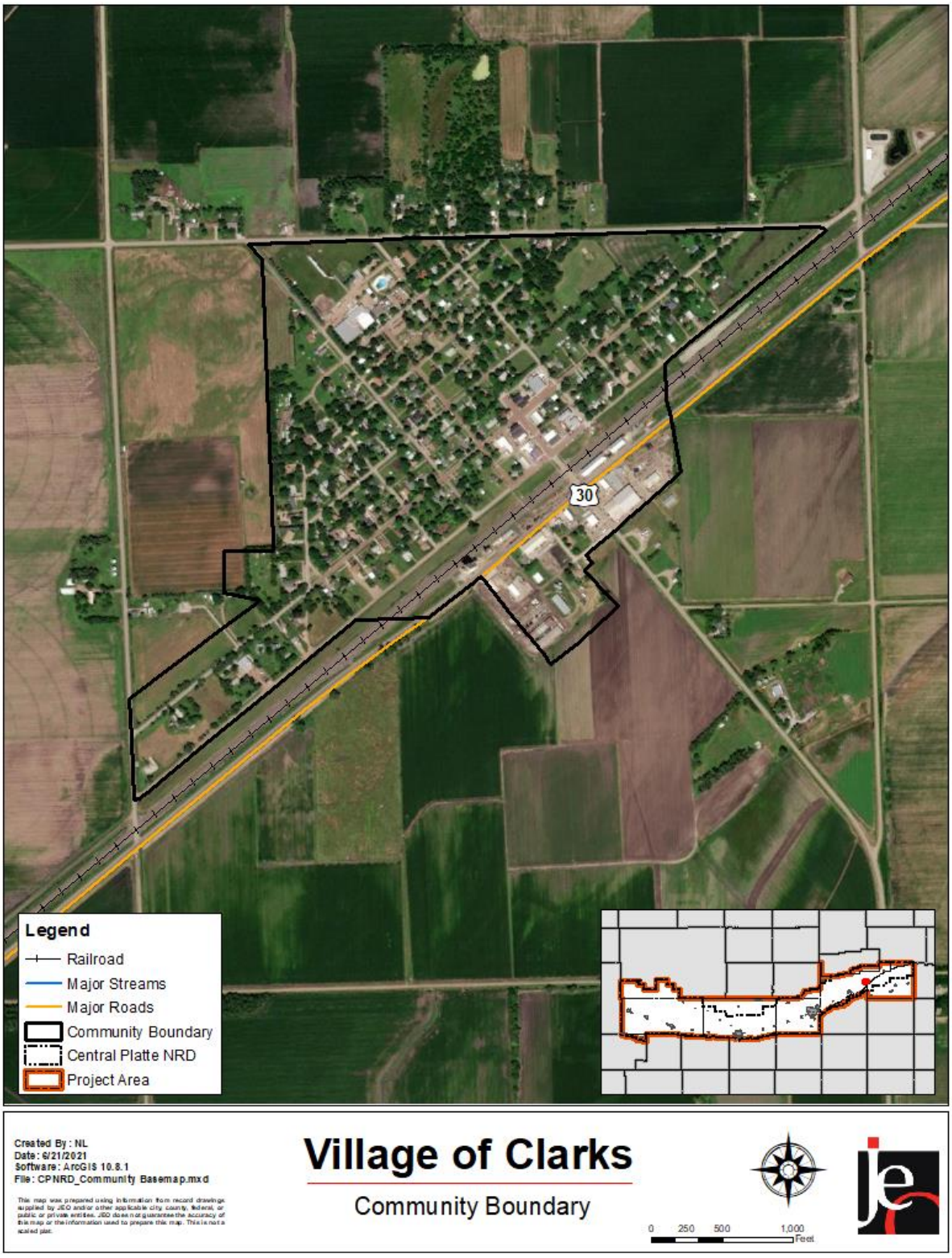
Figure CLA.1: Population 1990 - 2020



Source: U.S. Census Bureau

35 United States Census Bureau. "2020 Decennial Census: P1: DEC Redistricting Data." https://data.census.gov/cedsci/.

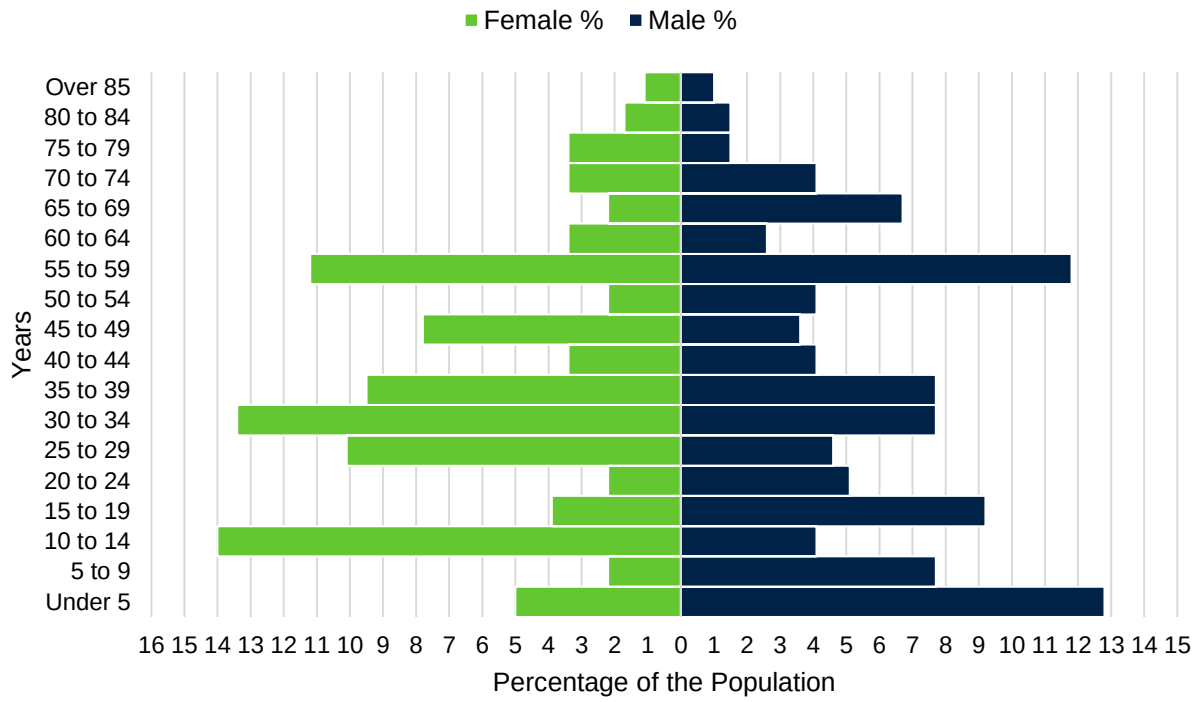
Figure CLA.2: Village of Clarks



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

- **1.9% is non-white.** Since 2010, Clarks became less ethnically diverse. In 2010, 6.8% of the Clarks' population was non-white. By 2019, 1.9% was non-white.[36]
- **32.9 median age.** The median age of Clarks was 32.9 years in old 2019. The population grew younger since 2010, when the median age was 39.2.[37]

Figure CLA.3: Clarks' Population Pyramid



The figure above shows Clarks' population percentage broken down by sex and five-year age groups. Clarks' population is remaining steady with an equal amount below 40 as above it.

Employment and Economics

Low-income populations, long distance commuters, and the unemployed may be more vulnerable to certain hazards than other groups. Clarks' population has:

- **22% of people living below the poverty line.** The poverty rate (22%) in the Village of Clarks was higher than the state's poverty rate (7.2%) in 2019.[38]
- **$49,167 median household income.** Clarks' median household income in 2019 ($49,167) was $12,272 lower than the state ($61,439).[38]
- **3.8% unemployment rate.** In 2019 Clarks had a higher unemployment rate (3.8%) when compared to the state (2.3%).[38]

36 United States Census Bureau. "2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates." https://data.census.gov/cedsci/.
37 United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." https://data.census.gov/cedsci/.
38 United States Census Bureau. "2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." https://data.census.gov/cedsci/.

- **41.5% of workers commuted 30 minutes or more to work.** More workers in Clarks commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (41.5% compared to 24.6%).[39]

Major Employers

The major employers in Clarks are the High Plains Community Schools and Strobel Energy. A large percentage of residents commute to Grand Island, Columbus, and York for work.

Housing

The age of housing may indicate which housing units were built prior to the development of state building codes. Those houses and vacant housing may be more vulnerable to hazard events if they are poorly maintained. Unoccupied housing may also suggest that future development may be less likely to occur. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe thunderstorms if those homes are not anchored correctly. Renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have flood insurance, or to know their risks to flooding and other hazards. Clarks' housing stock has:

- **66.1% of housing built prior to 1970.** Clarks has a larger share of housing built prior to 1970 than the state (66.1% compared to 46%).[40]
- **8% of housing units vacant.** Since 2010, Clarks' vacancy rate declined. In 2010 the vacancy rate was 15.8%. By 2019, 8% of housing units were vacant.[40]
- **2.3% mobile and manufacture housing.** The Village of Clarks had a smaller share of mobile and manufactured housing (2.3%) compared to the state (3.3%).[40]
- **30.9% renter-occupied.** The rental rate of Clarks was 30.9% in 2019. The percentage went up since 2010, when renter occupied housing was at 18.8%.[40]

Governance

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

- Clerk/Treasurer/Floodplain Administrator
- Maintenance Superintendent
- Planning Commissioner
- Volunteer Fire Department
- Volunteer Ambulance Service
- Housing Authority
- Library Board
- Water Superintendent

39 United States Census Bureau. "2019 Census Bureau American Community Survey: S0802: Means of Transportation to Work by Selected Characteristics." https://data.census.gov/cedsci/.

40 United States Census Bureau. "2019 Bureau American Community Survey: DP04: Selected Housing Characteristics." https://data.census.gov/cedsci/.

Capability Assessment

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

Municipal funds are limited to maintenance with minor improvements. A large portion of funds are already dedicated to water, sewer, and street improvements. Funds have increased a small amount over recent years.

