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County Profile

Dawson County

Central Platte NRD
Hazard Mitigation Plan Update

2022

Local Planning Team

Dawson 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 DAW.1: Dawson County Local Planning Team

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Brian Woldt	Emergency Manager	Dawson County	Lexington	Lexington
Mark Christiansen	Highway Superintendent	Dawson County	Lexington – Virtually	Lexington – Virtually
Mark Streit	Floodplain Administrator	Dawson County	Lexington	Lexington
Pam Holbrook	Planning/Zoning	Dawson County	Central City – Virtually	-
Rod Reynolds	County Commissioner	Dawson County	Lexington	Lexington

Location and Climate

Dawson County is located in south-central Nebraska and is bordered by Custer, Lincoln, Frontier, Gosper, Phelps, and Buffalo Counties. The total area of Dawson County is 1,019 square miles. Major waterways within the county include Buffalo Creek, Elm Creek, Platte River, Plum Creek, Spring Creek, West Buffalo Creek, and Wood River, as well as Midway Lake, Plum Creek Canyon, Gallagher Lake, and Johnson Lake. Most of Dawson County lies in the dissected plains, plains, bluffs and escarpments topographic region, with the vast majority of the county's land characterized by agricultural fields.

Climate

The average high temperature in Dawson County for the month of July is 88 degrees and the average low temperature for the month of January is 14.9 degrees. On average, Dawson County receives over 23.7 inches of rain and 19.9 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.

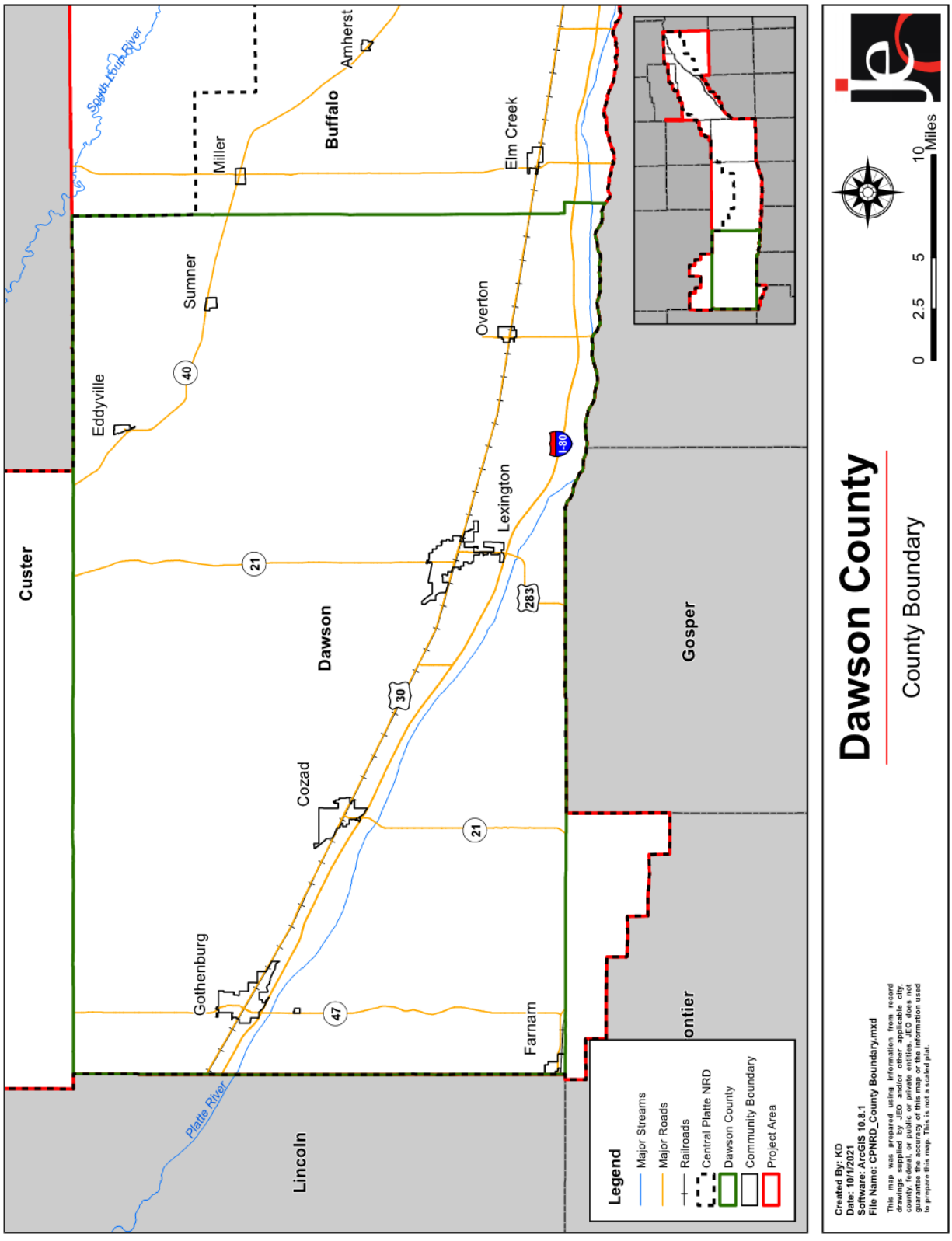
Table DAW.2: Dawson County Climate

	Dawson County	State of Nebraska
July Normal High Temp[1]	88°F	87.4°F
January Normal Low Temp[1]	14.9°F	13.8°F
Annual Normal Precipitation[2]	23.7"	23.8"
Annual Normal Snowfall[2]	19.9"	25.9"

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

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

Figure DAW.1: Dawson County

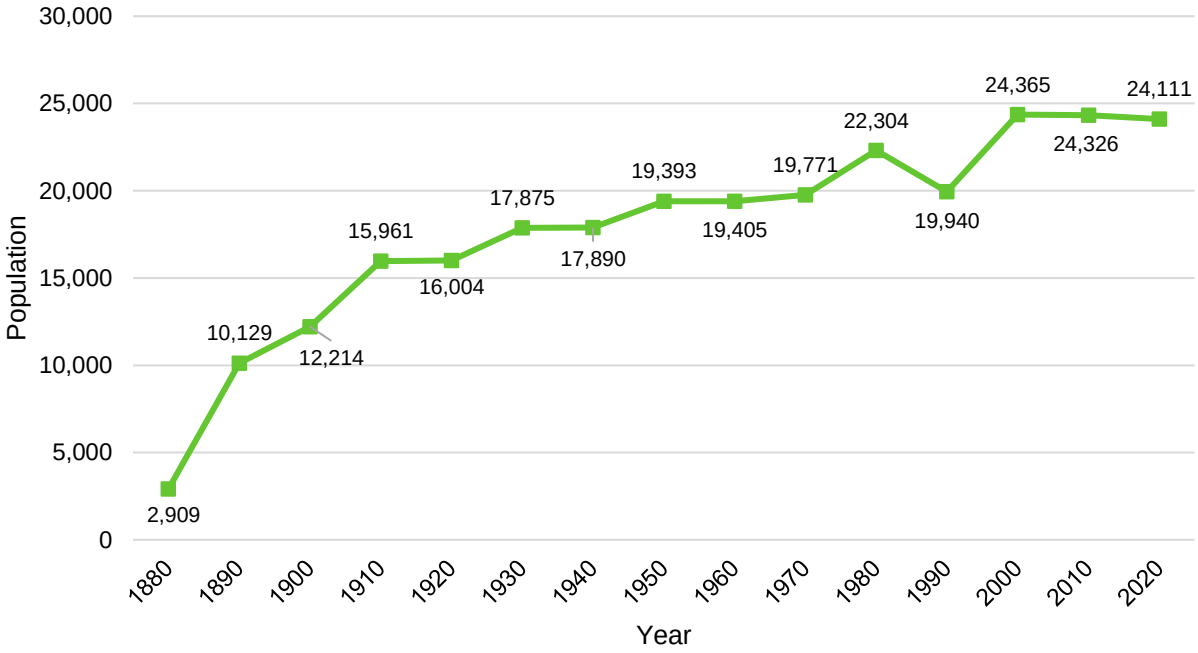


Demographics, Economics, Housing, and Employment

Demographics

The following figure displays the historical population trend from 1880 to 2020. This figure indicates that the population of Dawson County has been slightly decreasing since 2010 to 24,111 people in 2020.[3] A declining population can lead to more unoccupied housing that is not being maintained and is then at risk to high winds and other hazards. Furthermore, with fewer residents, there is decreasing tax revenue for the county, which could make implementation of mitigation projects more fiscally challenging. Dawson County's population accounted for 1.2% of Nebraska's population in 2020.

Figure DAW.2: Population 1880 - 2020



Source: U.S. Census Bureau

The following table indicates Dawson 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 DAW.3: Population by Age

Age	Dawson County	State of Nebraska
<5	8.6%	6.9%
5-64	75.8%	77.7%
>64	15.7%	15.4%
Median	35.7	36.5

Source: U.S. Census Bureau[4]

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

Economics and Housing

The following table indicates that median household income and per capita income for the county is lower than the State of Nebraska. Median home value and rent are also both lower than the rest of the state. 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.

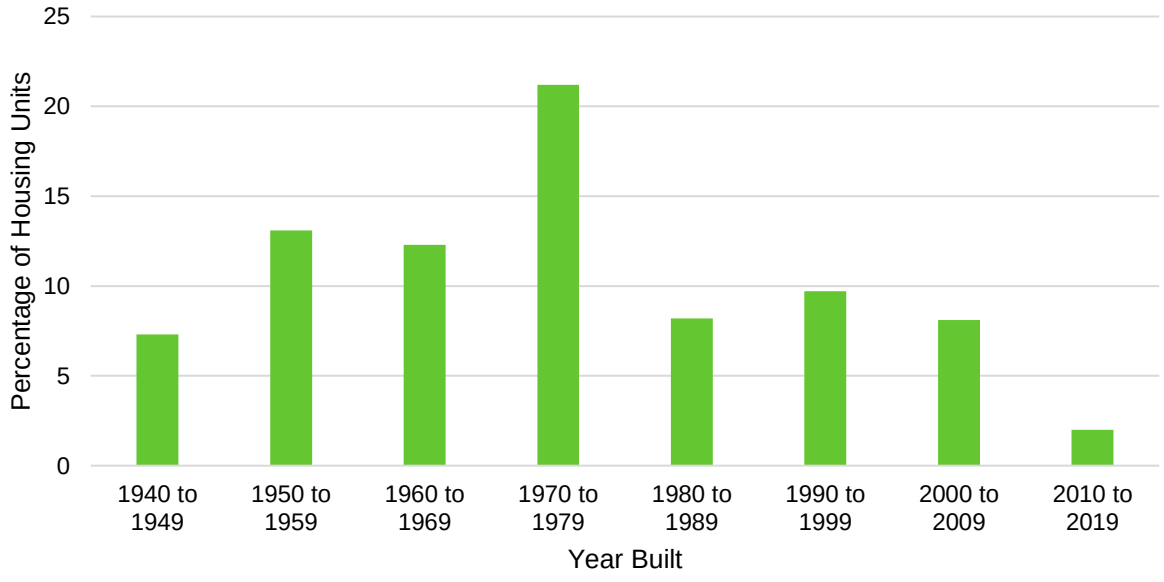
Table DAW.4: Housing and Income

	Dawson County	State of Nebraska
Median Household Income	$53,721	$61,439
Per Capita Income	$25,956	$32,302
Median Home Value	$102,600	$155,800
Median Rent	$730	$833

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

The following figure indicates that most of the housing in Dawson County was built between 1950 and 1979 (46.6%). 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 10,268 housing units with 87.3 percent of those units occupied. The county has two large mobile home parks. One is located on the north edge of Gothenburg and the other on the southeastern edge of Lexington. 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 DAW.3: Housing Units by Year Built



Source: U.S Census Bureau[5]

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

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

Table DAW.5: Housing Units

Jurisdiction	Total Housing Units				Occupied Housing Units			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Dawson County	8,965	87.3%	1,303	12.7%	6,035	67.3%	2,930	32.7%
Nebraska	759,176	90.7%	78,300	9.3%	501,679	66.1%	257497	33.9%

Source: U.S. Census Bureau[5]

Employment

According to 2018 Business Patterns Census Data, Dawson County had 687 business establishments. The following table presents the number of establishments, number of paid employees, and the annual payroll in thousands of dollars.

Table DAW.6: Business in Dawson County

	Total Businesses	Number of Paid Employees	Annual Payroll (In Thousands)
Total for All Sectors	687	8,968	$326,884

Source: U.S Census Bureau [7]

Agriculture is important to the economic fabric of the State of Nebraska. Dawson County's 686 farms cover 610,097 acres of land, about 94% 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 DAW.7: Agricultural Inventory

	Agricultural Inventory
Number of Farms with Harvested Cropland	686
Acres of Harvested Cropland	610,097

Source: USDA Census of Agriculture, 2017[8]

Governance

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

- County Clerk
- County Assessor
- Emergency Management
- Highway Superintendent
- Planning and Zoning
- Sheriff's Office
- Weed Superintendent
- County Treasurer
- Register of Deeds
- County Commissioners
- Veteran's Office

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

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

- Surveyor
- County Attorney
- Probation
- CASA
- County Court
- District Court Clerk
- Roads Department

Capability Assessment

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

County funds are limited to maintaining current facilities, however new capital projects could be budgeted for and then pursued. Currently a large portion of the budget is going towards resurfacing of roads around Lexington. Funds have stayed the same over recent years.

Table DAW.8: Capability Assessment

Survey Components/Subcomponents		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	Yes
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	No
	Floodplain Ordinance	Yes
	Building Codes	Yes - State
	National Flood Insurance Program	Yes
	Community Rating System	No
	Other (if any)	Loess Canyons Community Wildfire Protection Plan, Elm and Turkey Creeks Watershed Flood Risk Reduction Plan, Spring and Buffalo Creeks Watershed Flood Risk Reduction Plan, Wood River Watershed Study
Administrative & Technical Capability	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	Yes
	Local Staff Who Can Assess County's Vulnerability to Hazards	Yes
	Grant Manager	Yes

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

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

Plan Integration

Dawson 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.

Comprehensive Plan (2019)
The comprehensive plan is designed to guide the future actions and growth of the county. It contains goals aimed at safe growth, directs development away from the floodplain, directs housing away from major transportation routes, encourages clustering of development, encourages the elevation of structures in the floodplain, and encourages the preservation of open space. The comprehensive plan will next be updated in 2029.

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

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 (2013) and Zoning Regulations (2019)
The county's floodplain ordinance and zoning regulations outline where and how development should occur in the future. These documents contain floodplain maps, discourage development in the floodplain, and require more than one foot elevation above Base Flood Elevation. The zoning regulations are currently in the process of being updated.

Loess Canyons Community Wildfire Protection Plan (2021)
The purpose of the Loess Canyons Community Wildfire Protection Plan (CWPP) is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county-specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. Wildfire projects and concerns from the 2017 HMP were included in the CWPP and wildfire projects in the current HMP will included during the next CWPP update. This document is updated every five years.

Spring and Buffalo Creeks Watershed Flood Risk Reduction Plan (Under Development)
The primary purpose of the Spring and Buffalo Creeks Flood Risk Reduction Plan is flood risk reduction within and near the community of Lexington and Dawson County. It will identify projects within the watershed to help reduce flood risk and damages to agricultural property, homes, and businesses, as well as opportunities for groundwater recharge, threatened and endangered species habitat improvements, and recreation. 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

Over the past five years, there has been very few changes in the unincorporated areas of the county. All new structures were built outside the floodplain or other known hazardous areas. There are no plans for new housing or business developments in the next five years. Dawson County's zoning map, located on the next page, shows mainly general agriculture with the a few rural residential areas near Highway 30 and around Johnson Reservoir.

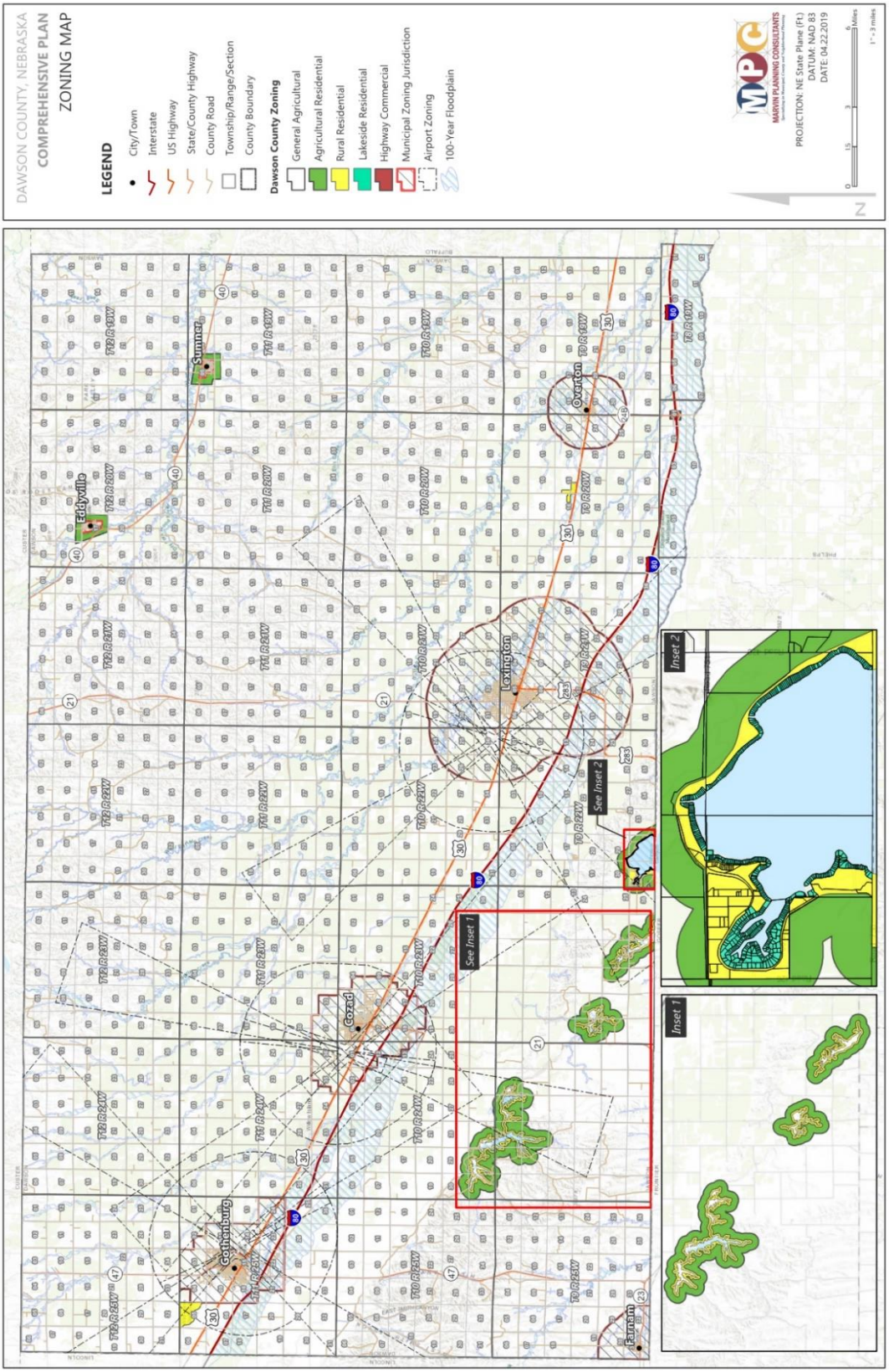
Community Lifelines

Transportation

Dawson County's major transportation corridors include Interstate 80, US Highways 30 and 283 and Nebraska State Highways 21, 40, 47. The most traveled route is Interstate 80 with an average of 3,095 vehicles daily, 240 of which are trucks.[9] A Union Pacific Railway rail line runs southeast to northwest through the county. All of these routes regularly transport chemicals with I-80 and the railroad having the most. The county also has the Cozad Municipal Airport, Quinn Field Airport, and Jim Kelly Field 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.

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

Figure DAW.4: Zoning Map



Hazardous Materials

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are a total of 53 chemical storage sites throughout Dawson 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. An anhydrous ammonia spill occurred at the Tyson Plant but was all contained to the facility.

Table DAW.9: Chemical Storage Sites

Name	Address	Floodplain (Y/N)
AT&T NE6020	77050 Road 446, Sumner, NE	N
AT&T NE6030	77252 Drive 425, Cozad, NE	N
AT&T NEA041/NE9154	77048 Drive 428, Lexington, NE	N
Bowie Fertilizer Inc	44320 Road 753, Overton, NE	Y (1%)
CenturyLink	413 10th St, Gothenburg, NE	N
CenturyLink	112 E 7th St, Lexington, NE	Y (0.2%)
Chief Ethanol Fuels Inc	1111 E Industry Dr, Lexington, NE	N
CHS Inc	305 3rd St, Overton, NE	N
Country Partners Cooperative	404 Willow St, Cozad, NE	N
Country Partners Cooperative	120 8th St, Gothenburg, NE	N
Country Partners Cooperative	707 E Pacific St, Lexington, NE	N
Country Partners Cooperative	302 W Highway 30, Cozad, NE	N
Country Partners Cooperative	Highway 40 W, Sumner, NE	N
Country Partners Cooperative	220 S Meridian Ave, Cozad, NE	N
Country Partners Cooperative	43571 Highway 30, Lexington, NE	Y (1%)
Country Partners Cooperative	300 E Monroe St, Cozad, NE	N
Country Partners Cooperative	400 Locust St, Cozad, NE	N
Country Partners Cooperative	41250 E Highway 30, Gothenburg, NE	N
Country Partners Cooperative	1306 E Walnut St, Lexington, NE	N
Country Partners Cooperative	41624 Highway 30, Willow Island, NE	N
Country Partners Cooperative	505 3rd St, Overton, Ne	N
Country Partners Cooperative	606 N Main St, Sumner, NE	N
Country Partners Cooperative	208 Moose St, Farnam, NE	N
Country Partners Cooperative	40923 Highway 23, Farnam, NE	N
Country Partners Cooperative	1410 W Highway 30, Cozad, NE	N
Country Partners Cooperative	820 E 3rd St, Cozad, NE	N
Darling Ingredients Inc	1208 E Walnut St, Lexington, NE	N
Davis Energy Inc	925 W Pacific Ave, Lexington, NE	N
Dawson County Maintenance Shop	1120 10th St, Gothenburg, NE	N
Dawson County Shop	710 W 8th St, Lexington, NE	Y (0.2%)
Dawson County Yard	300 E 4th Ave, Sumner, NE	N
Doug Gengenbach Livestock	75081 Road 422, Eustis, NE	N
Earth Science Laboratories Inc	75190 Road 448, Overton, NE	N
Frito-Lay Inc	311 Cottonwood Dr, Gothenburg, NE	Y (0.2%)
Hunt Cleaners Inc	604 W 2nd St, Cozad, NE	N
Island Dehy Co Inc	303 S Meridian Ave, Cozad, NE	N
MCI	75311 Road 441, Overton, NE	Y (1%)
Mid State Aviation II Inc	1304 W Highway 30, Cozad, NE	N
Midwest PMS LLC	408 W Ivan St, Lexington, NE	N
NDOT Gothenburg Yard	123 Lake Ave, Gothenburg, NE	Y (1%)

Name	Address	Floodplain (Y/N)
NDOT Lexington Yard	2812 Plum Creek Pkwy, Lexington, NE	N
NebraskaLand Truck Center	3002 Plum Creek Pkwy, Lexington, NE	N
Nutrien Ag Solutions	308 W 2nd St, Cozad, NE	N
Orthman Manufacturing Inc	75765 Road 435, Lexington, NE	N
Orthman Manufacturing Inc	620 Frontier St, Lexington, NE	N
Paulsen Corporate Headquarters	1116 E Highway 30, Cozad, NE	N
Paulsen Inc	43434 Heartland Rd, Lexington, NE	N
Paulsen Inc Redi-Mix Plant	903 Willow Island Rd, Gothenburg, NE	Y (1%)
Schwan's Home Service	514 W 2nd St, Cozad, NE	N
TIGT Lexington Compressor Sta	75780 Road 435, Lexington, NE	N
Titan Machinery Inc	75481 Road 435, Lexington, NE	Y (0.2%)
Tyson Fresh Meats Inc	1500 Plum Creek Pkwy, Lexington, NE	N
Union Pacific Railroad	100 W Railroad St, Cozad, NE	N

Source: Nebraska Department of Environment and Energy[10]

Health and Medical Facilities

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

Table DAW.10: Health and Medical Facilities

Name	Type of Facility	Address	Number of Beds
Avamere at Lexington	Assisted Living Facility	1811 Ridgeway Lexington, NE 68850	59
Meadowlark Pointe Assisted Living	Assisted Living Facility	2300 Ave O Cozad, NE 69130	69
Stone Hearth Estates	Assisted Living Facility	110 W 20th St, Ste 400 Gothenburg, NE 69138	65
Wel-Life at Plum Creek	Assisted Living Facility	1505 North Adams St Lexington, NE 68850	29
Emerald Nursing and Rehab Cozad	Assisted Living Facility/Long Term Care Facility	318 West 18th Street Cozad, NE 69130	89
Cozad Community Hospital	Hospital	300 East 12th St Cozad, NE 69130	20
Gothenburg Memorial Hospital	Hospital	910 20th St Gothenburg, NE 69138	12
Lexington Regional Health Center	Hospital	1201 North Erie St Lexington, NE 68850	25
Hilltop Estates	Long Term Care Facility	2520 Ave M Gothenburg, NE 69138	64
Plum Creek Care Center	Long Term Care Facility	1505 North Adams St Lexington, NE 68850	66
Cozad Community Medical Clinic	Rural Health Clinic	1803 Papio Lane Cozad, NE 69130	0

