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COUNTY PROFILE

HOWARD COUNTY

Lower Loup Natural Resources District Hazard Mitigation Plan 2022

Local Planning Team

Table HOW.1: Howard County Local Planning Team

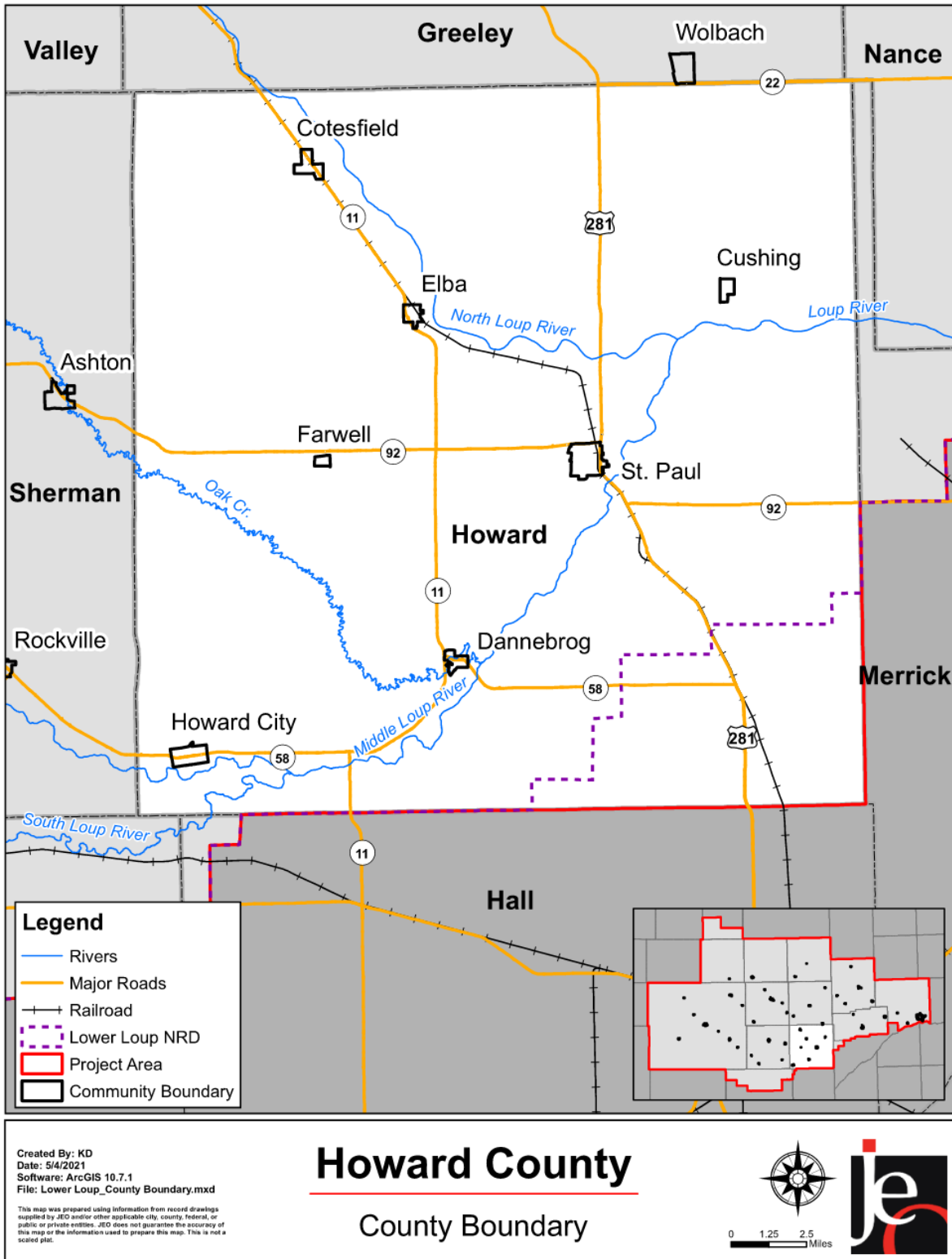
NAME	TITLE	JURISDICTION
RON TUBBS	Emergency Manager	Howard County
CHERRI KLINGINSMITH	Zoning Admin & Flood Plain Admin	Howard County
DAVE BOEHLE	County Commissioner	Howard County

Location, Geography, & Climate

Howard County is located in central Nebraska and is bordered by Sherman County, Greeley County, and Hall County.

The total area of Howard County is 576 square miles. Major waterways within the county include Middle Loup River and the North Loup River. The county is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Most of Howard County lies in the dissected plains topographic region, with the vast majority of the county’s land characterized by agricultural fields.

Figure HOW.1: Howard County Jurisdictional Boundary



Climate

The average high temperature in Howard County for the month of July is 88.8 degrees and the average low temperature for the month of January is 14.3 degrees. On average, Howard County receives over 27 inches of rain and 22 inches of snowfall per year. The following table compares these climate indicators with those of the entire 11-county planning area and the state. Climate data is helpful in determining if certain events are higher or lower than normal. For example, if the high temperatures in the month of July are running well into the 90s, high heat events may be more likely which could impact vulnerable populations.

Table HOW.2: Howard County Climate Normals

	HOWARD COUNTY	PLANNING AREA	STATE OF NEBRASKA
JULY NORMAL HIGH TEMP	88.8°F	62.7°F	87.4°F
JANUARY NORMAL LOW TEMP	14.3°F	12.1°F	13.9°F
ANNUAL NORMAL PRECIPITATION	27.3 inches	26.36 inches	24.0 inches
ANNUAL NORMAL SNOWFALL	22.4 inches	28.6 inches	28.2 inches

Source: NCEI 1991-2020 Climate Normals¹

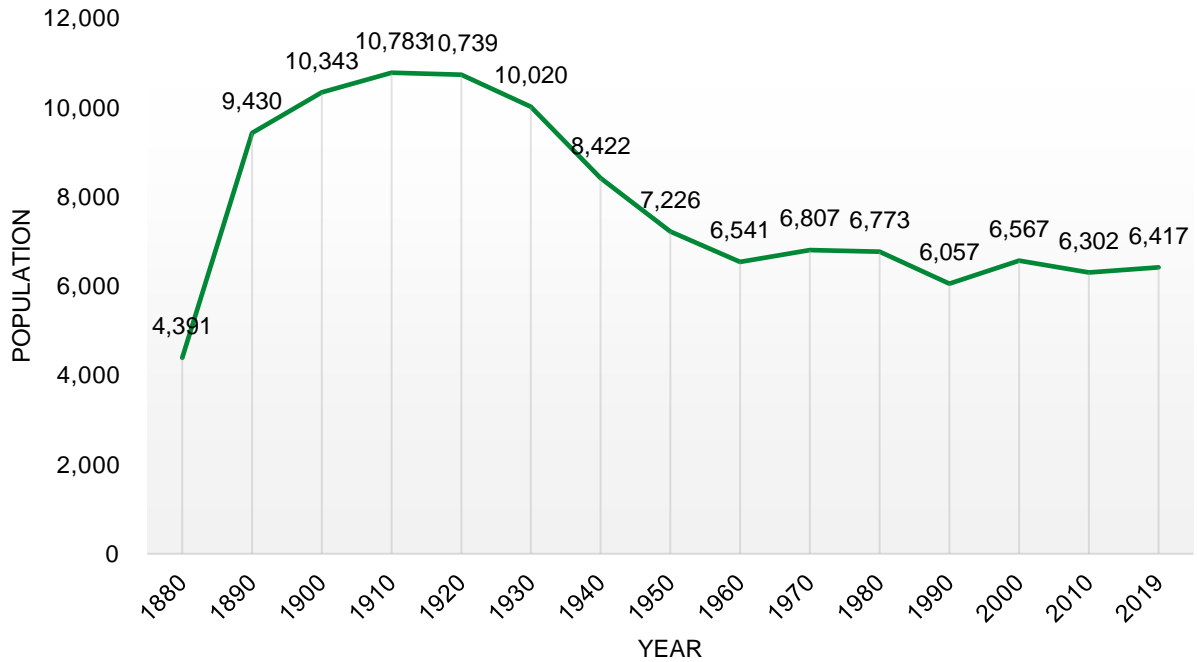
Precipitation includes all rain and melted snow and ice.

Demographics

The following figure displays the historical population trend from 1880 to 2019. This figure indicates that the population of Howard County has remained relatively stable since the 1960s. This is notable for hazard mitigation because communities with increasing population may also have a lower level of unoccupied housing that is not being up kept. Furthermore, areas with increasing population will be more prone to pursuing residential/commercial development in their areas, which may increase the number of structures vulnerable to hazards in the future. Increasing populations can also represent increasing tax revenue for the county which could make implementation of mitigation actions more fiscally viable.

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

Figure HOW.2: Howard County Population 1880-2019



Source: U.S. Census Bureau²

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

Table HOW.3: Population by Age

AGE	HOWARD COUNTY	STATE OF NEBRASKA
<5	6.1%	6.9%
5-64	72.7%	78.1%
>64	21.1%	15.0%
MEDIAN AGE	43.1	36.4

Source: U.S. Census Bureau³

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

² United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
³ United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]

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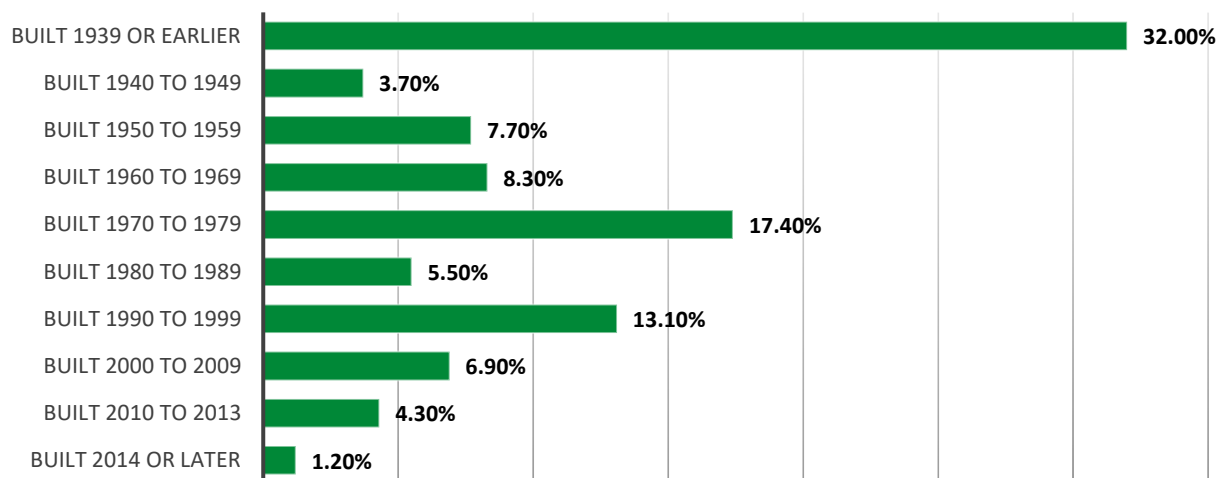
Table HOW.4: Housing and Income

AGE	HOWARD COUNTY	STATE OF NEBRASKA
MEDIAN HOUSEHOLD INCOME	\$59,348	\$59,116
PER CAPITA INCOME	\$27,489	\$31,101
MEDIAN HOME VALUE	\$148,800	\$147,800
MEDIAN RENT	\$685	\$805

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

The following figure indicates that the majority of the housing in Howard County was built prior to 1940. According to the United States Census Bureau 2019 ACS 5-year estimates, the county has 3,101 housing units; with 87.7 percent of those units occupied. Approximately 6.2 percent of the county’s housing is classified as mobile homes. Housing age can serve as an indicator or risk as structures built prior to state building codes being developed may be at greater risk. The State of Nebraska first adopted building codes in 1987, with the International Building Code adopted in 2010. The current edition of the IBC was updated in 2018. Finally, communities with a substantial number of mobile homes may have a higher number of residents vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

Figure HOW.3: Housing Units by Age



Source: U.S. Census Bureau⁶

Table HOW.5: Housing Units

JURISDICTION	TOTAL HOUSING UNITS				OCCUPIED HOUSING UNITS			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
HOWARD COUNTY	2,720	87.7%	381	12.3%	2,081	76.5%	639	23.5%
NEBRASKA	754,063	90.8%	76,686	9.2%	498,567	67.1%	255,496	33.9%

Source: U.S. Census Bureau⁷

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

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

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

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

Employment Factors

According to 2018 Business Patterns Census Data, Howard County had 179 business establishments. The following table presents the number of establishments, number of paid employees, and the annual payroll in thousands of dollars. Communities which have a diverse economic makeup may be more resilient following a hazardous event, especially if certain industries are more impacted than others.

Table HOW.6: Businesses in Howard County

	TOTAL BUSINESSES	NUMBER OF PAID EMPLOYEES	ANNUAL PAYROLL (IN THOUSANDS)
TOTAL FOR ALL SECTORS (2014)	152	985	\$27,627
TOTAL FOR ALL SECTORS (2016)	170	1,068	\$32,322
TOTAL FOR ALL SECTORS (2018)	179	1,180	\$38,681

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

Agriculture is also important to the economic fabric of Howard County, and the state of Nebraska as a whole. Howard County's 617 farms cover 280,566 acres of land. Crop and livestock production are the visible parts of the agricultural economy, but many related businesses contribute as well by producing, processing and marketing farm and food products. These businesses generate income, employment and economic activity throughout the region.

Table HOW.7: Howard County Agricultural Inventory

	2012 CENSUS	2017 CENSUS	PERCENT CHANGE
NUMBER OF FARMS WITH HARVESTED CROPLAND	682	617	-9.53%
ACRES OF HARVESTED CROPLAND	312,234	280,566	-10.14%

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

Governance

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

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

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

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

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

Capabilities

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

Table HOW.13: Capability Assessment

SURVEY COMPONENTS		YES/NO
PLANNING & REGULATORY CAPABILITY	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operational Plan	Yes
	Floodplain Ordinance	Yes
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Building Codes	No
	Floodplain Management Plan	Yes
	Storm Water Management Plan	No
	National Flood Insurance Program	Yes
	Community Rating System	No
	Other (if any)	
ADMINISTRATIVE & TECHNICAL CAPABILITY	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	Yes
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community’s Vulnerability to Hazards	Yes
	Grant Manager	Yes
	Mutual Aid Agreement	Yes
	Other (if any)	
FISCAL CAPABILITY	1 & 6 Year Plan	No
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	
EDUCATION AND OUTREACH	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	Yes - Working on Putting together a CERT group

SURVEY COMPONENTS		YES/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)	

Table HOW.14: Overall Capability

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

Plan Integration

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

Annual Budget

County funds are generally limited to maintaining current facilities and systems. Funds have remained relatively the same over the past decade and there are currently no large-scale projects with earmarked funds.