Table CLA.2: Capability Assessment

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

Survey Components/Subcomponents		Yes/No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	-
Education & Outreach Capability	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)	-

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

Plan Integration

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

Comprehensive Plan (2022)

The comprehensive plan is designed to guide the future actions and growth of the village. It contains goals aimed at safe growth, encourages infill development, and encourages clustering of development.

Merrick County Local Emergency Operations Plan

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

Water System Emergency Response Plan
A water system emergency response plan serves as a guideline for water operators and village administration to minimize the disruption of normal services to consumers and to provide public health protection during an emergency event. The document identifies several natural and human-caused events and discusses the water system's response during those events.

Wellhead Protection Plan
The purpose of wellhead protection plans is to protect the public drinking water supply wells from contamination. It includes identifying potential sources of groundwater contamination in the area and managing the potential contaminant sources.

Zoning Ordinance, Floodplain Ordinance, and Subdivision Regulations (2022)
The village's zoning ordinance, floodplain ordinance, and subdivision regulations outline where and how development should occur in the future. These documents include well setback requirements, discourage housing and vulnerable populations along major transportation routes, and discourage development in the floodplain.

Future Development Trends
Over the past five years, two dilapidated houses have been removed. In addition, Sapp's discontinued the local service station, and it has been purchased by a local mechanic. No new housing has been built. In the next five years, there are no planned housing or business developments at this time.

Community Lifelines
Transportation
Clarks' major transportation corridor includes State Highway 30, which accommodates an average of 3,645 vehicles daily, 950 of which are trucks.[41] There are currently no turn lanes on Highway 30 through the community. The village has one Union Pacific line traveling southwest to northeast on the eastern edge of the community. All local routes regularly have farm chemicals and propane transported on them. No spills have occurred. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

Hazardous Materials
According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are three chemical storage sites within or near Clarks which house hazardous materials (listed below). In addition, the local planning team identified KS #20 which has underground gas/diesel tanks. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

Table CLA.3: Chemical Storage Sites

Name	Address	Floodplain (Y/N)
Gavilon Grain LLC	2203 21st Rd	Y (1%)
Aurora Co-op Elevator Company	2341 23rd Rd	N
Sapp Bros Petroleum Inc	205 S Green St	N

Source: Nebraska Department of Environment and Energy[42]

41 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." [map]. https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34.
42 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed June 2021.

Health and Medical Facilities

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

Critical Facilities

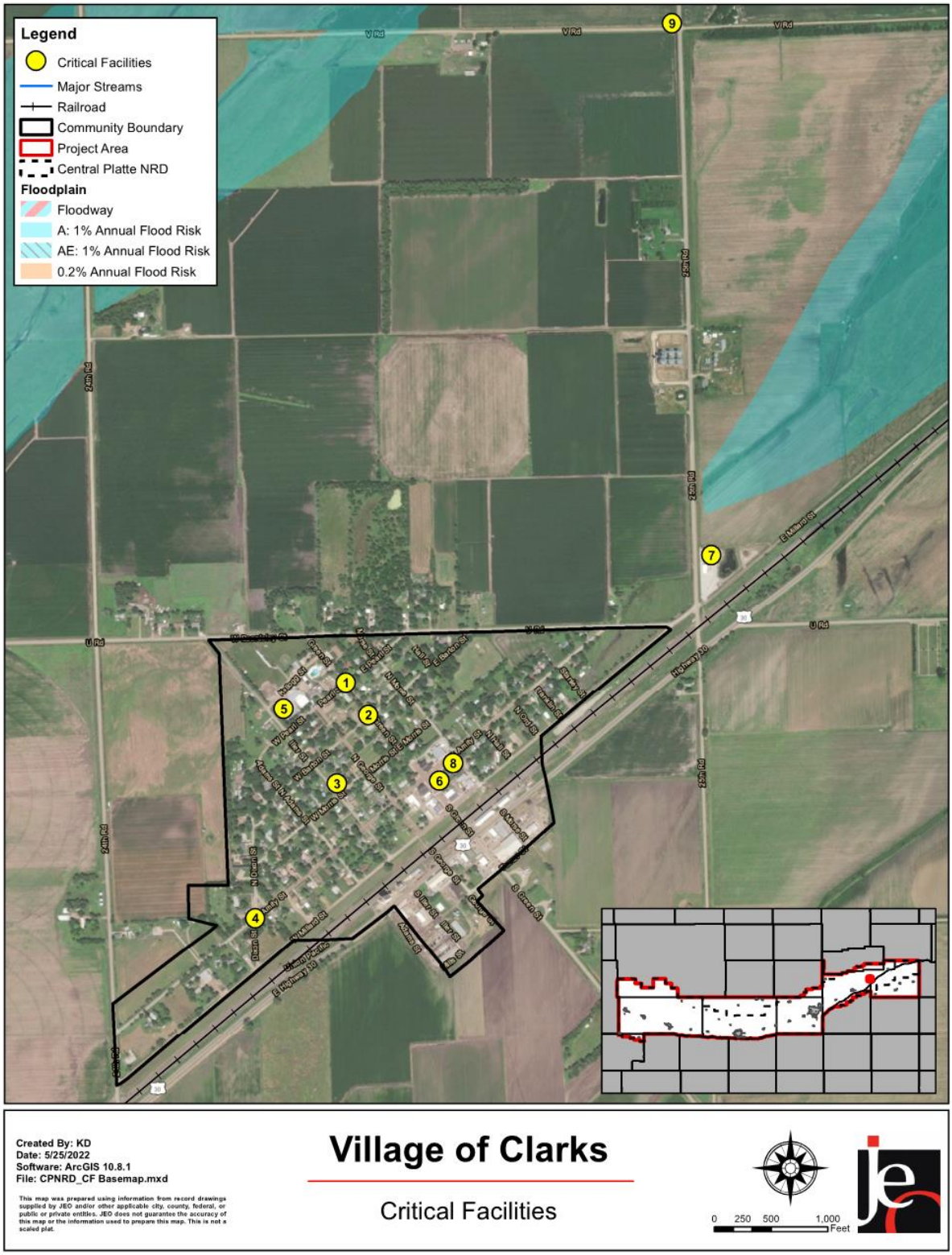
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during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

Although they may not be listed in the table below, critical infrastructure also includes power infrastructure, cell towers, alert sirens, water infrastructure, wastewater infrastructure, and roadways.

Table CLA.4: Critical Facilities

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Alneta Hejtimanck Daycare	N	N	N
2	Clarks United Methodist Church	N	N	N
3	First Congregational Church	N	N	N
4	High Plains Community School	Y	N	N
5	St. Peter's Church	N	N	N
6	Town Hall	N	Y	N
7	Treatment Plant	N	Y	N
8	Village Maintenance	N	N	N
9	Water Wells	N	Y	N

Figure CLA.4: Critical Facilities



Parcel Improvements and Valuation

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

Table CLA.5: Parcel Improvements and Value in the 1% Annual Flood Risk Area

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
211	$12,308,265	0	$0	0%

Source: County Assessor, 2021

Table CLA.6: Parcel Improvements and Value in the 0.2% Annual Flood Risk Area

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
211	$12,308,265	0	$0	0%

Source: County Assessor, 2021

Historical Occurrences

See the Merrick County profile for historical hazard events, including the number of events, damage estimates, and any fatalities or injuries. Larger scale and more damaging events that impacted the community are discussed under Hazard Prioritization.

Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the community. The local planning team prioritized the selected hazards 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

Drought is a concern to the community because of water availability and potential economic impacts. Since farming is one of the main trades in the region, economic losses would be felt throughout the area. The two community wells, which are located northeast of the village, are considered to be sufficient at this time. However, these wells have reported low water levels in the past. If a drought occurred and persisted many months or years, there is concern that the wells would not provide enough water to the community. The region has experienced droughts in the past the worst occurring in 2012-2013, with extreme drought conditions that resulted in lower crop yields. Water is metered at the wells and at the homes of the residents. Clarks has neither a drought monitoring board nor a drought response plan.

Hazardous Materials Release

Due to the village's proximity to a major highway and railroad, chemical transportation spills are a concern to the community. Highway 30 and the railroad are of greatest concern. Chemicals are presumed to be transported daily by highway; however, the village is not sure which types of chemicals are being transported. According to PHMSA, there have not been any reports of chemical spills. However, the planning team reported a train derailment occurred a few miles west of Clarks. In the event of a chemical spill the local fire department will respond. The fire department is trained and has equipment for spill response.

Flooding

While the local planning team did not identify flooding as a top concern for the community, they are a member of the NFIP. The Village's Floodplain Administrator (Kari Podliska) will oversee the commitments and requirements of the NFIP. The initial FIRM for the village was delineated in 8/19/1987 and the current effective map date is 1/6/2010. As of October 31, 2021, there is one NFIP policy in force covering $350,000. Clarks does not current have any repetitive loss or severe repetitive loss structures. No part of the community is located in the 1% or 0.2% annual flood risk areas.

Severe Thunderstorms

NCEI reported 18 severe thunderstorm events which have caused $1,375,000 in property damages. The most damaging event occurred in June 2011 when a thunderstorm wind event caused $1,000,000 in damages to trees, irrigation pivots, power poles, and a grain elevator. The local planning team estimates that less than 10% of power lines are buried in the community leading to an increased risk of power failure. Critical municipal records are backed up, but critical facilities do not have backup generators. The school and elderly housing apartments need backup generators. None of the critical facilities are fitted with hail resistant building materials.

Severe Winter Storms

Historically, severe winter storms with heavy snow and high winds have reduced visibility and closed roads in the village. In February 2021 extremely cold temperatures caused thermal shock damage to the water tower which now needs to be remediated. The village uses snow fences, located on the west end of the community and prioritizes the fire hall area for first removal. The village is responsible for snow removal and uses a dump truck with a blade and a tractor with a bucket and ice melt spreader. Current budget discussions include the need for a new dump truck outfitted to push snow.