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

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

Critical Facilities

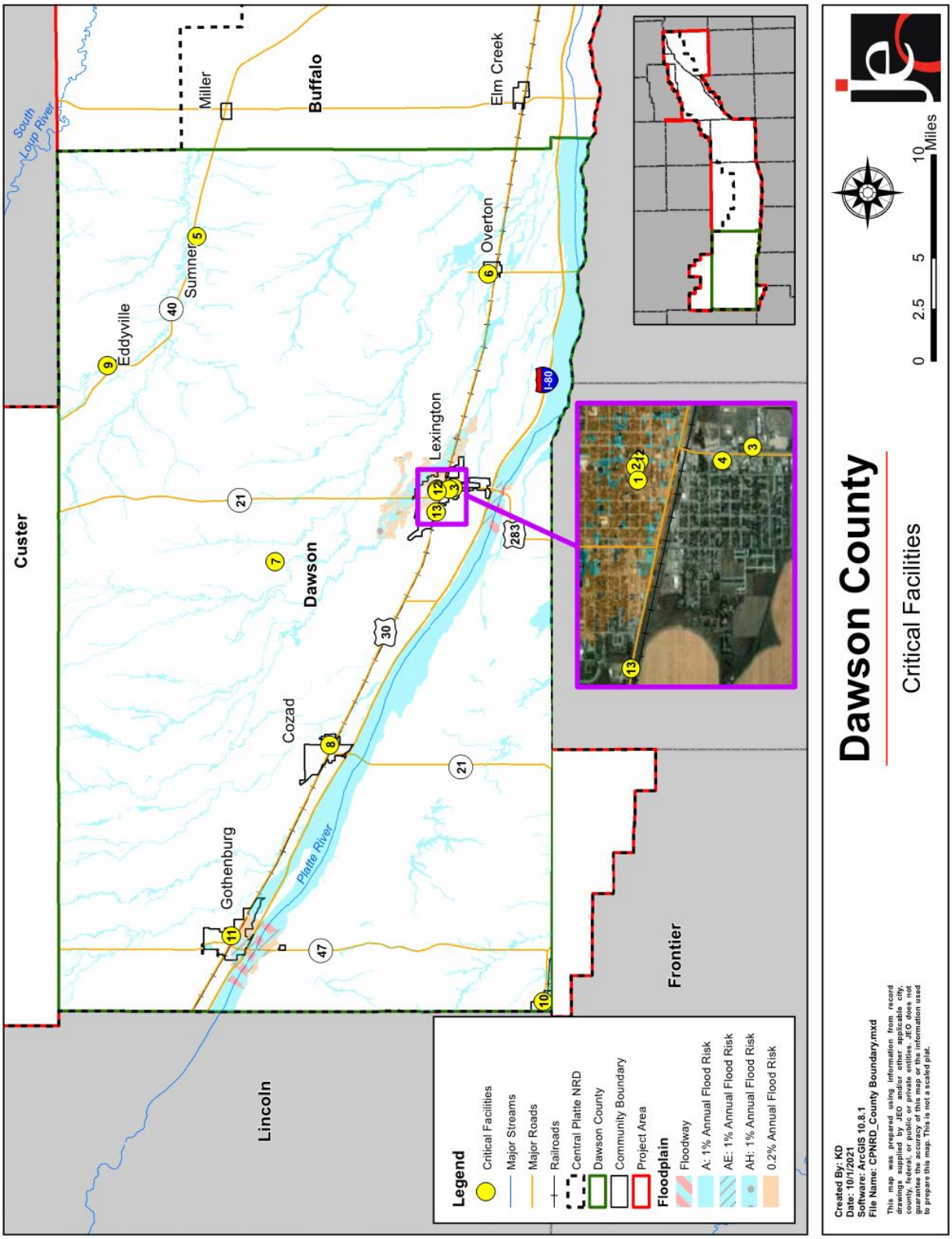
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during 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 DAW.11: Critical Facilities

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	County Office Space and Storage	N	N	Y (0.2%)
2	Courthouse	N	N	N
3	Extension Building	N	N	N
4	Handy Bus Barn	N	N	N
5	Roads Shop	N	N	N
6	Roads Shop	N	N	N
7	Roads Shop	N	N	N
8	Roads Shop - Cozad	N	N	N
9	Roads Shop – Eddyville	N	N	N
10	Roads Shop – Farnam	N	N	N
11	Roads Shop – Gothenburg	N	N	N
12	Sheriff Office/Jail	N	Y	Y (1%)
13	Weed District	N	N	N

Figure DAW.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 DAW.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
9,520	$1,234,924,706	1,631	$266,349,541	17.1%

Source: County Assessor, 2021

Table DAW.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
9,520	$1,234,924,706	2,143	$257,598,525	22.5%

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 Dawson County between 2000 and 2020.

Table DAW.14: County Hazard Loss History

Hazard Type		Count	Property Damage	Crop Damage[2]
Animal & Plant Disease	Animal Disease[1]	28	302 animals	N/A
	Plant Disease[2]	12	N/A	$165,975
Dam Failure[5]		3	N/A	N/A
Drought[6]		444 of 1,513 months	$0	$9,605,690
Earthquakes[12]		1	$0	N/A
Extreme Heat[7]		Avg. 6 Days a Year	N/A	$7,694,340
Flooding[8] *1 Fatality, 1 Injury*	Flash Flood	14	$5,575,000	$235,341
	Flood	7	$308,000	
Grass/Wildfires[9] *1 Injury*		455	27,565 acres	$57,895
Hazardous Materials Release	Fixed Site[3]	47	$0	N/A
	Transportation[4]	11	$719,820	N/A
Levee Failure[11]		0	$0.00	N/A
Public Health Emergency		2	N/A	N/A
Severe Thunderstorms[8] *3 Injuries*	Thunderstorm Wind Range: 50-92 Average: 57	140	$17,483,000	$55,900,701
	Hail Range: 0.75-4.5 in Average: 1.17 in.	252	$82,000,000	

Hazard Type		Count	Property Damage	Crop Damage[2]
	Heavy Rain	29	$587,000	
	Lightning	3	$95,000	
Severe Winter Storms[8] *2 Fatalities, 6 Injuries*	Blizzard	10	$375,000	$1,209,381
	Extreme Cold/Wind Chill	4	$0	
	Heavy Snow	4	$0	
	Ice Storm	6	$3,020,000	
	Winter Storm	42	$180,000	
	Winter Weather	41	$5,000	
Terrorism[10]		0	$0	N/A
Tornadoes and High Winds[8] *9 Injuries*	Tornadoes Range: EF0-EF2 Average: EF0	17	$3,990,000	$490,000
	High Winds Range: 35-61 Average: 51	56	$1,292,080	$2,530,845
Total		**1,207**	**$33,304,900**	**$70,858,854**

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

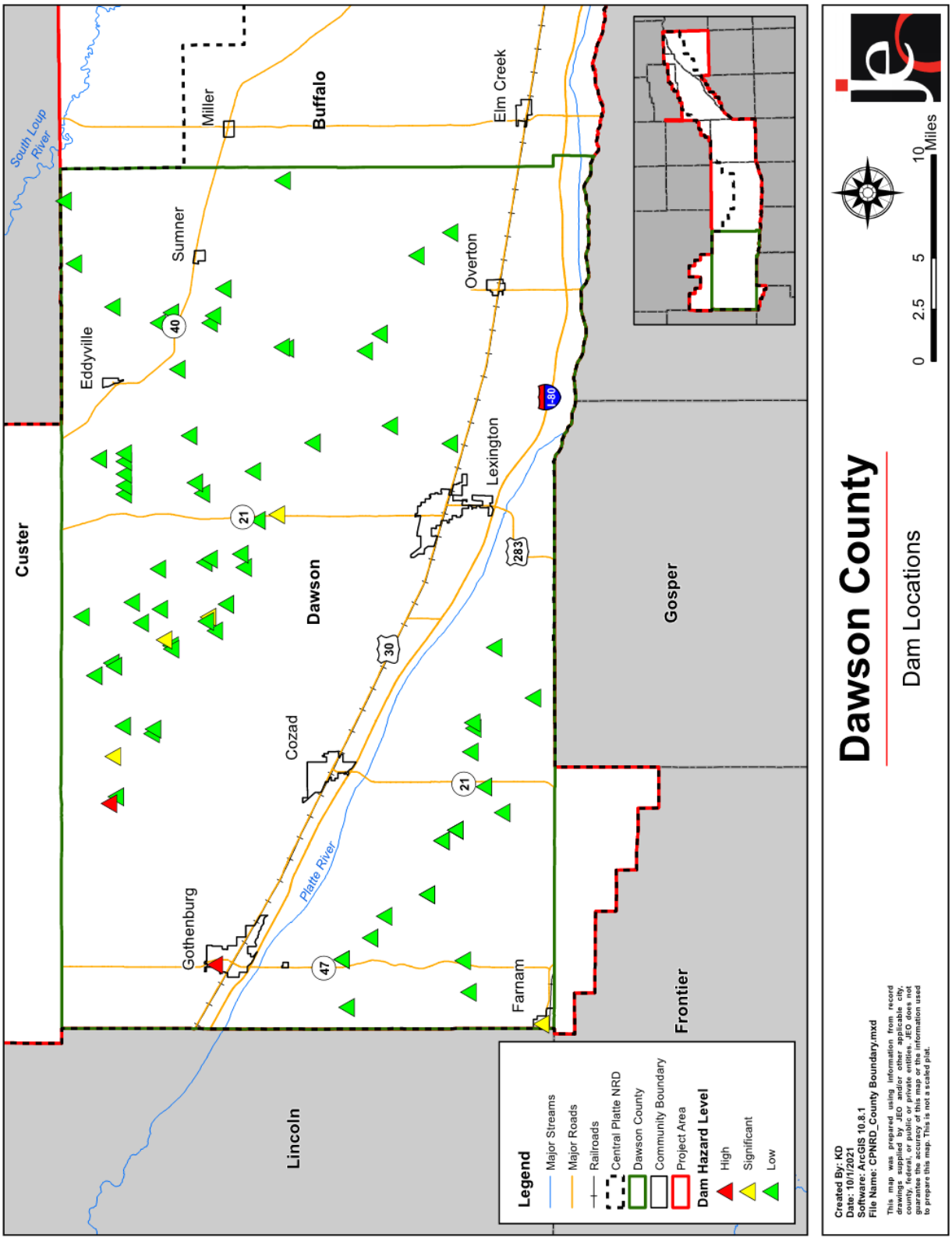
Hazard Prioritization

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*.

Dam Failure

There are 84 dams in Dawson County. Of these, two dams have been identified as high hazard potential dams: Spring Creek Dam #19-B and Lake Helen Dam. Spring Creek Watershed Dam #19-B was upgraded to a high hazard dam as of 2019. Dawson County owns and maintains this dam. Three low hazard dam failures have occurred in the county but there were no reported damages. If a high hazard potential dam was 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 Dawson County if it was to fail with impacts likely felt all along the Platte River. Figure DAW.6 shows the location of all the dams in the county.

Figure DAW.6: Dam Locations



Drought

Crop damage and available drinking water are the primary concerns as it relates to drought in the county. Agriculture is a significant economic driver in the county and a prolonged drought could result in economic impacts if crops were to fail. In Dawson County, drought may be defined as an extended period of time without significant rainfall. In 2002, extreme to exceptional drought occurred during the summer and fall months and resulted in millions of dollars in damages to crops across the region. Between 2012 and 2013, south central Nebraska, including Dawson County, saw 19 consecutive months where drought was categorized as at least severe. Crops were again impacted, and over $5,000,000 million in crop damages occurred during the drought. Dawson County would like to develop a Drought Management Plan to outline drought responses and identify water monitoring protocols.

Flooding

Flooding in the county is primarily localized in nature and occurs from heavy rainfall or lowland flooding by the river. Flash flooding has been the primary concern and has caused the highest amount of damages. In May 2005, thunderstorms brought flash flooding when they dropped between four and twelve inches of rain across the area. A few people needed to be rescued from rising waters and the storms also brought high winds that knocked out power to the Lexington area. In total, $1,000,000 in damages occurred in Dawson County. More recently major flooding occurred in March and July 2019. The events closed major roadways, flooded homes and businesses, and destroyed culverts. An estimated $4,100,000 in damages occurred. During the peak of flooding, so many roads were closed that Dawson County ran out of barricades. Pasture and crop land was also impacted as several inches of sand and silt were washed into fields near rivers and creeks. For community specific concerns and impacts to these events, see the individual community participant sections. The county works with local communities to maintain and cleanout drainage ditches and culverts. Communities most likely to flood include Lexington, Cozad, Gothenburg, and Overton.

Portions of the county fall under the Elm and Turkey Creeks and Spring and Buffalo Creeks Watershed Flood Risk Reduction Plans, which 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.

Dawson County is a member of the NFIP, and the county's Floodplain Administrator (Mark Streit) will oversee the commitments and requirements of the NFIP. The initial FIRM for the county was delineated in 7/1/1988 and the current effective map date is 5/3/2011. Over 29% 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 36 NFIP policies in-force covering $6,715,500. Dawson County has three single-family homes that are repetitive loss properties. A mitigation action can be found in the county's Mitigation Strategy to address these structures.

Severe Thunderstorms

Tree damage, heavy rainfall, high winds, and lightning strikes to critical infrastructure are the primary impacts that concern planning team members about severe thunderstorms. The local planning team noted that Willow Island Road has hazardous trees that need to be removed to reduce the possibility of damage from high winds during severe thunderstorms. The County Jail has a backup power generator, and the county has identified the need for additional backup power

generators, particularly at the County Courthouse. The most damaging event occurred in 2014 when 2.75-inch hail caused $2,000,000 in damages across the county.

Severe Winter Storms

Severe winter storms occur on an annual basis in Dawson County and can include high winds, blowing snow, ice, and high snow accumulations. 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, $2,000,000 in damages were reported from this storm. The county's snow removal resources are sufficient at this time, and the county regularly trims trees to reduce tree damage. The local planning team is most concerned with road closures and power outages. Approximately 1% of power lines are buried in the county leading to an increased risk of power loss from fallen branches and broken poles.

Tornadoes and High Winds

According to the NCEI, 17 tornadoes have touched down in Dawson County since 1996. An EF-2 tornado struck near Gothenburg and injured nine people after it crossed Interstate 80, blowing cars off the road. Nearly a dozen head of cattle were killed, and several outbuildings and a farmhouse were destroyed. About $2,500,000 in damages were reported from the event. In 2019 an EF-1 tornado caused $900,000 in damages along the east side of Cozad and surrounding rural areas. All of the communities in the county have warning sirens and County Emergency Management conducts outreach and education annually. The county is interested in installing a public safe room at the County Courthouse along with a backup power generator. Emergency Management would also maintains a database of vulnerable populations and the organizations which support them.

Mitigation Strategy

New Mitigation Actions

Mitigation Action	Project Scoping
Description	Evaluate potential flood risk reduction alternatives as identified through the NRCS WFPO including project scoping and implementation.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies by Project
Local Funding	Property Taxes, WFPO
Timeline	2-5 Years
Priority	Medium
Lead Agency	Floodplain Administrator
Status	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 county.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies by Project
Local Funding	Property Taxes, Private Owner Funds
Timeline	5+ Years
Priority	Low
Lead Agency	Floodplain Administrator
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	Property Taxes
Timeline	2-5 Years
Priority	High
Lead Agency	County Emergency Management
Status	Not Started

Mitigation Action	Database of Vulnerable Population
Description	Work with stakeholders to develop a database of vulnerable populations and the organizations which support them.
Hazard(s) Addressed	All Hazards
Estimated Cost	$2,000, Staff Time
Local Funding	Property Taxes
Timeline	Ongoing
Priority	Medium
Lead Agency	County Emergency Management
Status	This is an ongoing action.

Mitigation Action	Develop a Drought Management Plan
Description	Work with relevant stakeholders to develop a drought management plan; identify water monitoring protocols; outline drought responses; identify opportunities to reduce water consumption; and establish the jurisdictional management procedures.
Hazard(s) Addressed	Drought
Estimated Cost	$25,000+
Local Funding	Property Taxes
Timeline	5+ Years
Priority	Low
Lead Agency	County Emergency Management
Status	Not Started

Mitigation Action	Improve Drainage
Description	Improve storm sewers and drainage patterns in and around the community; deepen drainage ditches and clean out culverts.
Hazard(s) Addressed	Flooding
Estimated Cost	$5,000+
Local Funding	Property Taxes
Timeline	Ongoing
Priority	Low
Lead Agency	Roads Department, Local Communities
Status	This is an ongoing action as issues are identified.

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	$5,000+
Local Funding	Property Taxes
Timeline	Ongoing
Priority	Medium
Lead Agency	County Emergency Management
Status	This is an ongoing action.

Mitigation Action	Reduce Damages from Floods, Stormwater, and Heavy Precipitation Event
Description	Conduct stormwater drainage study; evaluate and implement recommendations or comparable measures to improve drainage; evaluate and improve stormwater system.
Hazard(s) Addressed	Flooding
Estimated Cost	$10,000 - $100,000+
Local Funding	Property Taxes
Timeline	2-5 Years
Priority	Medium
Lead Agency	Surveyor, Roads Department, County Emergency Management
Status	This is an ongoing action as issues are identified.

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	$10,000+
Local Funding	Property Taxes
Timeline	Ongoing
Priority	Low
Lead Agency	Roads Department
Status	This is an ongoing action as issue 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	Property Taxes
Timeline	5 Years
Priority	Medium
Lead Agency	County Emergency Management, County Board
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.

Dawson County last reviewed their section of the HMP in 2017 during the plan update. Emergency Management and a county commissioner will be responsible for reviewing and updating the plan annually in the future.

Community Profile

City of Cozad

Central Platte NRD
Hazard Mitigation Plan

2022

Local Planning Team

The City of Cozad'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 COZ.1: Cozad Local Planning Team

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Troy Franzen	Water/Sewer Commissioner	City of Cozad	Lexington – Virtually	-
Jimmy Wienmaster	Public Services Commissioner	City of Cozad	-	-
Jerry Fales	Electric Commissioner	City of Cozad	-	-
Doug Adkisson	Zoning and Planning / Floodplain Administrator	City of Cozad	-	Lexington
Alison Feik	Emergency Coordinator	Cozad Community Health System	Lexington – Virtually	Lexington - Virtually

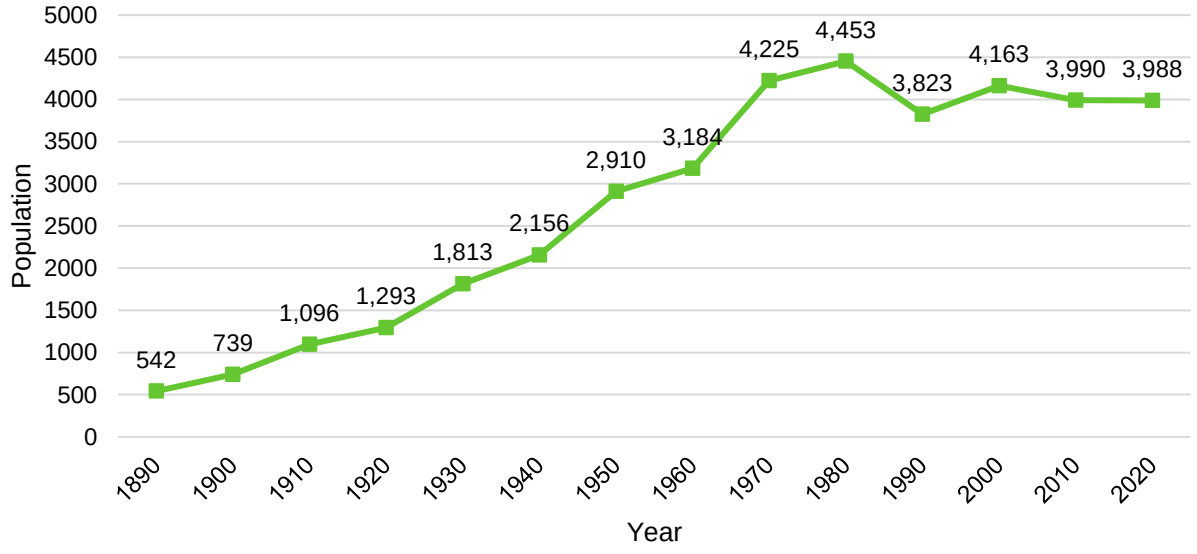
Location and Geography

The City of Cozad is in central Dawson County and covers an area of 2.6 square miles. The major waterway in the area is the Platte River.

Demographics

The following figure displays the historical population trend for the City of Cozad. This figure indicates that the population of Cozad has been declining since 2000 to 3,988 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. Cozad's population accounted for 16.5% of Dawson County's population in 2020.[15]

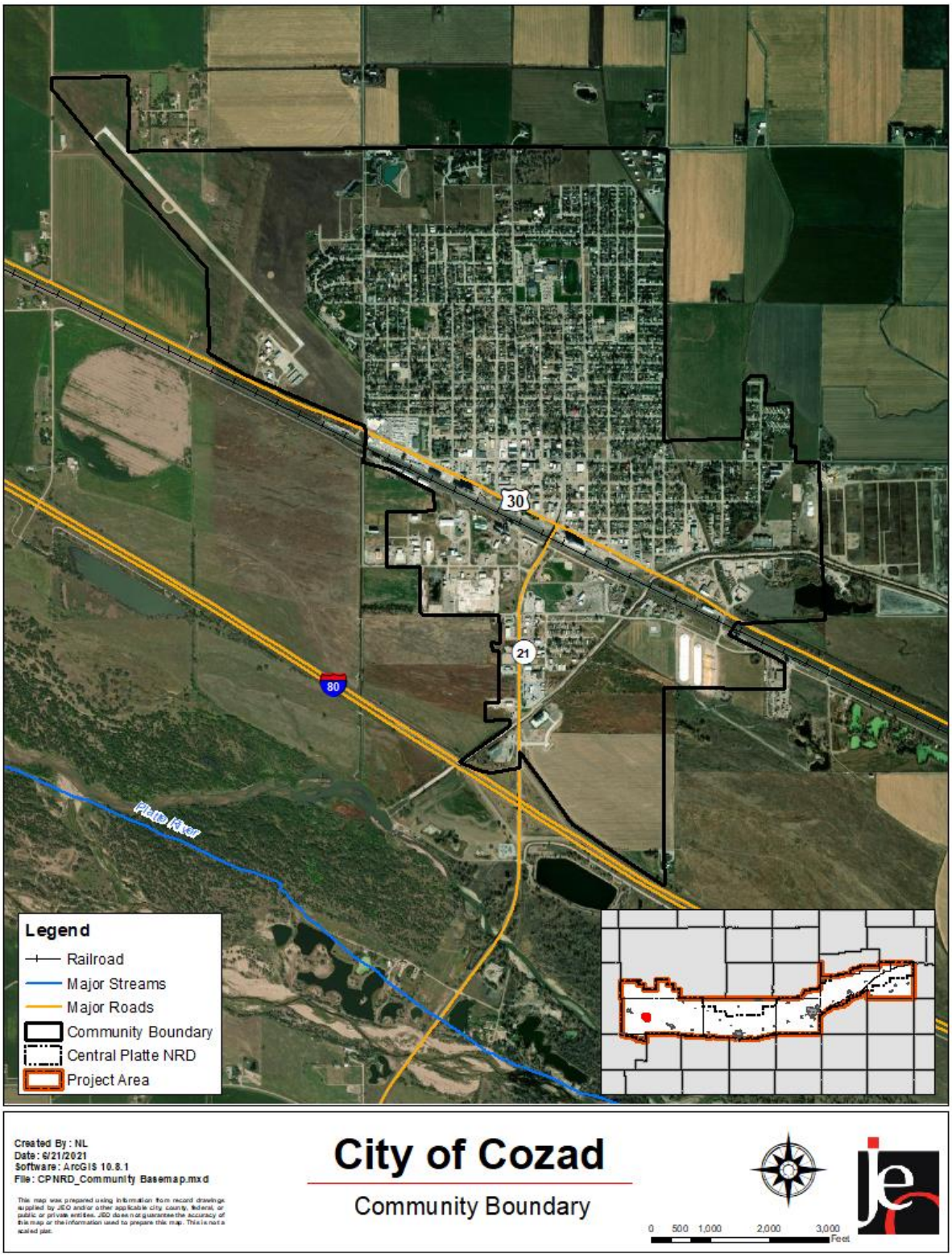
Figure COZ.1: Population 1890 - 2020



Source: U.S. Census Bureau

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

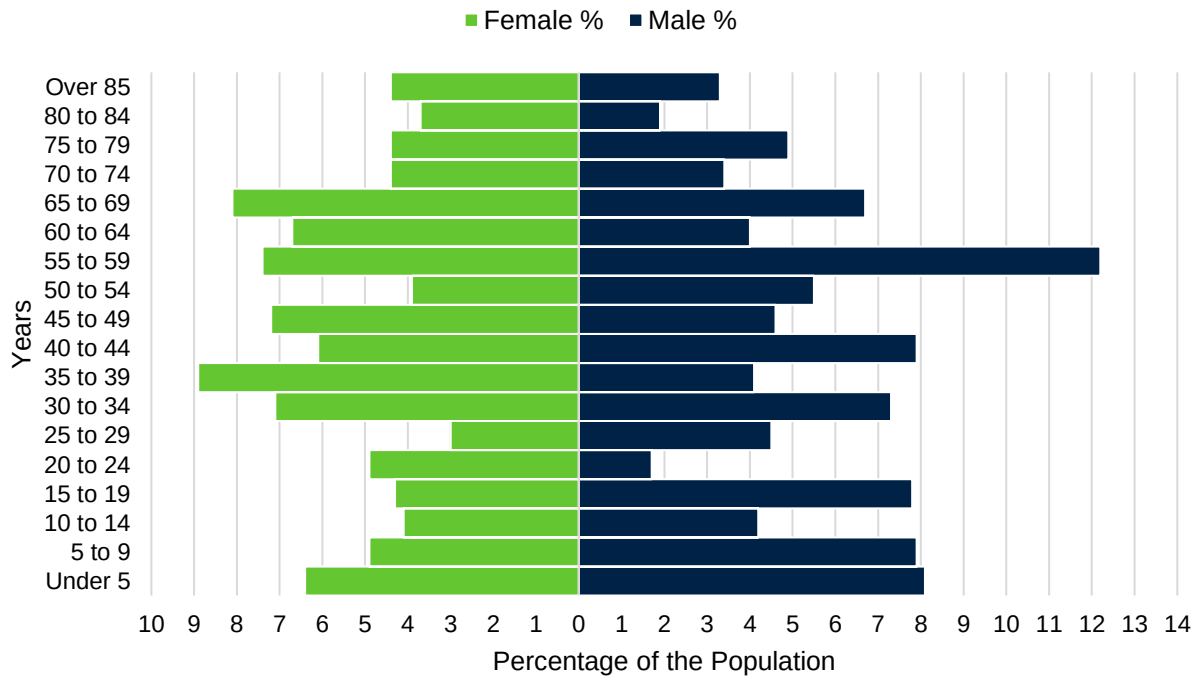
Figure COZ.2: City of Cozad



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

- **7.6% is non-white.** Since 2010, Cozad grew more ethnically diverse. In 2010, 6.6% of the Cozad's population was non-white. By 2019, 7.6% was non-white.[16]
- **Older median age.** The median age of Cozad was 44.2 years in old 2019. The population grew older since 2010, when the median age was 39.3.[17]

Figure COZ.3: Cozad's Population Pyramid



The figure above shows Cozad's population percentage broken down by sex and five-year age groups. The majority of Cozad's population is between the ages of five to 19 and 30 to 65. This likely indicates that Cozad's population will remain stable in the future.