Comprehensive Plan

Howard County has developed a County and Communities Comprehensive Plan which was last updated in 2015. The plan outlines future growth and development goals throughout the county for the communities of Boelus, Cotesfield, Cushing, Dannebrog, Elba, Farwell, and rural Howard County. The plan outlines the following goals which relate to hazard mitigation:

- **Land Use: Goal 1** Provide opportunities for development in an orderly, efficient and environmentally sound manner.
 - Limit future non-agricultural developments to locations which are relatively free of environmental constraints relating to soils, slope, flood plain, drainage, ground water endangered species or other natural resources.
- **Land Use: Goal 4** Work cooperatively with Federal, State, and adjoining County governments to develop compatible flood control measures.

- **Housing: Goal 3** Encourage future residential developments compatible with and complementary to existing residential areas.
 - Prohibit residential development in environmentally sensitive areas.
- **Public Infrastructure, Facilities, & Transportation: Goal 3** Provide adequate, efficient, and appropriate public utilities and services to both new and existing agricultural and residential developments.
 - Provide facilities and services in Rural Howard County and to each Village necessary to prevent degradation of the environment, including modern sewage treatment, refuse collection and disposal, street cleaning, proper disposal of animal waste and similar environmental control processes as necessary.

Zoning Ordinances and Regulations

The Howard County Zoning Ordinance is updated on an as-needed basis. The current ordinance discourages development within the floodplain and contains natural hazard layers. Future updates should address restricting development near chemical storage fixed sites and in the wildland urban interface.

Howard County Local Emergency Operations Plan

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

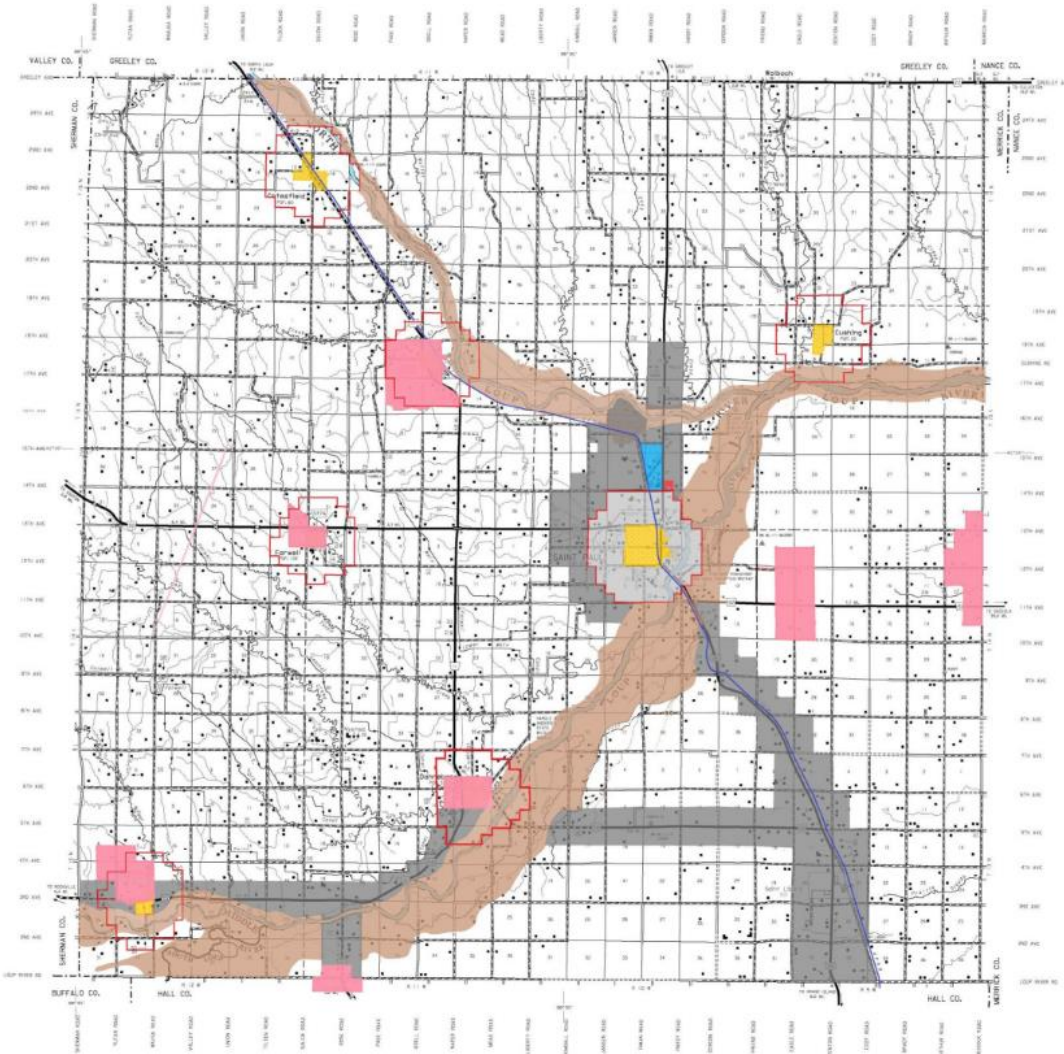
Central Platte Community Wildfire Protection Plan

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

Future Development Trends

In the past five years, there has been some new development throughout the county: a new gravel pit, expansion of a feedlot operation, and some new housing built above base floodplain elevation. According to the census data, Howard County's population is declining, which the local planning team attributes to an aging population and lack of employment opportunities. There are no commercial or residential developments planned within the county for the next five years.

Figure HOW.2: Howard County Future Land Use Map



FUTURE LAND USE MAP
HOWARD COUNTY, NEBRASKA



- LEGEND**
- RURAL CONSERVATION AREA
 - TRANSITIONAL AGRICULTURE
 - COMMERCIAL
 - INDUSTRIAL
 - WELLHEAD PROTECTION AREA
 - CITY/VILLAGE CORPORATE LIMITS
 - PLANNING JURISDICTIONS (BOELUS, COTESFIELD, CUSHING, DANNEBROG, ELBA, FARWELL)
 - ST. PAUL PLANNING JURISDICTION
 - HIGHWAY/MAJOR ARTERIAL ROADS
 - RAILROAD CORRIDOR

HANNA:KEELAN ASSOCIATES, P.C.
COMMUNITY PLANNING & RESEARCH

° Lincoln, Nebraska ° 402.464.5383 °

ILLUSTRATION 4.10

Community Lifelines

Transportation

Howard County's major transportation corridors include Highway 11, Highway 281, and Highway 92. Nebraska Central Railroad Company has a rail line that runs northwest and southeast across the county. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the county, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are 12 chemical storage sites throughout Howard County which house hazardous materials. In the event of a chemical spill, the local fire departments and regional hazmat team would be the first to respond. The local planning team noted that in the past some small gas and diesel spills have occurred. For a description of chemical sites located in incorporated areas, please see the jurisdiction's participant section.

Critical Facilities

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

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

Table HOW.9: Howard County Critical Facilities

CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Communications	Cell Tower	N	N	N
2	Communications	Cell Tower	N	N	N
3	Communications	Cell Tower	N	N	N
4	Communications	Cell Tower	N	N	N
5	Food, Water, and Shelter	Centura Public Schools	N	N	N
6	Communications	Communication Tower	N	N	N
7	Communications	Communication Tower	N	N	N
8	Food, Water, and Shelter	Elba Public Schools	N	N	N
9	Communications	Howard County Communications	N	N	N
10	Safety and Security	Howard County Courthouse	N	N	N
11	Energy	Howard Greeley Rural Power District	N	N	N

CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
12	Safety and Security	St. Libory Fire Station	N	N	N
13	Food, Water, and Shelter	St. Libory Schools	N	N	N
14	Food, Water, and Shelter	St. Paul Public Schools	Y	Y	N
15	Communications	State Communication Tower	N	N	N

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

Health and Medical Facilities

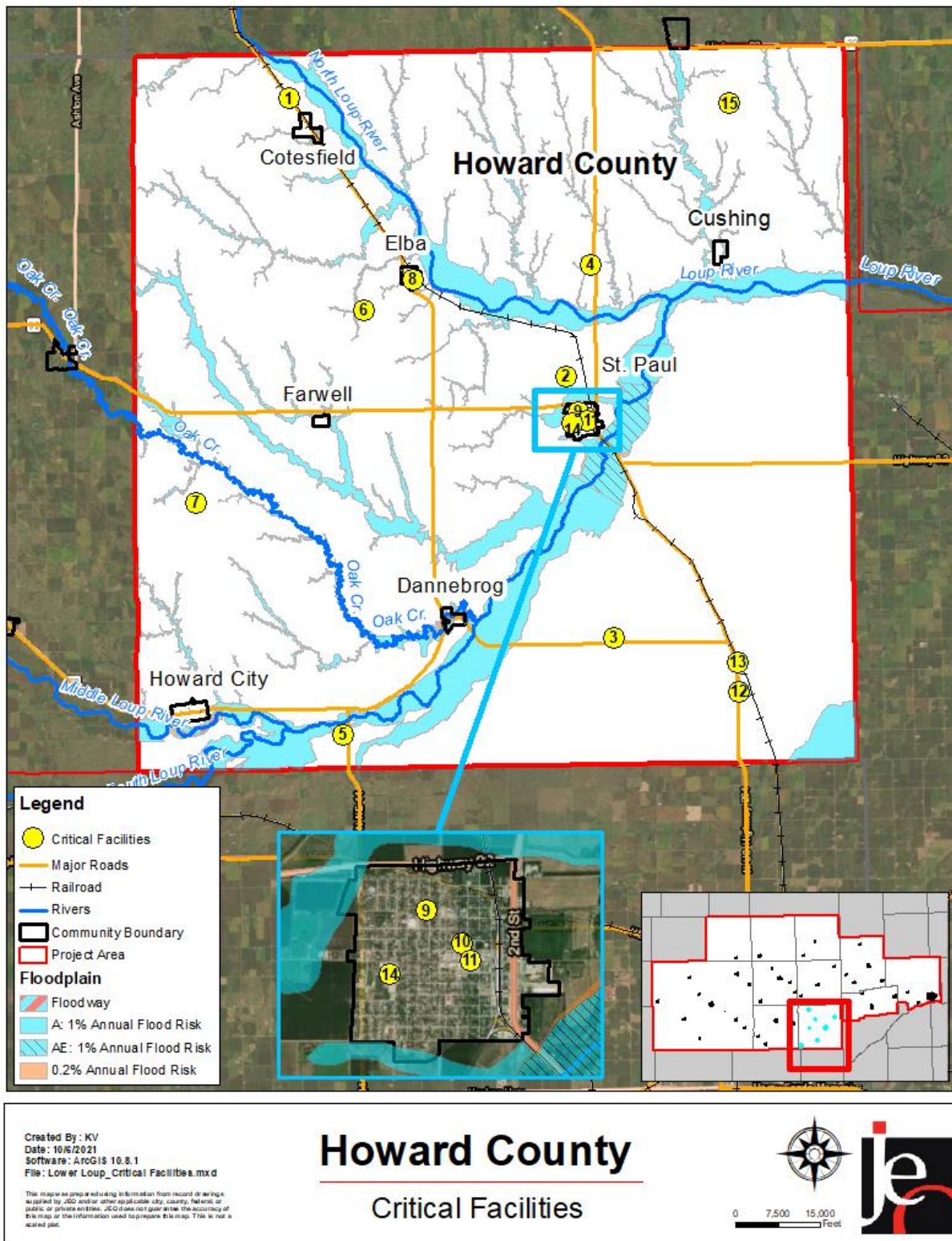
The following medical and health facilities are located within the county.

Table HOW.4: Howard County Critical Facilities

TYPE OF FACILITY	FACILITY NAME	COMMUNITY	NUMBER OF LICENSED BEDS
Assisted Living	Matelyn Retirement Community	St. Paul	66
Hospital	Howard County Medical Center	St. Paul	10
Long Term Care	Brookefield Park	St. Paul	70

Source: DHHS Care Rosters, 2021

Figure HOW.4: Howard County Critical Facilities



Parcel Improvements and Valuation

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

Table HOW.12: Howard County Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
6,675	3246	404,931,844	737	81,452,159	22.70%

Source: County Assessor, GIS Workshop

Table HOW.13: Howard County Flood Map Products

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
FIS	31093CV000B	7/7/2014	N/A
LOMR	16-07-2344P-310446	6/8/2017	Revision to FIRM along Oak Creek
LOMA	06-07-B459A-310446	4/6/2006	Structure removed from SFHA
LOMA	07-07-0233A-310446	1/9/2007	Structure (residence) removed from SFHA
LOMA	07-07-0364A-310446	1/16/2007	Structure (residence) removed from SFHA
LOMA	08-07-0365A-310446	3/4/2008	Property removed from SFHA
LOMA	08-07-0424A-310446	2/26/2008	Structure removed from SFHA
LOMA	10-07-0066A-310446	12/18/2009	Structure (residence) removed from SFHA
LOMA	11-07-2961A-310446	10/18/2011	Structure (residence) removed from SFHA
LOMA	12-07-0167A-310446	12/13/2011	Structure (residence) removed from SFHA
LOMA	12-07-1717A-310446	3/27/2012	Portion of property (portion 1) removed from SFHA
LOMA	13-07-0851A-310446	3/12/2013	Portion of property removed from SFHA
LOMA	13-07-1777A-310446	6/18/2013	Structure removed from SFHA
LOMA	13-07-1908A-310446	7/11/2013	Portion of property removed from SFHA
LOMA	14-07-0991A-310446	3/18/2014	Portion of property removed from SFHA
LOMA	14-07-1094A-310446	3/27/2014	Portion of property removed from SFHA
LOMA	14-07-1485A-310446	5/20/2014	Portion of property removed from SFHA

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TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
LOMA	14-07-1925A-310446	7/10/2014	Portion of property removed from SFHA
LOMA	14-07-2058A-310446	6/17/2014	Structure removed from SFHA
LOMA	14-07-2211A-310446	8/14/2014	Portion of property removed from SFHA
LOMA	15-07-0060A-310446	12/16/2014	Structure removed from SFHA
LOMA	15-07-0731A-310446	2/24/2015	Portion of property removed from SFHA
LOMA	15-07-0761A-310446	3/19/2015	Portion of property removed from SFHA
LOMA	15-07-1025A-310446	4/24/2015	Structure removed from SFHA
LOMA	15-07-1104A-310446	4/22/2015	Portion of property removed from SFHA
LOMA	15-07-2196A-310446	1/5/2016	Structure (residence) removed from SFHA
LOMA	15-07-2219A-310446	10/27/2015	Structure removed from SFHA
LOMA	16-07-0310A-310446	2/22/2016	Structure (residence) removed from SFHA
LOMA	16-07-0442A-310446	1/6/2016	Portion of property removed from SFHA
LOMA	16-07-0951A-310446	3/16/2016	Structure removed from SFHA
LOMA	17-07-0427A-310446	1/17/2017	Portion of property removed from SFHA
LOMA	17-07-0711A-310446	2/7/2017	Structure removed from SFHA
LOMA	17-07-1484A-310446	5/26/2017	Structure (machine shd) removed from SFHA
LOMA	17-07-2340A-310446	8/25/2017	Portion of property removed from SFHA
LOMA	18-07-0563A-310446	12/14/2017	Structure removed from SFHA
LOMA	18-07-0858A-310446	1/31/2018	Structure removed from SFHA
LOMA	18-07-1353A-310446	4/23/2018	Structure removed from SFHA
LOMA	18-07-1526A-310446	5/25/2018	Structure removed from SFHA
LOMA	18-07-1622A-310446	6/12/2018	Portion of property removed from SFHA
LOMA	18-07-1719A-310446	6/28/2018	Structure removed from SFHA
LOMA	19-07-0868A-310446	2/28/2019	Structure removed from SFHA