Tornadoes and High Winds

There are two reports of tornadoes since 1996 in the Village of Clarks, causing $230,000 in damages. The village does have a warning siren, however, on the north side of the village where the school is located, the sirens are hard to hear. Thus, the community would like to relocate the siren so that is closer to the north side. The siren is controlled by the Merrick County Sheriff's Department. The planning team noted that there are no storm shelters available in Clarks, however the two church basements can be utilized during a storm. Mutual aid agreements are in place with Central City, Polk, and Silver Creek. The community encourages property owners to remove hazardous trees and limbs and assists the power company to help clear branches near power lines. In addition, the village maintains a tree dump for residents to use.

Mitigation Strategy

New Mitigation Actions

Mitigation Action	Backup and Emergency Generators
Description	Backup generators are needed at the school and elderly housing apartments.
Hazard(s) Addressed	All Hazards
Estimated Cost	$40,000+ per generator
Local Funding	Local Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Village Board, County Emergency Management
Status	Not Started

Mitigation Action	Water Tower Improvements
Description	The water tower was damaged from the extremely cold temperatures in 2021 and needs to be remediated.
Hazard(s) Addressed	Severe Winter Storms
Estimated Cost	Unknown
Local Funding	Local Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Village Board,
Status	Not Started

Kept Mitigation Actions

Mitigation Action	Emergency Exercise: Hazardous Spill
Description	Utilize exercise to prepare for potential explosions or hazardous spills; ensure that nearby businesses and residents have appropriate plans in place.
Hazard(s) Addressed	Hazardous Materials Release
Estimated Cost	$5,000+
Local Funding	Local Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Village Board, Fire Department, County Emergency Management
Status	Not Started

Mitigation Action	Improve Warning Systems
Description	Evaluate current warning systems (defined as alert sirens, weather radios, and television, telephone, and radio warning systems, etc.); improve warning systems/develop new warning system; obtain/upgrade warning system equipment and methods; conduct evaluation of existing alert sirens for replacement or placement of new sirens; identify location of weather warning radios; improve weather radio system; obtain/upgrade weather radios. The existing siren at the fire station is in need of replacement and an additional siren needs to be installed on the north end of the village to extend coverage.
Hazard(s) Addressed	All Hazards
Estimated Cost	$15,000+
Local Funding	Local Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Purchase Snow Removal Equipment
Description	Increase ability to remove snow/ice from community streets by augmenting equipment or supplies, including purchasing equipment such as snowplows, payloaders, trucks, or plow blades.
Hazard(s) Addressed	Severe Winter Storms
Estimated Cost	$100,000+
Local Funding	Local Budget
Timeline	2-5 Years
Priority	Medium
Lead Agency	Village Board
Status	Not Started

Removed Mitigation Actions

Mitigation Action	Monitor Drought Conditions
Description	Establish specific drought monitoring protocols to serve as triggers for implementing drought response actions.
Hazard(s) Addressed	Drought
Status	The village would like to focus on other projects.

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

Clarks last reviewed their section of the HMP in 2017 during the plan update. The Clerk/Treasurer/Floodplain Administrator, Village Board, and Maintenance Supervisor will be responsible for reviewing and updating the plan in the future. These individuals will review the plan annually and the public will be notified through the village's website and monthly newsletter.

Community Profile

Village of Silver Creek

Central Platte NRD
Hazard Mitigation Plan

2022

Local Planning Team

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

Table SIL.1: Silver Creek Local Planning Team

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Jennifer Czarnick	Clerk/Treasurer/Floodplain Administrator	Village of Silver Creek	Centra City	Central City
Patrick Robinson	Utility Superintendent	Village of Silver Creek	-	Recording

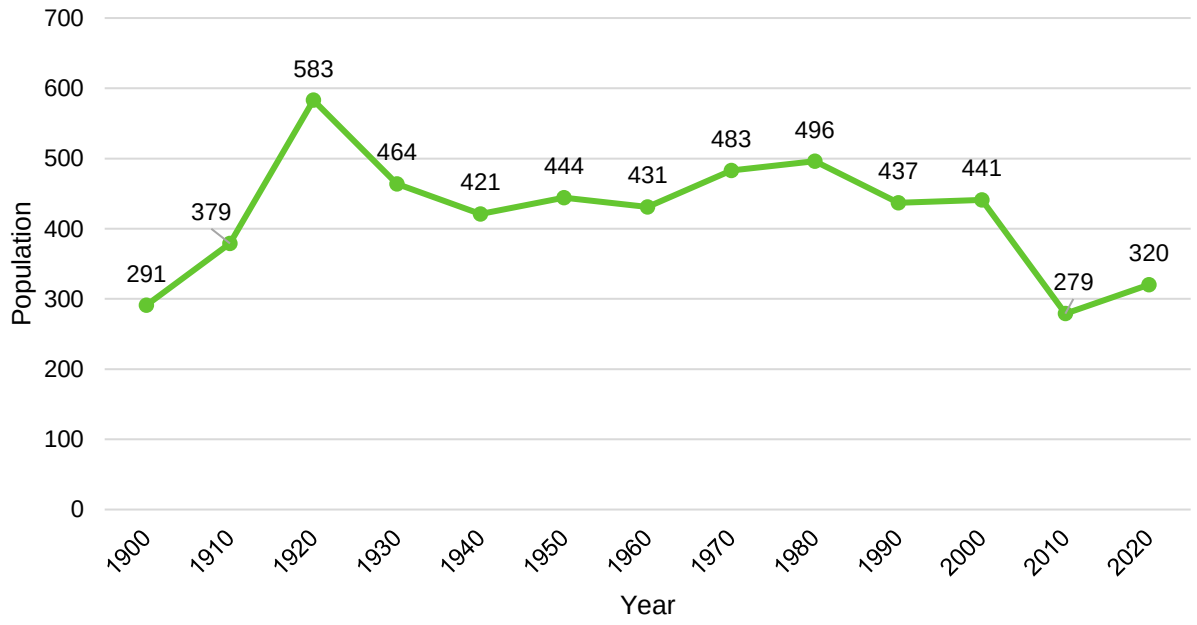
Location and Geography

The Village of Silver Creek is in northeastern Merrick County and covers an area of 0.28 square miles. Major waterways in the area include the Platte River and Silver Creek.

Demographics

The following figure displays the historical population trend for the Village of Silver Creek. This figure indicates that the population of Silver Creek has been increasing since 2010 to 320 people in 2020. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Increasing populations can also contribute to increasing tax revenues, allowing communities to pursue additional mitigation projects. Silver Creek's population accounted for 4.2% of Merrick County's population in 2020.[43]

