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**County Profile**

# **Buffalo County**

**Central Platte NRD  
Hazard Mitigation Plan Update**

**2022**

## Local Planning Team

Buffalo 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 BUF.1: Buffalo County Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Darrin Lewis	Emergency Manager	Buffalo County	Central City, Lexington, Grand Island – All Virtually	Grand Island – Virtually
Dennise Daniels	Planning/Zoning/Floodplain Administrator	Buffalo County	All Meetings - Virtually	Grand Island, Central City – All Virtually
Ivan Klein	County Commissioner	Buffalo County	-	Grand Island

## Location and Climate

Buffalo County is located in south-central Nebraska and is bordered by Custer, Sherman, Howard, Hall, Kearney, Phelps, and Dawson Counties. The total area of Buffalo County is 975 square miles. Major waterways within the county include the Platte River in the southern portion of the county, and the South Loup River in the northern portion of the county. Buffalo County lies in the dissected plains and valleys topographic regions, with the vast majority of the county's land characterized by agricultural fields.

### Climate

The average high temperature in Buffalo County for the month of July is 86.7 degrees and the average low temperature for the month of January is 13.3 degrees. On average, Buffalo County receives over 25.2 inches of rain and 21.8 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 BUF.2: Buffalo County Climate**

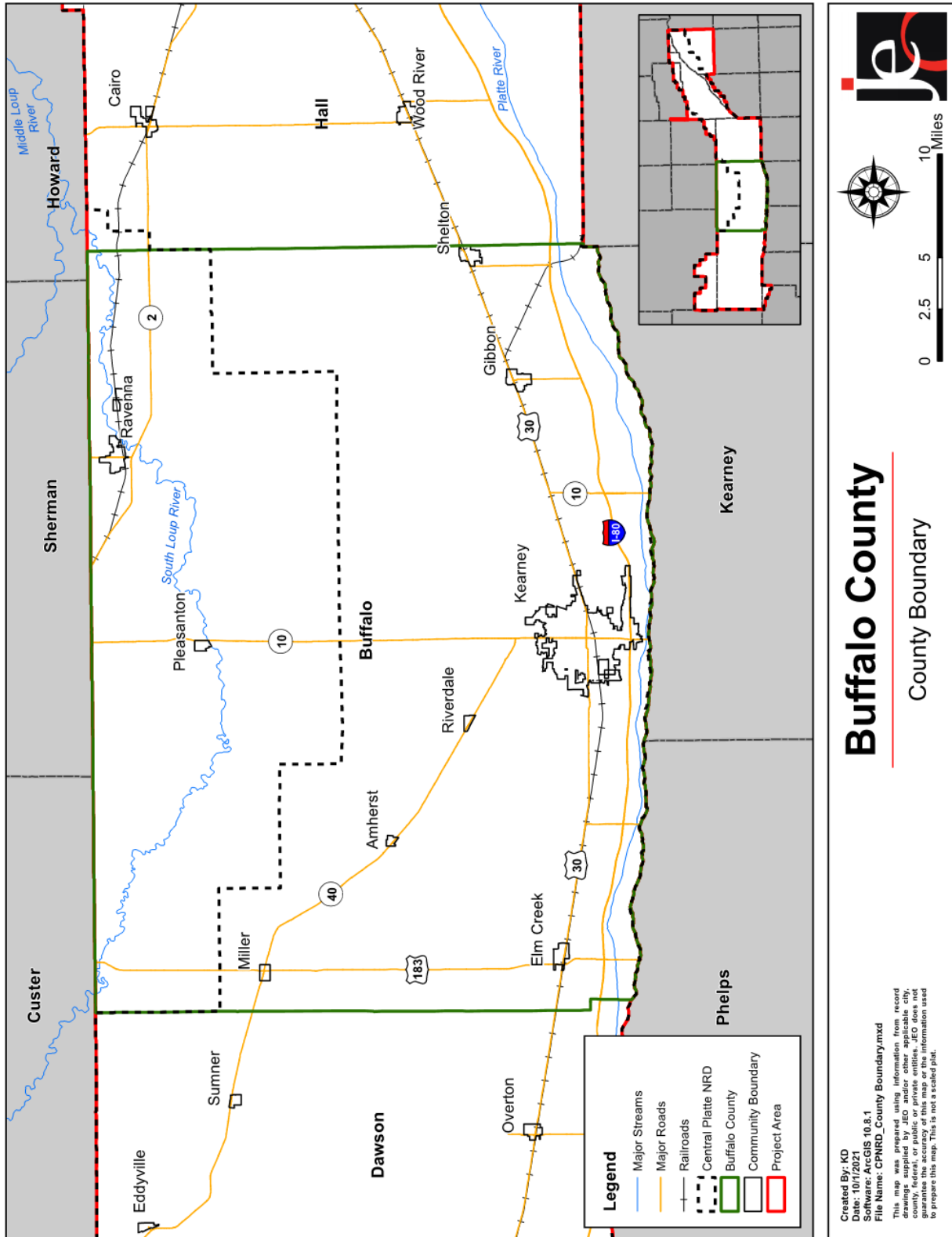
	Buffalo County	State of Nebraska
July Normal High Temp <sup>1</sup>	86.7°F	87.4°F
January Normal Low Temp <sup>1</sup>	13.3°F	13.8°F
Annual Normal Precipitation <sup>2</sup>	25.2"	23.8"
Annual Normal Snowfall <sup>2</sup>	21.8"	25.9"

Source: NCEI 1981-2010 Climate Normals<sup>1</sup>, High Plains Regional Climate Center, 1981-2010<sup>2</sup>  
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 – Kearney 4 NE." Accessed June 2021.  
<http://climod.unl.edu/>.

Figure BUF.1: Buffalo County



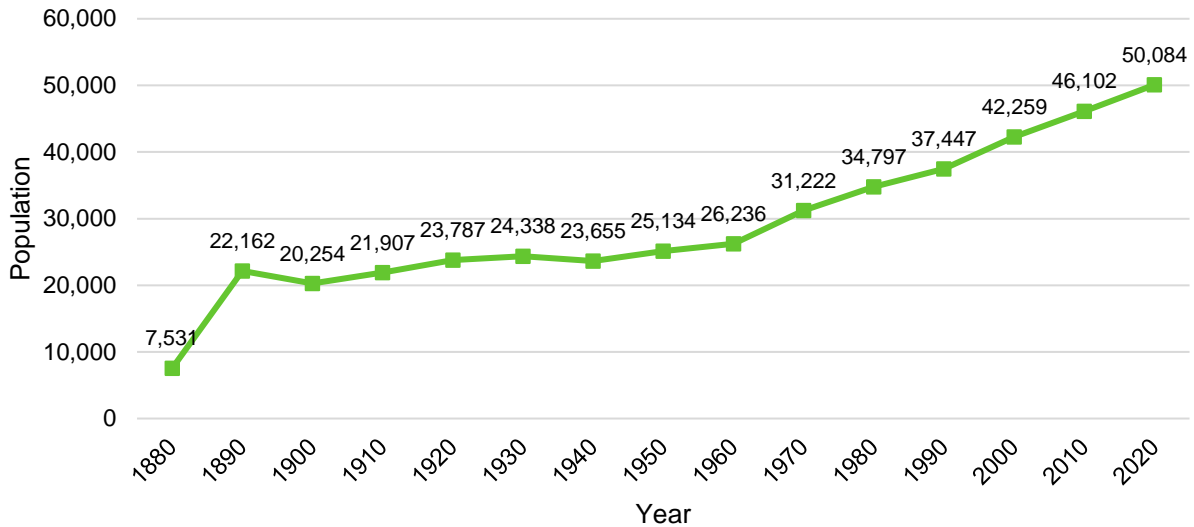


## Demographics, Economics, Housing, and Employment

### Demographics

The following figure displays the historical population trend from 1880 to 2020. This figure indicates that the population of Buffalo County has been increasing since 1940 to 50,084 people in 2020.<sup>3</sup> 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. Buffalo County's population accounted for 2.6% of Nebraska's population in 2020.

**Figure BUF.2: Population 1880 - 2020**



Source: U.S. Census Bureau

The following table indicates Buffalo 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 BUF.3: Population by Age**

Age	Buffalo County	State of Nebraska
<5	6.8%	6.9%
5-64	79.2%	77.7%
>64	13.9%	15.4%
<b>Median</b>	<b>33.5</b>	<b>36.5</b>

Source: U.S. Census Bureau<sup>4</sup>

### 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 is higher than the state and rent is lower than the state. These economic indicators are relevant to hazard mitigation because they indicate the relative economic strength compared to the state as a whole. Areas with economic indicators which are relatively low may influence a county's level of resilience during hazardous events.

<sup>3</sup> United States Census Bureau. "2020 Decennial Census: P1: DEC Redistricting Data." <https://data.census.gov/cedsci/>.

<sup>4</sup> United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." <https://data.census.gov/cedsci/>.

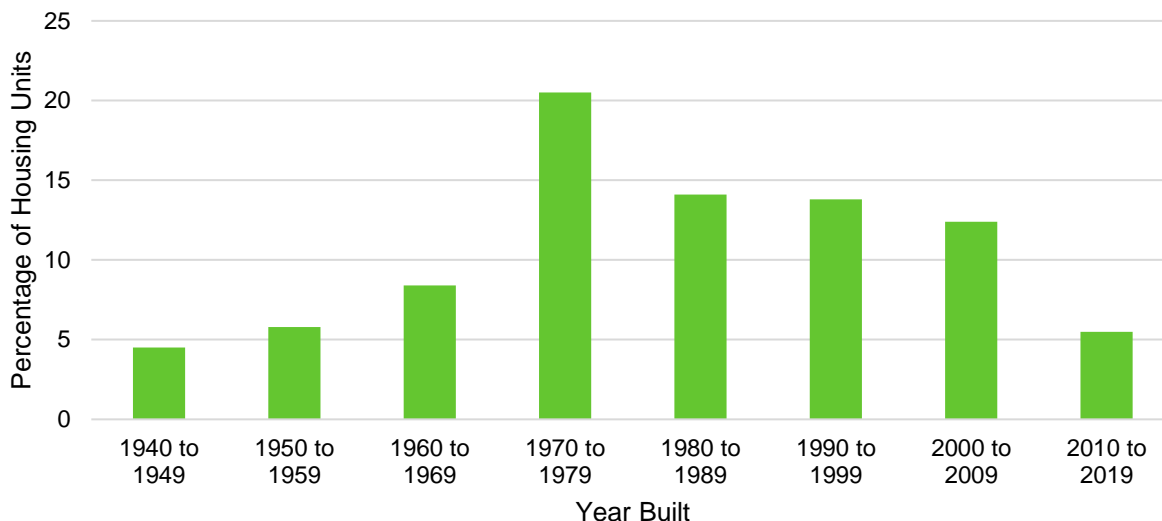
**Table BUF.4: Housing and Income**

	Buffalo County	State of Nebraska
<b>Median Household Income</b>	\$59,431	\$61,439
<b>Per Capita Income</b>	\$31,043	\$32,302
<b>Median Home Value</b>	\$174,800	\$155,800
<b>Median Rent</b>	\$779	\$833

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

The following figure indicates that most of the housing in Buffalo County was built between 1970 and 2009 (60.8%). 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 20,482 housing units with 93.1 percent of those units occupied. Mobile home parks are primarily located in Kearney and Gibbon. 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 BUF.3: Housing Units by Year Built**



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

**Table BUF.5: Housing Units**

Jurisdiction	Total Housing Units				Occupied Housing Units			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Buffalo County</b>	19,062	93.1%	1,420	6.9%	12,388	65%	6,674	35%
<b>Nebraska</b>	759,176	90.7%	78,300	9.3%	501,679	66.1%	257,497	33.9%

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

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/>.

## Employment

According to 2018 Business Patterns Census Data, Buffalo County had 1,703 business establishments. The following table presents the number of establishments, number of paid employees, and the annual payroll in thousands of dollars.

**Table BUF.6: Business in Buffalo County**

	Total Businesses	Number of Paid Employees	Annual Payroll (In Thousands)
<b>Total for All Sectors</b>	1,703	23,133	\$888,536

Source: U.S Census Bureau<sup>7</sup>

Agriculture is important to the economic fabric of the State of Nebraska. Buffalo County's 953 farms cover 528,404 acres of land, about 85% 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 BUF.7: Agricultural Inventory**

Agricultural Inventory	
<b>Number of Farms with Harvested Cropland</b>	953
<b>Acres of Harvested Cropland</b>	528,404

Source: USDA Census of Agriculture, 2017<sup>8</sup>

## Governance

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

- County Clerk
- County Treasurer
- Emergency Management
- Highway Department
- Planning and Zoning
- Floodplain Administrator
- Sheriff's Department
- Surveyor
- Deed Office
- District Court
- County Attorney's Office
- Assessor's Office
- Election Commissioner
- Board of Supervisors
- Weed Control

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

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

## 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, but a large portion is already dedicated to several ongoing projects. Funds have stayed the same over recent years.

**Table BUF.8: Capability Assessment**

Survey Components/Subcomponents		Yes/No
<b>Planning &amp; Regulatory Capability</b>	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
	Building Codes	Yes – State Code
	National Flood Insurance Program	Yes
	Community Rating System	No
Other (if any)	Continuity of Operations Plan, Debris Management Plan, Elm and Turkey Creek Watershed Flood Risk Reduction Plan, Wildfire Protection Plan, Wood River Watershed Flood Risk Reduction Plan, Wood River Watershed Study	
<b>Administrative &amp; Technical Capability</b>	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	Yes
	Chief Building Official	Yes
	Civil Engineering	No
	Local Staff Who Can Assess County’s Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	-
<b>Fiscal Capability</b>	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

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

## Plan Integration

Buffalo 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.

### Buffalo County Local Emergency Operations Plan (2021)

The Buffalo 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 annually.

### **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 be included during the next CWPP update. This document is updated every five years.

### **Comprehensive Plan (2012)**

The comprehensive plan is designed to guide the future actions and growth of the county. It directs development away from the floodplain, directs housing away from major transportation routes, and encourages the preservation of open space in known hazardous areas. In addition, the plan identifies the South Loup and Platte River corridors as sensitive environmental areas consisting of floodplain and low-lying lands. The Planning Commission agreed that these two regions need to limit future development activities not associated with agricultural production. An update to the comprehensive plan is currently under review.

### **Continuity of Operations Plan (2020)**

A continuity of operations plan is an effort to ensure that essential functions continue to be performed during and after an emergency or disaster event. Buffalo County's plan identifies essential functions of the county, maximum allowable downtime, essential equipment, and lists possible relocation sites for various county departments.

### **Debris Management Plan (2020)**

Buffalo County's debris management plan outlines the coordination, management, and removal of debris after a hazardous event. The plan specifically discusses who will be involved in the removal of debris, as well as locations for storage and removal.

### **Elm and Turkey Creeks Watershed Flood Risk Reduction Plan (Under Development)**

The primary purpose of the Elm and Turkey Creeks Watershed Flood Risk Reduction Plan is flood risk reduction within and near the communities of Elm Creek and Kearney. 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 and is anticipated to be completed by mid-2022. Projects identified in the plan with a positive benefit-cost ratio will be reviewed for inclusion in the HMP.

### **Floodplain Regulations (2010), Zoning Ordinance (2021), and Subdivision Regulations (2021)**

The county's floodplain regulations, zoning ordinance, and subdivision regulations outline where and how development should occur in the future. These documents contain floodplain maps and require new construction in the floodplain to be one foot above base flood elevation and have floodproofing techniques where necessary. The zoning ordinance and subdivision regulations are currently under review with the comprehensive plan. There are currently no plans to update the floodplain regulations.

### **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**

While communities in the county have shown significant growth in housing and businesses in the last five years, much of this growth is maintained within the communities and very little has occurred in the rural areas of the county. Over the next five years, the local planning team anticipates some new housing developments throughout the county. Any new industries and commercial development are likely to occur along Highway 30. Any growth occurring in floodplain areas will follow floodplain regulations. The Future Land Use Map, shown on the next page, for the county shows rural residential to be located west of Kearney and along Highways 10, 30, and 40. The county has identified mitigation actions to reduce the risk of transportation chemical spills. A large portion of floodplain areas in the county are located shown as Agricultural Conservation Districts.

### **Community Lifelines**

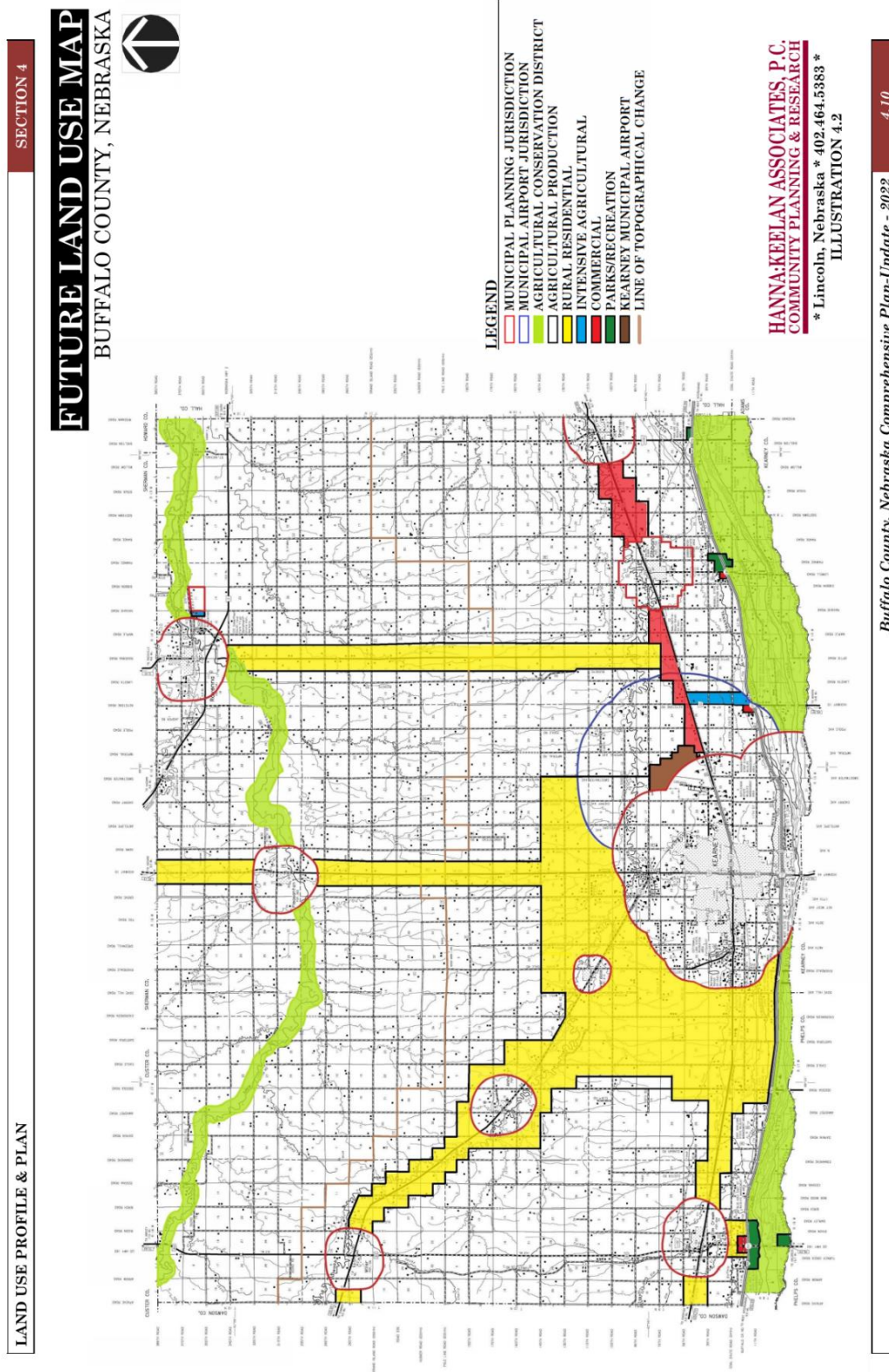
#### **Transportation**

Buffalo County's major transportation corridors include Interstate 80, US Highways 30 and 183, and Nebraska State Highways 2, 10, 40, and 44. The most traveled route is Interstate 80 with an average of 22,460 vehicles daily, 8,050 of which are trucks.<sup>9</sup> The local planning team indicated that the Ravenna spur from Highway 30 to Highway 2 is also a heavily traveled road. A Union Pacific Railway rail line runs east to west through the southern portion of the county. A Burlington Northern Railway line runs east to west through the community of Ravenna and the northern portion of Buffalo County. There has been a number of train derailments in the past and mostly involved coal cars. Various chemicals are transported along the routes listed above. Spills have occurred in the past but have mostly been farm and agriculture related. The county also has the Kearney Regional 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.

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



Figure BUF.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 a total of 69 chemical storage sites throughout Buffalo 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 BUF.9: Chemical Storage Sites**

Name	Address	Floodplain (Y/N)
<b>Agricultural Services Inc</b>	523 Railroad St, Shelton, NE	N
<b>AT&amp;T NE6040</b>	33175 Grove Rd, Pleasanton, NE	N
<b>AT&amp;T NEA042/NE9158</b>	33248 Pine Rd, Ravenna, NE	N
<b>Aurora Co-op Elevator Company</b>	6540 E 39th St, Kearney, NE	N
<b>Aurora Co-op Elevator Company</b>	7280 Gibbon Rd, Gibbon, NE	N
<b>Aurora Co-op Elevator Company</b>	1612 E 24th St, Kearney, NE	N
<b>Aurora Co-op Elevator Company</b>	44740 Highway 30, Gibbon, NE	N
<b>Aurora Co-op Elevator Company</b>	2922 Antelope Ave, Kearney, NE	N
<b>Aurora Co-op Elevator Company</b>	30250 Shelton Rd, Ravenna, NE	Y (1%)
<b>Baldwin Filters Inc</b>	4400 Highway 30 E, Kearney, NE	N
<b>Baldwin Filters Inc</b>	4015 Antelope Ave, Kearney, NE	N
<b>Bayer Western Production Co</b>	2615 Antelope Ave, Kearney, NE	N
<b>Bosselman Energy Inc Bulk Fuel</b>	4300 Airport Rd, Kearney, NE	N
<b>Bosselman Oil Inc</b>	104 E Railroad St, Shelton, NE	N
<b>Bowie Fertilizer Inc</b>	204 North St, Miller, NE	N
<b>Bowie Fertilizer Inc</b>	313 Railroad St, Riverdale, NE	N
<b>Buffalo Air Services Inc</b>	5735 Airport Rd, Kearney, NE	Y (0.2%)
<b>Cash-Wa Distribution Co</b>	401 W 4th St, Kearney, NE	Y (1%)
<b>Charter Communications NE31385</b>	809 Central Ave, Kearney, NE	N
<b>CHI Health Good Samaritan</b>	10 E 31st St, Kearney, NE	N
<b>Chief Industries Agri/Ind Div</b>	4400 E 39th St, Kearney, NE	N
<b>CHS Inc</b>	515 W Front St, Elm Creek, NE	N
<b>Clevenger Farm Products</b>	6325 Lowell Rd, Gibbon, NE	N
<b>Clevenger Petroleum Bulk Plant</b>	1808 E 24th St, Kearney, NE	Y (0.2%)
<b>Clevenger Petroleum Cardlock</b>	315 W 8th St, Kearney, NE	N
<b>Clevenger Propane Tank</b>	Link 10C, Gibbon, NE	N
<b>Columbus Metals Industries</b>	4211 E 43rd Street Pl, Kearney, NE	N
<b>Country Partners Cooperative</b>	300 S Main St, Amherst, NE	N
<b>Country Partners Cooperative</b>	16400 24th Rd, Odessa, NE	N
<b>Darling Ingredients Inc</b>	102 Lincoln Ave, Ravenna, NE	N
<b>Eaton Corporation</b>	4200 Highway 30 E, Kearney, NE	N
<b>Farmers Co-op Assn</b>	35885 Ravenna Rd, Ravenna, NE	N
<b>Farmers Co-op Assn</b>	35545 Pine Rd, Ravenna, NE	N
<b>Farmers Co-op Assn Fertilizer</b>	20805 Antelope Rd, Pleasanton, NE	N
<b>Farmers Union Co-op Assn</b>	1210 E 25th St, Kearney, NE	N
<b>Farmers Union Co-op Assn</b>	Jct 21st St & Avenue M, Kearney, NE	N
<b>Frontier Communications</b>	2302 1st Ave, Kearney, NE	N
<b>Frontier Communications</b>	1918 W 39th St, Kearney, NE	N
<b>Gibbon Packing LLC</b>	218 Highway 30, Gibbon, NE	N
<b>Henningsen Foods Inc</b>	200 E Railway St, Ravenna, NE	N
<b>Jiffy Lube 0030</b>	1204 2nd Ave, Kearney, NE	N

Name	Address	Floodplain (Y/N)
<b>KAAPA Ethanol Ravenna LLC</b>	35955 Navaho Rd, Ravenna, NE	N
<b>Kearney Crete &amp; Block Company</b>	2908 Highway 30 E, Kearney, NE	N
<b>Matheson Tri-Gas Inc</b>	701 Central Ave, Kearney, NE	N
<b>NDOT Kearney Yard</b>	4001 Highway 30 W, Kearney, NE	N
<b>NDOT Kearney Yard I-80</b>	415 W Talmadge Rd, Kearney, NE	Y (1%)
<b>NDOT Ravenna Yard</b>	42775 Highway 2, Ravenna, NE	N
<b>NDOT Shelton Yard</b>	4558 Shelton Rd, Shelton, NE	N
<b>Nebraska Central Telephone Co</b>	22 La Barre St, Gibbon, NE	N
<b>Nebraska Central Telephone Co</b>	113 W Genoa St, Ravenna, NE	N
<b>Nebraska Central Telephone Co</b>	215 C St, Shelton, NE	N
<b>Nutrien Ag Solutions</b>	1720 16th Ave, Kearney, NE	N
<b>Nutrien Ag Solutions</b>	33855 Navaho Rd, Ravenna, NE	N
<b>Pilot Flying J 901</b>	5085 Buffalo Creek Rd, Elm Creek, NE	N
<b>Sapp Bros Landmark Inc</b>	380 Odessa Rd, Elm Creek, NE	Y (1%)
<b>Schwan's Home Service</b>	3409 Antelope Ave, Kearney, NE	N
<b>Simplot Grower Solutions</b>	3010 E 39th St, Kearney, NE	N
<b>Simplot Grower Solutions</b>	39695 E 56th Rd, Gibbon, NE	N
<b>SkyWest Airlines/United Exprss</b>	5145 Airport Rd, Kearney, NE	Y (0.2%)
<b>Sunbelt Rentals 413</b>	3211 Antelope Ave, Kearney, NE	N
<b>The Andersons B4 Grain</b>	304 W 19th St, Kearney, NE	N
<b>The Andersons B4 Grain</b>	313 Railroad St, Riverdale, NE	N
<b>The Andersons Inc</b>	6090 Optic Rd, Gibbon, NE	N
<b>Titan Machinery Inc</b>	714 3rd Ave, Kearney, NE	Y (1%)
<b>Trotter Fertilizer</b>	307 E Cemetery, Pleasanton, NE	N
<b>Union Pacific Railroad</b>	1327 E 25th St, Kearney, NE	N
<b>Verizon Wireless Kearney Lake</b>	3406 Lakeview Dr, Kearney, NE	N
<b>West Pharmaceutical Services</b>	923 W Railroad St, Kearney, NE	N
<b>Winfield United</b>	39560 39th Rd, Gibbon, NE	N

Source: Nebraska Department of Environment and Energy<sup>10</sup>

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

## Health and Medical Facilities

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

**Table BUF.10: Health and Medical Facilities**

Name	Type of Facility	Address	Number of Beds
<b>CHI Health Good Samaritan</b>	Hospital	10 East 31st St Kearney, NE 68848	174
<b>Richard Young Behavioral Health</b>	Hospital	1755 Prairie View Place Kearney, NE 68847	61
<b>Kearney Ambulatory Surgical Center</b>	Hospital	3515 30th Ave Kearney, NE 68845	0
<b>Kearney Regional Medical Center</b>	Hospital	804 22nd Ave Kearney, NE 68845	93
<b>Brookestone Gardens</b>	Assisted Living Facility/Long Term Care Facility	2615 West 11th St Kearney, NE 68845	108
<b>Cambridge Court</b>	Assisted Living Facility	4107 Central Ave Kearney, NE 68847	48
<b>Praire View Gardens</b>	Assisted Living Facility	1705 Prairie View Place Kearney, NE 68845	60
<b>Kearney Countryhouse, LLC</b>	Assisted Living Facility	5605 K Ave Kearney, NE 68847	36
<b>Kinship Pointe Northridge</b>	Assisted Living Facility	5410 17th Ave Kearney, NE 68845	55
<b>Midwest Homestead of Kearney</b>	Assisted Living Facility	4205 6th Ave Kearney, NE 68847	44
<b>Wei-Life at Kearney</b>	Assisted Living Facility	5616 4th Ave Kearney, NE 68847	48
<b>Central Nebraska Veterans Home</b>	Long Term Care Facility	4510 East 56th St Kearney, NE 68847	225
<b>Good Samaritan Society - St. Johns</b>	Long Term Care Facility	3410 Central Ave Kearney, NE 68847	56
<b>Good Samaritan Society - St Luke's Village</b>	Long Term Care Facility	2201 East 32nd St Kearney, NE 68847	60
<b>Mother Hull Home</b>	Long Term Care Facility	125 East 23rd St Kearney, NE 68847	58
<b>Mount Carmel Home - Keens Memorial</b>	Long Term Care Facility	412 West 18th St Kearney, NE 68845	75
<b>Seneca Sunrise</b>	Assisted Living Facility	710 Grand Ave Ravenna, NE 68869	50
<b>Good Samaritan Society - Ravenna</b>	Long Term Care Facility	411 West Genoa Ravenna, NE 68869	61
<b>Broadwell Senior Living</b>	Assisted Living Facility	617 22 <sup>nd</sup> Ave Kearney, NE 68845	-

Source: Nebraska Department of Health and Human Services<sup>11,12,13,14</sup>

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](https://dhhs.ne.gov/licensure/Documents/RHC_Roster.pdf).

### 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.

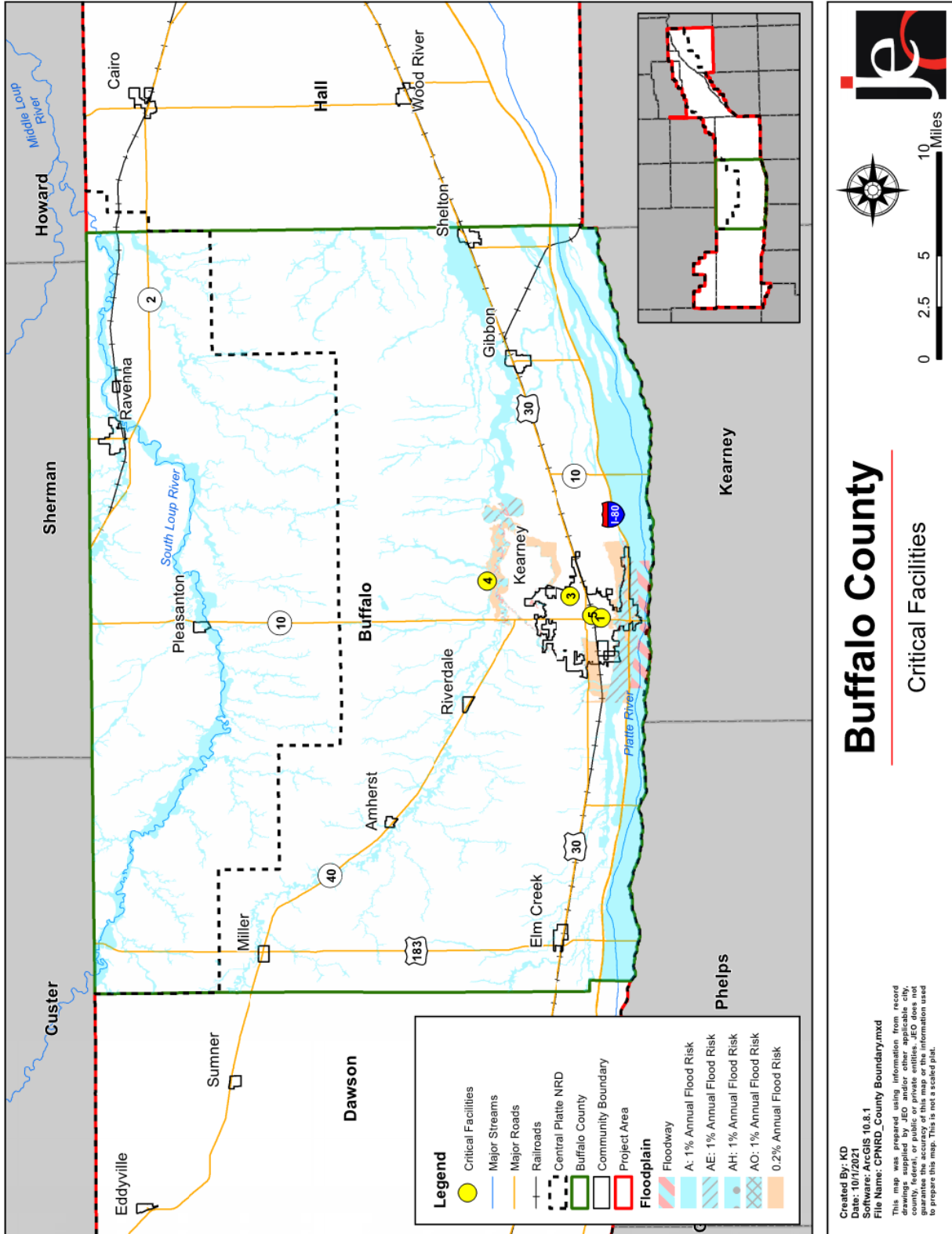
Although they may not be listed in the table below, critical infrastructure also includes power infrastructure, cell towers, alert sirens, water infrastructure, wastewater infrastructure, and roadways.

**Table BUF.11: Critical Facilities**

CF Numbers	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Buffalo County Courthouse/Jail/EOC	N	Y	N
2*	Communications Towers (8)	N	Y	N
3	Fairgrounds	N	N	N
4	Highway Department	N	Y	N
5	Police / Buffalo County Building / Backup EOC / 911 Center	N	Y	N

*\*Not mapped for security purposes.*

Figure BUF.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 BUF.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
17,665	\$3,634,232,115	1,868	\$429,161,590	10.6%

Source: County Assessor, 2021

**Table BUF.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
17,665	\$3,634,323,115	682	\$258,243,980	3.9%

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 Buffalo County between 2000 and 2020.

**Table BUF.14: County Hazard Loss History**

Hazard Type		Count	Property Damage	Crop Damage <sup>2</sup>
<b>Animal &amp; Plant Disease</b>	Animal Disease <sup>1</sup>	24	1,773 animals	N/A
	Plant Disease <sup>2</sup>	18	N/A	\$139,937
<b>Dam Failure<sup>5</sup></b>		2	N/A	N/A
<b>Drought<sup>6</sup></b>		444 of 1,513 months	\$0	\$29,040,387
<b>Earthquakes<sup>12</sup></b>		0	\$0	N/A
<b>Extreme Heat<sup>7</sup></b>		Avg. 6 Days a Year	N/A	\$5,837,403
<b>Flooding<sup>8</sup></b> <i>2 Injuries</i>	Flash Flood	14	\$33,395,000	\$966,595
	Flood	13	\$6,135,000	
<b>Grass/Wildfires<sup>9</sup></b> <i>3 Fatalities, 6 Injuries</i>		628	6,806 acres	\$77,673
<b>Hazardous Materials Release</b>	Fixed Site <sup>3</sup>	36	\$0	N/A
	Transportation <sup>4</sup>	36	\$265,920	N/A
<b>Levee Failure<sup>11</sup></b>		0	\$0	N/A
<b>Public Health Emergency</b>		2	N/A	N/A
<b>Severe Thunderstorms<sup>8</sup></b> <i>21 Injuries</i>	Thunderstorm Wind Range: 50-87 Average: 57	140	\$17,483,000	\$55,900,701
	Hail Range: 0.75-5.0 in. Average: 1.21 in.	252	\$82,000,000	
	Heavy Rain	29	\$587,000	

Hazard Type		Count	Property Damage	Crop Damage <sup>2</sup>
<b>Severe Winter Storms<sup>8</sup></b>	Lightning	3	\$95,000	
	Blizzard	11	\$375,000	
	Extreme Cold/Wind Chill	4	\$0	
	Heavy Snow	2	\$0	\$1,070,964
	Ice Storm	6	\$5,420,000	
	Winter Storm	45	\$305,000	
	Winter Weather	43	\$30,000	
<b>Terrorism<sup>10</sup></b>		0	\$0	N/A
<b>Tornadoes and High Winds<sup>8</sup></b> <i>1 Injury</i>	Tornadoes Range: EF0-EF3 Average: EF0	22	\$18,645,000	\$4,070,000
	High Winds Range: 35-61 Average: 49	39	\$1,027,080.00	\$8,689,983
<b>Total</b>		<b>1,369</b>	<b>\$165,763,000</b>	<b>\$105,793,643</b>

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*.

### Animal and Plant Disease

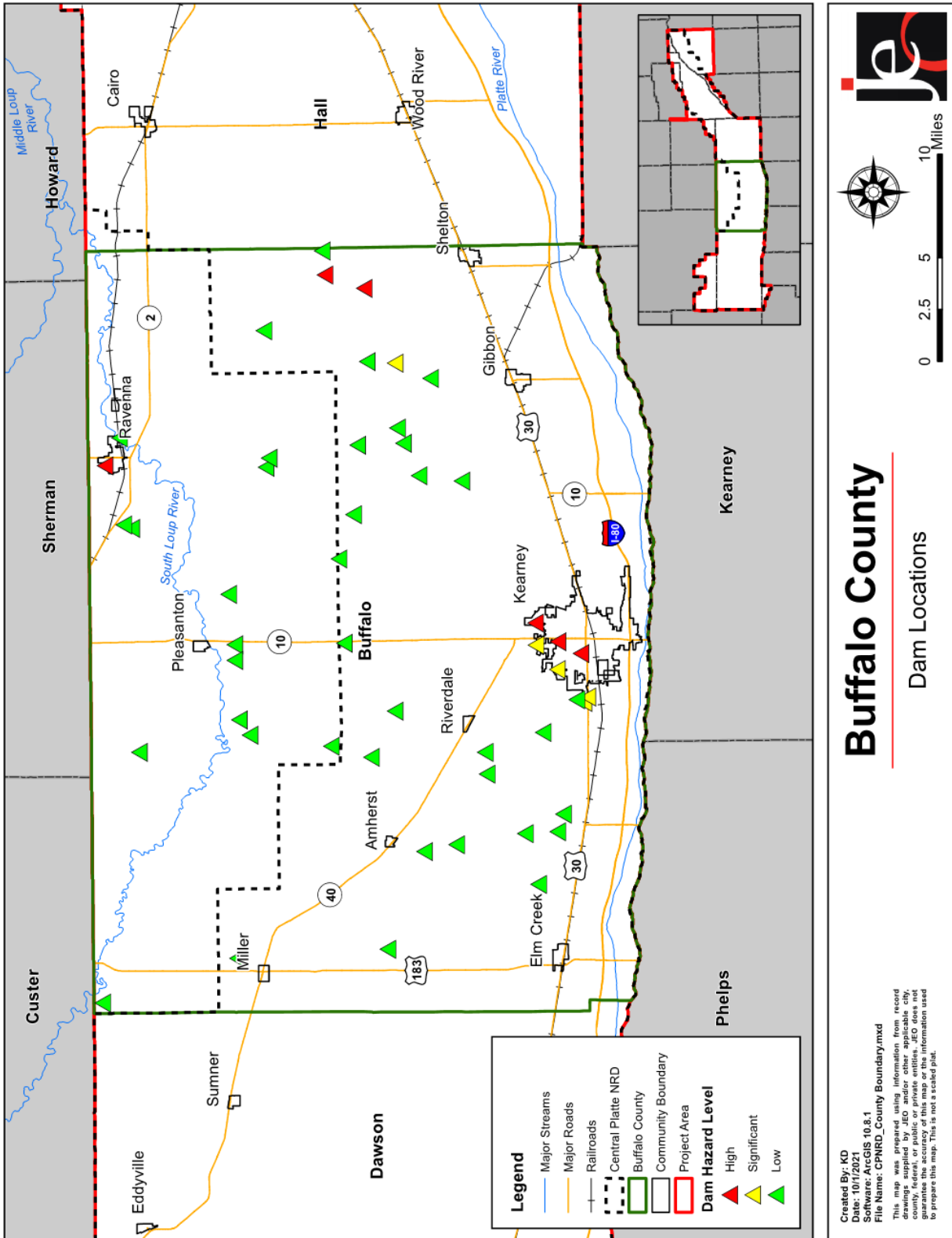
Agriculture makes up a major portion of the economy in Buffalo County. Communities in the county rely heavily on the economy of farming, ranching, and stockyards. An agricultural disease outbreak could impact taxes, businesses, family farms, and overall mental health and well-being of the community. Other concerns include contamination during the disposal/clean-up of infected populations. It was noted by the planning team that there are good state educational programs available to farmers on plant and animal disease. Emergency Management has worked with the Statewide LEADRS group and local veterinarians in exercises and planning processes related to agricultural disease outbreaks. All feed lots in the county are required to have an emergency animal control plan. Buffalo County also has a zoning regulation in place for Paunch and manure disposal. Currently there is an ongoing avian flu outbreak in Nebraska. As of April 13, 2022, it has not been detected in Buffalo County but has been found in nearby Merrick County.

### Dam Failure

There are 49 dams in Buffalo County. Of these, six dams have been identified as high hazard dams. Two low hazard dam failures have occurred in the past but had no reported damages. If one of the high hazard dams were to fail, there is a risk of fatalities, property damage, and flooding of agricultural lands. Furthermore, Kingsley Dam, located upstream in Keith County, could affect Buffalo County if it was to fail, with impacts likely felt all along the Platte River. The figure below shows the location of all the dams in the county.



Figure BUF.6: Dam Locations





## **Drought**

The primary concern related to drought is the economic impact to the communities and county. Buffalo County is heavily reliant on agriculture to drive the economy. During a drought, farmers may not be able to irrigate crops which lead to a poor harvest and have trickle down effects to the communities. USDA disaster declarations for drought were declared for the county in 2006, 2013, and 2014. The county is currently experiencing drought conditions; however, no federal declaration of drought has been declared at this time. There have been no required water restrictions implemented in the past, but the City of Kearney has implemented voluntary restrictions in the past.

## **Flooding**

Flooding and flash flooding in the county has been caused by ice jams, heavy rain from thunderstorms, and high river runoff. In May 2005, flooding caused \$5,000,000 in property damage and the county was declared a Federal Disaster Area. In 2010, a flood control project was completed in the Odessa area where improvements to existing roadside and field drainage ditches and culverts were made. The most significant flood events occurred in March and July of 2019. Flooding across the county in both rural areas and communities caused an estimated \$33,000,000 in damages according to NCEI reports. Evacuations were requested and conducted in parts of Elm Creek, Odessa, Kearney, Gibbon, and various rural areas in 2019. Roads were heavily impacted with 150 miles of roads closed and eight bridges impassible. So many roads were closed that Buffalo County ran out of barricades. Some gravel roads had ruts two to three feet deep. As flood water receded, pastureland and fields next to rivers and creeks were covered in sand and silt inches to feet deep, which ruined many acres for grazing. For community specific concerns and impacts to flood events, see the individual community participant sections. Since that event roads, culverts, and bridges have been replaced. Areas most prone to flooding include the Platte River Valley, Wood River, Buffalo Creek, Elm Creek, and Turkey Creek. Mitigation projects to reduce the impact of flooding for the county include reducing bottlenecks and flow restrictions in streams and conducting a stormwater drainage study.

Portions of the county fall under the Elm and Turkey Creeks Watershed and Wood River Watershed Flood Risk Reduction Plans, which are currently under development. The plans will identify projects within the watersheds to help reduce flood risk and damages to agricultural property, homes, and businesses. Projects deemed feasible in the plans will be added to this HMP once the planning process has concluded.

Buffalo County is a member of the NFIP, and the county's Floodplain Administrator (Dennise Daniels) will oversee the commitments and requirements of the NFIP. The initial FIRM for the county was delineated in 3/1/1990 and the current effective map date is 11/26/2010. Over 14% 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 52 NFIP policies in force covering \$11,905,400. Buffalo County has two single-family homes that are repetitive loss properties. A mitigation action can be found in the county's Mitigation Strategy to address these structures.

## **Hazardous Materials Release**

Buffalo County has several major highways and two rail lines that transect the county and run through populated areas. Interstate 80, Highway 30, and both rail lines are of greatest concern due to the high traffic volume and the likelihood of chemicals being transported along these routes on a regular basis. According to the PHMSA, chemical spills have occurred during transportation in Elm Creek, Odessa, Ravenna, and Kearney. The largest spill occurred in May 2012 when 852

LGA of a corrosive liquid caught fire when a trailer of mixed freight was left at the terminal over a long holiday weekend. It was suspected that it was caused by spontaneous combustion due to the high temperatures that weekend. Damages were reported to be over \$82,000. In 1974, one fatality and four injuries occurred during a vehicle crash near Elm Creek and over 8,300 LGA of gasoline was spilled. The county regularly educates and trains fire departments on how to respond to hazardous material incidents. They also help fund the technician level hazmat team in the county.

### **Public Health Emergency**

Primary concerns related to a public health emergency include economic impact to communities and the county, death of citizens, and overwhelming the medical community. As of September 24, 2021, Buffalo County has had 6,781 positive cases of Covid-19, with that number likely to increase as vaccines are still getting distributed. At this time 55% of the population age 12+ in the county has been vaccinated. During the beginning of Covid-19, most businesses and government operations were either restricted or shutdown. The county worked with local public health agencies to encourage protective measures and helped distribute PPE to responders, healthcare workers, government agencies, and businesses. In addition, Buffalo County was part of the unified command system for the Two Rivers Public Health Region which helped provide logistical and operations support as well as public information to assist in the reductions of infections and loss of life. Coming out of the pandemic it was learned that public health pandemic plans do not properly address the outbreak long term and need to be updated. This will likely be handled by the local health departments and hospitals.

### **Severe Thunderstorms**

Severe thunderstorms are a regular part of the climate of Buffalo County, and they have caused wind damage, flooding, and hail damage across many parts of the county. The local planning team is concerned with the possibility of loss of life, property damage, economic impacts, and the displacement of people if homes are damaged. Some of the critical facilities in the county have backup power generators, including the Emergency Operations Center, County Courthouse, and communication towers. However, many local communities still have facilities that need backup power. Buffalo County continues education on thunderstorms, has improved notification systems, and has added warning sirens to cover more populated areas. The county plans to mitigate the effects of thunderstorms by improving electrical services, improving citizen warning systems, and improving/providing adequate backup power generators.

### **Severe Winter Storms**

Severe winter storms occur annually in Buffalo County and can include high winds, blowing snow, ice, and high accumulations. The local planning team is most concerned with power outages, stranded motorists, and economic impacts. In December 2006, an ice storm caused widespread tree damage, downed power lines and poles, closed businesses, and stranded many motorists during the holiday period. In total, NCEI estimated \$5,000,000 in damages from this ice storm. The county's snow removal resources are sufficient at this time, and the county regularly trims and maintains trees to reduce tree damage. The county also works with the public, private sectors, first responders, and the National Weather Service to help plan and mitigate winter storm issues.

### **Tornadoes and High Winds**

Significant tornado events include an EF2 that impacted Kearney in 2008 and an EF3 that impacted Elm Creek in 2011. These two tornadoes caused a total of \$17,000,000 in damages. Every community has tornado sirens which are activated through 911 Dispatch. However, the local planning team noted that some rural subdivisions do not have warning sirens or adequate

coverage. There are two safe rooms constructed to the standards set forth in the FEMA P-320 guidance in the high school and middle school in Kearney. However, these are not open to the general public. Providing adequate public safe rooms is a mitigation project identified for the county.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Project Scoping
<b>Description</b>	Evaluate potential flood risk reduction alternatives as identified through the NRCS WFPO including project scoping and implementation.
<b>Hazard(s) Addressed</b>	Flooding
<b>Estimated Cost</b>	Varies by Project
<b>Local Funding</b>	General Budget, WFPO
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Floodplain Administrator
<b>Status</b>	The Flood Risk Reduction Plans are 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.

Mitigation Action	Repetitive Loss Property Mitigation
<b>Description</b>	Identify and perform flood mitigation options on repetitive loss properties within the county.
<b>Hazard(s) Addressed</b>	Flooding
<b>Estimated Cost</b>	Varies by Project
<b>Local Funding</b>	General Budget, Private Owner Funds
<b>Timeline</b>	5+ Years
<b>Priority</b>	Low
<b>Lead Agency</b>	Floodplain Administrator
<b>Status</b>	Not Started

### Kept Mitigation Actions

Mitigation Action	Backup and Emergency Generators
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$20,000 - \$75,000+ per generator
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Emergency Management, Local Fire Departments, Local Communities
<b>Status</b>	Most fire departments have backup power at this time, however many shelter locations and lift stations are still in need of backup generators.

Mitigation Action	Hazardous Fuel Reduction
<b>Description</b>	Create a defensible space around residential and non-residential buildings in fire prone areas and to perform hazardous fuels reduction.
<b>Hazard(s) Addressed</b>	Grass/Wildfire
<b>Estimated Cost</b>	\$5,000+
<b>Local Funding</b>	General Budget, Nebraska Forest Service Funds
<b>Timeline</b>	1-3 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Highway Department, Local Fire Departments, Nebraska Forest Service
<b>Status</b>	Not Started

Mitigation Action	Improve Electrical Service
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	Varies
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	Low
<b>Lead Agency</b>	Planning and Zoning, NPPD, Dawson PPD
<b>Status</b>	All new construction has buried power lines; however, work needs to continue for additional protective measures and burying of transmission lines in the county.

Mitigation Action	Improve Response to Hazardous Materials Incidents
<b>Description</b>	Evaluate current hazardous materials response plan and procedures; implement improved or higher-level response plans and procedures; obtain additional hazmat response equipment and material; train additional hazmat team members/maintain high training level for all hazmat team members.
<b>Hazard(s) Addressed</b>	Hazardous Materials Release
<b>Estimated Cost</b>	\$75,000
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Emergency Management
<b>Status</b>	The county funds \$20,000 annually for the technician level hazmat team. However, this is only enough to maintain the team. Additional equipment for the team is still needed.

Mitigation Action	Improve Warning Systems
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	Varies
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	High
<b>Lead Agency</b>	Emergency Management, County Board, Village Boards
<b>Status</b>	Not Started

Mitigation Action	Public Awareness/Education
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	Less than \$5,000
<b>Local Funding</b>	General Budget
<b>Timeline</b>	Ongoing
<b>Priority</b>	Medium
<b>Lead Agency</b>	Emergency Management
<b>Status</b>	This is an ongoing project.

Mitigation Action	Reduce Bottlenecks / Flow Restrictions
<b>Description</b>	Evaluate current bottlenecks/flow restrictions; implement measures to reduce bottlenecks/flow restrictions including silt removal.
<b>Hazard(s) Addressed</b>	Flooding
<b>Estimated Cost</b>	\$100,000+
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Planning and Zoning, Highway Department
<b>Status</b>	Several studies are ongoing at this time to identify projects that are needed in the future.

Mitigation Action	Reduce Damages 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+ depending on project
Local Funding	General Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Planning and Zoning
Status	Several studies are ongoing at this time to identify projects that are needed in the future.

Mitigation Action	Reduce Tree Damage and Damage from Trees
Description	Conduct tree inventory; develop tree maintenance/trimming program; implement tree maintenance/trimming program; remove hazardous limbs and/or trees.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Winter Storms, Severe Thunderstorms, Grass/Wildfire
Estimated Cost	\$10,000+
Local Funding	General Budget
Timeline	Ongoing
Priority	Medium
Lead Agency	Highway Department, Public Power District
Status	This is an ongoing project as issues are identified.

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 Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	Emergency Management, Local School Districts
Status	Not Started

## 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.

Buffalo County last reviewed their section of the HMP in 2020 and did not find any revisions or changes. Buffalo County Emergency Management will be responsible for reviewing and updating the plan in the future. These individuals will review the annually and report any updates at county board meetings.