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
LOMA	20-07-0065A-310446	10/21/2019	Portion of property removed from SFHA
LOMA	20-07-0168A-310446	12/30/2019	Structure removed from SFHA
LOMA	20-07-0727A-310446	3/20/2020	Portion of property removed from SFHA
LOMA	20-07-0755A-310446	4/2/2020	Portion of property removed from SFHA
LOMA	20-07-1182A-310446	6/30/2020	Structure removed from SFHA
LOMA	20-07-1210A-310446	7/9/2020	Structure removed from SFHA
LOMA	20-07-1298A-310446	7/28/2020	Structure removed from SFHA
LOMA	20-07-1319A-310446	8/10/2020	Portion of property removed from SFHA
LOMA	21-07-0277A-310446	2/5/2021	Portion of property removed from SFHA
LOMA	21-07-0604A-310446	3/10/2021	Portion of property removed from SFHA
LOMA	21-07-0834A-310446	4/30/2021	Structure removed from SFHA
LOMA	21-07-1102A-310446	7/16/2021	Portion of property removed from SFHA
LOMA	21-07-1222A-310446	9/7/2021	Portion of property removed from SFHA
LOMA	22-07-0095A-310446	10/28/2021	Portion of property removed from SFHA

Source: FEMA Flood Map Service Center

Historical Occurrences

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

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

Table HOW.10: Hazard Risk Assessment – Howard County

Hazard Type		Howard County		
		Count	Property	Crop
Agricultural Disease	Animal Disease ²	18	362 Animals	N/A
	Plant Disease ³	13	N/A	\$79,201

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Hazard Type		Howard County		
		Count	Property	Crop
Dam Failure ⁷		1	\$0	N/A
Drought ⁸		444 out of 1,512 Months	\$0	\$12,655,981
Earthquakes ¹¹		2	\$0	\$0
Extreme Heat ⁹		Avg 6 Days per Year	\$0	\$6,638,680
Flooding ¹	Flash Flood	9	\$3,100,000	\$383,118
	Flood	9	\$6,095,000	
Grass/Wildfires ⁴		95	1,781 Acres	\$1,575
Hazardous Materials	Chemical Spills (Fixed Site) ⁵	1	\$0	N/A
	Chemical Spills (Transportation) ⁶	0	\$0	N/A
Levee Failure ¹²		N/A	N/A	N/A
Public Health Emergency ¹³		~554 cases, 10 deaths	N/A	N/A
Severe Thunderstorms ¹	Hail Average: 1.17" Range: 0.75"-4.25"	158	\$5,197,000	\$11,307,642
	Heavy Rain	9	\$265,000	\$6,118,673
	Lightning	3	\$173,000	N/A
	Thunderstorm Wind Average: 58.2mph Range: 50-89mph	57	\$1,807,000	N/A
Severe Winter Storms ¹	Blizzard	9	\$375,000	\$502,434
	Extreme Cold/Wind Chill	2	\$0	
	Heavy Snow	3	\$0	
	Ice Storm	6	\$3,070,000	
	Winter Storm	41	\$160,000	
	Winter Weather	25	\$5,000	
Terrorism ¹⁰		0	\$0	N/A
Tornadoes & High Winds ¹	High Winds Average: 48.2mph Range: 35-62mph	17	\$1,319,080	\$4,690,125
	Tornadoes Average: F0 Range: EF0/F0-F2	13	\$935,000	\$0
Totals		491	\$22,501,080	\$42,377,429

- 1 - NCEI, Jan 1996-Dec 2020
- 2 - USDA, 2014-2020
- 3 - USDA RMA, 2000-2020
- 4 - NFS, 2000- April 2020
- 5 - NRC, 1990-2020

- 6 - PHSMA, 1971- Jan 2021
 7 - NeDNR Dam Safety Division, 2021
 8 - NOAA, 1895-2020
 9 - HPRCC & NOAA Regional Climate Center, 1983-2021
 10 - Global Terrorism Database, 1970-2017
 11 - USGS, 1900-2021
 12 - USACE, 2021
 13 - NE DHHS, May 12, 2021(COVID only)

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

Table HOW.11: Howard County and Communities Hazard Matrix

JURISDICTION	AG DISEASE	DAM FAILURE	DROUGHT & EXTREME HEAT	EARTHQUAKES	FLOODING	GRASS/ WILDFIRE	HAZARDOUS MATERIALS	LEVEE FAILURE	PUBLIC HEALTH EMERGENCY	SEVERE THUNDERSTORMS	SEVERE WINTER STORMS	TERRORISM	TORNADOES & HIGH WINDS
HOWARD COUNTY	X	X			X		X			X			X
BOELUS (HOWARD CITY)			X		X					X	X		X
COTESFIELD		X			X					X	X		X
CUSHING					X	X			X	X	X		X
DANNEBROG			X		X		X	X		X	X		X
ELBA			X		X		X			X	X		X
FARWELL							X				X		X
ST. PAUL	X		X		X		X			X	X	X	X

Hazard Prioritization

For additional discussion regarding area wide hazards, please see *Section Four: Risk Assessment*. The hazards discussed in detail below were selected by the local planning team from the regional hazard list as the relevant hazards for the jurisdiction. The selected hazards

were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the county’s capabilities.

Agricultural Animal Disease

Local concerns regarding this hazard include the economic impact of significant loss of livestock which is a large part of the economy in the county and debris management for deceased animals. Animal disposal after the 2019 flooding in the county was a large concern. Howard County does have a plan in place in the event of an outbreak. Loup City in Sherman County is the closest market or auction that sees a large concentration of livestock. The UNL-Extension office has educational programs available regarding this hazard.

Dam Failure

There are 26 dams in Howard County. None of these dams have been identified as a high hazard dam. If a dam were to fail in the county, the likely impacts would be flooding of agricultural lands, loss of rural housing, loss of agricultural land, and loss of livestock. There is not emergency housing available for displaced residents. Significant flooding in 2019 added extra stress on dams throughout the county; however, no failure events were reported.

According to the Howard County LEOP, the following upstream dams could affect Howard County: Sherman Dam, Davis Creek Dam, and Virginia Smith Dam.

Table HOW.16: Dams in Howard County

	NUMBER OF DAMS	MINIMAL	LOW	SIGNIFICANT	HIGH
HOWARD COUNTY	26	1	22	3	0
PLANNING AREA	135	5	119	6	5

Source: NeDNR, 2017

The county has a dam failure evacuation plan and will continue to utilize annual plan updates to reduce their risk to this hazard.

Flooding

Unincorporated areas of Howard County have 39 NFIP policies in-force for \$5,388,300. There are no repetitive flood loss properties in unincorporated areas of Howard County. Howard County has experienced FEMA declared flooding disasters, including ice jams. Areas of concern for the local planning team include flood zones along the North Loup River and Middle Loup River. St. Libory, Dannebrog, and Boelus have areas with poor stormwater drainage.

According to NCEI data, there have been 18 flooding events in the county from 1996 to 2020, which have resulted in \$9,195,000 in property damages. During the major flooding event in 2019, flooding occurred in Dannebrog, and St. Paul. The flooding led to the loss of homes and businesses and damages to roads and bridges. Evacuations were required for the area. The county is looking into rebuilding some areas above base flood elevation and needs to rebuild the riverbank of the Middle Loup River in St. Paul to protect the highway bridge and railroad from washing out.

Hazardous Materials (Transportation and Fixed Sites)

The local planning team indicated that vulnerable populations are located near chemical fixed sites in Elba, Dannebrog, Boelus, St. Paul and St. Libory. Local concerns focus on the potential need to evacuate in the event of a chemical spill as fixed sites are located within incorporated areas. The local planning team is also concerned with the amount of hazardous materials transported on major highways through the county. The planning team noted that in the past a propane tank fire occurred in the county. Local fire departments have some protective gear and training, however, the closest hazmat unit is in Grand Island. Local response resources have limited gear and training. The county would like to keep incoming responders up to date on hazmat training and update fire department equipment where possible.

Severe Thunderstorms (includes Hail)

Hail events occur several times annually in Howard County. Local concerns focus on the economic impacts from property and crop damages, power outages, and safety of residents. According to the NCEI, there have been 227 severe thunderstorm events from 1996 to 2020 that have caused \$7.4 million in property damages. County critical facilities are insured for hail damage. Approximately 10% of power lines in the county are buried. The city civic center in St. Paul can be used as a temporary shelter during natural disaster events.

Tornadoes and High Winds

Local concerns regarding high winds include the potential for property and agricultural land damages. The local planning team indicated that high winds occur annually in Howard County. The NCEI reported 16 high wind events that have caused \$394,080 in property damages.

Howard County does not have data backup systems for county records. The St. Paul School was damaged by a tornado in 1983. The county does have electronically activated warning sirens located in rural areas and rural subdivisions. The county does not have any safe rooms available for community members seeking shelter. Howard County Emergency Management offers text alerts in the event of severe weather. The county does engage in educational outreach activities including Public Safety Day. In the event of a disaster, Howard County has mutual aid agreements with neighboring counties. Hazardous trees in the county are mostly trimmed and taken care of by the rural power supplier.

Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	IMPROVE EMERGENCY COMMUNICATIONS
DESCRIPTION	<ol style="list-style-type: none"> 1. Develop/Improve Emergency Communication Action plan 2. Implement Emergency Communication Action Plan 3. Establish inner-operable communications 4. Obtain/Upgrade Emergency Communication Facilities/Equipment
HAZARD(S) ADDRESSED	All Hazards
STATUS	Howard County Emergency Management offers text alerts to all residents during severe weather.

Continued Mitigation Actions

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

OBJECTIVE	IMPROVE STREAM BED/BANK STABILIZATION
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate current stream bed and bank stabilization needs 2. Implement stream bed and bank stabilization improvements including grade control structures, rock rip rap, vegetative cover, etc.
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$25,000 - \$500,000+
POTENTIAL FUNDING	Howard County General Fund, HMGP, PDM, FMA
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Planning & Zoning, Roads Department, LLNRD
STATUS	The county is working to rebuild the riverbank of the Middle Loup River in St. Paul to protect the highway bridge and railroad from washing out

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate current warning systems 2. Improve warning systems/develop new warning system 3. Obtain/Upgrade warning system equipment and methods 4. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 5. Identify location of weather warning radios 6. Improve weather radio system 7. Obtain/Upgrade weather radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	Varies by Project
POTENTIAL FUNDING	Howard County General Fund, HMGP, PDM
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Howard County Emergency Manager
STATUS	The county is currently evaluating sirens in rural Howard County for condition.

OBJECTIVE	PUBLIC EDUCATION ON HAZARD EVENTS AND PREPAREDNESS
DESCRIPTION	<ol style="list-style-type: none"> 1. Obtain or develop materials about hazards 2. Conduct multifaceted public education 3. Distribute fact sheet at community events, schools, other venues 4. Conduct scheduled siren/warning system tests 5. Prepare/distribute educational materials listing safe room and shelters
HAZARD(S) ADDRESSED	Tornadoes, Severe Winter Storms, Severe Thunderstorms, Flooding, Dam Failure
ESTIMATED COST	\$5,000+
POTENTIAL FUNDING	Grant Funds
TIMELINE	5+ years
PRIORITY	High
LEAD AGENCY	Howard County Emergency Manager
STATUS	The county has educational outreach activities including Public Safety Day. Additional information should be dispersed about hazardous materials safety.

SECTION SEVEN: HOWARD COUNTY PROFILE

OBJECTIVE	REDUCE BOTTLENECKS & FLOW RESTRICTIONS
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate restrictions and measures to prevent or reduce flood damage 2. Implement appropriate nonstructural or structural methods on an emergency or permanent basis (monitoring or warning systems, ice jam dusting, excavation or blasting, reshaping channel, tree and debris removal, acquire property and/or construct additional channels or other flow improvements)
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$10,000+
POTENTIAL FUNDING	Howard County General Fund, HMGP, PDM, FMA
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Planning & Zoning, Roads Department, LLNRD
STATUS	This project has not yet been started.

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

OBJECTIVE	PUBLIC SAFE ROOMS & POST-DISASTER STORM SHELTERS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate existing safe rooms and/or storm shelters 2. Improve and/or construct safe rooms and/or storm shelters 3. Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
HAZARD(S) ADDRESSED	High Winds and Tornadoes, Severe Thunderstorms
ESTIMATED COST	\$150/sf for retrofit; \$300/sf for new construction
POTENTIAL FUNDING	Howard County General Fund, HMGP, PDM
TIMELINE	5+ years
PRIORITY	High
LEAD AGENCY	Howard County Emergency Manager
STATUS	This project has not yet been 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 (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms.

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

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COMMUNITY PROFILE

VILLAGE OF BOELUS

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

Local Planning Team

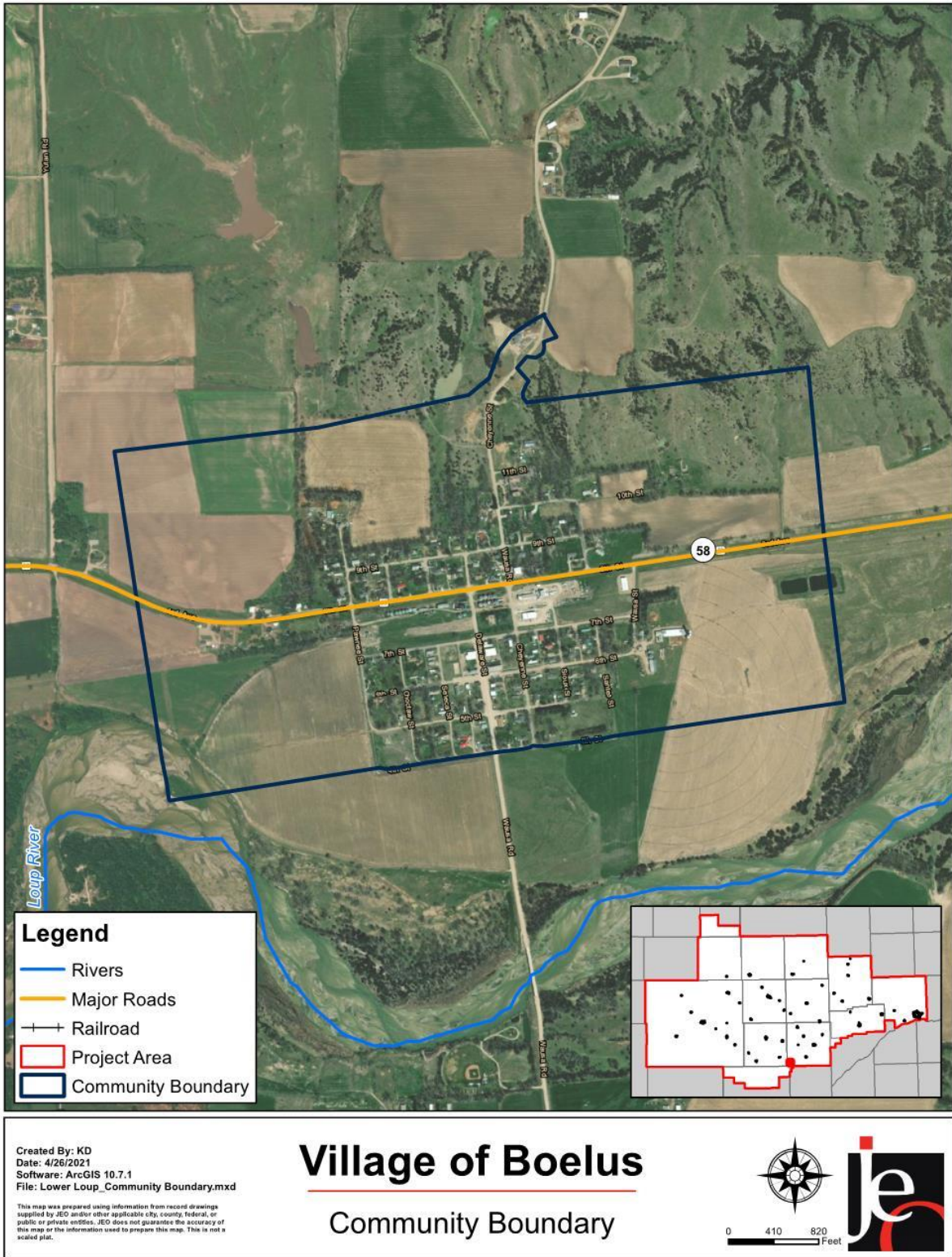
Table BOE.1: Village of Boelus Local Planning Team

NAME	TITLE	JURISDICTION
GENE WHITEFOOT	Clerk	Village of Boelus
PAUL JANULEWICZ	Board Chairperson	Village of Boelus
ROGER VANBIBBER	Board Chairperson	Village of Boelus
RUSSEL K. JENSEN	Treasurer	Village of Boelus

Location and Geography

The Village of Boelus (officially called Howard City) is located in the southwestern portion of Howard County and covers an area of 0.71 square miles. The Middle Loup River runs along the south side of the village. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. The village lies in the plains topographic region and is surrounded by agricultural fields.