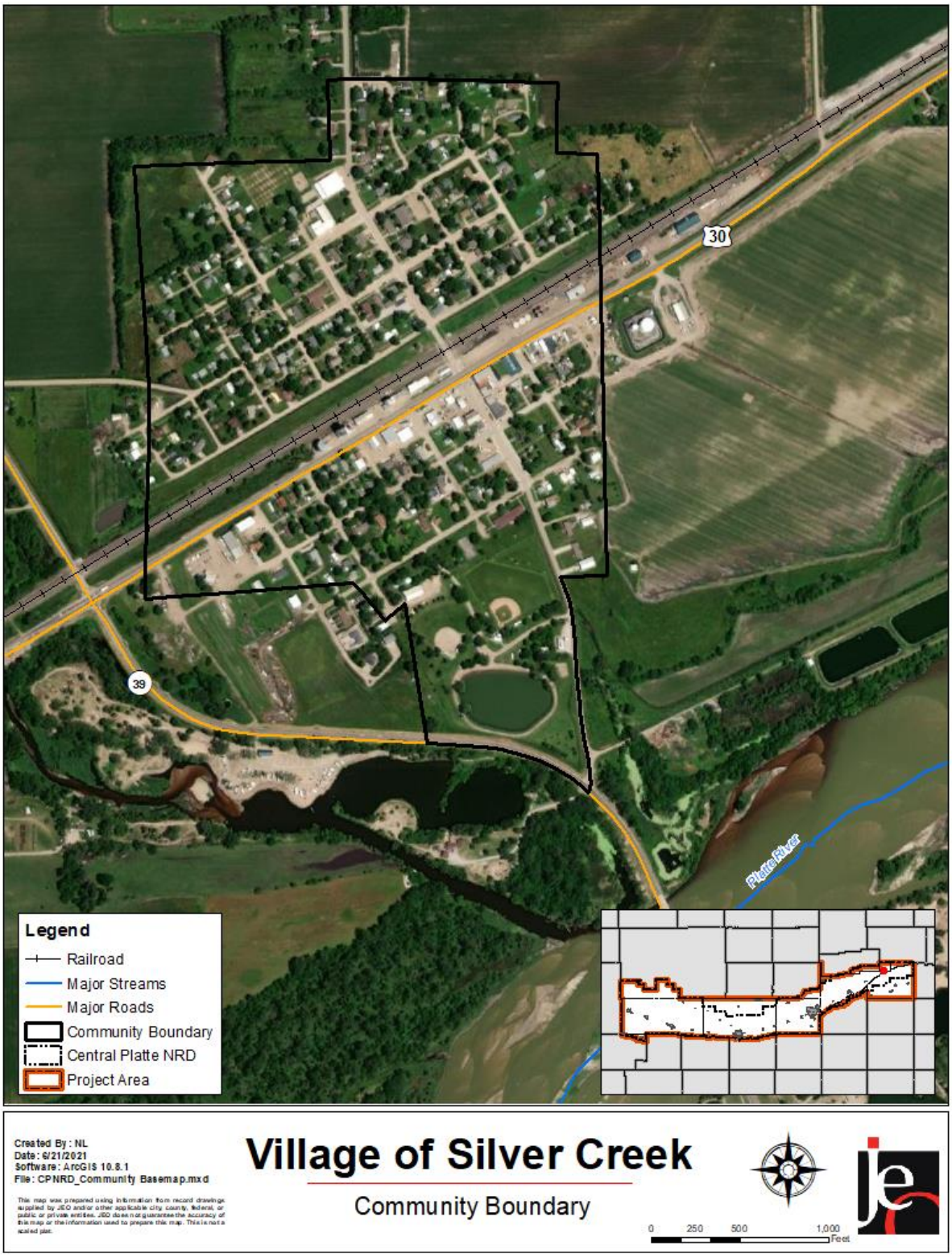
Figure SIL.1: Population 1900 - 2020



Source: U.S. Census Bureau

43 United States Census Bureau. "2020 Decennial Census: P1: DEC Redistricting Data." https://data.census.gov/cedsci/.

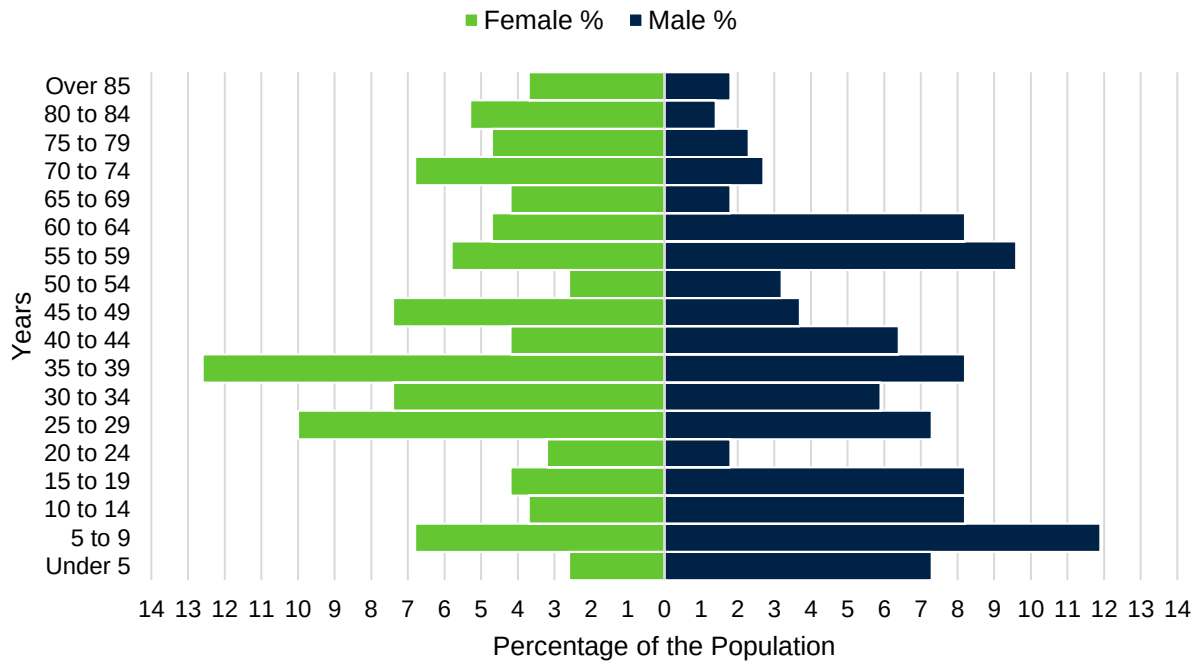
Figure SIL.2: Village of Silver Creek



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

- **0.7% is non-white.** Since 2010, Silver Creek grew less ethnically diverse. In 2010, 1.1% of the Silver Creek's population was non-white. By 2019, 0.7% was non-white.[44]
- **Younger median age.** The median age of Silver Creek was 37.6 years in old 2019. The population grew younger since 2010, when the median age was 47.5.[45]

Figure SIL.3: Silver Creek's Population Pyramid



The figure above shows Silver Creek's population percentage broken down by sex and five-year age groups. Silver Creek's population is younger with a much higher percentage of the population below 40 years of age. This likely indicates a growing population in the years to come.

Employment and Economics

Low-income populations, long distance commuters, and the unemployed may be more vulnerable to certain hazards than other groups. Silver Creek's population has:

- **13.5% of people living below the poverty line.** The poverty rate (13.5%) in the Village of Silver Creek was higher than the state's poverty rate (7.2%) in 2019.[46]
- **$37,083 median household income.** Silver Creek's median household income in 2019 ($37,083) was $24,000 lower than the state ($61,439).[46]
- **0.3% unemployment rate.** In 2019 Silver Creek had a lower unemployment rate (0.3%) when compared to the state (2.3%).[46]

44 United States Census Bureau. "2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates." https://data.census.gov/cedsci/.
45 United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." https://data.census.gov/cedsci/.
46 United States Census Bureau. "2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." https://data.census.gov/cedsci/.

- **23.8% of workers commuted 30 minutes or more to work.** Fewer workers in Silver Creek commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (23.8% compared to 29.1%).[47]

Major Employers

The community has a few locally owned businesses that employ a few residents. The largest employer is Twin Rivers Public Schools. Much of the community's workforce commute to nearby Columbus and Grand Island for work.

Housing

The age of housing may indicate which housing units were built prior to the development of state building codes. Those houses and vacant housing may be more vulnerable to hazard events if they are poorly maintained. Unoccupied housing may also suggest that future development may be less likely to occur. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe thunderstorms if those homes are not anchored correctly. Renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have flood insurance, or to know their risks to flooding and other hazards. Silver Creek's housing stock has:

- **52.9% of housing built prior to 1970.** Silver Creek has a larger share of housing built prior to 1970 than the state (52.9% compared to 46%).[48]
- **11.8% of housing units vacant.** Since 2010, Silver Creek's vacancy rate grew. In 2010 the vacancy rate was 9.6%. By 2019, 11.8% of housing units were vacant.[48]
- **6.6% mobile and manufacture housing.** The Village of Silver Creek had a larger share of mobile and manufactured housing (6.6%) compared to the state (3.3%).[48]
- **17.1% renter-occupied.** The rental rate of Silver Creek was 17.1% in 2019. The percentage went down since 2010, when renter occupied housing was at 20.5%.[48]

Governance

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

- Clerk/Treasurer
- Streets/Parks Commissioner
- Planning Commission
- Housing Authority
- Water and Sewer Department
- Volunteer Fire Department
- Village Engineer

47 United States Census Bureau. "2019 Census Bureau American Community Survey: S0802: Means of Transportation to Work by Selected Characteristics." https://data.census.gov/cedsci/.

48 United States Census Bureau. "2019 Bureau American Community Survey: DP04: Selected Housing Characteristics." https://data.census.gov/cedsci/.

Capability Assessment

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

Municipal funds are limited to maintaining current facilities and systems. Currently there are no projects that a large portion of funds are dedicated to. Funds have increased over recent years, likely due to inflation of property values.

Table SIL.2: Capability Assessment

Survey Components/Subcomponents		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
	Building Codes	Yes
	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	Yes
	Civil Engineering	Yes
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	-
Fiscal Capability	Capital Improvement Plan/ 1- & 6-Year plan	Yes
	Applied for grants in the past	No
	Awarded a grant in the past	No
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No

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

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

Plan Integration

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

Building Code

The building code sets standards for constructed buildings and structures. Silver Creek's Building Codes require elevation of structures in the floodplain and outlines proper sump pump installation.

Comprehensive Plan (2015)

The comprehensive plan is designed to guide the future actions and growth of the village. The plan directs development away from chemical storage facilities and from major transportation routes. It also limits density in areas adjacent to known hazardous areas and encourages preservation of open space in hazard-prone areas. With the plan having been updated recently, there is currently no plan to further integrate the HMP into the comprehensive plan.

Floodplain Ordinance, Zoning Ordinance (2015), and Subdivision Regulations

The villages floodplain ordinance, zoning ordinance, and subdivision regulations outline where and how development should occur in the future. The villages zoning ordinances identify floodplain areas as parks of open space and requires at least one foot of elevation above base flood elevation in the floodplain. The ordinance also discourages development near chemical storage sites and along major transportation routes.

Merrick County Local Emergency Operations Plan (2020)

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

Future Development Trends

Over the past five years a lakeside subdivision and a privately owned campground have been under development. The new campground and lakeside/riverside properties are exposed to possible flood impacts from river and creek conditions. No new developments or businesses are planned at this time. Silver Creek's future land use map shows commercial and industrial properties along the highway with residential housing outside of those areas.