**Community Profile**

# **Village of Amherst**

**Central Platte NRD  
Hazard Mitigation Plan**

**2022**

## Local Planning Team

The Village of Amherst’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 AMH.1: Amherst Local Planning Team**

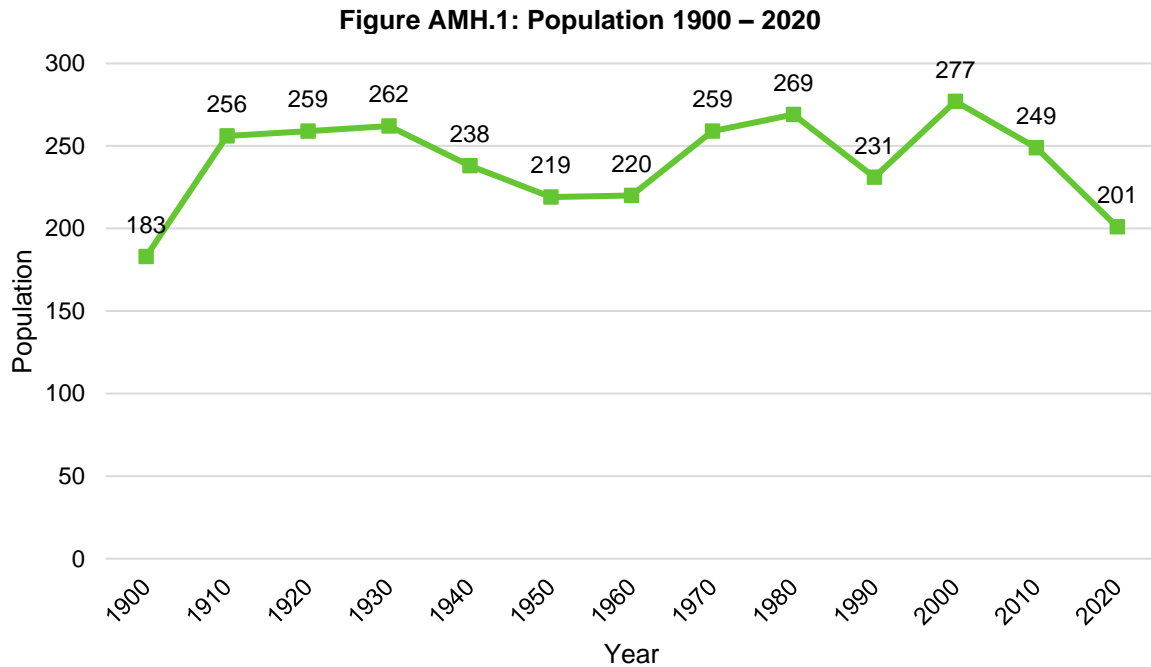
Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Janice Taubenheim	Clerk/Treasurer/Floodplain Administrator	Village of Amherst	Grand Island	Central City - Virtually

## Location and Geography

The Village of Amherst is in west-central Buffalo County and covers an area of 0.22 square miles. Wood River is the major waterway in the area and is located south and west of the community.

## Demographics

The following figure displays the historical population trend for the Village of Amherst. This figure indicates that the population of Amherst has been declining since 2000 to 201 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. Amherst’s population accounted for 0.4% of Buffalo County’s population in 2020.<sup>15</sup>

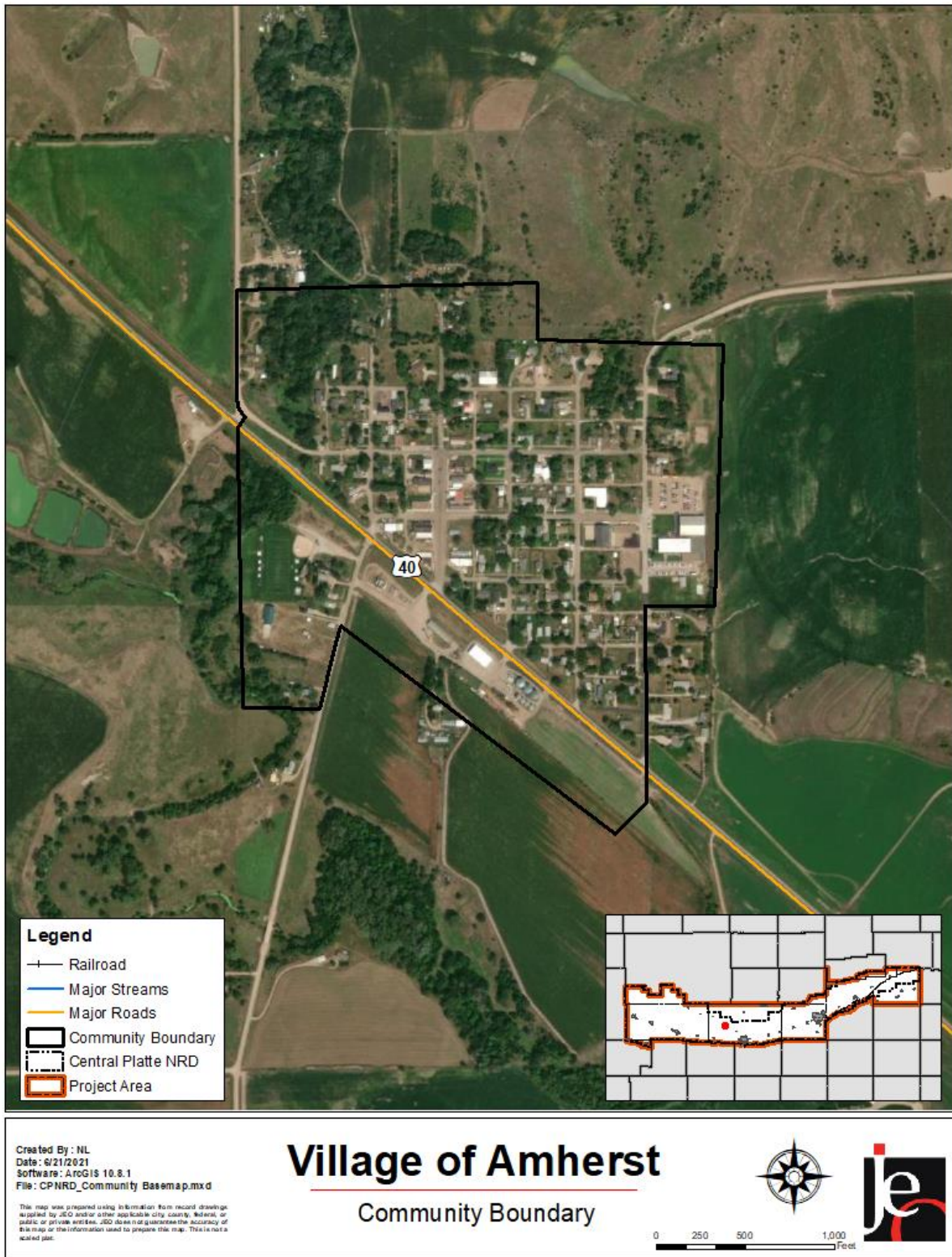


Source: U.S. Census Bureau

<sup>15</sup> United States Census Bureau. “2020 Decennial Census: P1: DEC Redistricting Data.” <https://data.census.gov/cedsci/>.



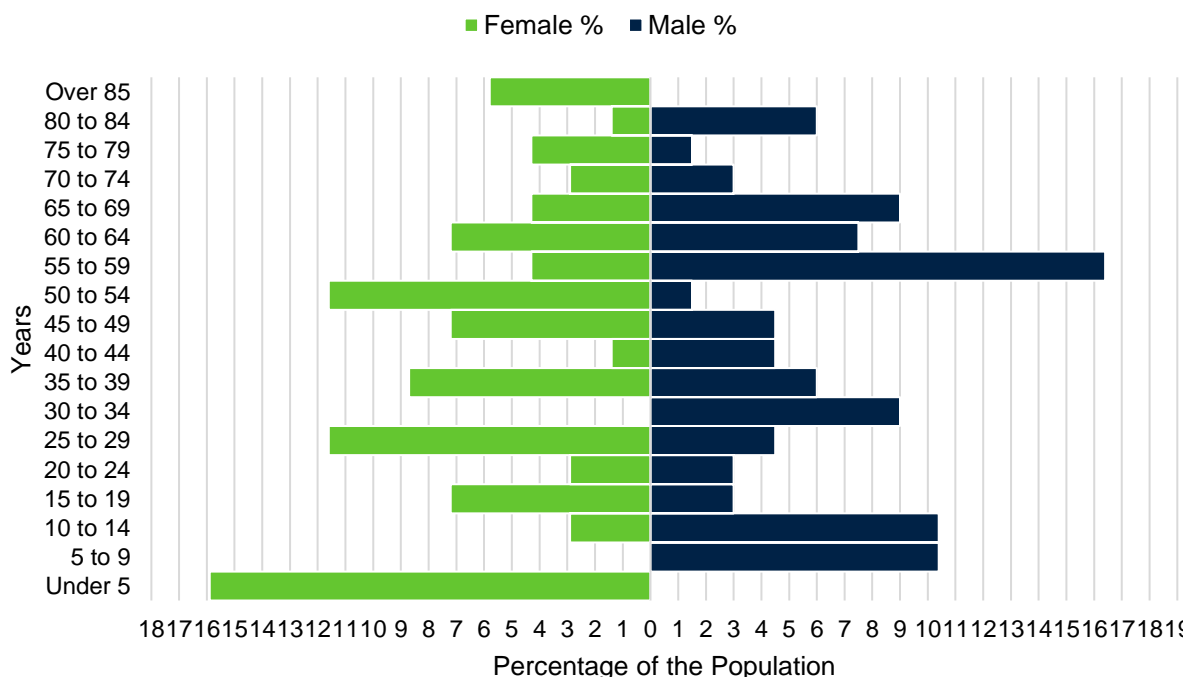
Figure AMH.2: Village of Amherst



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

- **0% is non-white.** Since 2010, Amherst became less ethnically diverse. In 2010, 0.8% of Amherst’s population was non-white. By 2019, 0% was non-white.<sup>16</sup>
- **43 median age.** The median age of Amherst was 43 years in old 2019. The population grew older since 2010, when the median age was 40.3.<sup>17</sup>

**Figure AMH.3: Amherst’s Population Pyramid**



The figure above shows Amherst’s population percentage broken down by sex and five-year age groups. Amherst’s population is likely to stay constant with an equal amount of individuals above 50 as below 50.

## Employment and Economics

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

- **0% of people living below the poverty line.** The poverty rate (0%) in the Village of Amherst was lower than the state’s poverty rate (7.2%) in 2019.<sup>18</sup>
- **\$46,250 median household income.** Amherst’s median household income in 2019 (\$46,250) was \$15,000 lower than the state (\$61,439).<sup>18</sup>
- **2.8% unemployment rate.** In 2019 Amherst has a higher unemployment rate (2.8%) when compared to the state (2.3%).<sup>18</sup>

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/>.

- **24.1% of workers commuted 30 minutes or more to work.** More workers in Amherst commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (24.1% compared to 24%).<sup>19</sup>

### Major Employers

The major employers in the community are Belschner Custom Meats, Stockman's Bar and Grill, Awesome Auto, Bombshells & Beauty Salon, Caring Transitions, Todd's Motor, Bramer Auction, Klingelhoefel Well, and Graham Stamps. A large percentage of residents commute to work in Kearney 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. Amherst has two mobile homes. 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.

- **62.6% of housing built prior to 1970.** Amherst has a larger share of housing built prior to 1970 than the state (62.6% compared to 46%).<sup>20</sup>
- **21.7% of housing units vacant.** Since 2010, Amherst's vacancy rate grew. In 2010 the vacancy rate was 0%. By 2019, 21.7% of housing units were vacant.<sup>20</sup>
- **9.6% mobile and manufacture housing.** The Village of Amherst had a larger share of mobile and manufactured housing (9.6%) compared to the state (3.3%).<sup>20</sup>
- **20% renter-occupied.** The rental rate of Amherst was 20% in 2019. The percentage went up since 2010, when renter occupied housing was at 13.5%.<sup>20</sup>

### Governance

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

- Clerk/Treasurer
- Fire Department
- Engineer
- Public Works
- Maintenance

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.

**Table AMH.2: Capability Assessment**

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

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

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

## Plan Integration

Amherst 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 village 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.

### Buffalo County Local Emergency Operations Plan (2021)

Amherst is an annex in the Buffalo 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 annually.

### Capital Improvements Plan

The capital improvements plan annually outlines projects the village would like to pursue and provides a planning schedule and financing options. The only project identified that relates to hazard mitigation is constructing a new wastewater treatment facility. Projects identified in this HMP will be reviewed and added to the next CIP as applicable.



### Floodplain Regulations and Zoning Ordinance (2000)

The city’s floodplain ordinance and zoning ordinance outline where and how development should occur in the future. These documents discourage development in the floodplain, identifies floodplain areas as parks or open space, discourages housing near chemical sites and along major transportation routes, and prohibits development within the floodway.

### 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.

## Future Development Trends

There have been no changes in the village over the past five years. In the next five years, there are currently no anticipated housing or business developments.

## Community Lifelines

### Transportation

Amherst’s major transportation corridors include State Highway 40. The most traveled route is Highway 40 with an average of 1,565 vehicles daily, 65 of which are trucks.<sup>21</sup> The village has no rail lines. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents. No large spills or significant transportation events have occurred locally.

### 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 Amherst which houses hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

**Table AMH.3: Chemical Storage Sites**

Name	Address	Floodplain (Y/N)
Country Partners Cooperative	300 S Main St	N

Source: Nebraska Department of Environment and Energy<sup>22</sup>

### Health and Medical Facilities

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

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

### Critical Facilities

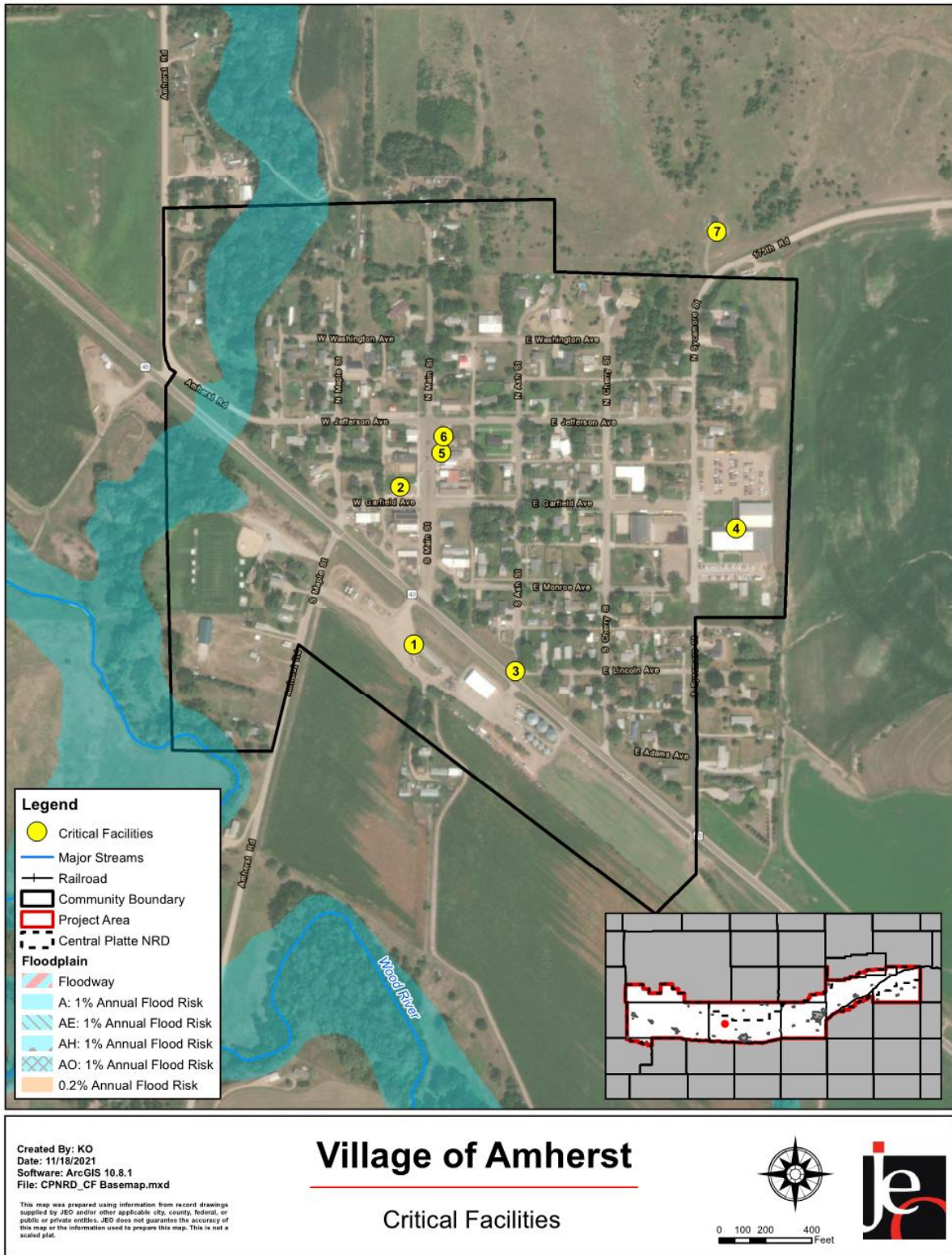
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during 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 AMH.4: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	All Points Co-Op	N	N	N
2	Amherst Community Center	N	N	N
3	Amherst Fire Department	N	N	N
4	Amherst Public Schools	N	N	N
5	Post Office	N	N	N
6	Village Office, Warning Siren	N	N	N
7	Water Tower	N	N	N

Figure AMH.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 AMH.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
137	\$17,007,175	4	\$176,240	2.9%

Source: County Assessor, 2021

**Table AMH.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
137	\$17,007,175	0	\$0	0%

Source: County Assessor, 2021

## Historical Occurrences

See the Buffalo 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 Amherst are local creeks, low road areas, and the wastewater lagoon. The local planning team reports that the wastewater lagoon is not able to keep up with demand and needs to be relocated as it is partially in the floodplain. Amherst is currently in the process of building and relocating the wastewater lagoon. Amherst is planning to reduce their vulnerability to flooding by conducting a stormwater drainage system study. Once the study is completed, the community plans to evaluate and implement the findings, thus controlling bottlenecks and flow restrictions, and improving storm and flood water capacity.

Amherst is a member of the NFIP, and the village's Floodplain Administrator (Janice Taubenheim) will oversee the commitments and requirements of the NFIP. The initial FIRM for the village was delineated in 8/27/1985 and the current effective map date is 11/26/2010. As of October 31, 2021, there are no NFIP policies in place. Amherst does not currently have any repetitive loss or severe repetitive loss structures.

### Severe Winter Storms

A large severe winter storm in the vicinity of Amherst on December 8, 2011, caused slick roads and resulted in two fatalities in a vehicle accident. Based on previous severe winter storm impacts, the village is concerned about power outages and the need for backup generators. All the village's

power lines are above ground, which increases the vulnerability to power loss. There are no designated snow routes nor snow fences in the community. The village is responsible for snow removal, and equipment is currently sufficient. To mitigate the risk of power failure during blizzards, the community has identified backup power generators and burial of power lines as mitigation projects.

### Tornadoes and High Winds

There have been no reports of high winds or tornadoes in the Village of Amherst. However, the village is concerned about electrical distribution during a high wind event. Although tornadoes have not directly hit the village, there have been several tornadic events, which have been near the village. In June of 2011, an EF3 tornado west of Amherst destroyed three homes, and downed electrical transmission lines. The planning team noted that there are no certified safe rooms in the village, but the local high school has a basement level that can provide shelter for some. That space, however, cannot hold a large volume of people. Post-impact, community members take shelter in the Fire Hall and in the Community Hall, but space is limited. Text alerts are offered for the village, but there are no other educational outreach activities about high winds or tornadoes conducted in the community. The village has mutual aid agreements with all of Buffalo County.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	New Wastewater Treatment Facility
<b>Description</b>	The current wastewater lagoon is not able to keep up with demand and is partially located in the floodplain. Construct a larger wastewater lagoon that is located out of the floodplain.
<b>Hazard(s) Addressed</b>	Drought
<b>Estimated Cost</b>	\$50,000+
<b>Local Funding</b>	General Fund
<b>Timeline</b>	2-5 Years
<b>Priority</b>	High
<b>Lead Agency</b>	Village Board, Public Works
<b>Status</b>	Under Construction

### Kept Mitigation Actions

Mitigation Action	Backup and Emergency Generators
<b>Description</b>	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 village has a generator, but it will not connect with the setup in place. The village needs a new generator that matches that direct connect setup.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$20,000-\$75,000+ per Generator
<b>Local Funding</b>	General Fund
<b>Timeline</b>	1 Year
<b>Priority</b>	High
<b>Lead Agency</b>	Village Maintenance
<b>Status</b>	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, Public Power District Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	Village Maintenance
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	\$25,000-\$100,000+
Local Funding	General Fund
Timeline	2-5 Years
Priority	High
Lead Agency	Village Maintenance
Status	Not Started
Mitigation Action	Improve Sanitary and Storm Sewer System
Description	Conduct sanitary and storm sewer study; evaluate and implement recommendations or comparable measures.
Hazard(s) Addressed	Flooding
Estimated Cost	\$10,000 - \$100,000+
Local Funding	General Fund
Timeline	2-5 Years
Priority	High
Lead Agency	Village Maintenance
Status	In Progress. Some flow studies have been completed.
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 siren has recently undergone maintenance. The village needs handheld radios.
Hazard(s) Addressed	All Hazards
Estimated Cost	Unknown
Local Funding	General Fund, Fire Department Funds
Timeline	1 Year
Priority	Medium
Lead Agency	Village Maintenance
Status	Not Started

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 Maintenance
Status	Not Started

Mitigation Action	Reduce Damages from Floods, Stormwater, and Heavy Precipitation Events
Description	Evaluate current control grade structures and implement measures to add/improve grade control structures including bridges, approaches, and culverts.
Hazard(s) Addressed	Flooding
Estimated Cost	\$25,000
Local Funding	General Fund
Timeline	2-5 Years
Priority	Medium
Lead Agency	Village Maintenance
Status	Not Started

Mitigation Action	Replace Fire Hydrants
Description	Purchase and install fire hydrants to replace those with failing functionality.
Hazard(s) Addressed	Grass/Wildfire
Estimated Cost	\$5,000/Hydrant
Local Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	Public Works, Fire 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/sf for Retrofit, \$300/sf for New Constructions
Local Funding	General Fund
Timeline	2-5 Years
Priority	Medium
Lead Agency	Village Maintenance
Status	Not Started

## 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.

Amherst last reviewed their section of the HMP in 2017 during the plan update. The Village Board will be responsible for reviewing and updating the plan in the future. These individuals will review the plan annually during a public board meeting.

**Community Profile**

# **Village of Elm Creek**

**Central Platte NRD  
Hazard Mitigation Plan**

**2022**

## Local Planning Team

The Village of Elm 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 ELM.1: Elm Creek Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
<b>Carol Jurgensen</b>	Secretary	Village of Elm Creek	Virtual	-
<b>Dusty Newton</b>	Municipal Administrator	Village of Elm Creek	Central City – Virtually	Lexington - Virtually
<b>Scott Fisher</b>	Utility Superintendent / Emergency Manager	Village of Elm Creek	-	-
<b>Dr. Bret Schroder</b>	Superintendent	Elm Creek Public Schools	-	-
<b>Village of Elm Creek Board of Health</b>		Village of Elm Creek	-	-
<b>Elm Creek Public Schools Safety Committee</b>		Elm Creek Public Schools	-	-

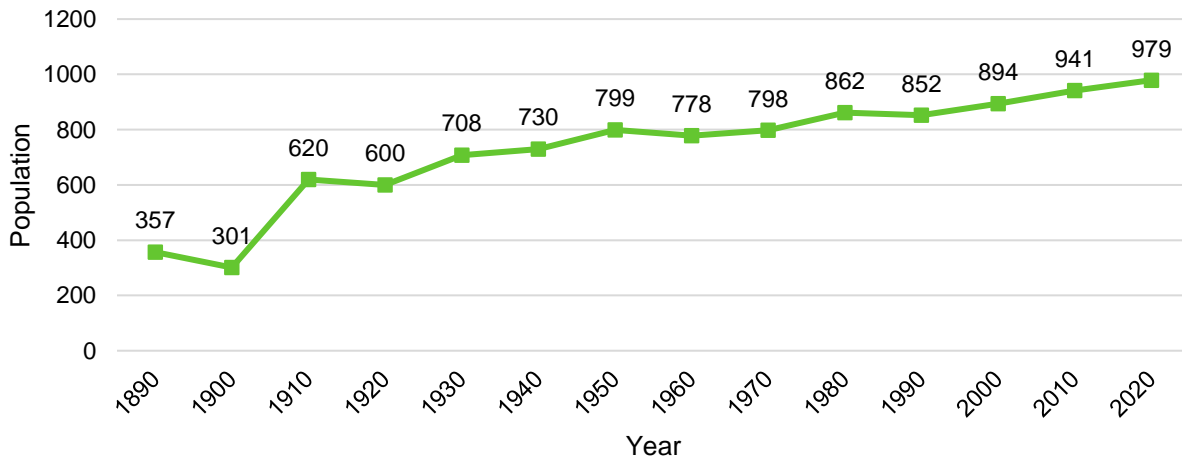
## Location and Geography

The Village of Elm Creek is in the southwestern portion of Buffalo County and covers an area of 0.70 square miles. Major waterways in the area include the Platte River, Elm Creek, and the Elm Creek Canal.

## Demographics

The following figure displays the historical population trend for the Village of Elm Creek. This figure indicates that the population of Elm Creek has been increasing since 1990 to 979 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. Elm Creek’s population accounted for 2% of Buffalo County’s population in 2020.<sup>23</sup>

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

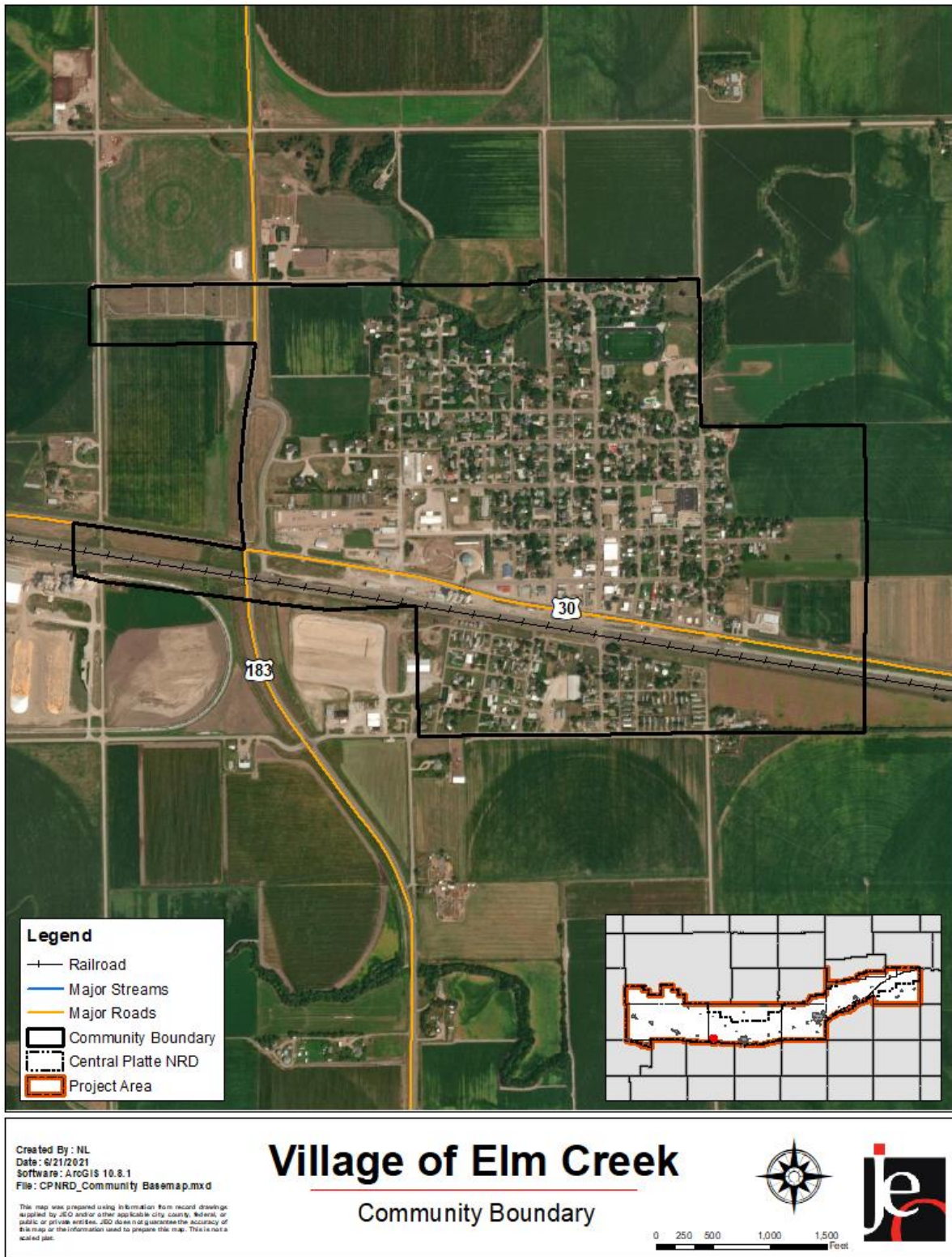


Source: U.S. Census Bureau

23 United States Census Bureau. “2020 Decennial Census: P1: DEC Redistricting Data.” <https://data.census.gov/cedsci/>.



Figure ELM.2: Village of Elm Creek

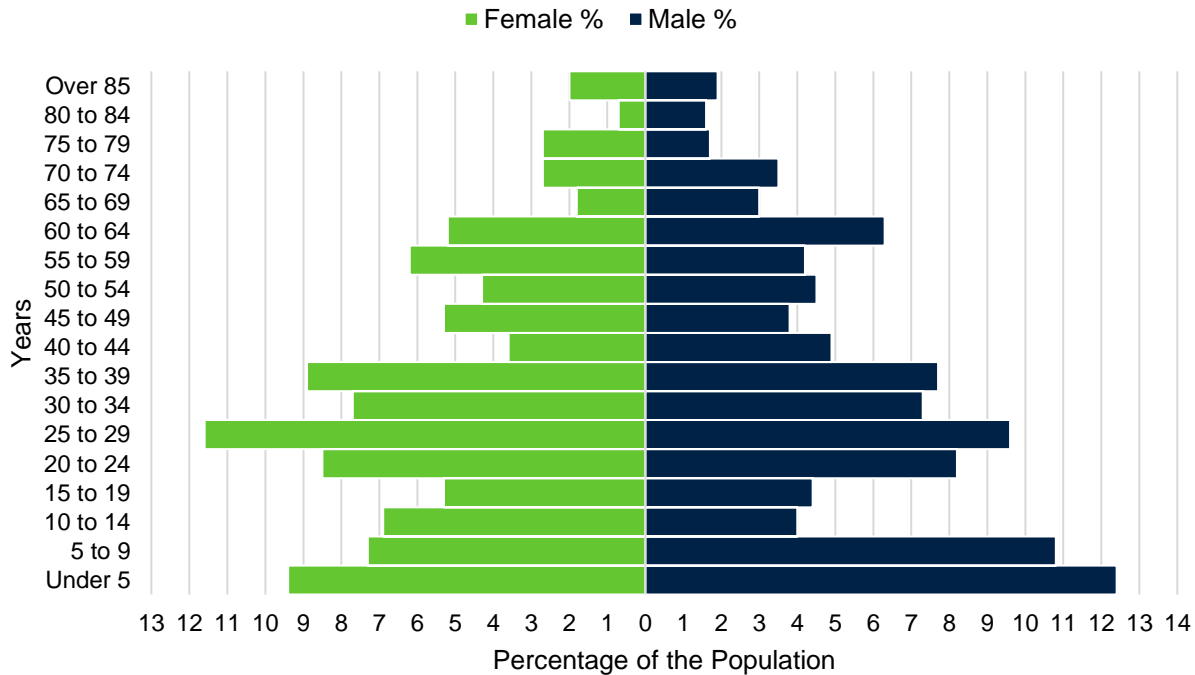




The young, elderly, and minority populations may be more vulnerable to certain hazards than other groups. Looking at Elm Creek’s population:

- **2.5% is non-white.** Since 2010, Elm Creek grew more ethnically diverse. In 2010, 1.9% of the Elm Creek’s population was non-white. By 2019, 2.5% was non-white.<sup>24</sup>
- **Younger median age.** The median age of Elm Creek was 30.3 years in old 2019. The population grew younger since 2010, when the median age was 36.2.<sup>25</sup>

**Figure ELM.3: Elm Creek’s Population Pyramid**



The figure above shows Elm Creek’s population percentage broken down by sex and five-year age groups. Elm Creek’s population is younger with a much high percentage of the population under 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. Elm Creek’s population has:

- **3.9% of people living below the poverty line.** The poverty rate (3.9%) in the Village of Elm Creek was lower than the state’s poverty rate (7.2%) in 2019.<sup>26</sup>
- **\$60,375 median household income.** Elm Creek’s median household income in 2019 (\$60,375) was \$1,000 lower than the state (\$61,439).<sup>26</sup>
- **1.6% unemployment rate.** In 2019 Elm Creek had a lower unemployment rate (1.6%) when compared to the state (2.3%).<sup>26</sup>

24 United States Census Bureau. “2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates.” <https://data.census.gov/cedsci/>.

25 United States Census Bureau. “2019 Census Bureau American Community Survey: S0101: Age and Sex.” <https://data.census.gov/cedsci/>.

26 United States Census Bureau. “2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics.” <https://data.census.gov/cedsci/>.

- **25.4% of workers commuted 30 minutes or more to work.** More workers in Elm Creek commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (25.4% compared to 23%).<sup>27</sup>

### Major Employers

The major employers in Elm Creek are Elm Creek Public Schools, KAAPA Grains, CHS Agri Service Center, and Ag Dryer Services. A large percentage of residents also commute to Kearney, Holdrege, and Lexington 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. Elm Creek has approximately 25 mobile homes located in the southeast part of the village. 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.

- **48.4% of housing built prior to 1970.** Elm Creek has a larger share of housing built prior to 1970 than the state (48.4% compared to 46%).<sup>28</sup>
- **4.5% of housing units vacant.** Since 2010, Elm Creek's vacancy rate decreased. In 2010 the vacancy rate was 17.6%. By 2019, 4.5% of housing units were vacant.<sup>28</sup>
- **9.4% mobile and manufacture housing.** The Village of Elm Creek had a larger share of mobile and manufactured housing (9.4%) compared to the state (3.3%).<sup>28</sup>
- **19.9% renter-occupied.** The rental rate of Elm Creek was 19.9% in 2019. The percentage went down since 2010, when renter occupied housing was at 27.5%.<sup>28</sup>

## Governance

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

- Clerk/Treasurer/Floodplain Administrator
- Municipal Administrator
- Utility Superintendent/Village Emergency Manager
- Secretary
- Fire Department
- Sewage Plant Operator
- Street Commissioner
- Water Commissioner
- Elm Creek Schools Safety Committee

<sup>27</sup> United States Census Bureau. "2019 Census Bureau American Community Survey: S0802: Means of Transportation to Work by Selected Characteristics." <https://data.census.gov/cedsci/>.

<sup>28</sup> United States Census Bureau. "2019 Bureau American Community Survey: DP04: Selected Housing Characteristics." <https://data.census.gov/cedsci/>.

- Board of Health

## 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 project and do not already have funds dedicated to a specific project. Funds have increased a small amount over recent years.

**Table ELM.2: Capability Assessment**

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

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

Elm 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.

**Buffalo County Local Emergency Operations Plan (2021)**

Elm Creek is an annex in the Buffalo 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 annually.

**Building Codes (2019)**

The building code sets standards for constructed buildings and structures. The village has their own set of codes that was last updated in 2019.

### **Capital Improvements Plan (2021)**

The capital improvements plan annually outlines projects the village would like to pursue and provides a planning schedule and financing options. Projects include improving transportation routes for drainage, widening roadways from improved evacuations, and installing emergency generators. This plan is updated regularly to stay current with needed projects. Projects identified in the hazard mitigation plan are reviewed for inclusion in the capital improvements plan.

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

The comprehensive plan is designed to guide the future actions and growth of the village. It contains goals aimed at safe growth, directs development away from the floodplain, directs housing away from chemical sites and major transportation routes, encourages infill, encourage clustering of development, encourages preservation of open space, and encourages elevation of structures located in the floodplain.

### **Elm and Turkey Creeks Watershed Flood Risk Reduction Plan (Under Development)**

The primary purpose of the Elm and Turkey Creeks Watershed Flood Risk Reduction Plan is flood risk reduction within and near the communities of Elm Creek and Kearney. 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 and is anticipated to be completed by mid-2022. Projects identified in the plan with a positive benefit-cost ratio will be reviewed for inclusion in the HMP.

### **Floodplain Regulations (2019), Zoning Ordinance (2019), and Subdivision Regulations (2019)**

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, identify floodplain areas as parks and open spaces, require more than one foot above base flood elevation for structures in the floodplain, discourage housing near chemical storage sites and major transportation routes, consider the wildland urban interface, include well setback requirements, and include the ability to implement water restrictions. These documents are updated as issues or concerns come up.

### **Future Development Trends**

Over the past five years, a couple of new streets were built, and additional commercial development was added on the east side of the village. No new structures were built in the floodplain or other known hazardous areas. In the next five years, another seven-block street, commercial development on the northwest edge of the village, and a potential housing development to the north are planned. Both developments will adhere to floodplain ordinances if located in the floodplain.

## Community Lifelines

### Transportation

Elm Creek’s major transportation corridors include US Highway 30 and 183. The most traveled route is Highway 183 with an average of 3,110 vehicles daily, 645 of which are trucks.<sup>29</sup> Fuel and fertilizer are primary transported along these routes. The village has one Union Pacific Railroad line traveling east to west on the southern edge of the community. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents. No large spill or significant transportation events have occurred recently.

### 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 Elm Creek which house hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

**Table ELM.3: Chemical Storage Sites**

Name	Address	Floodplain (Y/N)
<b>CHS Inc</b>	515 W Front St	N
<b>One9 Fuel Stop</b>	5085 Buffalo Creek Rd	N
<b>Sapp Bros Landmark Inc</b>	380 Odessa Rd	N

Source: Nebraska Department of Environment and Energy<sup>30</sup>

### 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 ELM.4: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Elm Creek School #9	Y	Y	N
2	Lift Station	N	N	N
3	Lift Station #1	N	N	N
4	Lift Station #3	N	N	N
5	Village Hall/Fire Station	N	Y	N
6	Water Tower/Well	N	Y	N
7	Well/Pump House	N	N	N

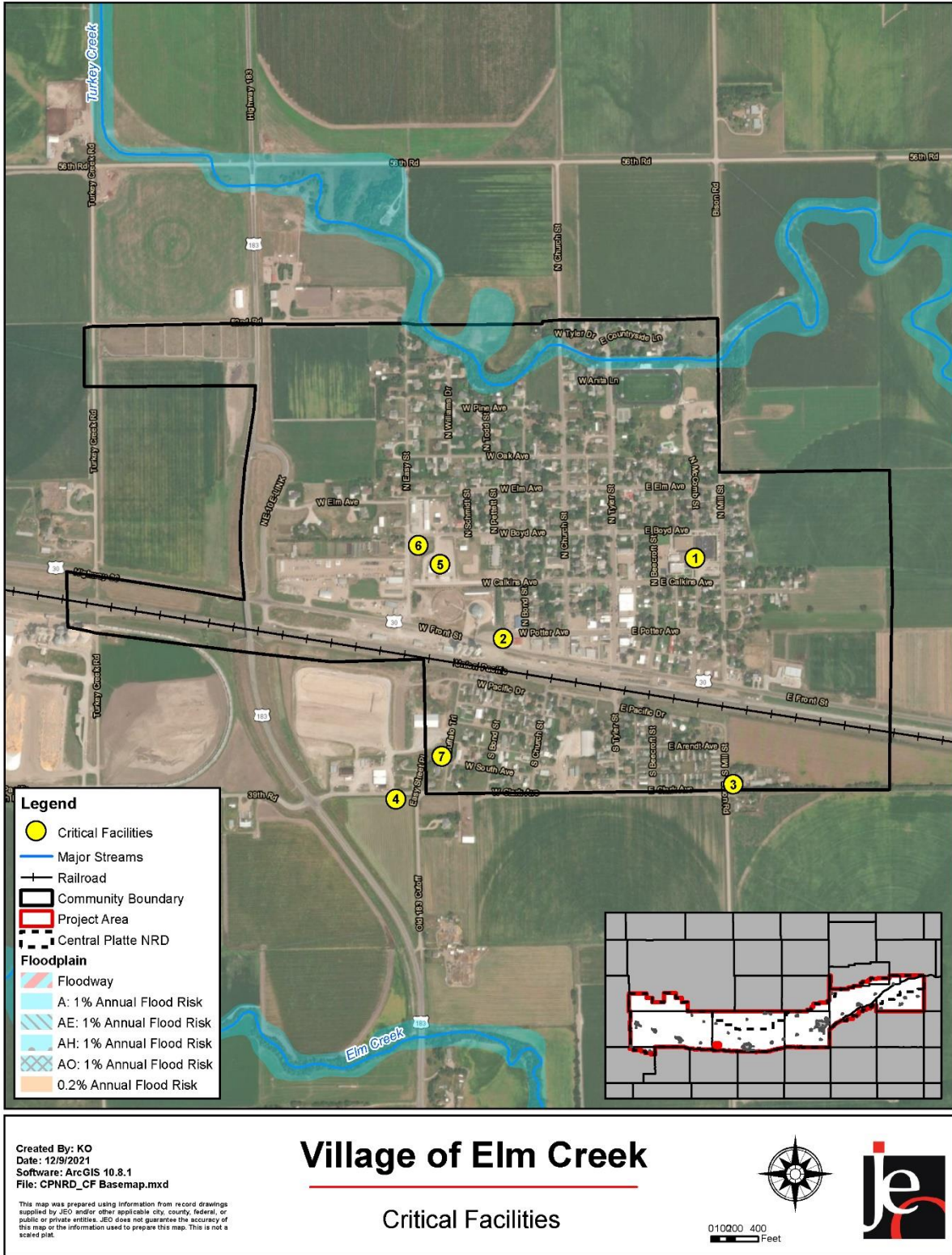
29 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." [map].

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

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



Figure ELM.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 ELM.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
412	\$47,264,150	19	\$3,511,360	4.6%

Source: County Assessor, 2021

**Table ELM.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
412	\$47,264,150	0	\$0	0%

Source: County Assessor, 2021

## Historical Occurrences

See the Buffalo 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 near the Village of Elm Creek are located north and east of the village. The local planning team commented that southwest Buffalo County is most prone to flooding, and the low-lying Village of Elm Creek is prone to flooding. Turkey Creek, Elm Creek, and Highway 183 to the Platte River all have tendencies to flood. NCEI reported seven flooding events for Elm Creek since 1996, which caused \$25,235,000 dollars in property damages. The local planning team cited significant flooding events from 2003 through 2007. During this time, flooding affected the community and businesses, including Fosters Family Foods. Furthermore, houses were jeopardized, animals needed to be rescued, and countless sandbags were filled and strategically placed to mitigate the flooding. Flooding also impacted the community in July 2019. Many roads and basements were flooded during the event. Elm Creek has improved their recurring flooding issues along North Tyler Street.

The entire village falls under the Elm and Turkey Creeks 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.



Elm Creek is a member of the NFIP, and the village's Floodplain Administrator (Wendy Clabaugh) 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 11/26/2010. As of October 31, 2021, there are two NFIP policies in-force covering \$424,000. Elm Creek has one single-family home that is a repetitive loss structure, and a mitigation action can be found in the village's Mitigation Strategy section to address this structure.

**Figure ELM.5: July 2019 Flooding**



### **Hazardous Materials Release**

Local concerns over chemical spills during transportation center around Elm Creek's ability to evacuate and provide medical care. The only serious chemical release event occurred in 1974, when a vehicular crash (releasing 8,355 LGA of gasoline) ended in one death and four injuries. Since that event, there have been five other chemical release incidents in Elm Creek, none of which were serious incidents. If a large spill were to occur the local fire department, county sheriff, and county emergency manager would respond.

The transportation routes of most concern are Highway 183, Highway 30, the railroad, and Interstate-80. A large variety of chemicals are regularly transported on these routes. The elementary school, Fire Hall, and Village Hall are all located within a quarter mile of Highway 30. The village intends to work with the Fire Department and County Emergency Management to conduct a tabletop exercise on a chemical transportation spill scenario.

### **Severe Thunderstorms**

NCEI reported 40 severe thunderstorm events since 1996 occurring in the village. Official reports accounted for \$2,782,000 dollars in property damage and five injuries from those events. The most recent event occurred on July 9<sup>th</sup> and 10<sup>th</sup> in 2021. Eighty plus mph straight line winds caused damage to homes and trees in the community. In the early 1980s, and again in 2004 and 2005, the Village of Elm Creek experienced 100mph winds. Elm Creek does not have any safe rooms or places for community members to seek shelter during severe thunderstorm events. The village is in the process of backing up municipal records. Buffalo County's Emergency Management offers severe weather alerts through email and Facebook. The village has sent newsletters to community members with information about sirens and their important purpose. The local planning team estimate that only 10% of power lines in the community are buried making them more at risk to power loss. However, the village hall, fire department, school, and well all have backup generators. Elm Creek is currently in the process of adding generators to the lift stations.

### **Severe Winter Storms**

The local planning team cited several severe winter storms that have impacted the community. In December 2006 to January 2007, a regional ice storm was so severe that Elm Creek opened a shelter for other communities who lost power for extended periods of time. On February 2, 2016, there was a large accumulation of heavy snow, and conditions worsened through high winds and drifting snow. Roads were impassable, power outages occurred, and emergency response teams responded slowly to 911 calls because of the dangerous conditions. Despite the danger, there were no property damages resulting from this storm. The local planning team is concerned with severe winter storms because of power outages, infrastructure damages, transportation issues, and the lack of effective sheltering. The village is responsible for snow removal using a snowplow and pick-up with a blade. The village is in the process of adding another pickup with a blade, skid steer, tractor, and loader. The designated snow routes in Elm Creek are Tyler Street, Potter Avenue, Calkins Street, Beecroft to Mill Street, Highway 30 to Boyd, Boyd to Calkins Street, Front Street, and Mill to Tyler Street. Snow fencing is used when drifting becomes an issue.

### **Tornadoes and High Winds**

There have been four tornadoes since 1998 that impacted the Village of Elm Creek, causing a combined total of \$7,080,000 dollars in property damages. One event in 2011 had two tornadoes, one which was rated an EF2 and one that was rated an EF3. These events heavily damaged two houses, many roofs, sidings, windows, and trees. One person was injured when a semi overturned west of the village. Weather radios are available at the school and Fire Hall, and tornado sirens were improved in 2007. The sirens can be heard anywhere within the village. There are no safe rooms in the community. The village utilizes the community's website and newsletter to share hazard information to residents.

## Mitigation Strategy

### Completed Mitigation Actions

<b>Mitigation Action</b>	<b>Water Supply Study</b>
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	Drought
<b>Status</b>	The study determined that the village does not need a new water tower.

### New Mitigation Actions

<b>Mitigation Action</b>	<b>Alert Sirens</b>
<b>Description</b>	Evaluate the need for additional or upgrading alert sirens. Install new sirens if needed.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Thunderstorms
<b>Estimated Cost</b>	\$15,000+
<b>Local Funding</b>	General Funds
<b>Timeline</b>	5+ Years
<b>Priority</b>	Low
<b>Lead Agency</b>	Village Board, County Emergency Manager
<b>Status</b>	Not Started

<b>Mitigation Action</b>	<b>Backup and Emergency Generators</b>
<b>Description</b>	Purchase two backup generators to support the lift stations.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$34,000
<b>Local Funding</b>	Village ARPA Funds
<b>Timeline</b>	1 Year
<b>Priority</b>	High
<b>Lead Agency</b>	Village Board, Utilities Department
<b>Status</b>	This project should be completed in 2023.

<b>Mitigation Action</b>	<b>Project Scoping</b>
<b>Description</b>	Evaluate potential flood risk reduction alternatives as identified through the NRCS WFPO including project scoping and implementation.
<b>Hazard(s) Addressed</b>	Flooding
<b>Estimated Cost</b>	Varies by Project
<b>Local Funding</b>	General Funds, WFPO
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Village Board
<b>Status</b>	Elm-Turkey Creeks 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.

Mitigation Action	Repetitive Loss Property Mitigation
Description	Identify and perform flood mitigation options on repetitive loss properties within the community.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies by Project
Local Funding	General Funds, Private Owner Funds
Timeline	5+ Years
Priority	Low
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Water Meters
Description	Water meters need to be added to the village water lines.
Hazard(s) Addressed	Drought
Estimated Cost	\$600,000+
Local Funding	General Funds
Timeline	5+ Years
Priority	Medium
Lead Agency	Village Board, Utilities Department
Status	The village is currently evaluating the project.

### 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	General Fund
Timeline	2-5 Years
Priority	Low
Lead Agency	Village Board, Fire Department
Status	An exercise was done a few years ago but the village needs to schedule another one soon.

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	Maintenance Department
Status	This is an ongoing action. The Fire Department does annual fire safety and prevention workshop with elementary students. The village includes pertinent information in newsletters and on the website.



## **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.

Elm Creek last reviewed their section of the HMP in 2017 during the plan update. The Municipal Administrator and Utility Superintendent/Village Emergency Manger will be responsible for reviewing and updating the plan in the future. These individuals will review the plan annually during a public board meeting. The public will be notified using social media, village website, and newsletter.

**Community Profile**

# **City of Gibbon**

**Central Platte NRD  
Hazard Mitigation Plan**

**2022**

## Local Planning Team

The City of Gibbon’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 GIB.1: Gibbon Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Larry Homan	City Administrator / Floodplain Administrator	City of Gibbon	Grand Island	Grand Island
Stacey Jaeschke	Assistant to City Administrator	City of Gibbon	-	-
Deb Van Matre	Mayor	City of Gibbon	Grand Island	Grand Island

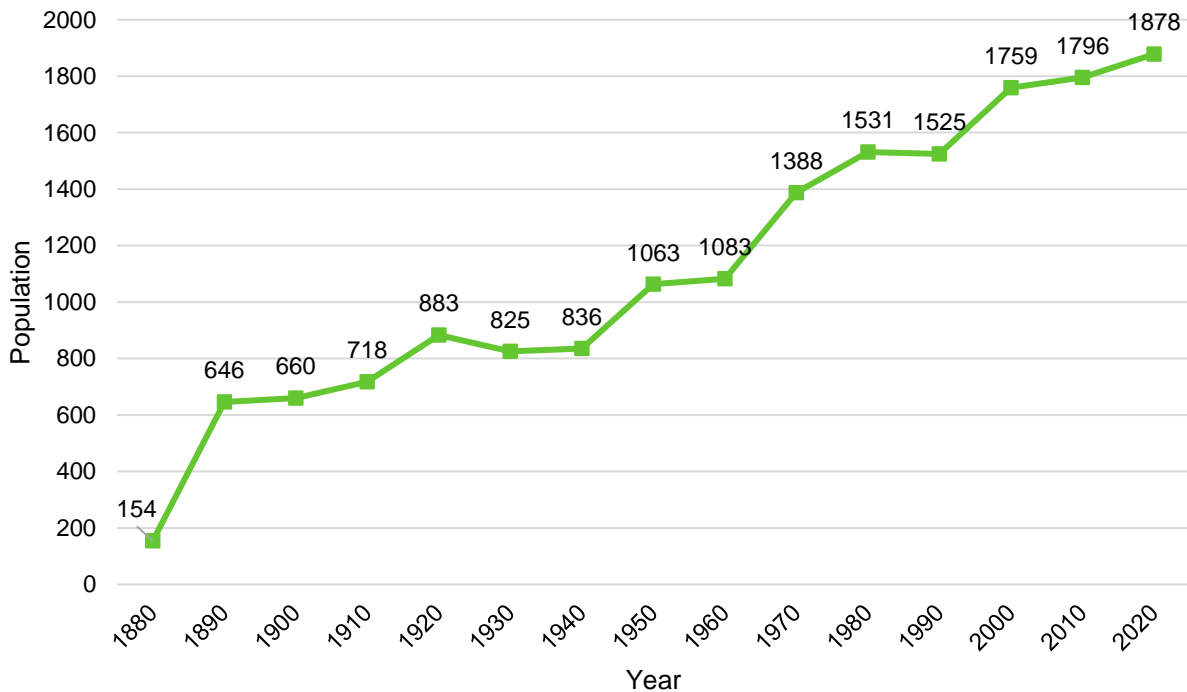
## Location and Geography

The City of Gibbon is in southeastern Buffalo County and covers an area of 0.87 square miles. The major waterway in the area is the Wood River.