Employment and Economics

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

- **11.8% of people living below the poverty line.** The poverty rate (11.8%) in the City of Cozad was higher than the state's poverty rate (7.2%) in 2019.[18]
- **$46,196 median household income.** Cozad's median household income in 2019 ($46,196) was $15,000 lower than the state ($61,439).[18]
- **1.5% unemployment rate.** In 2019 Cozad had a lower unemployment rate (1.5%) when compared to the state (2.3%).[18]

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

- **23% of workers commuted 30 minutes or more to work.** Fewer workers in Cozad commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (23% compared to 54.6%).[19]

Major Employers

The major employers in the city are Cozad Healthcare System, Golden Living Center, Nebraska Plastics, VVS Inc., Paulsen Inc., and Cozad Community Schools. Approximately 15-20 percent of residents commute to Lexington and Gothenburg.

Housing

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

- **77.6% of housing built prior to 1970.** Cozad has a larger share of housing built prior to 1970 than the state (77.6% compared to 46%).[20]
- **11.3% of housing units vacant.** Since 2010, Cozad's vacancy rate grew. In 2010 the vacancy rate was 8.4%. By 2019, 11.3% of housing units were vacant.[20]
- **6.7% mobile and manufacture housing.** The City of Cozad had a larger share of mobile and manufactured housing (6.7%) compared to the state (3.3%).[20]
- **33.8% renter-occupied.** The rental rate of Cozad was 33.8% in 19. The percentage went up since 2010, when renter occupied housing was at 26.4%.[20]

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 Cozad 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
- Streets/Parks Commissioner
- Planning Commission
- Housing Authority
- Water and Sewer Department
- Fire Department
- Police Department
- Library Board
- Electric Department
- Street Department
- Board of Public Works

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

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

Capability Assessment

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

Municipal funds are limited to maintaining current facilities and systems with a large portion already dedicated to infrastructure and pool improvements. Funds have stayed the same over recent years.

Table COZ.2: Capability Assessment

Survey Components/Subcomponents		Yes/No
Planning & Regulatory Capability	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
Administrative & Technical Capability	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	No
	Chief Building Official	Yes
	Civil Engineering	Yes
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	Yes
	Mutual Aid Agreement	Yes
	Other (if any)	-
Fiscal Capability	Capital Improvement Plan/ 1- & 6-Year plan	Yes
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	Yes
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes

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

Plan Integration

Cozad 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.

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 upgrading storm sewer systems, widening roadways, installing new municipal wells, upsizing water distribution pipes, installing water meters, burying power lines, and updating the electrical distribution system. 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 directs development away from the floodplain and directs housing away from chemical storage facilities and major transportation routes. Given the recent update of the plan, there is currently no plan to update the document.

Dawson County Local Emergency Operations Plan (2020)
Cozad 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 every five years.

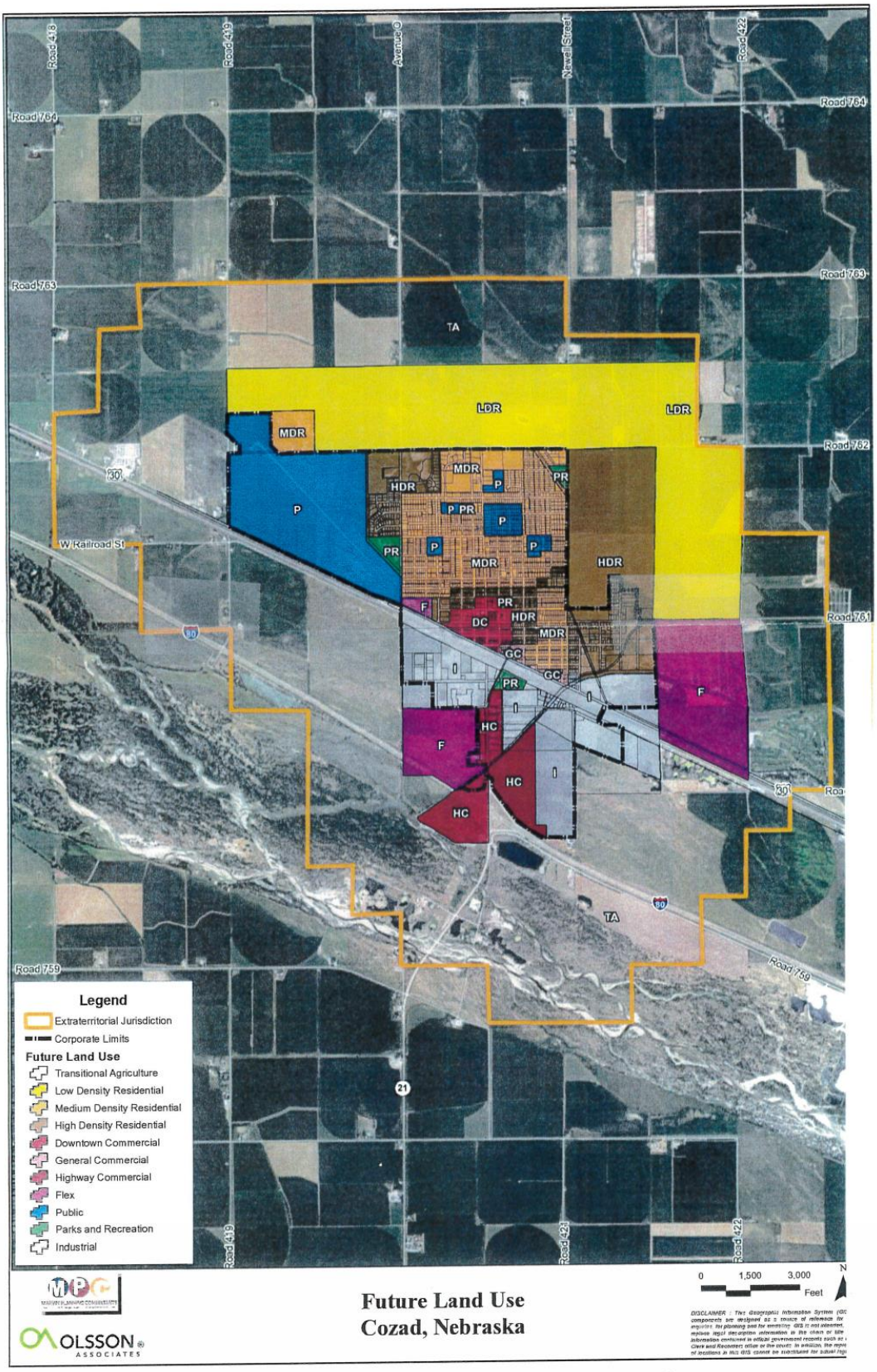
Floodplain Ordinance (2016), Zoning Ordinance (2016), and Subdivision Regulations (2016)
The city's floodplain ordinance, zoning ordinance, and subdivision regulations outline where and how development should occur in the future. These documents prohibit development in the floodplain and discourage housing near chemical sites and major transportation routes. There are currently no plans to update these documents.

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 (2003)
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, industrial subdivisions, a hotel, and several buildings on Davis Drive were built. None of the new structures were constructed in the floodplain or other known hazardous areas. In next five years, the city has five triplexes, four duplexes, and several single-family dwellings under contract. The future land use map for the city shows commercial and industrial along Highway 30, Interstate 80, and to the south, with residential primarily located in the northern half of the city.

Figure COZ.4: Future Land Use Map



Community Lifelines

Transportation

Cozad's major transportation corridors include Interstate 80, State Highway 21, and US Highway 30. Interstate 80 has an average of 17,540 vehicles daily, 7,115 of which are trucks. Highway 21 has an average of 4,270 vehicles daily, 315 of which are trucks. Highway 30 has an average of 3,085 vehicles daily, 290 of which are trucks.[21] The city has one Union Pacific line traveling southeast to northwest 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 major chemical spills or transportation incidents have occurred in the city. However, the wastewater treatment plant is located near Interstate 80.

Hazardous Materials

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are 15 chemical storage sites within or near Cozad which house hazardous materials (listed below). In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

Table COZ.3: Chemical Storage Sites

Name	Address	Floodplain (Y/N)
AT&T NE6030	77252 Drive 425	N
Country Partners Cooperative	404 Willow St	N
Country Partners Cooperative	302 W Highway 30	N
Country Partners Cooperative	220 S Meridian Ave	N
Country Partners Cooperative	300 E Monroe St	N
Country Partners Cooperative	400 Locust St	N
Country Partners Cooperative	1410 W Highway 30	N
Island Dehy Co Inc	303 S Meridian Ave	N
Mid-State Aviation II Inc	1304 W Highway 30	N
Nutrien Ag Solutions	308 W 2nd St	N
Paulsen Corporate Headquarters	1116 E Highway 30	N
Schwan's Home Service	514 W 2nd St	N

Source: Nebraska Department of Environment and Energy[22]

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.

Health and Medical Facilities

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

Table COZ.4: Health and Medical Facilities

Name	Type of Facility	Address	Number of Beds
Cozad Community Hospital	Hospital	300 East 12th St	20
Emerald Nursing and Rehab Cozad	Assisted Living Facility/Long Term Care Facility	318 West 18th St	89
Meadowlark Pointe Assisted Living	Assisted Living Facility	2300 Ave O	69
Cozad Community Medical Clinic	Rural Health Clinic	1803 Papio Ln	0

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

Critical Facilities

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

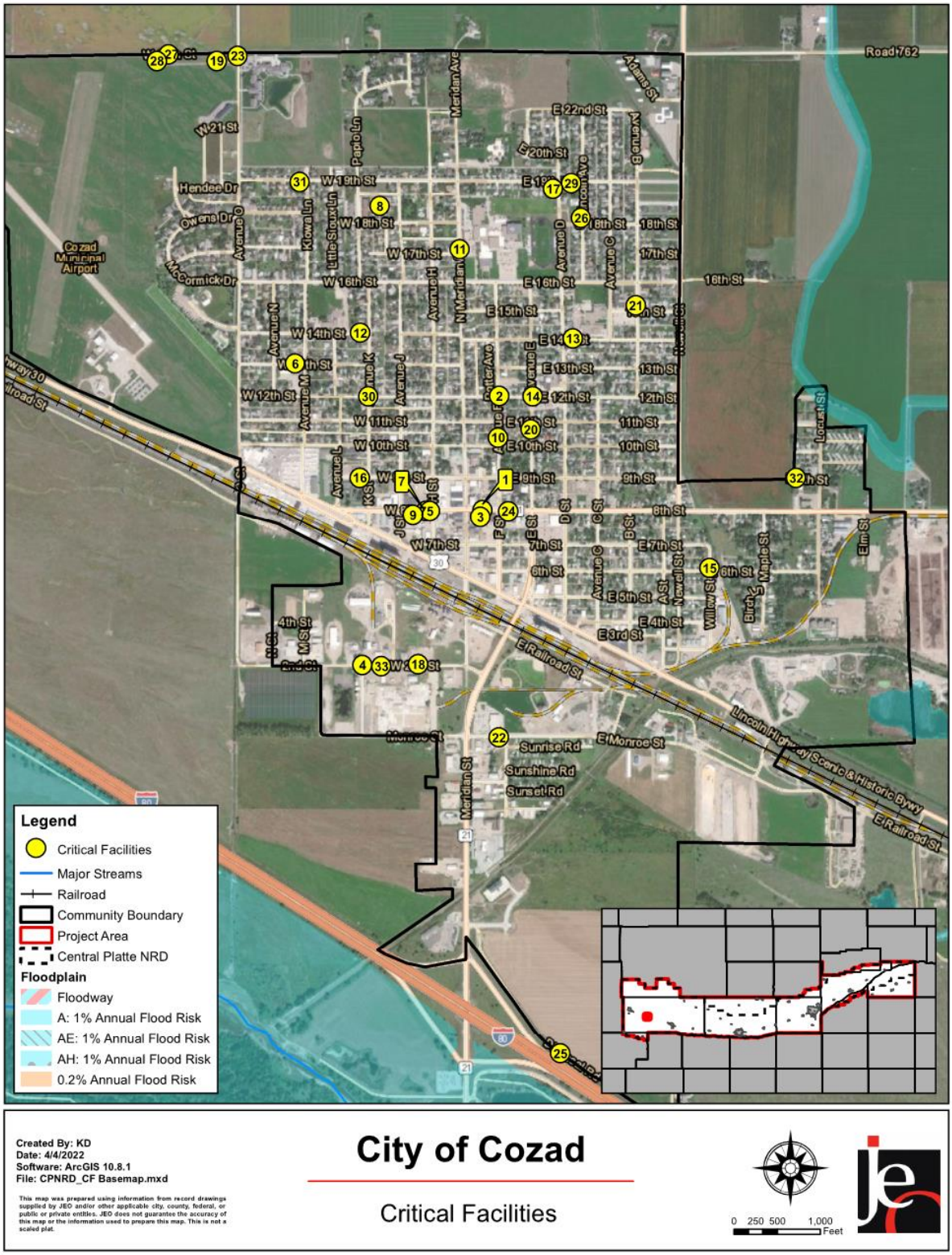
Although they may not be listed in the table below, critical infrastructure also includes power infrastructure, cell towers, alert sirens, water infrastructure, wastewater infrastructure, and roadways.

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

Table COZ.5: Critical Facilities

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Alco Lift Station	N	N	N
2	American Lutheran Church	Y	N	N
3	Berryman Lift Station	N	N	N
4	Black Hills Town Border Station	N	N	N
5	Board of Public Works	N	Y	N
6	Christ the King Catholic Church	Y	Y	N
7	City Office	N	Y	N
8	Cozad Care and Rehabilitation	N	Y	N
9	Cozad Central Substation #1	N	N	N
10	Cozad Christian Church	N	N	N
11	Cozad City School High School	Y	N	N
12	Cozad City Schools Early Education	Y	N	N
13	Cozad City Schools Elementary	Y	N	N
14	Cozad Community Hospital	N	Y	N
15	Cozad East Substation #5	N	N	N
16	Cozad Haymaker Haven	N	N	N
17	Cozad North Substation #3	N	N	N
18	Cozad South Substation #2	N	N	N
19	Cozad West Substation #4	N	N	N
20	First Presbyterian Church	Y	N	N
21	First United Methodist Church	Y	N	N
22	Interceptor Lift Station	N	N	N
23	Meadowlark Pointe	N	Y	N
24	Police/Fire Station	N	Y	N
25	Wastewater Treatment Plant	N	Y	N
26	Water Tower	N	N	N
27	Water Well 06-1	N	Y	N
28	Water Well 06-2	N	Y	N
29	Water Well 63-1	N	N	N
30	Water Well 65-1	N	N	N
31	Water Well 85-1	N	N	N
32	Water Well 94-1	N	Y	N
33	West 2nd St Lift Station	N	N	N

Figure COZ.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 COZ.6: Parcel Improvements and Value in the 1% Annual Flood Risk Area

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
1,715	$159,168,674	2	$1,463,400	0.1%

Source: County Assessor, 2021

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

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
1,715	$159,168,674	0	$0	0%

Source: County Assessor, 2021

Historical Occurrences

See the Dawson 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*.

Cozad Community Health System identified a mass casualty incident as a concern, which could apply to any of the regional hazards. The hospital's primarily concerns are the placement of the deceased prior to transport to the morgue, identification of individuals, and proper handling if the event was caused by a pandemic or bioterrorism. The hospital regularly holds drills to prepare for various mass casualty events.

Drought

The local planning team is concerned about the capacity of their wells to handle a drought event. There are six wells located throughout Cozad that feed into the water tower. All residences and business are metered to track water use. Cozad does not have a drought monitoring board, drought response plan, or landscape ordinance. However, drought and the water supply are monitored using well draw down levels. Voluntary water restrictions can be implemented if needed.

Flooding

The flood risk areas of concern for the City of Cozad are located south of the city limits on the south side of Interstate 80 along the Platte River. Cozad experienced $75,000 in property damages in May of 2008 when four inches of rain over 24-hours resulted in a flash flood, flooding roads, and damaging residential properties. During the 2019 floods, the trailer court on the south side of the community flooded and caused property damages. Plans for further mitigating damage from flooding include performing a drainage study and educating the public on preparedness actions.

Cozad is a member of the NFIP, and the city's Floodplain Administrator (Doug Adkisson) will oversee the commitments and requirements of the NFIP. The initial FIRM for the city was delineated in 5/3/2011 and the current effective map date is 5/3/2011. Only 0.1% of parcel improvements in the city are located in the 1% annual flood risk areas (see table in the Parcel Improvements and Valuation section). As of October 31, 2021, there are seven NFIP policies in-force covering $1,341,100. Cozad currently has one single-family structure and one two-four family structure as repetitive loss properties. A mitigation action can be found in the city's Mitigation Strategy to address these structures.

Grass/Wildfires

The Cozad Fire Department is responsible for responding to wildfire in the area. They have established Mutual Aid Agreements within the district. Since 2000, the Cozad Fire Department has responded to 21 fires that burned a total of 533 acres. A fire in January of 2009 burnt 320 acres of land when a baler ignited a high fuel load area. The city does not have a Wildland Urban Interface Code or promote defensible spaces around structures. However, building codes do encourage the use of fire-resistant building materials. Cozad plans to mitigate further damages from wildfires by implementing a tree maintenance program and providing residents with education on wildfire.

Hazardous Materials Release

This hazard was identified by Cozad Community Health System. Specifically, the hospital is concerned with air contamination in the event that a chemical plume is near the hospital. While this type of event has not occurred in the past, it could impact transportation routes to the hospital, cause an evacuation of the building, or increase the number of people needing treatment.

Severe Thunderstorms

The major concerns associated with thunderstorms in Cozad are downed trees and power lines. There are hazardous dead trees scattered throughout city on private property, the city park, and cemetery. Municipal records are protected with a surge protector. All critical facilities have weather radios, but many are lacking backup power generators. Approximately ten percent of the power lines in the city are buried leaving a higher risk for power outages. The most damaging event occurred in August 2019. A thunderstorm wind event caused $1,500,000 in damages to trees, powerlines, center pivots, the roof of the high school, homes, and a metal storage building. Cozad plans to mitigate further damage from thunderstorms by providing backup generators for critical facilities and implementing a tree maintenance program.

Severe Winter Storms

One of the biggest winter storms occurred in January of 2011, when 10-12 inches of snow fell in and around Cozad, causing a stretch of I-80 to close after multiple vehicle accidents. Extremely cold temperatures in February of 2021 caused frozen domestic water lines and water meters across the city. The local planning team is concerned about severe winter storms because of the

possibility of downed power lines and reduced mobility of emergency responders in the community. There are many snow routes in the city, and some extend to Highway 30. The community utilizes snow fences and the Street Department to keep roads clear. Cozad owns a snow blower, loaders, dump trucks, a road grader, a dump truck with a blade, a salt spreader, tractors with snow blowers, a sweeper, and extra blades that can be used to remove snow from snow routes. These resources are not sufficient, but no contracts are available to assist the city. Cozad plans to mitigate further damage from winter storms by implementing a tree maintenance program, educating the public on responses to winter storms, and providing adequate backup generators for critical facilities.

Cozad Community Health System also identified severe winter storms as hazard of top concern. Specific concerns for the hospital include staff safety to and from work, accidents on the interstate causing a backup in the emergency room, and disruption of equipment. The hospital regularly reviews emergency plans and holds tabletop exercises for various situations.

Terrorism

Terrorism was identified as a top concern by the Cozad Community Health System. In 2021, the hospital experienced a malware attack that threatened to damage protected health information. A payout was needed to unblock and recover the information. During the time of the attack information was not easily sent to and from facilities for procedures and paper backup copies had to be used, which slowed things down. Although no information was lost, that type of attack is a concern for the hospital if it were to occur again.

Tornadoes and High Winds

The most recent tornado to cause property damage in Cozad occurred in May of 2019. During this storm, $900,000 in damages occurred to the east side of the community and the surrounding rural area. Municipal records are protected with a daily backup procedure onto an interchangeable data card. Community warning sirens are activated by the Dawson County Communications Center in Lexington by dispatchers, or alternatively activated by the local police department. The sirens can be heard in all areas of Cozad. The County Emergency Manager also offers text alerts through Dawson County Communications. There are no community safe rooms so community members heavily rely on shelter locations in private structures. Cozad provides community members education on tornadoes annually in the local paper, describing what the different siren signals indicate. In the event of a disaster, there are mutual aid agreements in place with Gothenburg, Lexington, Brady, Curtis, Elwood, Eustis, Farnam, Johnson Lake, and Overton.

Cozad Community Health System also identified tornadoes as a hazard of top concern. Specific concerns for the hospital include staff and patient safety during a tornado and additional injuries causing a backup in the emergency room. The hospital regularly reviews emergency plans and holds tabletop exercises for various situations.

Mitigation Strategy

Completed Mitigation Actions

Mitigation Action	Wellhead Protection Plan
Description	Develop a wellhead protection plan to protect the community's water from point source pollution.
Hazard(s) Addressed	Drought, Hazardous Materials Release
Status	Completed in 2010.

New Mitigation Actions

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	Property Taxes, Private Owner Funds
Timeline	5+ Years
Priority	Low
Lead Agency	City Council, Board of 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	Property Taxes, Foundation Funds
Timeline	2-5 Years
Priority	Medium
Lead Agency	City Council, County Emergency Management
Status	Currently planning and securing funding.

Mitigation Action	Drainage Study
Description	Conduct stormwater drainage study to improve, evaluate, and improve the stormwater system.
Hazard(s) Addressed	Flooding
Estimated Cost	$10,000-$100,000
Local Funding	Property Tax
Timeline	2-5 Years
Priority	Medium
Lead Agency	City Administration
Status	Not Started

Mitigation Action	Public Awareness and 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	$0-$5,000+
Local Funding	Property Tax
Timeline	Ongoing
Priority	Medium
Lead Agency	City Council, County Emergency Management
Status	This is an ongoing action.

Mitigation Action	Reduce Tree Damage and Damages 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/Wildfires
Estimated Cost	$100 per tree
Local Funding	Property Tax
Timeline	2-5 Years
Priority	Medium
Lead Agency	Street Department, Board of Public Works
Status	Currently planning and securing funding.

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, Grass/Wildfires, Flooding
Estimated Cost	$150 per sq ft for retrofit, $300 per sq ft for new construction
Local Funding	Property Taxes
Timeline	5+ Years
Priority	Medium
Lead Agency	City Council, County Emergency Management
Status	Planning Stage

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.

Cozad last reviewed their section of the HMP in 2017 during the plan update. The City Administrator, Water/Sewer Commissioner, and Electrical Commissioner will be responsible for reviewing and updating the plan annually in the future.