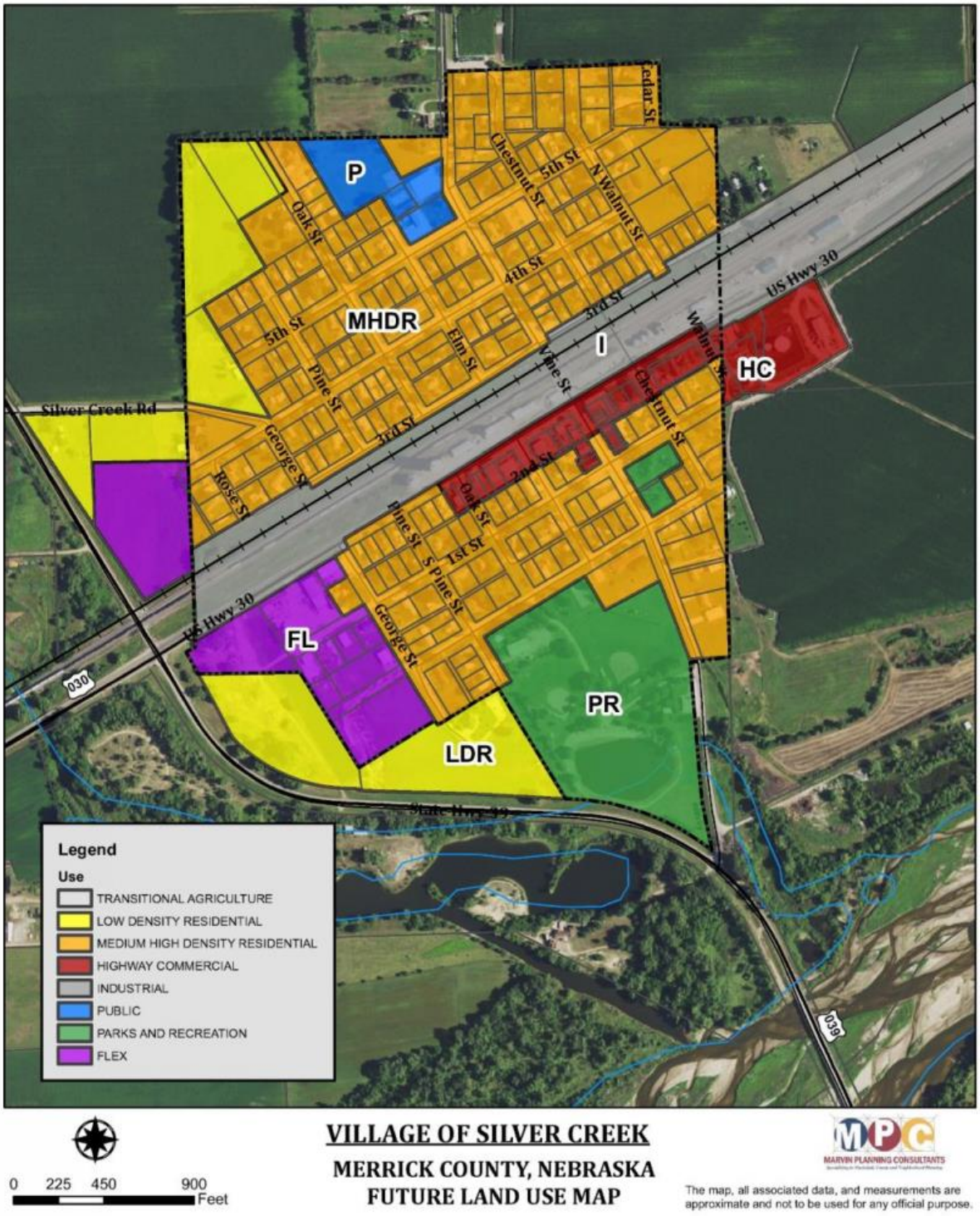
Community Lifelines

Transportation

Silver Creek's major transportation corridors include US Highway 30 and Nebraska State Highway 39. The most traveled route is Highway 30 with an average of 3,870 vehicles daily, 1,125 of which are trucks.[49] The village has one Union Pacific line traveling west to east along Highway 30 through the community. The local planning team noted that hazardous chemicals are regularly transported along local routes. In the past, the local coop had a fuel spill resulting from an overfilled storage tank. The event contaminated land and ground water next to a recreational pond and park area. Train derailments have occurred in the village in the past. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

49 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." [map]. https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34.

Figure SIL.4: Future Land Use Map



Hazardous Materials

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are six chemical storage sites within or near Silver Creek which house hazardous materials (listed below). In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. In addition to the chemical storage sites below, the local planning team indicated that Agro Service located along Highway 30 is another facility of concern due to housed chemicals.

Table SIL.3: Chemical Storage Sites

Name	Address	Floodplain (Y/N)
Frontier Cooperative	3221 35th Rd	Y (1%)
Frontier Cooperative	308 Highway 30	N
Town Mart Convenience Store	212 Vine St	N
CenturyLink	306 Vine St	N
Frontier Cooperative	Rose St	Y (1%)
Frontier Cooperative	S Vine St	Y (1%)

Source: Nebraska Department of Environment and Energy[50]

Health and Medical Facilities

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

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 part of this plan update. The following table and figure provide a summary of the critical facilities for the jurisdiction.

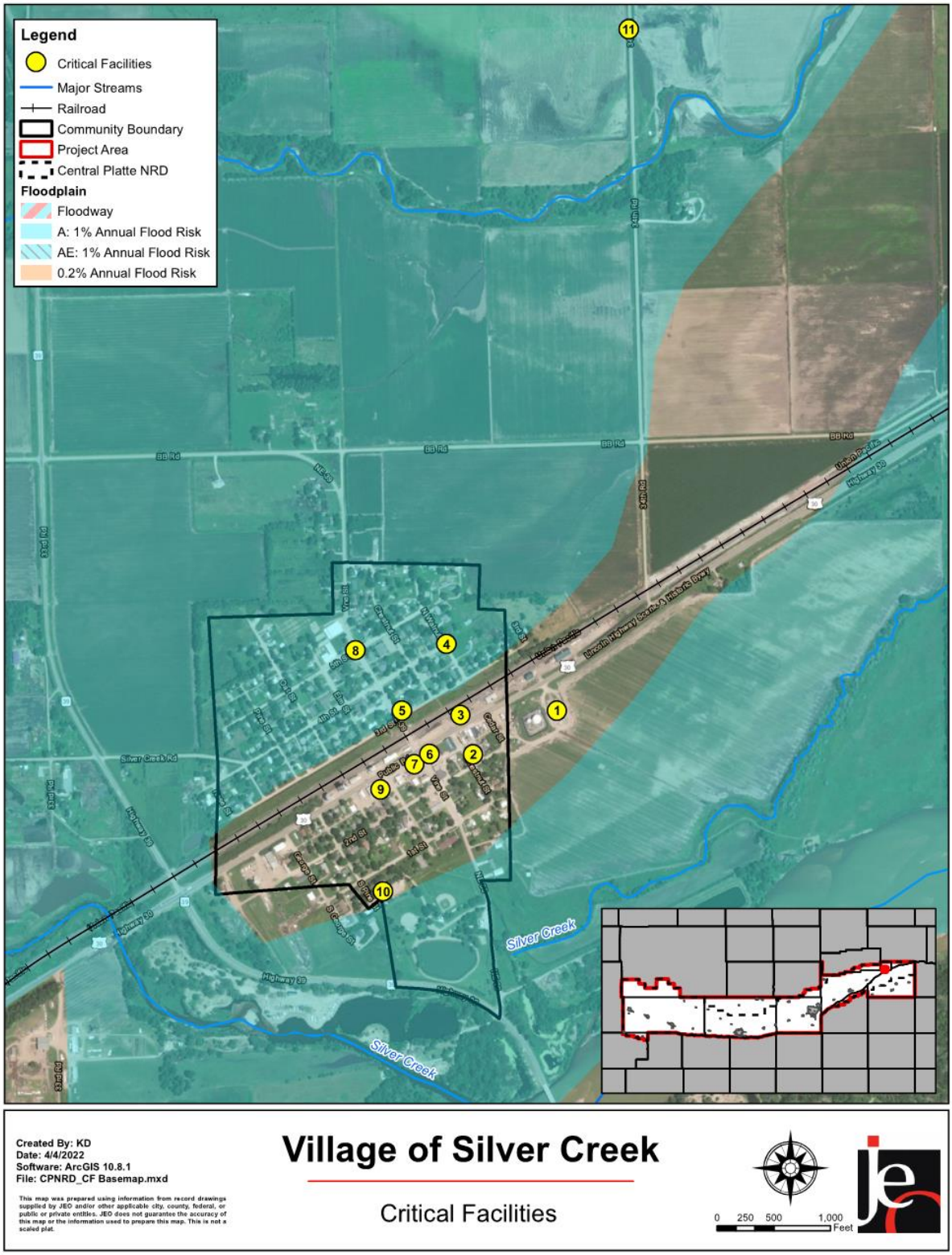
Although they may not be listed in the table below, critical infrastructure also includes power infrastructure, cell towers, alert sirens, water infrastructure, wastewater infrastructure, and roadways.

Table SIL.4: Critical Facilities

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Agro Services	N	N	N
2	Hometown Market	N	N	N
3	Frontier Coop	N	In Process	N
4	Lift Station	N	Y	Y (1%)
5	Police Department	N	N	Y (1%)
6	Post office	N	N	N
7	Tonto's 66	N	N	N
8	Twin River Public School	N	N	Y (1%)
9	Village Hall/Fire Station	N	Y - Portable	N
10	Village Maintenance/Water Tower	N	Y	N
11	Well	N	N	Y (1%)

50 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed June 2021.

Figure SIL.5: Critical Facilities



Parcel Improvements and Valuation

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

Table SIL.5: Parcel Improvements and Value in the 1% Annual Flood Risk Area

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
205	$10,790,405	132	$7,260,865	64.4%

Source: County Assessor, 2021

Table SIL.6: Parcel Improvements and Value in the 0.2% Annual Flood Risk Area

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
205	$10,790,405	0	$0	0%

Source: County Assessor, 2021

Historical Occurrences

See the Merrick County profile for historical hazard events, including the number of events, damage estimates, and any fatalities or injuries. Larger scale and more damaging events that impacted the community are discussed under Hazard Prioritization.

Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the community. The local planning team prioritized the selected hazards 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

Drought was identified as one of the top concerns for the Village because of the associated risk of wildfire, crop and livestock loss, and reduced water supply. Silver Creek defines drought as decreased well levels and extreme fire potentials. The planning team reports that the village's water quality is excellent, but they have only one, shallow 50-foot well. The village's water supply is metered. They have drought emergency response procedures with DHHS, but no drought ordinance to control water expenditures. Silver Creek's water supply is sufficient at this time, but mitigation plans include increasing the water supply with a second well. A location for a second well is stalled because the village is having difficulty finding a suitable site due to the proximity of bedrock to the surface of the ground. EPA depth regulations have made it difficult to find a good location.

Flooding

The flood risk areas of concern for Silver Creek surround the village with a large portion of the village being impacted by the floodplain. The Platte River, Silver Creek, and Prairie Creek are the bodies of water of greatest concern. The planning team reported past significant floods that occurred in 1967, the early 80s, and in 2007 when heavy rainfall and snow melt caused the surrounding waters to flood almost up to the town. Because of Silver Creek's flat landscape, the resulting water from sudden heavy rains cannot drain fast enough. Rain in nearby areas can overfill Prairie Creek, and cause flooding near Silver Creek. There is public housing near the Platte River prone to flooding. Flooding mitigation will be done by reducing creek flow restrictions to improve drainage.

During the 2019 flood events, due to numerous road closures across the state, Silver Creek received heavy detour traffic with no routes out of town. Traffic would end up at Silver Creek which was a dead end for travelers heading north or east. The village cooperated with state and county efforts to manage traffic but overall, there was difficulty rerouting traffic away from the dead-end roads.