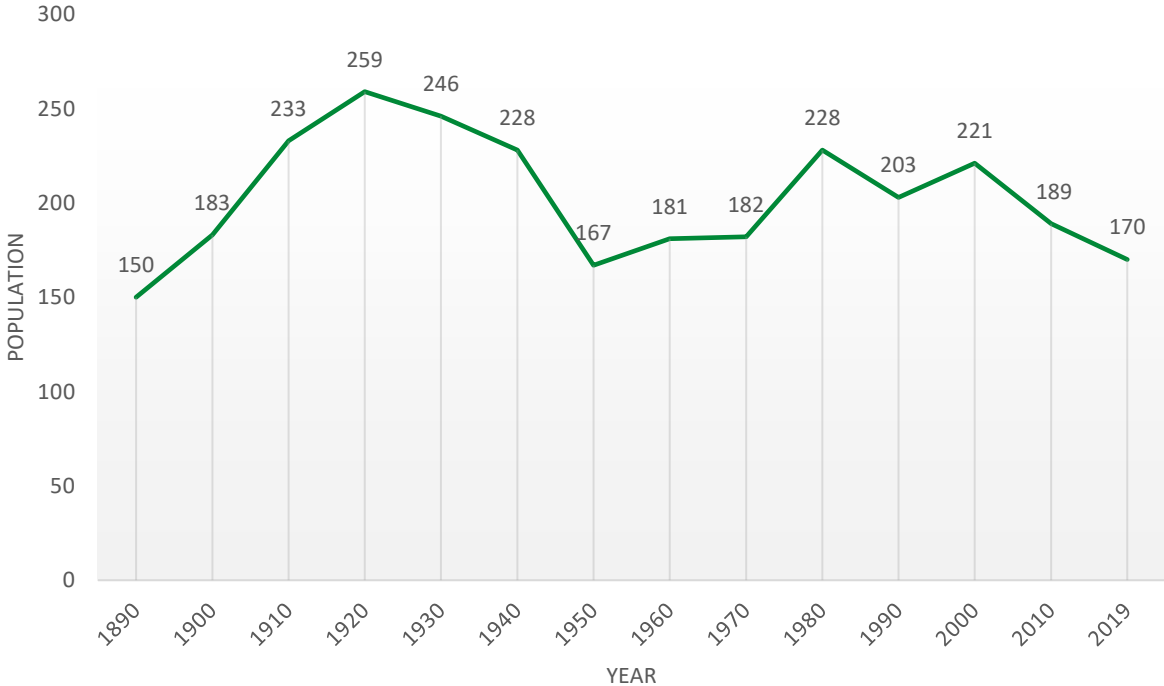
Figure BOE.1: Village of Boelus Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1890 to 2019 (estimated). This figure indicates that the population of Boelus experienced a decline from 1920 to 1950. The population then increased through 1980, fluctuated until 2000, and has since declined. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. The village’s population accounted for 3% of Howard County’s population in 2019.

Figure BOE.2: Boelus Population 1890-2019



Source: U.S. Census Bureau¹²

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

- **Older.** The median age of Boelus was 56.2 years old in 2019, compared with the County average of 43.1 years. Boelus’ population has grown older since 2010, when the median age was 50.2 years old. Boelus had a smaller proportion of people under 20 years old (12.4%) than the County (26.3%).¹³
- **More ethnically diverse.** In 2010, 2.6% of Boelus’ population was American Indian and 1% was Asian. By 2019, 0.6% was American Indian, 1.2% was Native Hawaiian/Pacific

¹² United States Census Bureau. “2019 American Fact Finder: S0101: Age and Sex.” [database file]
¹³ United States Census Bureau. “2019 American Fact Finder: S0101: Age and Sex.” [database file]

Islander and 1.8% was two or more races. During that time, Howard County went from 0.2% to 0% American Indian, 0% to 1.4% other races, and 0.5% to 1.6% two or more races, from 2010 to 2019, respectively.¹⁴

- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Boelus (3.5%) was lower than the County (5.9%) in 2019.¹⁵

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Boelus included Manufacturing, Education, Construction, and Retail. In comparison Howard County's included Agriculture, Manufacturing, Retail, and Education.¹⁶
- **Lower household income.** Boelus' median household income in 2019 (\$49,875) was about \$10,500 lower than the County (\$59,348).¹⁷
- **More long-distance commuters.** About 15.4% percent of workers in Boelus commuted for fewer than 15 minutes, compared with about 36.3% of workers in Howard County. About 57.2% of workers in Boelus commute 30 minutes or more to work, compared to about 38% of the County workers.¹⁸

Major Employers

Major employers in the Village of Boelus include Ag Services, Boelus State Bank, Whitefoot Market and Catering, and the Gold Nugget. The local planning team noted that approximately eighty percent of residents commute to surrounding communities.

Housing

In comparison to Howard County, Boelus' housing stock was:¹⁹

- **More owner occupied.** 86.5% of occupied housing units in Boelus are owner occupied compared with 76.5% of occupied housing in Howard County in 2019.
- **Greater share of aged housing stock.** Boelus has more houses built prior to 1970 than the County (58% compared to 51.7%).
- **Fewer multi-family homes.** The predominant housing type in the village is single family detached and Boelus contains less multifamily housing with five or more units per structure than the County (0.0% compared to 1.5%). 79.5% of housing in Boelus was single-family detached, compared with 84.6% of the County's housing. Boelus has a greater share of mobile and manufactured housing (20.5%) compared to the County (6.2%)

The local planning team noted that there are 11 mobile homes located in the village. This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which

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

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

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

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

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

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

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

Governance

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

Capabilities

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

Table BOE.2: Capability Assessment

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

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

Table BOE.3: Overall Capability

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

Plan Integration

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

Grants and Funding

The Village of Boelus’s funds are limited to maintaining current facilities and systems. There are no major projects planned for the next five years. Funds for the village have remained relatively stable over recent years.

Comprehensive Plan

Boelus is included in the Howard County and Communities Comprehensive Plan which was last updated in 2015. The plan outlines future growth and development goals throughout the county for the communities of Boelus, Cotesfield, Cushing, Dannebrog, Elba, Farwell, and rural Howard County. The plan outlines the following goals which relate to hazard mitigation:

- **Land Use: Goal 1** Provide opportunities for development in an orderly, efficient and environmentally sound manner.
 - Limit future non-agricultural developments to locations which are relatively free of environmental constraints relating to soils, slope, flood plain, drainage, ground water endangered species or other natural resources.
- **Land Use: Goal 4** Work cooperatively with Federal, State, and adjoining County governments to develop compatible flood control measures.
- **Housing: Goal 3** Encourage future residential developments compatible with and complementary to existing residential areas.
 - Prohibit residential development in environmentally sensitive areas.
- **Public Infrastructure, Facilities, & Transportation: Goal 3** Provide adequate, efficient, and appropriate public utilities and services to both new and existing agricultural and residential developments.
 - Provide facilities and services in Rural Howard County and to each Village necessary to prevent degradation of the environment, including modern sewage treatment, refuse collection and disposal, street cleaning, proper disposal of animal waste and similar environmental control processes as necessary.

Ordinances and Regulations

The zoning ordinance was last updated in 2011 and incorporates a number of mitigation principles. The ordinance discourages development in the floodplain, requires more than one foot of elevation above Base Flood Elevation in the floodplain, discourages development near chemical storage sites, and prohibits the filling of wetlands. The ordinance also includes a wellhead protection district.

Howard County Local Emergency Operations Plan

The village has an annex in the Howard 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.

Central Platte Community Wildfire Protection Plan

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

Future Development Trends

In the past five years, there were very few changes in the village. Two new houses were constructed, and one was destroyed in a fire. According to census data, the village's population is declining. The local planning team attributes the decline to a lack of jobs and housing.

Community Lifelines

Transportation

Boelus' major transportation corridor is State Highway 58 which runs east-west through the center of Boelus. Highway 58 accommodates on average 970 vehicles per day, 95 of which are heavy commercial vehicles. Boelus does not have any rail lines. According to the Pipeline and Hazardous Materials Administration, there were no reported transportation-related chemical spills in Boelus from 1971 to 2021. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one chemical storage site in Boelus which houses hazardous materials. In the event of a chemical spill, the Boelus Fire Department would be the first to respond.

Table BOE.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
AGRICULTURAL SERVICES INC	422 8 th St	

Source: Nebraska Department of Environment and Energy²⁰

Critical Facilities

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

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

Table BOE.5: Boelus Critical Facilities

CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Water Tower	N	N	N
2	Food, Water, and Shelter	Well	N	N	N
3	Food, Water, and Shelter	Well	N	N	N

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

SECTION SEVEN: VILLAGE OF BOELUS COMMUNITY PROFILE

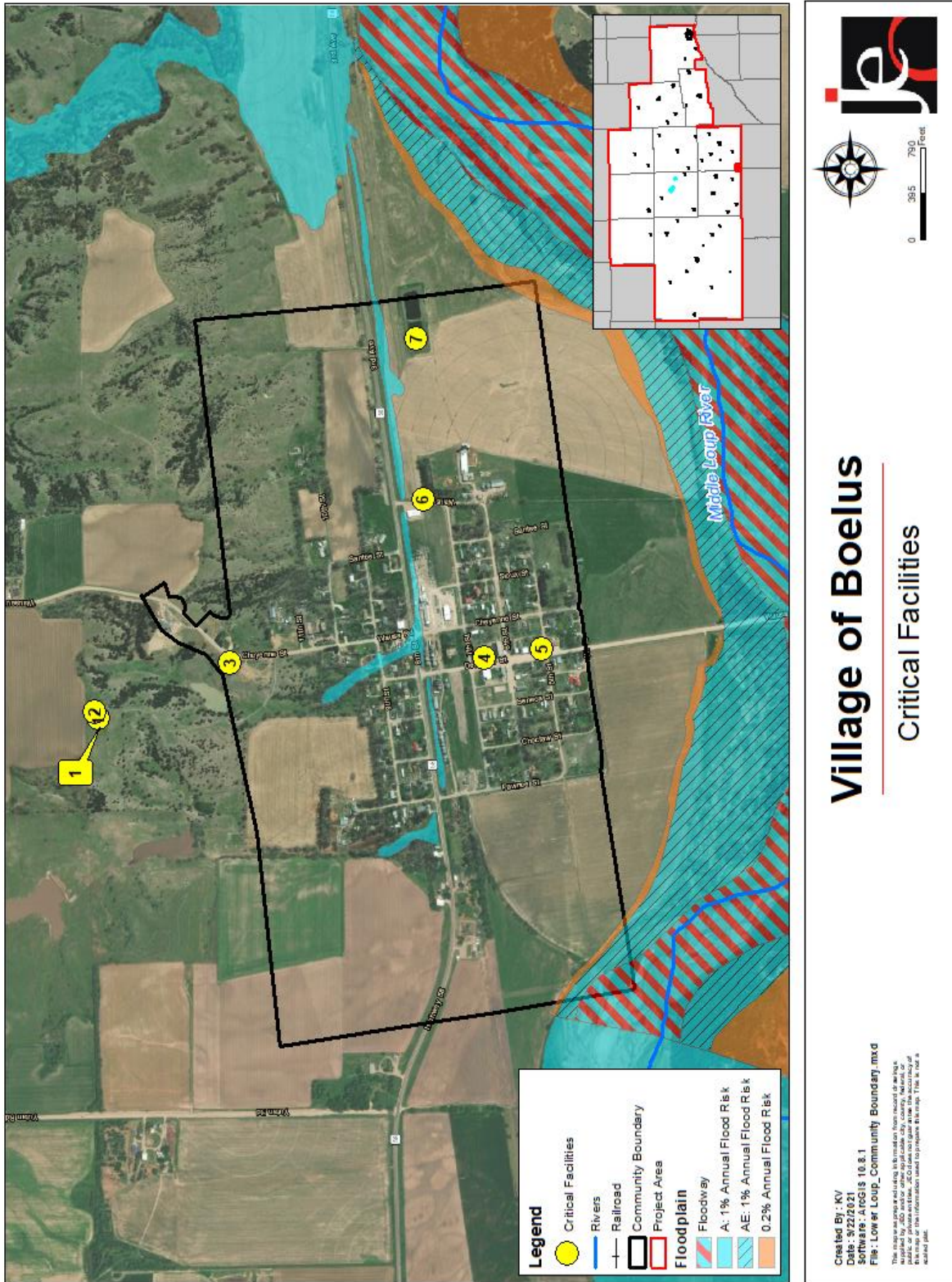
CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
4	Food, Water, and Shelter	Civic Center	N	N	N
5	Safety and Security	Fire Station	N	N	N
6	Food, Water, and Shelter	Sewer Pumping Station	N	N	N
7	Food, Water, and Shelter	Lagoon	N	N	N

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

Health and Medical Facilities

No medical and health facilities are located within the community.