## Demographics

The following figure displays the historical population trend for the City of Gibbon. This figure indicates that the population has been increasing since 1940 to 1,878 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. Gibbon’s population accounted for 3.7% of Buffalo County’s population in 2020.<sup>31</sup>

**Figure GIB.1: Population 1880 – 2020**



Source: U.S. Census Bureau

31 United States Census Bureau. “2020 Decennial Census: P1: DEC Redistricting Data.” <https://data.census.gov/cedsci/>.

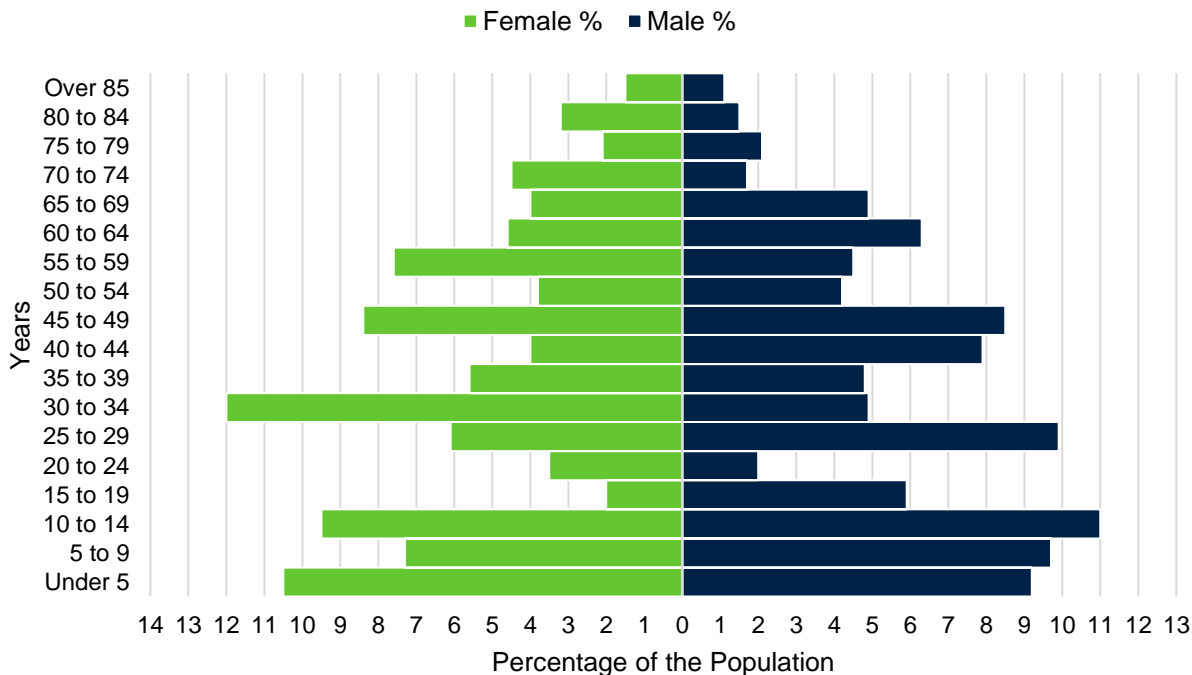
Figure GIB.2: City of Gibbon



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

- **27.5% is non-white.** Since 2010, Gibbon grew more ethnically diverse. In 2010, 18.2% of the City’s population was non-white. By 2019, 27.5% was non-white.<sup>32</sup>
- **Older median age.** The median age of Gibbon was 34.3 years in old 2019. The population grew slightly older since 2010, when the median age was 34.1.<sup>33</sup>

**Figure GIB.3: Gibbon’s Population Pyramid**



The figure above shows Gibbon’s population percentage broken down by sex and five-year age groups. Gibbon’s population is younger with a much higher percentage of the population below 35 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. Gibbon’s population has:

- **7.8% of people living below the poverty line.** The poverty rate (7.8%) in the City of Gibbon was higher than the state’s poverty rate (7.2%) in 2019.<sup>34</sup>
- **\$62,548 median household income.** Gibbon’s median household income in 2019 (\$62,548) was \$1,000 higher than the state (\$61,439).<sup>34</sup>
- **2.2% unemployment rate.** In 2019, Gibbon had a lower unemployment rate (2.2%) when compared to the state (2.3%).<sup>34</sup>

32 United States Census Bureau. “2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates.” <https://data.census.gov/cedsci/>.

33 United States Census Bureau. “2019 Census Bureau American Community Survey: S0101: Age and Sex.” <https://data.census.gov/cedsci/>.

34 United States Census Bureau. “2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics.” <https://data.census.gov/cedsci/>.

- **21.8% of workers commuted 30 minutes or more to work.** Fewer workers in Gibbon commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (21.8% compared to 41.2%).<sup>35</sup>

### Major Employers

The major employers in the City of Gibbon are Gibbon Public Schools, Nebraska Central Telephone Company, Gibbon Pack, Cargill, Glass Edge, Rasmussen Mechanical, Clevenger's Convenience Store, and Exchange Bank. A large percentage of residents commute to Kearney 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. 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. The local planning team noted that there is a large mobile home park located on the west side of town on 7<sup>th</sup> street. 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.

- **63% of housing built prior to 1970.** Gibbon has a larger share of housing built prior to 1970 than the state (63% compared to 46%).<sup>36</sup>
- **3.9% of housing units vacant.** Since 2010, Gibbon's vacancy rate went down. In 2010 the vacancy rate was 6.3%. By 2019, only 3.9% of housing units were vacant.<sup>36</sup>
- **7.8% mobile and manufacture housing.** The City of Gibbon had a larger share of mobile and manufactured housing (7.8%) compared to the state (3.3%).<sup>36</sup>
- **28.9% renter-occupied.** The rental rate of Gibbon was 28.9% in 2019. The percentage went up since 2010, when renter occupied housing was at 28.7%.<sup>36</sup>

## Governance

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

- Clerk
- Treasurer
- City Administrator/Floodplain Administrator
- Assistant to the City Administrator
- Public Works Director
- Fire Department
- Sewage Plant Operator
- Planning Commissioner
- Street Superintendent

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

36 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 with a large portion already dedicated to a lift station, community center, and fire hall. Funds have stayed the same over recent years.

**Table GIB.2: Capability Assessment**

Survey Components/Subcomponents		Yes/No
<b>Planning &amp; Regulatory Capability</b>	Comprehensive Plan	Yes
	Capital Improvements Plan	Yes
	Economic Development Plan	Yes
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	N
	Storm Water Management Plan	Yes
	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, Wood River Watershed Flood Risk Reduction Plan, Wood River Watershed Study	
<b>Administrative &amp; Technical Capability</b>	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	Yes
	Chief Building Official	Yes
	Civil Engineering	No
	Local Staff Who Can Assess Community’s Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	-
	<b>Fiscal Capability</b>	Capital Improvement Plan/ 1- & 6-Year plan
Applied for grants in the past		Yes
Awarded a grant in the past		No
Authority to Levy Taxes for Specific Purposes such as Mitigation Projects		Yes
Gas/Electric Service Fees		Yes
Storm Water Service Fees		No

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

## Plan Integration

Gibbon 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 city will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

### Buffalo County Local Emergency Operations Plan (2021)

Gibbon is an annex in the Buffalo 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 annually.

### Building Code (2013)

The building code sets standards for constructed buildings and structures. The city has adopted the 2013 International Building Codes with no amendments made.

### **Capital Improvements Plan (2020)**

The capital improvements plan annually outlines projects the city would like to pursue and provides a planning schedule and financing options. Projects include improving transportation routes for drainage, installing new municipal wells, upsizing water distribution pipes, installing water meters, burying powerlines, installing emergency generators in critical facilities, wastewater treatment improvements, water quality improvements, flood mitigation projects, and constructing new municipal and emergency response facilities. Projects identified in the HMP are reviewed for inclusion in the capital improvements plan.

### **Comprehensive Plan (2016)**

The comprehensive plan is designed to guide the future actions and growth of the city. It incorporates some of the goals and objectives included in the HMP. The plan encourages development away from major transportation routes and the floodplain, contains goals and objectives aimed at safe growth, limits density in areas adjacent to known hazardous areas, encourages elevation of structures located in the floodplain, identifies areas that need emergency shelters, and encourages preservation of open space in hazard-prone areas. The comprehensive plan is updated every ten years for the city. There are no current strategies to further incorporate the HMP into the comprehensive plan.

### **Floodplain Ordinance (2013), Zoning Ordinance (2013), and Subdivision Regulations (2013)**

The city has a Floodplain Ordinance, which requires at least one foot of elevation above base flood elevation in the floodplain and prohibits development in the floodway. Gibbon plans to update zoning regulations, mapping, and subdivision regulations by the summer of 2022.

### **Storm Water Pollution Prevention Plan (2017)**

The purpose of the storm water pollution prevention plan is to prevent storm water pollution through prevention measures and corrective action. The plan includes guidelines for water sampling, spill response, routine inspections, pollutant sources, storm water control measures, and corrective actions.

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

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

### **Wellhead Protection Plan (2021)**

The purpose of wellhead protection plan 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.

### **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 a 1% AEP peak discharge that is 15% less than the current design for the Grand Island diversion channel. This study will help support ongoing WFPO studies and future NFIP mapping efforts in the region.

### **Future Development Trends**

Over the past five years, the city has had several new housing developments and small businesses come to the area. No new structures were developed in the floodplain. In the next five years, the city plans to develop ten new homes in a cul-de-sac on Turkey drive. The city also has plans for developing a new fire hall, city hall, and community center.

### **Community Lifelines**

#### **Transportation**

Gibbon's major transportation corridors include US Highway 30, and State Highway 10C. The most traveled route is Highway 30 with an average of 6,200 vehicles daily, 455 of which are trucks.<sup>37</sup> The city has two Union Pacific Railroad lines that converge east of the community, with one line traveling east-west through the northern portion of the community. The local planning team noted that the city hall and sewer lift station are located along main transportation routes in the city. Hazardous chemicals are transported regularly along major highways and the railroad. In March 2021, a train derailment occurred in 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 are nine chemical storage sites within or near Gibbon which house hazardous materials. In addition to the table below, the local planning team noted that chemical storage facilities in the city and at Mid Nebraska Chemical are also sites of concern. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

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

**Table GIB.3: Chemical Storage Sites**

Name	Address	Floodplain (Y/N)
The Andersons Inc	6090 Optic Rd	N
Clevenger Farm Products	6325 Lowell Rd	N
Gibbon Packing LLC	218 Highway 30	N
Nebraska Central Telephone Co	22 La Barre St	N
Aurora Co-op Elevator Company	7280 Gibbon Rd	N
Clevenger Propane Tank	Link 10C	N
Aurora Co-op Elevator Company	44740 Highway 30	N
Winfield United	39560 39th Rd	N
Simplot Grower Solutions	39695 E 56th Rd	N

Source: Nebraska Department of Environment and Energy<sup>38</sup>

**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.

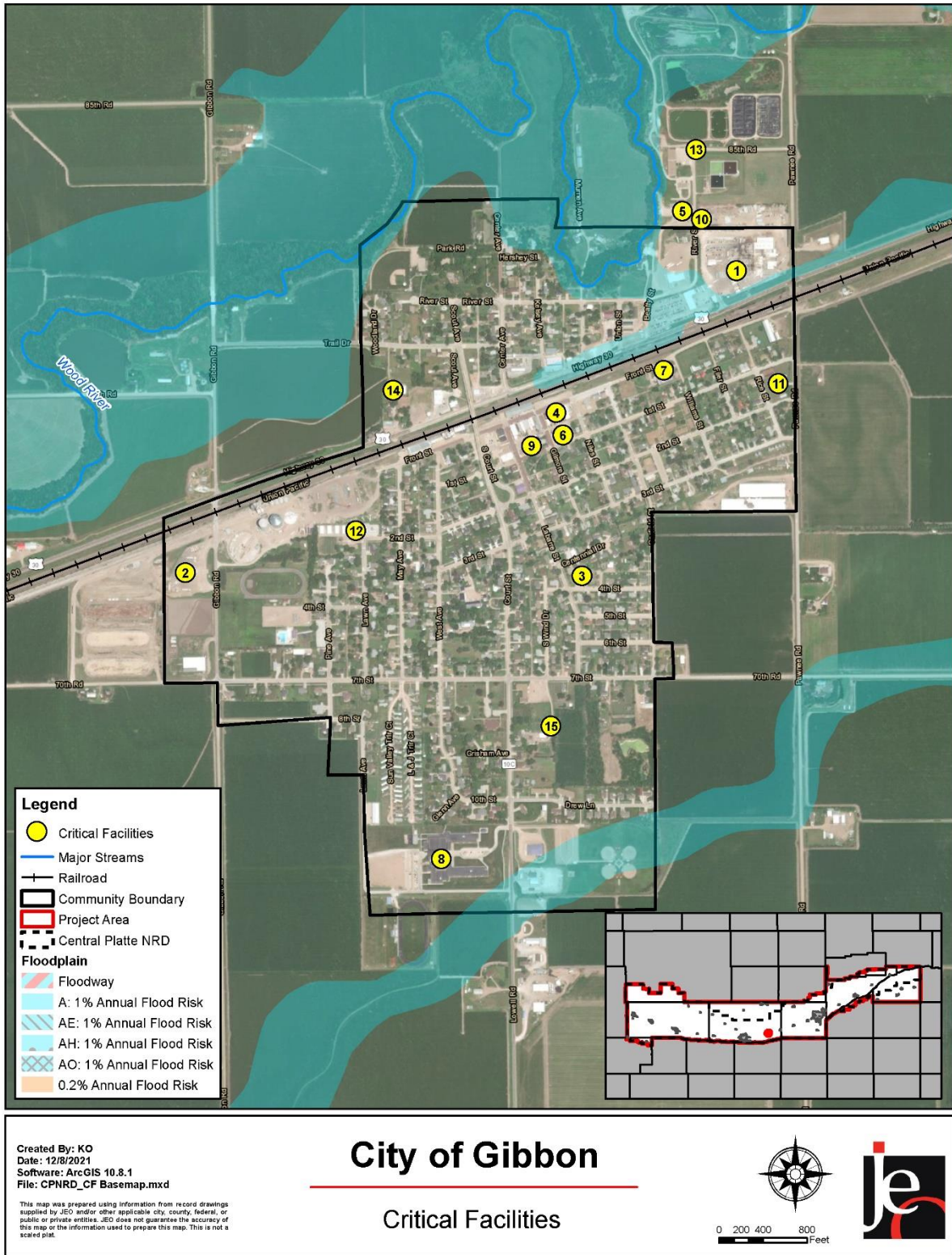
**Table GIB.4: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	American Foods	N	N	N
2	Cargill	N	N	N
3	Centennial Manor	N	N	N
4	City Hall	N	N	N
5	City Shop	N	N	N
6	Fire Hall	N	Y	N
7	Front Street Lift Station	N	N	N
8	Gibbon Schools	Y	N	N
9	Medical Clinic	N	N	N
10	Park Substation	N	N	N
11	Source Gas Border Station	N	N	N
12	Turkey Plant Substation	N	N	N
13	Wastewater Treatment Plant	N	Y	N
14	Water Station/Storage Tank	N	Y	N
15	Water Tower	N	Y	N

<sup>38</sup> Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed June 2021.



Figure GIB.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 GIB.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
645	\$88,942,420	33	\$8,888,455	5.1%

Source: County Assessor, 2021

**Table GIB.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
645	\$88,942,420	0	\$0	0%

Source: County Assessor, 2021

## Historical Occurrences

See the Buffalo 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 area of concern for the City of Gibbon is located north of the city and impacts a large portion of the city. The local planning team also identified the east part of the town as having been impacted by flooding events. Specific areas most prone to flooding include the north side of town/Highway 30, East Third Street, Williams Street, East Second Street, Drew Lane, and the area around the school. The biggest concern in the community is slow drainage and not being able to divert water away from the city. The close proximity of Wood River to the city is also an issue.

In 2010 the city made improvements to the stormwater system. Most recently, the community experienced two flood events four months apart in 2019 due to flooding from Wood River that overwhelmed current systems after heavy rains. Large portions of Gibbon were impacted by this flooding, mainly north of Highway 30 and Front Street. Homes and businesses were evacuated and sand-bagged where possible. Several houses and businesses are vacant and unlivable due to flood damages. The city is currently working with the Central Platte NRD and surrounding communities to gather data and develop solutions to mitigate against flooding.



**Figure GIB.5: 2019 Flooding**



*Source: U.S. Army Corps of Engineers*

The entire city 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.

Gibbon is a member of the NFIP, and the city's Floodplain Administrator (Larry Homan) will oversee the commitments and requirements of the NFIP. The initial FIRM for the city was delineated in 9/27/1985 and the current effective map date is 11/26/2010. As of October 31, 2021, there are 17 NFIP policies in-force covering \$3,880,300. Gibbon has four non-residential businesses that are repetitive loss properties. A mitigation action can be found in the city's Mitigation Strategy to address these structures.

### **Hazardous Materials Release**

Union Pacific Railroad's main line runs through the middle of the city. Highway 30 is another route of concern. Chemicals are presumed to be transported daily by highway and railroad; however, the city is not sure which types of chemicals are being transported. According to the Pipeline and Hazardous Materials Safety Administration (PHMSA), there have not been any reports of chemical spills in Gibbon as of January 2021. The planning team noted however that there was a train derailment in the city in March 2021 near Front Street and Niles. Several train cars derailed during the incident and spilled their contents, but no chemicals were spilled. The derailment damaged the roadway and surrounding business properties. Several critical facilities are located along these main transportation routes, including City Hall and a sewer lift station. Local response resources include the volunteer fire department, surrounding fire departments, and Buffalo County. Gibbon has worked to improve their response to this hazard by utilizing the Buffalo County emergency response notification system and educating the public about potential hazards.

### Public Health Emergency

The local planning team identified public health emergency as a hazard of concern due to impacts from Covid-19. To help slow the spread of the virus, the city implemented a policy for city employees that they could not return to work without a negative Covid-19 test after being sick. During the pandemic, the city identified a need for increased medical care availability in the community.

### Severe Thunderstorms

NCEI reported 11 thunderstorm wind events since 1996 with property damages topping \$4,130,000 dollars. In June and July of 2014, a severe thunderstorm event damaged every property in the city. Gibbon’s critical municipal records are protected with surge protectors, City Hall and City Shop have backup power generators, and the critical facilities have weather radios. Gibbon would like to have a storm shelter in the planned new community center.

For hail, the planning team is concerned with the inability of those with inadequate insurance to repair their property. The NCEI reports 20 hail events since 1996 with the largest hail stone reported at 2.75 inches. The planning team referenced two dates, June and July of 2014, where hail events caused damages to all properties in the city. The Fire Hall has some shatterproof windows, but no other critical facilities are fitted with hail resistant building materials. Gibbon’s critical facilities are insured should hail damage occur. Gibbon intends to mitigate hail damage in their community by educating the public about the hazards associated with hail. Additionally, the community plans to utilize the Buffalo County emergency response notification system.

### Tornadoes and High Winds

The NCEI reports two tornadoes since 2005 in the City of Gibbon, causing \$75,000 dollars in property damages. The local planning team noted a lack of shelters for residents in the Trailer Courts. The city backs up their records and takes them off site every day. The city has three sirens in the community that are able to reach all parts of the city and are activated by Buffalo County Civil Defense. Sirens are tested the first Thursday of every month. The County Emergency Management does offer text alerts, and has Mutual Aid with Kearney, Shelton, Ravenna, Minden, Wood River, and all other communities in Buffalo County. Gibbon would like to have a storm shelter in the planned new community center.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Alert Sirens
Description	Evaluate the need for additional or upgrading alert sirens. Install new sirens if needed.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Thunderstorms
Estimated Cost	\$15,00+ per Siren
Local Funding	General Budget
Timeline	5+ Years
Priority	Low
Lead Agency	City Administrator/Floodplain Administrator, County Emergency Management
Status	Not Started

Mitigation Action	New Fire Hall
Description	A new fire hall is needed for the city.
Hazard(s) Addressed	Grass/Wildfire
Estimated Cost	\$2,000,000+
Local Funding	General Budget
Timeline	2-5 Year
Priority	Medium
Lead Agency	City Administrator/Floodplain Administrator, Fire Department
Status	Not Started

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 Budget, WFPO
Timeline	2-5 Years
Priority	Medium
Lead Agency	City Administrator/Floodplain Administrator
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.

Mitigation Action	Reduce Damages from Floods, Stormwater, and Heavy Precipitation Events
Description	Improve grading in the city and implement a diversion. Form a partnership with the CPNRD to support floodplain management.
Hazard(s) Addressed	Flooding
Estimated Cost	Unknown, Staff Time
Local Funding	General Budget
Timeline	1 Year
Priority	High
Lead Agency	City Administrator/Floodplain Administrator, CPNRD, Utility Superintendent, Street Superintendent
Status	Currently looking into potential solutions.

Mitigation Action	Repetitive Loss Property Mitigation
Description	Identify and perform flood mitigation options on repetitive loss properties within the community.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies by Project
Local Funding	General Budget, Private Owner Funds
Timeline	5+ Years
Priority	Low
Lead Agency	City Administrator/Floodplain Administrator
Status	Not Started

**Kept Mitigation Actions**

Mitigation Action	Backup and Emergency Generators
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$20,000-\$75,000+ per Generator
<b>Local Funding</b>	Tax, General Budget
<b>Timeline</b>	1 Year
<b>Priority</b>	Medium
<b>Lead Agency</b>	City Administrator/Floodplain Administrator
<b>Status</b>	Work has been completed at the Front Street Lift Station to add a generator with plans to purchase it in the next 12 months.
Mitigation Action	Improve Emergency Communication Systems
<b>Description</b>	Develop Emergency Communication Action Plan; implement Emergency Communication Action Plan; obtain/upgrade emergency communication equipment.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$5,000+
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	Low
<b>Lead Agency</b>	City Administrator/Floodplain Administrator
<b>Status</b>	Not Started
Mitigation Action	Public Awareness/Education
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$1,000+
<b>Local Funding</b>	General Budget
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Low
<b>Lead Agency</b>	City Administrator/Floodplain Administrator
<b>Status</b>	Not Started

Mitigation Action	Storm Shelter / Safe Room
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Thunderstorms
<b>Estimated Cost</b>	\$150/sf for retrofit; \$300/sf for new construction
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	City Administrator/Floodplain Administrator
<b>Status</b>	Not Started. Hoping to include this in the new community center building project.

### 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.

Gibbon last reviewed their section of the HMP in 2019 and no changes were made. The City Administrator/Floodplain Administrator, Mayor, Public Works Director, and Assistant to the City Administrator will be responsible for reviewing and updating the plan in the future. These individuals will review the plan annually during public council meetings. The public will be notified through social media, local newspaper, and city website.

**Community Profile**

# **City of Kearney**

**Central Platte NRD  
Hazard Mitigation Plan**

**2022**



## Local Planning Team

The City of Kearney'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 KRN.1: Kearney Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
<b>Eric Hellriegel</b>	Assistant City Manager	City of Kearney	Lexington – Virtually, Virtual	Lexington - Virtually
<b>Bryan Waugh</b>	Police Chief	City of Kearney	-	-
<b>Jason Whalen</b>	Fire Administrator	City of Kearney	Grand Island	-
<b>Scott Hayden</b>	Park and Recreation Director	City of Kearney	-	-
<b>Tony Jelinek</b>	Utilities Director	City of Kearney	-	-
<b>Andy Harter</b>	Public Works Director	City of Kearney	-	-
<b>Luke Dutcher</b>	Assistant Public Works Director	City of Kearney	-	-
<b>Andy Bartling</b>	Building Official / Floodplain Administrator	City of Kearney	Grand Island – Virtually	Grand Island - Virtually
<b>Melissa Daugherty-O'hara</b>	City Planner	City of Kearney	-	-
<b>Melissa Haupt</b>	Risk Manager	City of Kearney	-	-

## Location and Geography

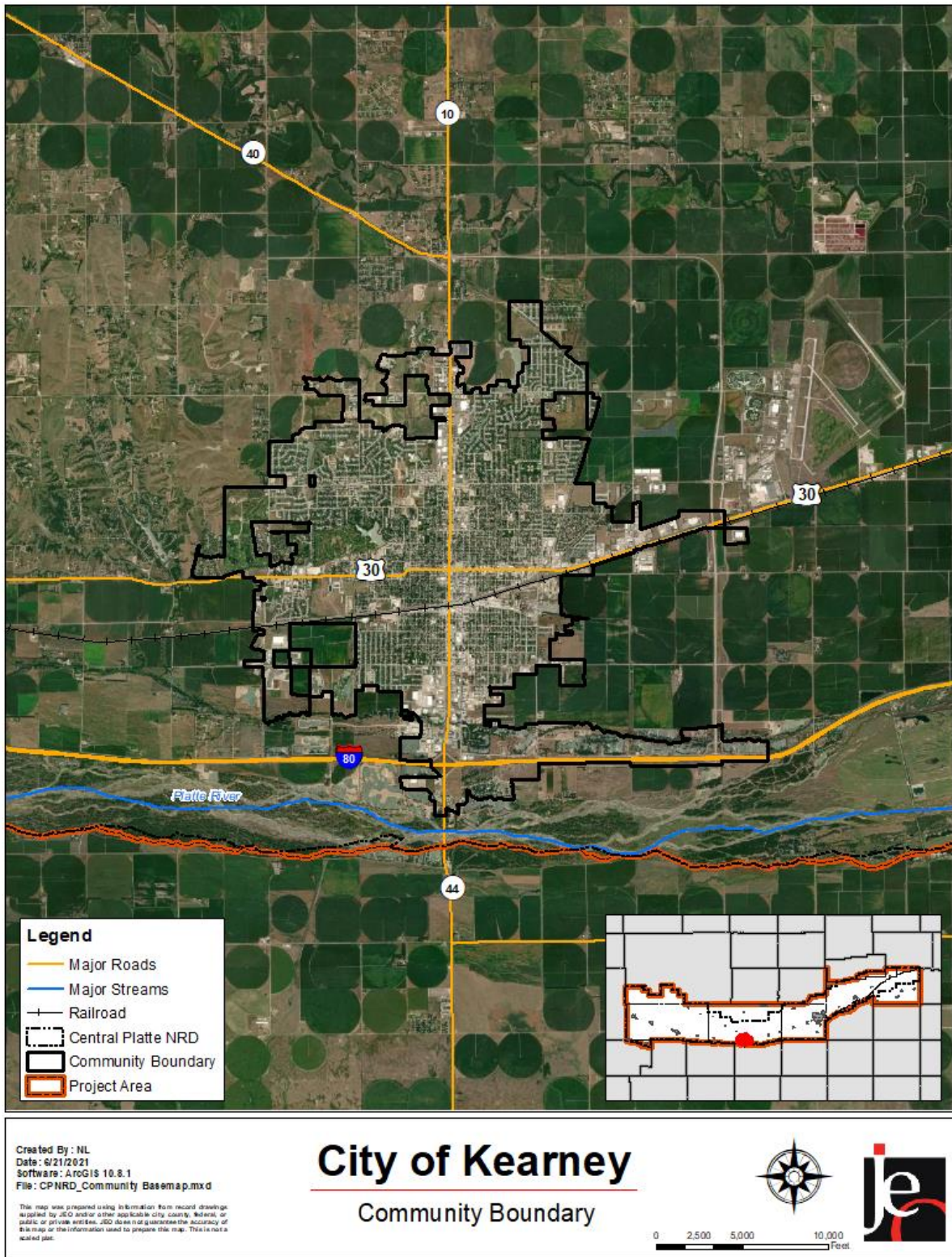
The City of Kearney is in the central-southern edge of Buffalo County and covers an area of 13 square miles. Major waterways in the area include the Platte River just south of the city, Cottonmill Reservoir, Kearney Reservoir, Yanney Lake, Lost Lake, and Hidden Lake. Kearney is the county seat and largest community in Buffalo County.

## Demographics

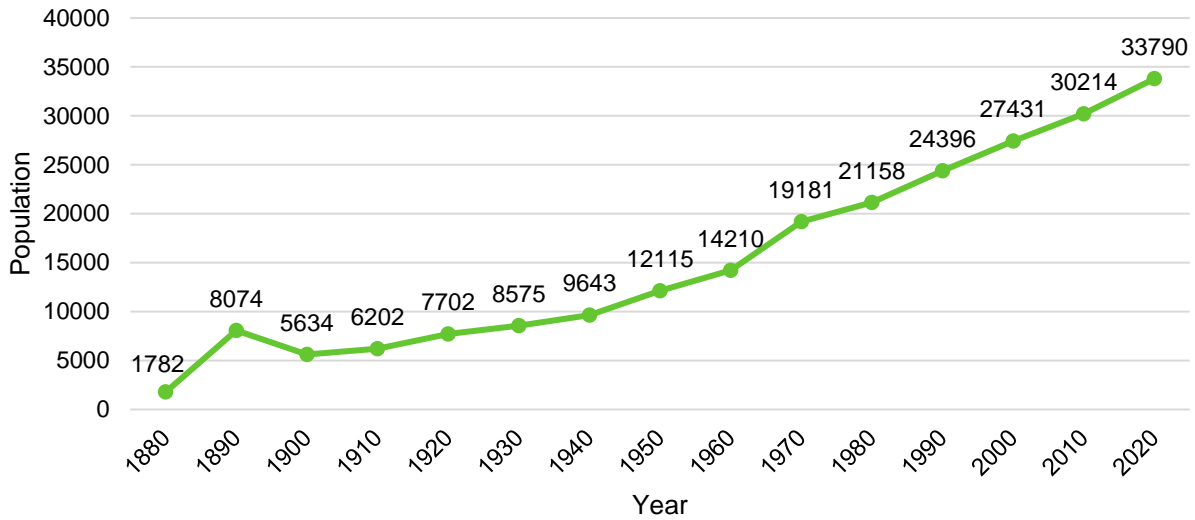
Figure KRN.2 displays the historical population trend for the City of Kearney. This figure indicates that the population of Kearney has been increasing since 1900 to 33,790 people in 2020. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Increasing populations can also contribute to increasing tax revenues, allowing communities to pursue additional mitigation projects. Kearney's population accounted for 67.5% of Buffalo County's population in 2020.<sup>39</sup>

<sup>39</sup> United States Census Bureau. "2020 Decennial Census: P1: DEC Redistricting Data." <https://data.census.gov/cedsci/>.

Figure KRN.1: City of Kearney



**Figure KRN.2: Population 1880 - 2020**

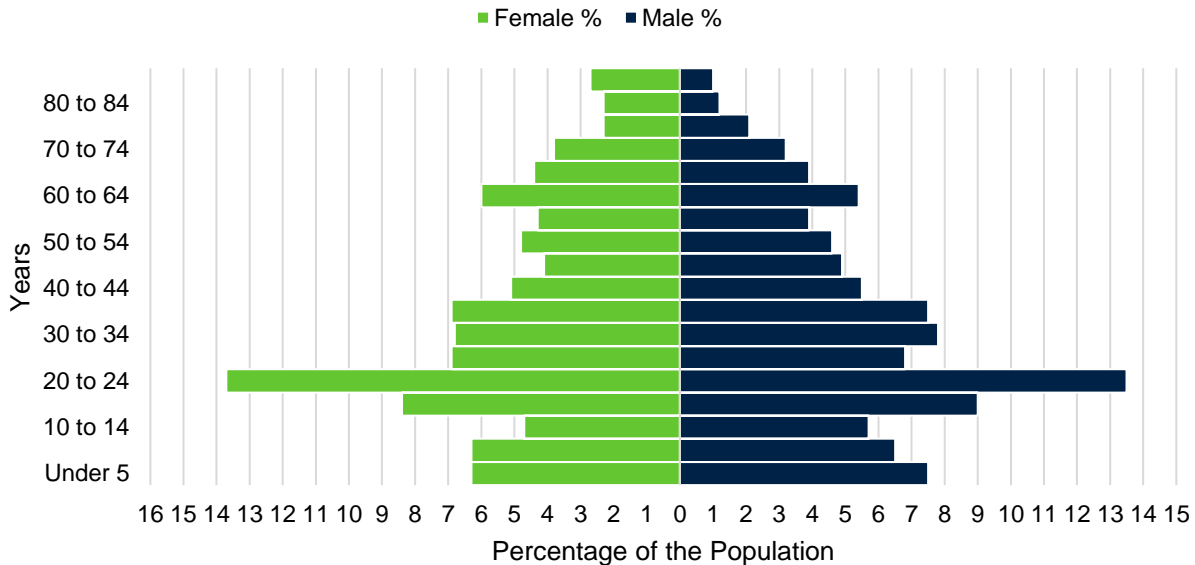


Source: U.S. Census Bureau

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

- **9% is non-white.** Since 2010, Kearney grew more ethnically diverse. In 2010, 7.7% of the Kearney’s population was non-white. By 2019, 9.0% was non-white.<sup>40</sup>
- **31.7 median age.** The median age of Kearney was 31.7 years in old 2019. The population grew older since 2010, when the median age was 29.<sup>41</sup>

**Figure KRN.3: Kearney’s Population Pyramid**



40 United States Census Bureau. “2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates.” <https://data.census.gov/cedsci/>.

41 United States Census Bureau. “2019 Census Bureau American Community Survey: S0101: Age and Sex.” <https://data.census.gov/cedsci/>.

The figure above shows Kearney's population percentage broken down by sex and five-year age groups. Kearney's population is likely to continue to grow with a higher percentage of the population less than 40 years of age.

## Employment and Economics

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

- **8.9% of people living below the poverty line.** The poverty rate (8.9%) in the City of Kearney was higher than the state's poverty rate (7.2%) in 2019.<sup>42</sup>
- **\$57,064 median household income.** Kearney's median household income in 2019 (\$57,064) was \$4,375 lower than the state (\$61,439).<sup>42</sup>
- **2% unemployment rate.** In 2019 Kearney had a slightly lower unemployment rate (2.0%) when compared to the state (2.3%).<sup>42</sup>
- **10.6% of workers commuted 30 minutes or more to work.** Less workers in Kearney commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (10.6% compared to 77.3%).<sup>43</sup>

## Major Employers

Major employers in the City of Kearney include CHI Health Good Samaritan, Kearney Regional Medical Center, University of Nebraska – Kearney, Kearney Public School District, The Buckle, West Pharmaceutical Services, Hy-Vee, Parker Hannefin, Eaton Corporation, Walmart, Cabela's, Cash-Wa, and the City of Kearney.

## 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. The City of Kearney has approximately 993 mobile homes within the city limits and extra territorial jurisdiction. The largest concentration of mobile homes is on the east side of the community located north of Highway 30, along Grand Avenue. The second largest concentration of mobile homes are located on the western edge of the city limits found on the north and south sides of Highway 30. Lastly, two smaller concentrations of mobile homes are located on the north side of 11<sup>th</sup> Street. None of the mobile home parks are located in the regulated floodplain. Two mobile home parks are within the 500-year floodplain on the west side of the city along Highway 30. 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. Kearney's housing stock has:

- **87.9% of housing built prior to 1970.** Kearney has a larger share of housing built prior to 1970 than the state (87.9% compared to 46%).<sup>44</sup>

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

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

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



- **7% of housing units vacant.** Since 2010, Kearney’s vacancy rate slightly declined. In 2010 the vacancy rate was 7.6%. By 2019, 7.0% of housing units were vacant.<sup>44</sup>
- **6.9% mobile and manufacture housing.** The City of Kearney had a larger share of mobile and manufactured housing (6.9%) compared to the state (3.3%).<sup>44</sup>
- **40.9% renter-occupied.** The rental rate of Kearney was 40.9% in 2019. The percentage went slightly down since 2010, when renter occupied housing was at 41.1%.<sup>44</sup>

## Governance

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

- City Clerk
- City Manager
- Assistant City Manager
- Public Works Department
- Utilities Department
- Police Department
- Fire Department
- Emergency Management Coordinator
- Finance Director
- Administration Department
- Park & Recreation Department
- Development Services Department
- Department of Roads
- City Forester

## 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.

Annually, city staff review needs regarding changing needs within the community, including an evaluation of hazard mitigation measures. This evaluation prioritizes capital projects and how they can be funded in future budget cycles. Currently the city’s budget situation allows for pursuing new capital projects as well as maintaining current facilities and systems. Municipal funds have increased over recent years.

**Table KRN.2: Capability Assessment**

Survey Components/Subcomponents		Yes/No
<b>Planning &amp; Regulatory Capability</b>	Comprehensive Plan	Yes
	Capital Improvements Plan	Yes
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No

Survey Components/Subcomponents		Yes/No
	Storm Water Management Plan	Yes
	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)	Elm and Turkey Creeks Watershed Flood Risk Reduction Plan, Water System Emergency Response Plan, Wood River Watershed Flood Risk Reduction Plan, Wood River Watershed Study
<b>Administrative &amp; Technical Capability</b>	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)	-
<b>Fiscal Capability</b>	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	Yes
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	-
<b>Education &amp; Outreach Capability</b>	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	Yes
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes



Survey Components/Subcomponents		Yes/No
	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	High
Public support to implement projects	Moderate
Time to devote to hazard mitigation	Moderate

## Plan Integration

Kearney 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 city will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

### Buffalo County Local Emergency Operations Plan (2021)

Kearney is an annex in the Buffalo 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 annually.

### Building Codes

The building code sets standards for constructed buildings and structures. The city has adopted the 2018 International Building Code, 2018 Residential Code, 2015 Plumbing code, 2017 National Electrical Code, 2018 International Existing Building Code, 2018 International Property Maintenance Code, and 2006 International Fire Code with no amendments made in any of the codes.

### Capital Improvements Plan (2021)

The capital improvements plan annually outlines projects the city would like to pursue and provides a planning schedule and financing options. Projects include upsizing culverts and drainage structures, upgrading storm sewer systems, widening roadways, bridge improvements, improving roadway drainage, upsizing water distribution pipes, installing water meters, updating the electrical distribution system, installing emergency generators, and constructing a new fire hall. Projects identified in the hazard mitigation plan will be reviewed for inclusion in the next capital improvements plan.

### **Comprehensive Plan (2016)**

The comprehensive plan is designed to guide the future actions and growth of the city. It encourages infill development, encourages the elevation of structures located in the floodplain, and encourages the preservation of open space in known hazard prone areas. Under Land Use, the plan encourages coordination with the HMP to ensure new development mitigates the loss of life and property from natural and man-made hazards. For Infrastructure and Public Facilities Action Strategies, the plan encourages coordination with County Emergency Management and CPNRD to maintain and implement the HMP. And finally, the plan advocates for the integration of other community policies into the annual review process, including the HMP. In 2026 the comprehensive plan will be updated.

### **Elm and Turkey Creeks Watershed Flood Risk Reduction Plan (Under Development)**

The primary purpose of the Elm and Turkey Creeks Watershed Flood Risk Reduction Plan is flood risk reduction within and near the communities of Elm Creek and Kearney. 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 and is anticipated to be completed by mid-2022. Projects identified in the plan with a positive benefit-cost ratio will be reviewed for inclusion in the HMP.

### **Floodplain Ordinance, Zoning Ordinance (2021), and Subdivision Regulations (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, identify floodplain areas as parks or open spaces, requires new development in the floodplain to be more than one foot above base flood elevation, includes well setback requirements, and includes the ability to implement water restrictions.

### **Stormwater Management Plan (2017)**

The stormwater management plan documents commitments by the City of Kearney to implement stormwater management procedures and practices. This plan helps the city maintain compliance with the National Pollution Discharge Elimination System permit issued by NDEE. The plan outlines procedures to comply with six minimum control measures which are: public education and outreach, public involvement/participation, illicit discharge detection and elimination, construction site stormwater runoff control, post construction stormwater management in new development and redevelopment, and pollution prevention/good housekeeping.

### **Water System Emergency Response Plan (2020)**

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.

### **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 a 1% AEP peak discharge that is 15% less than the current design for the Grand Island diversion channel. This study will help support ongoing WFPO studies and future NFIP mapping efforts in the region.

## **Future Development Trends**

Over the past five years new single family and multifamily units were added. In addition, Central Nebraska Veteran's Home, Patriot Park, Crown Plaza/Younes North, University Village, Central Community College, Compute North, and Solar Park were constructed. Patriot Park-Sports Complex, Central Nebraska Veteran's Home, Deerfield Subdivision, and Crown Plaza/Younes North were all built in the floodplain and met floodplain development regulations. 52.98 miles of roads were added within the city. In the next five years, the city anticipates many new housing units to be built. Many of these units will be single family homes but there will also be multifamily homes developed. Development of housing is focused toward the northside and southside of the city. Housing developments are anticipated in the following locations: a large-scale apartment complex with townhomes along east 11<sup>th</sup> Avenue and south of W 56<sup>th</sup> Street; single family homes south of E 39<sup>th</sup> Street and west of X Avenue; and single-family homes south of W 24<sup>th</sup> Street and east of University Drive. A majority of the future housing developments are not located within the regulated floodplain. Commercial development is anticipated to continue along the 2<sup>nd</sup> Avenue corridor with infill commercial developments to occur on W 56<sup>th</sup> Street, W 48<sup>th</sup> Street, Kearney East Expressway, and W Talmadge Street. While a majority of the commercial developments will occur outside the regulated floodplain, commercial developments along Talmadge Street will be in the regulated floodplain and meet floodplain development regulations. Figure KRN.4 show the future land use map for the city.

## **Community Lifelines**

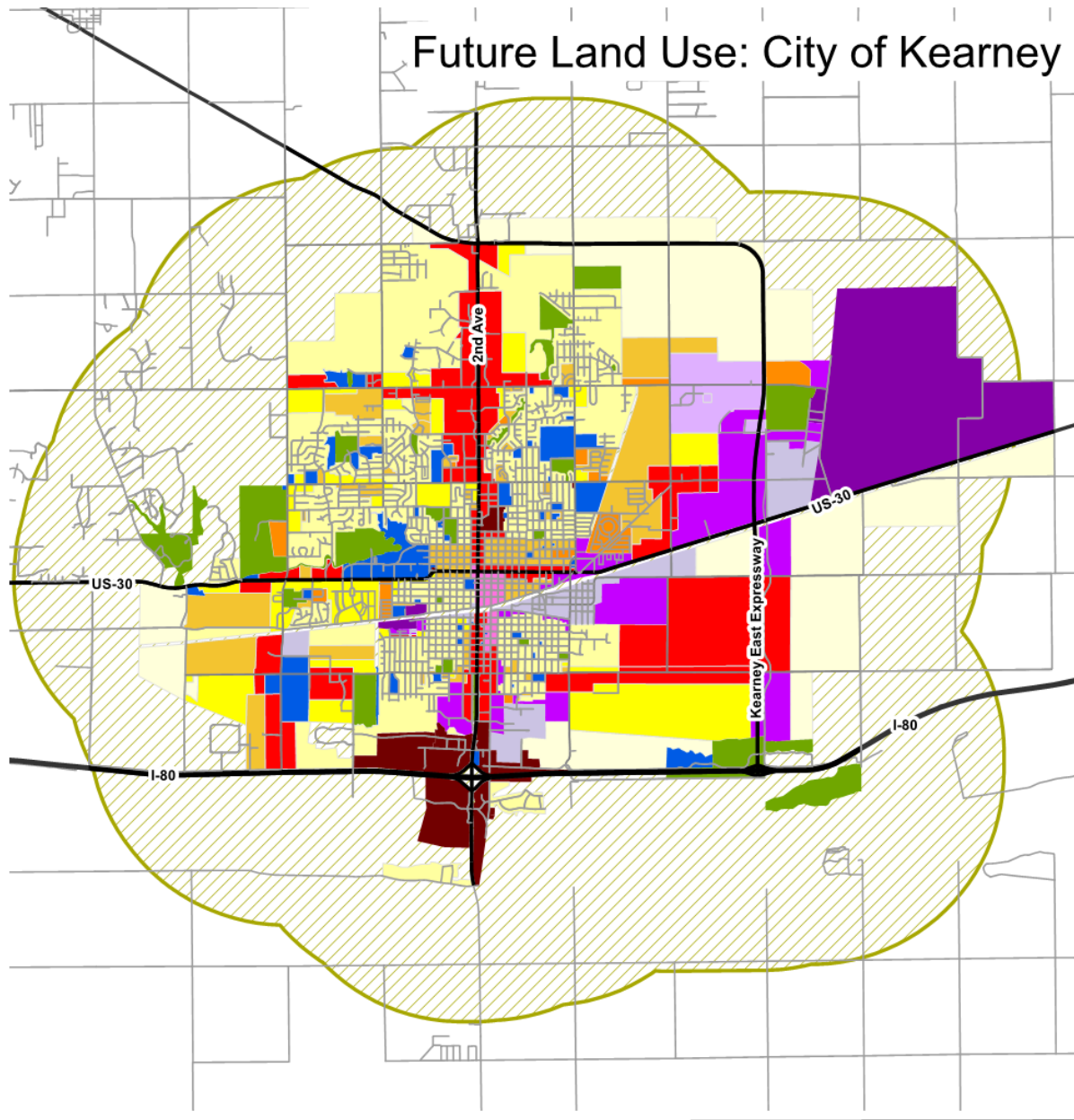
### **Transportation**

Kearney's major transportation corridors include Interstate 80, US Highway 30, State Highway 10, State Highway 44 and 2<sup>nd</sup> Avenue. Highway 30 has an average of 17,490 vehicles daily, 335 of which are trucks. Interstate 80 has an average of 21,590 vehicles daily, 7,700 of which are trucks. Highway 10 has an average of 3,185 vehicles daily, 240 of which are trucks. Highway 44 has an average of 9,715 vehicles daily, 510 of which are trucks.<sup>45</sup> The city has three Union Pacific lines traveling east to west on the southern edge 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.

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

Figure KRN.4: Future Land Use Map



September 2021

Legend

Future Land Uses					
	Rural Estates and Agriculture		General Commercial		Office/Commercial Retail Mixed Use
	Urban Reserve		Business Park		Commercial Mixed Use
	Low Density Residential		Light Industrial		Central Business District
	Medium Density Residential		General Industrial		Parks, Recreation and Open Space
	High Density Residential		Neighborhood Mixed Use		Civic

— Roadway Network      — Major Road

## Hazardous Materials

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are 35 chemical storage sites within or near Kearney which house hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

**Table KRN.3: Chemical Storage Sites**

Name	Address	Floodplain (Y/N)
<b>Eaton Corporation</b>	4200 Highway 30 E	N
<b>Nutrien Ag Solutions</b>	1720 16th Ave	N
<b>Baldwin Filters Inc</b>	4400 Highway 30 E	N
<b>Buffalo Air Services Inc</b>	5735 Airport Rd	Y (0.2%)
<b>Titan Machinery Inc</b>	714 3rd Ave	Y (1%)
<b>West Pharmaceutical Services</b>	923 W Railroad St	N
<b>Frontier Communications</b>	2302 1st Ave	N
<b>Aurora Co-op Elevator Company</b>	6540 E 39th St	N
<b>Clevenger Petroleum Cardlock</b>	315 W 8th St	Y (0.2%)
<b>Jiffy Lube 0030</b>	1204 2nd Ave	N
<b>NDOT Kearney Yard</b>	4001 Highway 30 W	Y (0.2%)
<b>NDOT Kearney Yard I-80</b>	415 W Talmadge Rd	Y (1%)
<b>The Andersons B4 Grain</b>	304 W 19th St	N
<b>CHI Health Good Samaritan</b>	10 E 31st St	N
<b>Farmers Union Co-op Assn</b>	1210 E 25th St	N
<b>Cash-Wa Distribution Co</b>	401 W 4th St	Y (1%)
<b>Matheson Tri-Gas Inc</b>	701 Central Ave	N
<b>Bayer Western Production Co</b>	2615 Antelope Ave	N
<b>Clevenger Petroleum Bulk Plant</b>	1808 E 24th St	N
<b>Farmers Union Co-op Assn</b>	Jct 21st St & Avenue M	N
<b>Kearney Crete &amp; Block Company</b>	2908 Highway 30 E	N
<b>Aurora Co-op Elevator Company</b>	1612 E 24th St	N
<b>Frontier Communications</b>	1918 W 39th St	N
<b>Aurora Co-op Elevator Company</b>	2922 Antelope Ave	N
<b>Union Pacific Railroad</b>	1327 E 25th St	N
<b>Chief Industries Agri/Ind Div</b>	4400 E 39th St	N
<b>Columbus Metals Industries</b>	4211 E 43rd Street Pl	N
<b>Bosselman Energy Inc Bulk Fuel</b>	4300 Airport Rd	N
<b>Simplot Grower Solutions</b>	3010 E 39th St	N
<b>Baldwin Filters Inc</b>	4015 Antelope Ave	N
<b>Schwan's Home Service</b>	3409 Antelope Ave	N
<b>Charter Communications NE31385</b>	809 Central Ave	N
<b>Sunbelt Rentals 413</b>	3211 Antelope Ave	N
<b>Verizon Wireless Kearney Lake</b>	3406 Lakeview Dr	N

Source: Nebraska Department of Environment and Energy<sup>46</sup>

<sup>46</sup> Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed June 2021.

## Health and Medical Facilities

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

**Table KRN.4: Health and Medical Facilities**

Name	Type of Facility	Address	Number of Beds
<b>CHI Health Good Samaritan Richard Young Behavioral Health</b>	Hospital	10 East 31st St	174
<b>Kearney Ambulatory Surgical Center</b>	Hospital	1755 Prairie View Pl	61
<b>Kearney Regional Medical Center</b>	Hospital	3515 30th Ave	0
<b>Brookestone Gardens</b>	Assisted Living Facility/Long Term Care Facility	804 22nd Ave	93
<b>Cambridge Court</b>	Assisted Living Facility	2615 West 11th St	108
<b>Prairie View Gardens</b>	Assisted Living Facility	4107 Central Ave	48
<b>Kearney Countryhouse, LLC</b>	Assisted Living Facility	1705 Prairie View Pl	60
<b>Kinship Pointe Northridge</b>	Assisted Living Facility	5605 K Ave	36
<b>Midwest Homestead of Kearney</b>	Assisted Living Facility	5410 17th Ave	55
<b>Wel-Life at Kearney</b>	Assisted Living Facility	4205 6th Ave	44
<b>Central Nebraska Veterans Home</b>	Long Term Care Facility	5616 4th Ave	48
<b>Good Samaritan Society - St. Johns</b>	Long Term Care Facility	4510 East 56th St	225
<b>Good Samaritan Society - St Luke's Village</b>	Long Term Care Facility	3410 Central Ave	56
<b>Mother Hull Home</b>	Long Term Care Facility	2201 East 32nd St	60
<b>Mount Carmel Home - Keens Memorial</b>	Long Term Care Facility	125 East 23rd St	58
	Long Term Care Facility	412 West 18th St	75

Source: Nebraska Department of Health and Human Services<sup>47,48,49,50</sup>

## 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. Although not mapped, the city identified 911 towers throughout Buffalo County as being critical to the city.

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

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

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

50 Department of Health and Human Services. 2021. "State of Nebraska Roster: Rural Health Clinic." [https://dhhs.ne.gov/licensure/Documents/RHC\\_Roster.pdf](https://dhhs.ne.gov/licensure/Documents/RHC_Roster.pdf).

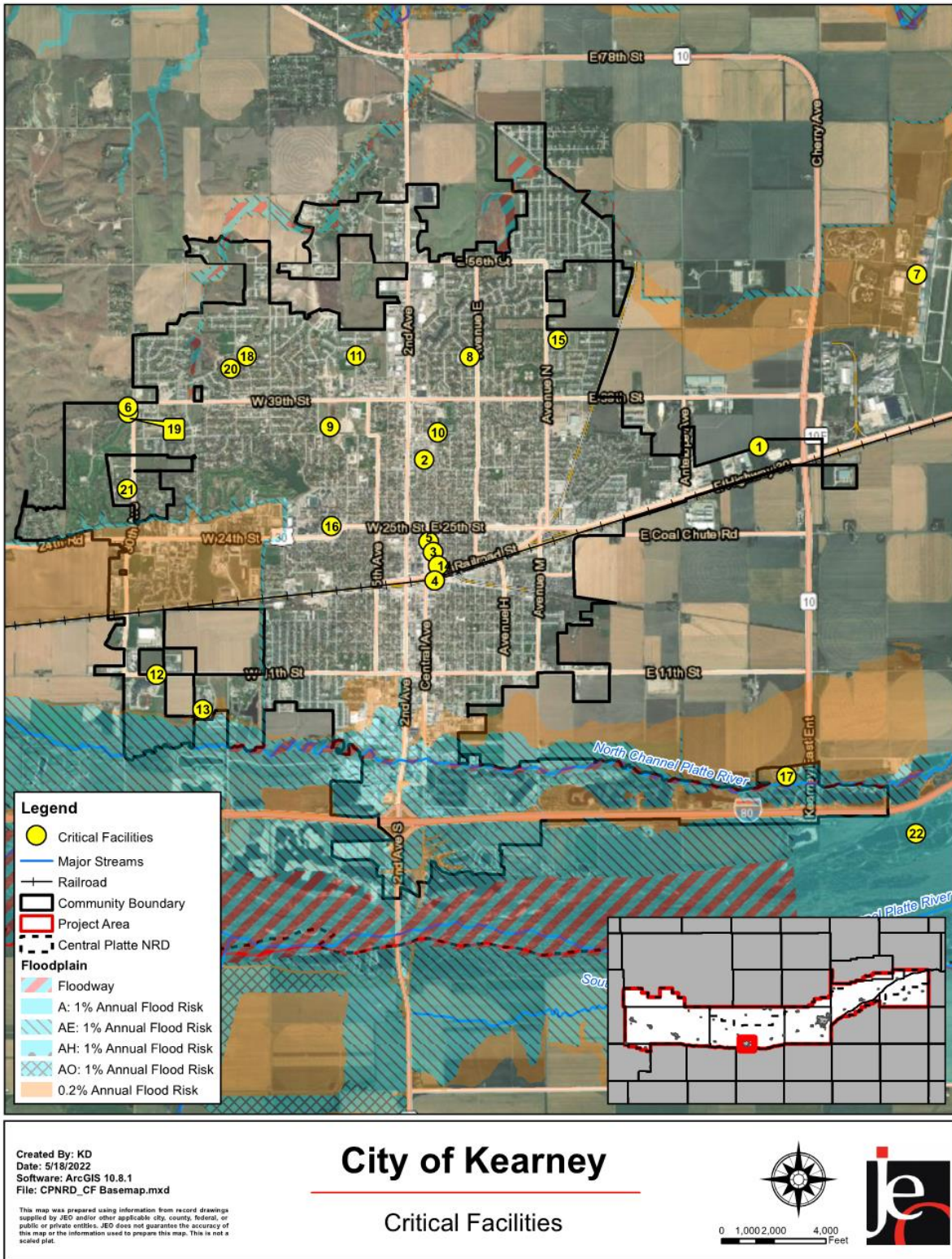


**Table KRN.5: Critical Facilities**

CF Numbers	Name	Mass Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Cabela's Water Tower	N	N	N
2	CHI Health	N	N	N
3	City Hall	N	N	N
4	Communication Tower	N	N	N
5	Fire Station #1	N	Y	N
6	Fire Station #2	N	Y	N
7	Fire Station #3	N	Y	Y (0.2%)
8	First United Methodist	N	N	N
9	Horizon Middle School	N	N	N
10	Kearney Catholic High School	Y	N	N
11	Kearney Family YMCA	N	N	N
12	Kearney High School	Y	N	N
13	Kearney Regional Medical Center	N	N	N
14	Law Enforcement Center	N	Y	N
15	Sunrise Middle School	Y	N	N
16	University of Nebraska-Kearney	Y	N	N
17	Wastewater Treatment Plant	N	Y	Y (0.2%)
18	Water Tower	N	N	N
19	Water Tank	N	N	N
20	Windy Hills Elementary School	Y	N	N
21	YRTC School	N	N	N
22	Platte River Wellfield	N	N	Y (1%)
23*	West Wellfield	N	N	N

\*Not mapped. Located several miles west of the city limits.