Silver Creek is a member of the NFIP, and the village's Floodplain Administrator (Jennifer Czarnick) will oversee the commitments and requirements of the NFIP. The initial FIRM for the village was delineated in 1/6/2010 and the current effective map date is 1/6/2010. Over 64% of parcel improvements in the village are located in the 1% annual flood risk area (see table in the Parcel Improvements and Valuation section). As of October 31, 2021, there are three NFIP policies in-force covering $495,900. Silver Creek does not currently have any repetitive loss or severe repetitive loss structures.

Hazardous Materials Release

The local planning team identified chemical transportation as a top concern for the village because of the isolated location and complicated routes of Silver Creek. The Loup and Platter Rivers make transportation confusing to unfamiliar visitors because there are limited river crossings in many locations. Highway 30 and the Union Pacific Railroad are of greatest concern. Unknown chemicals are frequently transported along these routes. Mitigation plans involve reducing Silver Creek's vulnerability to chemical spills with public education on response plans. Local response resources include the local volunteer fire department and mutual aid agreements with Columbus and Grand Island for HazMat response. Fire department equipment is in good shape but limited.

Tornadoes and High Winds

NCEI reports a tornadic event composed of multiple tornadoes reaching up to EF3 status in October of 2001 that resulted in $100,000 dollars in damages to the post office, thirteen residences, out buildings, trees, and power lines in the area. The community does not have private or public safe rooms in which to seek shelter. Due to the high ground water, most places do not have below ground structures. There is one siren in the community, operated by the County Sheriff, but it is not always heard throughout the town. Weather and text alerts are now available in the village. Municipal records are not backed up. Mutual aid agreements are in place with the Central Nebraska Mutual Aid Association. Tornado hazard mitigation plans include providing backup generators for all critical facilities and providing public education on tornado response plans. The village is continually removing hazardous trees in the community.

Mitigation Strategy

New Mitigation Actions

Mitigation Action	New Water Well
Description	Construct a second water well to help increase the village's water supply.
Hazard(s) Addressed	Drought
Estimated Cost	$500,000
Local Funding	General Fund
Timeline	2-5 Years
Priority	High
Lead Agency	Village Board, Village Engineer
Status	Currently have funds approved for the project. Working with EPA depth regulations has made site selection difficult due to bedrock close to the surface in the area.

Mitigation Action	Storm Shelter / Safe Room
Description	Identify and evaluate existing safe rooms and/or storm shelters; improve and/or construct safe rooms and/or storm shelters; design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Thunderstorms
Estimated Cost	$150 square ft for retrofit; $300 square ft for new construction
Local Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	Village Board
Status	The village is looking into constructing a safe room in or near the fire hall to provide emergency shelter for Highway 30 travelers.

Kept Mitigation Actions

Mitigation Action	Backup and Emergency Generators
Description	Identify and evaluate current backup and emergency generators; obtain additional generators based on identification and evaluation; provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters.
Hazard(s) Addressed	All Hazards
Estimated Cost	$20,000 - $75,000+ per generators
Local Funding	General Fund
Timeline	2-5 Years
Priority	Medium
Lead Agency	Village Board, Twin Rivers Public School
Status	A new backup generator is in place at the village shop to keep SCADA and 911 communications online.

Mitigation Action	Public Awareness/Education
Description	Obtain or develop hazard education materials; conduct multi-faceted public education; distribute fact sheets or maps at community events, public schools, other venues and to public and private communication systems; conduct scheduled siren/warning system tests; prepare educational materials listing safe rooms and shelters and evacuation plans; distribute educational materials listing safe rooms and shelters; purchase equipment such as overhead projectors and laptops to facilitate presentation of information.
Hazard(s) Addressed	All Hazards
Estimated Cost	$1,000+
Local Funding	General Fund
Timeline	1 Year
Priority	High
Lead Agency	Village Clerk, Village IT Contractor – IT Innovations
Status	The village has launched a website. Additional programs and information still in progress.

Mitigation Action	Reduce Bottlenecks / Flow Restrictions
Description	Evaluate current bottlenecks/flow restrictions; implement measures to reduce bottlenecks/flow restrictions including silt removal.
Hazard(s) Addressed	Flooding
Estimated Cost	$5,000
Local Funding	General Fund
Timeline	2-5 Years
Priority	Medium
Lead Agency	Village Board, Village Engineer
Status	No updates at this time.

Removed Mitigation Actions

Mitigation Action	Conduct Water Supply Study
Description	Evaluate the need to expand water storage capacity through new means (new water tower, standpipe, etc.) or locate new water resources to provide a safe water supply for the community and nearby rural areas during periods of drought.
Hazard(s) Addressed	Drought
Status	This project is no longer needed as a second well will be built.

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

The community profile was last reviewed by the planning team in 2017 during the required plan updated process. The Maintenance Superintendent will be responsible for reviewing and updating the plan in the future and will review the plan annually. The public will be notified through website updates and board meetings.

School District Profile

Central City Public Schools

Central Platte NRD
Hazard Mitigation Plan Update

2022

Local Planning Team

Central City Public School's local planning team for the hazard mitigation plan are listed in the table below along with the meetings attended. All participant worksheets were filled out and returned by the district.

Table CPS.1: Central City Public Schools Local Planning Team

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Jeff Jensen	Superintendent	Central City Public Schools	-	Central City
Zach Springer	Dean of Students	Central City Public Schools	Central City	-

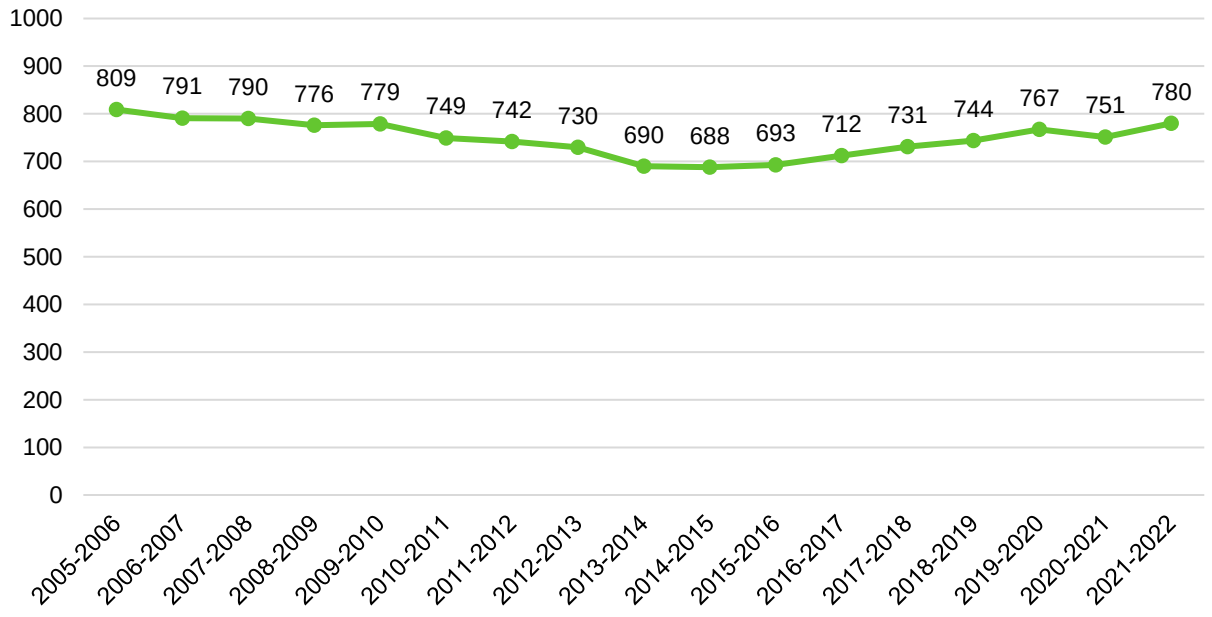
Location

Central City Public Schools is in southcentral Merrick County and serves three schools: Central City Elementary School, Central City High School, and Central City Middle School. Other district owned buildings include a bus barn, greenhouse, stadium concessions, and softball/baseball field. The school district provides services to students in the communities of Central City, Rural Merrick County, and parts of rural Hamilton County.

Demographics

The following figure displays the historical student population trend starting with the 2005-06 school year and ending with the 2020-2021 year. It indicates that the student population has declined since 2006. There are 780 students enrolled in the district. The district anticipates the student population to grow in the coming years as new housing continues to be developed. Most students speak English, but a small population speaks Spanish.

Figure CPS.1: Student Population 2005-2022



Source: Nebraska Department of Education (2006-2021)[51], Local Planning Team (2022)

51 Nebraska Department of Education. July 2021. "2020-2021 Education Profile for District: Central City Public Schools." https://nep.education.ne.gov//Districts/Index/61-0004-000?DataYears=20192020