Community Profile

Village of Farnam

Central Platte NRD
Hazard Mitigation Plan

2022

Local Planning Team

The Village of Farnam'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 FAR.1: Farnam Local Planning Team

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Darcy Gurule	Village Clerk / Treasurer / Floodplain Administrator	Village of Farnam	-	Recording
Ryan Schurr	Village Chairman	Village of Farnam	-	-

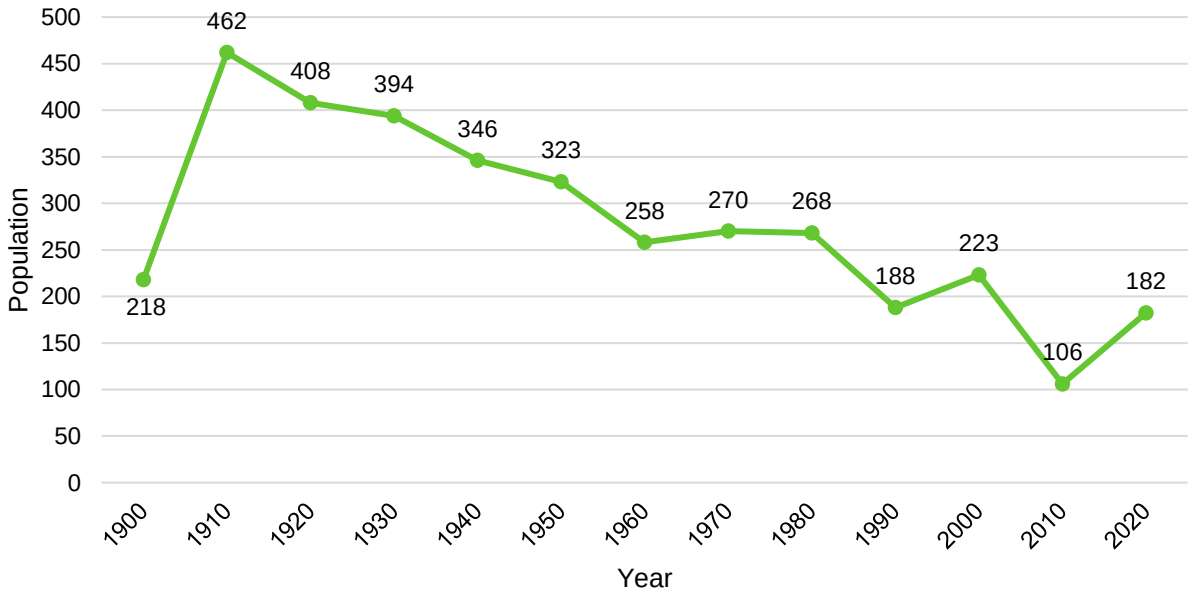
Location and Geography

The Village of Farnam is in southwestern Dawson County and covers an area of 0.67 square miles. There are no major waterways in the area, but the largest body of water in the area is the Farnam Reservoir.

Demographics

The following figure displays the historical population trend for the Village of Farnam. This figure indicates that the population of Farnam has been increasing since 2010 to 182 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. Farnam's population accounted for 0.8% of Dawson County's population in 2020.[27]

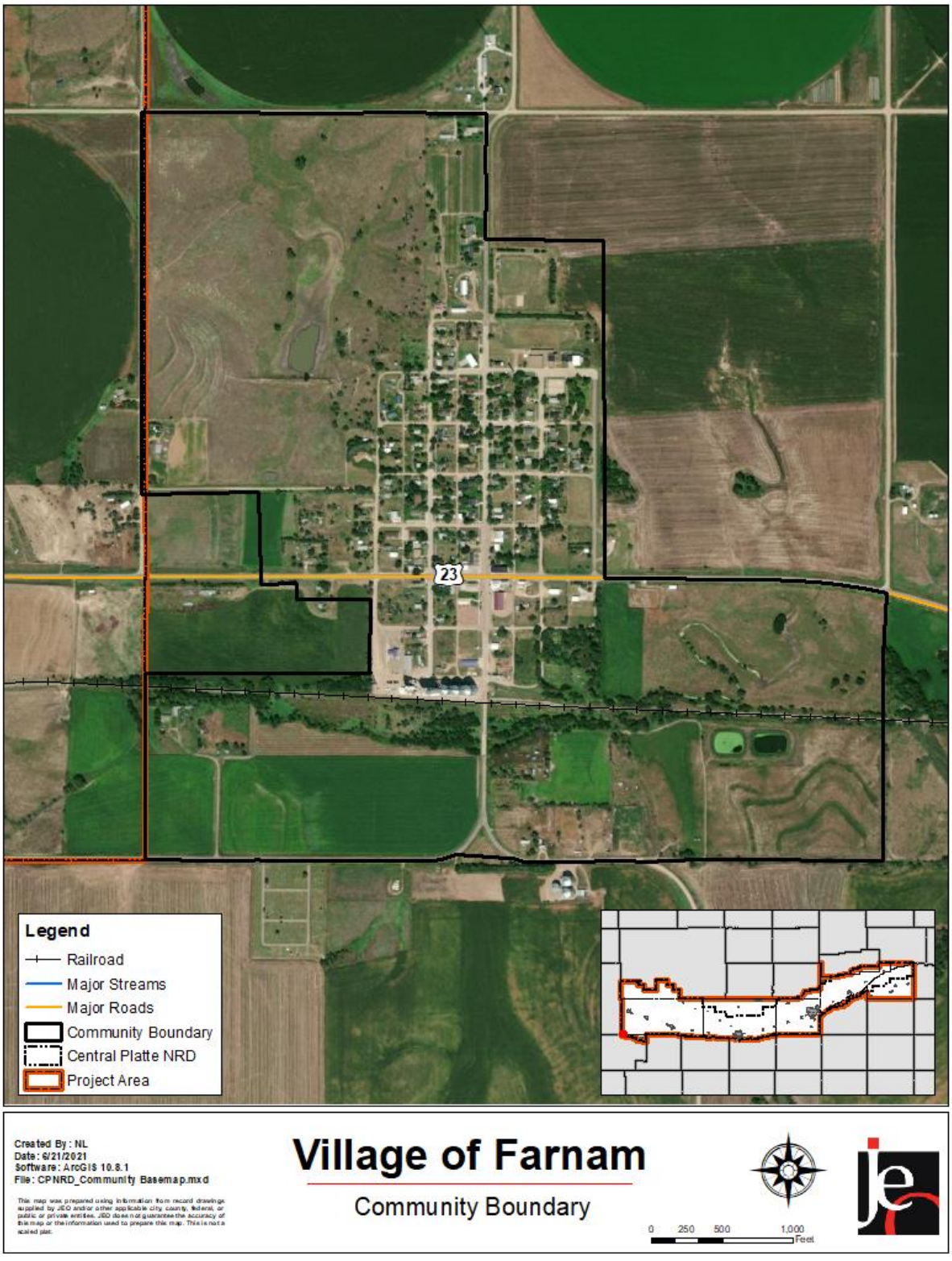
Figure FAR.1: Population 1900 - 2020



Source: U.S. Census Bureau

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

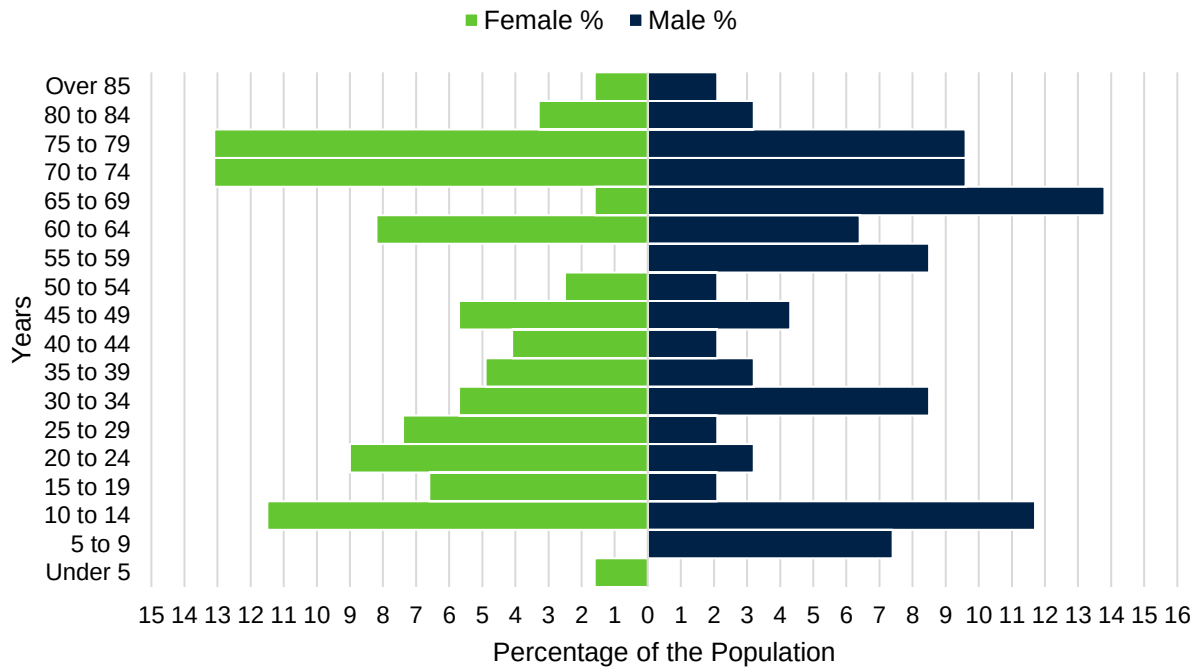
Figure FAR.2: Village of Farnam



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

- **2.8% is non-white.** Since 2010, Farnam grew less ethnically diverse. In 2010, 7.5% of the Farnam's population was non-white. By 2019, 2.8% was non-white.[28]
- **46.9 median age.** The median age of Farnam was 46.9 years in old 2019. The population grew older since 2010, when the median age was 46.8.[29]

Figure FAR.3: Farnam's Population Pyramid



The figure above shows Farnam's population percentage broken down by sex and five-year age groups. Farnam's population is likely to decline in the coming years with a higher percentage of the population above age 60.

Employment and Economics

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

- **6.3% of people living below the poverty line.** The poverty rate (6.3%) in the Village of Farnam was lower than the state's poverty rate (7.2%) in 2019.[30]
- **$46,250 median household income.** Farnam's median household income in 2019 ($46,250) was $15,000 lower than the state ($61,439).[30]

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

- **0% unemployment rate.** In 2019 Farnam had a lower unemployment rate (0%) when compared to the state (2.3%).[30]
- **39.4% of workers commuted 30 minutes or more to work.** More workers in Farnam commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (39.4% compared to 22.2%).[31]

Major Employers

The major employers in the village are County Partners Co-op and Hi-Grain Feedlot that is located approximately three miles north of the community.

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. Farnam's housing stock has:

- **61.6% of housing built prior to 1970.** Farnam has a larger share of housing built prior to 1970 than the state (61.6% compared to 46%).[32]
- **5.8% of housing units vacant.** Since 2010, Farnam's vacancy rate declined. In 2010 the vacancy rate was 19.7%. By 2019, 5.8% of housing units were vacant.[32]
- **8.7% mobile and manufacture housing.** The Village of Farnam had a larger share of mobile and manufactured housing (8.7%) compared to the state (3.3%).[32] The mobile homes are scattered throughout the village.
- **14.4% renter-occupied.** The rental rate of Farnam was 14.4% in 2019. The percentage went up since 2010, when renter occupied housing was at 3.3%.[32]

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. The Village of Farnam 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
- Utility Supervisor
    - Water Department
    - Sewer Department
    - Streets Department
    - Village Maintenance
- Volunteer Fire Department

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

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

Capability Assessment

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

Currently funds are used for maintaining or upgrading facilities and systems. Municipal funds have been relatively stable over the past few years.

Table FAR.2: Capability Assessment

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

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

Farnam 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 comprehensive plan that was last updated in 2001. It has not been integrated with the HMP due to the age of the document. 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.

Dawson County Local Emergency Operations Plan (2020)

Farnam 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 every five years.

Floodplain Regulations (2021)
Floodplain regulations outline development requirements for properties located within floodplain regulated areas. The regulations contain floodplain maps, discourage development in the floodplain, and discourage housing and other vulnerable populations near chemical storage sites.

Zoning Ordinance (2004)
The village's zoning ordinance outlines where and how development should occur in the future. Due to the age of this document, it has not been integrated with the HMP. However, it is slated to be updated soon. The HMP will be reviewed for any integration during the update process.

Future Development Trends
Over the past five years, no new developments in the village occurred. Recently Farnam began participating in the NFIP. In the next five years, a group has purchased an unused school building with intention to develop it into an inpatient treatment center for sexually exploited females.

Community Lifelines
Transportation
Farnam's major transportation corridors include State Highway 23. The most traveled route is Highway 23 with an average of 850 vehicles daily, 125 of which are trucks.[33] The village has one Nebraska-Kansas Colorado rail line traveling east to west on the southern edge of the community. One spill has occurred in the community when a vehicle accident involving a semi-truck resulted in the spill of diesel fuel. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

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

Table FAR.3: Chemical Storage Sites

Name	Address	Floodplain (Y/N)
Country Partners Cooperative	208 Moose St	N

Source: Nebraska Department of Environment and Energy[34]

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

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

Critical Facilities

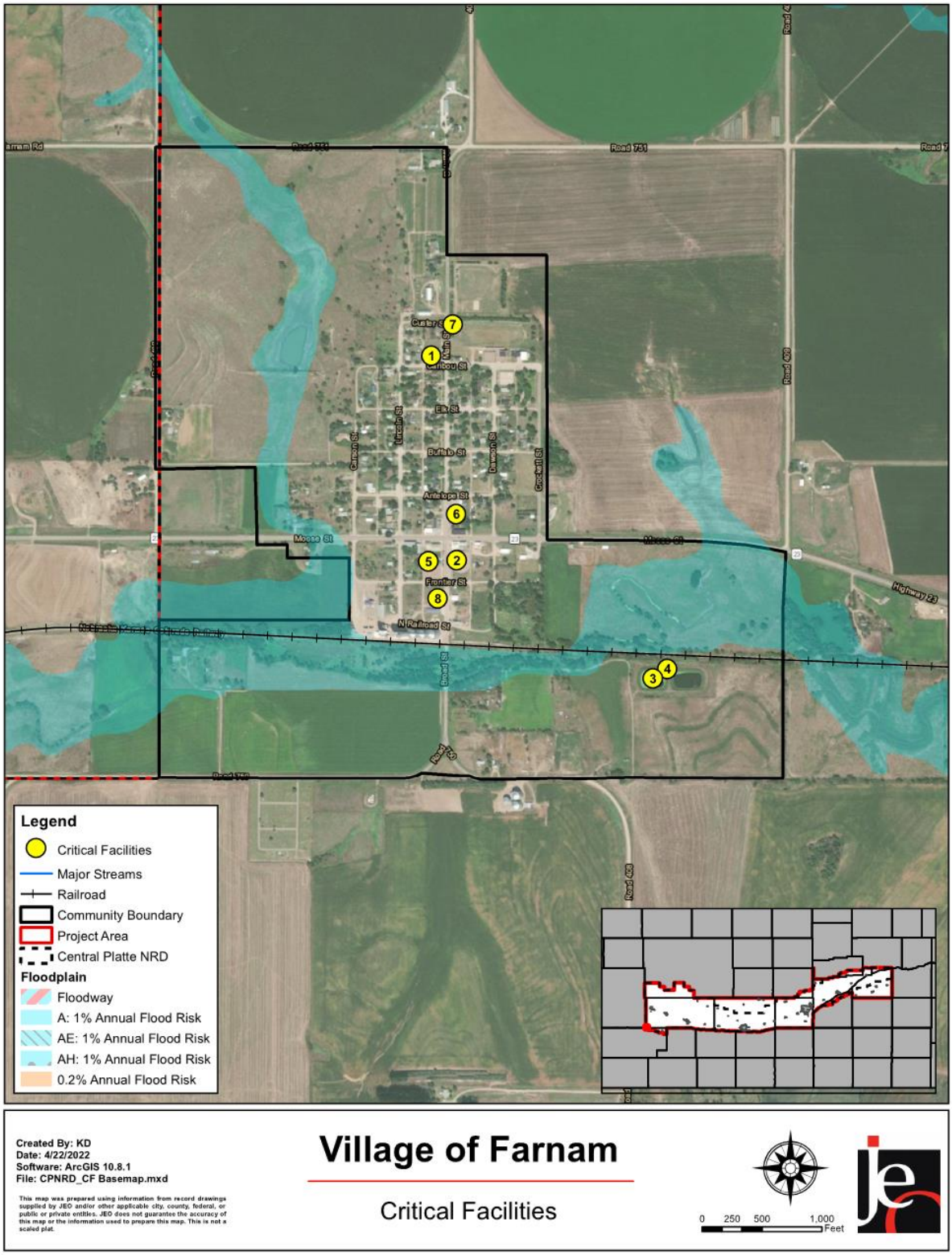
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during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

CF Number	Name	Mass Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Farnam United Methodist Church	Y	N	N
2	Fire Hall	N	Y	N
3	Lagoon	N	N	N
4	Pump Station	N	Y – Portable	N
5	Senior Center	Y	Y	N
6	Village Office/Siren	N	N	N
7	Well #1	N	Y – Portable	N
8	Well #2	N	Y – Portable	N

Figure FAR.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 FAR.5: Parcel Improvements and Value in the 1% Annual Flood Risk Area

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
123	$7,218,052	7	$2,548,635	5.7%

Source: County Assessor, 2021

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

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
123	$7,218,052	0	$0	0%

Source: County Assessor, 2021

Historical Occurrences

See the Dawson 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 south side of Farnam has a history of flooding. In 1993, the main roads and health clinic flooded. Following this flood, the county cleared the ditches, but left hazardous trees. During the county-wide flooding event in 2005, a second round of damage to the health clinic was mitigated with sandbagging. The water tower and wells are on the high end of town which is not at risk to flooding. Farnam plans to mitigate future flooding by working with the NRD to clear the trees and straighten the slope of the creek on the south side of the village. Farnam had limited impacts from the 2019 floods, with most damages occurring in rural areas around the village.

Farnam is a member of the NFIP, and the village's Floodplain Administrator (Darcy Gurule) will oversee the commitments and requirements of the NFIP. The initial FIRM for the village was delineated in 11/8/1974 and the current effective map date is 5/3/2011. Nearly 6% of parcel improvements in the village are located in the 1% annual flood risk area (see table in the Parcel Improvements and Valuation section). As of October 31, 2021, there are no NFIP policies in place. Farnam does not currently have any repetitive loss or severe repetitive loss structures.

Grass/Wildfires

The Farnam Fire Department, with assistance from the Gothenburg Fire Department, responded to a large wildfire that began with a lightning strike in 2003 after a hot, dry year. In four days, 22,000 square-acres of mostly crop land burned. This event precipitated a FEMA grant for a new 1,000-gallon pumper truck. In 2018, the fire department responded to a fire that burned a total of 450 acres but did not impact the community. The Farnam Fire Department consists of 25 volunteer members and recently upgraded multiple grass rigs and has purchased a new pumper truck/tanker to improve fire response. Property owners in the community are encouraged to reduce fuel loads and have a defensible space around structures.

Severe Thunderstorms

October of 2016 brought thunderstorms and lightning that hit residences and critical facilities in Farnam, blowing the fuses at the village wells. In 2009, $10,000 in property damages resulted from a thunderstorm that brought 1.25-inch hail through the metal Fire Hall roof. Thunderstorms have caused this roof to be replaced twice more since 2009. All service lines are buried in Farnam, but no power lines are buried. There are surge protectors on all critical facilities and backup generators on the Fire Hall and Senior Center. A recently completed project included purchasing a portable generator for the sewer pump station and two wells. The Dawson County Emergency Manager provides weather radios and text alerts that warn the community of severe weather. The Community Development Assistance Act funds a tree maintenance program and the village is in the process of identifying old, dead, or diseased trees that need to be removed. Further mitigation plans including backing up municipal records, providing backup generators to critical facilities, and providing safe rooms for the community.

Tornadoes and High Winds

In June of 2000, an EF0 tornado formed three miles northwest of Farnam, causing $25,000 in property damages and injuring two people. In May 2019, an EF1 tornado east of Farnam caused $250,000 in damage when it destroyed a storage building. There have also been problems with high winds encouraging wildfire in the area. Farnam recently installed a new warning siren at the Fire Hall and the old siren is being relocated further north to expand the warning reach. The new siren can be activated remotely but the old one requires manual activation. The Farnam Fire Department's storm response trainings are open to the public. In the event of a disaster, there are mutual aid agreements in place with Brady, Lexington, Gothenburg, Elmwood, Cozad, Johnson Lake, Eustis, Curtis, and Overton.

Mitigation Strategy

Kept Mitigation Actions

Mitigation Action	Backup and Emergency Generators
Description	Identify and evaluate current backup and emergency generators; obtain additional generators based on identification and evaluation; provide portable or stationary sources 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	Private Donations/Fundraising, General Fund
Timeline	2-5 Years
Priority	High
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Backup Municipal Records
Description	Develop protocol for backing up critical municipal records onto a portable storage device or service; maintain routine backup of records.
Hazard(s) Addressed	All Hazards
Estimated Cost	$100
Local Funding	General Fund
Timeline	1 Year
Priority	Medium
Lead Agency	Village Clerk / Treasurer / Floodplain Administrator
Status	Not Started

Mitigation Action	Hazardous Materials Reduction
Description	Clean up hazardous waste site on the southeast side of the village.
Hazard(s) Addressed	Hazardous Materials Release
Estimated Cost	Unknown
Local Funding	General Fund
Timeline	1-2 Years
Priority	High
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Improve Warning Systems
Description	Evaluate current warning systems (defined as alert sirens, weather radios, and television, telephone, and radio warning systems, etc.); improve warning systems/develop new warning system; obtain/upgrade warning system equipment and methods; conduct evaluation of existing alert sirens for replacement or placement of new sirens; identify location of weather warning radios; improve weather radio system; obtain/upgrade weather radios.
Hazard(s) Addressed	Tornadoes and High Winds
Estimated Cost	$15,000+
Local Funding	General Fund
Timeline	2-5 Years
Priority	Medium
Lead Agency	Village Board, County Emergency Management
Status	A new warning siren for the village was purchased and the old siren is in the process of being moved north to expand the coverage area.

Mitigation Action	Increase Soil and Water Conservation
Description	Develop and improve public awareness of soil and water conservation methods; develop or maintain materials and conduct multi-faceted public education.
Hazard(s) Addressed	Drought
Estimated Cost	$500
Local Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Reduce Bottleneck/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-$75,000+
Local Funding	General Fund
Timeline	1 Year
Priority	High
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Reduce Water Demand / Improve Drought Education
Description	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.
Hazard(s) Addressed	Drought
Estimated Cost	$5,000
Local Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Reduce Wildfire Damage
Description	Identify vulnerable areas and combustion sources; evaluate fire resistant roofing; develop plan to reduce wildfire impact and reduce combustion materials; reduce combustion material by removal or other methods; enact building codes/ordinances for fire resistant roofing.
Hazard(s) Addressed	Grass/Wildfire
Estimated Cost	Unknown
Local Funding	General Fund, Fire Department Funds
Timeline	5+ Years
Priority	Medium
Lead Agency	Village Board, 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/sq ft retrofit; $300/sq ft new construction
Local Funding	Bonds, Private Donations/Fundraising
Timeline	2-5 Years
Priority	High
Lead Agency	Village Board
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.

The Village Chairman and Village Clerk/Treasurer/Floodplain Administrator will be responsible for reviewing and updating the plan in the future. These individuals will review the plan bi-annually and will present any changes at a public board meeting.

Community Profile

City of Gothenburg

Central Platte NRD
Hazard Mitigation Plan

2022

Local Planning Team

The City of Gothenburg'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 GTH.1: Gothenburg Local Planning Team

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Gary Greer	City of Administrator	City of Gothenburg	-	-
Doug Swanson	Floodplain Administrator	City of Gothenburg	Lexington	Lexington
Noah Dea	Park Director	City of Gothenburg	-	-

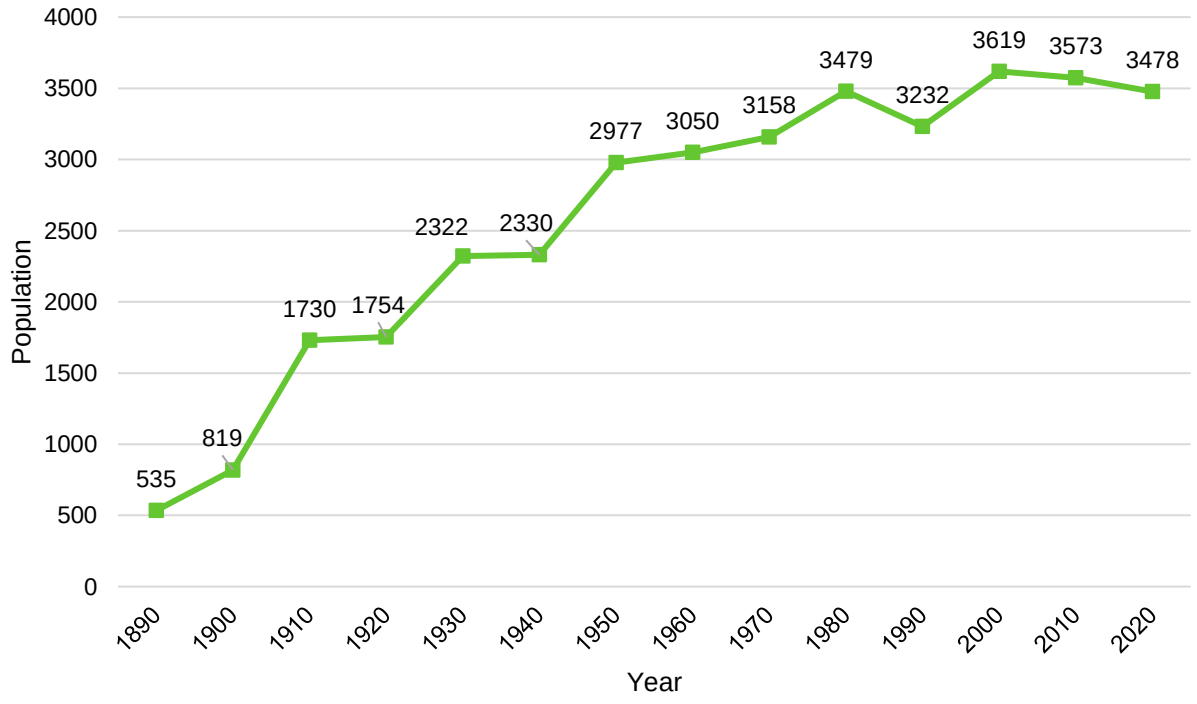
Location and Geography

The City of Gothenburg is in northwestern Dawson County and covers an area of 3.64 square miles. Major waterways in the area include the Platte River and Lake Helen.