Figure KRN.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 KRN.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
10,369	\$2,411,030,040	218	\$176,016,500	2.1%

Source: County Assessor, 2021

**Table KRN.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
10,369	\$2,411,030,040	485	\$215,292,970	4.7%

Source: County Assessor, 2021

## Historical Occurrences

See the Buffalo 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*.

### Animal and Plant Disease

The risk of agricultural animal disease has been identified as a hazard priority due to economic impacts to the community. The City of Kearney hosts the County Fair, which involves many breeders, shippers, and showing of animals, and if the fair was cancelled, it could have economic impacts on the community. The city also has two animal sale barns where animal disease could spread quickly if an outbreak occurred. This concern has developed because of two recent animal disease events. The most recent was in the spring of 2016, when the horses at the horse track in nearby Grand Island were quarantined because of a horse herpes outbreak. Horse breeders and sellers were so concerned with the outbreak and poor response infrastructure that some avoided traveling through Grand Island with their horses. The second agricultural animal disease event that has precipitated concern in Kearney was the spread of avian flu in chickens from Dixon County in the summer of 2015. Although the avian flu outbreak was confined to northeast Nebraska, there is concern that a similar outbreak in Buffalo County would impact the economy in Kearney. Currently there is an ongoing avian flu outbreak in Nebraska. As of April 13, 2022, it has not been detected in Buffalo County but has been found in nearby Merrick County.

In June of 2020, the Nebraska Department of Agriculture confirmed the presence of the emerald ash borer (EAB) within the corporate limits. This could have a significant impact on the city’s ash tree population. The Nebraska Department of Agriculture, City of Kearney, and other have begun educating the public on the threat of EAB to the community. The City of Kearney has initiated a grant program for citizens to assist in the removal of ash tree species from their properties or within the city’s rights-of-way.

**Dam Failure**

There are eight dams in the City of Kearney. Of these, three dams have been identified as high hazard dams. Figure KRN.6 shows the locations of the dams. No dam failures have occurred at any of the eight dams located in Kearney. However, if one of the high hazard dams were to fail, there is a risk of fatalities. The City of Kearney is also located in the inundation area of Kingsley Dam, which is located to the west of the planning area in Keith County. Kingsley Dam is one of the top 30 ranked high hazard dams based on population at risk. High hazard dams are inspected annually, and emergency action plans are required. The table below lists the dams the local planning team have identified as possessing the greatest risk to the community.

**Table KRN.8: Dams of Most Concern**

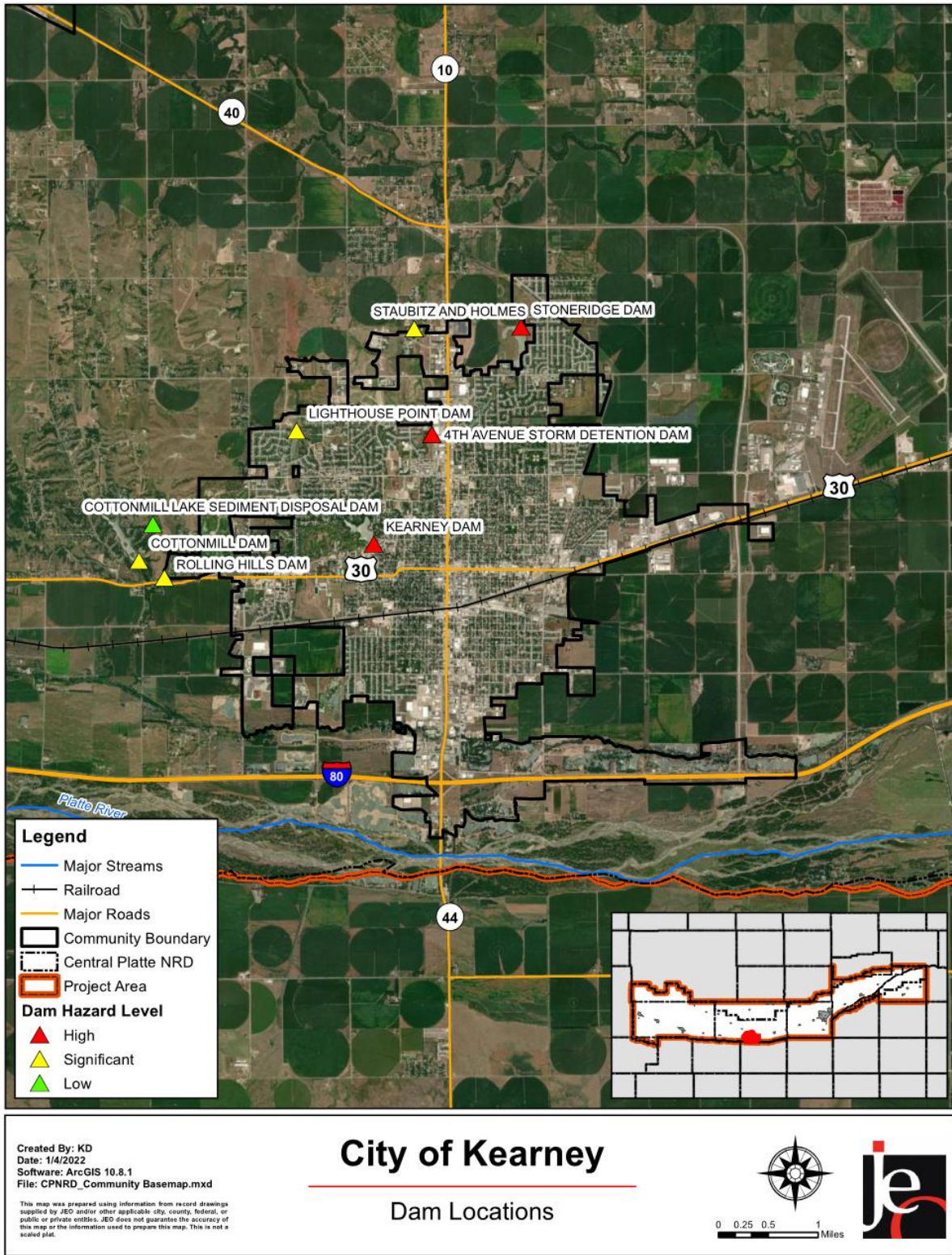
Dam Name	Hazard Classification	Dam Owner
4 <sup>th</sup> Avenue Storm Detention Dam	High	Johnson Imperial Home Company
Kearney Dam	High	Nebraska Public Power District
Stoneridge Dam	High	NP Land Development Inc.
Lighthouse Point Dam	Significant	Lighthouse Point Homeowners Association
Rolling Hills Dam	Significant	City of Kearney
Cottonmill Dam	Significant	City of Kearney
Cottonmill Lake Sediment Disposal Dam	Low	City of Kearney

**Drought**

If a prolonged drought occurred, the economic impacts to Kearney could be devastating for the community. During periods of drought where farmers are heavily impacted, farmers and residents reduce their costs by cutting back on their spending, which hinders businesses in Kearney. The local planning team also suggested that grass and wildfires would likely increase during this period putting added stress on the water availability and Fire Department. The comprehensive plan along with the local planning team noted that water storage is at 3.7 million gallons and can produce 28 million gallons of water per day. A new water tower will start to be constructed in 2022 and will add additional water storage capacity to the system. The water system is supplied by two well fields, one located within the Platte River channel area, the other located northwest of the city in the hills between the Platte River Valley and Wood River Valley. All water supplied and pumped is metered and well static water levels are measured regularly. The city has also installed a radio meter reading system that allows the city to scan the customer’s water usage and warn them if the city sees an alarming high use of water that could be a leak. This reduces the waste of water in the system. The city has not had to introduce water restrictions in the past but does provide residents with information on how to reduce their water consumption. The city’s Utilities Department continues to update and utilize a Water System Emergency Response Plan, which is implemented during drought periods, to preserve water in storage, and to restore service where needed.



Figure KRN.6: Dam Locations



## **Flooding**

The flood risk areas of concern are located south and west of the City of Kearney. One major area of concern, the Platte River, runs parallel to Interstate 80 and impacts a large portion of that area of the city. According to NCEI, there has been one flood and four flash floods since 1996. The local planning team also noted that a flash flood in August 2014 occurred when over five inches of rain fell in under an hour. This led to flooding of the hospital cafeteria causing \$5.5 million in damages. Many residential basements also flooded. During the July 2019 flooding, damages were incurred to city park facilities and streets, totaling close to \$1 million. 300+ people were evacuated from the affected motel district the day of the flood and were relocated to the University of Nebraska-Kearney dormitory facilities. At its peak, water was two to four feet high inside the hotels and four to five feet high in the parking lots. Of the 1,800 hotel rooms in Kearney, only about 600 were available due to flood damage to first floor services. In addition, approximately 400 homes were damaged by the flood. Flood waters also damaged a power substation causing a power outage to about 450 customers.

The city has already taken many actions to reduce the risk of flooding across the community. Between 2000 and 2006 the city completed a flood control project on the northeast side of the city. The project included widening an existing channel near 56<sup>th</sup> Street on Eaton Road, detention cells a half mile north of N Avenue and 56<sup>th</sup> Street, and channel improvements from 39<sup>th</sup> Street to Antelope Road. The stormwater system has been improved by upsizing pipes and the city continues to make improvements as needed. In addition, a stormwater pipe was installed to lower the level of the sandpit in the hospitality district and discharge to the north channel of the Platte River. The City of Kearney is currently evaluating a large drainage project to alleviate localized flooding issues. Final cost estimates have not been prepared to determine the amount of funding required.

The southern portion of the city falls under the Elm and Turkey Creeks Watershed Flood Risk Reduction Plan and the north portion falls under the Wood River Watershed Flood Risk Reduction Plan. Both plans are currently under development. The plans will identify projects within the watershed to help reduce flood risk and damages to agricultural property, homes, and businesses. Projects deemed feasible in the plans will be added to this HMP once the planning process has concluded.

Kearney is a member of the NFIP, and the city's Floodplain Administrator (Andy Bartling) will oversee the commitments and requirements of the NFIP. The initial FIRM for the city was delineated in 7/5/1984 and the current effective map date is 2/18/2005. As of October 31, 2021, there are 18 NFIP policies in-force covering \$3,580,800. Kearney has one single family severe repetitive loss structure. A mitigation action can be found in the city's Mitigation Strategy to address this structure.

## **Hazardous Materials Release**

Kearney has experienced several chemical release incidents on local transportation routes. The first major incident occurred in 1983, which involved 300 liquid gallons of gasoline released during transport on the highway. In 2010, 500 liquid gallons of nitrogen spilled after a vehicle accident on 78th and Avenue N. The third major incident occurred in 2012 when 850 liquid gallons of an inorganic corrosive leaked from a tank traveling on a highway causing \$83,000 in damages. Concern over chemical spills during transportation centers around the heavy traffic on the highways and rail lines surrounding and intersecting Kearney. Current mitigation plans involve the continuation of building a bypass for traffic around the city.



**Figure KRN.7: July 2019 Flooding**



*Source: City of Kearney*

**Public Health Emergency**

The ongoing Covid-19 pandemic has caused the local planning team to identify public health emergencies as a top hazard of concern. The pandemic has had many impacts on the city. Many community events were either postponed or cancelled. There was a major strain on the region’s health care system with hospital capacities maxed out during several spikes. Many businesses altered business practices to remain open, as state and local guidelines permitted. To help reduce the spread of the virus, a mask mandate was issued from November 23, 2020, to February 23, 2021. The City of Kearney also supported vaccine clinics and testing sites as appropriate during the pandemic. As of February 22, Buffalo County has had 11,242 total confirmed Covid-19 cases with 56% of the population over five being vaccinated. For any future public health emergencies, it will be important to ensure personal protective equipment is available to the medical community and first responders.

**Severe Thunderstorms**

Since 1996, Kearney has experienced 143 severe thunderstorm events, with 16 injuries sustained, according to the NCEI Storm Events Database. Aggregated losses from these events totaled \$61,288,000 in property damages. The most damaging event occurred in June 2002 when 5-inch hail caused \$50 million in damages to cars and houses. A rigorous early warning broadcast system has been implemented in Kearney to alert citizens of impending thunderstorms. The local planning team estimates that 40% of power lines are buried in the city. Some of the community’s critical facilities have been fitted with hail resistant building materials.

**Severe Winter Storms**

According to the local planning team, severe winter storms have a large impact on the proper functioning of the Kearney government. 2016 had more snow than ever before, with three winter storms dropping a total of 16-20 inches of snow across Buffalo County. In December of 2007, Kearney experienced accumulations of one-half inch of ice that led to widespread power outages and road and business closures. NCEI reported \$20,000 in property damages from this event, in

addition to economic losses stemming from the shut-down of the city. During the extreme cold in February 2021, the city experienced short-term rolling blackouts. There are designated snow routes in the city with snow removal being handled by the Public Works Department. The city has 16 dump trucks, 10 caterpillars, four snow blowers, 21 snowplows, 10 sand spreaders, and two anti-icers to help with winter storm response. To reduce the impacts from this hazard, snow removal equipment has been updated and notification has been improved through the use of social media.

### Tornadoes and High Winds

There have been three tornadoes in Kearney since 1996. The most devastating tornado was an EF2 that occurred in May 2008 and caused \$11 million in damages. The tornado struck an apartment complex, ripping off the roof, damaged cars and trees, and destroyed a hanger housing corporate jets at the Kearney Airport. There were no fatalities or injuries from this event. A high wind event in June 2021 damaged trees across the city, many of which have since been removed. The local planning team is concerned about losing the water tower and electrical infrastructure from a tornado. There are no community safe rooms in the city. There are 26 emergency sirens which provide coverage to all areas of the city.

## Mitigation Strategy

### Completed Mitigation Actions

Mitigation Action	Water System Emergency Response Plan
Description	Develop and maintain procedures to notify personnel of the implementation of an Emergency Operations Plan, how to preserve water in storage, how to isolate areas within the system and the restoring of service, and the setting of priorities on repair work.
Hazard(s) Addressed	All Hazards
Status	Completed

### New Mitigation Actions

Mitigation Action	New Water Tower
Description	A new water tower will be added to the city to increase water storage capabilities.
Hazard(s) Addressed	Drought
Estimated Cost	\$500,000+
Local Funding	General Budget, Utility Funds
Timeline	2-5 Years
Priority	High
Lead Agency	Utilities Department
Status	Construction is scheduled to begin in 2022.

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 Budget, WFPO
Timeline	2-5 Years
Priority	Medium
Lead Agency	City Administration, Public Works
Status	Elm and Turkey Creeks and Wood River Watershed Flood Risk Reduction Plans are 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.

Mitigation Action	Repetitive Loss Property Mitigation
Description	Identify and perform flood mitigation options on repetitive loss properties within the community.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies by Project
Local Funding	General Budget, Private Owner Funds
Timeline	5+ Years
Priority	Low
Lead Agency	City Administration, Public Works
Status	Not Started

### 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 Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	City Administration
Status	A new backup generator was installed at the Law Enforcement Center in 2019. Generator replacement will continue as part of departmental guidelines.

Mitigation Action	Hazardous Fuel Reduction
Description	Create a defensible space around residential and non-residential buildings in fire prone areas and to perform hazardous fuels reduction.
Hazard(s) Addressed	Grass/Wildfire
Estimated Cost	\$5,000+
Local Funding	General Budget
Timeline	1-3 Years
Priority	Medium
Lead Agency	City Administration, Fire Department, Nebraska Forest Service
Status	Not Started

Mitigation Action	Highway/Railway Bypass
Description	Build highway and railway bypass system to decrease traffic through Kearney.
Hazard(s) Addressed	Hazardous Materials Release
Estimated Cost	\$1,000,000
Local Funding	General Budget, Roads Department Funds
Timeline	5+ Years
Priority	High
Lead Agency	Public Works, Department of Roads
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	\$50,000+
Local Funding	General Budget
Timeline	5+ Years
Priority	High
Lead Agency	City Administration, NPPD
Status	This project is ongoing between NPPD and the City of Kearney.

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	\$10,000+
Local Funding	General Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	City Administration, County Emergency Management
Status	Not Started

Mitigation Action	Public Awareness/Education
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$1,000+
<b>Local Funding</b>	General Budget, Emergency Management Funds
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	City Administration
<b>Status</b>	This project is still under evaluation and development.

Mitigation Action	Reduce Bottleneck / Flow Restrictions
<b>Description</b>	Evaluate current bottlenecks/flow restrictions; implement measures to reduce bottlenecks/flow restrictions including silt removal.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	Unknown
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Public Works
<b>Status</b>	Public Works has recently cleared a drainage way under the UPRR line on the west side of the community. Other drainage ways will continue to be evaluated based on existing conditions.

Mitigation Action	Reduce Damages from Floods, Stormwater, and Heavy Precipitation Events
<b>Description</b>	Conduct stormwater drainage study; evaluate and implement recommendations or comparable measures to improve drainage; evaluate and improve stormwater system.
<b>Hazard(s) Addressed</b>	Flooding
<b>Estimated Cost</b>	Unknown
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Public Works
<b>Status</b>	The City of Kearney has hired two separate engineering firms to evaluate existing conditions in various subbasins of the community. The engineering firms are evaluating feasibility, scope, and proving opinions of probable construction cost to allow the City of Kearney to budget for future improvements.

Mitigation Action	Reduce Tree Damage and Damage from Trees
Description	Conduct tree inventory; develop tree maintenance/trimming program; implement tree maintenance/trimming program; remove hazardous limbs and/or trees.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Winter Storms, Severe Thunderstorms
Estimated Cost	\$20,000
Local Funding	General Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	Parks and Recreation, City Forester, Park Division
Status	This continues as ongoing related to the Parks & Forestry Divisions efforts to maintain a tree maintenance/trimming program. With the presence of EAB within the community, a priority of Ash Tree removal will be present in the coming years.

Mitigation Action	Storm Shelter / Safe Rooms
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	\$10,000-\$100,000
Local Funding	General Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	City Administration, Emergency Management
Status	Not Started

Mitigation Action	Stream Channelization/Bank Stabilization
Description	Improve Stream Bed/Bank Stabilization; evaluate current stream bed and bank stabilization needs; implement stream bed and bank stabilization improvements including grade control structures, rock rip rap, vegetative cover, etc.
Hazard(s) Addressed	Flooding
Estimated Cost	\$10,000+
Local Funding	General Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	Public Works, NPPD
Status	In Progress. A few areas were repaired as a result from the 2019 flooding, east of the Archway along Turkey Creek.

## 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 Administration Department and Development Services Department will be responsible for reviewing and updating the plan in the future. These individuals will review the plan annually. The public will be notified using a press release and social media.



**Community Profile**

# **Village of Pleasanton**

**Central Platte NRD  
Hazard Mitigation Plan**

**2022**

## Local Planning Team

The Village of Pleasanton’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 PLN.1: Pleasanton Local Planning Team**

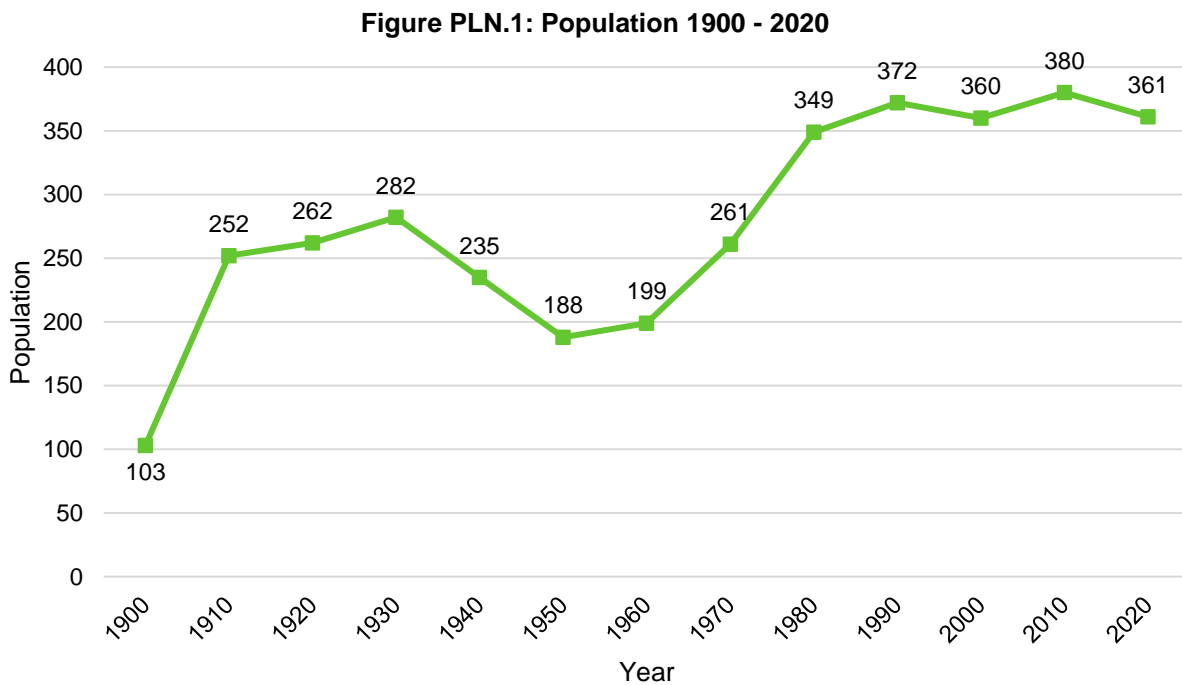
Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
<b>Leora Hofmann</b>	Ex Clerk/Treasurer	Village of Pleasanton	Grand Island	Lexington – Virtually
<b>Katie Griffis</b>	Clerk/Treasurer	Village of Pleasanton	-	Lexington - Virtually
<b>Chad Dixon</b>	Floodplain Administrator	Village of Pleasanton	Virtual	Virtual

## Location and Geography

The Village of Pleasanton is in north central Buffalo County and covers an area of 0.34 square miles. The major waterway in the area is the South Loup River.

## Demographics

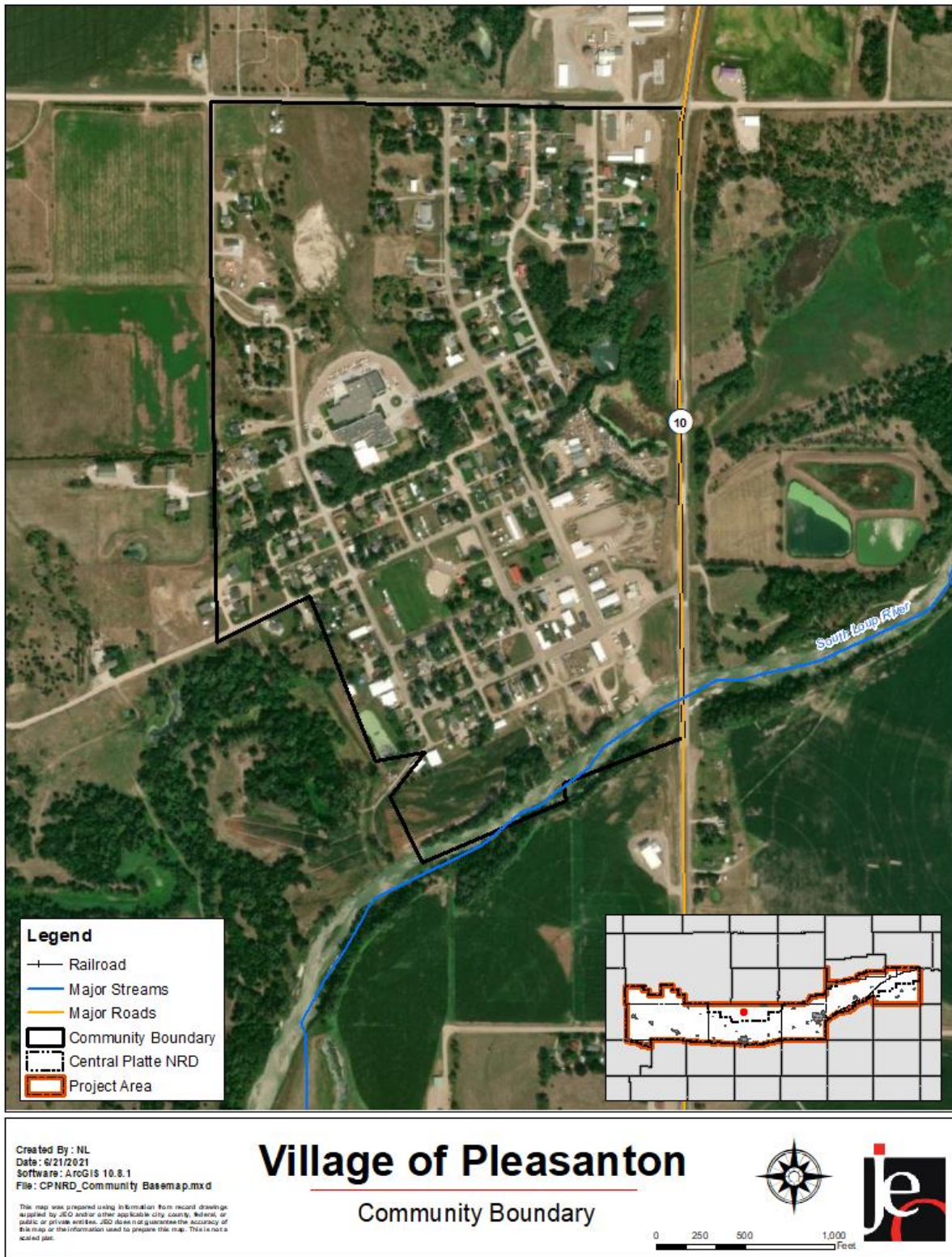
The following figure displays the historical population trend for the Village of Pleasanton. This figure indicates that the population of Pleasanton has been declining since 2010 to 361 people in 2020. A declining population can lead to more unoccupied housing that is not being maintained and is then 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. Pleasanton’s population accounted for 0.7% of Buffalo County’s population in 2020.<sup>51</sup>



Source: U.S. Census Bureau

51 United States Census Bureau. “2020 Decennial Census: P1: DEC Redistricting Data.” <https://data.census.gov/cedsci/>.

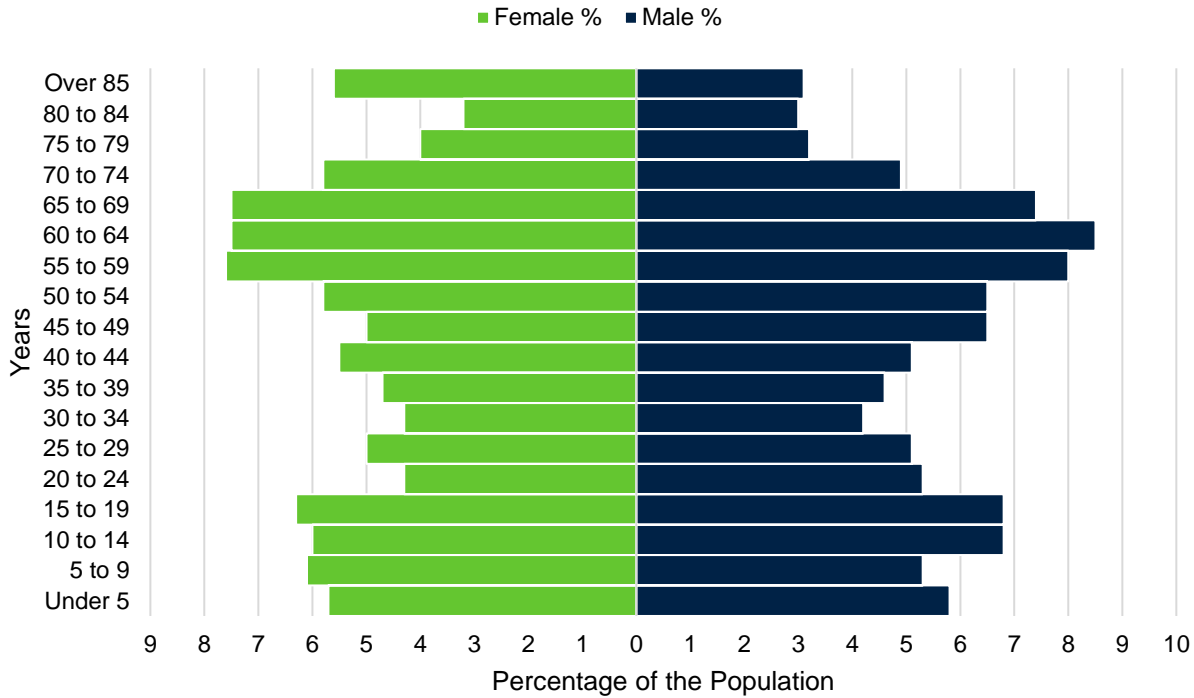
Figure PLN.2: Village of Pleasanton



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

- **2.8% is non-white.** Since 2010, Pleasanton grew more ethnically diverse. In 2010, 0.8% of the Pleasanton’s population was non-white. By 2019, 2.8% was non-white.<sup>52</sup>
- **35.6 median age.** The median age of Pleasanton was 35.6 years in old 2019. The population grew younger since 2010, when the median age was 35.8.<sup>53</sup>

**Figure PLN.3: Pleasanton’s Population Pyramid**



The figure above shows Pleasanton’s population percentage broken down by sex and five-year age groups. Pleasanton’s population is aging with a higher percentage of the population above 50 years of age. This likely indicates an aging 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. Pleasanton’s population has:

- **7% of people living below the poverty line.** The poverty rate (7%) in the Village of Pleasanton was lower than the state’s poverty rate (7.2%) in 2019.<sup>54</sup>
- **\$54,107 median household income.** Pleasanton’s median household income in 2019 (\$54,107) was \$7,000 lower than the state (\$61,439).<sup>54</sup>

52 United States Census Bureau. “2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates.” <https://data.census.gov/cedsci/>.

53 United States Census Bureau. “2019 Census Bureau American Community Survey: S0101: Age and Sex.” <https://data.census.gov/cedsci/>.

54 United States Census Bureau. “2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics.” <https://data.census.gov/cedsci/>.

- **1% unemployment rate.** In 2019 Pleasanton had a lower unemployment rate (1%) when compared to the state (2.3%).<sup>54</sup>
- **31.7% of workers commuted 30 minutes or more to work.** Slightly more workers in Pleasanton commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (31.7% compared to 31.2%).<sup>55</sup>

### Major Employers

Major employers within the village include Pleasanton Public Schools, Trotter Fertilizer, and Hand Machining Co. A large percentage of residents commute to Kearney and Ravenna 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.

- **62.9% of housing built prior to 1970.** Pleasanton has a larger share of housing built prior to 1970 than the state (62.9% compared to 46%).<sup>56</sup>
- **1.2% of housing units vacant.** Since 2010, Pleasanton's vacancy rate decreased. In 2010 the vacancy rate was 3.9%. By 2019, 1.2% of housing units were vacant.<sup>56</sup>
- **3.7% mobile and manufacture housing.** The Village of Pleasanton had a larger share of mobile and manufactured housing (3.7%) compared to the state (3.3%).<sup>56</sup>
- **17% renter-occupied.** The rental rate of Pleasanton was 17% in 2019. The percentage went up since 2010, when renter occupied housing was at 3.9%.<sup>56</sup>

## Governance

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

- Clerk/Treasurer
- Engineer/Street Commissioner
- Planning Commission
- Housing Authority
- Maintenance
- Volunteer Fire Department

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

56 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, with a large portion of funds dedicated to streets. Funds have mostly stayed the same over recent years.

**Table PLN.2: Capability Assessment**

Survey Components/Subcomponents		Yes/No
<b>Planning &amp; Regulatory Capability</b>	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
	Building Codes	Yes
	National Flood Insurance Program	Yes
	Community Rating System	No
Other (if any)	Drought Ordinance, Water System Emergency Response Plan, Wellhead Protection Plan	
<b>Administrative &amp; Technical Capability</b>	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	Yes
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	No
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	-
<b>Fiscal Capability</b>	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
Education & Outreach Capability	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	-
	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	Limited
Public support to implement projects	Moderate
Time to devote to hazard mitigation	Limited

## Plan Integration

Pleasanton 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 village has a building code from 1998 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.

### Buffalo County Local Emergency Operations Plan (2021)

Pleasanton is an annex in the Dawson 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 annually.

### Capital Improvements Plan (2012)

The capital improvements plan annually outlines projects the village would like to pursue and provides a planning schedule and financing options. Projects include installing new municipal wells, installing backup generators, and constructing a new fire hall. Projects identified in the hazard mitigation plan will be reviewed for inclusion in the next update.

### **Comprehensive Plan (2012)**

The comprehensive plan is designed to guide the future actions and growth of the village. It contains goals aimed at safe growth, directs development away from the floodplain, directs housing away from chemical storage sites and major transportation routes, encourages infill, encourages elevation of structures in the floodplain, identifies areas that need emergency shelters, encourages the preservation of open space, and encourages clustering of development. There are currently no plans to update the document.

### **Drought Ordinance (2008)**

Pleasanton's drought ordinance addresses any short-term water shortage problems through a series of stages based on conditions of supply and demand with accompanying triggers, goals, and actions. The ordinance has three stages with subsequent triggers and actions. Triggers are primarily based on groundwater levels, system pressure, and water demand. Actions include education, leak repair, voluntary water restrictions, north/south irrigation restrictions, banning outdoor water use, and seeking emergency supplies of water. There are no plans to update this ordinance.

### **Floodplain Regulations (2020), Zoning Ordinance (2021), and Subdivision Regulations (2012)**

The village's floodplain ordinance, zoning ordinance, and subdivision regulations outline where and how development should occur in the future. These documents contain floodplain maps, discourage building in the floodplain, discourage housing near chemical storage sites and major transportation routes, and consider the wildland urban interface. The zoning ordinance is reviewed and updated annually.

### **Water System Emergency Response Plan (2020)**

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 (2008)**

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.

## **Future Development Trends**

Over the past five years, a new housing subdivision has been added on the north side of the village on Pine Street and Walnut. None of the new housing was built in the floodplain or other known hazardous areas. In the next five years, additional housing is planned along Pine Street. The figure below shows future land use of the village with housing planned on the west and northern parts of the village.





## Community Lifelines

### Transportation

Pleasanton's major transportation corridors include State Highway 10. The most traveled route is Highway 10 with an average of 3,785 vehicles daily, 150 of which are trucks.<sup>57</sup> There are no rail lines in the community. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents. No significant transportation events or spills have occurred locally.

### 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 Pleasanton which house hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

**Table PLN.3: Chemical Storage Sites**

Name	Address	Floodplain (Y/N)
Trotter Fertilizer	307 E Cemetery	N
AT&T NE6040	33175 Grove Rd	N
Farmers Co-op Assn Fertilizer	20805 Antelope Rd	N

Source: Nebraska Department of Environment and Energy<sup>58</sup>

### 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 PLN.4: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Community Hall/Village Office	N	N	Y (1%)
2	Fire Hall	N	N	Y (1%)
3	Lift Station	N	Y	Y (1%)
4	Maintenance Shop	N	N	Y (1%)
5	Pleasanton School	Y	N	N
6	Trailer Park	N	N	Y (1%)
7	Water Tower	N	Y	N
8	Well – Park	N	N	Y (1%)
9	Well – Pine and Vine	N	N	N

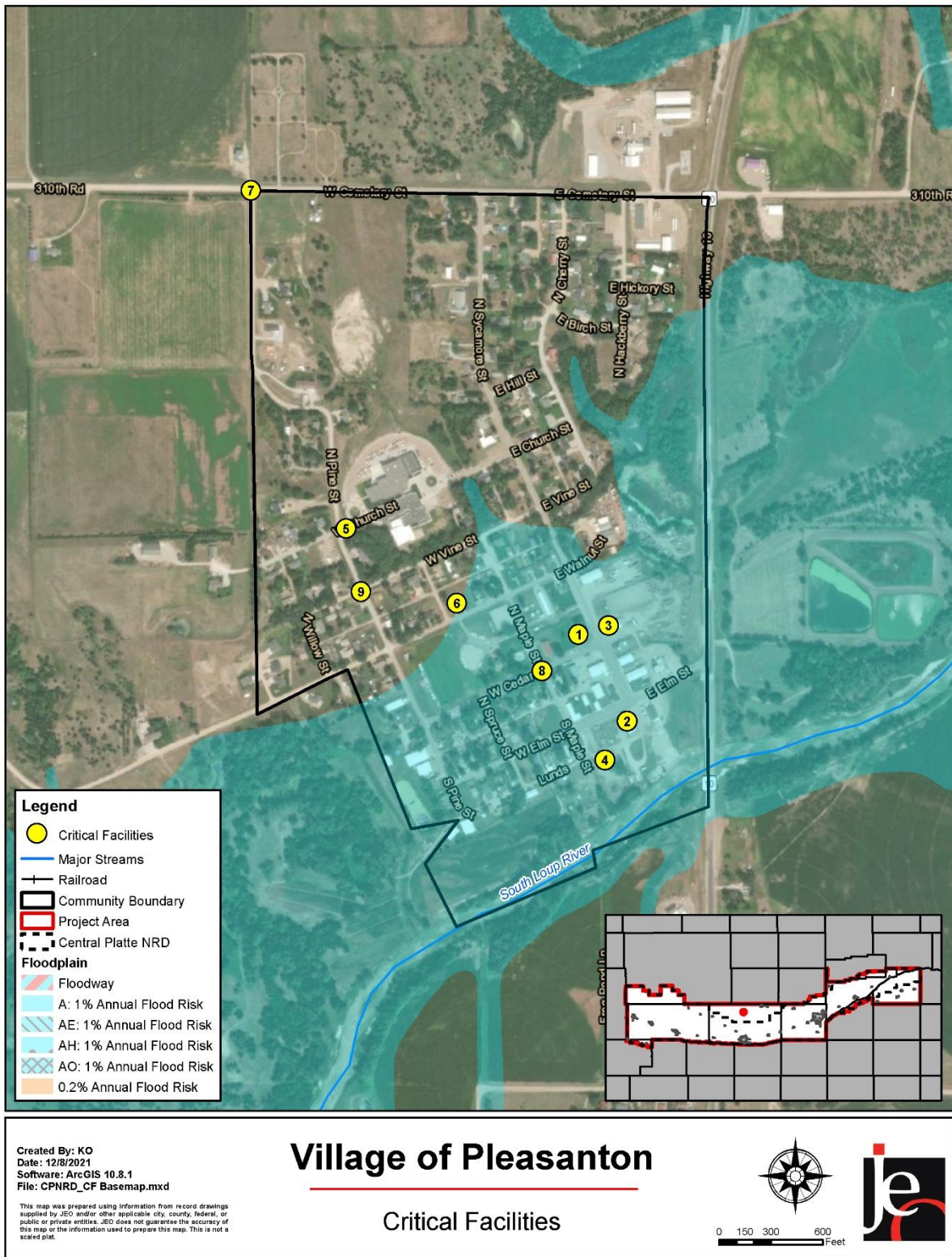
57 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." [map].

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

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



Figure PLN.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 PLN.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
195	\$18,861,360	84	\$6,465,440	43.1%

Source: County Assessor, 2021

**Table PLN.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
195	\$18,861,360	0	\$0	0%

Source: County Assessor, 2021

## Historical Occurrences

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

Flood risk areas in Pleasanton are the Platte River and Wood River. Areas of concern for the village are largely located to the south of the village with a smaller area of concern to the north. The south portion of the flood risk area impacts a large portion of the village. During the March 2019 flood, the downtown and homes around the downtown area had to be evacuated for a day. The post office was closed temporarily, with mail operations moved to nearby post offices. Streets were damaged in the village and storm drains had to be cleared of flood materials. To help mitigate flooding, the village has installed drainage ditches near of the trailer court and football field.

Pleasanton is a member of the NFIP, and the village's Floodplain Administrator (Chad Dixon) will oversee the commitments and requirements of the NFIP. The initial FIRM for the village was delineated in 9/27/1985 and the current effective map date is 11/26/2010. As of October 31, 2021, there is one NFIP policy in-force covering \$71,000. Pleasanton does not currently have any repetitive loss or severe repetitive loss structures.



**Severe Thunderstorms**

NCEI reported 29 thunderstorm and hail events since 1996 totaling \$1,424,000 dollars in property damages. The most damaging recent event occurred in August 2017 when thunderstorm winds caused \$500,000 in damages to power lines, homes, trees, and vehicles. Pleasanton requires utility lines to be buried in new subdivisions. Recently, permanent backup generators were purchased for the water towers and the sewer lift station. All village-owned buildings are insured for hail damage but are not hail resistant. Pleasanton does not have a local tree board but plans to conduct a tree inventory and develop a tree maintenance program. They also hope to improve their public safe rooms and post-disaster storm shelters.

**Severe Winter Storms**

Pleasanton does not have the physical or governmental infrastructure to respond to a severe winter storm if one was to occur. There are no designated snow routes or snow fences and clearing streets of snow usually proves to be time-consuming. Snow removal is performed by the Village Maintenance Department and village members. Pleasanton’s snow removal equipment includes a tractor with a blade and pickup with a blade. When a severe winter storm swept through Pleasanton in 2009, citizens were forced to bunk with family or neighbors when the snow caused a power outage.

**Tornadoes and High Winds**

Since 1996, the NCEI reported one tornado in Pleasanton. This tornado caused no property damage as it skipped through the village. In the case of a power surge, municipal records are protected by a flash drive backup. An emergency siren has been installed by the Buffalo County Emergency Management Department and is tested monthly. Pleasanton does not have any community safe rooms identified, but there are spaces in the school and community center that could be utilized for sheltering purposes if necessary. The village quarterly newsletter offers educational materials on tornado preparedness. In the event of a disaster, there are Mutual Aid Agreements in place with Ravenna and Litchfield.

**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	A backup generator was installed at the sewer lift station in December 2018.

**Kept Mitigation Actions**

Mitigation Action	Develop Emergency Snow/Evacuation Routes
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	Severe Winter Storms, Tornadoes and High Winds, Grass/Wildfire, Flooding
<b>Estimated Cost</b>	\$4,000
<b>Local Funding</b>	General Budget
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Street Commissioner
<b>Status</b>	This is a yearly, ongoing project, as needed for severe winter storms. Supplies are kept stocked, such as salt and gravel.

Mitigation Action	Improve Warning Systems
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	Varies
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	Low
<b>Lead Agency</b>	Village Board, Fire Department
<b>Status</b>	The fire department handles and upgrades all warning systems.

Mitigation Action	Increase Soil and Water Conservation
<b>Description</b>	Develop and improve public awareness of soil and water conservation methods; develop or maintain materials and conduct multi-faceted public education.
<b>Hazard(s) Addressed</b>	Drought, Flooding
<b>Estimated Cost</b>	\$1,000+
<b>Local Funding</b>	General Budget
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Village Board, Fire Department
<b>Status</b>	The fire department educates the public with newsletters and does talks at the school. The village board publishes education in the quarterly newsletters.

Section Seven | Village of Pleasanton Community Profile

Mitigation Action	Public Awareness/Education
<b>Description</b>	Provide education to community members on preparedness actions associated with tornadoes in the quarterly newsletter.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds
<b>Estimated Cost</b>	\$100
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Clerk
<b>Status</b>	The village board publishes education in the quarterly newsletter and on the village website.

Mitigation Action	Reduce Tree Damage and Damage from Trees
<b>Description</b>	Conduct tree inventory; develop tree maintenance/trimming program; implement tree maintenance/trimming program; remove hazardous limbs and/or trees.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Winter Storms, Severe Thunderstorms, Grass/Wildfire
<b>Estimated Cost</b>	\$5,000
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Maintenance Department
<b>Status</b>	Maintenance continually clears hazardous limbs and tree debris.

Mitigation Action	Reduce Water Demand / Improve Drought Education
<b>Description</b>	Conduct water use study to evaluate/implement methods to conserve water/reduce consumption; evaluate/implement water use restriction ordinance; identify/evaluate current/additional potable water sources; develop or obtain drought education materials to conduct multi-faceted public education and awareness program.
<b>Hazard(s) Addressed</b>	Drought
<b>Estimated Cost</b>	\$2,000+
<b>Local Funding</b>	General Budget
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Village Board, Engineer
<b>Status</b>	There is a comprehensive plan that covers drought situations.

Mitigation Action	Storm Shelter / Safe Room
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Thunderstorms
<b>Estimated Cost</b>	\$150 per square ft for retrofit; \$300 per square ft for new construction
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	Low
<b>Lead Agency</b>	Village Board, Engineer
<b>Status</b>	Not Started

## **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.

Pleasanton last reviewed their section of the HMP in August 2020 when a new floodplain ordinance was put in place. The Village Chairperson and maintenance individual will be responsible for reviewing and updating the plan in the future. These individuals will review the plan bi-annually during village board meetings. The public will be notified on the village's Facebook page, website, and quarterly newsletter.

**Community Profile**

# **City of Ravenna**

**Central Platte NRD  
Hazard Mitigation Plan**

**2022**

## Local Planning Team

The City of Ravenna’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 RAV.1: Ravenna Local Planning Team**

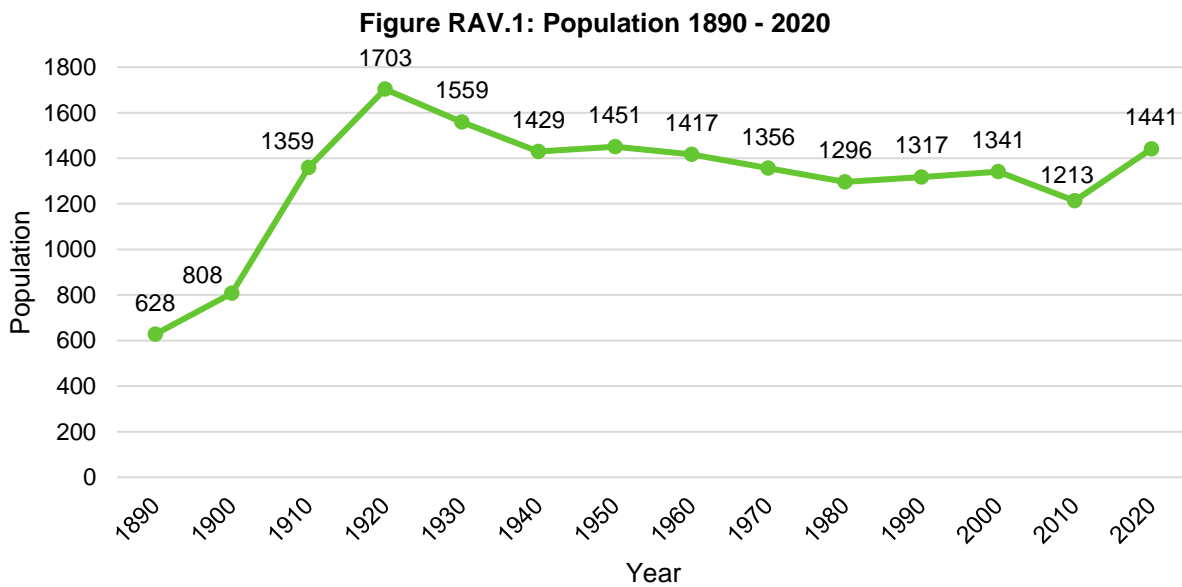
Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
<b>Chad Dixon</b>	Floodplain Administrator	City of Ravenna	Virtual	Virtual
<b>Dave Dunning</b>	Public Works Director	City of Ravenna	Grand Island	Grand Island
<b>Tom Spaulding</b>	Public Works Assistant	City of Ravenna	-	Grand Island
<b>Kellie Crowell</b>	City Clerk/Treasurer	City of Ravenna	-	-
<b>Peg Dethlefs</b>	Mayor	City of Ravenna	-	-
<b>Larry Wilke</b>	Fire Chief	City of Ravenna	-	-

## Location and Geography

The City of Ravenna is in the northeast corner of Buffalo County and covers an area of 1.67 square miles. Major waterways in the area include the South Loup River, the Middle Loup River, Mud Creek, and Dry Creek.

## Demographics

The following figure displays the historical population trend for the City of Ravenna. This figure indicates that the population of Ravenna has been increasing since 2010 to 1,441 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. Ravenna’s population accounted for 2.9% of Buffalo County’s population in 2020.<sup>59</sup>

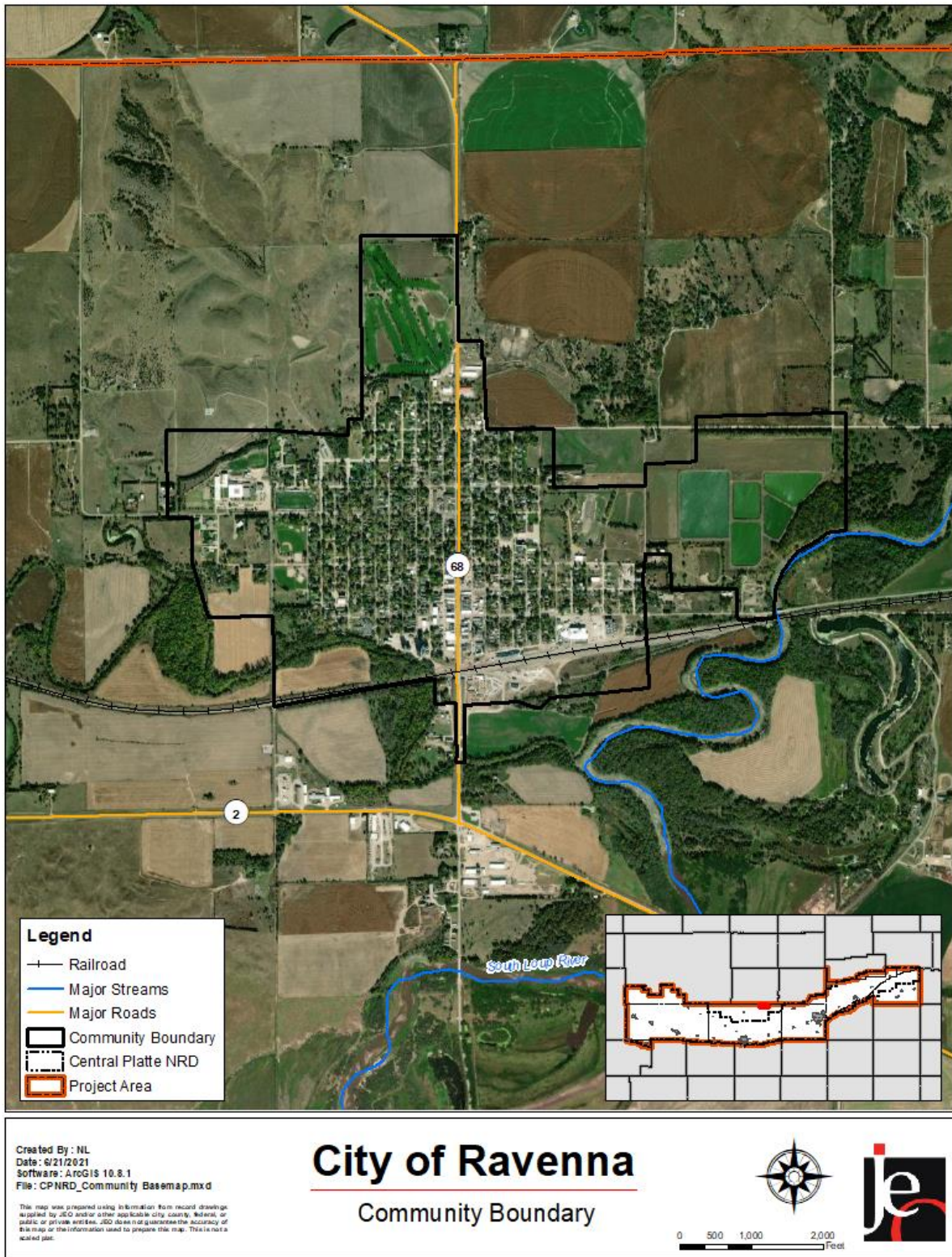


Source: U.S. Census Bureau

59 United States Census Bureau. “2020 Decennial Census: P1: DEC Redistricting Data.” <https://data.census.gov/cedsci/>.



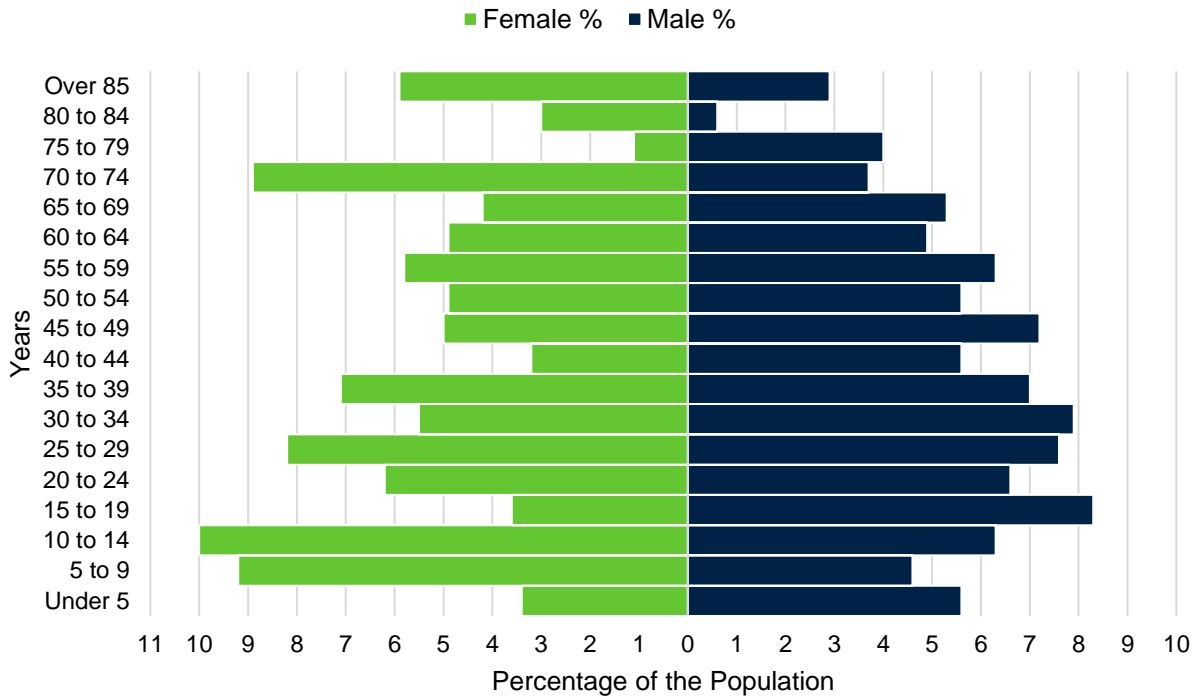
Figure RAV.2: City of Ravenna



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

- **3.1% is non-white.** Since 2010, Ravenna grew more ethnically diverse. In 2010, 2.1% of the Ravenna’s population was non-white. By 2019, 3.1% was non-white.<sup>60</sup>
- **37 median age.** The median age of Ravenna was 37 years in old 2019. The population grew younger since 2010, when the median age was 40.9.<sup>61</sup>

**Figure RAV.3: Ravenna’s Population Pyramid**



The figure above shows Ravenna’s population percentage broken down by sex and five-year age groups. Ravenna’s population is likely to grow in the future with a higher percentage of the population age 39 and younger.