Figure CPS.2: Central City Public Schools

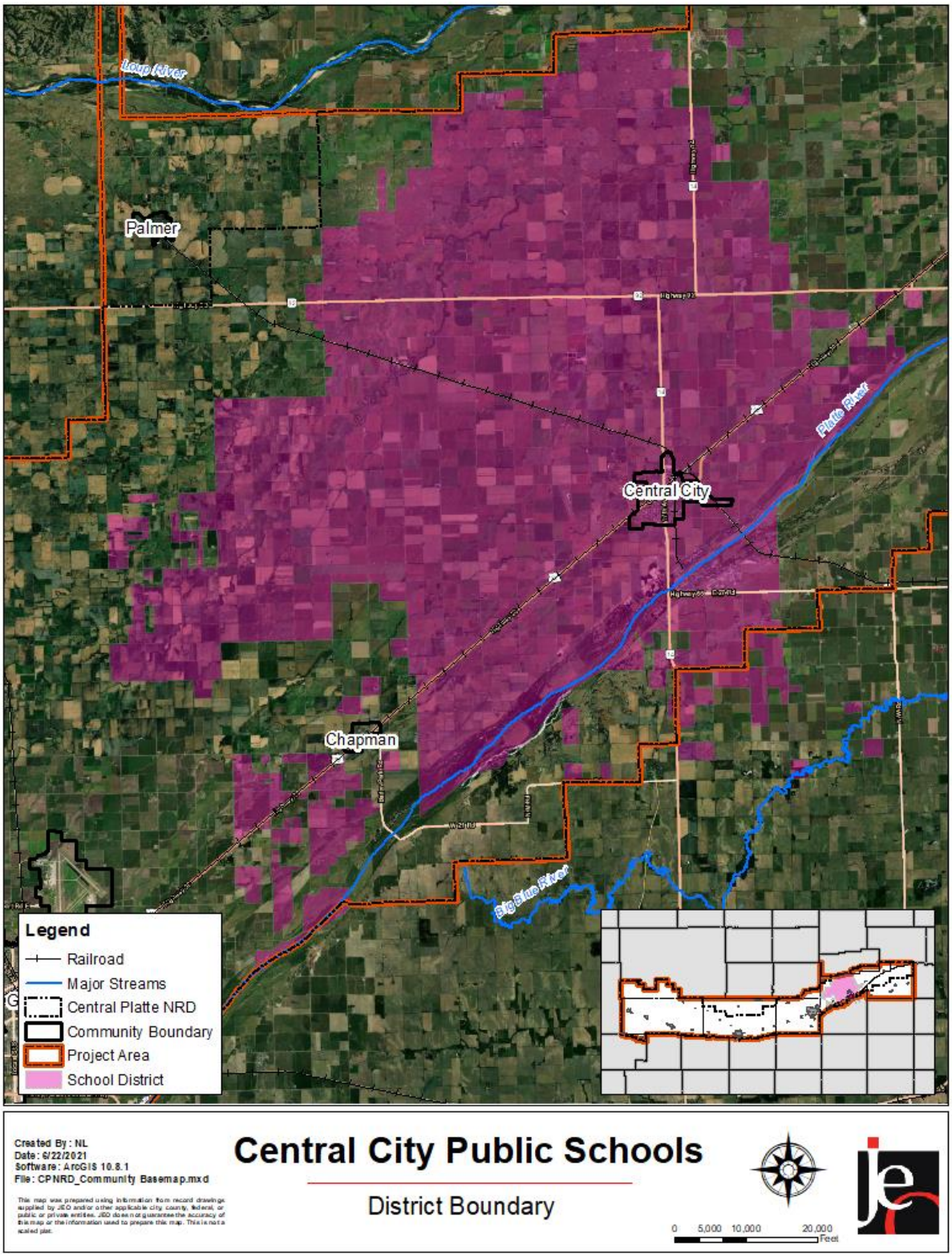
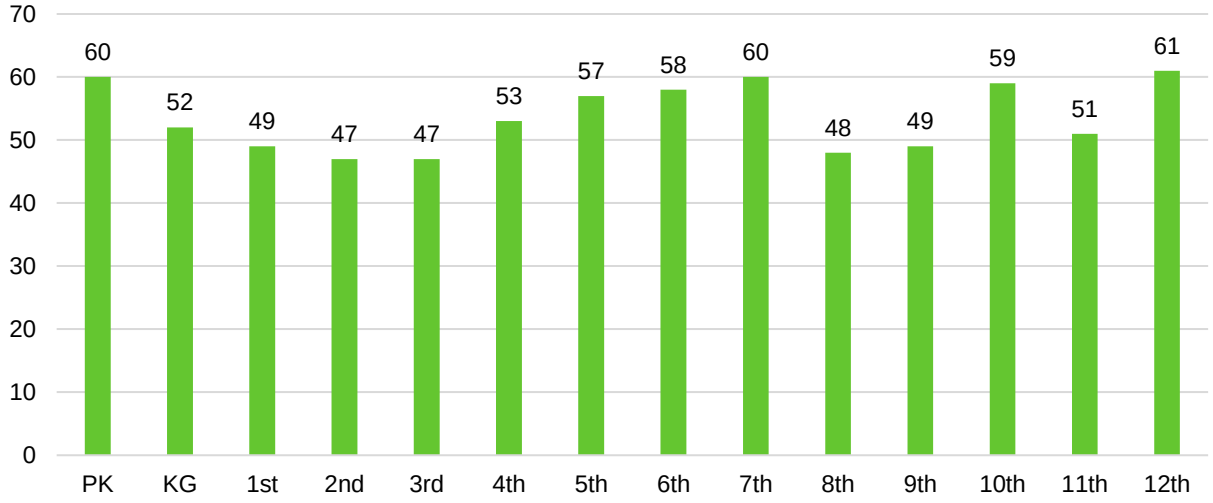


Figure CPS.3: Number of Students by Grade, 2020-2021



Source: Nebraska Department of Education

The figure above indicates that the largest number of students are in the 12th and 7th grades. The lowest population of students are 2nd and 3rd grades. According to the Nebraska Department of Education (NDE), 46.15% of students receive either free or reduced priced meals at school. This is higher than the state average of 45.60%. Additionally, 16.81% of students are in the Special Education Program, and the school mobility rate is 7.55%. These particular students may be more vulnerable during a hazardous event than the rest of the student population.

Table CPS.2: Student Statistics, 2019-2020

	School District	State of Nebraska
Free/Reduced Priced Meals	46.15%	45.60%
School Mobility Rate	7.55%	8.36%
English Language Learners	*	7.43%
Special Education Students	16.81%	15.56%

**Data is not available with fewer than 10 students*
Source: Nebraska Department of Education[52]

Administration and Staff

The school district has a superintendent and three principals. The school board is made up of a six-member panel. Additional offices which may assist in mitigation projects are listed below. The district has approximately 138 staff.

- Facilities
- Business Manager
- Technology
- Transportation
- Special Education Director
- Activities Director
- Dean of Students

52 Nebraska Education Profile. "School Report Card." Accessed July 2021. http://nep.education.ne.gov/Home/.

Capability Assessment

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

The school district conducts regular in-service trainings about emergency procedures for staff and provides educational materials to students and families including student handbooks, website updates, and newsletters. The district conducts all drills in collaboration with local police and county. There are also quarterly safety meetings and an annual insurance visit to each school.

A large portion of district funds are dedicated to upgrading the high school and for the new gym/FEMA storm shelter. Funds have stayed the same over recent years.

Table CPS.3: Capability Assessment

Survey Components/Subcomponents		Yes/No
Planning Capability	Capital Improvements Plan/Long-Term Budget	Yes
	Continuity of Operations Plan	No
	Disaster Response Plan	Yes
	Other (if any)	-
Administration & Technical Capability	GIS Capabilities	No
	Civil Engineering	Yes
	Local staff who can assess district's vulnerability to hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	-
Fiscal Capability	Applied for grants in the past	Yes
	Awarded grants in the past	Yes
	Authority to levy taxes for specific purposes such as mitigation projects	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Approved bonds in the past	Yes
	Flood Insurance	Yes
	Other (if any)	-
Education & Outreach Capability	Local school groups or non-profit organizations focused on environmental protection, emergency preparedness, access, and functional needs populations, etc. (Ex. Parent groups, hazard mitigation boards, etc.)	No
	Ongoing public education or information program (Ex. Responsible water use, fire safety, household preparedness, environmental education, etc.)	Yes
	StormReady Certification	No
	Other (if any)	-
Drills	Fire	10 / year
	Tornado	2 / year
	Intruder	2 / year
	Bus evacuation	2 / year
	Evacuation	1 / year
	Other (if any)	

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

Plan Integration

The school district has a Crisis Response Plan that addresses severe weather, fire, chemical spills, and acts of terrorism/intruders. This plan was last updated in 2017 and outlines roles, responsibilities, and procedures for response to these hazards. No other examples of plan integration were identified. The district will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Future Development Trends

Over the past five years the school has updated facilities so that they are more safe and secure. All of the facilities are in great shape and will not need to be updated for another 10-15 years. In the next five years the school district is working with Central City to construct a new gym that will also serve as a FEMA storm shelter.

Community Lifelines

Transportation

Four major transportation corridors travel through the district: US Highway 30, and Nebraska State Highways 14, 66, 92. The most traveled route is Highway 30 with an average of 6,555 vehicles daily, 785 of which are trucks. [53] Highway 14 is also a large concern as there is no stop light. In addition, there is no overpass at the railroad tracks on Highway 14. A Union Pacific rail line runs southwest to northeast through the district and a Nebraska Central Railroad Company rail lines runs southeast to northwest through the district. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the district, as well as areas more at risk of transportation incidents. The district owns 12 busses with approximately 300 students bused to and from school each day.

Hazardous Materials

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are eight chemical storage sites located within the district which house hazardous materials. None of the schools are located near these chemical facilities. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

53 Nebraska Department of Roads. 2018. “Interactive Statewide Traffic Counts Map.” https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34.

Table CPS.4: Chemical Storage Sites

Name	Address	Floodplain (Y/N)
Agricultural Services Inc.	2132 Archer Rd, Archer, NE	Y (1%)
Aurora Co-op Elevator Company	1313 13th Ave, Central City, NE	Y (0.2%)
Aurora Co-op Elevator Company	1313 13th Rd, Central City, NE	N
NDOT Central City Yard	1406 6th St, Central City, NE	Y (0.2%)
Pump & Pantry 29	1110 G St, Central City, NE	Y (0.2%)
CenturyLink	1707 16th Ave, Central City, NE	Y (0.2%)
Green Plains Central City LLC	214 20th St, Central City, NE	Y (0.2%)
Central City Ready Mix Plant	1576 L Rd, Central City, NE	Y (0.2%)

Source: Nebraska Department of Environment and Energy[54]

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 part of this plan update. The following table and figure provide a summary of the critical facilities for the district.