Demographics

The following figure displays the historical population trend for the City of Gothenburg. This figure indicates that the population of Gothenburg has been declining since 2000 to 3,478 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. Gothenburg's population accounted for 14.4% of Dawson County's population in 2020.[35]

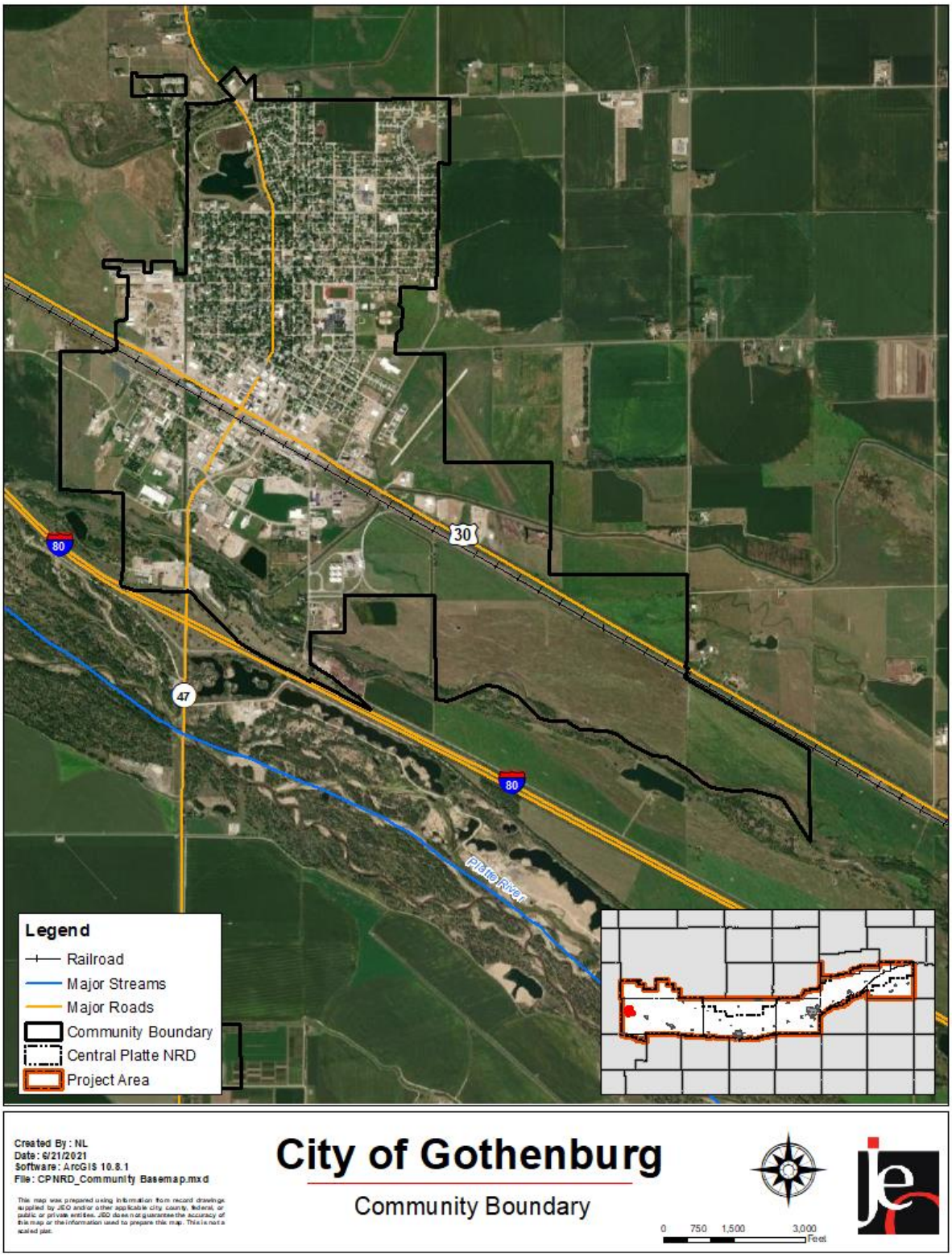
Figure GTH.1: Population 1890 – 2020



Source: U.S. Census Bureau

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

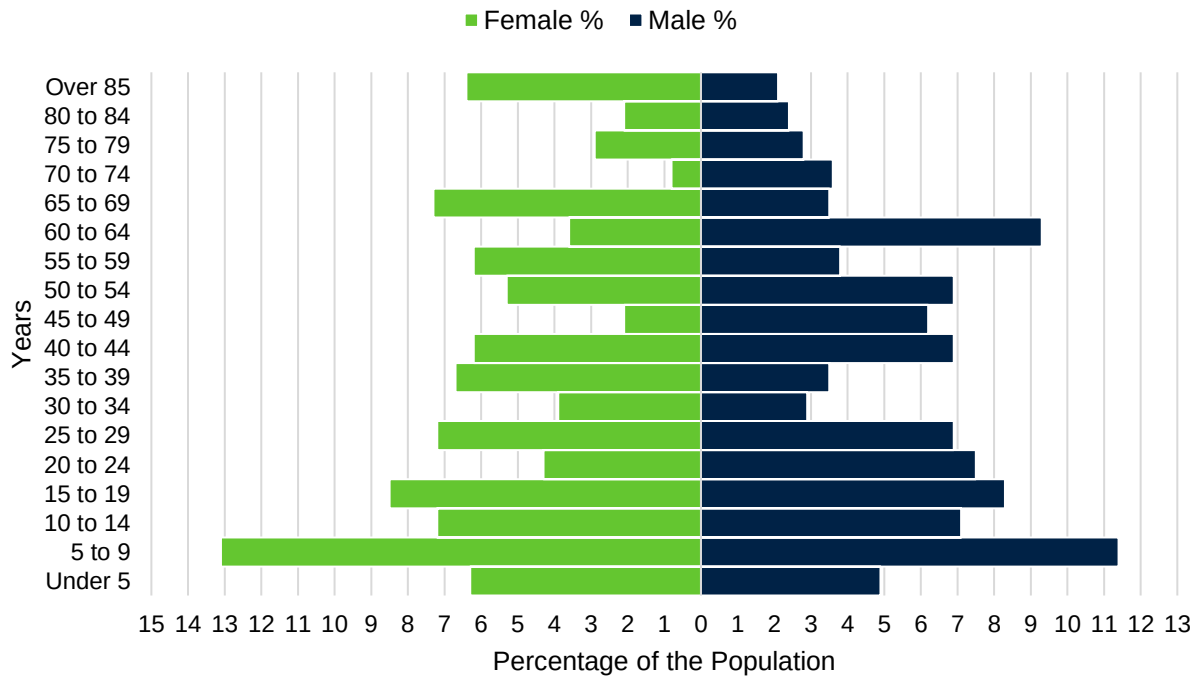
Figure GTH.2: City of Gothenburg



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

- **1.6% is non-white.** Since 2010, Gothenburg grew more ethnically diverse. In 2010, 0.3% of the Gothenburg's population was non-white. By 2019, 1.6% was non-white.[36]
- **35.3 median age.** The median age of Gothenburg was 35.3 years in old 2019. The population grew younger since 2010, when the median age was 40.4.[37]

Figure GTH.3: Gothenburg's Population Pyramid



The figure above shows Gothenburg's population percentage broken down by sex and five-year age groups. Gothenburg's population is younger with a much higher percentage of the population below 60 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. Gothenburg's population has:

- **5.5% of people living below the poverty line.** The poverty rate (5.5%) in the City of Gothenburg was lower than the state's poverty rate (7.2%) in 2019.[38]
- **$65,433 median household income.** Gothenburg's median household income in 2019 ($65,433) was $4,000 higher than the state ($61,439).[38]
- **1.7% unemployment rate.** In 2019 Gothenburg had a lower unemployment rate (1.7%) when compared to the state (2.3%).[38]

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

- **14% of workers commuted 30 minutes or more to work.** Fewer workers in Gothenburg commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (14% compared to 72.6%).[39]

Major Employers

The major employers in the community are Gothenburg Public Schools, the Gothenburg Hospital, Baldwin Filters, Parker Hannifin, Frito Lay, Dawson Tire, and Maschoff. Most residents work in Gothenburg, and few commute outside of the city 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.

- **86.6% of housing built prior to 1970.** Gothenburg has a larger share of housing built prior to 1970 than the state (86.6% compared to 46%).[40]
- **14.2% of housing units vacant.** Since 2010, Gothenburg's vacancy rate grew. In 2010 the vacancy rate was 7.2%. By 2019, 14.2% of housing units were vacant.[40]
- **4.6% mobile and manufacture housing.** The City of Gothenburg had a larger share of mobile and manufactured housing (4.6%) compared to the state (3.3%).[40]
- **28.2% renter-occupied.** The rental rate of Gothenburg was 28.2% in 2019. The percentage went up since 2010, when renter occupied housing was at 21.6%.[40]

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 Gothenburg is governed by a Mayor and three-member city council; other governmental offices and departments that may be involved in implementing hazard mitigation initiatives are listed below.

- Clerk/Treasurer
- Planning Commission
- Housing Authority
- Volunteer Fire Department
- City Administrator
- City Services Director
- Chief of Police
- Electrical Foreman
- Parks Division
- Floodplain Administrator
- Electrical Department

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

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

Capability Assessment

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

Table GTH.2: Capability Assessment

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

Survey Components/Subcomponents		Yes/No
	Other (if any)	-
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes – Water Use
	Natural Disaster or Safety related school programs	No
	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	Limited
Staff/expertise to implement projects	Limited
Public support to implement projects	Moderate
Time to devote to hazard mitigation	Limited

Plan Integration

Gothenburg 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.

Building Code (2015)

The building code sets standards for constructed buildings and structures. The city has adopted the 2012 International Building Codes with no amendments made.

Comprehensive Plan (2007)

The comprehensive plan is designed to guide the future actions and growth of the city. It directs development away from the floodplain, directs housing away from chemical storage facilities, encourages infill, and encourages the elevation of structures located in the floodplain. Currently there are no plans to update this document.

Dawson County Local Emergency Operations Plan (2020)

Gothenburg 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 every five years.

Floodplain Ordinance (2011), Zoning Ordinance (2009), and Subdivision Regulations (2009)

The city's floodplain ordinance, zoning ordinance, and subdivision regulations outline where and how development should occur in the future. These documents contain floodplain maps, discourage development in the floodplain, limit population density in the floodplain, identify floodplain areas as parks or open spaces, and discourage housing near chemical sites and along major transportation routes. There are no plans to update these documents at this time.

Water System Emergency Response Plan

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

Wellhead Protection Plan (2003)

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, the city has added new single-family housing. None of the new housing was constructed in the floodplain or other known hazardous areas. In the next five years, new housing developments are planned on the northeast corner of the corporate limits. Gothenburg has a future land use map, but copies are not available at this time.

Community Lifelines

Transportation

Gothenburg's major transportation corridors include State Highway 47, US Highway 30, and Interstate 80. The most traveled route is Interstate 80 with an average of 17,540 vehicles daily, 7,115 of which are trucks.[41] The city has one Union Pacific line traveling southeast to northwest in the southern portion of the community. Agricultural chemicals are transported along all local routes. No spills or other major accidents have occurred in the past. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

Hazardous Materials

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

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

Table GTH.3: Chemical Storage Sites

Name	Address	Floodplain (Y/N)
CenturyLink	413 10th St	N
Country Partners Cooperative	120 8th St	N
Country Partners Cooperative	41250 E Highway 30	N
Dawson County Maintenance Shop	1120 10th St	N
Frito-Lay Inc	311 Cottonwood Dr	Y (0.2%)
NDOT Gothenburg Yard	123 Lake Ave	Y (1%)
Paulsen Inc Redi-Mix Plant	903 Willow Island Rd	Y (1%)

Source: Nebraska Department of Environment and Energy[42]

Health and Medical Facilities

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

Table GTH.4: Health and Medical Facilities

Name	Type of Facility	Address	Number of Beds
Gothenburg Memorial Hospital	Hospital	910 20th St	12
Stone Hearth Estates	Assisted Living Facility	110 W 20th St, Ste 400	65
Hilltop Estates	Long Term Care Facility	2520 Ave M	64

Source: Nebraska Department of Health and Human Services[43,44,45,46]

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.

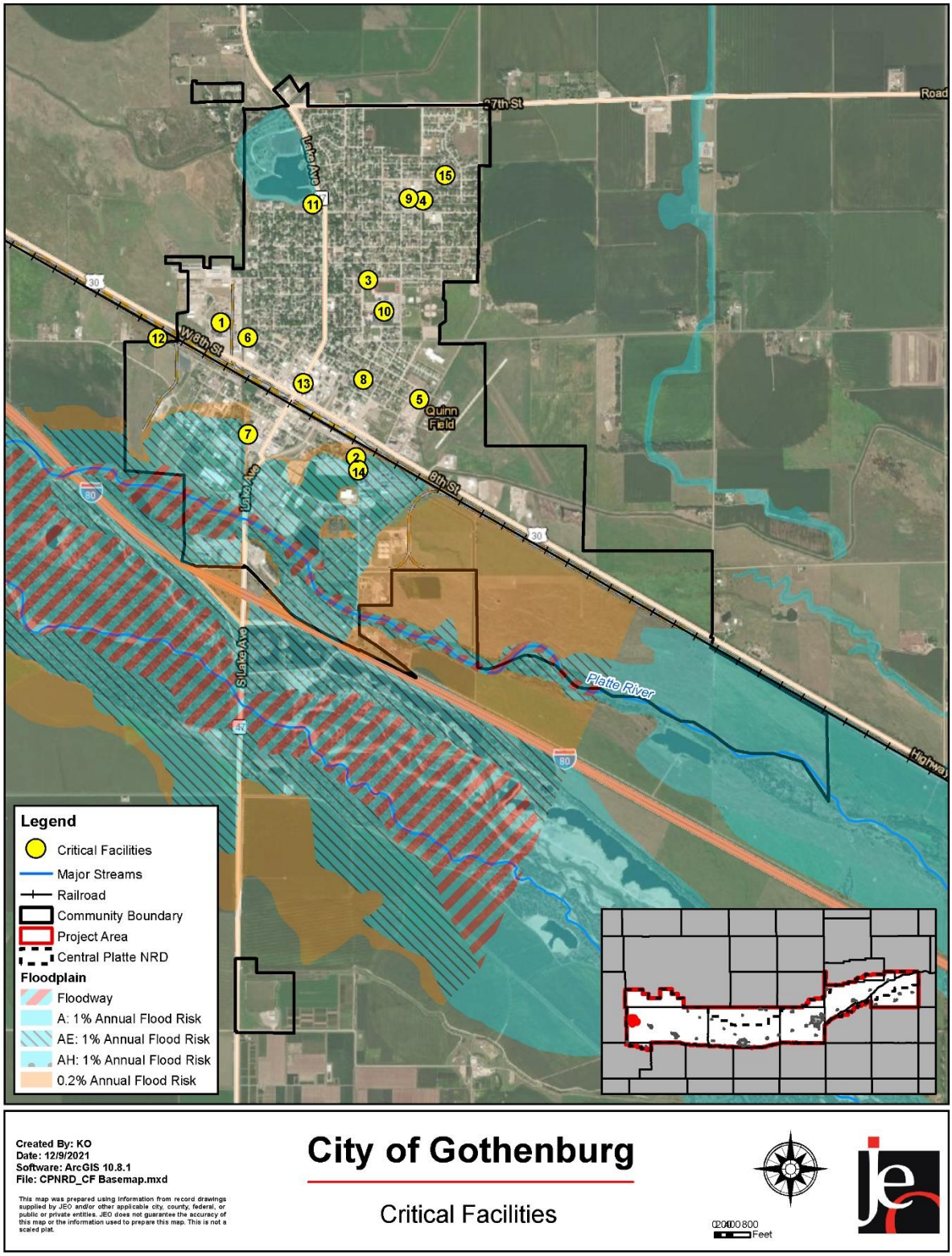
Although they may not be listed in the table below, critical infrastructure also includes power infrastructure, cell towers, alert sirens, water infrastructure, wastewater infrastructure, and roadways.

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

Table GTH.5: Critical Facilities

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Allpoints Fertilizer Coop	N	N	N
2	City Well GMW 72-2	N	Gas Backup	Y (0.2%)
3	City Well GMW 86-1	N	N	N
4	Electrical Power Station	N	N	N
5	Electrical Power Stations	N	N	N
6	Electrical Power Substation	N	N	N
7	Electrical Substation	N	N	Y (0.2%)
8	Fire Department	N	N	N
9	Gothenburg Memorial Hospital	N	Y	N
10	Gothenburg Public Schools	N	N	N
11	Gothenburg Senior Center	Y	Y	Y (1%)
12	High Pressure Interstate Gas Lines	N	N	N
13	Police Department	N	Y	N
14	Wastewater Treatment Plant	N	Y	Y (1%)
15	Water Tower and City Well GMW 90-1	N	N	N

Figure GTH.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 GTH.6: Parcel Improvements and Value in the 1% Annual Flood Risk Area

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
1,619	$231,872,428	84	$45,721,322	5.2%

Source: County Assessor, 2021

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

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
1,619	$231,872,428	70	$25,361,891	4.3%

Source: County Assessor, 2021

Historical Occurrences

See the Dawson 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*.

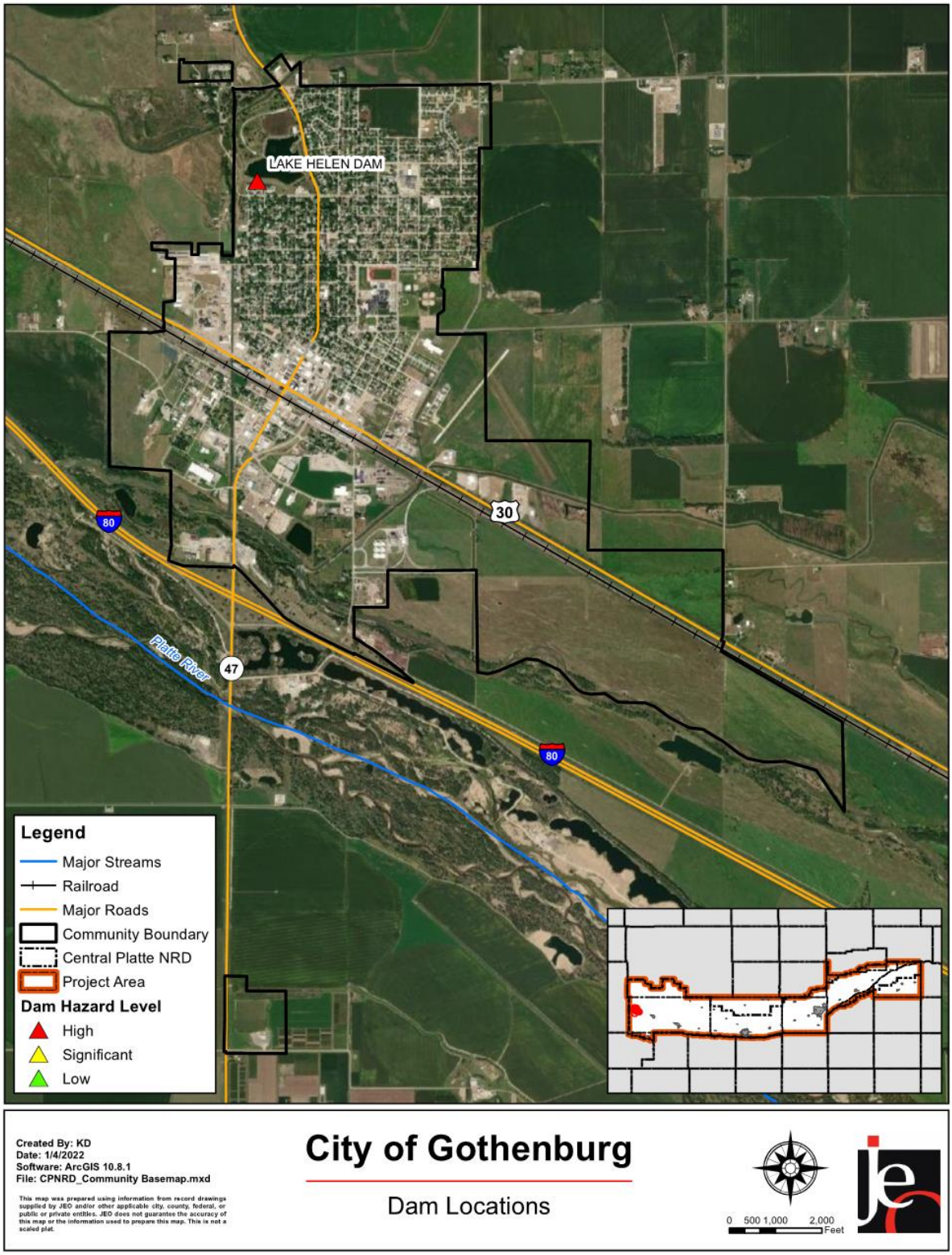
Dam Failure

The dam of most concern is the Lake Helen Reservoir, a high hazard dam owned by the city (Figure GTH.5). High hazard dams are inspected annually, and emergency action plans are required. There are structures downstream of the dam that could be impacted if the dam were to fail. However, there is no emergency housing available for displaced residents. In 2016 the city completed a project that dredged Lake Helen Reservoir and repaired damaged areas of the dam. Gothenburg plans to make additional improvements to the dam in the next two to five years.

Flooding

While not identified has a hazard of top concern, parts of the city are located in flood risk hazard areas. Most of the floodplain is located around Lake Helen and on the southern portion of the city. Gothenburg is a member of the NFIP, and the city's Floodplain Administrator (Doug Swanson) will oversee the commitments and requirements of the NFIP. The initial FIRM for the city was delineated in 1/9/1990 and the current effective map date is 5/3/2011. Over 9%of parcel improvements in the city are located in either the 0.2% or 1% annual flood risk areas (see tables in Parcel Improvements and Valuation section). As of October 31, 2021, there are 10 NFIP policies in-force covering $5,458,000. Gothenburg has two non-residential businesses that are repetitive loss properties, and a mitigation action can be found in the city's Mitigation Strategy to address these structures.

Figure GTH.5: Dam Location



Hazardous Materials Release

The planning team's concerns with this hazard center on potential railroad derailment and truck wrecks on Interstate 80. Agricultural chemicals are presumed to be transported daily by highway; however, the city is not sure which other types of chemicals are being transported. There have been two reported fixed site chemical releases and four transportation spills. No injuries were reported from the events and damages were minor. In the event of a spill, the local fire department would be the first to respond.

Severe Thunderstorms

NCEI reported 108 severe thunderstorm events since 1997. These severe thunderstorms caused $3,630,000 dollars in damage. The worst of these was a massive storm in July of 2014 that caused $1,000,000 in property damage throughout the area from high winds and hail. The local planning team reports that in past severe thunderstorm events, downed trees and roof damage were the primary impacts. The team's primary concerns relate to power outages, wind, and tree damage that result from the storms. Critical municipal records are protected with surge protectors on electronic devices, and some critical facilities have backup generators and weather radios. None of the city's critical facilities are fitted with hail resistant building materials. Approximately twenty percent of power lines are buried. Gothenburg plans to mitigate the hazards associated with thunderstorms by providing adequate safe rooms, improving their emergency communication and warning systems, adding backup generators, hardening electrical systems, and implementing a tree maintenance program.

Severe Winter Storms

There have been four significant winter storms in the past that caused travel restrictions and power outages because of snowfall 10-inches or greater. A heavy snowstorm in October of 2009 caused power outages for 1,100 customers in Gothenburg when snow fell at a rate of one to two inches per hour resulting in 10 inches of snow. I-80 was closed in January of 2011 when nearly a foot of snow caused multiple car accidents. The planning team's main concerns with severe winter storms are the resulting delays and restrictions in transportation, delayed response times from Fire and Rescue teams, and power outages. Gothenburg uses snow fences and designated snow routes. Designated snow routes run from Highway 30 to Avenue I. The city is responsible for snow removal and equipment is sufficient at this time. New snow removal equipment was purchased recently to replace aging equipment. Mitigation actions include improving electrical systems, adding backup generators, warning systems, and emergency communication systems.

Tornadoes and High Winds

There are two NCEI reports of tornadoes in Gothenburg in 2005 and 2007. The EF2 tornado that occurred in April of 2007 was severe, causing nine injuries, 12 head cattle dead, $1,200,000 in vehicle damages, outbuilding damages, and downed power lines. Gothenburg has warning sirens activated by North Platte dispatch. All areas can hear the sirens, but the local planning team reports that the coverage could be improved. City Hall has a safe room that is constructed to the standards set forth in the FEMA P-320 guidance. The city has data backup systems for municipal records on separate files located offsite. No educational outreach activities are done in the community. The County Emergency Manager offers text alerts for emergencies.