Figure BOE.3: Boelus Critical Facilities



Parcel Improvements and Valuation

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

Table BOE.7: Boelus Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN
175	127	5,269,273	18	813,364	14.17%

Source: County Assessor, GIS Workshop

Table BOE.8: Boelus Flood Map Products

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
FIS	31093CV000B	7/7/2014	N/A

Source: FEMA Flood Map Service Center

Hazard Prioritization

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

Drought

Local concerns regarding drought in Boelus include the sustainability of the municipal well and infrastructure integrity. Drought is defined in the jurisdiction as a lack of rain. Past drought events have led to foundations cracking, and road degradation. The village has one main well and one secondary well, both monitored through equipment in the village civic center. The residential water supply is metered and pumping is recorded daily. Nitrate levels are typically 1 to 2 ppm and are not a problem in the local water supply. To mitigate against this hazard in the future, the village plans to limit outside watering when necessary.

Severe Thunderstorms (includes hail)

According to the NCEI, there have been 29 reported severe thunderstorm events between 1996 and 2021, that have caused \$790,000 in property damages. In June of 2015, a severe thunderstorm caused wind and hail damage to roofs, siding, and trees. Approximately 60% of homes were affected by the storm. A primary local concern is the ability of citizens to repair damage necessary to remain in the community. No critical facilities in the village have backup generators. No power lines are buried in the community. Water use records are electronic and are protected by a surge and static protector.

Severe Winter Storms

Local concerns regarding severe winter storms include providing adequate shelter, heat, water, and meals for citizens. In March 2016, a winter storm made travel impossible within and outside of the Village. On New Year's Eve 2006, an ice storm caused a power outage for an extended period of time, extreme tree damage, and no power for water service. A local construction company is responsible for removing snow in the village.

Tornadoes and High Winds

The local concerns regarding tornadoes include the lack of shelter for mobile homes, and the limited heavy equipment available for response. According to NCEI data, one tornado event occurred on June 10, 2004. During that event, the village experienced \$35,000 in property damages. The storm knocked down trees and damaged electric lines, affecting the ability to restore electrical lines and service.

The village keeps only paper records except for water usage. Water usage records are electronically backed up through a system at Boelus State Bank. Critical Facilities have not been damaged by tornadic events in the past. The warning siren is radio controlled by Howard County 911 Center. Local concerns regarding high winds include potential damages to trees, homes, and vehicles. In April 2015, a high wind event caused damages to trees and homes.

Flooding

Flooding was not identified as a hazard of top concern; however, flood hazard areas are located south of town along the Middle Loup River and there are Zone A drainage ways identified along 3rd Avenue in town. The village participates in the NFIP but has no active policies in place.

Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	MOBILE HOME ANCHORING
DESCRIPTION	1. Require mobile homes located in the jurisdiction to be properly anchored
HAZARD(S) ADDRESSED	High Winds, Severe Thunderstorms, Tornadoes
STATUS	The local ordinance requires all mobile or manufactured homes to be anchored.

OBJECTIVE	STATIC DETECTORS
DESCRIPTION	2. Utilize static detectors to detect lightning strikes, predict distance to lightning and monitor whether storms are approaching/moving away from the detector
HAZARD(S) ADDRESSED	Severe Thunderstorms
STATUS	Static detectors have been installed.

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate current backup and emergency generators 2. Obtain additional generators based on identification and evaluation 3. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$3,500+ depending on site requirements
POTENTIAL FUNDING	Village General Fund, HMGP, PDM
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board, Howard County Emergency Manager
STATUS	This project has not yet been started.

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

OBJECTIVE	HAIL INSURANCE
DESCRIPTION	<ol style="list-style-type: none"> 1. Ensure critical facilities have insurance for hail damage
HAZARD(S) ADDRESSED	Hail
ESTIMATED COST	Varies by Structure
POTENTIAL FUNDING	Village General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

SECTION SEVEN: VILLAGE OF BOELUS COMMUNITY PROFILE

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate current warning systems 2. Improve warning systems/develop new warning system 3. Obtain/Upgrade warning system equipment and methods 4. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 5. Identify location of weather warning radios 6. Improve weather radio system 7. Obtain/Upgrade weather radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$15,000+
POTENTIAL FUNDING	Village General Fund, HMGP, PDM
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Village Board, Howard County Emergency Manager
STATUS	This project has not yet been started.

OBJECTIVE	MONITOR DROUGHT CONDITIONS
DESCRIPTION	<ol style="list-style-type: none"> 1. Establish specific drought monitoring protocols to serve as triggers for implementing drought response actions
HAZARD(S) ADDRESSED	Drought
ESTIMATED COST	\$1,000+
POTENTIAL FUNDING	Village General Fund
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not yet been started. The community plans to include drought monitoring actions in future ordinance updates.

OBJECTIVE	PROVIDE SHORT TERM RESIDENCY SHELTERS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and designate short term shelters for rural residents (These structures does not serve as FEMA approved safe rooms and is not intended for long-term recovery, such as displacement from floods, fires, etc. The buildings could be used for short term sheltering during high heat events for those without A/C.)
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$0
POTENTIAL FUNDING	Village General Fund
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Village Board, Howard County Emergency Manager
STATUS	This project has not yet been started.

OBJECTIVE	REDUCE TREE DAMAGE & DAMAGE FROM TREES
DESCRIPTION	1. Conduct tree inventory 2. Develop tree maintenance/trimming program 3. Implement tree maintenance/trimming program 4. Remove hazardous limbs and/or trees
HAZARD(S) ADDRESSED	Drought, High Winds, Severe Thunderstorms, Severe Winter Storms, Tornadoes
ESTIMATED COST	\$1,000+
POTENTIAL FUNDING	Village General Fund, CDBG
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not yet been 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 (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. The Village Clerk, Village Board, and County Emergency Manager will annually review the community’s profile and notify and involve the public via at local board meetings.

COMMUNITY PROFILE

VILLAGE OF COTESFIELD

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

Local Planning Team

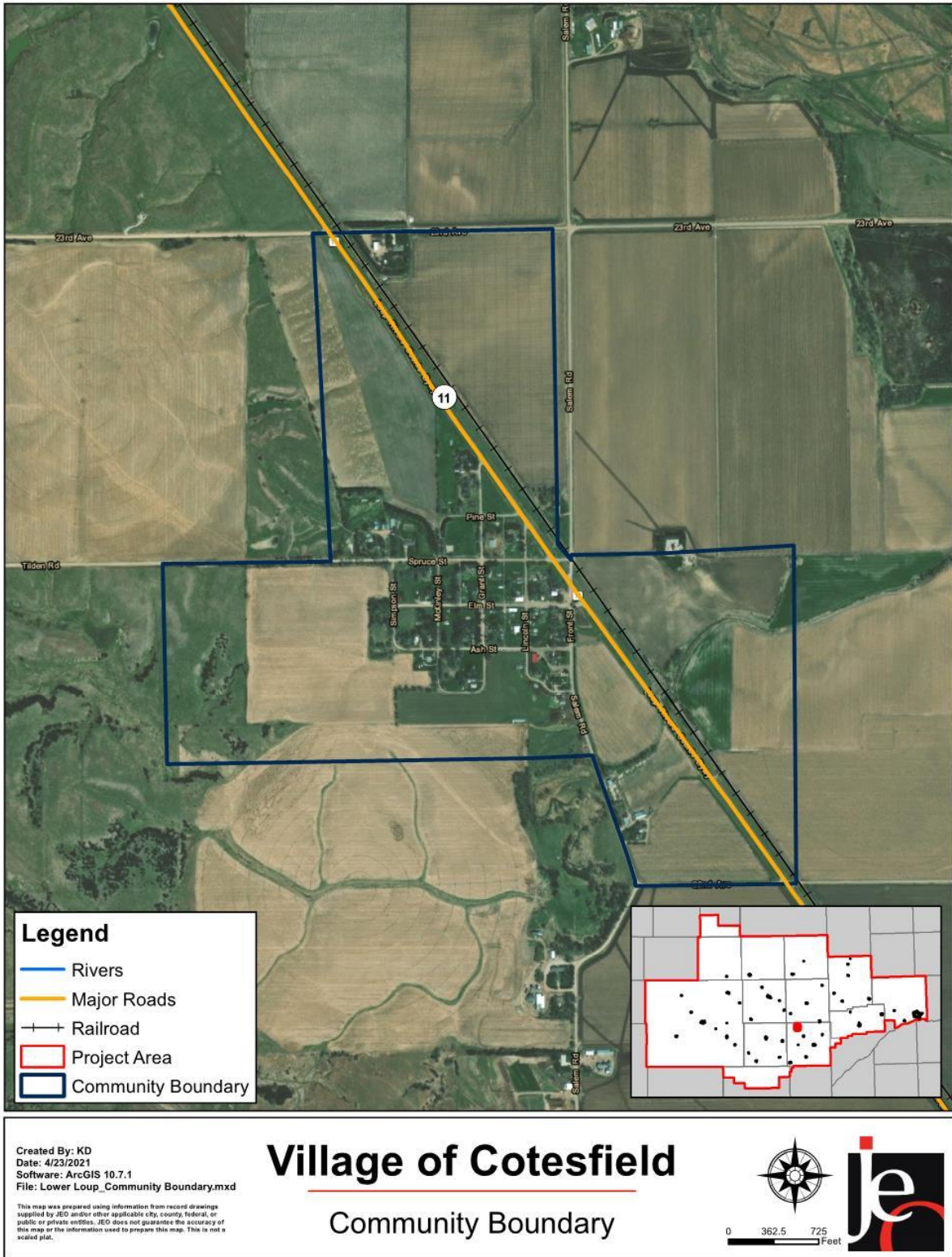
Table COT.1: Village of Cotesfield Local Planning Team

NAME	TITLE	JURISDICTION
RANDY FAABORG	Chairman	Village of Cotesfield

Location and Geography

The Village of Cotesfield is located in the north western portion of Howard County. The Village of Cotesfield covers an area of 0.52 square miles. The North Loup River runs east of the Village. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Most of Cotesfield lies in the valleys topographic region, and is surrounded by agricultural fields.

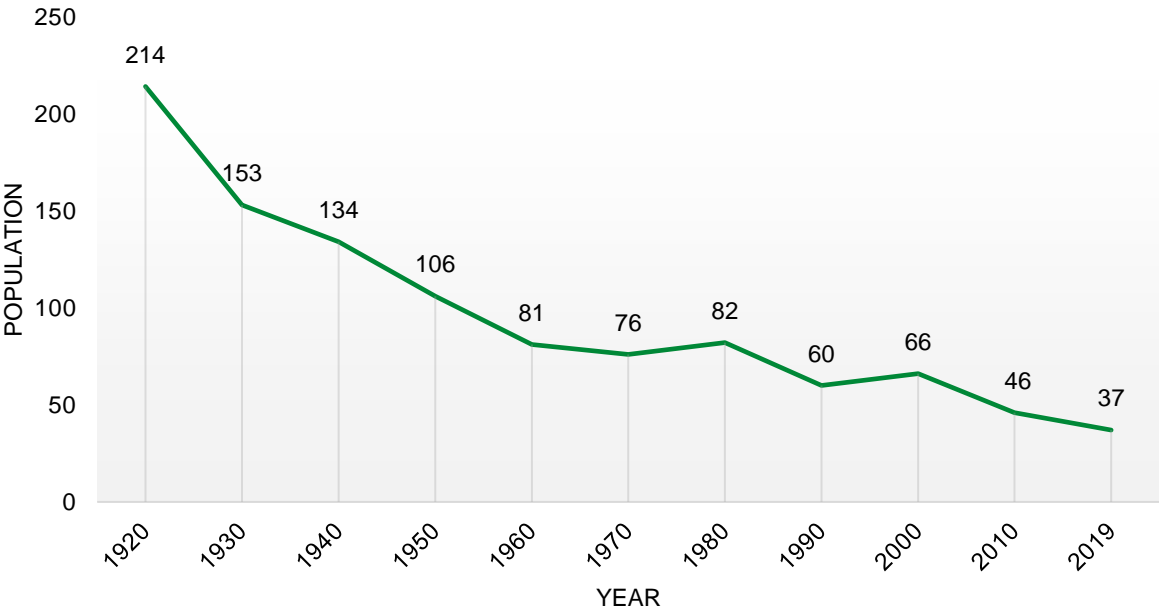
Figure COT.1: Village of Cotesfield Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1920 to 2019 (estimated). This figure indicates that the population of Cotesfield experienced a decline from 1920 through 1970. During the 1980s and 2000 the population grew, however, since 2000 the population has been in a steady decline. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. The Village’s population accounted for <1% of Howard County’s Population in 2019.

Figure COT.2: Cotesfield Population 1920-2019



Source: U.S. Census Bureau²¹

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

- **Older.** The median age of Cotesfield was 62.5 years old in 2019, compared with the County average of 43.1 years. Cotesfield’s population has grown older since 2010, when the median age was 33.5 years old. Cotesfield had a larger proportion of people under 20 years old (16.6%) than the County (26.3%).²²
- **Less ethnically diverse.** In 2010, 0% of Cotesfield’s population was Black or African American, 3.8% was other races, and 0% were two or more races. By 2019, only 0% of Cotesfield’s population was two or more races. During that time, Howard County went from 0.2% to 0% American Indian, 0% to 1.4% other races and 0.5% to 1.6% two or more races from 2010 to 2019 respectively.²³

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

- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Cotesfield (0%) was lower than the County (5.9%) in 2019.²⁴

Employment and Economics

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

- **Different mix of industries.** Employment sectors accounting for 10% or more of employment in Cotesfield included Agriculture and Education. In comparison Howard County's included Agriculture, Manufacturing, Retail, and Education.²⁵
- **Lower household income.** Cotesfield's median household income in 2019 (\$55,000) was about \$4,000 lower than the County (\$59,348).²⁶
- **More long-distance commuters.** About 18.2% percent of workers in Cotesfield commuted for fewer than 15 minutes, compared with about 36.3% of workers in Howard County. About 36.4% of workers in Cotesfield commute 30 minutes or more to work, compared to about 38.0% of the County workers.²⁷

Major Employers

There are no major employers in the community. The majority of working residents commute to surrounding areas including Grand Island and St. Paul.

Housing

In comparison to Howard County, Cotesfield's housing stock was:²⁸

- **More owner occupied.** About 100.0% of occupied housing units in Cotesfield are owner occupied compared with 76.5% of occupied housing in Howard County in 2019.
- **Larger share of aged housing stock.** Cotesfield has more houses built prior to 1970 than the county (86.4% compared to 51.7%).
- **Fewer multi-family homes.** The predominant housing type in the Village is single family detached and Cotesfield contains no multifamily housing with five or more units per structure in comparison to the County (0.0% compared to 1.5%). About 100.0% of housing in Cotesfield was single-family detached, compared with 84.6% of the County's housing. Cotesfield has a smaller share of mobile and manufactured housing (0%) compared to the County (6.2%)

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

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

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

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

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

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

Governance

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

Capabilities

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

Table COT.2: Capability Assessment

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

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

Table COT.3: Overall Capability

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

Plan Integration

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

Grants and Funding

The Village of Cotesfield’s funds are limited to maintaining current facilities and systems. There are no major projects planned for the next five years. Funds for the village have remained relatively stable over recent years.