## Employment and Economics

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

- **8% of people living below the poverty line.** The poverty rate (8%) in the City of Ravenna was slightly higher than the state’s poverty rate (7.2%) in 2019.<sup>62</sup>
- **\$50,172 median household income.** Ravenna’s median household income in 2019 (\$50,172) was \$11,267 lower than the state (\$61,439).<sup>62</sup>

60 United States Census Bureau. “2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates.” <https://data.census.gov/cedsci/>.

61 United States Census Bureau. “2019 Census Bureau American Community Survey: S0101: Age and Sex.” <https://data.census.gov/cedsci/>.

62 United States Census Bureau. “2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics.” <https://data.census.gov/cedsci/>.

- **1.8% unemployment rate.** In 2019 Ravenna had a slightly lower unemployment rate (1.8%) when compared to the state (2.3%).<sup>62</sup>
- **39.3% of workers commuted 30 minutes or more to work.** Less workers in Ravenna commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (39.3% compared to 53%).<sup>63</sup>

### Major Employers

The major employers in the community are Kaapa Ethanol Plant, Darling Ingredients, and Michael Foods. A large percentage of residents commute to work in Kearney and Grand Island.

## 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. Ravenna's housing stock has:

- **92.3% of housing built prior to 1970.** Ravenna has a larger share of housing built prior to 1970 than the state (92.3% compared to 46%).<sup>64</sup>
- **12.4% of housing units vacant.** Since 2010, Ravenna's vacancy rate declined. In 2010 the vacancy rate was 17.2%. By 2019, 12.4% of housing units were vacant.<sup>64</sup>
- **2.9% mobile and manufacture housing.** The City of Ravenna had a slightly lower share of mobile and manufactured housing (2.9%) compared to the state (3.3%).<sup>64</sup> There are seven mobile homes within city limits and 10 more within the one-mile jurisdiction.
- **29.5% renter occupied.** The rental rate of Ravenna was 29.5% in 2019. The percentage went down since 2010, when renter occupied housing was at 34%.<sup>64</sup>

## Governance

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

- Clerk/Treasurer
- Public Works Department
- Streets Superintendent
- Police Department
- Planning Commission
- Housing Authority
- Economic Development Corporation
- Volunteer Fire Department

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

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



- Volunteer EMS Department
- Community Redevelopment Authority
- Chamber of Commerce

## 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 with a large portion of funds already dedicated to a downtown improvement project. Funds have increased recently, however, the city is getting less sales tax due to the Nebraska Advantage Tax Incentive.

**Table RAV.2: Capability Assessment**

Survey Components/Subcomponents		Yes/No
<b>Planning &amp; Regulatory Capability</b>	Comprehensive Plan	Yes
	Capital Improvements Plan	Yes
	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)	Water System Emergency Response Plan, Wellhead Protection Plan
<b>Administrative &amp; Technical Capability</b>	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	No (currently working on this)
	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)	-
	<b>Fiscal Capability</b>	Capital Improvement Plan/ 1- & 6-Year plan
Applied for grants in the past		Yes
Awarded a grant in the past		Yes
Authority to Levy Taxes for Specific Purposes such as Mitigation Projects		Yes

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

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

## Plan Integration

Ravenna 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 city will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

### Buffalo County Local Emergency Operations Plan (2021)

Ravenna is an annex in the Buffalo 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 annually.



### **Building Code (2018)**

The building code sets standards for constructed buildings and structures. The city has adopted the 2018 International Building Codes with no amendments made.

### **Capital Improvements Plan (2021)**

The capital improvements plan annually outlines projects the city would like to pursue and provides a planning schedule and financing options. Installing water meters for residential structures is the only project identified that relates to hazard mitigation. Projects in the HMP are reviewed for inclusion in the capital improvements plan.

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

The comprehensive plan is designed to guide the future actions and growth of the city. It has integrated some of the objectives included in the HMP. The plan also contains goals aimed at safe growth, directs development away from the floodplain, directs housing away from chemical storage sites, encourages infill, and encourages the elevation of structures located in the floodplain. There are currently no plans to update the comprehensive plan.

### **Floodplain Ordinance (2016), Zoning Ordinance (2014), and Subdivision Regulations (2018)**

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, include well setback requirements, and include the ability to implement water restrictions.

### **Water System Emergency Response Plan (2019)**

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 (2004)**

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.

## **Future Development Trends**

Over the past five years two new housing subdivisions have been built and an old brick hotel near the railroad was demolished by the city. One house in 2019 was built near the river and is located within the floodplain. The house was built one foot above base flood elevation. In the next five years the city anticipates additional houses to be built but no large housing or business developments are planned at this time. The figure below shows the future land use for the city. Residential housing is located north of the railroad tracks with commercial located south of the railroad tracks and around Highway 2.



## Community Lifelines

### Transportation

Ravenna’s major transportation corridors include State Highway 2 and 68. The most traveled route is Highway 68 with an average of 2,440 vehicles daily, 155 of which are trucks.<sup>65</sup> The city has one Burlington Northern Santa Fe Railway line traveling east to west on the southern edge of the community. No large spills or accidents have impacted 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 are ten chemical storage sites within or near Ravenna which house hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

**Table RAV.3: Chemical Storage Sites**

Name	Address	Floodplain (Y/N)
Henningsen Foods Inc	200 E Railway St	N
Darling Ingredients Inc	102 Lincoln Ave	N
Farmers Co-op Assn	35885 Ravenna Rd	N
NDOT Ravenna Yard	42775 Highway 2	N
Hamilton Communications	113 W Genoa St	N
Farmers Co-op Assn	35545 Pine Rd	N
Aurora Co-op Elevator Company	30250 Shelton Rd	Y (1%)
KAAPA Ethanol Ravenna LLC	35955 Navaho Rd	N
AT&T NEA042/NE9158	33248 Pine Rd	N
Nutrien Ag Solutions	33855 Navaho Rd	N

Source: Nebraska Department of Environment and Energy<sup>66</sup>

### Health and Medical Facilities

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

**Table RAV.4: Health and Medical Facilities**

Name	Type of Facility	Address	Number of Beds
Seneca Sunrise	Assisted Living Facility	710 Grand Ave	50
Heartland Health Clinic	Medical Clinic	104 W. Seneca St	-

Source: Nebraska Department of Health and Human Services<sup>67,68,69,70</sup>

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

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

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

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

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

70 Department of Health and Human Services. 2021. "State of Nebraska Roster: Rural Health Clinic." [https://dhhs.ne.gov/licensure/Documents/RHC\\_Roster.pdf](https://dhhs.ne.gov/licensure/Documents/RHC_Roster.pdf).

### 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.

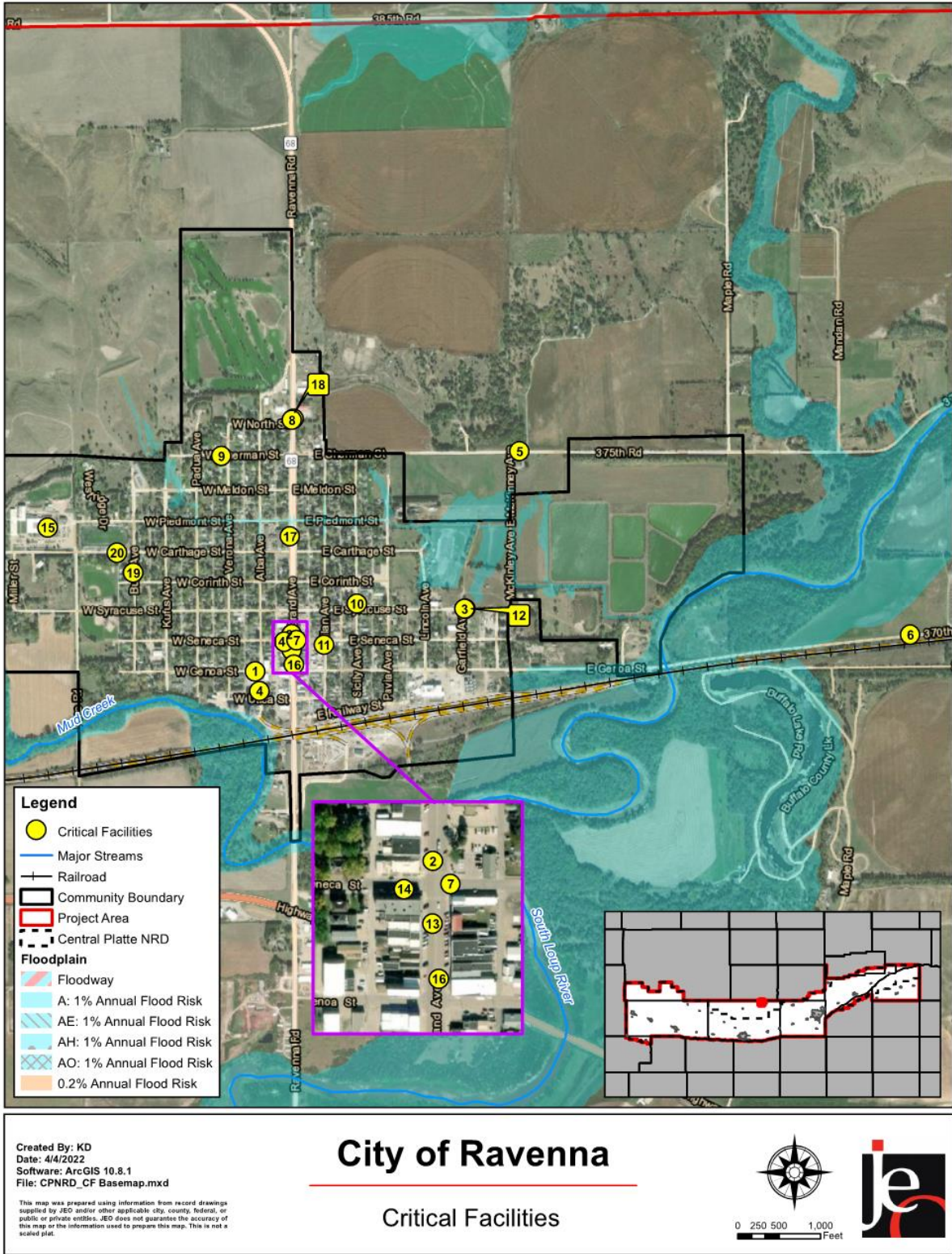
Although they may not be listed in the table below, critical infrastructure also includes power infrastructure, cell towers, alert sirens, water infrastructure, wastewater infrastructure, and roadways.

**Table RAV.5: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	City Auditorium	N	Y	N
2	City Hall	N	Y	N
3	Fill Station	N	N	N
4	Fire Station	N	Y	N
5	Lagoons	N	N	N
6	Lift Station	N	Y	N
7	Medical Center	N	N	N
8	North Pump House	N	N	N
9	Northwest Pump House	N	N	N
10	Our Lady of Lourdes Church	N	N	N
11	New Public Library	N	N	N
12	Public Works	N	N	N
13	Ravenna Economic Development Corporation	N	N	N
14	Ravenna Public Library	N	N	N
15	Ravenna Public Schools	N	N	N
16	Ravenna Senior Center	N	N	N
17	Seneca Sunrise Assisted Living	N	N	N
18	Water Tower/ Reservoir/Water Booster Station	N	Y	N
19	Water Well House	N	N	N
20	West Pump House	N	N	N



Figure RAV.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 RAV.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
674	\$58,187,610	15	\$1,379,640	2.2%

Source: County Assessor, 2021

**Table RAV.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
674	\$58,187,610	0	\$0	0%

Source: County Assessor, 2021

## Historical Occurrences

See the Buffalo 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*.

### Dam Failure

There are two dams near Ravenna. Of these, one dam has been identified as a high hazard dam. There have been no reports of failures at any of these dams, however, if the high hazard dam was to fail it would put life and property at risk. High hazard dams are annually inspected and must have an emergency action plan. To help reduce the risk of dam failure the city has installed storm drains along Piedmont Street to help with drainage. Figure RAV.6 show the location and names of the dams.

Figure RAV.6: Dam Locations



## **Flooding**

The flood risk areas of concern for the City of Ravenna are located south and east of the city. According to NCEI, there have been three flood events in Ravenna, all occurring in 2019. These events caused an estimated \$4,000,000 in damages. Three homes sustained major flood damage, with many other homes having minor flood damage. One of the homes was damaged beyond repair and had to be demolished. The residents of the three heavily damaged homes had to be evacuated during the flooding. One storage building business received major damage, along with all the contents that were being stored inside. Other businesses in the community received moderate to minor flood damages. Most of the homes and businesses that were damaged, were not located in the identified 1% flood risk area. Ravenna plans to mitigate damages in future flooding events by improving the city's electrical services, continuing to implement their tree maintenance program, and educating the public on ways to mitigate flooding. Recently, the City of Ravenna completed a drainage study and completed two separate storm drain projects.

Ravenna is a member of the NFIP, and the city's Floodplain Administrator (Chad Dixon) will oversee the commitments and requirements of the NFIP. The initial FIRM for the city was delineated in 9/4/1985 and the current effective map date is 11/26/2010. As of October 31, 2021, there are four NFIP policies in-force covering \$385,800. Ravenna does not currently have any repetitive loss or severe repetitive loss structures.

## **Hazardous Materials Release**

BNSF rail line runs through Ravenna along Highway 2 which could cause a chemical spill during an accident. In addition, a large dry fertilizer plant has recently been built along Highway 2 near the Famers Coop. There are a total of 10 Tier II sites located in or near the city that house chemicals. There have been no chemical spills during transport reported, but chemicals are transported daily by highway. Various acids, anhydrous ammonia, fertilizers, and fuel are some of the chemicals that are regularly transported. There are critical facilities along these main transportation routes that are at risk should a spill occur. In the event of a spill, Ravenna Fire and EMS Departments have done Hazmat training and have some gear for response. Ravenna plans to mitigate this hazard with public education and a tabletop emergency exercise.

## **Severe Thunderstorms**

The local planning team noted that in 2013, there was a large severe thunderstorm event with high winds and golf ball to tennis ball sized hail that caused widespread damage. NCEI reports that there have been 49 severe thunderstorm events since 1996 that caused \$1,526,000 in property damage.

Much has been done the past five years to reduce the city's vulnerability to severe thunderstorms. All municipal records are backed up to a cloud-based system. NPPD continues to make improvements to the electrical service and the city hires a tree trimming company to come every year and trim trees in the city parks and along the streets. In addition, many critical facilities have backup power generators, with the City Auditorium recently getting one. Notification of severe weather can be done through the Chamber/Economic Development texting notification program. The new library was built with a FEMA approved tornado shelter and is located behind the Senior Center, so they are able to access it quickly. City Hall also has two rooms that can be used as a shelter. All city owned buildings have their roofs checked annually for hail and wind damage.

Ravenna plans to mitigate the risks associated with severe thunderstorms by providing adequate public safe rooms and hazard education, improving electrical service, and reducing tree damage with a maintenance program.

### **Severe Winter Storms**

The planning team referenced two specific winter storm events that were especially severe. In December of 2006, there was a large ice storm that downed power lines, broke poles, and left the community without power for four days. Next, in February of 2016, Ravenna received 20” of snow. Accompanying road clearing problems shut down business and travel for several days. More recently extremely cold temperatures in February 2021 caused a few frozen water pipes. To help minimize the occurrence, the city continues to educate the community on how to prevent frozen pipes. The issues concerning the planning team include insufficient Fire and EMS response in wintery conditions, and the safety of elderly populations, who are more vulnerable during severe winter storms. The Mayor/EMT Captain has a list of individuals who live at home and are on oxygen. These individuals are checked on anytime there is a hazardous event.

The City of Ravenna retains a pay loader, grader, snowplow pickup, snowplow truck, skid steer, and backhoe for snow removal. The local planning team indicated that the city has sufficient snow removal equipment and personnel to operate the equipment. Main Street is the official snow route for the community. Plans to further prepare for severe winter storms include improving electrical service, educating community members on the hazards associated with severe winter weather, and maintaining trees with a tree trimming program.

### **Tornadoes and High Winds**

An EF0 tornado occurred in September of 2006. Its path crossed south of Ravenna, where it destroyed an unused barn causing \$40,000 in property damages. The local planning team identified another tornado in 2013 that crossed north of Ravenna, causing house damages and destroying a garage.

Since the last plan update, a FEMA approved storm shelter was built in the new library. The Senior Center is located next door so that they have easy access to the shelter if needed. City Hall also has two rooms that can be used as a shelter location. Furthermore, several businesses have basements, and all churches have basements available for shelter. The community does have warning sirens, activated by dispatch or at the Fire Hall. The planning team is unaware of areas that might not be reached by sirens. There are text alerts available for Ravenna, and once a year Emergency Management or NOAA puts on a training for the Fire Department and EMS. Mutual aid agreements are in effect with Pleasanton, Loup City, and Cairo.

## Mitigation Strategy

### Completed Actions

Mitigation Action	Reduce Stormwater Damage
<b>Description</b>	Conduct stormwater drainage study to evaluate restrictions, capacity, level of protection, alternative improvements, prioritize improvements, etc.; evaluate and implement recommendations or comparable measures including open ditch and culvert improvements, underground piping, retention and detention facilities to decrease runoff, etc.; evaluate storm-water ordinance; implement improved storm-water ordinance. Improvements are needed along Milan Ave and Alba Ave.
<b>Hazard(s) Addressed</b>	Flooding
<b>Status</b>	The City of Ravenna completed a drainage study and completed two separate storm drain projects. The Storm Drain Project along Piedmont Street included adding storm drains for 4 blocks of storm drains. The Southeast Storm Drain Project included 3 blocks along Alba Avenue, 1 block along Milan Avenue and 4 blocks along Genoa Street. Also, the city created a new Subdivision called Solar Subdivision, and installed 4 blocks of storm drains in that area.

### New Mitigation Actions

Mitigation Action	Backup and Emergency Generators
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$20,000-\$75,000+ per Generator
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	City Council
<b>Status</b>	A backup generator was installed at the new library.

Mitigation Action	Improve Warning Systems
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$10,000+
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	City Council, County Emergency Management
<b>Status</b>	Not Started



**Kept Mitigation Actions**

Mitigation Action	Improve Electrical Service
<b>Description</b>	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 and new subdivisions.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
<b>Estimated Cost</b>	\$50,000+
<b>Local Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Public Works
<b>Status</b>	Not Started

Mitigation Action	Public Awareness/Education
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$3,000+
<b>Local Funding</b>	General Fund
<b>Timeline</b>	Ongoing
<b>Priority</b>	Low
<b>Lead Agency</b>	Clerk, Various Departments
<b>Status</b>	The city conducts scheduled monthly siren/warning system tests. The city has also purchased projectors and laptops to help facilitate presentation of information when needed.

Mitigation Action	Reduce Tree Damage and Damage from Trees
<b>Description</b>	Conduct tree inventory; develop tree maintenance/trimming program; implement tree maintenance/trimming program; remove hazardous limbs and/or trees.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Thunderstorms, Severe Winter Storms, Grass/Wildfires
<b>Estimated Cost</b>	Less than \$5,000
<b>Local Funding</b>	General Fund
<b>Timeline</b>	Ongoing
<b>Priority</b>	Medium
<b>Lead Agency</b>	Public Works, Contracted Tree Trimmers
<b>Status</b>	The City of Ravenna continues to budget yearly for tree trimming/removal. The city hires a tree trimming company to trim and remove hazardous limbs and trees in the City Parks, Cemetery and along the City Streets yearly.

Mitigation Action	Storm Shelter / Safe Room
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Thunderstorms
<b>Estimated Cost</b>	\$150 square ft for retrofit; \$300 square ft for new construction
<b>Local Funding</b>	General Fund
<b>Timeline</b>	1 Year
<b>Priority</b>	Medium
<b>Lead Agency</b>	City Council, Contracted Engineer – Miller and Associates
<b>Status</b>	The city needs to make a current list of storm shelter safe rooms in the community. A public safe room was constructed in the new Library.

Mitigation Action	Tabletop Emergency Exercises
<b>Description</b>	Utilize tabletop emergency exercises to prepare for hazardous events; ensure that businesses and residents have appropriate plans in place.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$5,000+
<b>Local Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	Low
<b>Lead Agency</b>	City Council
<b>Status</b>	Not Started

## 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, Fire Chief, EMS Captain, City Clerk, and Public Works Director will be responsible for reviewing and updating the plan in the future. These individuals will review the plan annually. The public will be notified through city council meetings, Facebook, the city website, as well as coordinating with the Chamber of Commerce and Economic Development to send out information via text to their patrons and businesses.

**Community Profile**

**Village of Riverdale**

**Central Platte NRD  
Hazard Mitigation Plan**

**2022**

## Local Planning Team

The Village of Riverdale’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 RIV.1: Riverdale Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Jim Cudaback	Clerk / Floodplain Administrator	Village of Riverdale	Virtual	Recording

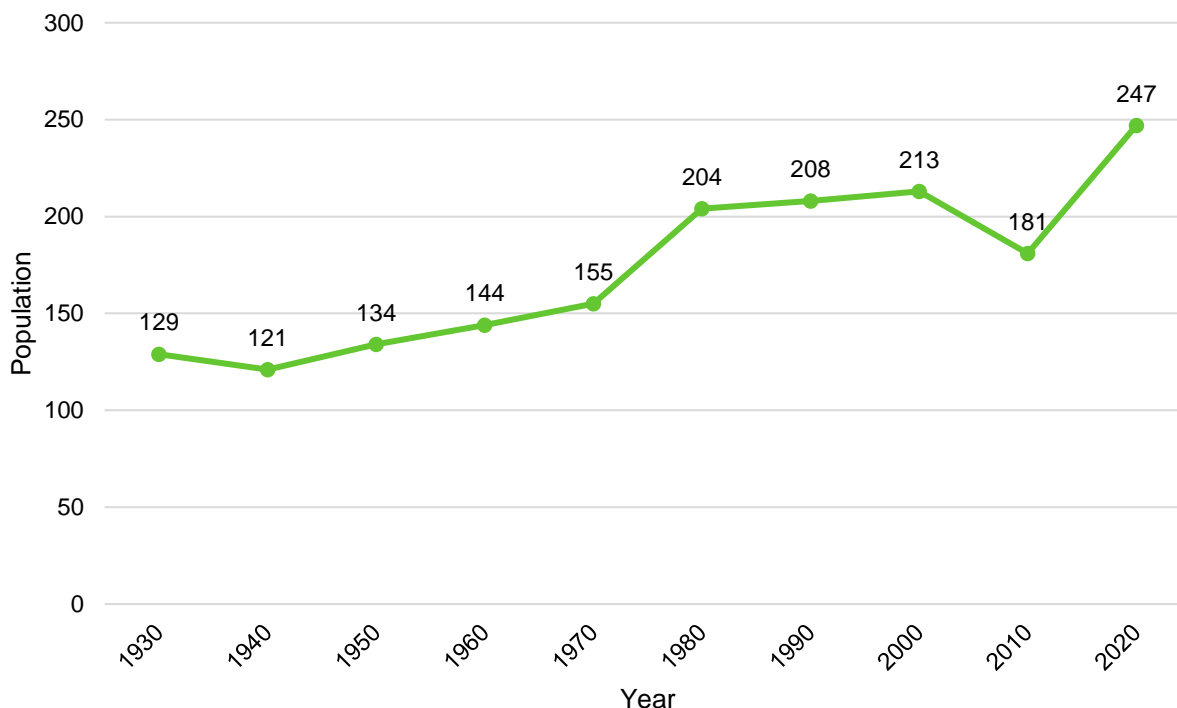
## Location and Geography

The Village of Riverdale is in southern Buffalo County and covers an area of 0.26 square miles. The major waterway in the area is the Wood River.

## Demographics

The following figure displays the historical population trend for the Village of Riverdale. This figure indicates that the population of Riverdale has been increasing since 2010 to 247 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. Riverdale’s population accounted for 0.5% of Buffalo County’s population in 2020.<sup>71</sup>

**Figure RIV.1: Population 1930 - 2020**



Source: U.S. Census Bureau

71 United States Census Bureau. “2020 Decennial Census: P1: DEC Redistricting Data.” <https://data.census.gov/cedsci/>.

Figure RIV.2: Village of Riverdale

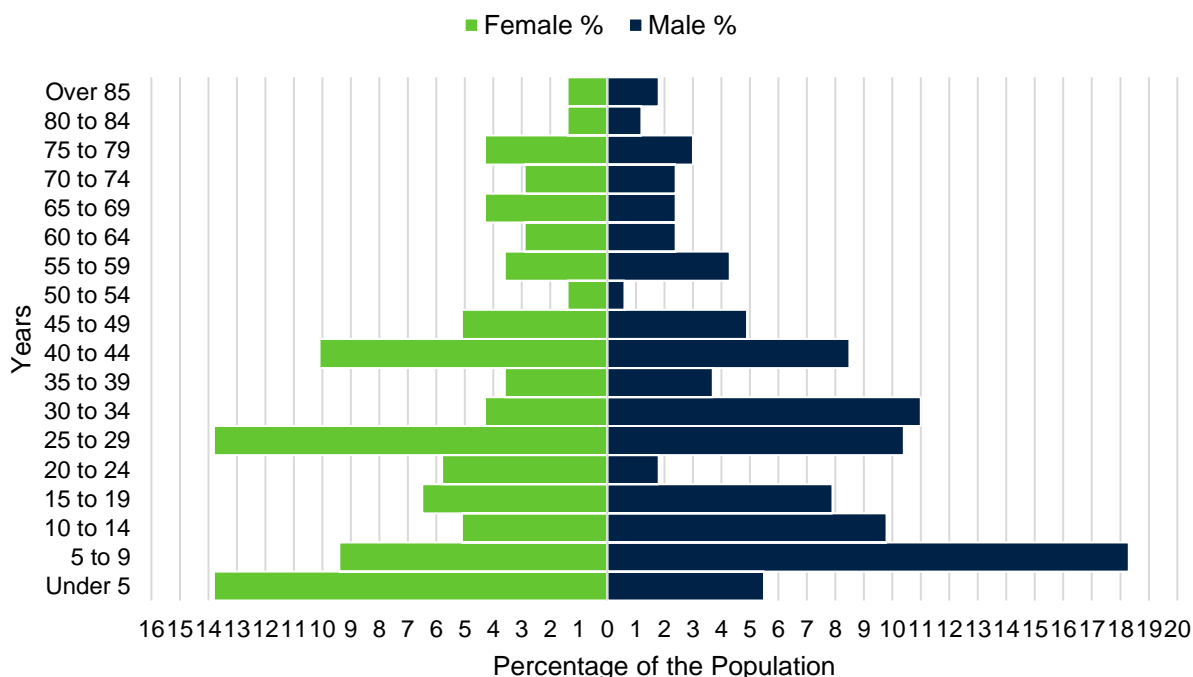




The young, elderly, and minority populations may be more vulnerable to certain hazards than other groups. Looking at Riverdale’s population:

- **0.7% is non-white.** Since 2010, Riverdale grew more ethnically diverse. In 2010, 0% of the Riverdale’s population was non-white. By 2019, 0.7% was non-white.<sup>72</sup>
- **Younger median age.** The median age of Riverdale was 26.9 years in old 2019. The population grew younger since 2010, when the median age was 37.5.<sup>73</sup>

**Figure RIV.3: Riverdale’s Population Pyramid**



The figure above shows Riverdale’s population percentage broken down by sex and five-year age groups. Riverdale’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. Riverdale’s population has:

- **5.6% of people living below the poverty line.** The poverty rate (5.6%) in the Village of Riverdale was lower than the state’s poverty rate (7.2%) in 2019.<sup>74</sup>
- **\$63,438 median household income.** Riverdale’s median household income in 2019 (\$63,438) was \$2,000 higher than the state (\$61,439).<sup>74</sup>
- **0% unemployment rate.** In 2019 Riverdale had a lower unemployment rate (0%) when compared to the state (2.3%).<sup>74</sup>

72 United States Census Bureau. “2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates.” <https://data.census.gov/cedsci/>.

73 United States Census Bureau. “2019 Census Bureau American Community Survey: S0101: Age and Sex.” <https://data.census.gov/cedsci/>.

74 United States Census Bureau. “2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics.” <https://data.census.gov/cedsci/>.

- **10.2% of workers commuted 30 minutes or more to work.** Fewer workers in Riverdale commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (10.2% compared to 26.5%).<sup>75</sup>

### Major Employers

Major employers in the village are the Heartland Bank, The Andersons Grain Elevator, Riverdale Electric and Plumbing, Riverdale Auto Repair, and Bowie Fertilizer. A large percentage of residents commute to Kearney 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.

- **36.7% of housing built prior to 1970.** Riverdale has a smaller share of housing built prior to 1970 than the state (36.7% compared to 46%).<sup>76</sup>
- **0% of housing units vacant.** Since 2010, Riverdale’s vacancy rate decreased. In 2010 the vacancy rate was 17.4%. By 2019, 0% of housing units were vacant.<sup>76</sup>
- **4.2% mobile and manufacture housing.** The Village of Riverdale had a larger share of mobile and manufactured housing (4.2%) compared to the state (3.3%).<sup>76</sup> However, according to the local planning team, there are no mobile homes located in the community.
- **22.1% renter-occupied.** The rental rate of Riverdale was 22.1% in 2019. The percentage went up since 2010, when renter occupied housing was at 7.9%.<sup>76</sup>

## Governance

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

- Village Clerk / Floodplain Administrator
- Engineer

## 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.

<sup>75</sup> United States Census Bureau. “2019 Census Bureau American Community Survey: S0802: Means of Transportation to Work by Selected Characteristics.” <https://data.census.gov/cedsci/>.

<sup>76</sup> United States Census Bureau. “2019 Bureau American Community Survey: DP04: Selected Housing Characteristics.” <https://data.census.gov/cedsci/>.

Municipal funds are used to maintain current facilities and systems with some additional funding available to implement other projects as needed. A large portion of funds are currently dedicated to streets and lagoon maintenance. The amount of municipal funds has stayed the same over recent years.

**Table RIV.2: Capability Assessment**

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

Survey Components/Subcomponents		Yes/No
<b>Outreach Capability</b>	environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	
	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
<b>Financial resources to implement mitigation projects</b>	High
<b>Staff/expertise to implement projects</b>	Limited
<b>Public support to implement projects</b>	Moderate
<b>Time to devote to hazard mitigation</b>	Moderate

### Plan Integration

Riverdale 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.

#### Buffalo County Local Emergency Operations Plan (2021)

Riverdale is an annex in the Buffalo 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 annually.

#### Floodplain Ordinance

The village’s floodplain ordinance outlines how development should occur within identified floodplain areas. It requires at least one foot of elevation above base flood elevation for new structures in the floodplain and prohibits development in the floodway.

#### 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.

## Future Development Trends

In the past five years, there have been a few changes in the Village of Riverdale. Two houses were demolished, two houses were built, and several houses in the community were remodeled. The village constructed a new park and installed a second well. No new structures were built in the floodplain. There are no plans for any new businesses or housing developments in the next five years, as there are limited lots for development.

## Community Lifelines

### Transportation

Riverdale’s major transportation corridors include State Highway 40. The most traveled route is Highway 40 with an average of 2,435 vehicles daily, 100 of which are trucks.<sup>77</sup> There are no rail lines in the community. The local planning team indicated that there have been no transportation hazardous material releases in the village. 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 two chemical storage sites within or near Riverdale which house hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. The Kearney Fire Department is also available to assist the village in the event of a spill.

**Table RIV.3: Chemical Storage Sites**

Name	Address	Floodplain (Y/N)
<b>Bowie Fertilizer Inc</b>	313 Railroad St	N
<b>The Andersons B4 Grain</b>	313 Railroad St	N

Source: Nebraska Department of Environment and Energy<sup>78</sup>

### 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.

77 Nebraska Department of Roads. 2018. “Interactive Statewide Traffic Counts Map.” [map].

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

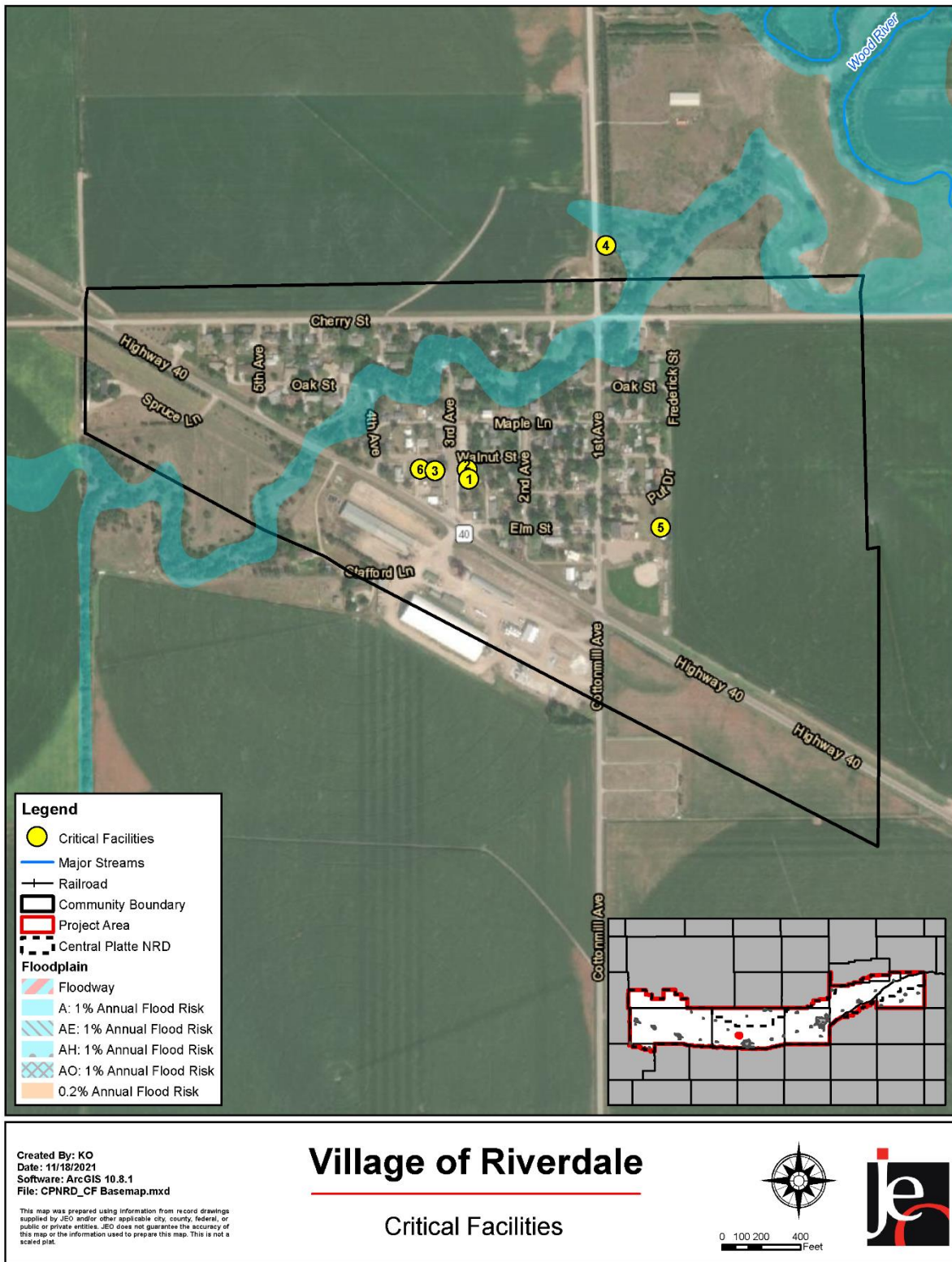
78 Nebraska Department of Environment and Energy. “Search Tier II Data.” Accessed June 2021.



**Table RIV.4: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Community Center	N	N	N
2	Fire Station	N	Y	N
3	Village Shop	N	N	N
4	Wastewater Plant	N	N	Y (1%)
5	Water Tower & Wellhouse	N	N	N
6	Well	N	N	N

Figure RIV.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 RIV.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
98	\$10,434,930	21	\$3,119,090	21.4%

Source: County Assessor, 2021

**Table RIV.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
98	\$10,434,930	0	\$0	0%

Source: County Assessor, 2021

## Historical Occurrences

See the Buffalo 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*.

### Extreme Heat

The greatest concern around extreme heat is for the elderly and those without air conditioning. July of 2011 contained a significant extreme heat event where the heat index reached 105 degrees multiple times throughout an 11-day period. To mitigate this, the Riverdale Community Center is identified as a cooling center for community members to use as needed. The village’s public meeting and event cancellation procedure is through the media or by telephone. Riverdale plans to further mitigate the risks associated with extreme heat by improving their backup generator system and educating their residents about extreme heat events.

### Flooding

The flood risk areas of concern for the Village of Riverdale are located in the northern and center portions of the village. During the major flooding of 2019, the village saw very few impacts within the community from the event. However, some debris that floated down the Wood River and knocked out a foot bridge in the area, causing \$1,000,000 in damages.

The entire village 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.

Riverdale is a member of the NFIP, and the village's Floodplain Administrator (Jim Cudaback) will oversee the commitments and requirements of the NFIP. The initial FIRM for the village was delineated in 11/26/2010 and the current effective map date is 11/26/2010. As of October 31, 2021, there are three policies in-force covering \$555,000. Riverdale does not currently have any repetitive loss or severe repetitive loss structures.

### **Hazardous Materials Release**

Although there have been no hazardous material spills in the past, the local planning team identified hazardous material release as a hazard of concern. There is one fertilizer plant and a grain elevator south of Highway 40. There are also agricultural chemicals regularly transported along local transportation routes. In the event of a spill, the local fire department would be the first to respond.

### **Severe Thunderstorms**

NCEI reports show 21 severe thunderstorm events since 1996. In total, these reported severe thunderstorms events caused \$10,920,000 dollars in damage. In May of 2011, wind gusts of 80-90 mph caused damage to trees and power lines resulting in power outages and \$500,000 in property damages. On June 12, 2002, 1.75-inch hail caused \$10,000,000 in damages to homes, trees, and vehicles across the community. Riverdale's critical facilities have since been fitted with hail resistant material, however in 2015 and 2016, some of the community's critical facilities were damaged by hail. The local planning team is concerned about the potential for loss of life and damage to property. Critical municipal records are protected with surge protectors, and critical facilities have weather radios.

### **Severe Winter Storms**

One of the worst severe winter storms to occur in Riverdale was on December 8, 2011, when slick roads caused two fatalities in a vehicle accident. The village is concerned with the potential for building collapse, loss of life or injury potentials, and the hindered mobility of emergency vehicles. Snow removal is done with village tractors with blades attached. This equipment is considered sufficient at this time. Riverdale does not have any snow fences or designated snow routes, but many residents have backup generators for their homes. Mitigation plans include providing backup generators for all critical facilities, improving citizen warning and emergency communication systems, and providing education to residents on severe winter storms.

### **Tornadoes and High Winds**

The local planning team identified high winds and tornadoes as a top hazard for the village, because of concerns about loss of life and property. The local planning team reports that a high wind event in 2016 saw wind speeds of 50-85 mph. The village does not have data backup systems for municipal records. The Community Center has an area where residents can seek shelter, with plans to improve this public storm shelter. Emergency text alerts are available through the County Emergency Manager. The Buffalo County Emergency Management also activates the warning siren in the event of inclement weather. This siren has been recently upgraded.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Project Scoping
<b>Description</b>	Evaluate potential flood risk reduction alternatives as identified through the NRCS WFPO including project scoping and implementation.
<b>Hazard(s) Addressed</b>	Flooding
<b>Estimated Cost</b>	Varies by Project
<b>Local Funding</b>	General Budget, WFPO
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Village Board, Village Clerk / Floodplain Administrator
<b>Status</b>	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.

### Continued Mitigation Actions

Mitigation Action	Backup and Emergency Generators
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$20,000 - \$75,000 per generator
<b>Local Funding</b>	General Budget
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Village Board
<b>Status</b>	Not Started. A plan is in place to borrow an emergency generator from a nearby town for the time being.

Mitigation Action	Improve Emergency Communication Systems
<b>Description</b>	Develop Emergency Communication Action Plan; implement Emergency Communication Action Plan; obtain/upgrade emergency communication equipment.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$5,000+
<b>Local Funding</b>	General Budget
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Low
<b>Lead Agency</b>	Village Board
<b>Status</b>	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)	All Hazards
Estimated Cost	\$5,000+
Local Fund	General Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Village Board
Status	A new warning siren was purchased and installed by the village. This is being kept in the event that another siren is 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	Less than \$5,000
Local Funding	General Budget
Timeline	Ongoing
Priority	Medium
Lead Agency	Village Board, Fire Department
Status	This is an ongoing action. Educational materials provided in village newsletters when applicable.

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 Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Village Board
Status	Not Started

### Removed Mitigation Actions

Mitigation Action	Develop/Update Floodplain Information
Description	Conduct mapping/remapping of floodplains; revise floodplain/insurance maps.
Reason for Removal	Not feasible at this time and would be better handled by other entities.

## **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 Village Clerk and Board Chairman will be responsible for reviewing and updating the plan in the future and will review the plan annually. Any updates will be discussed during a public board meeting.

**Community Profile**

# **Village of Shelton**

**Central Platte NRD  
Hazard Mitigation Plan**

**2022**

## Local Planning Team

The Village of Shelton’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 SHN.1: Shelton Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Brett Gillming	Utility Superintendent / Floodplain Administrator	Village of Shelton	-	Virtual
Bonnie Doremus	Clerk	Village of Shelton	-	-

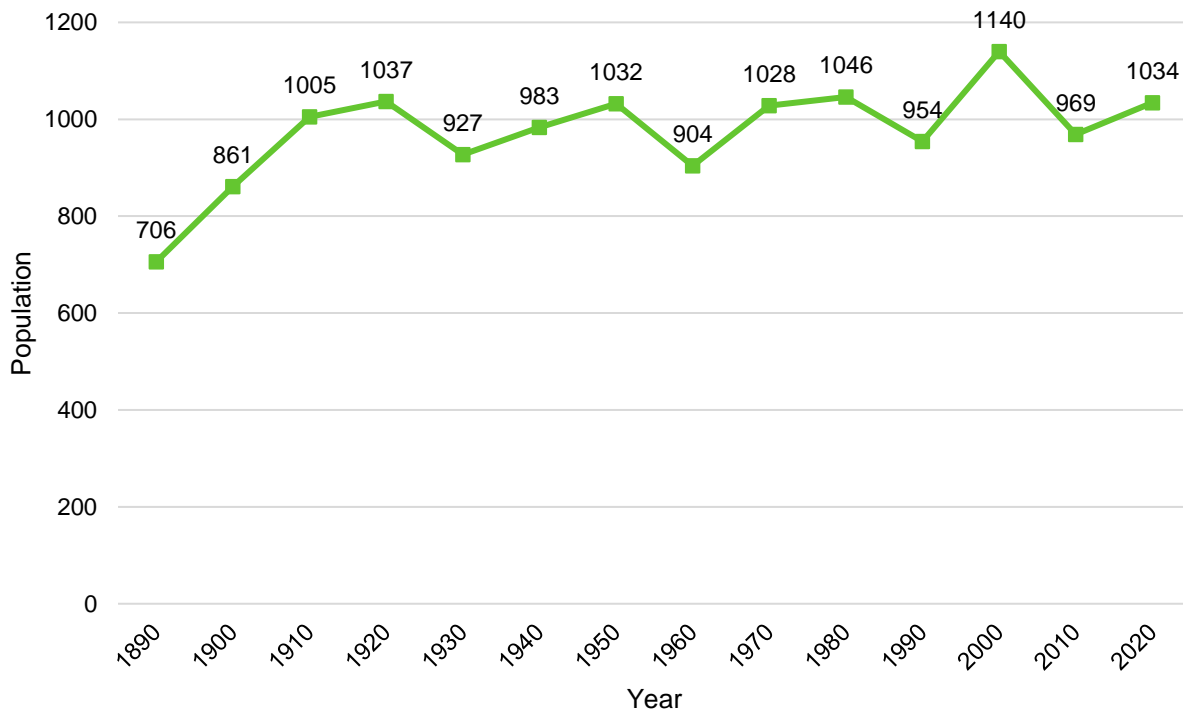
## Location and Geography

The Village of Shelton is located in southeastern Buffalo County and covers an area of 0.73 square miles. Major waterways in the area include the Wood River and Boxelder Creek.

## Demographics

The following figure displays the historical population trend for the Village of Shelton. This figure indicates that the population of Shelton has been increasing since 2010 to 1,034 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. Shelton’s population accounted for 2.1% of Buffalo County’s population in 2020.<sup>79</sup>

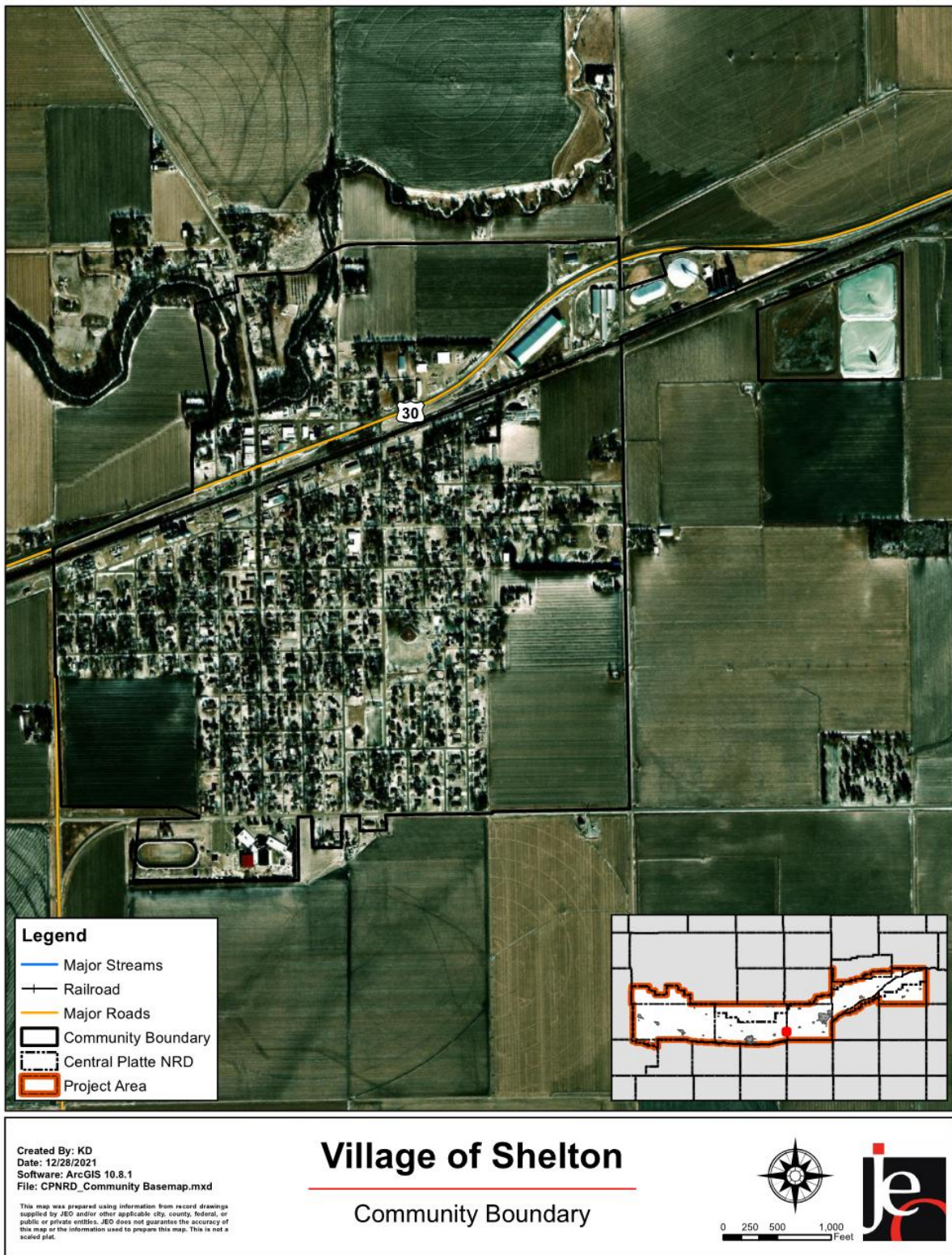
**Figure SHN.1: Population 1890 - 2020**



Source: U.S. Census Bureau

79 United States Census Bureau. “2020 Decennial Census: P1: DEC Redistricting Data.” <https://data.census.gov/cedsci/>.

Figure SHN.2: Village of Shelton

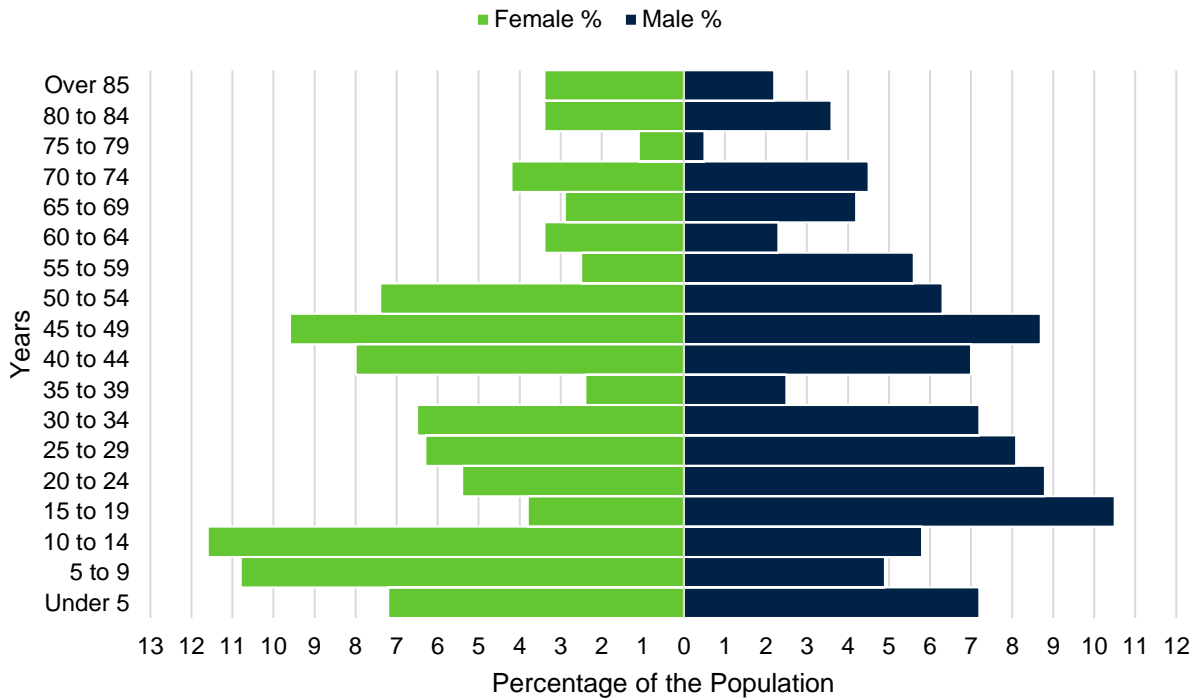




The young, elderly, and minority populations may be more vulnerable to certain hazards than other groups. Looking at Shelton’s population:

- **3.8% is non-white.** Since 2010, Shelton became less ethnically diverse. In 2010, 15.5% of the Shelton’s population was non-white. By 2019, 3.8% was non-white.<sup>80</sup>
- **33.3 median age.** The median age of Shelton was 33.3 years in old 2019. The population grew younger since 2010, when the median age was 34.7.<sup>81</sup>

**Figure SHN.3: Shelton’s Population Pyramid**



The figure above shows Shelton’s population percentage broken down by sex and five-year age groups. Shelton’s population is likely to grow in the future, with a higher percentage of the population age 35 or less.