Mitigation Strategy

New Mitigation Actions

Mitigation Action	Backup and Emergency Generators
Description	Purchase and install backup generators at critical buildings and infrastructure.
Hazard(s) Addressed	All Hazards
Estimated Cost	$40,000+ per Generator
Local Funding	Tax
Timeline	5+ Years
Priority	Low
Lead Agency	City Administrator
Status	Not Started

Mitigation Action	Dam Updates and Improvements
Description	Make improvements to the dam at Lake Helen.
Hazard(s) Addressed	Dam Failure, Flooding
Estimated Cost	$50,000
Local Funding	Tax
Timeline	2-5 Years
Priority	Medium
Lead Agency	Parks Division
Status	Not Started

Kept Mitigation Actions

Mitigation Action	Evaluate Stream Channelization / Bank Stabilization
Description	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	$25,000-$500,000+
Local Funding	Tax
Timeline	Ongoing
Priority	Low
Lead Agency	City Administrator, City Engineer
Status	Bank stabilization is done as issues are identified and funding is available.

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	$1,000,000
Local Funding	Rate Payers
Timeline	Ongoing
Priority	Low
Lead Agency	Electrical Department
Status	Improvements to the electrical system are made as funding and issues are identified.

Mitigation Action	Improve Emergency Communication Systems
Description	Develop Emergency Communication Action Plan; implement Emergency; communication Action Plan; obtain/upgrade emergency communication equipment.
Hazard(s) Addressed	All Hazards
Estimated Cost	$5,000+
Local Funding	Tax, E911 Money
Timeline	Ongoing
Priority	Medium
Lead Agency	Police Department
Status	Communication equipment is updated as needed.

Mitigation Action	Improve Flood/Dam Failure Warning System
Description	Evaluate current flood/water level alert and dam failure warning alert system; implement improved alert measures; increase stricter inspection of dams.
Hazard(s) Addressed	Flooding, Dam Failure
Estimated Cost	$5,000+
Local Funding	Tax
Timeline	5+ Years
Priority	Low
Lead Agency	City Administrator, Floodplain Administrator
Status	Not Started

Mitigation Action	Improve Warning Systems
Description	Evaluate current warning systems (defined as alert sirens, weather radios, and television, telephone, and radio warning systems, etc.); improve warning systems/develop new warning system; obtain/upgrade warning system equipment and methods; conduct evaluation of existing alert sirens for replacement or placement of new sirens; identify location of weather warning radios; improve weather radio system; obtain/upgrade weather radios.
Hazard(s) Addressed	All Hazards
Estimated Cost	$50,000+
Local Funding	Tax
Timeline	5+ Years
Priority	Medium
Lead Agency	City Administrator
Status	Not Started

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 Thunderstorms, Severe Winter Storms
Estimated Cost	$5,000+
Local Funding	Tax
Timeline	Ongoing
Priority	Low
Lead Agency	City Administrator
Status	Hazardous trees are trimmed or removed as issues arise.

Mitigation Action	Repetitive Loss Property Mitigation
Description	Evaluate repetitive loss or potential loss structures located in floodplain; acquire and relocate or demolish flood prone property or elevate flood prone property; elevate equipment vulnerable to flooding.
Hazard(s) Addressed	Flooding
Estimated Cost	$50,000+
Local Funding	Tax
Timeline	5+ Years
Priority	Low
Lead Agency	City Administrator, Floodplain Administrator
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	All Hazards
Estimated Cost	$150/sf for retrofit; $300/sf for new construction
Local Funding	Tax
Timeline	5+ Years
Priority	Low
Lead Agency	City Administrator
Status	City Hall has a safe room, but more are needed in the city.

Mitigation Action	Stormwater Drainage Study
Description	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.
Hazard(s) Addressed	Flooding
Estimated Cost	$10,000-$75,000
Local Funding	Tax
Timeline	5+ Years
Priority	Low
Lead Agency	City Administrator, Floodplain Administrator
Status	Not Started

Mitigation Action	Stormwater and Drainage Improvements
Description	Improve stormwater drainage across the community.
Hazard(s) Addressed	Flooding
Estimated Cost	$10,000+
Local Funding	Tax
Timeline	Ongoing
Priority	Low
Lead Agency	City Administrator, Floodplain Administrator
Status	Drainage and stormwater improvements are made regularly as issues arise and funding is available.

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 City Administrator, Park Director, and Floodplain Administrator 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 social media, newspapers, and council meetings.

Community Profile

City of Lexington

Central Platte NRD
Hazard Mitigation Plan

2022

Local Planning Team

The City of Lexington'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 LEX.1: Lexington Local Planning Team

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Bill Brecks	Development Services Director / Floodplain Administrator	City of Lexington	-	-
Dennis Burnside	Assistant City Manager	City of Lexington	Lexington	Lexington
Joe Pepplitsch	City Manager	City of Lexington	Lexington - Virtually	Lexington

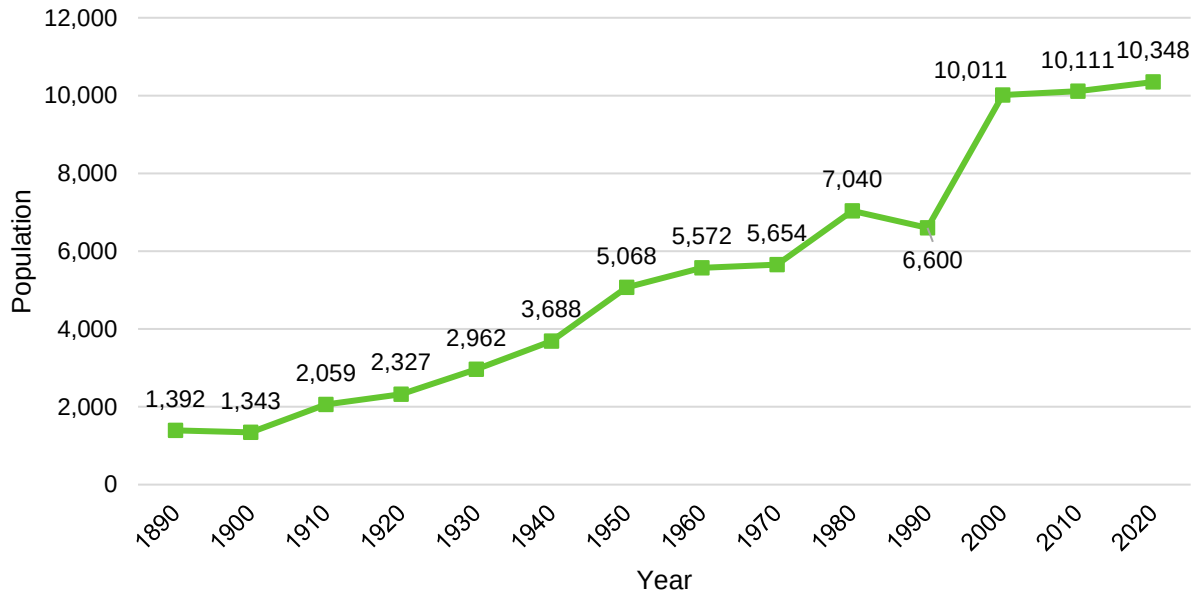
Location and Geography

The City of Lexington is in south central Dawson County and covers an area of 4.51 square miles. Major waterways in the area include the Platte River, Spring Creek, and Buffalo Creek. The City of Lexington is the county seat and largest community in Dawson County.

Demographics

The following figure displays the historical population trend for the City of Lexington. This figure indicates that the population of Lexington has been increasing since 1990 to 10,348 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. Lexington's population accounted for 43% of Dawson County's population in 2020.[47]

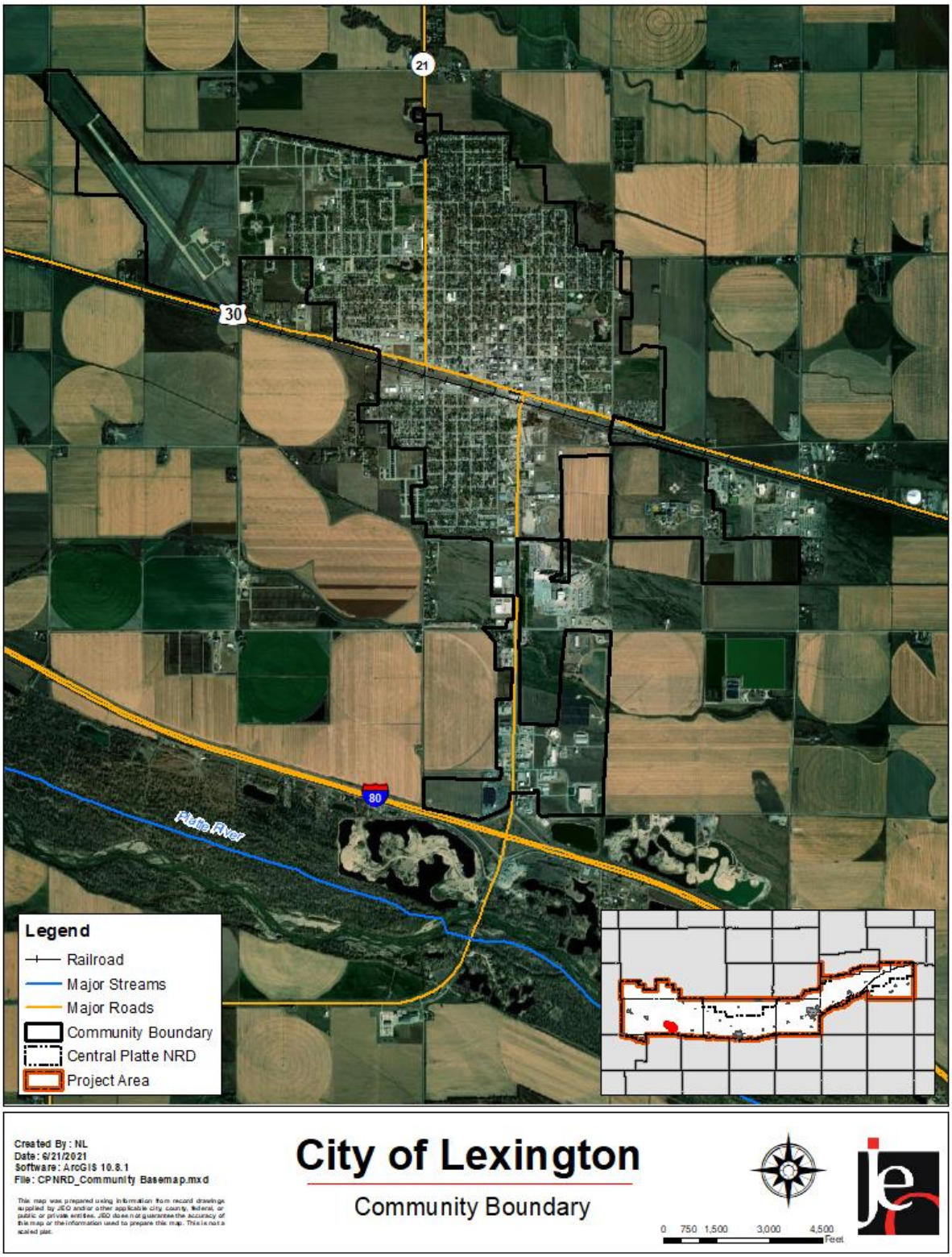
Figure LEX.1: Population 1890 - 2020



Source: U.S. Census Bureau

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

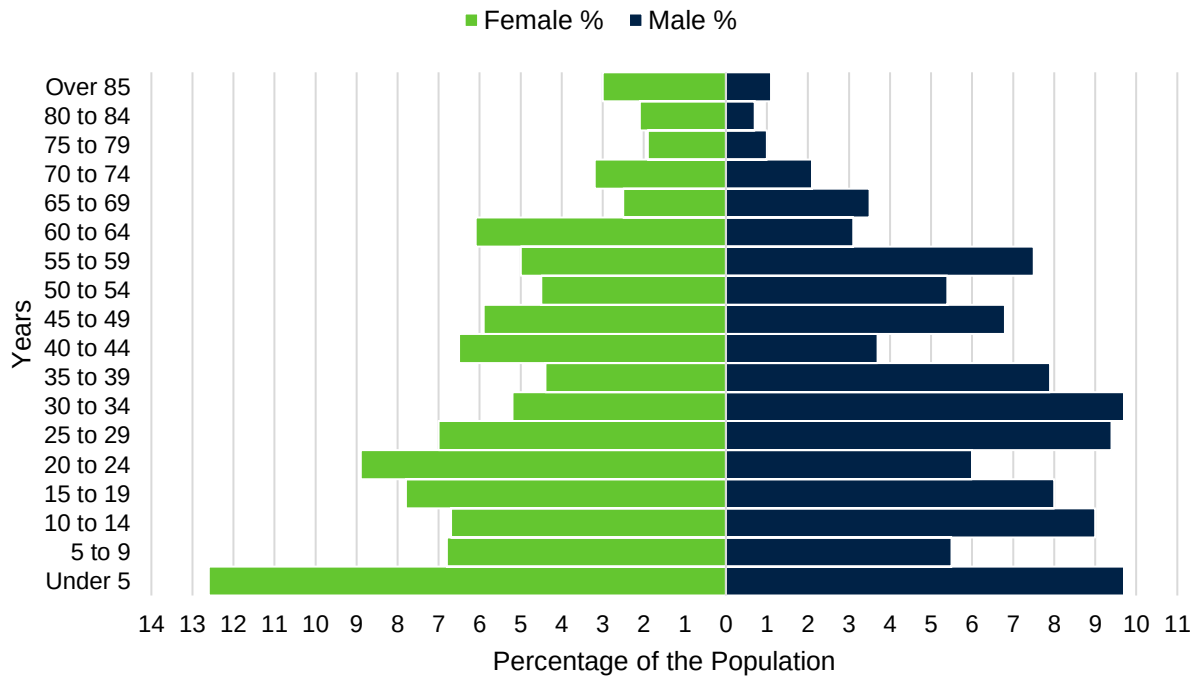
Figure LEX.2: City of Lexington



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

- **22.8% is non-white.** Since 2010, Lexington grew less ethnically diverse. In 2010, 44.7% of the Lexington's population was non-white. By 2019, 22.8% was non-white.[48]
- **30.8 median age.** The median age of Lexington was 30.8 years in old 2019. The population grew older since 2010, when the median age was 29.4.[49]

Figure LEX.3: Lexington's Population Pyramid



The figure above shows Lexington's population percentage broken down by sex and five-year age groups. Lexington's population is younger with a much higher percentage of the population below 55 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. Lexington's population has:

- **10.6% of people living below the poverty line.** The poverty rate (10.6%) in the City of Lexington was higher than the state's poverty rate (7.2%) in 2019.[50]
- **$52,885 median household income.** Lexington's median household income in 2019 ($52,885) was $8,000 lower than the state ($61,439).[50]
- **4% unemployment rate.** In 2019 Lexington had a higher unemployment rate (4%) when compared to the state (2.3%).[50]

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

- **14.9% of workers commuted 30 minutes or more to work.** Fewer workers in Lexington commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (14.9% compared to 75.3%).[51]

Major Employers

Major employers in the City of Lexington include Tyson Fresh Meats, Lexington Public Schools, Orthman Manufacturing, Walmart Super Store, and Lexington Regional Health Center. Most of the residents work in the City of Lexington, and do not commute outside the community.

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. According to the local planning team, there are approximately 400 mobile homes located on the east and west edges of the community. 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.

- **90.2% of housing built prior to 1970.** Lexington has a larger share of housing built prior to 1970 than the state (90.2% compared to 46%).[52]
- **5.8% of housing units vacant.** Since 2010, Lexington's vacancy rate decreased. In 2010 the vacancy rate was .9%. By 2019, 5.8% of housing units were vacant.[52]
- **8.3% mobile and manufacture housing.** The City of Lexington had a larger share of mobile and manufactured housing (8.3%) compared to the state (3.3%).[52]
- **41.5% renter-occupied.** The rental rate of Lexington was 41.5% in 2019. The percentage went up since 2010, when renter occupied housing was at 36%.[52]

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 Lexington is governed by a five-member city council; other governmental offices and departments that may be involved in implementing hazard mitigation initiatives are listed below.

- Clerk/Treasurer
- City Manager
- Floodplain Administrator
- Community Development Agency
- Development Services Department
- Housing Authority
- Planning Commission
- Public Library
- Senior Center

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

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

- Streets Department
- Parks Department
- Tree Board
- Volunteer Fire Department
- Water and Sewer Department
- Electric Department
- Building Department
- Public Works Department

Capability Assessment

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

Municipal funds are sufficient to pursue new capital projects and a large portion are already dedicated to a wastewater treatment facility expansion. Funds have increased over recent years.

Table LEX.2: Capability Assessment

Survey Components/Subcomponents		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	Yes
	Capital Improvements Plan	Yes
	Economic Development Plan	Yes
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	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)	Spring and Buffalo Creeks Watershed Flood Risk Reduction Plan. Tree Ordinance
Administrative & Technical Capability	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	Yes
	Chief Building Official	Yes
	Civil Engineering	Yes – Contractor
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	Yes
	Mutual Aid Agreement	Yes
	Other (if any)	-

Survey Components/Subcomponents		Yes/No
Fiscal Capability	Capital Improvement Plan/ 1- & 6-Year plan	Yes
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	Yes
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	-
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	Yes – Red Cross
	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	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

Lexington 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.

Building Code (2015)

The building code sets standards for constructed buildings and structures. The city's building codes were updated in 2016, and they mention several hazards including fire, flood, chemical, electrical, and environmental. The codes require mechanical systems to be elevated for structures in the floodplain, requires sewer backflow valves for structures in the floodplain, and outlines proper sump pump installation. They also allow for raingardens in residential areas, encourage the use of permeable surfaces, encourage the use of hail resistant building materials, and require hurricane clips during construction.

Capital Improvements Plan (Annually)

The capital improvements plan annually outlines projects the city would like to pursue and provides a planning schedule and financing options. Projects include stormwater system improvements, improving transportation routes for drainage, bridge improvements, installing new municipal wells, installation of water meters for residential structures, upsizing water distribution pipes, updating electrical distribution system, and constructing a new water treatment facility, and lift station improvements. Projects identified in the hazard mitigation plan are identified for inclusion into the capital improvements plan.

Comprehensive Plan (2013)

The comprehensive plan is designed to guide the future actions and growth of the city. Flooding, water quality, and continuity of electric service are hazards discussed in the comprehensive plan. The plan directs developments away from the floodplain, chemical storage facilities, and major transportation routes. The plan also encourages infill development, elevation of structures located in the floodplain, and preservation of open space in hazard-prone areas. The city anticipates updating the comprehensive plan every five to ten years and will integrate additional hazard mitigation actions and goals into future updates.

Dawson County Local Emergency Operations Plan (2020)

Lexington 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 every five years.

Floodplain Ordinance (2009), Zoning Ordinance (2009), and Subdivision Regulations (2009)

The city's floodplain ordinance, zoning ordinance, and subdivision regulations outline where and how development should occur in the future. These documents discourage development, limit population density, and require more than one foot of elevation above Base Flood Elevation in the floodplain. The documents also discourage development and housing near chemical sites and major transportation routes, include well setback requirements, restrict subdivision of land within or adjacent to the floodplain, and outline water restriction implementation. There are currently no plans to update these documents.

Spring and Buffalo Creeks Watershed Flood Risk Reduction Plan (Under Development)

The primary purpose of the Spring and Buffalo Creeks Flood Risk Reduction Plan is flood risk reduction within and near the community of Lexington and Dawson County. It will identify projects within the watershed to help reduce flood risk and damages to agricultural property, homes, and businesses, as well as opportunities for groundwater recharge, threatened and endangered species habitat improvements, and recreation. 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.

Stormwater Management Plan (2017)

The stormwater management plan documents commitments by the City of Lexington 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, illicit discharge detection and elimination, construction stormwater management, post-construction stormwater management, and good housekeeping and pollution prevention.

Future Development Trends

In the past five years, Lexington has had multiple new businesses come to the community, as well as a few businesses that closed. Construction and maintenance of streets has been done to accommodate new development of residential homes, duplexes, townhomes, and apartments. No new structures were developed in the floodplain. In the next five years, new housing will be concentrated in the northwest and southwest portions of the community away from the floodplain. In addition, the city will install several new well backup generators, install two new siren warning systems, update the Comprehensive Plan, update the city's Tree Ordinance, and will work with partners to evaluate and improve drainage in the Spring Creek watershed.

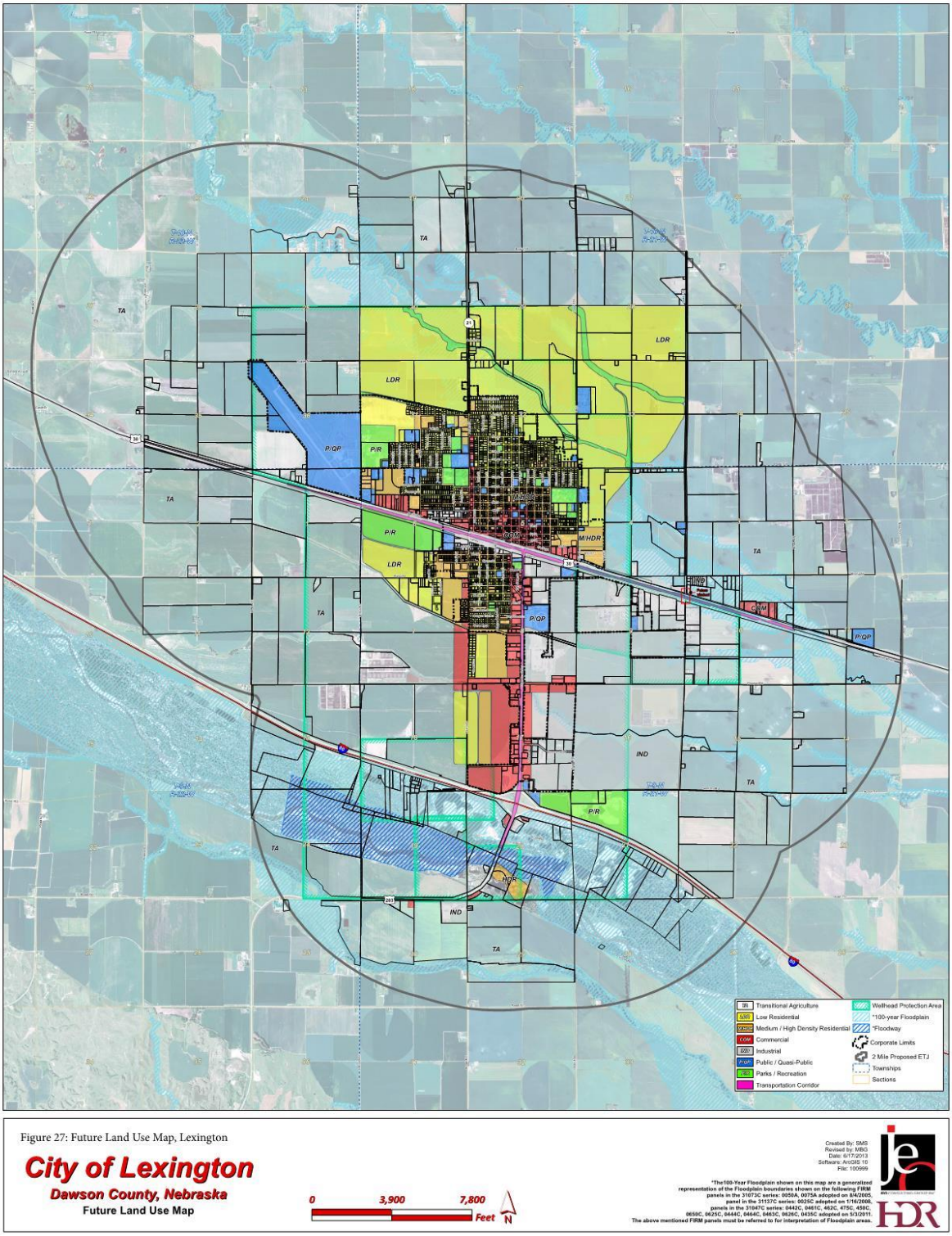
Community Lifelines

Transportation

Lexington's major transportation corridors include Interstate 80, State Highway 21, US Highway 30, and US Highway 283. The most traveled route is Interstate 80 with an average of 18,345 vehicles daily, 6,935 of which are trucks.[53] The city has one Union Pacific line that splits into three different tracks traveling southeast to northwest through the central portion of the community. The local planning team noted that there are designated truck routes in the less populated portions of the city. 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.