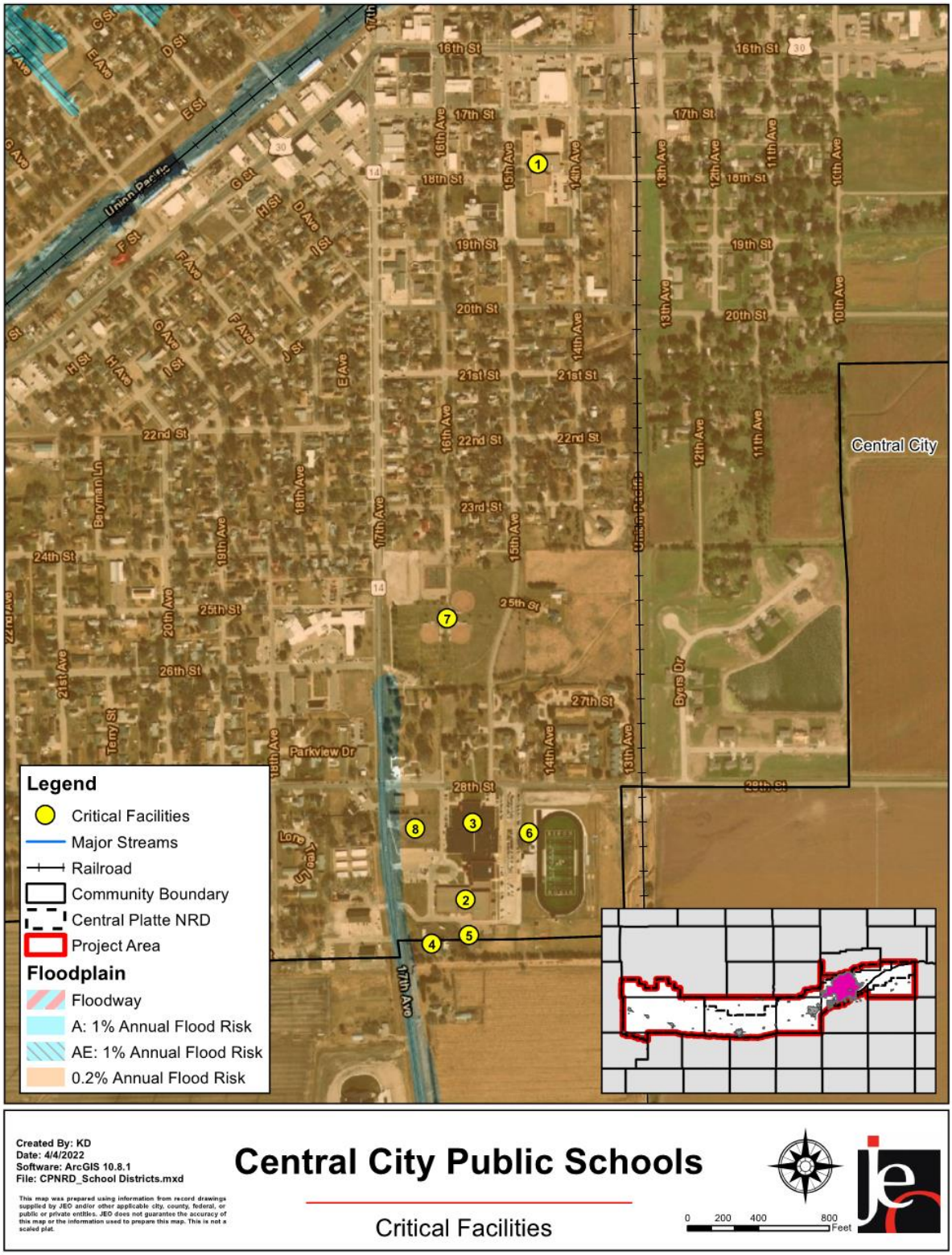
Although they may not be listed in the table below, critical infrastructure also includes power infrastructure, cell towers, alert sirens, water infrastructure, wastewater infrastructure, and roadways.

Table CPS.5: Critical Facilities

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Central City Elementary School	Y	N	Y (0.2%)
2	Central City Middle School	Y	Y	Y (0.2%)
3	Central City High School	Y	Y	Y (0.2%)
4	Bus Barn	N	N	Y (0.2%)
5	Greenhouse	N	N	Y (0.2%)
6	Stadium Concessions	N	N	Y (0.2%)
7	Softball & Baseball Fields	N	N	Y (0.2%)
8	Bison Activity Center / Safe Room	Y	Y	Y (0.2%)

54 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed June 2021.

Figure CPS.4: Critical Facilities



Historical Occurrences

See the Merrick County profile for historical hazard events, including the number of events, damage estimates, and any fatalities or injuries. Larger scale and more damaging events that impacted the district are discussed under Hazard Prioritization.

Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the district. The local planning team prioritized the selected hazards based on historical hazard occurrences, potential impacts, and the district's capabilities. For more information regarding regional hazards, please see *Section Four* | *Risk Assessment.*

Hazardous Materials Release

Transportation chemical spills are primarily a hazard for the middle and high school buildings. Both schools are located adjacent to Highway 14. A large variety of chemicals are transported along this highway daily. An evacuation of the schools may be necessary if a significant spill were to occur nearby. The school district has a plan in place to facilitate an evacuation. Other transportation routes of concern are Highway 30 and the railroad which runs through the city.

Severe Thunderstorms

Severe thunderstorms can lead to water damage and power outages affecting refrigeration and communication. The planning team indicated that severe thunderstorms have not damaged any facilities in the past. However, that does not mean there is no risk as severe thunderstorms occur multiple times annually. In the event of power loss, all three schools have back up power generators. In addition, all three schools have a weather radio to help warn of impending severe weather.

Severe Winter Storms

Severe winter storms can cause power outages, impact communication infrastructure, and hinder transportation of students. In 2017 an ice storm caused the district to lose power for several days. During the February 2021 extremely cold temperatures the school opened its facilities to families in need that didn't have adequate heat. Students living outside the city limits are especially vulnerable to snow affecting transportation routes. On school grounds the district has multiple means for snow removal and can contract out removal for parking areas. The planning team indicated that snow removal resources were sufficient for what is needed on school properties.

Tornadoes and High Winds

Tornadoes have the potential to cause significant damages to critical facilities, power outages, and loss of life. Power outages can affect communication infrastructure and refrigeration. The school district does have all files backed up in the cloud should data loss occur. The school buildings have designated areas for students and teachers to go to in the event of a tornado, however space may become an issue as many facilities do not have low areas due to a high-water table. The planning team indicated that the city has tornado sirens which can be heard at all of the school facilities. A new gym/FEMA storm shelter is currently under construction with help from the city. The FEMA storm shelter will be used by both the school district and community in the event of a tornado.

Figure CPS.5: Safe Room Construction

Mitigation Strategy

New Mitigation Actions

Mitigation Action	Update Technology Resources
Description	Update resources to 1 to 1 devices for situations in which the district may need to go to virtual distance learning.
Hazard(s) Addressed	All Hazards
Estimated Cost	$10,000+
Local Funding	School General Fund
Timeline	1-5 Years
Priority	Medium
Lead Agency	Superintendent
Status	New Action, Not Started

Kept Mitigation Actions

Mitigation Action	Alert Sirens
Description	Perform an evaluation of existing alert sirens in order to determine sirens which should be replaced or upgraded. Install new sirens where lacking with remote activation options. Establishing safe room communication between the school and community is critical.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Thunderstorms, Severe Winter Storms
Estimated Cost	$15,000+
Local Funding	School General Fund
Timeline	1-5 Years
Priority	High
Lead Agency	Superintendent
Status	Not Started

Mitigation Action	Backup and Emergency Generators
Description	Provide a portable or stationary source of backup power or replace existing generators.
Hazard(s) Addressed	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
Estimated Cost	$3,500+ depending on site requirements
Local Funding	School General Fund
Timeline	5+ Years
Priority	Low
Lead Agency	Superintendent
Status	Backup generators have been installed at the middle school, high school, and bison activity center/safe room. Replacement of such generators may be necessary in the future.

Mitigation Action	Continuity Plans
Description	Develop continuity plans for critical services in order to increase resiliency after a hazardous event. Include information regarding the safe room that is currently under construction.
Hazard(s) Addressed	All Hazards
Estimated Cost	$5,000, Staff Time
Local Funding	School General Fund
Timeline	1-5 Years
Priority	Medium
Lead Agency	Superintendent
Status	Not Started

Mitigation Action	Emergency Communication
Description	Establish an action plan to improve communication between schools and other government agencies to better assist students and staff during and following emergencies. Establish inner-operable communications.
Hazard(s) Addressed	All Hazards
Estimated Cost	$1,000, Staff Time
Local Funding	School General Fund
Timeline	1-5 Years
Priority	Medium
Lead Agency	Superintendent
Status	Not Started

Mitigation Action	Public Awareness/Education
Description	Educate staff, students, and parents about hazard vulnerability and mitigation measures. Activities may include classroom modules profiling certain hazards and discussing preparedness measures. Educational materials, such as brochures and fliers, can be developed and provided to parents to increase community wide hazard awareness. Staff training can be conducted regarding school hazard vulnerability. In addition, purchasing education equipment such as overhead projectors and laptops.
Hazard(s) Addressed	All Hazards
Estimated Cost	$3,000+
Local Funding	School General Fund
Timeline	1-5 Years
Priority	Medium
Lead Agency	Superintendent
Status	Ongoing. Educational materials are given to students and families on a regular basis.

Mitigation Action	Storm Shelter / Safe Room
Description	Design and construct fully supplied safe rooms in school facilities. Safe room will protect the population ½ mile from the facility.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Thunderstorms, Severe Winter Storms
Estimated Cost	$4,000,000+
Local Funding	School General Fund, Central City General Fund
Timeline	1 Year
Priority	High
Lead Agency	Superintendent, Central City Council
Status	Under construction. Project to be completed in September 2022.

Removed Mitigation Actions

Mitigation Action	Install Hail Resistant Roofing
Description	Install hail resistant roofing at critical facilities.
Hazard(s) Addressed	Severe Thunderstorms
Status	Removed. The district would like to focus on other projects.

Mitigation Action	Power, Service, Electrical, and Water Distribution Lines
Description	School Districts can work with their local Public Power District or community electricity department to identify vulnerable transmission and distribution lines on school property and plan to replace or retrofit existing structures to be less vulnerable to storm events.
Hazard(s) Addressed	All Hazards
Status	Removed. This action would be better handled by the city, county, or local public power districts.

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 planning documents, 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 Safety Committee will be responsible for reviewing and updating the plan. This committee will review the plan annually.