## Employment and Economics

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

- **8.1% of people living below the poverty line.** The poverty rate (8.1%) in the Village of Shelton was higher than the state’s poverty rate (7.2%) in 2019.<sup>82</sup>
- **\$49,583 median household income.** Shelton’s median household income in 2019 (\$49,583) was \$11,856 lower than the state (\$61,439).<sup>82</sup>

80 United States Census Bureau. “2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates.” <https://data.census.gov/cedsci/>.

81 United States Census Bureau. “2019 Census Bureau American Community Survey: S0101: Age and Sex.” <https://data.census.gov/cedsci/>.

82 United States Census Bureau. “2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics.” <https://data.census.gov/cedsci/>.

- **4.3% unemployment rate.** In 2019 Shelton had a higher unemployment rate (4.3%) when compared to the state (2.3%).<sup>82</sup>
- **32% of workers commuted 30 minutes or more to work.** Slightly less workers in Shelton commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (32% compared to 33.6%).<sup>83</sup>

### Major Employers

Major employers in the village are Cargill Inc. and Shelton Public Schools. A large percentage of residents commute to work in the tri-cities.

## 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. Shelton's housing stock has:

- **65.6% of housing built prior to 1970.** Shelton has a larger share of housing built prior to 1970 than the state (65.6% compared to 46%).<sup>84</sup>
- **7.5% of housing units vacant.** Since 2010, Shelton's vacancy rate declined. In 2010 the vacancy rate was 14.2%. By 2019, 7.5% of housing units were vacant.<sup>84</sup>
- **5.4% mobile and manufacture housing.** The Village of Shelton had a larger share of mobile and manufactured housing (5.4%) compared to the state (3.3%).<sup>84</sup>
- **31.2% renter-occupied.** The rental rate of Shelton was 31.2% in 2019. The percentage went up since 2010, when renter occupied housing was at 17.1%.<sup>84</sup>

## Governance

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

- Clerk
- Utility Superintendent / Floodplain Administrator
- Police Department
- Volunteer Fire Department
- Park and Recreation
- Park Board
- Tree Board
- Planning Commissioner
- Engineer

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

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

- Library Board

## 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 with a large portion of funds not already dedicated to a specific project. In recent years funds have stayed the same for the village.

**Table SHN.2: Capability Assessment**

Survey Components/Subcomponents		Yes/No
<b>Planning &amp; Regulatory Capability</b>	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
	Building Codes	Yes (State Code)
	National Flood Insurance Program	Yes
	Community Rating System	No
Other (if any)	Water System Emergency Response Plan, Wellhead Protection Plan, Wood River Watershed Flood Risk Reduction Plan, Wood River Watershed Study	
<b>Administrative &amp; Technical Capability</b>	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	Yes
	Chief Building Official	No
	Civil Engineering	Yes
	Local Staff Who Can Assess Community’s Vulnerability to Hazards	No
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	Zoning Officer
<b>Fiscal Capability</b>	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

Survey Components/Subcomponents		Yes/No
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	-
<b>Education &amp; Outreach Capability</b>	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	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
<b>Financial resources to implement mitigation projects</b>	Limited
<b>Staff/expertise to implement projects</b>	Limited
<b>Public support to implement projects</b>	Limited
<b>Time to devote to hazard mitigation</b>	Limited

## Plan Integration

Shelton 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.

### Buffalo County Local Emergency Operations Plan (2021)

Shelton is an annex in the Buffalo 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 annually.

### **Building Codes (2018)**

The building code sets standards for constructed buildings and structures. The village does not have its own building codes but follows the State of Nebraska Building Codes based on the 2018 International Building Codes. No inspections or enforcement is performed by the village.

### **Comprehensive Plan (2018)**

The comprehensive plan is designed to guide the future actions and growth of the village. It contains goals aimed at safe growth, directs development away from the floodplain, directs housing away from chemical storage facilities, encourages infill development, encourages clustering of development, directs housing and vulnerable populations away from major transportation routes, encourages the elevation of structures located in the floodplain, and identifies areas that need emergency shelters. This plan will be reviewed periodically and fully updated in 2028.

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

The village'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, identify floodplain areas as parks and open spaces, requires new development to be more than one foot of elevation above base flood elevation, discourages housing and vulnerable populations near chemical storage sites and along major transportation routes, includes well setback requirements, restricts the subdivision of land within the floodplain, and includes the ability to implement water restrictions. These documents are reviewed every three years and updated if needed.

### **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 (2016)**

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.

### **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 a 1% AEP peak discharge that is 15% less than the current design for the Grand Island diversion



channel. This study will help support ongoing WFPO studies and future NFIP mapping efforts in the region.

### Future Development Trends

Over the past five years, several vacant houses became occupied and six new homes were built. An eight-home development is currently being built using tax increment financing funds. None of the new homes were constructed in the floodplain or other known hazardous areas. In the next five years, the eight-home development is planned to be completed. There are no other planned housing or business developments. The future land use map for the village shows commercial and industrial uses along the highway and to the north. Residential housing is located south of the highway.

### Community Lifelines

#### Transportation

Shelton’s major transportation corridors include US Highway 30 and State Highway Link 10D. The most traveled route is Highway 30 with an average of 5,785 vehicles daily, 470 of which are trucks.<sup>85</sup> The village has one Union Pacific line traveling east to west along Highway 30 on the northern edge 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.

#### Hazardous Materials

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

**Table SHN.3: Chemical Storage Sites**

Name	Address	Floodplain (Y/N)
Agricultural Services Inc	523 Railroad St	N
Bosselman Oil Inc	104 E Railroad St	N
Nebraska Central Telephone Co	215 C St	N
NDOT Shelton Yard	4558 Shelton Rd	N

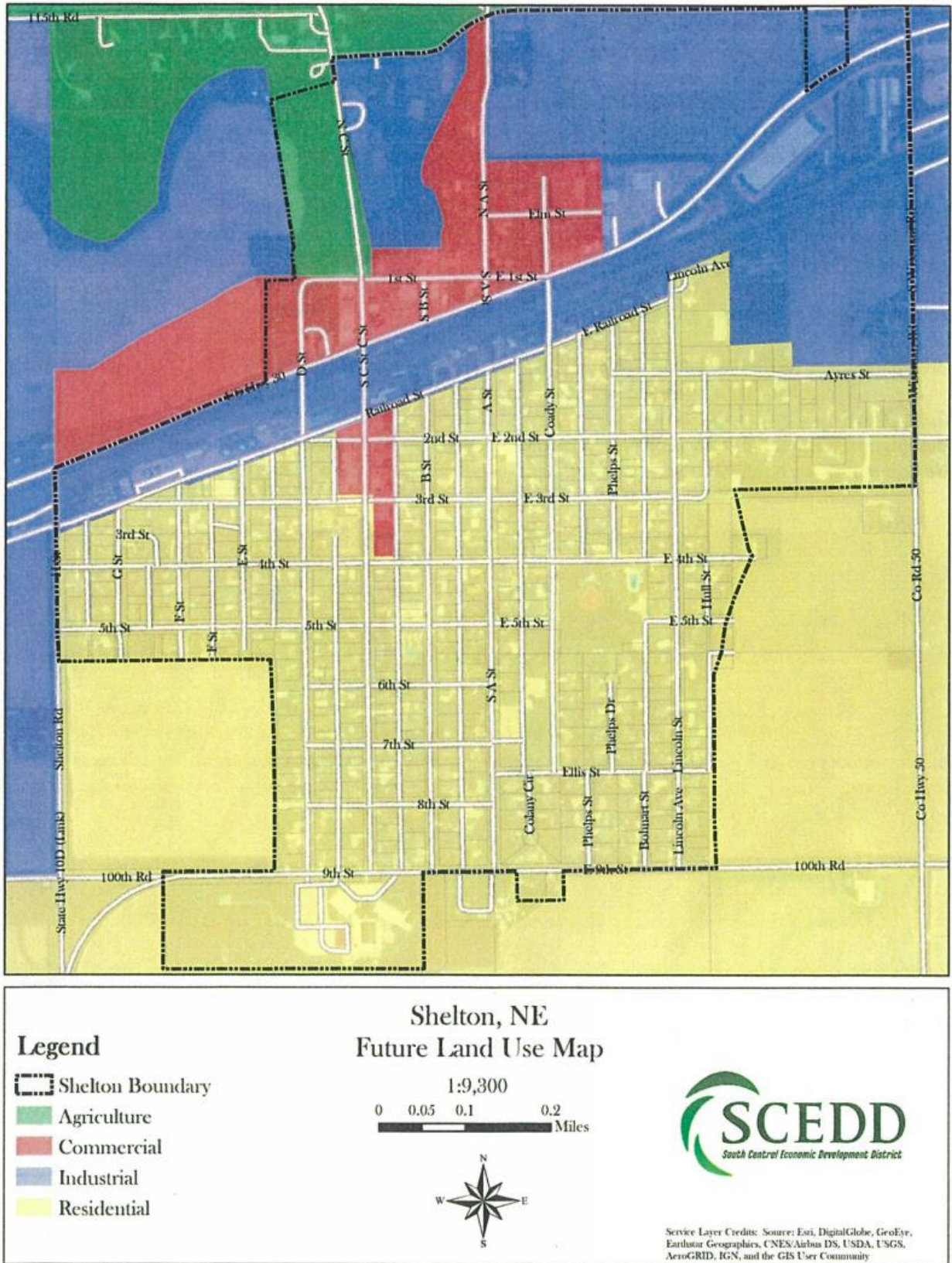
Source: Nebraska Department of Environment and Energy<sup>86</sup>

#### Health and Medical Facilities

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

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

Figure SHN.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.

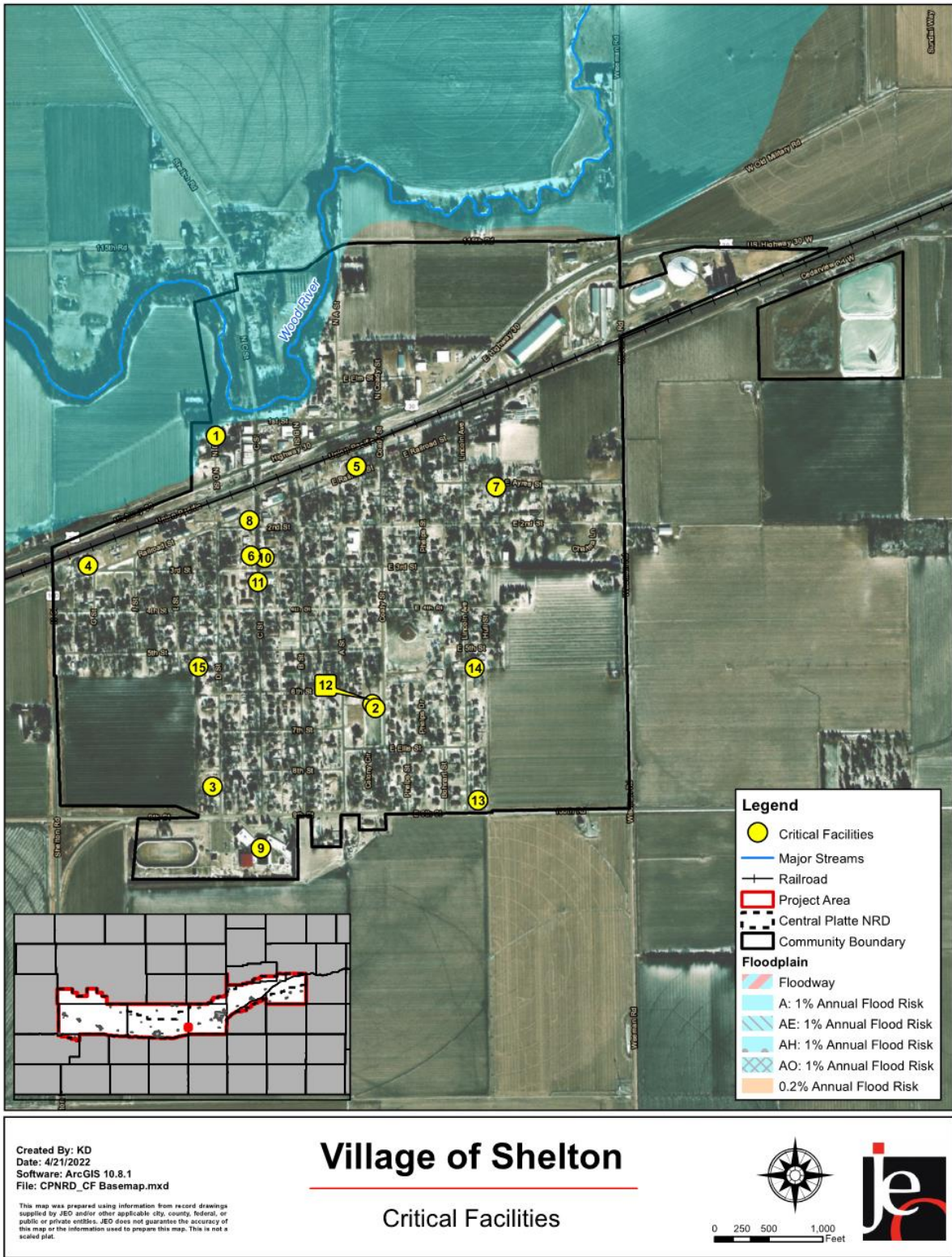
**Table SHN.4: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	2002 Well	N	Y	N
2	2005 Well	N	Y	N
3	2012 Well	N	N	N
4	Ag Services	N	N	N
5	Bosselman Oil	N	Y	N
6	Fire and Rescue Department	N	Y	N
7	Lift Station	N	Y	N
8	NPPD Substation	N	Y	N
9	Shelton School	Y	Y	N
10	Village Office/Police	N	N	N
11	Village Shop	N	Y	N
12	Water Tower	N	Y	N
13	Well 1*	N	N	N
14	Well 2*	N	N	N
15	Cell Tower	N	N	N

*\*Well #1 used for fires only; well #2 for back-up purposes only*



Figure SHN.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 SHN.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
489	\$49,676,985	14	\$938,540	2.9%

Source: County Assessor, 2021

**Table SHN.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
489	\$49,676,985	0	\$0	0%

Source: County Assessor, 2021

## Historical Occurrences

See the Buffalo 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 area of concern for Shelton is located north of the community, impacting a small northwest portion of the village. In June of 2010, a flash flood caused by heavy rain resulted in \$10,000 in property damage. The March 2019 floods caused \$2,000,000 in damages to four homes on the north side of the community. Some evacuations were necessary because of the event. To help reduce flooding, Shelton regularly cleans culverts to help keep water flowing.

The entire village 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.

Shelton is a member of the NFIP, and the village’s Floodplain Administrator (Brett Gillming) will oversee the commitments and requirements of the NFIP. The initial FIRM for the village was delineated in 9/27/1985 and the current effective map date is 11/26/2010. As of October 31, 2021, there are four NFIP policies in-force covering \$283,600. Shelton does not currently have any repetitive loss or severe repetitive loss structures.



### **Hazardous Materials Release**

The local planning team identified hazardous materials release, specifically for transportation as a top concern for the village due to the proximity of Highway 30 and Union Pacific Railroad. Chemicals are presumed to be transported daily by highway and rail; however, the village is not sure which types of chemicals are being transported. Several local businesses and homes are located along Highway 30. The local planning team reports that once a fill line for an anhydrous tank broke. There was no impact to the area, but it could have caused a gas cloud. Spill response would come from the local fire department and the Buffalo County Hazmat Team. Both have protective gear and training to respond to various chemical spills.

### **Severe Thunderstorms**

NCEI report 23 severe thunderstorm events since 1997, causing \$2,425,000 dollars in damage. The worst of these storms was in July of 2014. \$1,000,000 in property damage was caused when 1.75-inch hail damaged roofs and cars. To help reduce the impacts of severe thunderstorms, critical municipal records are protected with surge protectors on electronic devices. The Village Shop, Fire Hall, wells (2005, and 2002 wells), lift station, school, and water tower have backup generators. Very few of the village's power lines are buried. None of the community's critical facilities are fitted with hail resistant materials, but they are insured. Shelton has mutual aid agreements with Gibbon, Kenesaw, and Wood River.

### **Severe Winter Storms**

The planning team's top concerns are emergency response time and availability during severe winter storms. During a severe winter storm in February 2016, Shelton received 18" of snow, with high winds and blizzard conditions. This snow event shut down businesses and roads. The designated snow route is C Street. The village is responsible for snow removal and equipment is sufficient at this time but could be improved. Current equipment includes a snowplow, loader, backhoe, skid steer, and a tractor with a blade. Shelton has mitigated some of the risk associated with severe winter storms by providing adequate backup generators for critical facilities and plans to further mitigate risk by improving their warning systems.

### **Tornadoes and High Winds**

There have been three reports of tornadoes since 2002 in Shelton. Each of these tornadoes touched down outside of Shelton and fortunately resulted in no damages. The local planning team is concerned about property and tree damage from tornadoes and high wind events. Residents of Shelton may go to the school to seek shelter during a severe storm event. Shelton has mitigated some of the risk associated with tornadoes and high winds by providing backup generators to critical facilities and regularly trimming and removing old and damaged trees. The village has warning sirens that are activated by Buffalo County Dispatch, and they cover the entire community.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Backup and Emergency Generators
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$40,000+
<b>Local Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	Low
<b>Lead Agency</b>	Village Board
<b>Status</b>	Not Started

Mitigation Action	Project Scoping
<b>Description</b>	Evaluate potential flood risk reduction alternatives as identified through the NRCS WFPO including project scoping and implementation.
<b>Hazard(s) Addressed</b>	Flooding
<b>Estimated Cost</b>	Varies by Project
<b>Local Funding</b>	General Fund, WFPO
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Village Board
<b>Status</b>	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 Emergency Communication Systems
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$50 per radio; \$5,000 - \$50,000 for broadcast system; \$15,000 - \$50,000 for sirens
<b>Local Funding</b>	General Fund
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Village Board, Volunteer Fire Department, Buffalo County
<b>Status</b>	The Fire Department keep regularly update radios and work with Buffalo County to keep the warning system updated.

### Removed Mitigation Actions

Mitigation Action	Safe Rooms and Storm Shelters
<b>Description</b>	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.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Thunderstorms
<b>Status</b>	The village is no longer looking to construct a safe room or storm shelter.

### 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 Village Clerk, Utility Superintendent, and County Emergency Manager will be responsible for reviewing and updating the plan in the future. These individuals will review the plan bi-annually and notify the public of any changes during a public board meeting.

**School District Profile**

# **Elm Creek Public Schools**

**Central Platte NRD  
Hazard Mitigation Plan Update**

**2022**

## Local Planning Team

Elm Creek Public Schools' 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 ECS.1: Elm Creek Public Schools Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Bret Schroder	Superintendent	Elm Creek Public Schools	Central City	Lexington - Virtually

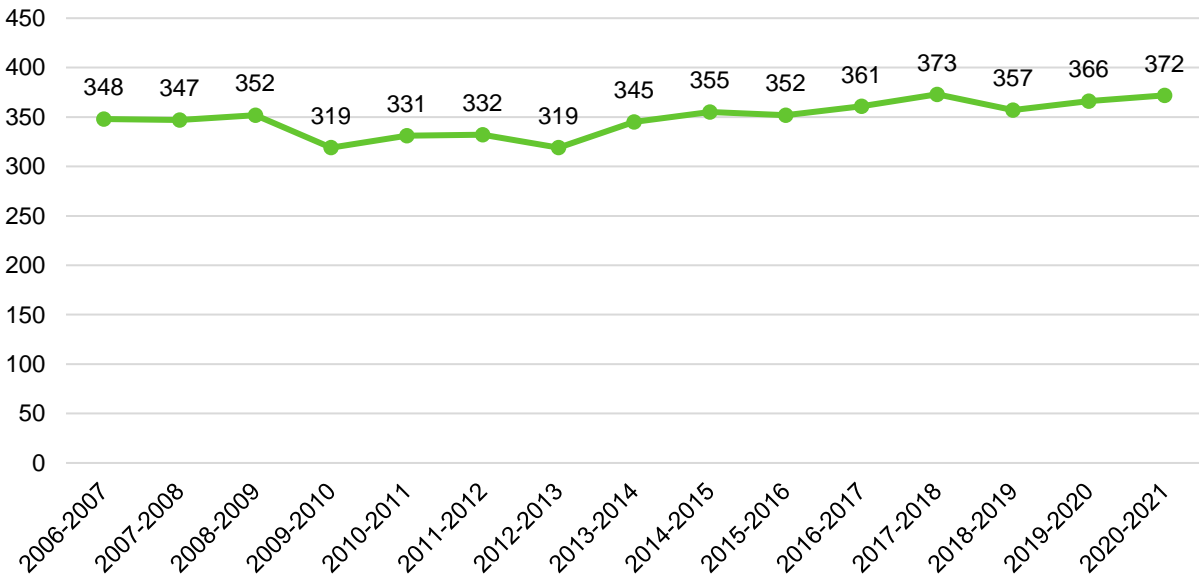
## Location

Elm Creek Public Schools is located in southwest Buffalo County, southeast Dawson County, and northern Phelps County. The district has two schools: Elm Creek High School and Elm Creek Elementary School. The district also owns the Elm Creek District Office. The school district provides services to students in the Village of Elm Creek and the rural areas surrounding it.

## Demographics

The following figure displays the historical student population trend starting with the 2006-07 school year and ending with the 2020-2021 year. It indicates that the student population has increased slightly since 2007. There are 372 students enrolled in the district.<sup>87</sup> The local planning team anticipates a slight increase in the student population in the coming years. Both English and Spanish are spoken in the district. Emergency instructions and notices are provided in both Spanish and English.

**Figure ECS.1: Student Population 2007-2021**

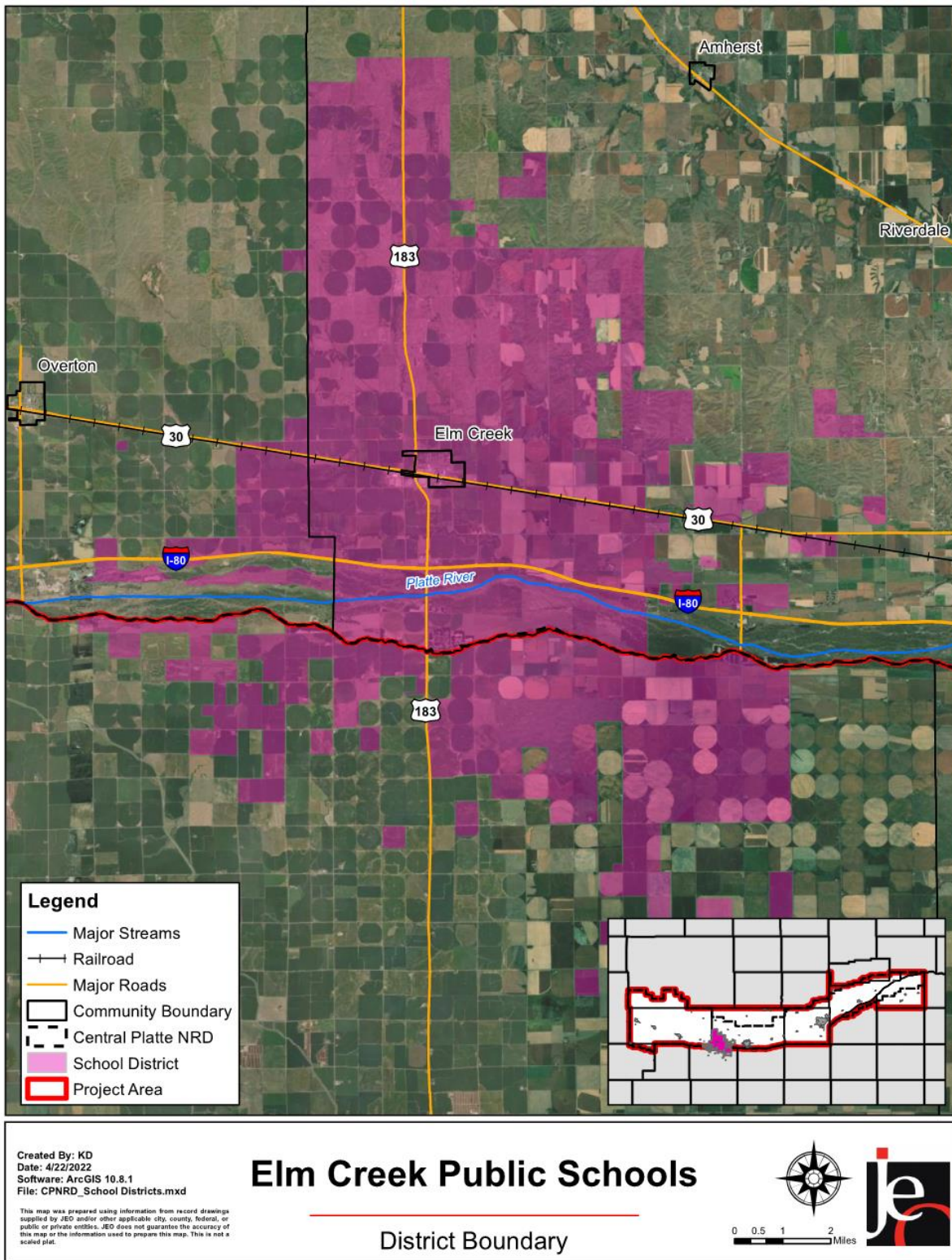


Source: Nebraska Department of Education

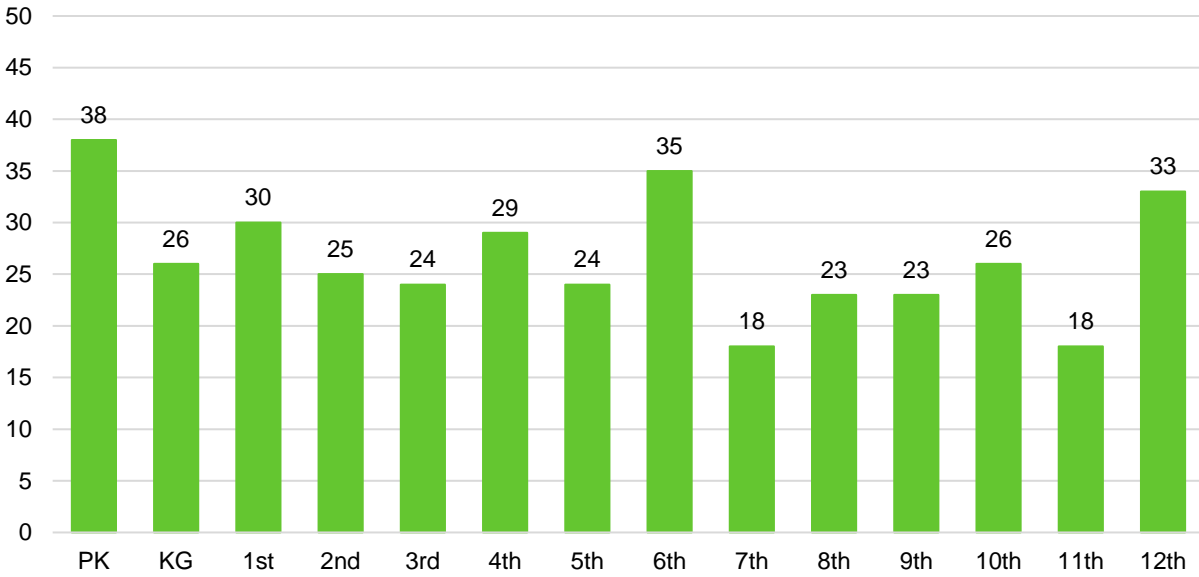
<sup>87</sup> Nebraska Department of Education. July 2021. "2019-2020 Education Profile for District: Grand Island Public Schools." <https://nep.education.ne.gov/Districts/Index/40-0002-000?DataYears=20192020>



Figure ECS.2: Elm Creek Public Schools



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



Source: Nebraska Department of Education

The figure above indicates that the largest number of students are in prekindergarten and 6th grades. The lowest population of students are in the 7th and 11th grades. According to the Nebraska Department of Education (NDE), 40.32% of students receive either free or reduced priced meals at school. This is lower than the state average of 46.33%. Additionally, 11.38% of students are in the Special Education Program and the district mobility rate is 6.89%. These particular students may be more vulnerable during a hazardous event than the rest of the student population.

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

	School District	State of Nebraska
Free/Reduced Priced Meals	40.32%	46.33%
School Mobility Rate	6.89%	9.12%
English Language Learners	*	7.25%
Special Education Students	11.38%	15.67%

\*Indicates 10 students or less.

Source: Nebraska Department of Education<sup>88</sup>

### Administration and Staff

The school district has a superintendent and two principals. The school board is made up of a six-member panel. Approximately 65 staff are employed by the district.

### 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. Students and families are educated about emergency procedures through the school newsletter.

88 Nebraska Education Profile. "School Report Card." Accessed January 2022. <http://nep.education.ne.gov/Home/>.

School district funds are sufficient to pursue new capital projects, but a large portion of funds are going toward the construction of a new elementary school building. Funds have stayed the same over recent years.

**Table ECS.3: Capability Assessment**

Survey Components/Subcomponents		Yes/No
<b>Planning Capability</b>	Capital Improvements Plan/Long-Term Budget	Yes
	Continuity of Operations Plan	No
	Disaster Response Plan	No
	Other (if any)	-
<b>Administration &amp; Technical Capability</b>	GIS Capabilities	No
	Civil Engineering	No
	Local staff who can assess community's vulnerability to hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	No
	Other (if any)	-
<b>Fiscal Capability</b>	Applied for grants in the past	No
	Awarded grants in the past	No
	Authority to levy taxes for specific purposes such as mitigation projects	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Approved bonds in the past	Yes
	Flood Insurance	Yes
	Other (if any)	-
<b>Education &amp; Outreach Capability</b>	Local school groups or non-profit organizations focused on environmental protection, emergency preparedness, access, and functional needs populations, etc. (Ex. Parent groups, hazard mitigation boards, etc.)	Yes
	Ongoing public education or information program (Ex. Responsible water use, fire safety, household preparedness, environmental education, etc.)	No
	StormReady Certification	No
	Other (if any)	-
<b>Drills</b>	Fire	10 / year
	Tornado	3 / year
	Intruder	0 / year
	Bus evacuation	2 / year
	Evacuation	10 / year
	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

Elm Creek Public Schools does not currently have any plans that relate to hazard mitigation. Within the next year, the district would like to develop a hazard and crisis plan. 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 district has started the process of building a new elementary building. In the next five years, the district will have completed the new elementary school building.

### Community Lifelines

#### Transportation

Three major transportation corridors travel through the district: U.S. Highways 30, 183, and Interstate 80. The most traveled route is Interstate 80 with an average of 23,160 vehicles daily, 8,250 of which are trucks.<sup>89</sup> Gravel roads are of most concern to the district due to potentially poor road conditions for the bus routes during the winter and after heavy rains. A Union Pacific Railroad line runs west to east south of Elm Creek. 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 four buses to take students to and from school.

#### 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 the district which house hazardous materials. The school building is not located near any of the 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.

**Table ECS.4: Chemical Storage Sites**

Name	Address	Floodplain (Y/N)
CHS Inc.	515 W Front St, Elm Creek, NE	N
Pilot Flying J 901	5085 Buffalo Creek Rd, Elm Creek, NE	N
Sapp Bros Landmark Inc.	380 Odessa Rd, Elm Creek, NE	Y (1%)

Source: Nebraska Department of Environment and Energy<sup>90</sup>

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

**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 ECS.5: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Elementary and Middle/High School Building	Y	Y	N



Figure ECS.4: Critical Facilities



## Historical Occurrences

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

## 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*.

### Drought

While drought has not directly impacted the school district in the past, it can have economic impacts. Elm Creek Public Schools is primarily located in a rural area that is heavily dependent upon the agricultural sector of the economy. During a prolonged drought, the agricultural sector can see severe impacts which has trickle down effects on the district's funds and student enrollment. In addition, dry conditions can create an increased risk of grass/wildfires.

### Flooding

Primary concerns related to flooding include potential issues with travel due to flooded roads and impacts on the local community. The Village of Elm Creek sits near a river and has flooded in the past. While the school is not located in the floodplain, many properties in the community are susceptible to flooding. In the event of a large flood, the school would be a sheltering location for families that needed to evacuate their homes. Flooding has impacted bus routes in the past with different routes needing to be made due to poor road conditions.

### Grass/Wildfire

Grass/Wildfire events have not impacted the school district in the past. However, the school building is located near the edge of the village and is therefore more at risk to a grass/wildfire event. To reduce the risk of a fire impacting the building, school property is regularly kept mowed and dead grass/plants are removed.

### Severe Thunderstorms

Primary concerns related to thunderstorms include damage to school property, student and staff safety, and power outages. Power outages have been a problem in the past as all power lines are above ground. The high school building has a backup generator in the event of a loss of power. School vehicles and busses are kept outside and could potentially be damaged from a hail event. However, all school property is insured against hail and wind damage. The district is notified of severe weather through online radar, the radio, and the village's alert siren.

### Tornadoes and High Winds

A tornado has not impacted the school in the past, but the possibility still exists. If a large tornado were to hit the school, it could cause massive amounts of damage. The high school has a FEMA approved storm shelter, but the elementary school does not. Elementary students are instructed to go to an interior room on the main floor. Three tornado drills are performed each school year.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Hazard and Crisis Plan
Description	Develop and implement a hazard and crisis protocol/plan.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$10,000
Local Funding	General Budget
Timeline	1 Year
Priority	High
Lead Agency	Superintendent
Status	Planning Stage

Mitigation Action	Improve Warning Systems
Description	Purchase a weather radio for each of the schools.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$50 per Radio
Local Funding	General Budget
Timeline	2-5 Years
Priority	Low
Lead Agency	Superintendent
Status	Not Started

### 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 Superintendent and Principals will be responsible for reviewing and updating the plan in the future. These individuals will review the plan every six months. Staff and families will be notified of any changes through the school website, social media, and board announcements.

**School District Profile**

**Gibbon Public Schools**

**Central Platte NRD  
Hazard Mitigation Plan Update**

**2022**

## Local Planning Team

The Gibbon 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 school district.

**Table GPS.1: Gibbon Public Schools Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Vern Fisher	Superintendent	Gibbon Public Schools	Lexington – Virtually	Lexington – Virtually

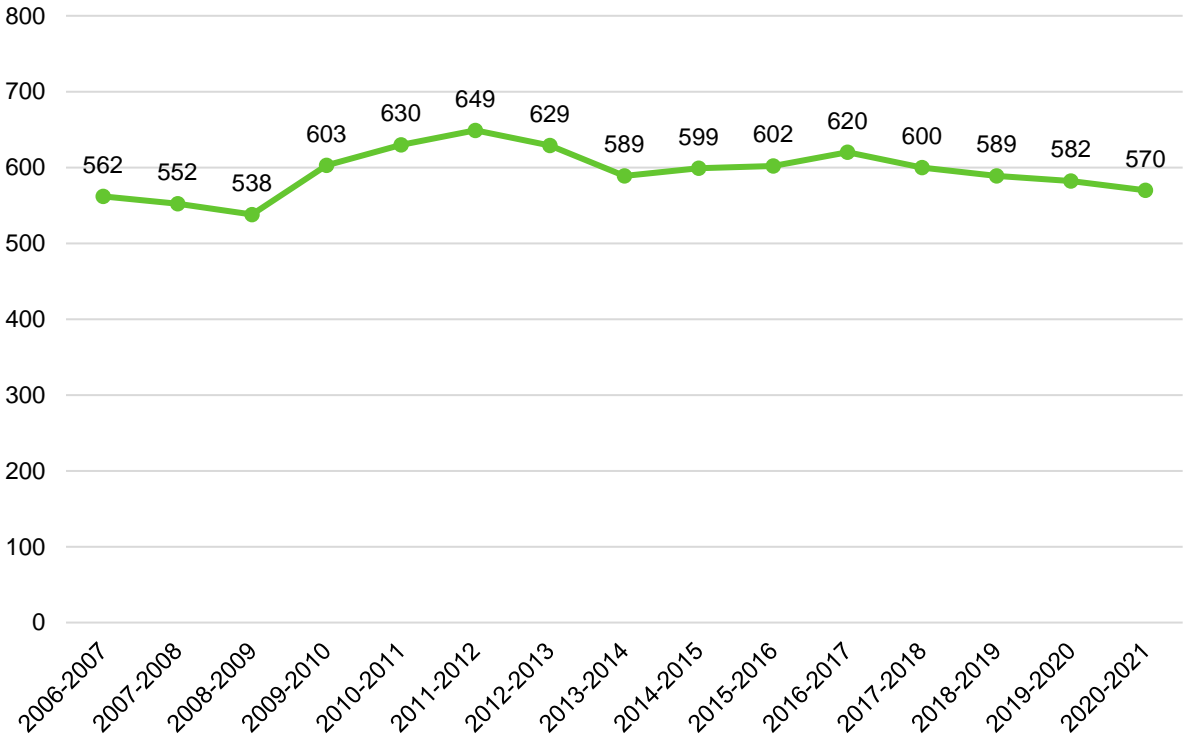
## Location

Gibbon Public Schools is in southeastern Buffalo County and northeastern Kearney County. They serve two schools: Gibbon Elementary School and Gibbon High School in one facility built in 2009. Other district owned buildings include the bus barn and football field buildings. The district provides services to students in the community of Gibbon and the rural areas surrounding it.

## Demographics

The following figure displays the historical student population trend starting with the 2006-07 school year and ending with the 2020-2021 year. It indicates that the student population has been declining since 2017. There are 570 students enrolled in the district.<sup>91</sup> The local planning team anticipates very little change in the student population in the coming years. Aside from English, a small portion of students speak Spanish. Employees are available as translators if needed.

**Figure GPS.1: Student Population 2007-2021**

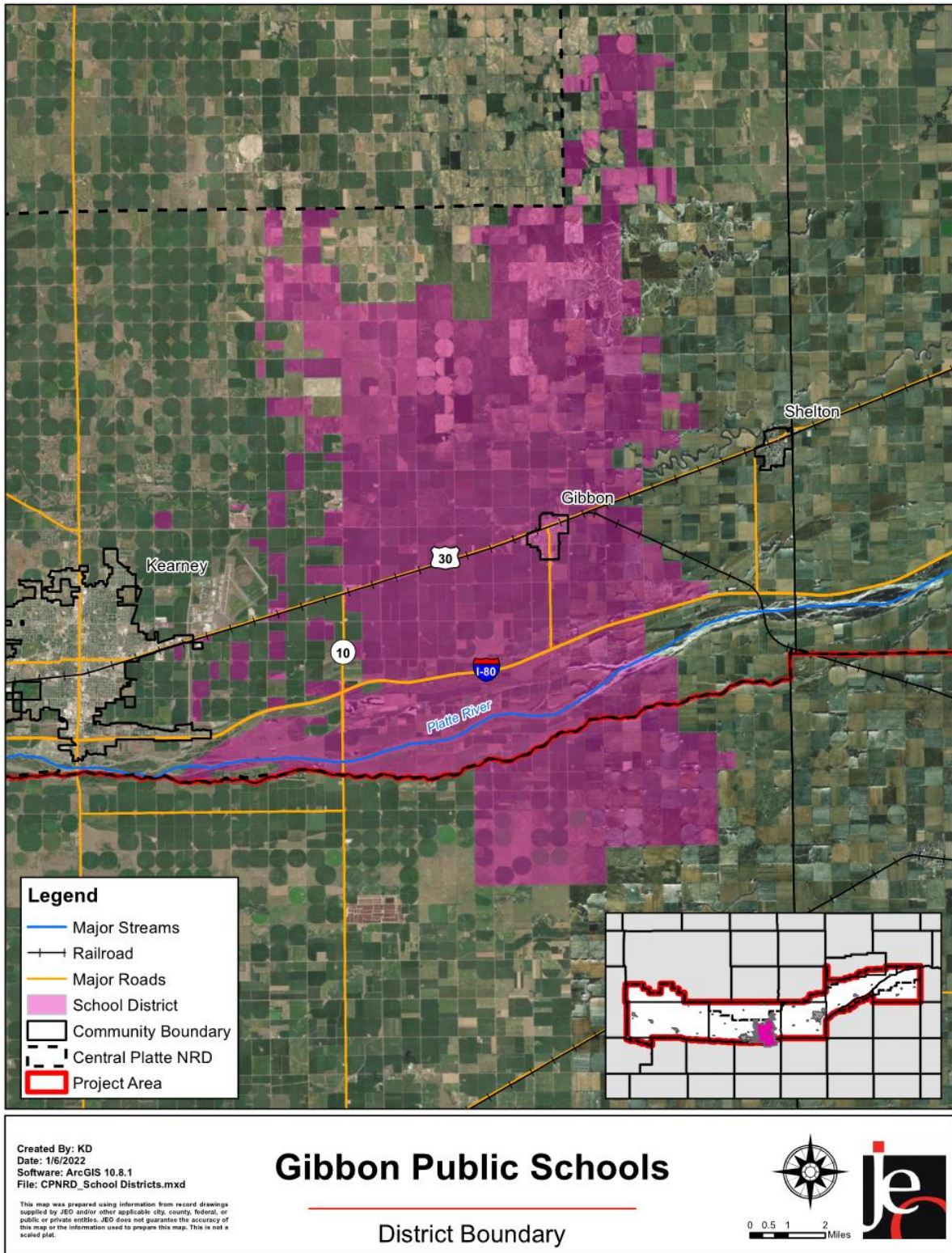


Source: Nebraska Department of Education

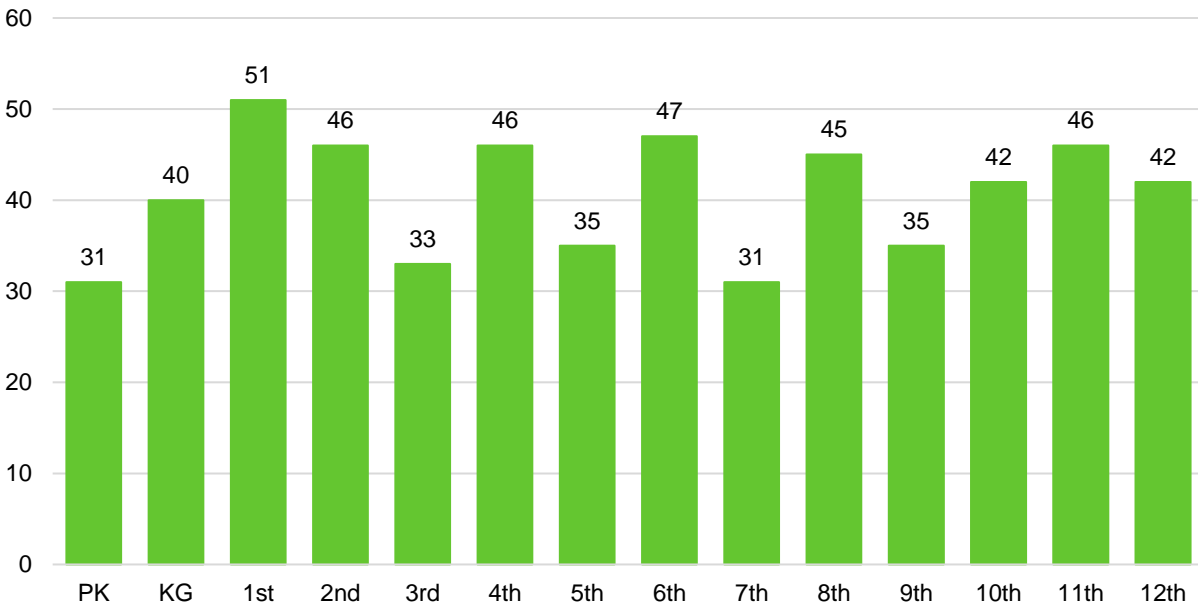
91 Nebraska Department of Education. July 2021. "2019-2020 Education Profile for District: Grand Island Public Schools." <https://nep.education.ne.gov/Districts/Index/40-0002-000?DataYears=20192020>



Figure GPS.2: Gibbon Public Schools



**Figure GPS.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 1st and 6th grades. The lowest population of students are in pre-kindergarten and 7th grades. According to the Nebraska Department of Education (NDE), 56% of students receive either free or reduced priced meals at school. This is higher than the state average of 46%. Additionally, 11% of students are in the Special Education Program, the school mobility rate is 10%, and 19% of students are English Language Learners. These particular students may be more vulnerable during a hazardous event than the rest of the student population.

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

	School District	State of Nebraska
Free/Reduced Priced Meals	55.61%	46.33%
School Mobility Rate	10.02%	9.12%
English Language Learners	18.92%	7.25%
Special Education Students	10.95%	15.67%

Source: Nebraska Department of Education<sup>92</sup>

## Administration and Staff

The school district has a superintendent and three principals. The school board is made up of a six-member panel. The district employees 89 staff, all of whom are trained on district emergency procedures.

## 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. Students and families are educated on emergency procedures through drills, the school website, and the critical response plan.

<sup>92</sup> Nebraska Education Profile. “School Report Card.” Accessed July 2021. <http://nep.education.ne.gov/Home/>.

The district uses ESSR funds for capital projects when it is available. Capital projects could also be partially funded through the building fund if planned for in advance. A large portion of funds are already dedicated to building a new greenhouse. Funds have increased due to a grant from the pandemic but is not likely to continue in the future.

**Table GPS.3: Capability Assessment**

Survey Components/Subcomponents		Yes/No
<b>Planning Capability</b>	Capital Improvements Plan/Long-Term Budget	Yes
	Continuity of Operations Plan	No
	Disaster Response Plan	Yes
	Other (if any)	-
<b>Administration &amp; Technical Capability</b>	GIS Capabilities	No
	Civil Engineering	No
	Local staff who can assess community's vulnerability to hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
<b>Fiscal Capability</b>	Other (if any)	-
	Applied for grants in the past	Yes
	Awarded grants in the past	Yes
	Authority to levy taxes for specific purposes such as mitigation projects	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Approved bonds in the past	Yes
	Flood Insurance	No
<b>Education &amp; Outreach Capability</b>	Other (if any)	-
	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.)	Yes
	Ongoing public education or information program (Ex. Responsible water use, fire safety, household preparedness, environmental education, etc.)	Yes
	StormReady Certification	No
	Other (if any)	-
<b>Drills</b>	Fire	2 / year
	Tornado	2 / year
	Intruder	1 / year
	Bus evacuation	0 / year
	Evacuation	0 / year
	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	Limited
Time to devote to hazard mitigation	Limited

## Plan Integration

Gibbon Public Schools has two 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 district will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

### Strategic Plan (2021-2022)

The strategic plan outlines the goals and objectives for the district in the coming years. It includes a discussion on the operations team. The team handles safety and security, threat assessment, and bomb threat checklist. Also discussed in the plan is the safety and security manual and threat assessment guide.

### Crisis Response Plan (2021-2022)

The crisis response plan for the school provides response protocols for unique situations such as large-scale natural disaster or criminal activities. It assigns specific responsibilities to individuals during an emergency, identifies scenarios that would require evacuation, and identifies sheltering locations. The operations team is familiar with the plan. This plan is reviewed regularly and at least every school year.

## Future Development Trends

Over the past five years, there has been very few changes to the school building or district. In the next five years, a greenhouse is being built on the west side of school property.

## Community Lifelines

### Transportation

Three major transportation corridors travel through the district: Interstate 80, US Highway 30, and Nebraska State Highway 10. The most traveled route is Interstate 80 with an average of 22,460 vehicles daily, 8,050 of which are trucks.<sup>93</sup> The transportation routes of most concern are the rural bus routes due to potentially poor road conditions. Two Union Pacific rail lines run east to west 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. Eight busses are owned by the district and 195 students are bussed to and from school each day.

93 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map."  
<https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.



## Hazardous Materials

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

**Table GPS.4: Chemical Storage Sites**

Name	Address	Floodplain (Y/N)
The Andersons Inc.	6090 Optic Rd Gibbon, NE	N
Clevenger Farm Products	6325 Lowell Rd Gibbon, NE	N
Gibbon Packing LLC	218 Highway 30 Gibbon, NE	N
Nebraska Central Telephone Co.	22 La Barre St Gibbon, NE	N
Aurora Co-op Elevator Company	7280 Gibbon Rd Gibbon, NE	N
Aurora Co-op Elevator Company	44740 Highway 30 Gibbon, NE	N
Simplot Grower Solutions	39695 E 56 <sup>th</sup> Rd Gibbon, NE	N
Clevenger Propane Tank	Link 10C Gibbon, NE	N

Source: Nebraska Department of Environment and Energy<sup>94</sup>

## 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.

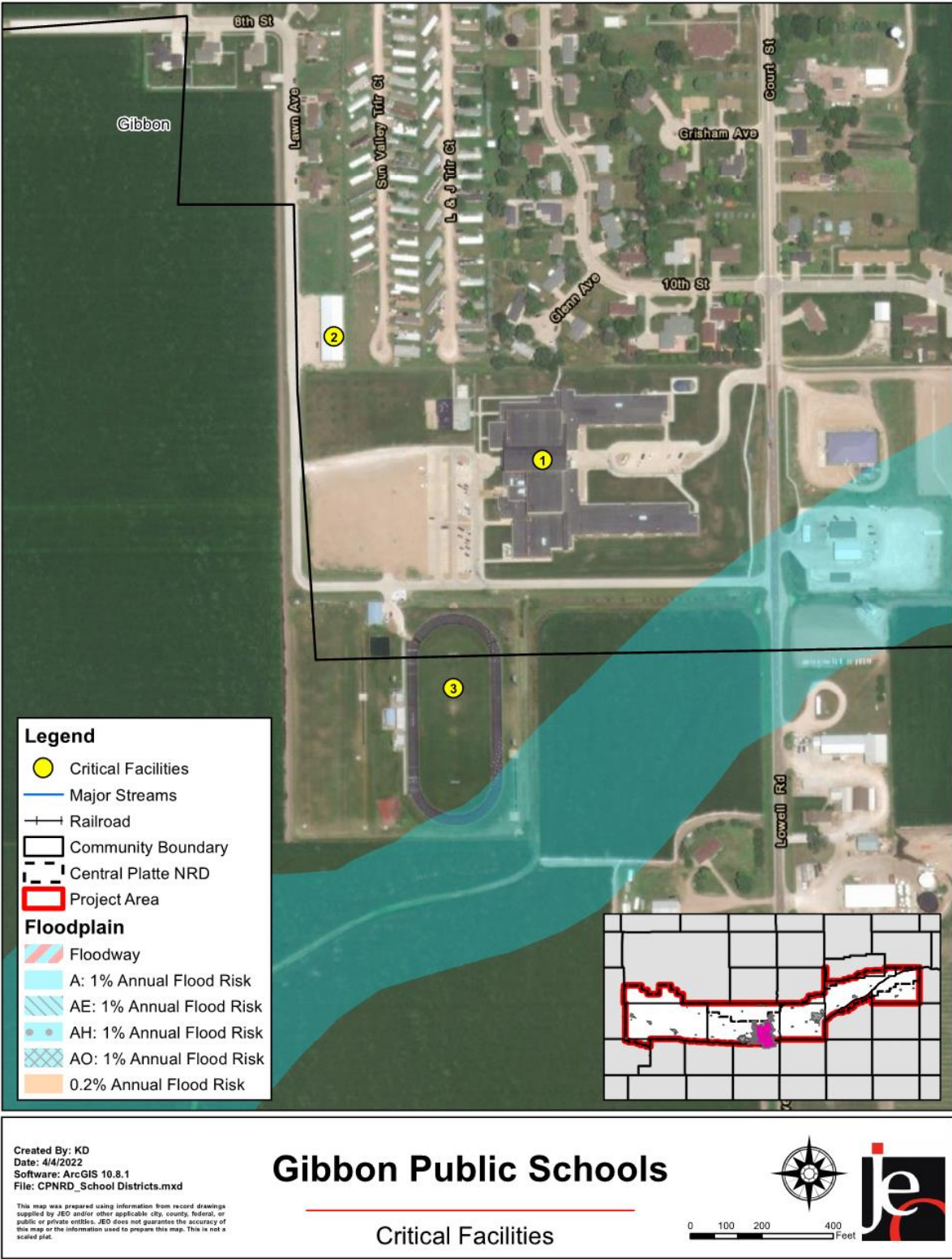
**Table GPS.5: Critical Facilities**

CF Number	Name	Mass Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	School Building	Y	Y	N
2	Bus Barn	N	N	N
3	Football Field	N	N	Y (1%)

<sup>94</sup> Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed June 2021.



Figure GPS.4: Critical Facilities



## Historical Occurrences

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

## 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*.

### Flooding

The district's main concern with flooding is the impact of flooded streets to bus routes. The school campus' playground and East lawn by Court Street are within a floodplain, but the buildings are not at risk of flooding. The district has implemented landscaping and drainage work, including a pump on the Southeast corner of the lawn, to help remove water. During the 2019 Wood River flood, the school's buildings were not affected. However, with flooded roads, some bus routes had to be modified for safe transportation while others were completely inoperable. This resulted in parents having to bring their children to school.