Comprehensive Plan

Cotesfield is included in the Howard County and Communities Comprehensive Plan which was last updated in 2015. The plan outlines future growth and development goals throughout the county for the communities of Boelus, Cotesfield, Cushing, Dannebrog, Elba, Farwell, and rural Howard County. The plan outlines the following goals which relate to hazard mitigation:

- **Land Use: Goal 1** Provide opportunities for development in an orderly, efficient and environmentally sound manner.
 - Limit future non-agricultural developments to locations which are relatively free of environmental constraints relating to soils, slope, flood plain, drainage, ground water endangered species or other natural resources.
- **Land Use: Goal 4** Work cooperatively with Federal, State, and adjoining County governments to develop compatible flood control measures.
- **Housing: Goal 3** Encourage future residential developments compatible with and complementary to existing residential areas.
 - Prohibit residential development in environmentally sensitive areas.
- **Public Infrastructure, Facilities, & Transportation: Goal 3** Provide adequate, efficient, and appropriate public utilities and services to both new and existing agricultural and residential developments.
 - Provide facilities and services in Rural Howard County and to each Village necessary to prevent degradation of the environment, including modern sewage treatment, refuse collection and disposal, street cleaning, proper disposal of animal waste and similar environmental control processes as necessary.

Ordinances and Regulations

While the village does not have zoning regulations or building codes, the village follows requirements as set by the State of Nebraska.

Howard County Local Emergency Operations Plan

The village has an annex in the Howard 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.

Central Platte Community Wildfire Protection Plan

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

Future Development Trends

In the past five years, some dilapidated buildings have been removed. Cotesfield's population is declining which the local planning team noted is exacerbated by a lack of adequate housing and employment opportunities. There are no new residential or commercial developments planned for the Village.

Community Lifelines

Transportation

Cotesfield's major transportation corridors include Highway 11, which runs southeast-northwest, through the eastern portion of Cotesfield. N-11 accommodates on average 1,315 vehicles per day, 160 of which are heavy commercial vehicles. The Nebraska Central Railroad Company has a rail line along Highway 11 on the eastern side of the village. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are no chemical storage sites throughout Cotesfield which house hazardous materials. In the event of a chemical spill, the local Elba fire department and Howard County emergency response may be the first to respond to the incident.

Critical Facilities

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

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

Table COT.5: Cotesfield Critical Facilities

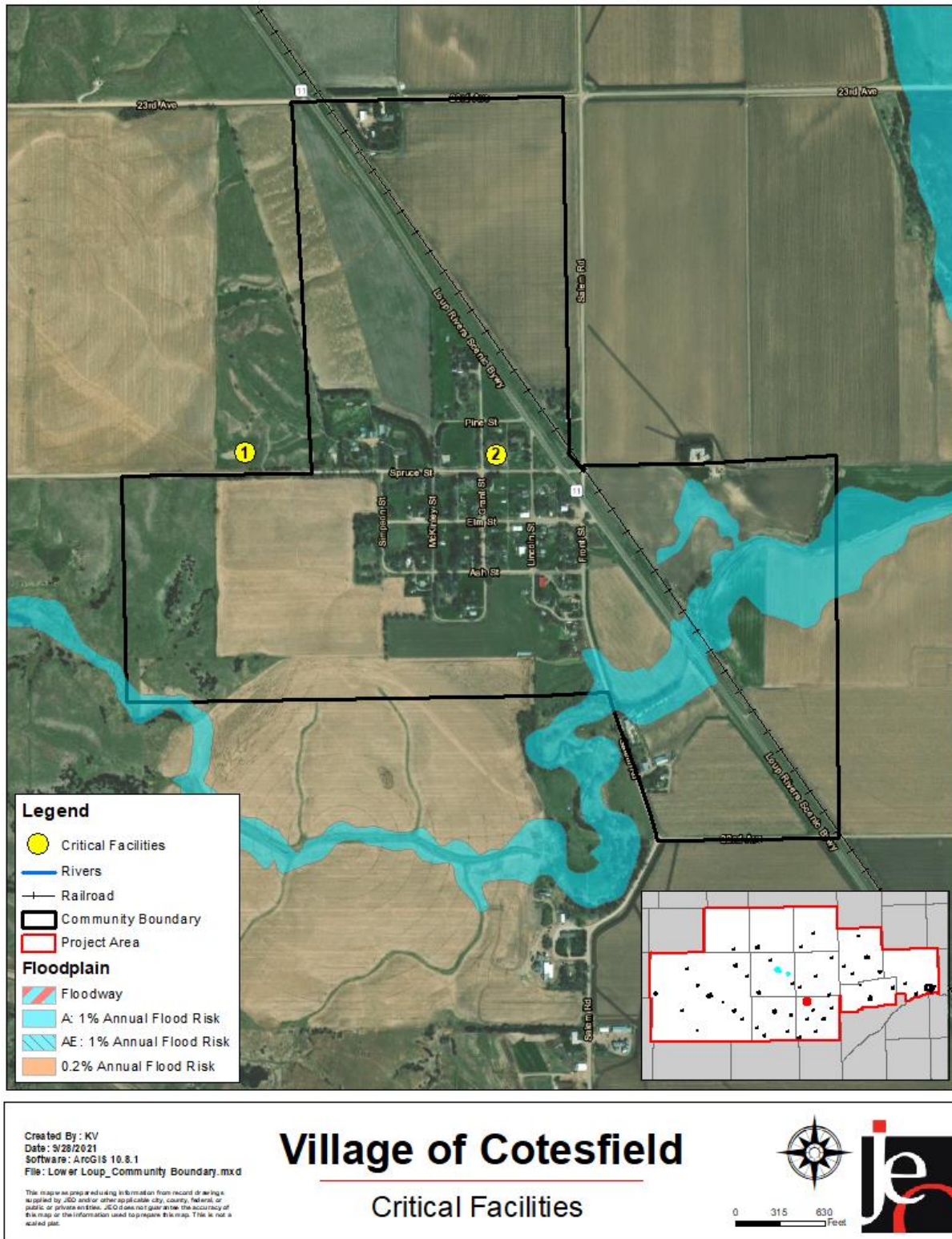
CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Shelter, and Water	Flood Control Dam	N	N	N
2	Food, Shelter, and Water	Cotesfield Community Center	N	N	N

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

Health and Medical Facilities

No medical and health facilities are located within the village.

Figure COT.3: Cotesfield Critical Facilities



Parcel Improvements and Valuation

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

Table COT.7: Cotesfield Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
85	45	987,956	1	26,410	2.22%

Source: County Assessor, GIS Workshop

Table COT.8: Cotesfield Flood Map Products

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
FLOOD INSURANCE STUDY	31093CV000B	7/7/2014	N/A

Source: FEMA Flood Map Service Center

Hazard Prioritization

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

Dam Failure

There is an earthen dam located $\frac{1}{4}$ mile west of town. If the dam were to fail, there would be a rapid release of water into the Village. This release would cause homes to flood. Howard County Emergency Management has identified emergency housing for displaced residents. As of 2020 the dam has not failed.

Table COT.9: Dams Near Cotesfield

NIDID	DAM NAME	LOCATION
NE00191	Cotesfield Detention Dam	West of Cotesfield

Source: NeDNR, 2017

Flooding

Cotesfield participates in the NFIP but does not have any policies in-force. There are no repetitive flood loss properties in the Village of Cotesfield. There are no local concerns regarding flooding, due to the lack of structures within the floodplain; however, flooding is a concern as associated with the failure of the Cotesfield Detention Dam.

Severe Thunderstorms (includes hail)

Severe thunderstorms are common across the planning area and include impacts from heavy rain, lightning, hail, and thunderstorm winds. Local concerns regarding severe thunderstorms focus on the potential for widespread damage to structures from hail. The local planning team indicated that hail events typically occur annually within Cotesfield. The community's critical facilities are insured for hail damage. There are no backup generators in town and no power lines in town are buried. The community building has been identified as a local shelter and is in need of a generator.

Severe Winter Storms

Local concerns for severe winter storms exist due to power outages and heavy snow leaving residents stranded. In the Spring of 2016, a severe winter storm came through Cotesfield and blocked residents in their homes. No power lines are buried within the community. The Village has one maintenance person who clears snow with a tractor with a blade. Currently snow removal resources are sufficient for local needs.

Tornadoes and High Winds

Cotesfield has warning sirens that are activated by the Howard County dispatch center. County Emergency Management offers the Code Red warning system. The community does not have any safe rooms available for residents seeking shelter but has identified the Community Building as a shelter for residents if needed. Tree damage and downed power lines are a concern for the local planning team. In the event of a disaster, the Village has mutual aid agreements with neighboring communities.

Mitigation Strategy

Continued Mitigation Actions

OBJECTIVE	PUBLIC SAFE ROOMS & POST-DISASTER STORM SHELTERS
DESCRIPTION	<ol style="list-style-type: none"> 2. Identify and evaluate existing safe rooms and/or storm shelters 3. Improve and/or construct safe rooms and/or storm shelters 4. Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$150/sf for retrofit; \$300/sf for new construction
POTENTIAL FUNDING	Bonds, Grants, Village General Fund
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Emergency Management, Village Board
STATUS	This project has not yet been started.

SECTION SEVEN: VILLAGE OF COTESFIELD COMMUNITY PROFILE

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate current backup and emergency generators 2. Obtain additional generators based on identification and evaluation 3. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
ESTIMATED COST	\$45,000
POTENTIAL FUNDING	Bonds, Grants, Village General Fund
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Emergency Management, Village Board
STATUS	This project has not yet been started. The community building is in need of a backup generator.

OBJECTIVE	REDUCE STREAM & DRAINAGE BOTTLENECKS/FLOW RESTRICTIONS
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate restrictions and measures to prevent or reduce flood damage 2. Implement appropriate nonstructural or structural methods on an emergency or permanent basis (monitoring or warning systems, ice jam dusting, excavation or blasting, reshaping channel, tree and debris removal, acquire property and/or construct additional channels or other flow improvements)
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$10,000 to \$50,000 for studies; \$10,000+ to enlarge ditches, culverts, pipes; unknown for stream channel, crossing structures or bridge improvements
POTENTIAL FUNDING	Village General Fund
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	Cleaning and doing maintenance on drainage ditches as funding becomes available.

SECTION SEVEN: VILLAGE OF COTESFIELD COMMUNITY PROFILE

OBJECTIVE	REDUCE DAMAGES IN FLOODPLAIN
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate repetitive loss or potential loss structures located in floodplain 2. Acquire and relocate or demolish flood prone property or elevate flood prone property 3. Elevate equipment vulnerable to flooding
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Varies by number or size of structures
POTENTIAL FUNDING	Village General Fund
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

OBJECTIVE	PUBLIC EDUCATION ON HAZARD EVENTS & PREPAREDNESS
DESCRIPTION	<ol style="list-style-type: none"> 1. Obtain or develop materials about hazards 2. Conduct multifaceted public education 3. Distribute fact sheet at community events, schools, other venues 4. Conduct scheduled siren/warning system tests 5. Prepare/distribute educational materials listing safe room and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$5,000+
POTENTIAL FUNDING	Village General Fund
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Village Board, Emergency Management
STATUS	This project has not yet been started. Howard County Emergency Management assists with educational outreach. Additional information about emergency alerts should be distributed.

OBJECTIVE	REDUCE TREE DAMAGE & DAMAGE FROM TREES
DESCRIPTION	<ol style="list-style-type: none"> 1. Conduct tree inventory 2. Develop tree maintenance/trimming program 3. Implement tree maintenance/trimming program 4. Remove hazardous limbs and/or trees
HAZARD(S) ADDRESSED	Severe Thunderstorms, Severe Winter Storms, Tornadoes, Hail, High Winds
ESTIMATED COST	\$50 per tree
POTENTIAL FUNDING	Village General Fund
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	The village is currently working on trimming or removing dead/dying trees.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. The Village Board Chairperson, Clerk and County Emergency Manager will annually review the village's profile. They will notify and involve the public of the review by sharing information at board meetings.

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COMMUNITY PROFILE

VILLAGE OF CUSHING

Lower Loup Natural Resources District Hazard Mitigation Plan 2022

Local Planning Team

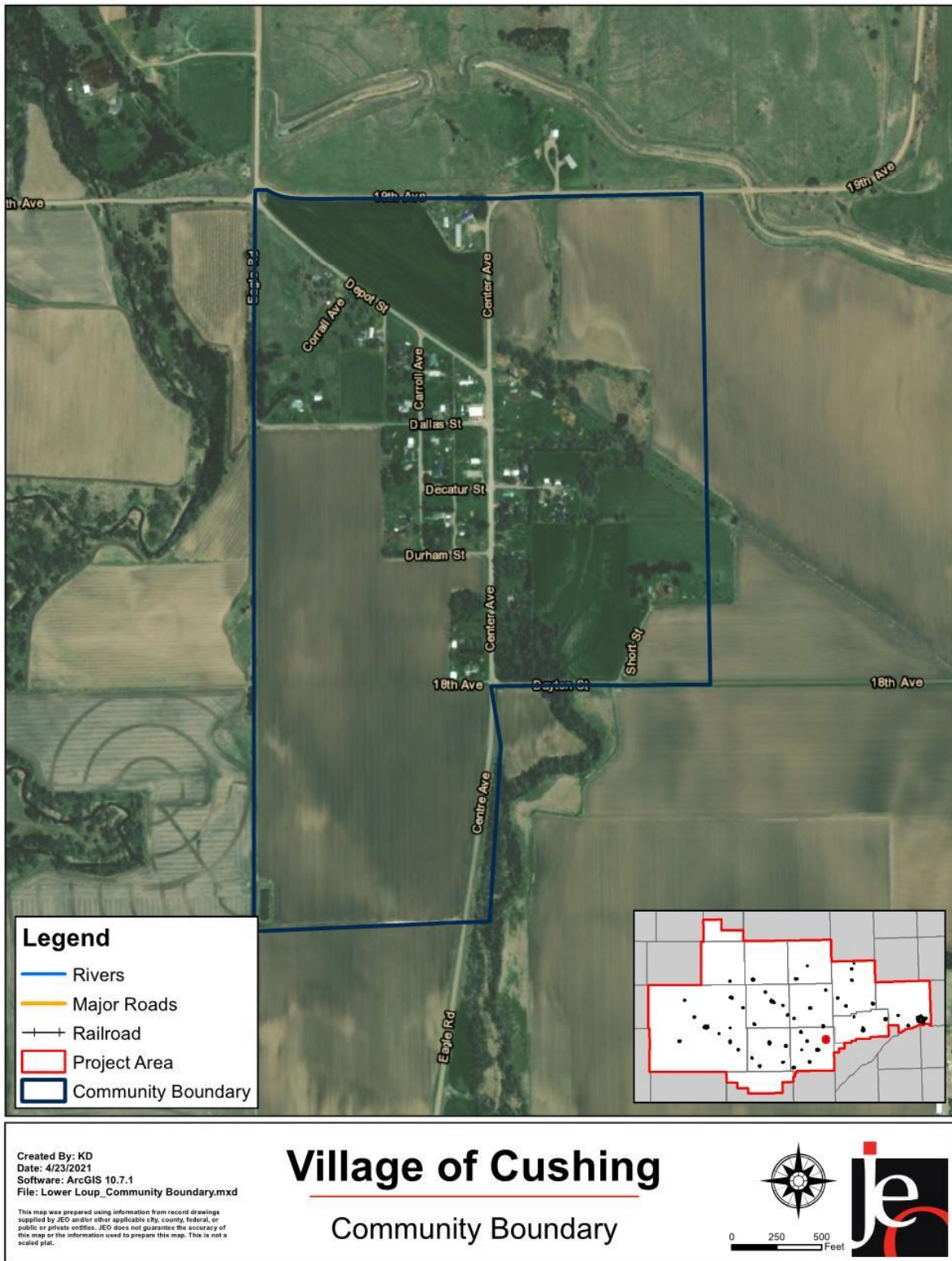
Table CUS.1: Village of Cushing Local Planning Team

NAME	TITLE	JURISDICTION
DAVE LARSON	Board Member	Village of Cushing
DANIEL KOPERSKI	Board Member	Village of Cushing
KATHY LARSON	Clerk/Treasurer	Village of Cushing
PAT GEIGER	Board Member	Village of Cushing

Location and Geography

The Village of Cushing is located in the northeastern portion of Howard County. The Village of Cushing covers an area of 0.31 square miles. Spring Creek runs along the west side of the village. The Loup River runs south of the village. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Most of Cushing lies in the valleys topographic region and is surrounded by agricultural fields.