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

Figure LEX.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 18 chemical storage sites within or near Lexington which house hazardous materials (listed below). In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

Table LEX.3: Chemical Storage Sites

Name	Address	Floodplain (Y/N)
Orthman Manufacturing Inc	75765 Road 435	N
Titan Machinery Inc	75481 Road 435	Y (0.2%)
Country Partners Cooperative	707 E Pacific St	N
NebraskaLand Truck Center	3002 Plum Creek Pkwy	N
NDOT Lexington Yard	2812 Plum Creek Pkwy	N
Dawson County Shop	710 W 8th St	Y (0.2%)
TIGT Lexington Compressor Sta	75780 Road 435	N
Tyson Fresh Meats Inc	1500 Plum Creek Pkwy	N
Darling Ingredients Inc	1208 E Walnut St	N
Country Partners Cooperative	43571 Highway 30	Y (1%)
Country Partners Cooperative	1306 E Walnut St	N
CenturyLink	112 E 7th St	Y (0.2)
Davis Energy Inc	925 W Pacific Ave	N
Paulsen Inc	43434 Heartland Rd	N
Chief Ethanol Fuels Inc	1111 E Industry Dr	N
Midwest PMS LLC	408 W Ivan St	N
AT&T NEA041/NE9154	77048 Drive 428	N
Orthman Manufacturing Inc	620 Frontier St	N

Source: Nebraska Department of Environment and Energy[54]

Health and Medical Facilities

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

Table LEX.4: Health and Medical Facilities

Name	Type of Facility	Address	Number of Beds
Lexington Regional Health Center	Hospital	1201 North Erie St	25
Avamere at Lexington	Assisted Living Facility	1811 Ridgeway	59
Wel-Life at Plum Creek	Assisted Living Facility	1505 North Adams St	29
Plum Creek Care Center	Long Term Care Facility	1505 North Adams St	66

Source: Nebraska Department of Health and Human Services[55,56,57,58]

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

Critical Facilities

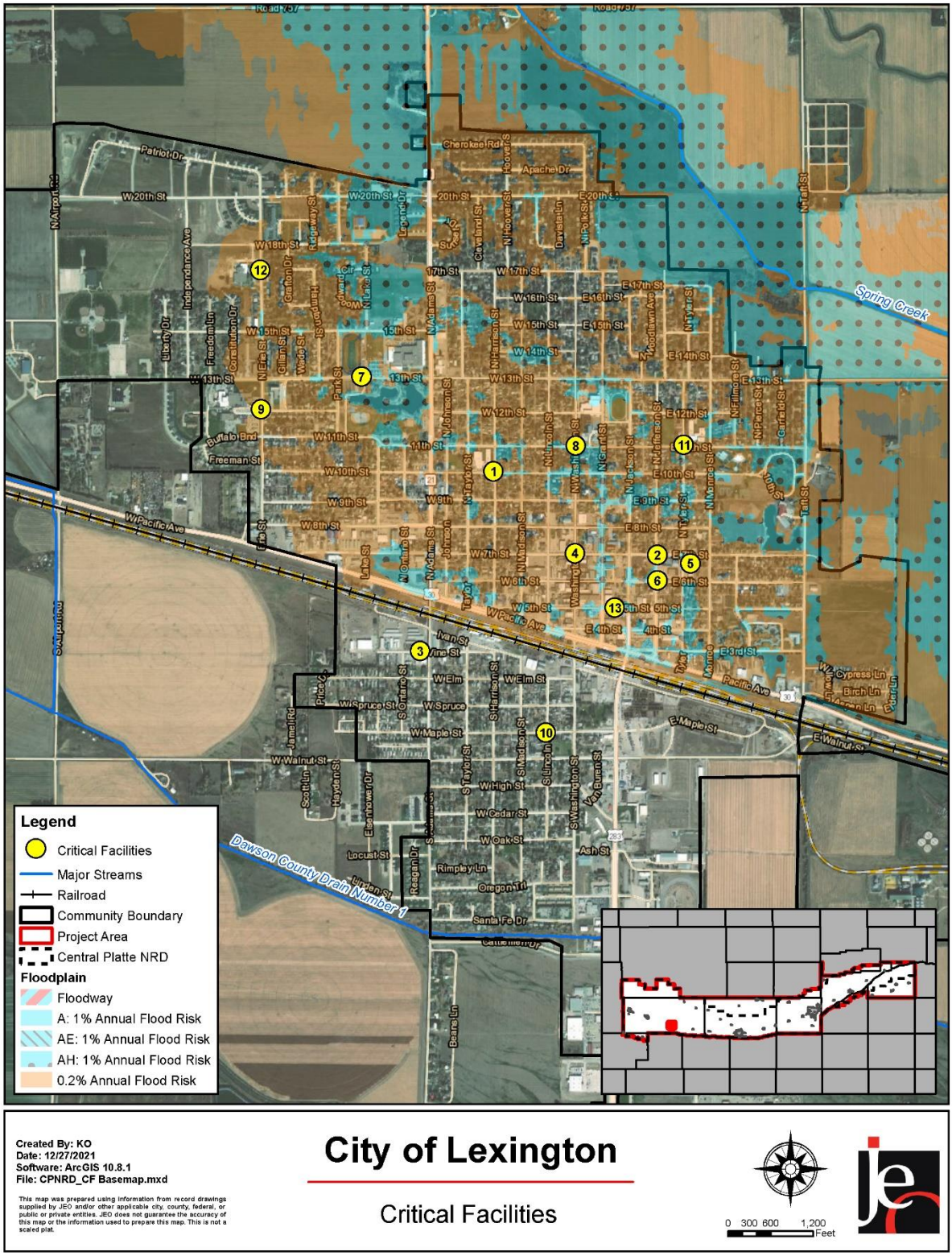
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during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

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Bryan Elementary School	Y	N	Y (0.2%)
2	City Hall/Police	N	Y	Y (0.2%)
3	City Service Building	N	Y	N
4	County Building/Sheriff	N	Y	Y (0.2%)
5	Fire Hall	N	Y	Y (0.2%)
6	Grand Generation Center	Y	N	Y (0.2%)
7	Lexington High School	Y	N	Y (0.2%)
8	Lexington Middle School	Y	Y	Y (1%)
9	Lexington Regional Health Center	N	Y	Y (0.2%)
10	Morton Elementary School	Y	N	N
11	Pershing Elementary School	Y	N	Y (0.2%)
12	Sandoz Elementary School	Y	N	Y (0.2%)
13	Wastewater Treatment Plant	N	Y	Y (0.2%)

Figure LEX.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 LEX.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
2,803	$341,990,076	551	$64,618,134	19.7%

Source: County Assessor, 2021

Table LEX.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
2,803	$341,990,076	1,972	$203,700,244	70.4%

Source: County Assessor, 2021

Historical Occurrences

See the Dawson 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 community is concerned about the health and safety of at-risk populations, the potential strain on the power grid, the safety of livestock, the increased chance for fire and drought, and the earth generally warming. Lexington has most recently experienced extreme heat in the summer of 2016. The community does not have official cooling centers, but Lexington has parks with shelters and shade, and the city plans to add one new splash pad in the summer of 2022. Event cancelation notification is through various social and traditional media outlets. Lexington is working to continually improve their power system and has made progress improving the electrical grid. Current hazard mitigation plans include creating a redundant electrical system and providing backup generators for critical facilities. Currently some faith-based organizations might attempt to aid vulnerable populations, but nothing is in effect yet. Lexington also plans to educate its residents on mitigation and response procedures for extreme heat.

Flooding

The City of Lexington is flanked by floodplain on its north and east sides, and down Highway 30 mostly east of the city's corporate limits. One of the most significant flood events occurred in May of 2008 as a result of heavy spring rains. This flood event caused water to enter homes, inundate streets, and impacted an electrical substation resulting in a reported $100,000 in property damages. Lexington was also affected by the flooding event in May of 2005 that caused

$3,000,000 in property damages throughout central Nebraska. Flooding during this event left nearly 60 percent of Lexington without power. In July 2019, flooding cause cars to be stalled in flood waters and 23 people were evacuated from an apartment building. The city issued a disaster declaration due to the disruption of utility services.

Stormwater drainage effectiveness varies within the community. One of the larger drainage issues is related to water discharged by an adjacent irrigation canal later near the northwest corner of the city. Currently the city is having a drainage improvements feasibility study done on the area to identify solutions to improving the drainage. Spring Creek is a body of water of concern to the planning team. Several culverts have been renovated to improve flow, but downstream flow of Spring Creek remains a concern. In 2016 the city completed a project of dredging and bank stabilization at Plum Creek Park. In 2019 the same was completed at the city's other lake at Kirkpatrick Memorial Park. Future mitigation plans include raising building codes, updating the city's comprehensive plan, stabilizing banks, deepening drainage ditches, a drainage improvements study, and engineering Spring Creek and Buffalo Creek to improve stormwater disbursement.

The city falls under the Spring and Buffalo 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.

Lexington is a member of the NFIP, and the city's Floodplain Administrator (William Brecks) will oversee the commitments and requirements of the NFIP. The initial FIRM for the city was delineated in 5/15/1984 and the current effective map date is 5/3/2011. Nearly 19% of parcel improvements in the city are located in the 1% annual flood risk area and over 70% of parcel improvements are located in the 0.2% annual flood risk area (see tables in the Parcel Improvements and Valuation section). As of October 31, 2021, there are 130 NFIP policies in-force covering $25,329,200. Lexington does not currently have any repetitive loss or severe repetitive loss structures.

Severe Thunderstorms

The NCEI reports 29 severe thunderstorms and one lightning event since 1996, causing $2,105,000 dollars in damage. Of these, the most damage was caused in July of 2014 when severe thunderstorms, accompanied by hail and strong winds, caused $1,000,000 in property damage. The community experiences thunderstorms often in the summer, and Lexington is concerned with potential power outages, lightning strikes, and the potential loss of life or property. In September of 2009, lightning struck a dry-cleaning business in Lexington, igniting a fire that burned the business to the ground. Approximately 5% of powerlines are buried in the community, which increased the risk of power outage. Critical municipal records are backed up, and most critical facilities have backup generators and weather radios. To mitigate damage caused by severe thunderstorms, Lexington plans to update and improve their tree maintenance programs by maintaining their Tree City USA membership, removing hazardous trees, and educating citizens about tree maintenance. Lexington has worked with the Nebraska Forest Service to complete a comprehensive tree inventory. The local tree board is also participating in monthly online tree board training and plans to update the tree ordinance.

Severe Winter Storms

Half an inch of ice from a storm in December of 2007 was heavy enough to down power lines and trees, precipitating concerns about future losses of power and disabling heating. The community is concerned with the potential impact various industries, depending on the severity of the storm and conditions of roads. The planning team is also concerned about the delay in emergency response time due to poor road conditions. The city publishes emergency snow routes online and on local media outlets and there are a few snow fences along main transportation routes. The city owns several sander/plows, pickup trucks with blades, front end loaders, and a new snow blower to use for snow removal. The city has erected a salt building so inventory of street salt is sheltered from the elements that may prematurely deplete the supply.

Tornadoes and High Winds

Lexington is concerned with the potential damage to trees, property, and power lines. NCEI reported 11 high wind events nearing wind speeds of 60 mph since 1996. A high wind event in April of 2010 brought down tree branches that caused power outages throughout the city. The planning team reports that Lexington experiences high winds perennially that down tree limbs. The city's municipal records are backed up, text alerts are available, and the community has safe rooms in the senior center and in the local hospital. The community has warning sirens, with a couple of upgrades and add additions planned for in 2022. The sirens are activated by the County Emergency Management Department. To mitigate the hazards associated with high winds, Lexington has maintained membership with Tree City USA for 20 years and plans to continue tree maintenance with hazardous tree removal, a tree assistance program, a tree care ordinance, and a tree planting program. Electric linemen regularly identify potential tree/line hazards, and have those trees trimmed or removed.

Mitigation Strategy

New Mitigation Actions

Mitigation Action	Drainage Study
Description	In collaboration with JEO, review the feasibility of improving the drainage in the northwest corner of the city, with several potential solutions being investigated: conversion of irrigated acres from surface water to groundwater, canal operation adjustments, and/or diversion of flow. It is anticipated that if the project is feasible, then additional efforts will be required to fully develop the solution.
Hazard(s) Addressed	Flooding
Estimated Cost	$16,000
Local Funding	General Fund
Timeline	1 Year
Priority	High
Lead Agency	City Manager, JEO Consulting Group
Status	This study is currently underway.

Mitigation Action	Project Scoping
Description	Evaluate potential flood risk reduction alternatives as identified through the NRCS WFPO including project scoping and implementation.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies by Project
Local Funding	General Fund
Timeline	2-5 Years
Priority	High
Lead Agency	City Manager, CPNRD
Status	Spring and Buffalo 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. This must remain a multi-jurisdictional effort, requiring improvements in the downstream Spring Creek watershed.

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	$100,000+
Local Funding	General Fund
Timeline	2-5 Years
Priority	Medium
Lead Agency	City Administration, Water and Sewer Department
Status	Evaluation of wells in underway and the city is making plans to install several new backup generators in 2022-2023.

Mitigation Action	Construction Standards and Building Survivability
Description	Evaluate building standards/codes/requirements; implement new or improved building standards/codes/requirements; educate construction companies on building standards; promote use of higher codes and standards, such as fortified for Safer Living Standard, to provide greater protection for any new construction or building retrofits.
Hazard(s) Addressed	All Hazards
Estimated Cost	Staff Time
Local Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	Building Department
Status	The city has the most up to date code version and will update the building code as soon as the State of Nebraska moves to the newest code.

Mitigation Action	Develop Emergency Snow/Evacuation Routes
Description	Develop or improve snow and evacuation routes and programs to include parking, snow/ice/debris removal, etc.; obtain and install snow emergency route and evacuation signs; provide information on emergency routes to the public; construct snow fences where possible on main routes to prevent snow from disrupting transportation.
Hazard(s) Addressed	Severe Winter Storms
Estimated Cost	$1,000, Staff Time
Local Funding	General Fund
Timeline	2-5 Years
Priority	Medium
Lead Agency	City Administration, Public Works Department, Streets Department
Status	The city has established firm emergency snow routes and snow removal procedures. This action is being kept as growth in the city may necessitate updates.

Mitigation Action	Hail Resistant Roofing
Description	Use roofing materials that are resistant to hail impacts for new buildings; retrofit existing buildings with hail resistant roofing; encourage the use of hail resistant roofing for any new constructions.
Hazard(s) Addressed	Severe Thunderstorms
Estimated Cost	$2 per square foot
Local Funding	General Fund
Timeline	Ongoing
Priority	Low
Lead Agency	Building Department
Status	This is an ongoing action. The city requires and plans to continue to enforce what is required by code, which is hail resistant roofing, both new and retrofit.

Mitigation Action	Improve and Revise Snow/Ice Removal Program
Description	Revise and improve snow and ice removal program for streets; address situations such as plowing snow, ice removal, parking during snow and ice removal, and removal of associated storm debris; improve capabilities to rescue those stranded in blizzards and increase the capacity to which snow can be removed from roadways after an event.
Hazard(s) Addressed	Severe Winter Storms
Estimated Cost	Varies
Local Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	City Administration, Streets Department
Status	This is done and in place but is kept as updates may be necessary as community growth occurs.

Mitigation Action	Improve Drainage
Description	Improve storm sewers and drainage patterns in and around the community; deepen drainage ditches and clean out culverts.
Hazard(s) Addressed	Flooding
Estimated Cost	$10,000+
Local Funding	General Fund
Timeline	Ongoing
Priority	Medium
Lead Agency	City Administration, Streets Department, Water and Sewer Department
Status	This is an ongoing action due to erosion and litter that will eventually accumulate. Several drainage ditches have been cleaned, smoothed, and even added flow liners to expedite drainage flow. More will be tended to incrementally.

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	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
Estimated Cost	$50,000+
Local Funding	Enterprise Funds
Timeline	2-5 Years
Priority	High
Lead Agency	City Administration, Electric Department
Status	The city is in the final stages of a multi-year effort to update everything to a uniform standard. The city will continue to evaluate the grid and make improvements when called for.

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	$30,000+
Local Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	City Administration, Streets Department
Status	The city replaces and upgrades warning systems incrementally. As new neighborhoods are developed, the city will plan to appropriately augment the warning siren network. There are plans for one or two additional sirens in 2022. At least one siren has been replaced since the last HMP.

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	$5,000+
Local Funding	General Fund
Timeline	Ongoing
Priority	Medium
Lead Agency	City Administration
Status	This is an ongoing action. The city plans to continue issuing periodic educational pieces and also posting on the city's website.

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	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
Estimated Cost	$20,000 per year
Local Funding	General Fund
Timeline	Ongoing
Priority	Low
Lead Agency	Streets Department, Parks Department
Status	The city completed a tree inventory in 2021. The city's main trimming efforts are in response to power lines. Parks personnel also evaluate tree health and prune dead branches as necessary.

Mitigation Action	Stream Channelization / Bank Stabilization
Description	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 Fund
Timeline	2-5 Years
Priority	Medium
Lead Agency	Public Works Department
Status	In 2016 the city completed a project of dredging and bank stabilization at Plum Creek Park. In 2019 the same was completed at the city's other lake at Kirkpatrick Memorial Park. Some streams and drainage ditches remain a concern. Since the main areas of concern are outside the city's jurisdiction, they are partnering with other stakeholders, including CPNRD. The stakeholders are making an evaluation of the Spring Creek watershed, with an end goal of pursuing improvements identified in the study.

Mitigation Action	Tree Care Ordinance
Description	Pass and enforce a tree care ordinance to improve tree health and to remove dangerous trees and limbs.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Winter Storms, Severe Thunderstorms
Estimated Cost	Staff Time
Local Funding	Staff Time
Timeline	1 Year
Priority	High
Lead Agency	Streets Department, Parks Department, Tree Board
Status	The Lexington Tree Board plans to forward a tree ordinance update to the City Council in 2022. The previous ordinance is heavily specific towards Dutch Elm Disease and a more flexible ordinance will help address unforeseen issues that may appear.

Mitigation Action	Tree Planting / Assistance for Tree Planting
Description	Educate public on appropriate tree planting and establish an annual tree trimming program to assist low income and elderly residents; develop tree planting and maintenance guidelines.
Hazard(s) Addressed	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
Estimated Cost	$3,000, Staff Time
Local Funding	Streets Funds, Parks Funds
Timeline	5+ Years
Priority	Medium
Lead Agency	City Administration, Parks Department, Tree Board
Status	This is an ongoing action. The city's website now has a section on trees that will be providing much of the educational information.

Mitigation Action	Update Comprehensive Plan
Description	Update Comprehensive Plan; integrate plan with Hazard Mitigation Plan components.
Hazard(s) Addressed	All Hazards
Estimated Cost	$50,000+
Local Funding	General Fund
Timeline	1 Year
Priority	Medium
Lead Agency	City Administration
Status	An updated Comprehensive Plan is planned for late 2022.

Plan Maintenance

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

Lexington last reviewed their section of the HMP in 2017 during the plan update. The City Manager, Assistant City Manager, and Development Services Director / Floodplain Administrator will be responsible for reviewing and updating the plan in the future. These individuals will review the plan bi-annually during city council meetings. The public will be notified through the city's website and Facebook page.

Drainage Districts Profile

Central Platte NRD
Hazard Mitigation Plan Update

2022

Local Planning Teams

Each drainage districts' local planning team members 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 various drainage districts.

Table DD.1: Local Planning Teams

Participating District	Name	Title	R1 Meeting	R2 Meeting
Dawson County Drainage District No. 2	Eric Miller	Attorney	Grand Island	Recording
Dawson County Drainage District No. 3	Eric Miller	Attorney	Grand Island	Recording

Location and Geography

Dawson County Drainage District No. 2 is located near the City of Cozad off the Platte River. Figure DD.1 shows the location of Dawson County Drainage District No.2.

Dawson County Drainage District No. 3 is located in central Dawson County near the City of Cozad. Figure DD.2 shows the location of Dawson County Drainage District No.3.

Services

The primary purpose of the drainage districts is to provide drainage and control flooding within the coverage area. Dawson County Drainage District No. 2 serves less than 5,000 people and was created around 40 years ago. Dawson County Drainage District No. 3 serves less than 5,000 people and was created around 40 years ago.

Governance and Staffing

Each drainage district is governed by a district board who will oversee the implementation of hazard projects. The number of board members and staff for each participating district is listed below.

Table DD.2: Board Members and Staffing

Participating District	Board Members	Staff
Dawson County Drainage District No. 2	3	0
Dawson County Drainage District No. 3	3	0

Figure DD.1: Dawson County Drainage District No.2

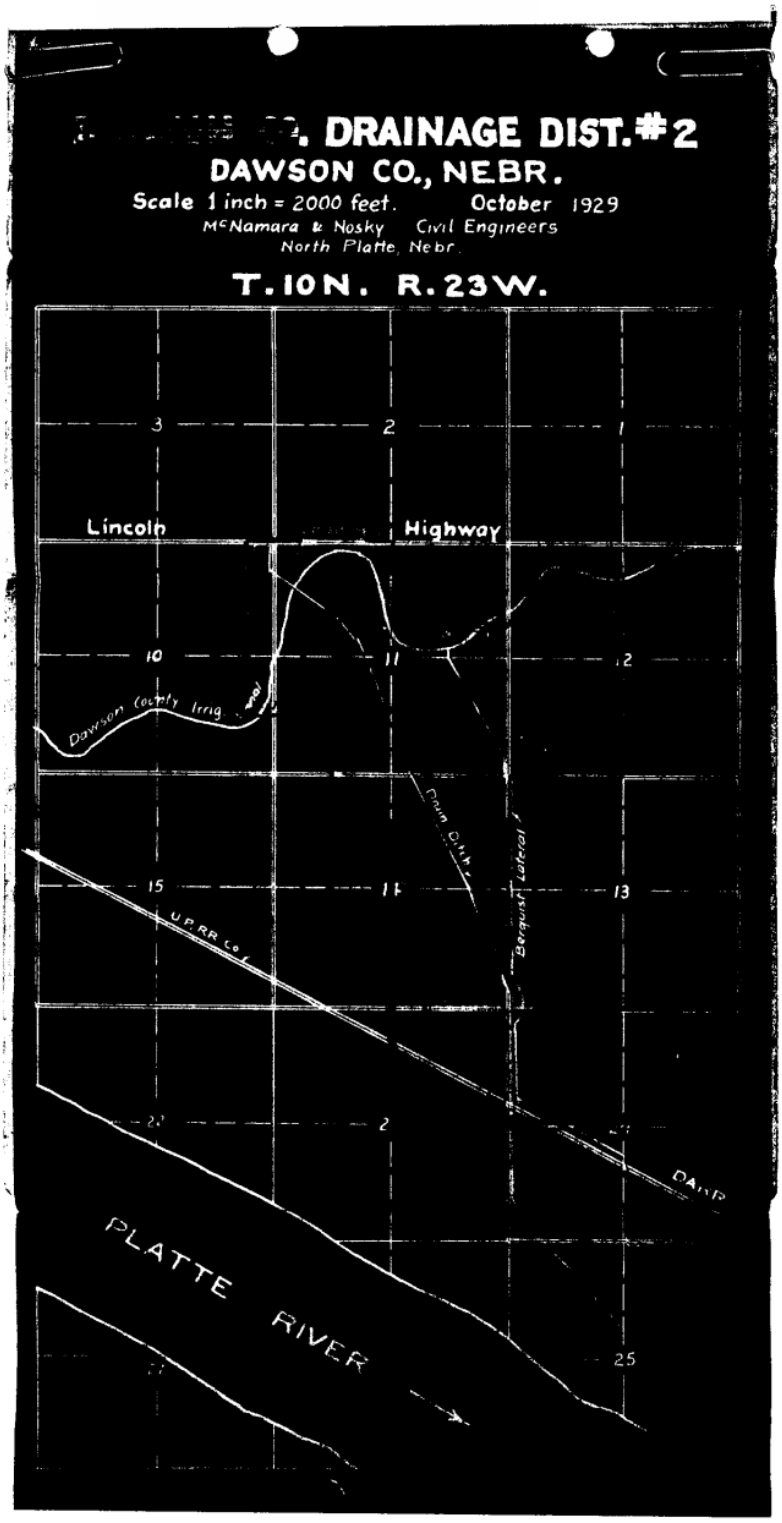
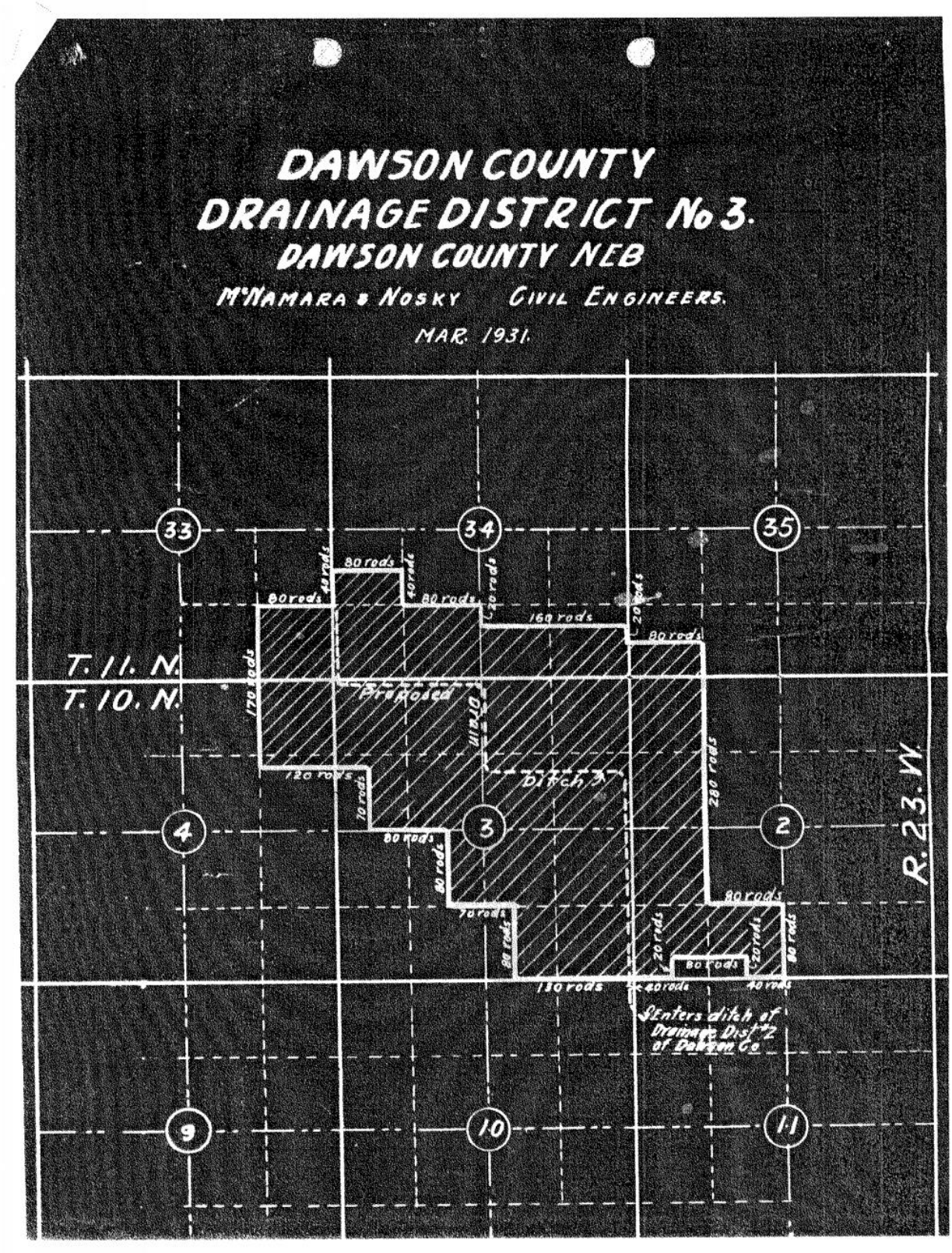


Figure DD.2: Dawson County Drainage District No.3



Capability Assessment

Due to the unique structure of drainage districts, the typical capability assessment table was not used. The following tables summarizes each district's overall capability.