### Public Health Emergency

The ongoing Covid-19 pandemic has caused the local planning team to identify public health emergencies as a top hazard of concern. The main concerns are the risk of the general public bringing viruses into the school and maintaining communication with the general public and district patrons through consistent direct messages. The pandemic has had a heavy impact on the school. Student and staff attendance, the availability of food delivery and general supplies, the required mask wearing by staff and students, increased cleaning and sanitizing, remote learning, and cancelled classes were all impacts the district experienced. To help reduce the spread of Covid-19, the school district followed the guidelines of the CDC and Two Rivers Health Department. Five electro-static sprays to disinfect classrooms and surfaces and 300 gallons of hand sanitizer were purchased by the district. Student hands were sanitized when they entered the school building, in the lunch line, and when entering each classroom. Desks were cleaned daily. For any future public health emergencies, it will be important to allow students and staff to stay home when not feeling well, wash hands frequently, and for the school to follow guidelines and alter procedures in response to challenges that arise.

### Severe Thunderstorms

The district is most concerned with the timing of storms and the ability to get students and visitors to shelter in the event of a severe thunderstorm. The district has experienced hail damage, wind damage, and water damage from past events. In December 2021, the school experienced a windstorm that damaged vehicles in the parking lot. Power outages occur 2 to 3 times a year but are not always due to thunderstorms. The powerlines are buried so are not in danger of being toppled from trees or high winds. To protect the district from thunderstorm damage, procedures are updated, and staff debriefs are held after any damage is experienced. The superintendent sends weather updates to the entire staff and key members of the operations team carry walkie talkies to ensure communication throughout the school.

### Severe Winter Storms

Heavy snow and ice are of concern to the school district due to the possibility of road conditions impacting staff and students' ability to travel home safely. The roads in the school district's area are impacted by winter storms yearly, with the more rural roads becoming difficult to drive on and Highway 30 becoming slick in numerous areas. During mornings with incoming winter storms, the superintendent travels and monitors road conditions closely to determine the need of late starts or school closures. If such delays are required, students and families are notified through the Powerschool Alert Solutions, also called Buff alert, local TV, radio stations, and social media alerts such as Facebook, Twitter, and the Apptegy App. During a large snow event, maintenance staff will clear the walkways and parking lots and salt the walkway for safety. The district experiences approximately two or three snow days per year. The district has also been impacted by dangerously low temperatures and wind chills that impact staff and students traveling to and from school. This can lead to dangerous situations for students dropped off early before the common areas open at 7:30 am.

### Tornadoes and High Winds

Although the school has not been impacted by a tornado directly, the district is concerned about the vulnerability of students and staff and the potential for damage to the school. The school does not have a FEMA certified storm shelter available for staff and students and the time it takes to get everyone into a safe place is a concern for the school. The district has implemented several strategies to reduce the impacts of a tornado. Bus drivers are trained to instruct all students to evacuate the bus and find shelter in a low ditch or low-lying area. Procedures are updated, staff are debriefed after occurrences, the operations team is kept up to date of any event, operations team key members carry walkie talkies, and the superintendent sends weather updates to the entire staff.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action Name	Storm Shelter / Safe Room
Description	Enhance safety for students and staff during a tornado event by building or identifying a FEMA approved storm shelter.
Hazard(s) Addressed	Tornado and High Winds
Estimated Cost	Unknown
Local Funding	Unknown
Timeline	5+ Years
Priority	Medium
Lead Agency	Superintendent
Status	Not started

## 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 operations team will be responsible for reviewing and updating the plan. The committee will review the plan annually and will present any updates at public school board meetings.

**School District Profile**

# **Kearney Public Schools**

**Central Platte NRD  
Hazard Mitigation Plan Update**

**2022**

## Local Planning Team

The Kearney Public Schools’ 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 KPS.1: Kearney Public Schools Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Trent Bosard	Facilities Director	Kearney Public Schools	Lexington – Virtually	Grand Island - Virtually

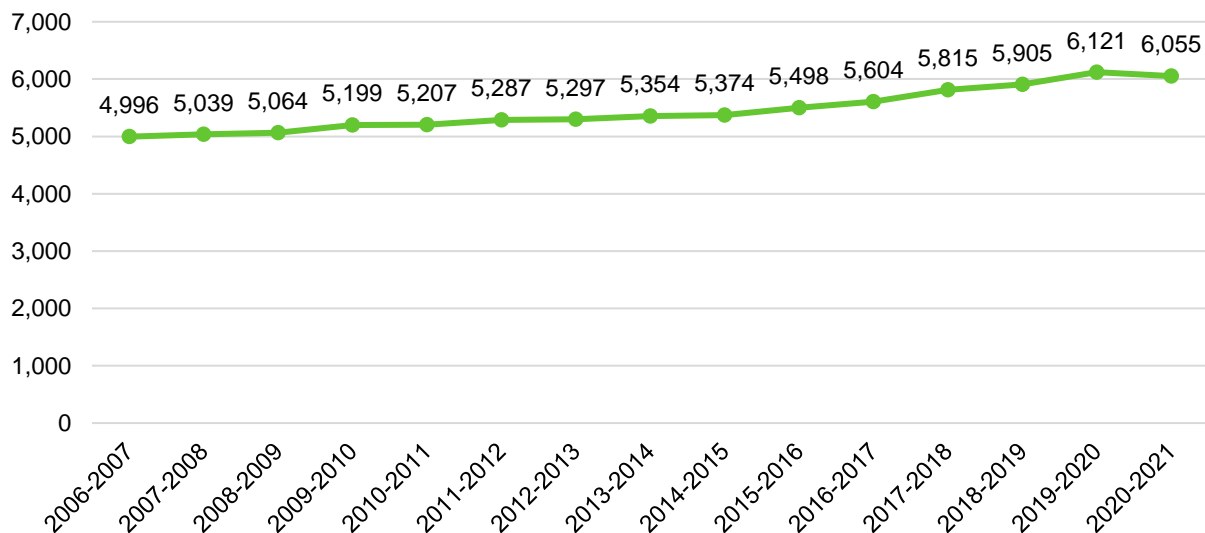
## Location

Kearney Public Schools is located in south central Buffalo County, northwest Kearney County, and northeast Phelps County. 14 schools are in the district: Bryant Elementary School, Buffalo Hills Elementary School, Central Elementary School, Emerson Elementary School, Glenwood Elementary School, Horizon Middle School, Kearney Education Center, Kearney High School, Kenwood Elementary School, Meadowlark Elementary School, Northeast Elementary School, Park Elementary School, Sunrise Middle School, and Windy Hills Elementary School. Other district owned buildings include the transportation building, facilities building, and administration building. The school district provides services to students in the communities of Kearney and Riverdale and the rural areas surrounding them.

## Demographics

The following figure displays the historical student population trend starting with the 2006-07 school year and ending with the 2020-2021 year. It indicates that the student population has been increasing since 2006. There are 6,055 students enrolled in the district.<sup>95</sup> The local planning team anticipates an increase in student population over the next couple of years. Aside from English, there is a small population of students who speak Spanish. Emergency instructions and notices are available in Spanish.

**Figure KPS.1: Student Population 2007-2021**

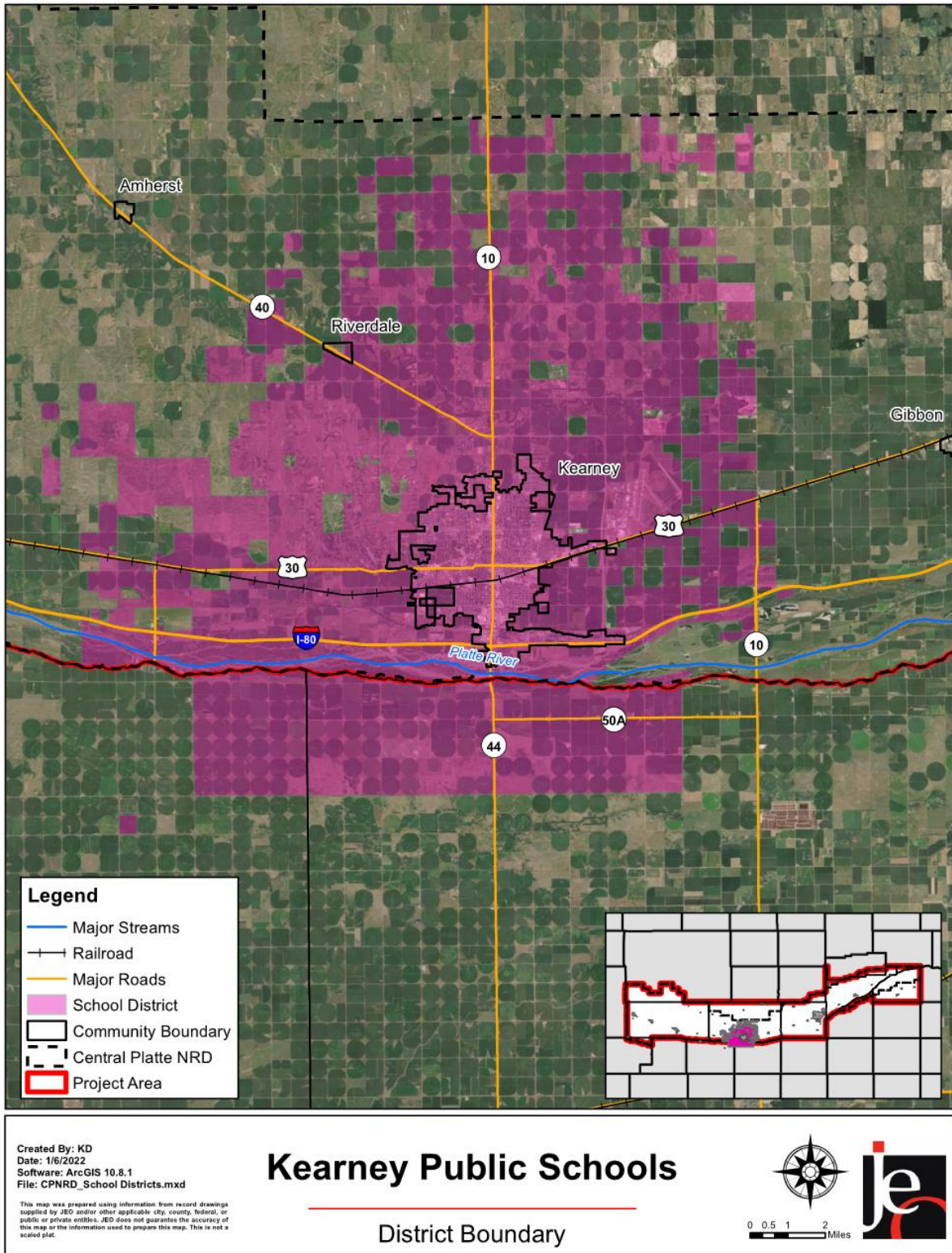


Source: Nebraska Department of Education

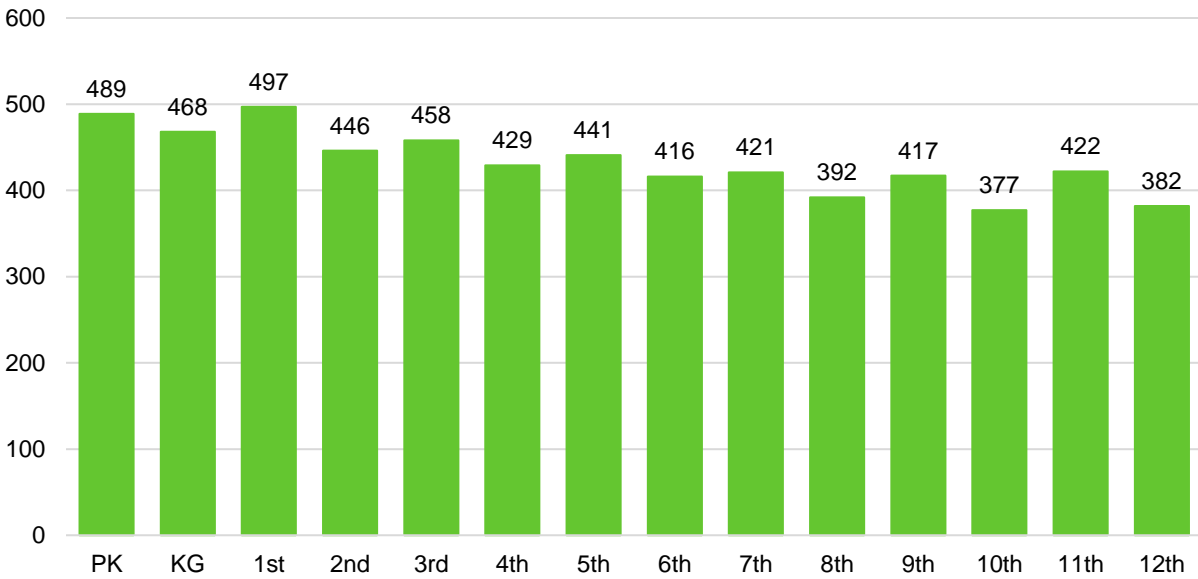
<sup>95</sup> Nebraska Department of Education. July 2021. "2019-2020 Education Profile for District: Grand Island Public Schools." <https://nep.education.ne.gov/Districts/Index/40-0002-000?DataYears=20192020>



Figure KPS.2: Kearney Public Schools



**Figure KPS.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 pre-kindergarten and 1st grade. The lowest population of students are in 10th and 12th grades. According to the Nebraska Department of Education (NDE), 39.17% of students receive either free or reduced priced meals at school. This is lower than the state average of 46.33%. Additionally, 14.8% of students are in the Special Education Program, the school mobility rate is 11.43%, and 2.30% of students are English Language Learners. These particular students may be more vulnerable during a hazardous event than the rest of the student population.

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

	School District	State of Nebraska
Free/Reduced Priced Meals	39.17%	46.33%
School Mobility Rate	11.43%	9.12%
English Language Learners	2.30%	7.25%
Special Education Students	14.80%	15.67%

Source: Nebraska Department of Education<sup>96</sup>

## Administration and Staff

The school district has a superintendent and 16 principals. The school board is made up of a six-member panel. 800 staff are employed by the district. Staff are trained on emergency procedures through drills.

## 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. Students and families are educated about emergency procedures through drills. Drills are performed in coordination with the local fire department and police department.

96 Nebraska Education Profile. “School Report Card.” Accessed July 2021. <http://nep.education.ne.gov/Home/>.

There are some funds available for new capital projects, but most funds go towards maintaining current buildings. District funds have increased over the last several years.

**Table KPS.3: Capability Assessment**

Survey Components/Subcomponents		Yes/No
<b>Planning Capability</b>	Capital Improvements Plan/Long-Term Budget	Yes
	Continuity of Operations Plan	Yes
	Crisis Response Plan	Yes
	Other (if any)	Facilities Master Plan
<b>Administration &amp; Technical Capability</b>	GIS Capabilities	No
	Civil Engineering	No
	Local staff who can assess community's vulnerability to hazards	Yes
	Grant Manager	Yes
	Mutual Aid Agreement	No
<b>Fiscal Capability</b>	Other (if any)	-
	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	No
Other (if any)	-	
<b>Education &amp; Outreach Capability</b>	Local school groups or non-profit organizations focused on environmental protection, emergency preparedness, access, and functional needs populations, etc. (Ex. Parent groups, hazard mitigation boards, etc.)	Yes
	Ongoing public education or information program (Ex. Responsible water use, fire safety, household preparedness, environmental education, etc.)	Yes
	StormReady Certification	No
	Other (if any)	-
	<b>Drills</b>	Fire
Tornado		Yes
Intruder		Yes
Bus evacuation		Yes
Evacuation		Yes
Other (if any)		-
<b>Overall Capability</b>		<b>Limited/Moderate/High</b>
<b>Financial resources to implement mitigation projects</b>		Moderate
<b>Staff/expertise to implement projects</b>		Moderate
<b>Public support to implement projects</b>		Moderate
<b>Time to devote to hazard mitigation</b>		Moderate

## Plan Integration

Kearney Public Schools has three 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 district will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

### Crisis Response Plan

The crisis response plan for the school provides response protocols for unique situations such as large-scale natural disaster or criminal activities. It assigns specific responsibilities to individuals during an emergency, addresses shelter in place protocols and locations, identifies scenarios that would require an evacuation, shows evacuation routes, and identifies opportunities for mitigation following an event. The crisis team meets four times a year to update the plan as needed.

### Facilities Master Plan (2022)

The facilities master plan has information about each building owned by the district. It includes current enrollment, maximum capacity, square footage, site area, the year constructed, renovations, any identified needs, and upcoming projects. It also contains a detailed floor plan for each building. Projects identified in the HMP will be considered for inclusion in the facilities master plan.

### Strategic Plan

The strategic plan outlines the goals and objectives for the district in the coming years. The plan states the district uses “I Love You Guys” for emergency preparedness situations. The strategic plan is reviewed and updated every school year.

## Future Development Trends

Over the past five years, the Kearney Education Center was renovated and the roof was replaced, an addition was made to Buffalo Hills Elementary, HVAC was upgraded for Central Elementary, Northeast Elementary and Sunrise Middle School were remodeled and additions were made, the Hanny Arram Center for Success was renovated, Kearney High School had an addition, and the transportation building was renovated. In the next five years, updates are planned for Bryant Elementary, Buffalo Hills Elementary, Emerson Elementary, Glenwood Elementary, Kenwood Elementary, Park Elementary, Windy Hills Elementary, Horizon Middle Schools, Sunrise Middle School, Kearney High School, and the transportation building.

## Community Lifelines

### Transportation

Six major transportation corridors travel through the district: Interstate 80, US Highway 30, and Nebraska State Highways 10, 40, 44 and 50A. The most traveled route is Interstate 80 with an average of 21,575 vehicles daily, 7,735 of which are trucks.<sup>97</sup> Two county bus routes are also a concern due to potential poor road conditions after heavy rainfall or snow. A Union Pacific rail line runs east to west 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. 24 buses are owned by the district with 350 students bussed to and from school each day.

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



### Hazardous Materials

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are 40 chemical storage sites within the district which house hazardous materials.<sup>98</sup> None of the schools are located near the chemical storage facilities. For a list of the chemical sites in the City of Kearney and Buffalo County, see their individual participant sections. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

### 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.

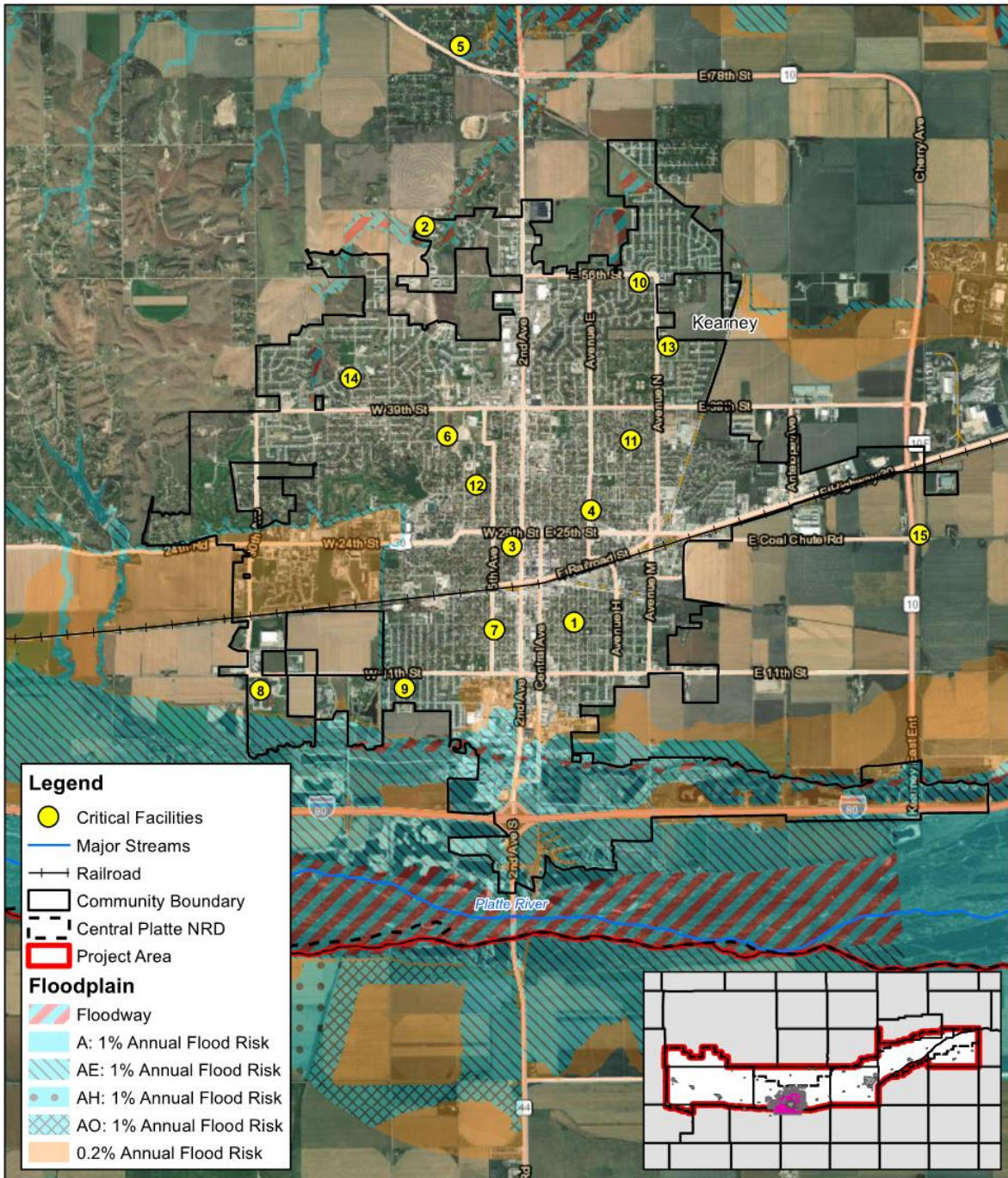
**Table KPS.4: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Bryant Elementary School	Y	N	N
2	Buffalo Hills Elementary School	N	N	N
3	Central Elementary School	N	N	N
4	Emerson Elementary School	N	N	N
5	Glenwood Elementary School	N	N	N
6	Horizon Middle School	N	N	N
7	Kearney Education Center	N	N	N
8	Kearney High School	Y	Y	N
9	Kenwood Elementary School	Y	N	N
10	Meadowlark Elementary School	N	N	N
11	Northeast Elementary School	N	N	N
12	Park Elementary School	N	N	N
13	Sunrise Middle School	Y	N	N
14	Windy Hills Elementary School	Y	N	N

<sup>98</sup> Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed June 2021.



Figure KPS.4: Critical Facilities



Created By: KD  
 Date: 4/25/2022  
 Software: ArcGIS 10.8.1  
 File: CPNRD\_School Districts.mxd

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

# Kearney Public Schools

## Critical Facilities



0 0.25 0.5 1 Miles

## Historical Occurrences

See the Buffalo 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 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*.

### Severe Thunderstorms

Concerns related to severe thunderstorms are damage to facilities and poor road conditions along bus routes. There are two county bus routes that are affected by poor road conditions after heavy rain events. Severe thunderstorms are an annual occurrence within the district. Past impacts to the district include a leak in one of the roofs and minor wind damage. Power loss occurs a couple of times during the year, but rarely during the school day. If power is lost during the school day, it is usually restored quickly by the power company. Some of the power lines leading to the schools are buried but some are still above ground. To reduce the impacts of severe thunderstorms the district makes sure all facilities are maintained and that there are no loose materials on the buildings. Several of the school buildings have been reroofed in the last three years.

### Severe Winter Storms

Severe winter storms are an annual occurrence within the district. Primary concerns include damage to facilities from heavy snow loads and poor driving conditions for bus routes and families. The district typically has five to six snow days each year where school is closed. Students and families are notified through email, text, and phone calls. Snow removal on school property is done by the facilities department and hired contractors.

### Tornadoes and High Winds

Tornadoes have not impacted the school district in the past; however, one could cause large amounts of damage if it were to hit one of the schools. None of the schools have a FEMA certified storm shelters but each school has identified areas where students and staff are told to go during a tornado warning. Tornado drills are done multiple times each school year. Kearney High School is the only building with a backup generator. Bryant Elementary, Windy Hills Elementary, and Kearney High School are all designated community shelter locations.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Backup and Emergency Generators
Description	Evaluate the need for backup generators at the school buildings. Install backup generators where needed.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$40,000+ per Generator
Local Funding	General Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Superintendent, Principals, Facilities Director
Status	Not Started

Mitigation Action	Improve Emergency Communications Systems
Description	Improve the radio communication system by purchasing a base station for each building (18) that tie into the KPD and BCS with panic buttons.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$150,000
Local Funding	General Budget
Timeline	2-5 Years
Priority	High
Lead Agency	Superintendent, Principals, Facilities Director
Status	Not Started

Mitigation Action	Storm Shelter / Safe Room
Description	Construct safe weather rooms at the 10 elementary schools, one middle school, and the two specialty schools.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Thunderstorms
Estimated Cost	\$1,000,000
Local Funding	General Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Superintendent, Principals, Facilities Director
Status	Not Started

## 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 Facilities Director and Superintendent will be responsible for reviewing and updating the plan in the future. These individuals will review the plan annually and notify staff and families of any changes at school board meetings and by social media.

**School District Profile**

# **Pleasanton Public Schools**

**Central Platte NRD  
Hazard Mitigation Plan Update**

**2022**

## Local Planning Team

Pleasanton Public Schools’ 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 PPS.1: Pleasanton Public Schools Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Nathan Lightle	Superintendent	Pleasanton Public Schools	Grand Island	Recording

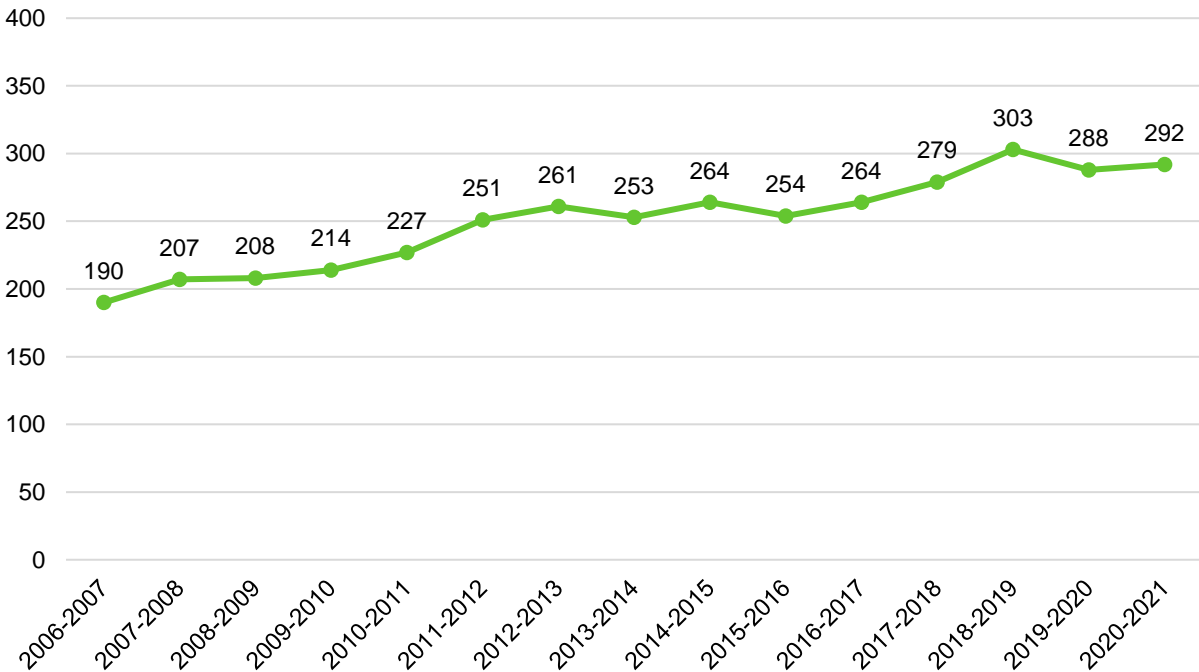
## Location

Pleasanton Public Schools is located in north central Buffalo County. It serves two schools located in one building: Pleasanton Elementary School and Pleasanton High School. In addition, the district owns a football field located off campus. The school district provides services to students in the community of Pleasanton and the rural areas surrounding it.

## Demographics

The following figure displays the historical student population trend starting with the 2006-07 school year and ending with the 2020-2021 year. It indicates that the student population has increased since 2007. There are currently 292 students enrolled in the district.<sup>99</sup> The local planning team anticipates the student population to grow in the coming years. 25% of students are from outside the district and enrollment increase is happening due to the building of additional homes and transfer students from Kearney.

**Figure PPS.1: Student Population 2007-2021**

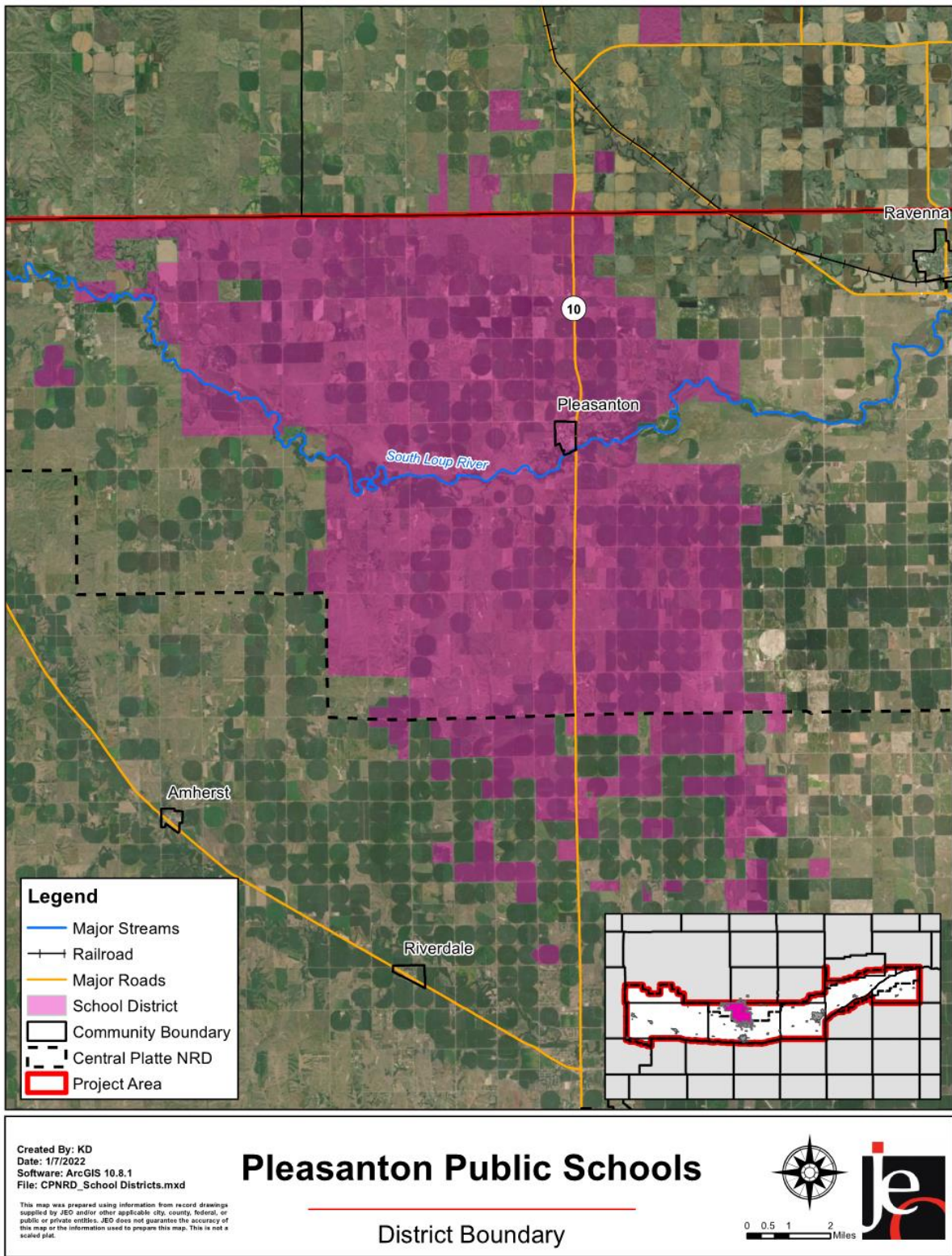


Source: Nebraska Department of Education

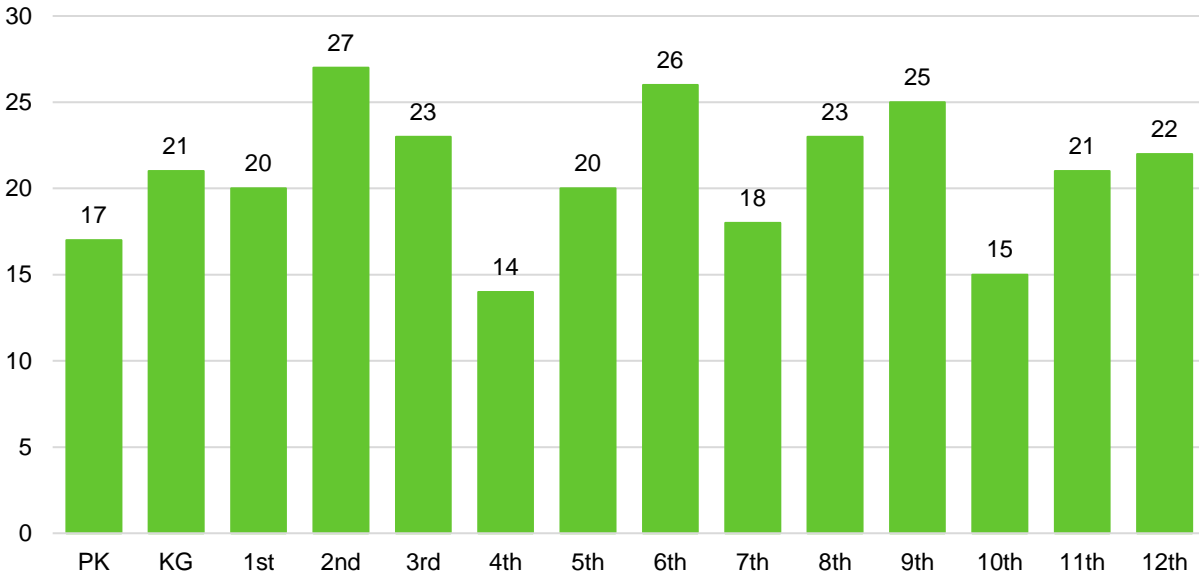
<sup>99</sup> Nebraska Department of Education. July 2021. "2019-2020 Education Profile for District: Grand Island Public Schools." <https://nep.education.ne.gov/Districts/Index/40-0002-000?DataYears=20192020>



Figure PPS.2: Pleasanton Public Schools



**Figure PPS.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 2nd and 6th grades. The lowest population of students are in 4th and 10th grades. According to the Nebraska Department of Education (NDE), 30.1% of students receive either free or reduced priced meals at school. This is lower than the state average of 46.3%. Additionally, 10.2% of students are in the Special Education Program and the school mobility rate is 3.6%. These particular students may be more vulnerable during a hazardous event than the rest of the student population.

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

	School District	State of Nebraska
Free/Reduced Priced Meals	30.14%	46.33%
School Mobility Rate	3.64%	9.12%
English Language Learners	*	7.25%
Special Education Students	10.18%	15.67%

\*Indicates less than 10 students.

Source: Nebraska Department of Education<sup>100</sup>

## Administration and Staff

The school district has a superintendent and one principal. The school board is made up of a six-member panel. There are 35 fulltime staff members. Each year staff are trained on the emergency procedures in the safety manual. The district also has a safety committee that meets quarterly and is comprised of school personnel and members of the fire department and sheriff’s office.

## 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. This past summer the district partnered with the local fire department and EMS to have an emergency

100 Nebraska Education Profile. “School Report Card.” Accessed July 2021. <http://nep.education.ne.gov/Home/>.

walkthrough of the school. Students and families are educated on emergency procedures via social media and the school calling system.

District funds are limited to maintaining current facilities and systems; however, a large portion of funds have not already been dedicated to a specific project. Funds are just now beginning to increase as it had been spent down below what is acceptable.

**Table PPS.3: Capability Assessment**

Survey Components/Subcomponents		Yes/No
<b>Planning Capability</b>	Capital Improvements Plan/Long-Term Budget	Yes
	Continuity of Operations Plan	No
	Disaster Response Plan	Yes
	Other (if any)	No
<b>Administration &amp; Technical Capability</b>	GIS Capabilities	No
	Civil Engineering	No
	Local staff who can assess community's vulnerability to hazards	No
	Grant Manager	No
	Mutual Aid Agreement	No
	Other (if any)	Covid-19 Response Plan
<b>Fiscal Capability</b>	Applied for grants in the past	No
	Awarded grants in the past	No
	Authority to levy taxes for specific purposes such as mitigation projects	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Approved bonds in the past	Yes
	Flood Insurance	No
	Other (if any)	-
<b>Education &amp; Outreach Capability</b>	Local school groups or non-profit organizations focused on environmental protection, emergency preparedness, access, and functional needs populations, etc. (Ex. Parent groups, hazard mitigation boards, etc.)	Yes
	Ongoing public education or information program (Ex. Responsible water use, fire safety, household preparedness, environmental education, etc.)	No
	StormReady Certification	No
	Other (if any)	-
<b>Drills</b>	Fire	10 / year
	Tornado	2 / year
	Intruder	1 / year
	Bus evacuation	2 / year
	Evacuation	2 / year
	Other (if any)	-

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

## Plan Integration

Pleasanton Public Schools has two planning documents that discuss or relate to hazard mitigation. The plans are listed below along with a short description of how it is integrated with the hazard mitigation plan. 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.

### Covid-19 Response Plan (2021)

Prior to the 2021-2022 school year the district created the Covid-19 Plan to help reduce the spread of the virus and plan for various scenarios directed by governmental agencies. The district operates using four color phases that generally follow the Two River Public Health Department code. Cleaning, lunch, recess, field trips, classes, hallways, facemasks, transportation, and activities all have different procedures depending on which color phase the district is currently in. This plan has been adjusted throughout the year as conditions warrant.

### Crisis Response Plan

The crisis response plan for the school provides response protocols for unique situations such as large-scale natural disaster or criminal activities. It assigns responsibilities to individuals during an emergency, addresses shelter in place protocols, identifies scenarios that would require evacuation, and identifies sheltering locations.

## Future Development Trends

A new elementary school was completed in 2016 and the district is currently planning to review how to handle increasing student enrollment with facilities and staff. In the next five years the district is looking at the cost to build a facility for students to have outside recess, physical education, and possibly use it as a football field connected to the campus rather than three blocks away.

## Community Lifelines

### Transportation

The major transportation corridor that travels through the district is Nebraska State Highway 10. It is traveled by an average of 2,455 vehicles daily, 150 of which are trucks.<sup>101</sup> Accidents have impacted the school in the past as many students, teachers, and families commute to and from Kearney. No railroad lines travel 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 six buses with four that go on a route each day. Approximately 150 students are bussed to and from school each day. Four bus routes cross the South Loup River, which is a concern during flood events.

101 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." <https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.

### 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 the district which house hazardous materials. Trotter Fertilizer is located ¼ mile north of the school. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

**Table PPS.4: Chemical Storage Sites**

Name	Address	Floodplain (Y/N)
<b>Trotter Fertilizer</b>	307 E Cemetery, Pleasanton, NE	N
<b>AT&amp;T NE6040</b>	33175 Grove Rd, Pleasanton, NE	N
<b>Farmers Co-op Assn Fertilizer</b>	20805 Antelope Rd, Pleasanton, NE	N

Source: Nebraska Department of Environment and Energy<sup>102</sup>

### 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.

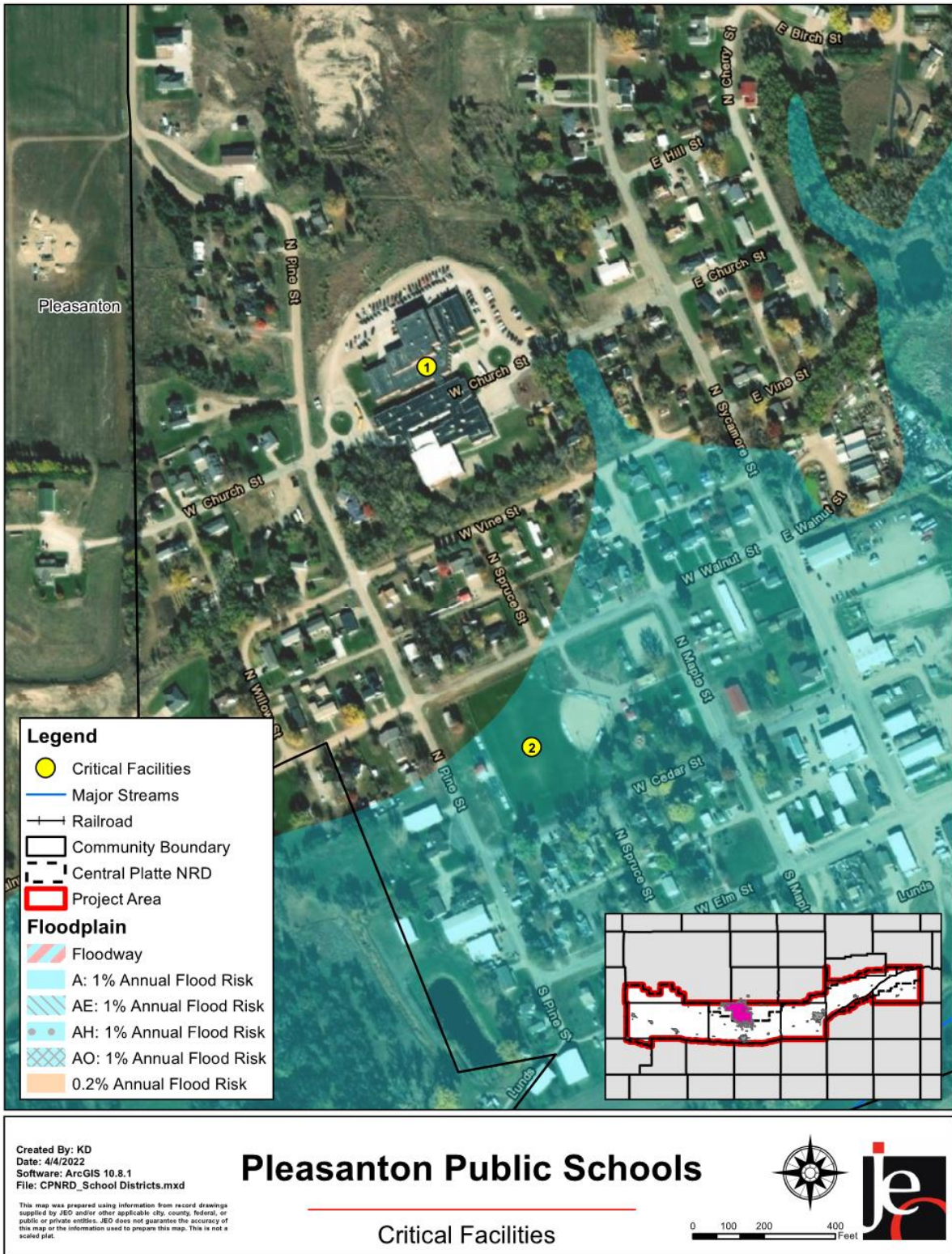
**Table PPS.5: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Pleasanton Elementary/MS/HS	Y	N	N
2	Pleasanton Football Field	N	N	Y (1%)

102 Nebraska Department of Environment and Energy. “Search Tier II Data.” Accessed June 2021.



Figure PPS.4: Critical Facilities



## Historical Occurrences

See the Buffalo 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*.

### Flooding

The school district was impacted by the flooding in 2019. Immediately after the event, the district had to cancel several days of school. Bus routes were impacted for several weeks due to flooded and poor road conditions. There are four bus routes that cross the South Loup River which is a concern during periods of flooding. In 2014-2015 the school did extensive dirt work to alleviate flooding around the building. A large drainage system was put in place to move water to the east of the school. Since then, flooding has not had a large impact on the school building, however the football field is located in the 1% floodplain and still has flooding issues.

### Grass/Wildfire

Primary concern related to grass/wildfires is the potential damage to the school building and student safety. Grass/Wildfires have not impacted the district in the past but being a rural school district, the potential is there. Last summer the local fire department and EMS performed a walkthrough of the school building to identify potential vulnerabilities. No other actions have been taken at this time.

### Hazardous Materials Release

Chemical spills have not impacted the school district in the past. However, there is a chemical storage and distribution site located approximately ¼ mile north of the school. The facility houses bulk gasoline, anhydrous ammonia, Roundup Power Max, Harness Xtra, diesel, and atrazine. In the event of a spill that would require an evacuation, students would either walk or be bused to a nearby church.

### Public Health Emergency

Covid-19 has had a major impact on the school district. Some students have experienced significant learning loss, while other have suffered socially or emotionally. The pandemic has forced the school district to evaluate everything they do throughout the school day to minimize the spread of any virus. To help reduce the spread of the virus the district implemented a Covid-19 plan for the 2020-2021 school year that addresses procedures based on color code system which follows the Two Rivers Public Health Department. Because of the pandemic the school learned the importance of school both as an education provider as well as a place for children to go so parents can work. In addition, the district learned how to better use technology as an educational tool.

**Severe Thunderstorms**

Severe thunderstorms have not impacted the school in the past but do pose a risk to student safety and damage to the facility. Heavy rains can cause flooding and thunderstorm winds can damage the roof or cause power outages. To help reduce the number of power outages, all power lines to the school building are buried.

**Severe Winter Storms**

The primary concern related to severe winter storms is student safety and transportation issues to and from the school. Many students and staff live in Kearney, which is 20 minutes away. Severe winter storms can impact travel, especially if there are issues along Highway 10 between Pleasanton and Kearney. During the extremely cold temperatures in February 2021, the district had to cancel one day of school and do a couple of late starts because the buses could not run in such cold conditions. Approximately three to four snow days are given each year and families are notified through a district calling system and the media. Snow removal on school property is typically handled by the custodial staff but a private company can be contracted if there is large amount. To help reduce the impacts of winter storms, the school is buying propane buses that are not impacted by cold weather and have leased a skid loader to help with snow removal.

**Tornadoes and High Winds**

Tornadoes have not impacted the school in the past. However, if one were to hit the school it could cause massive damage to the building and potentially harm the student population. The school’s weight room was built to as a tornado shelter with specialized concrete walls and hurricane glass windows and doors. The weight room is able to hold all students and staff. Tornado drills are practiced two times each school year.

**Mitigation Strategy**

**New Mitigation Actions**

Mitigation Action	Backup and Emergency Generators
Description	Provide a backup and emergency generator for the school building.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$40,000+
Local Funding	General Budget
Timeline	2-5 Years
Priority	Medium
Lead Agency	Superintendent
Status	Not Started

Mitigation Action	Propane Buses
Description	Purchase propane buses that are able to operate during extremely cold temperatures.
Hazard(s) Addressed	Severe Winter Storms
Estimated Cost	\$500,000+
Local Funding	General Budget
Timeline	2-5 Years
Priority	High
Lead Agency	Superintendent
Status	In Progress.

## **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 Superintendent and safety committee will be responsible for reviewing and updating the plan in the future. These individuals will review the plan at the quarterly safety committee meeting each year.

**School District Profile**

# **Ravenna Public Schools**

**Central Platte NRD  
Hazard Mitigation Plan Update**

**2022**



## Local Planning Team

Ravenna Public Schools' 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 school district.

**Table RPS.1: Ravenna Public Schools Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
<b>Cannon Blauvelt</b>	Secondary Principal	Ravenna Public Schools	Grand Island	-
<b>Paul Anderson</b>	Elementary Principal	Ravenna Public Schools	-	-
<b>Bradley Kjar</b>	Superintendent	Ravenna Public Schools	-	Recording

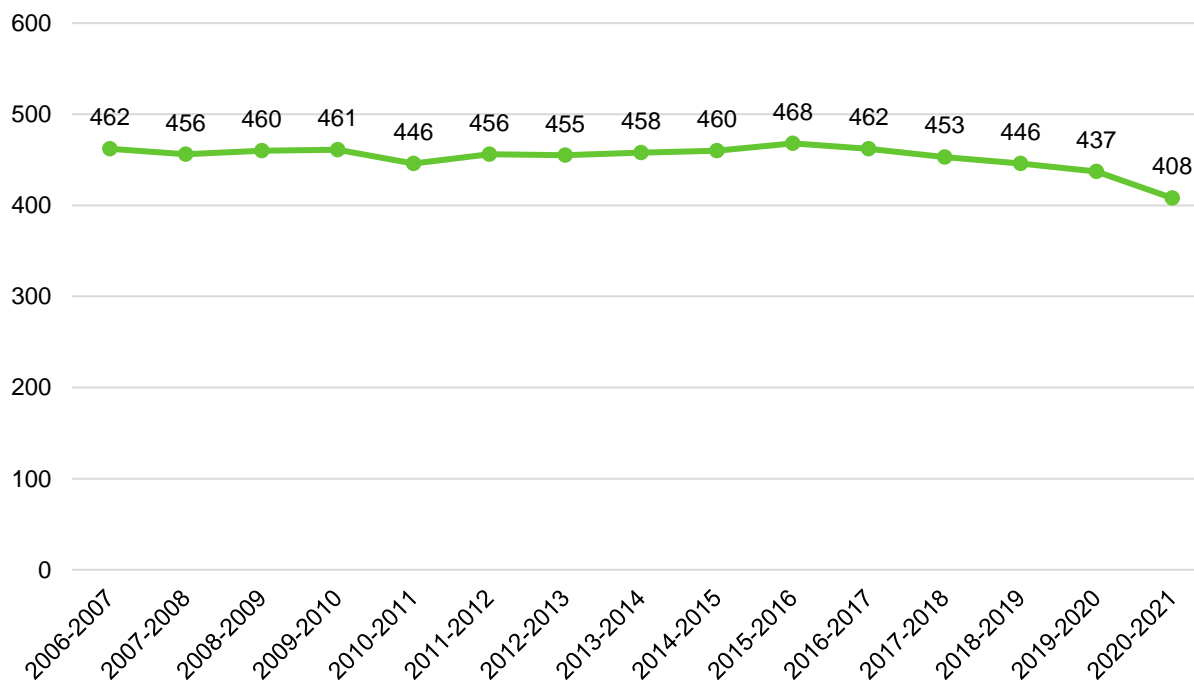
## Location

Ravenna Public Schools is located in northeastern Buffalo County and southwestern Sherman County. It serves two schools: Ravenna Elementary School and Ravenna Senior High located in one building. The school district provides services to students in the City of Ravenna and the rural areas surrounding it.

## Demographics

The following figure displays the historical student population trend starting with the 2006-07 school year and ending with the 2020-2021 year. It indicates that the student population has been declining since 2015. There are 408 students enrolled in the district.<sup>103</sup> The district anticipates little change in the student population in the coming years. There are three English language learners that speak English and Spanish.