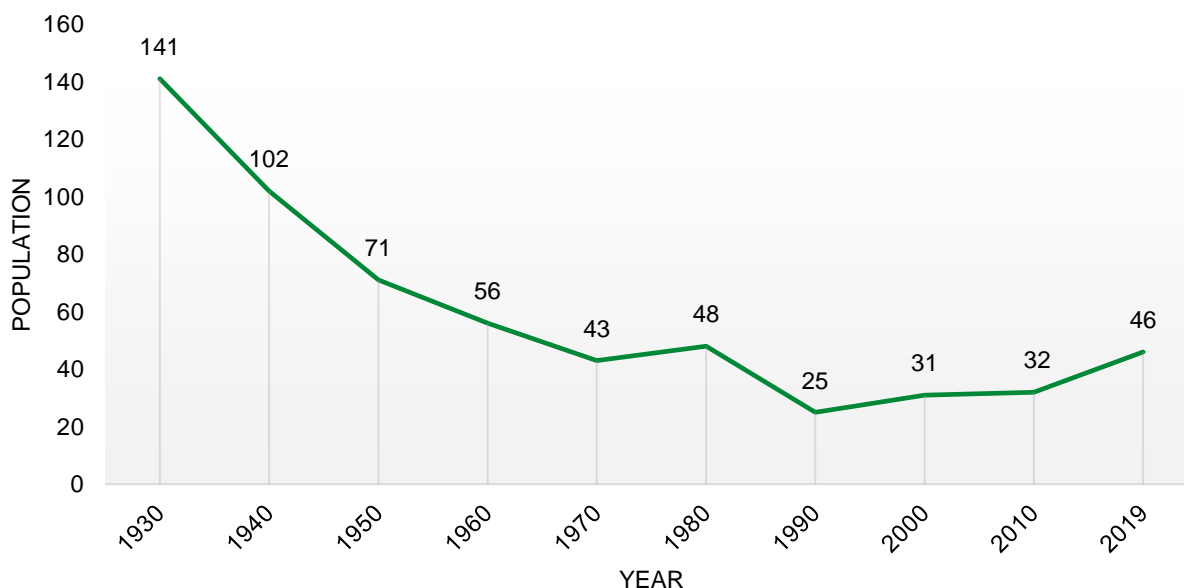
Figure CUS.1: Village of Cushing Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1930 to 2019 (estimated). This figure indicates that the population of Cushing experienced a decline from 1930 through 1970, grew in 1980, and then declined again until 2000. Since 2000 the population has been increasing. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Increasing populations can also contribute to increasing tax revenues, allowing communities to pursue additional mitigation projects. The Village's population accounted for 1% of Howard County's Population in 2019.

Figure CUS.2: Cushing Population 1930-2019



Source: U.S. Census Bureau²⁹

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

- **Older.** The median age of Cushing was 30.3 years old in 2019, compared with the County average of 43.1 years. Cushing's population has grown older since 2010, when the median age was 27.1 years old. Cushing had a larger proportion of people under 20 years old (39.5%) than the County (26.3%).³⁰
- **Less ethnically diverse.** In 2010, 0% of Cushing's population was Black or African American, 0% was other races, and 0% were two or more races. By 2019, 0% of Cushing's population was two or more races. During that time, Howard County went from 0.2% to 0% American Indian, 0% to 1.4% other races and 0.5% to 1.6% two or more races from 2010 to 2019 respectively.³¹
- **More likely to be at the federal poverty line.** The poverty rate of all persons in Cushing (50.0%) was higher than the County (5.9%) in 2019.³²

²⁹ United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]

³⁰ United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]

³¹ United States Census Bureau. "2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

³² United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

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

- **Different mix of industries.** Employment sectors accounting for 10% or more of employment in Cushing included Agriculture, Construction, Manufacturing, Retail, and Information. In comparison Howard County's included Agriculture, Manufacturing, Retail, and Education.³³
- **Lower household income.** Cushing's median household income in 2019 (\$18,125) was about \$41,000 lower than the County (\$59,348).³⁴
- **Fewer long-distance commuters.** About 53.8% percent of workers in Cushing commuted for fewer than 15 minutes, compared with about 36.3% of workers in Howard County. About 46.2% of workers in Cushing commute 30 minutes or more to work, compared to about 38.0% of the County workers.³⁵

Major Employers

There are no major employers in the Village of Cushing and the local planning team noted that approximately ninety percent of residents commute to the surrounding communities of Grand Island, St. Paul, St. Libory, and Elba.

Housing

In comparison to the Howard County, Cushing's housing stock was:³⁶

- **More owner occupied.** About 100.0% of occupied housing units in Cushing are owner occupied compared with 76.5% of occupied housing in Howard County in 2018.
- **Smaller share of aged housing stock.** Cushing has fewer houses built prior to 1970 than the county (86.4% compared to 51.7%).
- **Fewer multi-family homes.** The predominant housing type in the Village is single family detached and Cushing contains more multifamily housing with five or more units per structure than the County (0.0% compared to 1.5%). About 100.0% of housing in Cushing was single-family detached, compared with 91.4% of the County's housing. Cushing has a smaller share of mobile and manufactured housing (0%) compared to the County (6.2%)

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

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

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

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

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

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Cushing has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The Village has a five member village board and the following offices: clerk/treasurer and street commissioner. Additional departments that could assist with hazard mitigation activities include: Howard County Emergency Management, Howard County Sheriff's Office, and Howard County Fire Department.

Capabilities

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

Table CUS.2: Capability Assessment

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

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

Table CUS.3: Overall Capability

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

Plan Integration

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

Grants and Funding

The Village of Cushing's funds are limited to maintaining current facilities and systems. There are no major projects planned for the next five years. Funds for the village have remained relatively stable over recent years.

Comprehensive Plan

Cushing is included in the Howard County and Communities Comprehensive Plan which was last updated in 2015. The plan outlines future growth and development goals throughout the county for the communities of Boelus, Cotesfield, Cushing, Dannebrog, Elba, Farwell, and rural Howard County. The plan outlines the following goals which relate to hazard mitigation:

- **Land Use: Goal 1** Provide opportunities for development in an orderly, efficient and environmentally sound manner.
 - Limit future non-agricultural developments to locations which are relatively free of environmental constraints relating to soils, slope, flood plain, drainage, ground water endangered species or other natural resources.
- **Land Use: Goal 4** Work cooperatively with Federal, State, and adjoining County governments to develop compatible flood control measures.
- **Housing: Goal 3** Encourage future residential developments compatible with and complementary to existing residential areas.
 - Prohibit residential development in environmentally sensitive areas.
- **Public Infrastructure, Facilities, & Transportation: Goal 3** Provide adequate, efficient, and appropriate public utilities and services to both new and existing agricultural and residential developments.
 - Provide facilities and services in Rural Howard County and to each Village necessary to prevent degradation of the environment, including modern sewage treatment, refuse collection and disposal, street cleaning, proper disposal of animal waste and similar environmental control processes as necessary.

Building Codes (2018)

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

Howard County Local Emergency Operations Plan

The village has an annex in the Howard 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.

Central Platte Community Wildfire Protection Plan

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

Future Development Trends

In the past five years, there have been no changes in the Village of Cushing. According to the census data, Cushing's population is increasing. The local planning team indicated that young families are moving to the community to be closer to their parents and some housing stock has opened for renters to move in. There are no new housing or commercial developments planned for the next five years.

Community Lifelines

Transportation

Cushing's major transportation corridors include Highway 281, which runs north-south approximately six miles west of the village. US-281 accommodates on average 2,020 vehicles per day, 205 of which are heavy commercial vehicles. Cushing does not have rail lines. The local planning team identified 19th avenue as another transportation corridor of concern. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are no chemical storage sites throughout Cushing which house hazardous materials. In the event of a chemical spill, the Howard County Fire Department may be the first to respond to the incident. The local planning team indicated that local emergency response resources are not sufficient at this time.

Critical Facilities

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

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

Table CUS.5: Cushing Critical Facilities

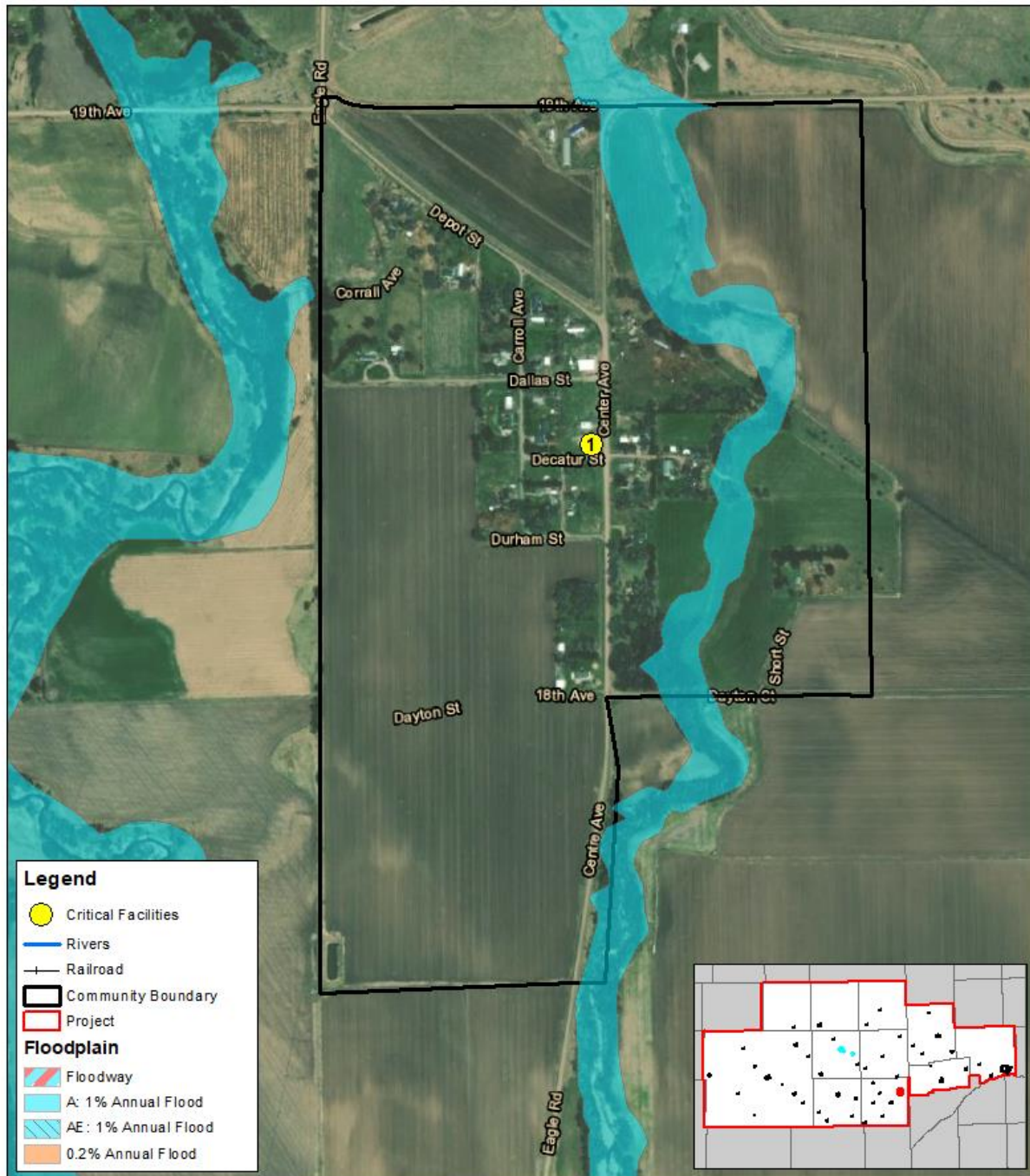
CF #	COMMUNITY LIFELINE	NAME	ADDRESS	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Shelter, and Water	Community Hall	405 Center Ave	N	N	N

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

Health and Medical Facilities

No medical and health facilities are located within the village.

Figure CUS.3: Cushing Critical Facilities



Created By : KV
 Date : 5/28/2021
 Software : ArcGIS 10.8.1
 File : Lower Loup_Community Boundary.mxd

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

Village of Cushing

Critical Facilities



Parcel Improvements and Valuation

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

Table CUS.7: Cushing Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
53	30	659,750	4	111,553	13.33%

Source: County Assessor, GIS Workshop

Table CUS.8: Cushing Flood Map Products

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
FIS	31093CV000B	7/7/2014	N/A

Source: FEMA Flood Map Service Center

Hazard Prioritization

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

Flooding

Cushing does not participate in the NFIP. There are no repetitive flood loss properties within the village. The outskirts of the village are most prone to flooding. During the major flooding in 2019, 19th avenue and other major roads in the village had major damage and were closed for a short period of time. Many roads were washed out and bridges were impacted. With 90% of the residents having to travel to work they either had to take the time to find a different route or be displaced from their homes. No evacuations were necessary. According to NCEI data, the flooding event in 2019 caused approximately \$3,000,000 in property damages to the community.

Grass/Wildfires

In 2013, a large grassfire burned 11 miles of pastureland near Cushing. Although the fire did not result in any damages or injuries within the corporate limits, Cushing is vulnerable to future wildfire due to the lack of resources. The main concerns with this hazard for the village is the risk of wildfire in the surrounding cropland and abandoned houses that are unkept with tall grass. Cushing will continue to benefit from the existing mutual aid agreements with nearby fire departments. According to the local planning team, property owners are encouraged to have defensible space around structures.

Severe Thunderstorms

Cushing experiences numerous severe thunderstorms every year. The primary concerns regarding these storms are the potential for property damages and power outages. The planning team is also concerned about the potential for lightning to cause fires and thunderstorm winds downing power lines and trees. The local planning team indicated that there are hazardous trees near power lines that are in need of removal. According to NCEI data, there have been seven severe thunderstorm events in the community that have caused approximately \$90,000 in property damages. Critical municipal records are protected with surge protectors on electronic devices. The town hall has metal roofing to protect against hail events. The village also utilizes a memory chip as a data backup system for municipal records.