Dawson County Drainage District No. 2

Revenue for the district is generated using a tax levy of all landowners within the district.

Table DD.3: Overall Capability

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

Dawson County Drainage District No. 3

Revenue for the district is generated using a tax levy of all landowners within the district.

Table DD.4: Overall Capability

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

Both drainage districts within the planning area do not have any formal response plans for emergency situations or plans that discuss hazards. In any future planning mechanisms, the drainage districts will work to integrate the goals and objectives of the hazard mitigation plan as appropriate.

Future Development Trends

Dawson County Drainage District No. 2

There have been no changes in district infrastructure over the past five years. In the next five years, the local planning team does not anticipate any future infrastructure development.

Dawson County Drainage District No. 3

Over the past five years, there have been no changes in district infrastructure. The local planning team does not anticipate any future infrastructure development in the next five years.

Community Lifelines

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 provides a summary of the critical facilities for each district. The critical facilities were not mapped as the entire drainage ditch is critical.

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 DD.5: Critical Facilities

CF Number	Name	Mass Care Facility (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Dawson County Drainage District No. 2 – Drainage Ditch	N	N	Y
2	Dawson County Drainage District No. 3 – Drainage Ditch	N	N	Y

Historical Occurrences

See the Dawson 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*.

Table DD.6: Hazard Prioritization

Hazards	Dawson County Drainage District No. 2	Dawson County Drainage District No. 3
Animal & Plan Disease		
Dam Failure		
Drought		
Earthquake		
Extreme Heat		
Flooding	X	X
Grass/Wildfires		
Hazardous Materials Release		
Levee Failure		
Public Health Emergency		
Severe Thunderstorms	X	X
Severe Winter Storms	X	X
Terrorism		
Tornadoes and High Winds		

Flooding

While the drainage districts help control flooding in the area, a large flooding event can overload and damage the system. Flooding can erode drainageways which could lead to breaches in the ditches. If the system is breached or overloaded, floodwaters can go into fields potentially damaging property and crops. Neither district has been impacted by flooding in the past.

Severe Thunderstorms

Severe thunderstorms can include heavy rain which may cause flooding and can overload the system. In addition, high winds and hail can cause downed tree limbs and other types of debris which can plug or block parts of the system. These blockages can impede the flow of water causing flooding concerns or erosion damage. If a culvert does become blocked the blockage is

removed, however neither district has the funds to do regular maintenance and cleaning. In 2020, downed tree limbs and debris blocked a culvert in Drainage District #2.

Severe Winter Storms

Severe winter storms can cause additional debris to get swept into the drainage system. This debris can cause blockages and plugs within the drainage ditches which impede the flow of water. In addition, increased snow melt from large snowstorms can lead to more water in the system, which combined with rain may overload the ditches and cause flooding. Neither district has been recently impacted by winter storms.

Mitigation Strategy

New Mitigation Actions

Dawson County Drainage District No.2

Mitigation Action	Culvert and Drainage Way Maintenance and Improvements
Description	Improve and maintain district operated drainage ways and culverts throughout the district
Hazard(s) Addressed	Flooding, Severe Thunderstorms, Severe Winter Storms
Estimated Cost	$50,000+
Local Funding	Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	District Board
Status	Currently planning and saving funds.

Dawson County Drainage District No.3

Mitigation Action	Culvert and Drainage Way Maintenance and Improvements
Description	Improve and maintain district operated drainage ways and culverts throughout the district
Hazard(s) Addressed	Flooding, Severe Thunderstorms, Severe Winter Storms
Estimated Cost	$50,000+
Local Funding	Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	District Board
Status	Currently planning and saving funds.

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 district 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 table below shows who will be responsible for reviewing the profile, the frequency of review, and how the public will be involved.

Table DD.7: Plan Maintenance

Participating District	Reviewers	Frequency	Public Involvement
Dawson County Drainage District No.2	Board Members, Attorney	Bi-Annually	Board Meetings
Dawson County Drainage District No.3	Board Members, Attorney	Bi-Annually	Board Meetings

School District Profile

Eustis-Farnam Public Schools

Central Platte NRD
Hazard Mitigation Plan Update

2022

Local Planning Team

The Eustis-Farnam 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 EFS.1: Eustis-Farnam Public Schools Local Planning Team

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Nick Hodge	Superintendent	Eustis-Farnam Public Schools	Virtual	Recording

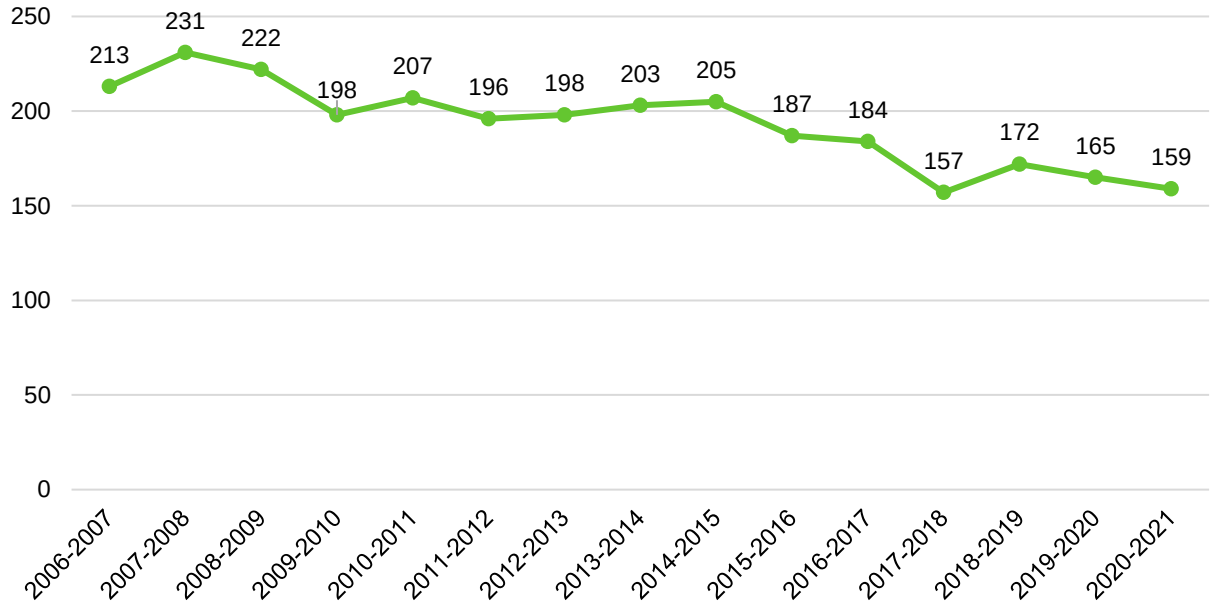
Location

Eustis-Farnam Public Schools is in northeastern Frontier, southwestern Dawson, northwestern Gosper, and southeastern Lincoln Counties. Schools in the district are Eustis Elementary School and Eustis-Farnam High School. In addition, the district owns a bus barn, agriculture building, and kindergarten cottage. The school district provides services to students in the communities of Eustis, Farnam, 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 declining since 2018. There are currently 159 students enrolled in the district.[59] The local planning team anticipates little change in student enrollment due to location and demographics.

Figure EFS.1: Student Population 2006-2021



Source: Nebraska Department of Education

59 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 EFS.2: Eustis-Farnam Public Schools

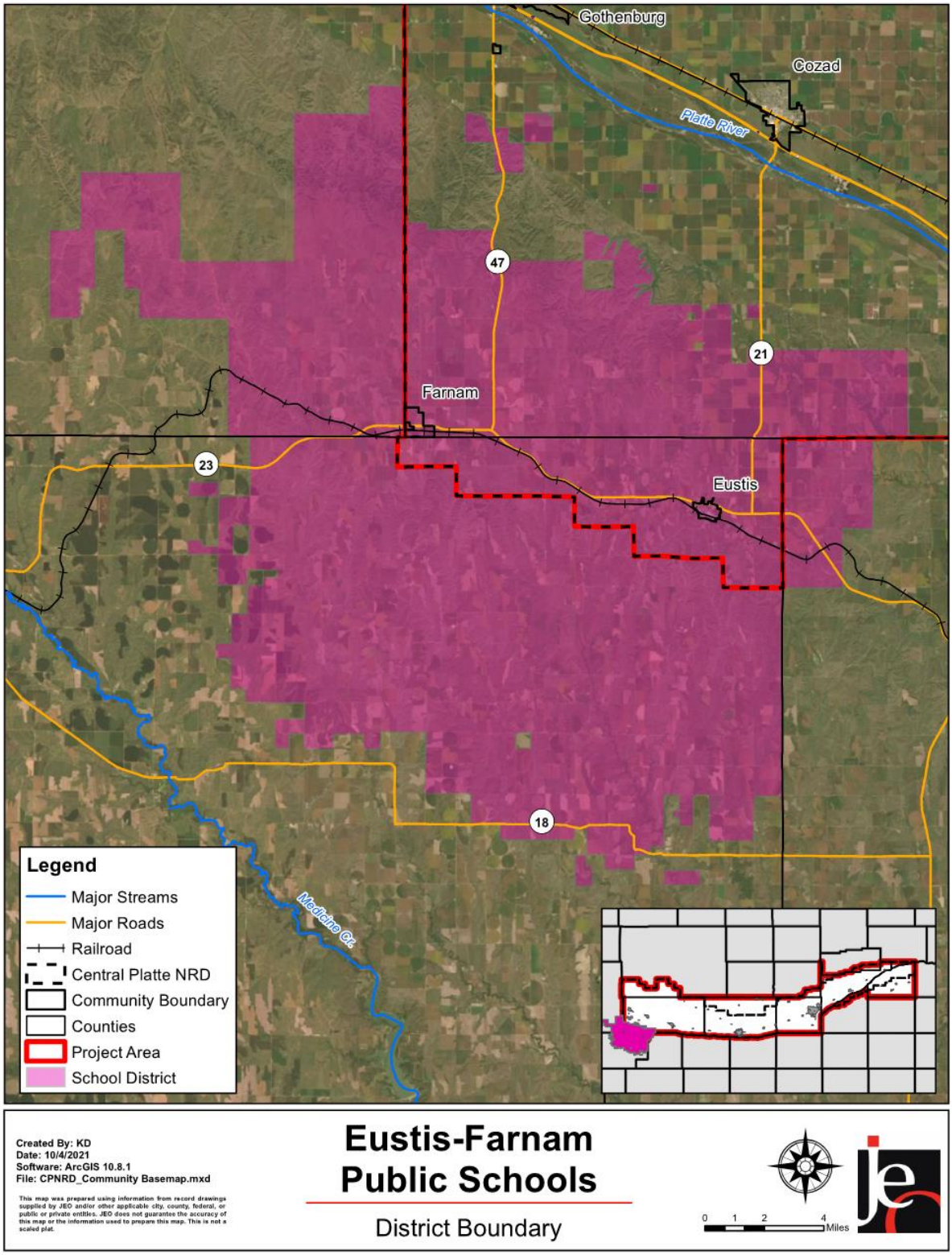
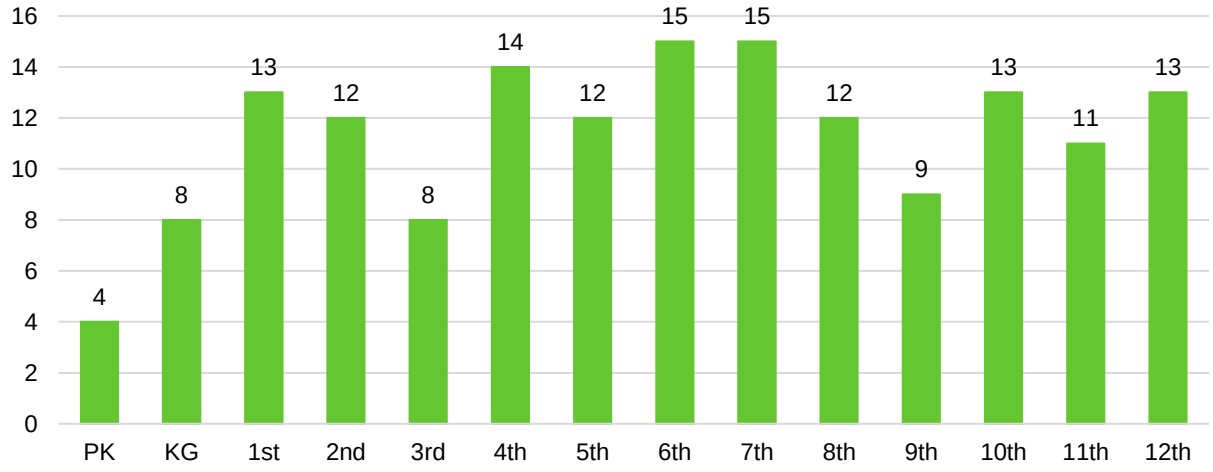


Figure EFS.3: Number of Students by Grade, 2020-2021



Source: Nebraska Department of Education

The figure above indicates that the largest number of students are in the 6th and 7th grades. The lowest population of students are in Pre-Kindergarten, Kindergarten, and 3rd grades. According to the Nebraska Department of Education (NDE), 37.74% of students receive either free or reduced priced meals at school. This is lower than the state average of 45.60%. Additionally, 12.26% of students are in the Special Education Program. These particular students may be more vulnerable during a hazardous event than the rest of the student population.

Table EFS.2: Student Statistics, 2020-2021

	School District	State of Nebraska
Free/Reduced Priced Meals	37.74%	45.60%
School Mobility Rate	N/A*	8.36%
English Language Learners	N/A*	7.43%
Special Education Students	12.26%	15.56%

N/A: Data is not available when less than 10 students.*
Source: Nebraska Department of Education[60]

Administration and Staff

The school district has a superintendent, a principal, and employs 35 staff. The school board is made up of a six-member panel. Staff are trained on emergency procedures through in-service trainings. The district also has a Crisis Response Team and Safety Committee.

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. District funds are limited to maintaining current facilities and systems. Funds have stayed the same over recent years.

Students and families are educated on emergency procedures through drills, mailings, and handouts. The district partners with the local volunteer fire department and county sheriff's office for educational outreach and exercises.

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

Table EFS.3: Capability Assessment

Survey Components/Subcomponents		Yes/No
Planning Capability	Capital Improvements Plan/Long-Term Budget	Yes
	Continuity of Operations Plan	Yes
	Disaster Response Plan	Yes
	Other (if any)	-
Administration & Technical Capability	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)	-
Fiscal Capability	Applied for grants in the past	Yes
	Awarded grants in the past	Yes
	Authority to levy taxes for specific purposes such as mitigation projects	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)	-
Education & Outreach Capability	Local school groups or non-profit organizations focused on environmental protection, emergency preparedness, access, and functional needs populations, etc. (Ex. Parent groups, hazard mitigation boards, etc.)	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)	-
Drills	Fire	10 / year
	Tornado	2 / year
	Intruder	1 / year
	Bus evacuation	2 / 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

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

All Hazards Plan (2021)
The All Hazards Plan provides safety information for patrons, students, and staff. Key components of this plan include preparation, prevention, intervention, and response to natural or manmade actions, events, or disasters that could impact students, staff, and facilities. It also contains evacuation procedures and reunification locations. This plan is reviewed and updated prior to each school year by the Safety Committee.

Crisis Team Manual (2021)
The purpose of the manual is to provide a quick reference guide for the Crisis Response Team to use in the event of a crisis situation. The manual includes procedures that were designed to deal with a number of crises that could occur in the district. In addition, it contains Crisis Response Team contact information, calling tree, media outreach information, staff meeting preparedness, and family outreach. This plan is reviewed and updated prior to each school year.

Safety Plan (2021)
The Safety Plan outlines safety procedures at the school in the event of an emergency. Hazards discussed in the plan include tornadoes, fires, intruder, exterior lockdown, and evacuation. This document is updated and reviewed annually.

Future Development Trends
Over the past five years, a new addition was built on the east side of the high school which contains a wellness center and locker rooms. The old school building in Farnam was also sold. A new addition to the west side of the existing building is planned to be completed by 2023.

Community Lifelines
Transportation
Four major transportation corridors travel through the district: Nebraska State Highways 18, 21, 23, and 47. The most traveled route is Highway 23 with an average of 1,270 vehicles daily, 135 of which are trucks.[61] A Nebraska, Kansas, Colorado Railway line runs west to east through center of 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 identified county roads as being of most concern due to poor road conditions. The district owns two school busses, five vans, and six suburbans. Approximately 60 kids are bussed across six routes.

Hazardous Materials
According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are seven chemical storage sites within the district which house hazardous materials (listed on the next page). The school is not located near any of the chemical storage sites. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. No chemical spills have affected the district.

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

Table EFS.4: Chemical Storage Sites

Name	Address	Floodplain (Y/N)
Doug Gengenbach Livestock	75081 Road 422, Eustis, NE	N
Country Partners Cooperative	208 Moose St, Farnam, NE	N
Country Partners Cooperative	40923 Highway 23, Farnam, NE	N
Eustis 66 Service Inc.	100 W chandler St, Eustis, NE	N
Country Partners Cooperative	303 E Railroad St, Eustis, NE	N
Country Partners Cooperative	100 N Windom St, Eustis, NE	N
Mentzer Oil Co Bulk Plant	E South County Line Rd, Farnam, NE	N

Source: Nebraska Department of Environment and Energy[62]

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.

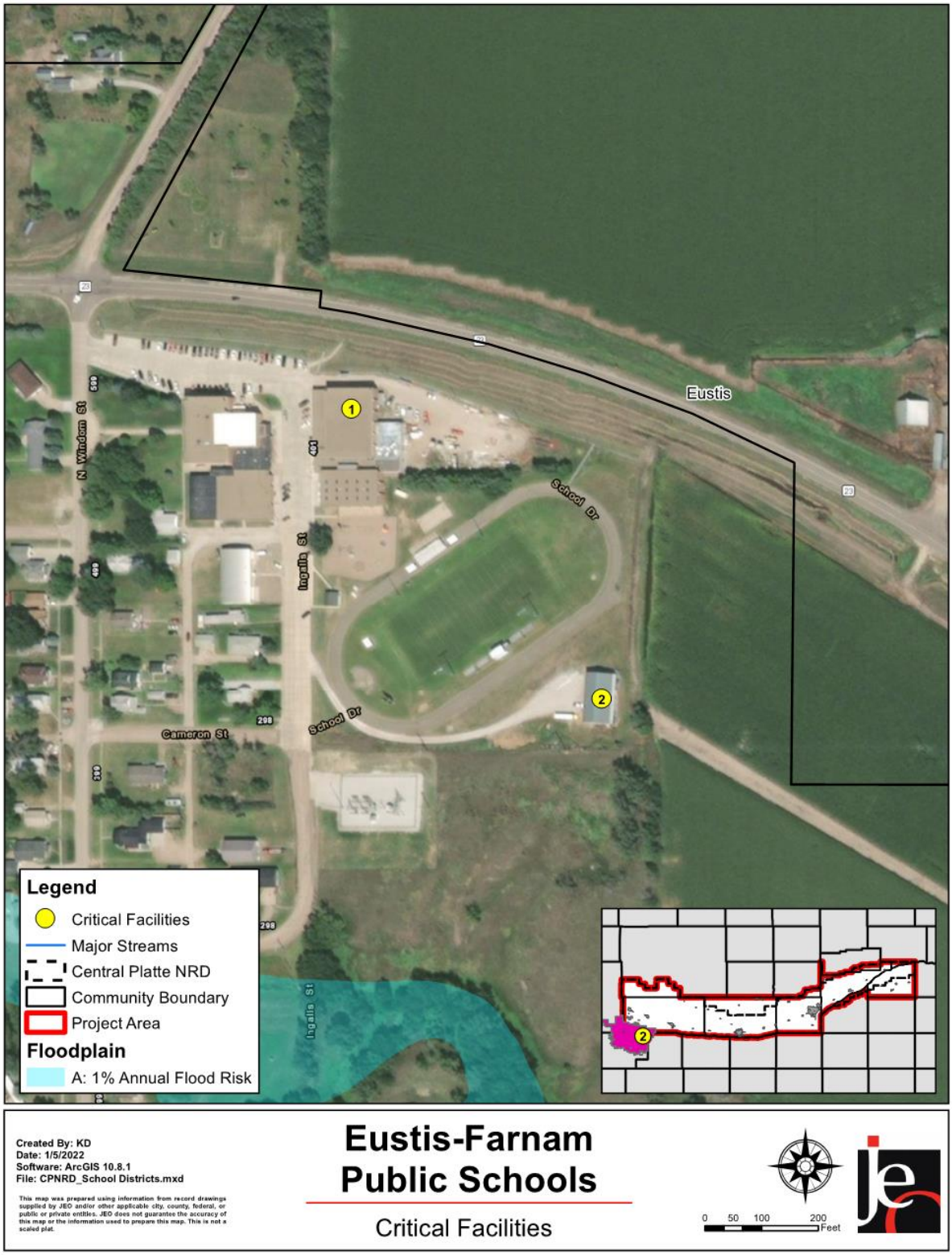
Although they may not be listed in the table below, critical infrastructure also includes power infrastructure, cell towers, alert sirens, water infrastructure, wastewater infrastructure, and roadways.

Table EFS.5: Critical Facilities

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	District Office / School Building	Y	N	N
2	Bus Barn	N	N	N

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

Figure EFS.4: Critical Facilities



Historical Occurrences

See the Dawson 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 school property, the secondary effects are a concern for the local planning team. The school district is located in a primarily rural area that is heavily reliant on agriculture to drive the local economy. Drought can have severe impacts on the agricultural sector, which will then have trickle down effects on the district. During a prolonged drought the district could see a decrease in student population and thus funds due to families moving away.

Grass/Wildfire

There have been several recent fires within the district, however none have impacted the school. The school building is located on the edge of the village and has agricultural fields on three sides. A nearby fast-moving fire could damage the building and cause an evacuation, if school was in session at the time. School property is mowed regularly to help reduce the risk of fires and create a defensible space.

Public Health Emergency

The ongoing Covid-19 pandemic has had a large impact on the school district and effected almost all areas of the school. Learning has been disrupted throughout the pandemic with students having to stay home if they were sick or had been in close contact with someone who had the virus. To help reduce the spread of the virus in the building, the district implemented several health measures including masking, social distancing, and increased cleaning.

Severe Thunderstorms

The primary concern for the district regarding severe thunderstorms is damage to school property and buildings from winds and hail. No major impacts have occurred from past severe thunderstorm events. All buildings are insured for hail and wind damage. In addition, school vehicles are kept in the bus barn when not in use.

Severe Winter Storms

Severe winter storms can cause travel and safety concerns for the district. Many kids walk to school and the district has six bus routes. Many of the bus routes travel along gravel and dirt roads, which can have poor road conditions during winter storms. If it is determined that travel is unsafe, the district has snow days built into the schedule and school will be cancelled. Snow removal on school property is done by staff with local residents available to help if needed.

Tornadoes and High Winds

Concerns regarding tornadoes and high winds include building damage, spread of wildfires, flying debris, and power loss. In the event of power loss, the school building does not have a backup generator so school may have to be cancelled if there is a prolonged outage. The school does not have a FEMA certified safe room. Students and staff are instructed to go to interior rooms within the building during a tornado warning. The district performs two tornado drills each school year.

Mitigation Strategy

New Mitigation Actions

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

Mitigation Action	Weather Radios
Description	Conduct an inventory of weather radios at schools and other critical facilities and provide new radios as needed. Potentially add a new weather tower constructed to increase radio service to larger coverage areas.
Hazard(s) Addressed	All Hazards
Estimated Cost	$300,000+
Local Funding	General Budget
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 district's Superintendent, Principal, and Counselor will be responsible for reviewing and updating the plan in the future. These individuals will review the plan annually and notify families and staff of any changes using social media and the school website.