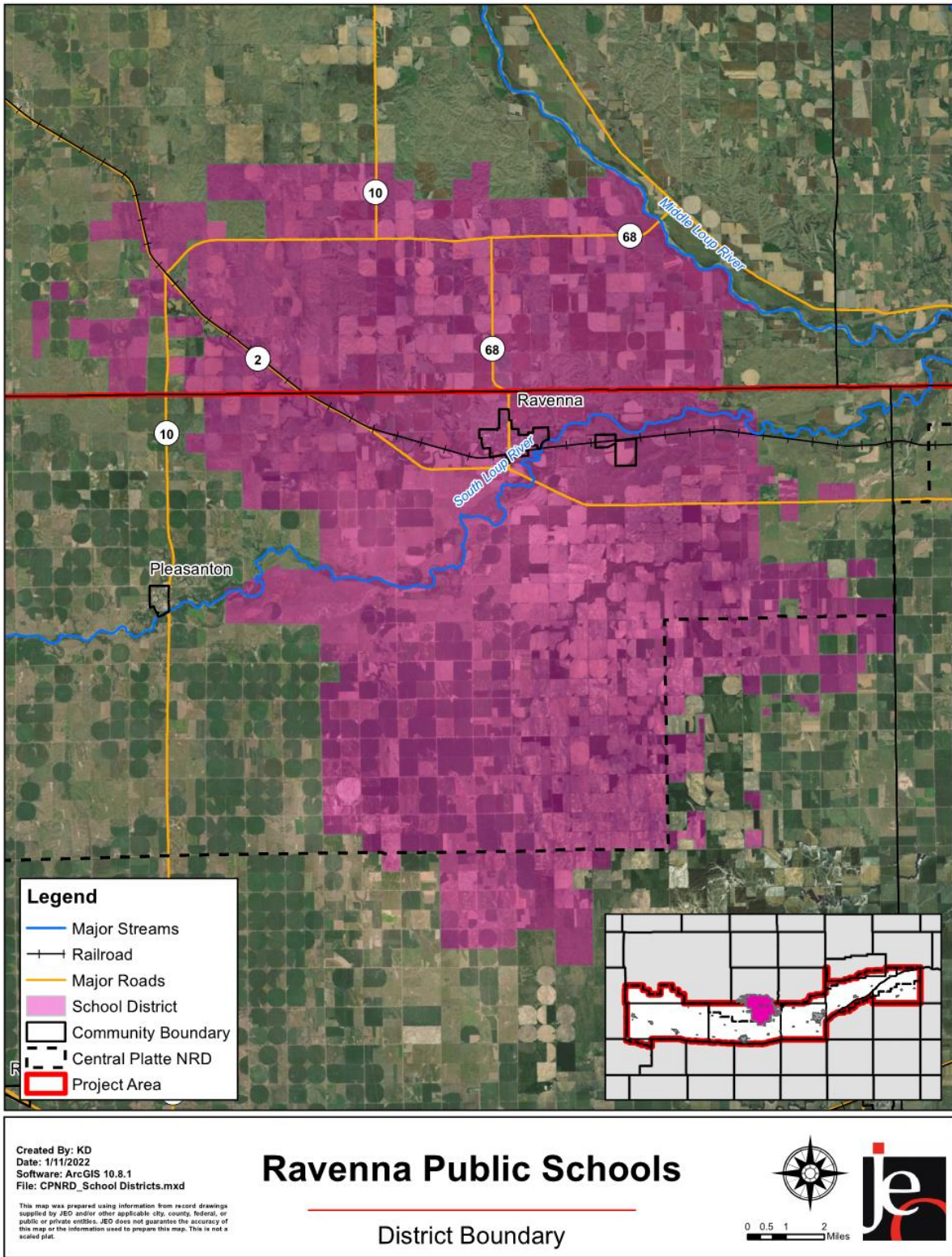
**Figure RPS.1: Student Population 2007-2021**



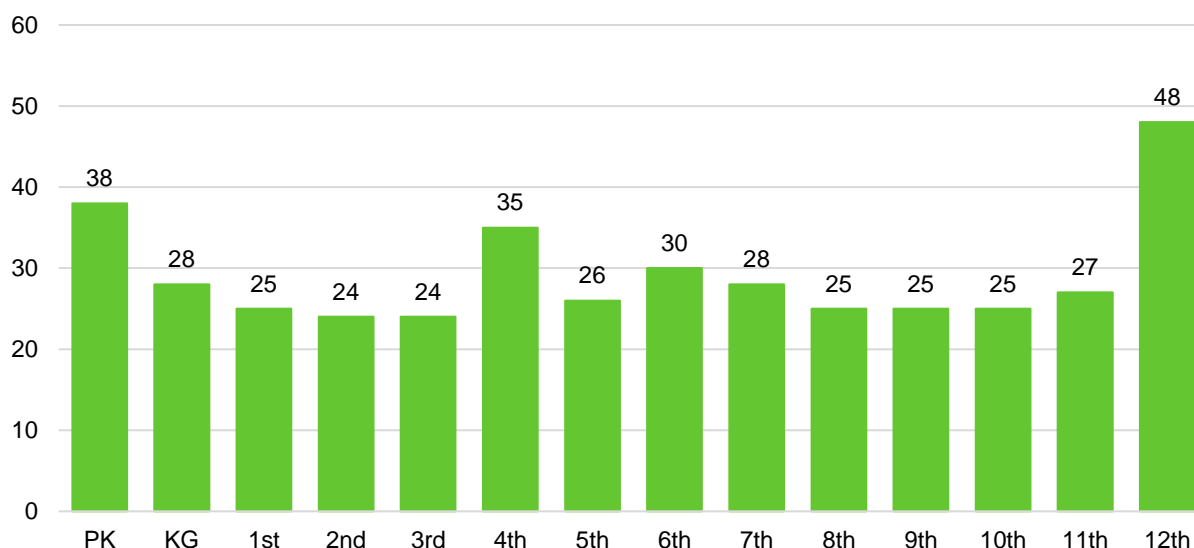
Source: Nebraska Department of Education

103 Nebraska Department of Education. July 2021. "2019-2020 Education Profile for District: Grand Island Public Schools." <https://nep.education.ne.gov/Districts/Index/40-0002-000?DataYears=20192020>

Figure RPS.2: Ravenna Public Schools



**Figure RPS.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 pre-kindergarten and 12th grades. The lowest population of students are in the 2nd and 3rd grades. According to the Nebraska Department of Education (NDE), 40.2% of students receive either free or reduced priced meals at school. This is lower than the state average of 46.33%. Additionally, 14.59% of students are in the Special Education Program and the school mobility rate is 10%. These particular students may be more vulnerable during a hazardous event than the rest of the student population.

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

	School District	State of Nebraska
Free/Reduced Priced Meals	40.20%	46.33%
School Mobility Rate	10.00%	9.12%
English Language Learners	*	7.25%
Special Education Students	14.59%	15.67%

\*Indicates less than 10 students.

Source: Nebraska Department of Education<sup>104</sup>

## Administration and Staff

The school district has a superintendent and two principals. The school board is made up of a six-member panel. There are eight staff employed by the district. Staff are trained on emergency procedures through the safety team and professional development training sessions.

## 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. Education and event exercises are performed in partnership with the local fire department. Students and families are educated about emergency procedures through informational messages.

104 Nebraska Education Profile. “School Report Card.” Accessed July 2021. <http://nep.education.ne.gov/Home/>.

At this moment funding is focused on maintaining current facilities and improving the existing building. However, a large portion of funds are not already dedicated to a specific project. District funds have decreased over recent years.

**Table RPS.3: Capability Assessment**

Survey Components/Subcomponents		Yes/No
<b>Planning Capability</b>	Capital Improvements Plan/Long-Term Budget	Yes
	Continuity of Operations Plan	Yes
	Disaster Response Plan	Yes
	Other (if any)	No
<b>Administration &amp; Technical Capability</b>	GIS Capabilities	-
	Civil Engineering	No
	Local staff who can assess community's vulnerability to hazards	No
	Grant Manager	No
	Mutual Aid Agreement	No
	Other (if any)	-
	Applied for grants in the past	No
<b>Fiscal Capability</b>	Awarded grants in the past	No
	Authority to levy taxes for specific purposes such as mitigation projects	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Approved bonds in the past	No
	Flood Insurance	No
	Other (if any)	-
	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
<b>Education &amp; Outreach Capability</b>	Ongoing public education or information program (Ex. Responsible water use, fire safety, household preparedness, environmental education, etc.)	No
	StormReady Certification	No
	Other (if any)	-
	<b>Drills</b>	Fire
Tornado		Monthly
Intruder		1 / year
Bus evacuation		2 / year
Evacuation		1 / year
Other (if any)		S.R.P. Drills



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	Moderate

## Plan Integration

Ravenna Public Schools has two 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 district will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

### Crisis Response Plan (2020)

The crisis response plan for the school provides response protocols for unique situations such as large-scale natural disaster or criminal activities. It assigns specific responsibilities to individuals during an emergency, addresses shelter in place protocols, identifies scenarios that would require evacuation and the evacuation routes, and lists sheltering locations. All staff have working knowledge of the plan and it is updated yearly with the safety team.

### Strategic Plan (2021)

The strategic plan for the district reflects master planning to improve facilities, safety, technology, and the curriculum. Mitigation actions in the hazard mitigation plan will be reflected in the district's strategic plan going forward.

## Future Development Trends

There have not been any large changes in the past five years. In the next five years, the local planning team does not anticipate any changes for the district.

## Community Lifelines

### Transportation

Three major transportation corridors travel through the district: Nebraska State Highways 2, 10, and 68. The most traveled route is Nebraska Highway 2 with an average of 3,235 vehicles daily, 455 of which are trucks.<sup>105</sup> A Burlington Northern Santa Fe Railway rail line runs west to east through the district. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the district, as well as areas more at risk of transportation incidents. The district has 11 buses and approximately 80 students get bussed to and from school each day.

<sup>105</sup> Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map."  
<https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.



### Hazardous Materials

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

**Table RPS.4: Chemical Storage Sites**

Name	Address	Floodplain (Y/N)
Henningsen Foods Inc.	200 E Railway St	N
Darling Ingredients Inc.	102 Lincoln Ave	N
Farmers Co-op Assn.	35885 Ravenna Rd	N
NDOT Ravenna Yard	42775 Highway 2	N
Nebraska Central Telephone Co.	113 W Genoa St	N
Farmers Co-op Assn.	35545 Pine Rd	N
KAAPA Ethanol Ravenna LLC	35955 Navaho Rd	N
AT&T NEA042/NE9158	33248 Pine Rd	N
Nutrien Ag Solutions	33855 Navaho Rd	N

Source: Nebraska Department of Environment and Energy<sup>106</sup>

### 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.

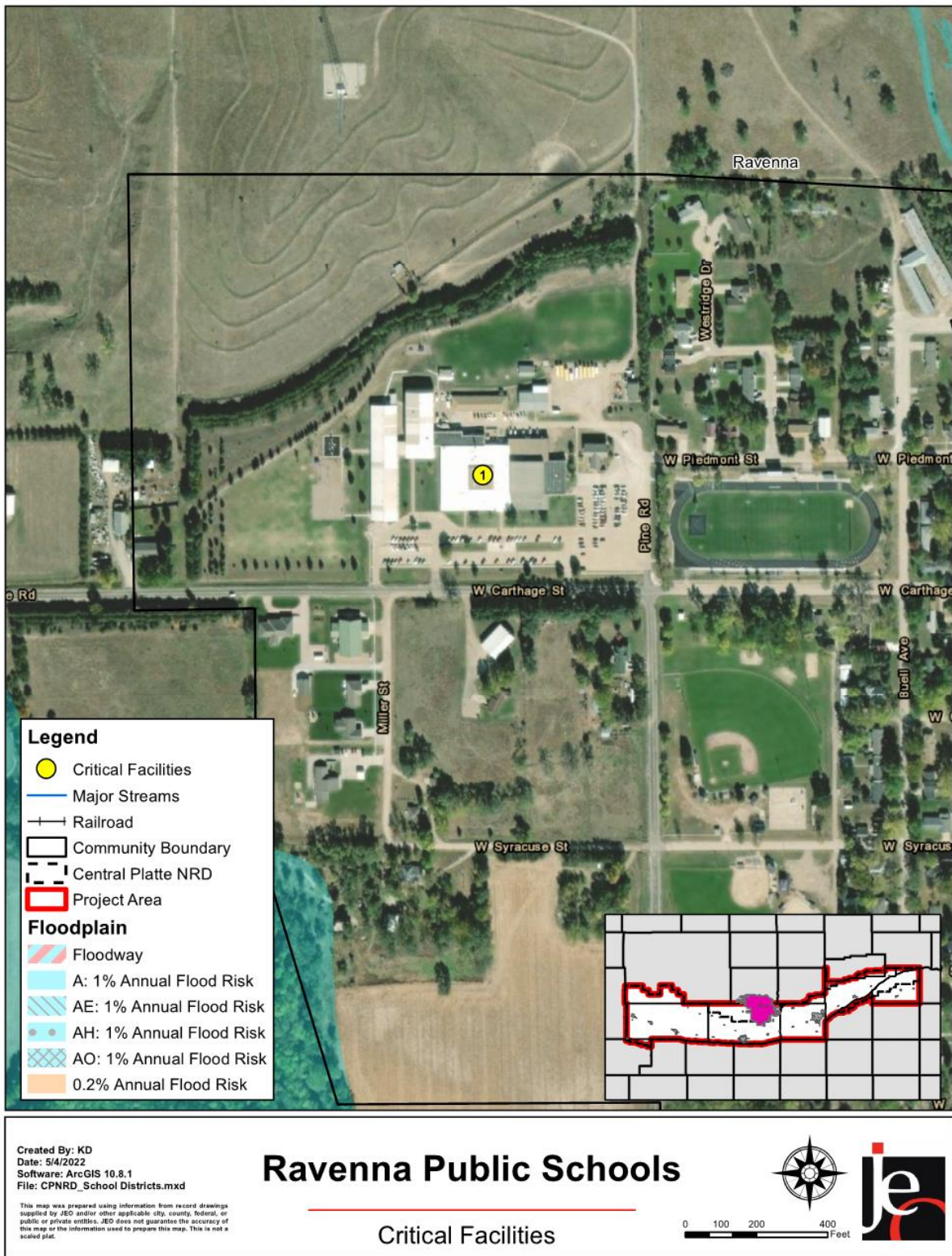
Although they may not be listed in the table below, critical infrastructure also includes power infrastructure, cell towers, alert sirens, water infrastructure, wastewater infrastructure, and roadways.

**Table RPS.5: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	School Building	Y	N	N

<sup>106</sup> Nebraska Department of Environment and Energy. “Search Tier II Data.” Accessed June 2021.

Figure RPS.4: Critical Facilities



## Historical Occurrences

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

## 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*.

### Drought

Drought is a concern due to the area's reliance on the agricultural economy. While it is rare that drought will directly affect the school, it does have trickle down affects. A prolonged drought could cause families to leave the area resulting in less students and funding. Drought has not significantly impacted the school district until this year. Water for the school comes from the City of Ravenna and a well that is owned by the district. Water restrictions have not been implemented in the past, but district could reduce irrigation if needed and asked by the city.

### Hazardous Materials Release

Hazardous materials release is a concern due to the school's proximity to the railroad line. The district is not aware of the exact types of chemicals that are transported by rail. No chemical spills have affected the district in the past. In the event of a spill students would be able to walk to the identified evacuation site. An evacuation drill is conducted once every school year.

### Public Health Emergency

The ongoing Covid-19 pandemic has had a large impact on the school district. The biggest impact has been the overall loss of learning that has taken place. To reduce the spread of Covid-19, the district implemented increased social distancing by spreading out desks, limiting how many students sit at a lunch table, adding hand sanitizer stations around the school, complying with mask mandates, and increasing sanitization. The biggest lesson learned from the pandemic is that a one size fits all mentality does not work for everyone. In the future, the school district would like better guidance from the CDC and local health departments and will do everything possible to have in person learning every day.

### Severe Thunderstorms

Ravenna Public Schools and the surrounding areas are vulnerable to severe local storms. The effects are generally transportation problems and loss of utilities but can vary with the intensity of the storm. The level of preparation by Ravenna Public Schools, the equipment available, and staff availability to perform tasks can help to lessen these effects. Power lines on school property are buried, which reduces the risk of power outages. Power is seldom lost to the school and classes will still typically be held. Vital information and data are backed up using onsite servers.

### Severe Winter Storms

Transportation issues are the primary concern for the school district regarding severe winter storms. These issues along with loss of power have impacted the district in the past. During the extremely cold temperatures in February 2021, the district had an increase in utility cost and a cancellation of school. Ravenna Public Schools average around three cancelled school days each year due to winter storms and cold temperatures. Students and families are notified of a school

closure through the school’s messenger system and other media outlets. Snow removal on school property is handled by the maintenance and grounds crew.

### Tornadoes and High Winds

Past impacts from high winds include damage to school property and trees. Tornadoes have not impacted the school in the past. The school does not have a FEMA certified storm shelter. In the event of a tornado warning, students and staff would report to their assigned tornado shelter locations. If the warning occurred during transportation to and from school, the bus drivers would direct students to the nearest safe location. Tornado drills are performed monthly.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Backup and Emergency Generators
<b>Description</b>	Purchase a backup power generator for the school building.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$40,000+
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	Low
<b>Lead Agency</b>	Superintendent
<b>Status</b>	Not Started

Mitigation Action	Storm Shelter / Safe Room
<b>Description</b>	Construct a FEMA certified storm shelter for the school building.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Thunderstorms
<b>Estimated Cost</b>	\$500,000+
<b>Local Funding</b>	General Budget
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Superintendent
<b>Status</b>	Not Started

## 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 Superintendent, Secondary Principal, and Elementary Principal will be responsible for reviewing and updating the plan in the future. These individuals will review the plan annually and will provide any updates at a school board meeting.

**School District Profile**

# **Shelton Public Schools**

**Central Platte NRD  
Hazard Mitigation Plan Update**

**2022**



## Local Planning Team

The Shelton Public Schools' 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 SPS.1: Shelton Public Schools Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Shanna Gannon	Superintendent	Shelton Public Schools	Grand Island	Grand Island – Virtually

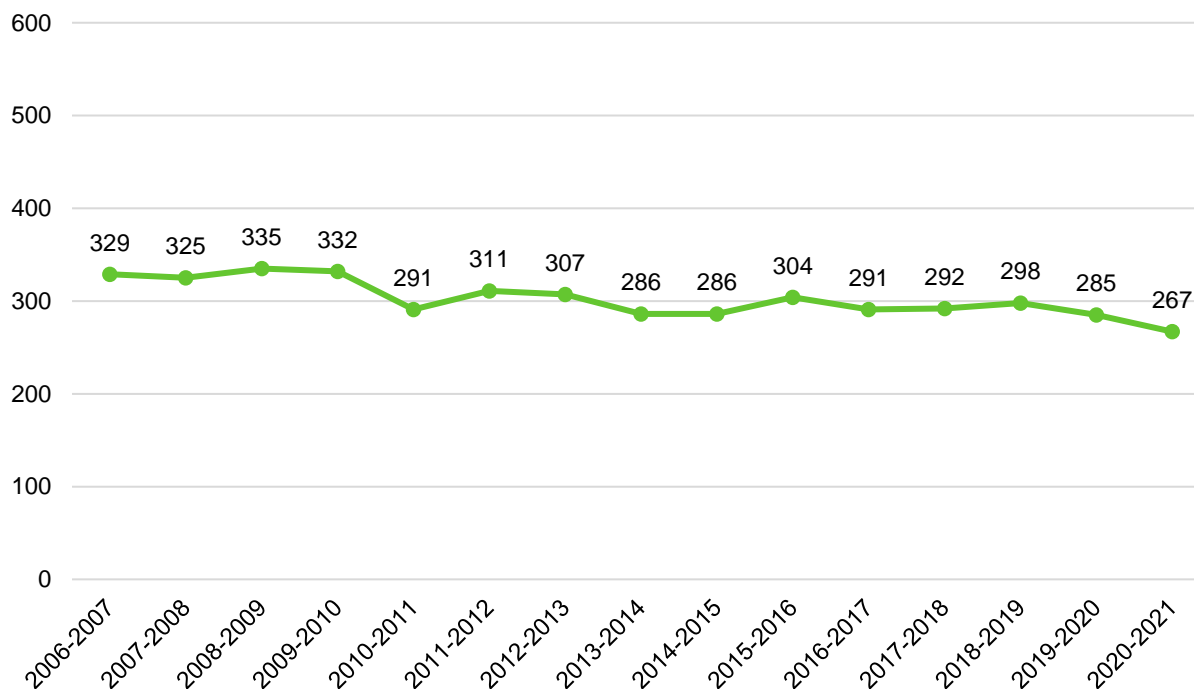
## Location

Shelton Public Schools is located in eastern Buffalo County and western Hall County. It serves two schools: Shelton Elementary School and Shelton High School. The school district provides services to students in the community of Shelton and the rural areas surrounding it.

## Demographics

The following figure displays the historical student population trend starting with the 2006-07 school year and ending with the 2020-2021 year. It indicates that the student population has been declining since 2007. There are currently 267 students enrolled in the district.<sup>107</sup> The local planning team does not anticipate an increase in the student population in the coming years. Most students speak English but there are some speak Spanish.

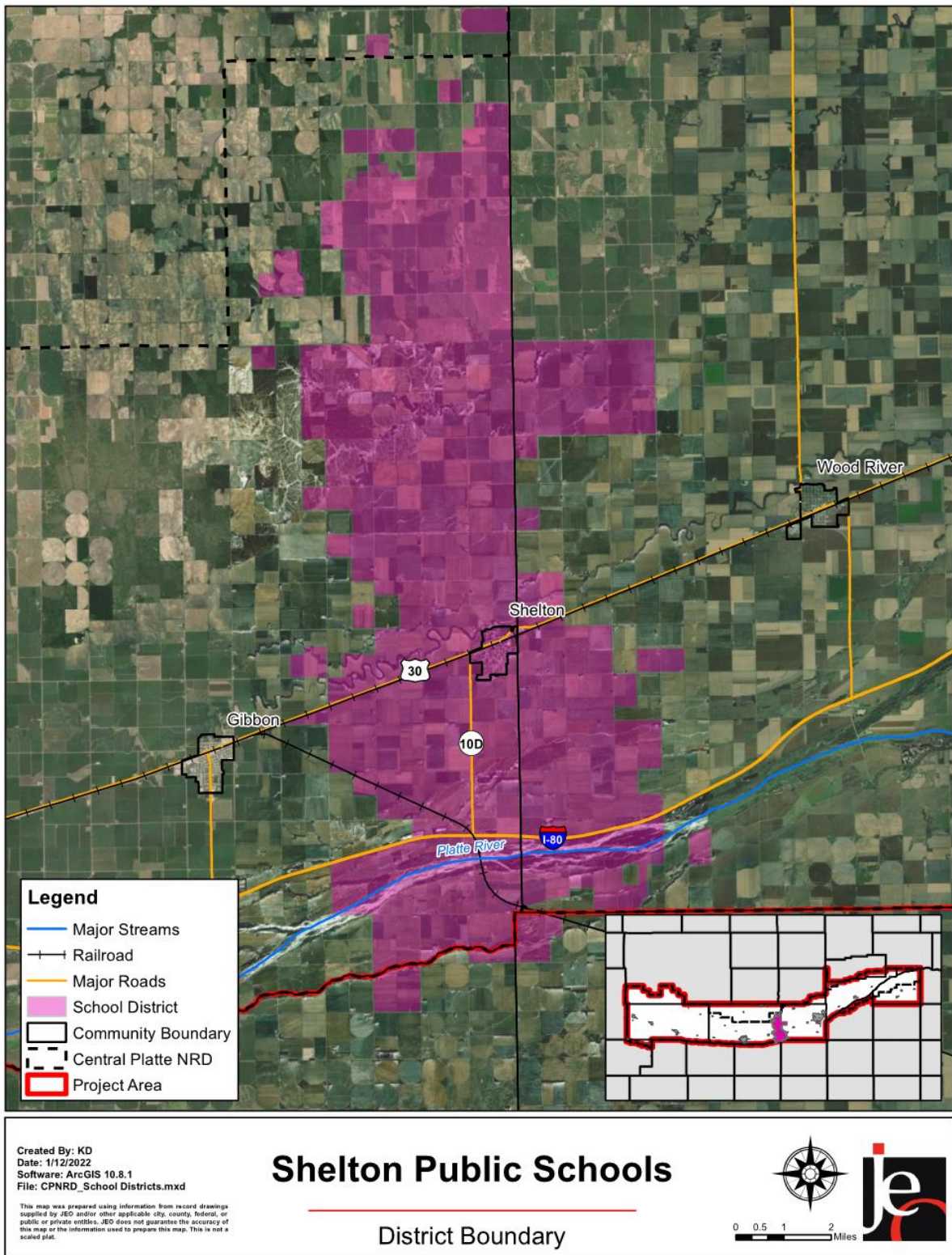
**Figure SPS.1: Student Population 2007-2021**



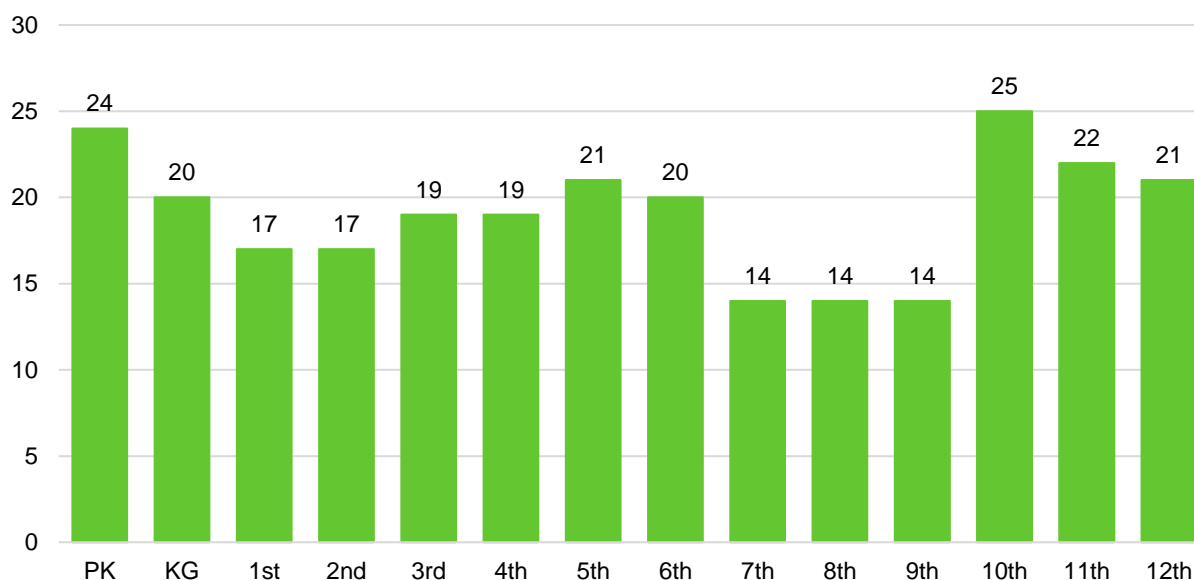
Source: Nebraska Department of Education

107 Nebraska Department of Education. July 2021. "2019-2020 Education Profile for District: Grand Island Public Schools." <https://nep.education.ne.gov/Districts/Index/40-0002-000?DataYears=20192020>

Figure SPS.2: Shelton Public Schools



**Figure SPS.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 pre-kindergarten and 10th grades. The lowest population of students are in the 7th, 8th, and 9th grades. According to the Nebraska Department of Education (NDE), 40.8% of students receive either free or reduced priced meals at school. This is lower than the state average of 46.3%. Additionally, 18.5% of students are in the Special Education Program, the school mobility rate is 7.82%, and 11.1% of students are English Language Learners. These particular students may be more vulnerable during a hazardous event than the rest of the student population.

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

	School District	State of Nebraska
Free/Reduced Priced Meals	40.82%	46.33%
School Mobility Rate	7.82%	9.12%
English Language Learners	11.11%	7.25%
Special Education Students	18.52%	15.67%

Source: Nebraska Department of Education<sup>108</sup>

## Administration and Staff

The school district has a superintendent, one principal, and one assistant principal. The school board is made up of a six-member panel. 55 staff are employed by the district. Staff are trained on emergency procedures through emergency drills.

## 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 local fire department participates in the annual safety meeting and also give input on the school’s safety plan.

108 Nebraska Education Profile. “School Report Card.” Accessed July 2021. <http://nep.education.ne.gov/Home/>.

District funds are limited to maintaining current facilities and systems, with a large portion already dedicated to replacing some of the HVAC units. Funds have decreased significantly over the past four years.

**Table SPS.3: Capability Assessment**

Survey Components/Subcomponents		Yes/No
<b>Planning Capability</b>	Capital Improvements Plan/Long-Term Budget	Yes
	Continuity of Operations Plan	No
	Disaster Response Plan	No
	Other (if any)	Crisis Handbook, Safety Plan
<b>Administration &amp; Technical Capability</b>	GIS Capabilities	No
	Civil Engineering	No
	Local staff who can assess community's vulnerability to hazards	No
	Grant Manager	No
	Mutual Aid Agreement	No
	Other (if any)	-
<b>Fiscal Capability</b>	Applied for grants in the past	No
	Awarded grants in the past	No
	Authority to levy taxes for specific purposes such as mitigation projects	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Approved bonds in the past	Yes
	Flood Insurance	No
	Other (if any)	-
<b>Education &amp; Outreach Capability</b>	Local school groups or non-profit organizations focused on environmental protection, emergency preparedness, access, and functional needs populations, etc. (Ex. Parent groups, hazard mitigation boards, etc.)	No
	Ongoing public education or information program (Ex. Responsible water use, fire safety, household preparedness, environmental education, etc.)	No
	StormReady Certification	No
	Other (if any)	-
<b>Drills</b>	Fire	8 / year
	Tornado	2 / year
	Intruder	1 / year
	Bus evacuation	1 / year
	Evacuation	1 / year
	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

The school district has a safety plan that was last updated in 2021. The plan emergency procedures for bad weather, tornado watches, tornado warning, lightning, infrastructure failure, intruder, bomb threat, fire, and hazardous materials release. It also outlines staff training for safety related measures, communication during an event, and evacuation locations.

The school district also has a crisis handbook that has not been integrated with the HMP. This handbook was last updated in 2021. 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, there have been no major changes to the school building or within the district. There are no plans for any new construction or renovation at this time.

## Community Lifelines

### Transportation

Two major transportation corridors travel through the district: Interstate 80 and US Highway 30. The most traveled route is Interstate 80 with an average of 22,360 vehicles daily, 8,070 of which are trucks.<sup>109</sup> Two Union Pacific rail lines travel east to west 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 local planning team also identified a bus route that crosses the Platte River as a concern during flooding events. The district owns four buses with approximately 30 students bussed 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 four chemical storage sites within the district which house hazardous materials. None of the sites are located near the school building. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

**Table SPS.4: Chemical Storage Sites**

Name	Address	Floodplain (Y/N)
Agricultural Services Inc.	523 Railroad St, Shelton, NE	N
Bosselman Oil Inc.	104 E Railroad St, Shelton, NE	N
Nebraska Central Telephone Co.	215 C St, Shelton, NE	N
NDOT Shelton Yard	4558 Shelton Rd, Shelton, NE	N

Source: Nebraska Department of Environment and Energy<sup>110</sup>

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



### Critical Facilities

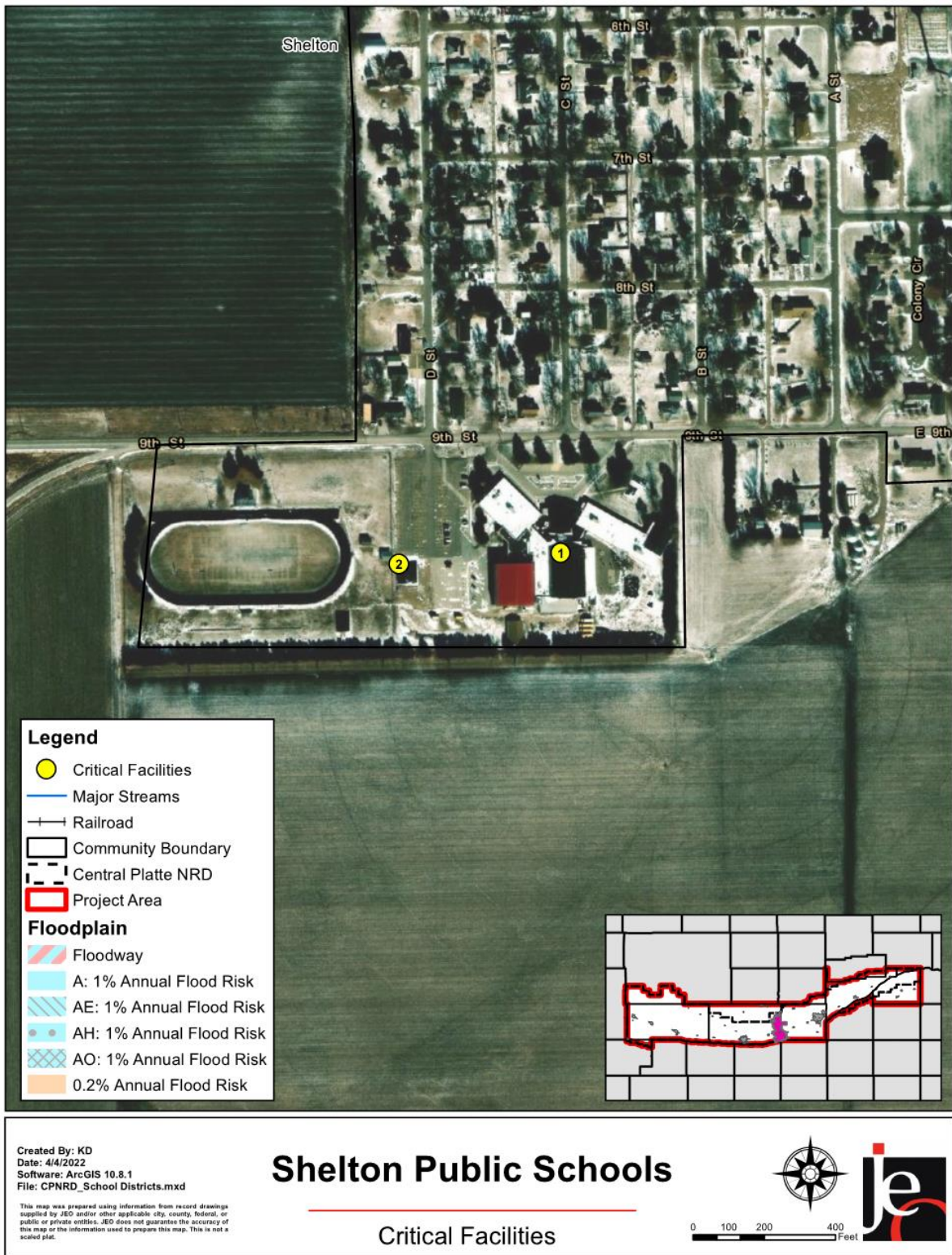
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during 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 SPS.5: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Main School Building	Y	N	N
2	Storage Sheds and Garage	N	N	N

Figure SPS.4: Critical Facilities



## Historical Occurrences

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

## 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*.

## Public Health Emergency

The ongoing Covid-19 pandemic has caused the local planning team to identify public health emergencies as a top hazard of concern. The main concern of the district is the potential for Covid-19 or a variant to cause the school to close for a period of time. The greatest impact of Covid-19 to the school district has been in the absence of staff and students due to illness or quarantine. During the 2021-2022 school year, the school closed down for 2 days due to staff illness and the lack of substitutes available. To help reduce the impact of Covid-19, the school has performed measures such as requiring masks, social distancing, cohorting classes for lunch, increasing handwashing, disinfecting highly touched surfaces, and asking any staff or students that experience symptoms to stay home. During future outbreaks the school would like to provide access to free masks, but these can become expensive for the district to purchase for students and staff.

## Severe Thunderstorms

Damage to the school and injuries to staff and students are the primary concerns related to severe thunderstorms. District administrators are alerted of severe weather through alerts on cell phones. The school has experienced damage to trees and the greenhouse in the past due to thunderstorm events. The power lines are buried, protecting them from the potential of being knocked over by high winds or falling trees. While the school does not experience power outages often, it is a concern due to the disruption it would have on the learning environment. As a precaution against power outages, all vital online data is backed up to an offsite server. Mitigation actions to help reduce the impact of a severe thunderstorm on the school include continued education through weather webinars, keeping trees trimmed and ensuring loose materials are picked up around school grounds.

## Severe Winter Storms

Primary concerns for winter storms are potential damages to the school or injuries to staff and students. Travel to and from activities in icy or snowy conditions is also a concern. The greatest impact to the school district from a severe winter storm is the closure or delay of school sessions. Closures and delays impact not only the students learning but also the safety of the students trying to get to or from school. During the extremely cold temperature in February 2021, the school district decided to close. The cold temperatures created an unsafe environment for students to be transported to and from school. As a result, students were impacted by a loss of learning on those days.

The school plans for up to four snow days per year. If the school does deem it necessary to delay or cancel the school day, students and families will be notified through the school-wide communication system Swiftreach. This system can send phone calls, text messages, and/or emails to registered parents. If the delays or cancelations are due to severe weather, they are

also posted on Weatherthreat.com and 10/11 NOW. Removal of a large amount snowfall is contracted with an outside company. Removal of a small snowfall amount is performed by the school custodians. The school’s biggest goal is to communicate weather related closings as soon as possible for staff living outside the district or for employees who get to school very early such as custodial staff or kitchen workers. Early communication is also needed for families that may need to make alternative arrangements for children if school is not in session.

### Tornadoes and High Winds

The safety of staff and students is the highest priority to the school during a tornado or high wind event. The Shelton Public School District has not been impacted by tornadoes or high winds in the past, but the threat is present. In the event of a tornado or dangerous high wind event, students are instructed to take shelter in a bathroom, locker room, or other interior location. Along a bus route, drivers will have students exit the bus and get down in a low area and cover their heads. The district performs two tornado drills each school year.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Backup and Emergency Generators
Description	Provide backup and emergency generators for the school in the event of power loss.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$40,000+
Local Funding	Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Superintendent, County Emergency Manager
Status	Not Started

Mitigation Action Name	Public Awareness/Education
Description	Participate in local weather webinars to stay abreast of current severe weather in our area.
Hazard(s) Addressed	Tornado and High Winds
Estimated Cost	Staff Time
Local Funding	Staff Time
Timeline	Ongoing
Priority	Medium
Lead Agency	Superintendent, Principal, Hastings Weather Station
Status	In Progress.

## 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 Head of Buildings and Grounds, the Principal, and the Superintendent will be responsible for reviewing and updating the plan. This committee will review the plan annually at a regular monthly board meeting that is open to the public.

**University Profile**

# **University of Nebraska- Kearney**

**Central Platte NRD  
Hazard Mitigation Plan Update**

**2022**



## Local Planning Team

The University of Nebraska – Kearney’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 university.

**Table UNK.1: University of Nebraska-Kearney Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Jim Davis	UNK Police Chief	University of Nebraska-Kearney	-	-
Ted Eichholz	Emergency Management Coordinator	University of Nebraska-Kearney	Grand Island	Grand Island - Virtually

## Location and Services

The University of Nebraska-Kearney (UNK) is located in the west central portion of the City of Kearney. The main office is located at 2504 9<sup>th</sup> Avenue, Kearney, NE 68849. Forty-nine different degree programs are offered under three broad areas: Arts and Sciences, Business and Technology, and Education. There are 32 buildings on campus, nine of which are residence halls. A small canal runs through the center of the campus. In addition, the Kearney Canal and Kearney Lake are located directly north of the university.

## Demographics and Housing

There are approximately 5,000 students and 1,200 staff at the university. Enrollment has stayed fairly steady throughout the last few years. The local planning team anticipates little change in enrollment numbers over the next several years. Of the 5,000 students, over 300 are international students. These particular students may be more vulnerable during a hazardous event due language barriers and unfamiliarity with the area. Student housing is spread throughout campus with around 2,000 students living in the residence halls.

## Administration

The university is governed by the University of Nebraska Board of Regents, which has eight voting members. Other positions and departments that may be involved in mitigation projects include the chancellor and UNK Emergency Operations Team.

## Capability Assessment

Due to the unique structure of the university, the typical capability assessment table was not used. The following table summarizes the UNK’s overall capability to implement mitigation projects. In addition, UNK has an Emergency Operations Team (EOT) consisting of members from various departments with very active subgroups of the team. Figure UNK.2 shows the EOT calling tree. The university is designated a Storm Ready University from the National Weather Service and regularly meets and trains with Buffalo County Emergency Management.

**Table UNK.2: Overall Capability**

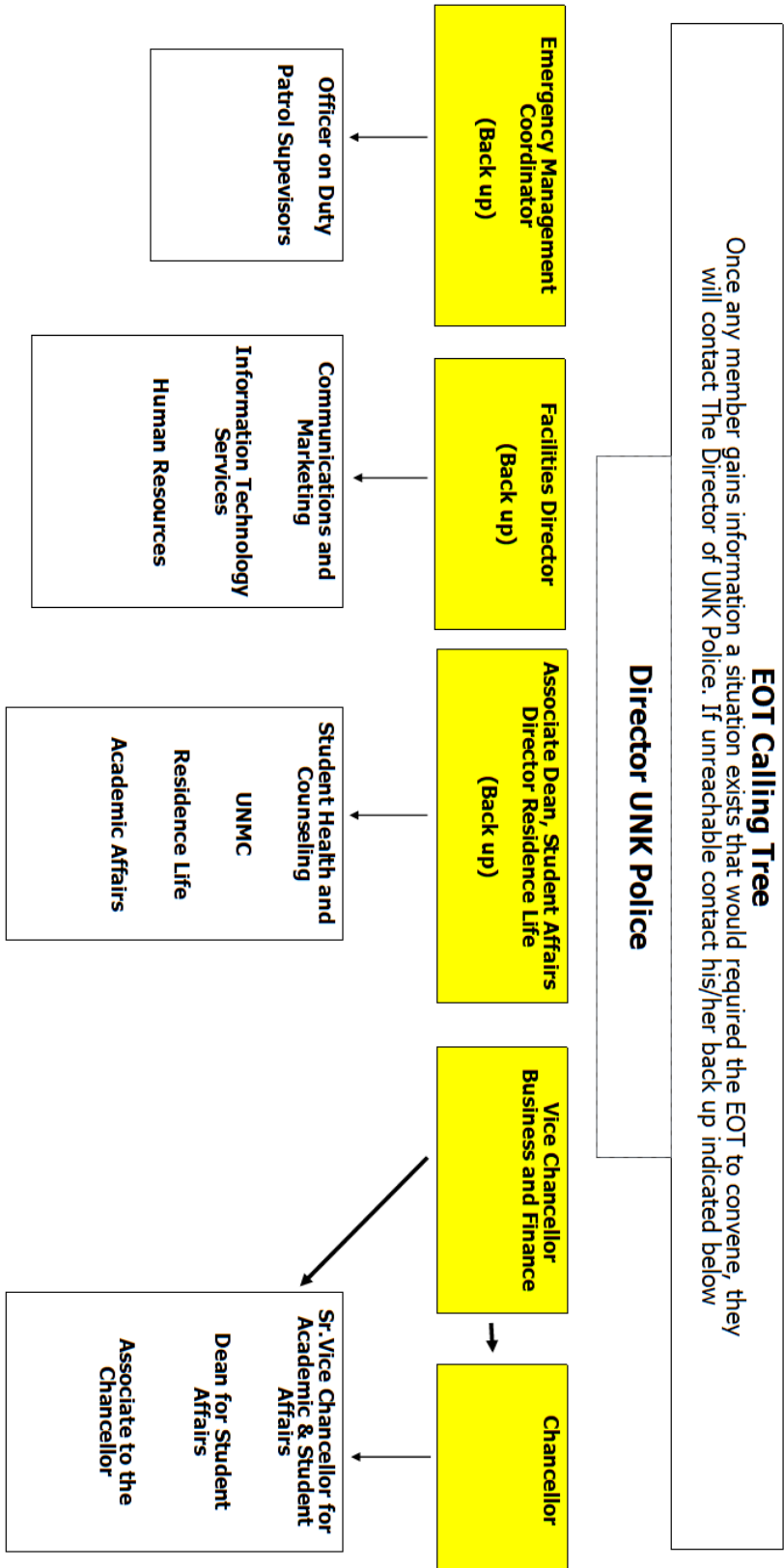
Overall Capability	Limited/Moderate/High
Financial resources to implement mitigation projects	Moderate
Staff/expertise to implement projects	Moderate
Public support to implement projects	Moderate
Time to devote to hazard mitigation	Moderate

Figure UNK.1: University of Nebraska-Kearney Campus Map





Figure UNK.2: EOT Calling Tree



Revised 10-12-18

## Plan Integration

UNK 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 university will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates. All plans are reviewed and updated every four years or as major changes occur.

### **Building Evacuation Plan (2018)**

The building evacuation plan is in place to ensure an orderly and complete evacuation of campus buildings during an emergency. Specific hazards addressed include fire, explosion, bomb threats, hazardous chemical release, and air contamination. The plan includes evacuation instructions and assignments for specific individuals.

### **Campus Evacuation Plan (2018)**

The campus evacuation plan provides for the timely and orderly evacuation of all or part of the UNK campus. The plan assigns responsibilities to specific individuals, incident operation, public notification, transportation, mass care of evacuees, re-entry, and access control. The plan discusses direction and control, identification, communication, administration and logistics, the emergency operation team, and training.

### **Emergency Operation Plan (2019)**

UNK's emergency operations plan is put into effect whenever an emergency situation causes a major disruption to university business, threatens lives of university students, faculty, and/or visitors, or has the potential to cause major damage. Hazards discussed include medical emergencies, flood, tornado, severe weather, fire, terrorism, bomb threat, and chemical spills.

### **Facilities Development Plan (2006)**

The facilities development plan outlines how UNK envisions using its land parcels. It specifically discusses student housing renewal, environmental enhancement, and infrastructure renewal. Floodplain maps are included and require that all new projects within floodplain areas be designed for flood issues. This plan was meant to cover 10 years and currently needs to be updated.

### **Shelter In Place Plan (2018)**

The shelter in place plan covers the actions for seeking immediate shelter indoors following the announcement of an emergency situation. The plan assigns responsibilities to specific individuals/departments, incident operations, public notification, sheltering procedures, access control, and building clearing.

### **Strategic Plan (2021)**

UNK's strategic plan outlines four goals that were developed from each of UNK's four core institutional values. The four goals are: academic quality, access and success, quality faculty and staff, and stewardship of resources. Several strategies are discussed to help meet each of the goals.

### **Sustainability Master Plan (2015)**

The sustainability master plan's goal is to consider social, environmental, and financial responsibility while benefiting present and future generations. The plan discusses university energy, water use, waste production, purchasing, mobility, and emissions. Actions identified in the plan include hiring an energy manager, implementation of sustainable lighting, reduce UNK-

owned IT devices, replace irrigation heads, improve recycling, incorporate sustainable mobility, and prioritize green purchasing.

## Future Development Trends

Over the past five years, UNK has had several buildings demolished and several others built. The university is currently in the process of building five new academic and residential buildings.

## Community Lifelines

### Transportation

Nebraska Highway 30 splits the campus in half and a Union Pacific Railroad line is located south of campus. Highway 30 is traveled by an average of 11,365 vehicles daily, 900 of which are trucks.<sup>111</sup> No hazardous incidents have impacted the university in the past. 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. There are multiple routes in and out of campus, in the event of a significant incident.

### Hazardous Materials

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are two chemical storage sites located near the university.

**Table UNK.3: Chemical Storage Sites**

Name	Address	Floodplain (Y/N)
Nutrien Ag Solutions	1720 16 <sup>th</sup> Ave	N
West Pharmaceutical Services	923 W Railroad St	N

Source: Nebraska Department of Environment and Energy<sup>112</sup>

### 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 UNK.4: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Heating Plant	N	Y	N
2	Warner Hall	N	N	N

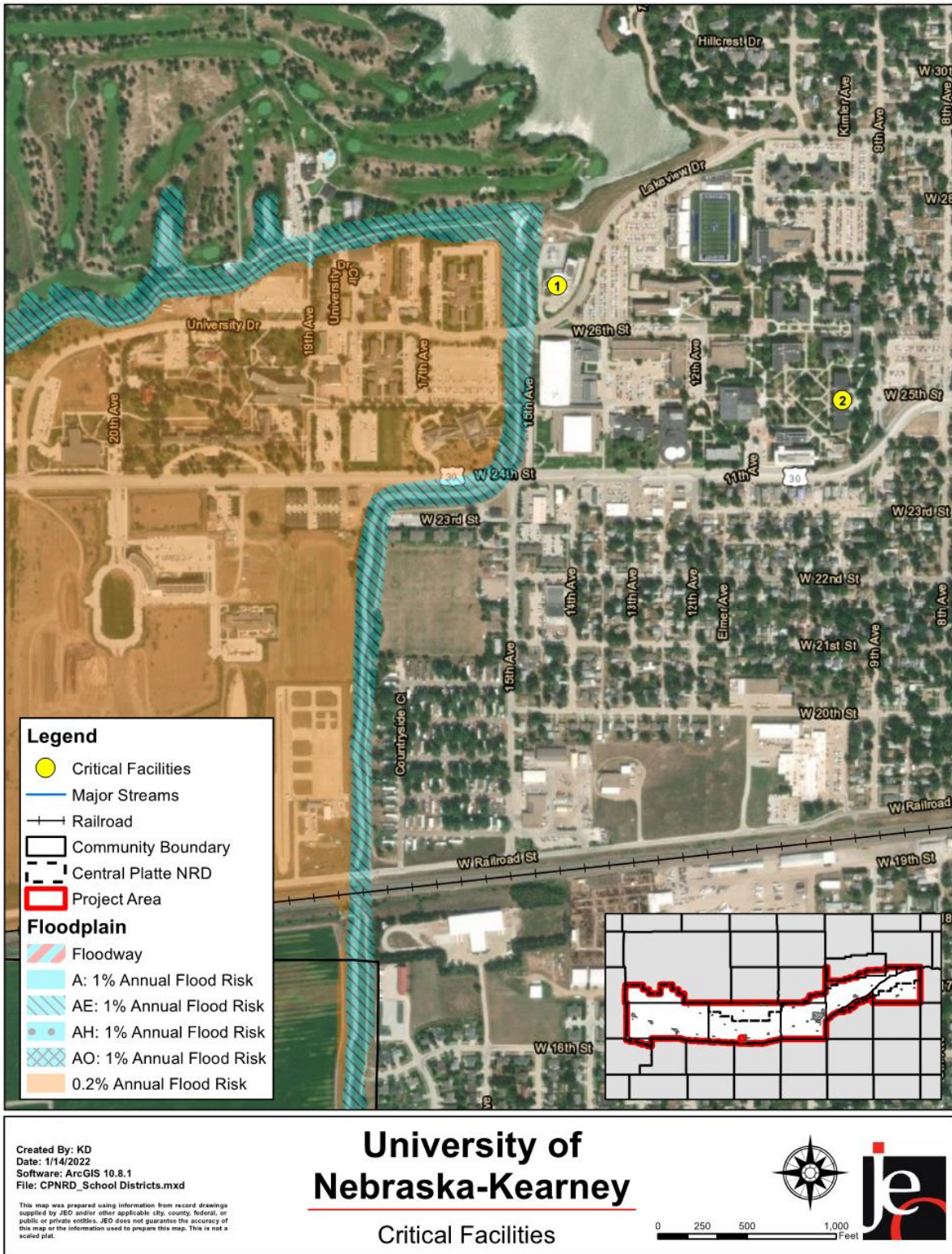
111 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map."

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

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



Figure UNK.3: Critical Facilities



## Historical Occurrences

See the Buffalo 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 university 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 university. The local planning team prioritized the selected hazards based on historical hazard occurrences, potential impacts, and the university's capabilities. For more information regarding regional hazards, please see *Section Four: Risk Assessment*.

### Flooding

While not identified by the local planning team as a hazard of top concern, parts of the campus are located in flood risk areas. The western portion of the campus is located in the 0.2% floodplain and 15<sup>th</sup> Avenue, which runs north south through the center of campus is located in the 1% floodplain. During the July 8<sup>th</sup>, 2019, flood event, the student union was flooded on campus. Two to three feet of water was reported in the lower level of the food court.

### Public Health Emergency

Primary concerns center around the ability to maintain the educational access for students and the ability for UNK employees to continue working. The Covid-19 pandemic created substantial and ongoing changes to the academic and support areas of university operations. To reduce the spread of the virus, lots of safety precautions were instituted during the pandemic. Web cameras and microphones were installed to most classrooms so that classes could be held virtually. Screens were added to office areas to reduce contact. Masks were required throughout most of the pandemic, UNK offered covid testing several times a week, and several mass vaccination clinics were held. Because of the pandemic, the university learned that many of the goals can still be accomplished remotely and safely. For any future outbreaks continued communication efforts is key so that the university can get the information out to students and stall as quickly as possible.

### Severe Thunderstorms

UNK has a significant number of students residing on campus at any given time that need food, shelter, and amenities during a severe thunderstorm event. The biggest impacts from past thunderstorm events includes building damage and building leaks due to heavy rains. No major impacts have been felt in the past two years. In the event of power outages, the university and residence halls have multiple redundancies for power and networking. Notification of severe weather comes from the National Weather Service and Buffalo County Emergency Management. When necessary, that information is forwarded out through UNK Alert, powered by Blackboard Connect, which sends text, phone, and email alerts. In addition, information is also put up on the university's website. To reduce the impacts of severe thunderstorms, UNK has done extensive waterproofing and secured the roofing systems.

### Tornadoes and High Winds

In April 2013 a high windstorm blew the roof off the library and damaged part of the theater. Numerous books and fixtures were damaged in the library. Other straight line wind events have caused damages to multiple buildings. No impacts from tornadoes have occurred in the past. There are no FEMA certified safe rooms on campus, but all buildings have storm shelters that are located in basements or interior rooms. Storm shelter location signs are found near stairways, entryways, and on the university's website.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Backup and Emergency Generators
<b>Description</b>	Bring in mobile generators for use in emergency incidents. Evaluate the need for permanent backup generators at buildings. Purchase permanent backup generators if needed.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$40,000+ per Generator
<b>Local Funding</b>	Unknown
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	UNK Emergency Management and Facilities
<b>Status</b>	Not Started

Mitigation Action	Public Awareness/Education
<b>Description</b>	Obtain or develop hazard education materials to be posted on the university website and fliers around campus; prepare and distribute educational materials listing safe rooms and shelters; purchase equipment such as overhead projectors and laptops to facilitate presentation of information.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	Unknown
<b>Local Funding</b>	Unknown
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	UNK Emergency Management
<b>Status</b>	Not Started

Mitigation Action	Storm Shelter / Safe Room
<b>Description</b>	Evaluate existing storm shelters and safe areas. Install additional storm shelters / safe rooms if needed.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Thunderstorms
<b>Estimated Cost</b>	Unknown
<b>Local Funding</b>	General Fund
<b>Timeline</b>	1 Year
<b>Priority</b>	High
<b>Lead Agency</b>	UNK Emergency Management and Facilities
<b>Status</b>	Evaluation of storm shelters is currently ongoing.

## **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, 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 Director of Facilities, Vice Chancellor of Business and Finance, and Chief of Police will be responsible for reviewing and updating the plan in the future. These individuals will review the plan bi-annually.