Severe Winter Storms

Severe winter storms have the potential to hinder transportation and cause power outages. The local planning team is also concerned with severe winter storms impacting emergency response times. A severe winter storm in January 2016 dropped a significant amount of snow onto the community, straining snow removal capabilities. Village Board members oversee snow removal in the community. Snow removal resources for the community include a tractor and blade, which are effective but take a long time to clear snow. The local planning team indicated that snow removal resources are not sufficient for local needs and that the village is in search of a replacement tractor.

Tornadoes and High Winds

There has been one tornadic event in Cushing from 1996 to 2015. On May 16, 2004, a tornado set down west of Cushing and headed eastward. The tornado damaged or destroyed a few outbuildings and damaged one home. In total, the event caused \$250,000 in property damages. Cushing has warning sirens that reach the entire community. The sirens are remotely activated by Region 26 dispatch. There are no safe rooms located in the community and some residents do not have basements. Howard Greeley Rural Public Power checks on hazardous trees and removes them if they encroach on power lines. Board members in the village also remove hazardous trees.

Public Health Epidemic

The main concerns around a public health epidemic for the village, is the number of residents who travel to other communities for work and shopping. Additionally, over half of the residents are 30 ears of age or older. There are still some residents in the community who are not vaccinated.

Mitigation Strategy

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	<ol style="list-style-type: none"> 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 to \$75,000+ per generator
POTENTIAL FUNDING	HMGP, Local Tax
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

OBJECTIVE	PUBLIC SAFE ROOMS & POST-DISASTER STORM SHELTERS
DESCRIPTION	<ol style="list-style-type: none"> 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
POTENTIAL FUNDING	HMGP, Local Tax
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

New Mitigation Actions – 2022 Plan

OBJECTIVE	IMPROVE SNOW REMOVAL RESOURCES
DESCRIPTION	<ol style="list-style-type: none"> Purchase or upgrade existing equipment to assist with snow removal resources – i.e. new snow plow/tractor
HAZARD(S) ADDRESSED	Severe Winter Storms
ESTIMATED COST	\$25,000+
POTENTIAL FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This is a new mitigation action

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. The Village Clerk, Village Board, and County Emergency Manager will annually review the community's profile and notify and involve the public via at local board meetings.

COMMUNITY PROFILE

VILLAGE OF DANNEBROG

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

Local Planning Team

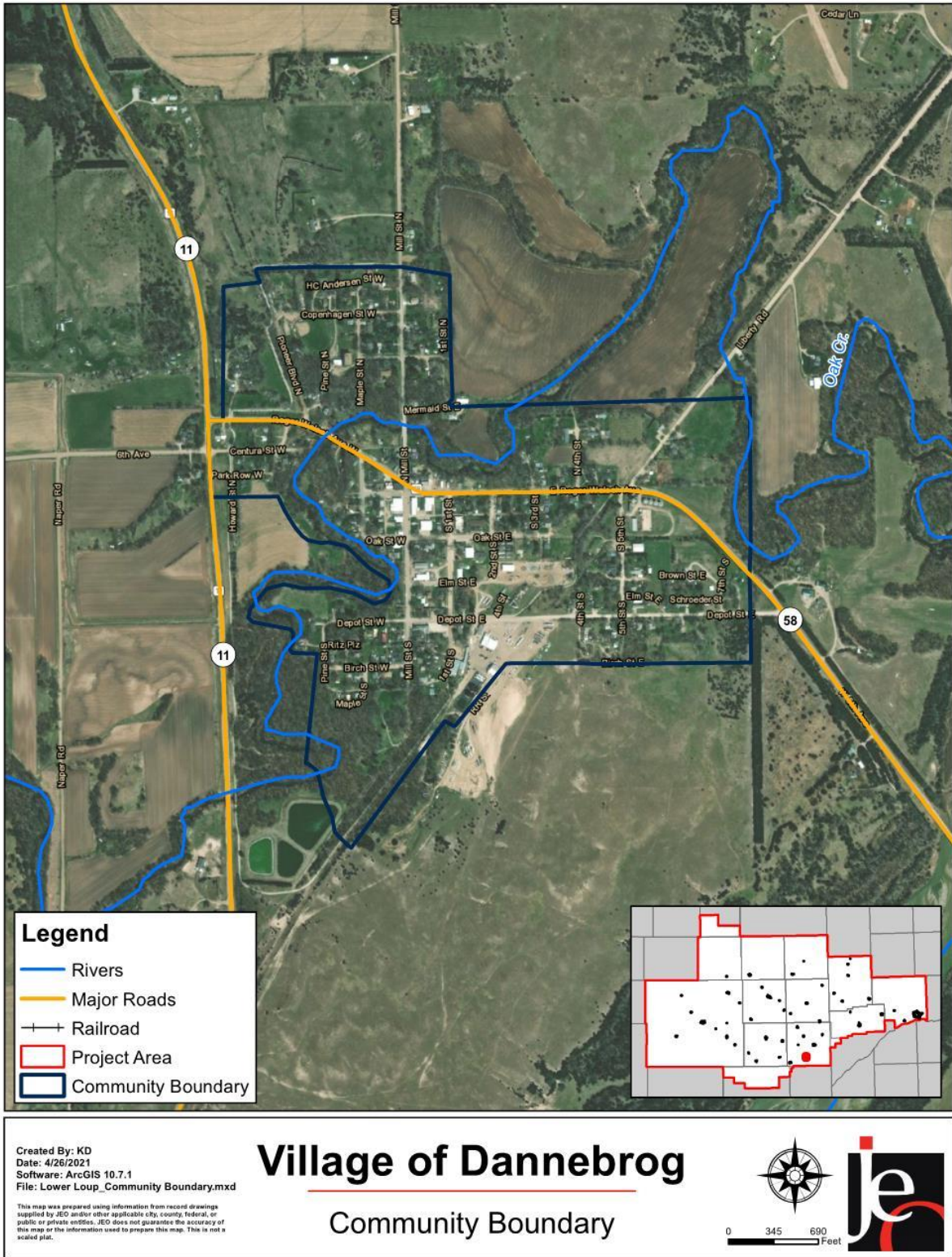
Table DAN.1: Village of Dannebrog Local Planning Team

NAME	TITLE	JURISDICTION
TERRY WEBB	Floodplain Manager	Village of Dannebrog

Location and Geography

The Village of Dannebrog is located in the southern portion of Howard County. The Village of Dannebrog covers an area of 0.37 square miles. Oak Creek runs through the village and the Middle Loup River is located east of the village. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Most of Dannebrog lies in the plains topographic region, and is surrounded by agricultural fields.

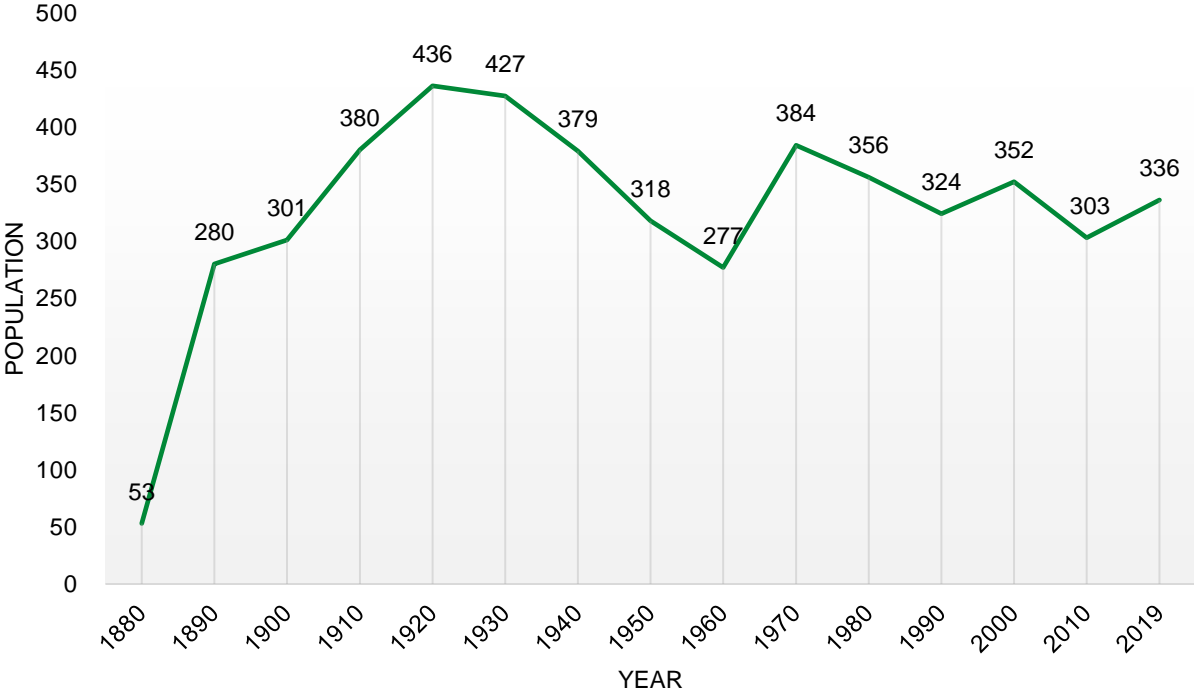
Figure DAN.1: Village of Dannebrog Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1880 to 2019 (estimated). This figure indicates that the population of Dannebrog experienced a decline between 2000 through 2010, but has been increasing since. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Increasing populations can also contribute to increasing tax revenues, allowing communities to pursue additional mitigation projects. The village’s population accounted for 5% of Howard County’s Population in 2019.

Figure DAN.2: Dannebrog Population 1880-2019



Source: U.S. Census Bureau³⁷

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

- **Younger.** The median age of Dannebrog was 43.4 years old in 2019, compared with the County average of 43.1 years. Dannebrog’s population has grown younger since 2010, when the median age was 41.3 years old. Dannebrog had a smaller proportion of people under 20 years old (23.8%) than the County (26.3%).³⁸
- **Less ethnically diverse.** In 2010, 0% of Dannebrog’s population was Black or African American, 0% was other races, and 0.3% were two or more races. By 2019, only about 0% of Dannebrog’s population was two or more races. During that time, Howard County went from 0.2% to 0% American Indian, 0% to 1.4% other races and 0.5% to 1.6% two or more races from 2010 to 2019 respectively.³⁹

³⁷ United States Census Bureau. “2019 American Fact Finder: S0101: Age and Sex.” [database file]
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³⁹ United States Census Bureau. “2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates.” [database file]

- **More likely to be at the federal poverty line.** The poverty rate of all persons in Dannebrog (6.8%) was higher than the County (5.9%) in 2019.⁴⁰

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Dannebrog included Manufacturing, Retail, and Education. In comparison Howard County's included Agriculture, Manufacturing, Retail, and Education.⁴¹
- **Lower household income.** Dannebrog's median household income in 2019 (\$44,688) was about \$15,000 lower than the County (\$59,348).⁴²
- **More long-distance commuters.** About 1.3% percent of workers in Dannebrog commuted for fewer than 15 minutes, compared with about 36.3% of workers in Howard County. About 61.9% of workers in Dannebrog commute 30 minutes or more to work, compared to about 38.0% of the County workers.⁴³

Major Employers

Major employers in the Village of Dannebrog include Aurora Corp, Archer Credit Union, Kerry's Grocery, and the Danish Bakery. The local planning team indicated that approximately 95% of residents commute to the communities of Grand Island and St. Paul.

Housing

In comparison to the Howard County, Dannebrog's housing stock was:⁴⁴

- **Less owner occupied.** About 75.6% of occupied housing units in Dannebrog are owner occupied compared with 76.5% of occupied housing in Howard County in 2019.
- **Larger share of aged housing stock.** Dannebrog has more houses built prior to 1970 than the county (68.5% compared to 51.7%).
- **More multi-family homes.** The predominant housing type in the Village is single family detached and Dannebrog contains more multifamily housing with five or more units per structure than the County (8.2% compared to 1.5%). About 78.1% of housing in Dannebrog was single-family detached, compared with 84.6% of the County's housing. Dannebrog has a smaller share of mobile and manufactured housing (12.3%) compared to the County (6.2%)

The local planning team noted that there are currently two occupied mobile homes in the community and 67.2 percent of the community's housing was built before 1940. This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities

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

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

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

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Dannebrog has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The village has a five-member village board and the following offices: clerk/treasurer, fire chief, sewer/water commissioner, and utility supervisor.

Capabilities

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

Table DAN.2: Capability Assessment

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

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

Table DAN.3: Overall Capability

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

Plan Integration

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

Grants and Funding

The Village of Dannebrog’s funds are limited to maintaining current facilities and systems. There are no major projects planned for the next five years. Funds for the village have remained relatively stable over recent years.

Comprehensive Plan

Dannebrog is included in the Howard County and Communities Comprehensive Plan which was last updated in 2015. The plan outlines future growth and development goals throughout the county for the communities of Boelus, Cotesfield, Cushing, Dannebrog, Elba, Farwell, and rural Howard County. The plan outlines the following goals which relate to hazard mitigation:

- **Land Use: Goal 1** Provide opportunities for development in an orderly, efficient and environmentally sound manner.
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 - Prohibit residential development in environmentally sensitive areas.
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 - Provide facilities and services in Rural Howard County and to each Village necessary to prevent degradation of the environment, including modern sewage treatment, refuse collection and disposal, street cleaning, proper disposal of animal waste and similar environmental control processes as necessary.

Building Codes (2018)

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

Ordinances and Regulations

Dannebrog utilizes Howard County zoning regulations which incorporates a number of mitigation principles. The ordinance discourages development in the floodplain, requires more than one foot of elevation above Base Flood Elevation in the floodplain, discourages development near chemical storage sites, and prohibits the filling of wetlands.

Howard County Local Emergency Operations Plan

The village has an annex in the Howard 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.

Central Platte Community Wildfire Protection Plan

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

Future Development Trends

In the last five years, two houses have been demolished with four more set to be demolished before 2023. In the next five years a new bar is set to be built at 210 Mill Street. The local planning team indicated that the census estimates are accurate, and that Dannebrog's population is increasing due to people moving out of Grand Island and into Dannebrog.

Community Lifelines

Transportation

Dannebrog's major transportation corridors include State Highway 58, which runs east-west, through the center of Dannebrog and State Highway 11, which runs north-south on the western edge of the village. The most traveled route is Highway 58 with an average of 1,115 vehicles per day, 110 of which are heavy commercial vehicles. The local planning team also noted that Liberty Road and Mill Street North are other routes of concern. Dannebrog does not have any rail lines. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one chemical storage site throughout Dannebrog which houses hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. The local planning team also identified the Aurora Co-op Gas Station as another chemical storage site of concern. In August 2020, there was a propane release at the Aurora Co-op in Dannebrog, but there were no impacts to the community.

Table DAN.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
AURORA CO-OP ELEVATOR COMPANY	303 Depot St E	

Source: Nebraska Department of Environment and Energy⁴⁵

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

⁴⁵ Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

during the previous planning process and updated by the local planning team as a part of this plan update.

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

Table DAN.5: Dannebrog Critical Facilities

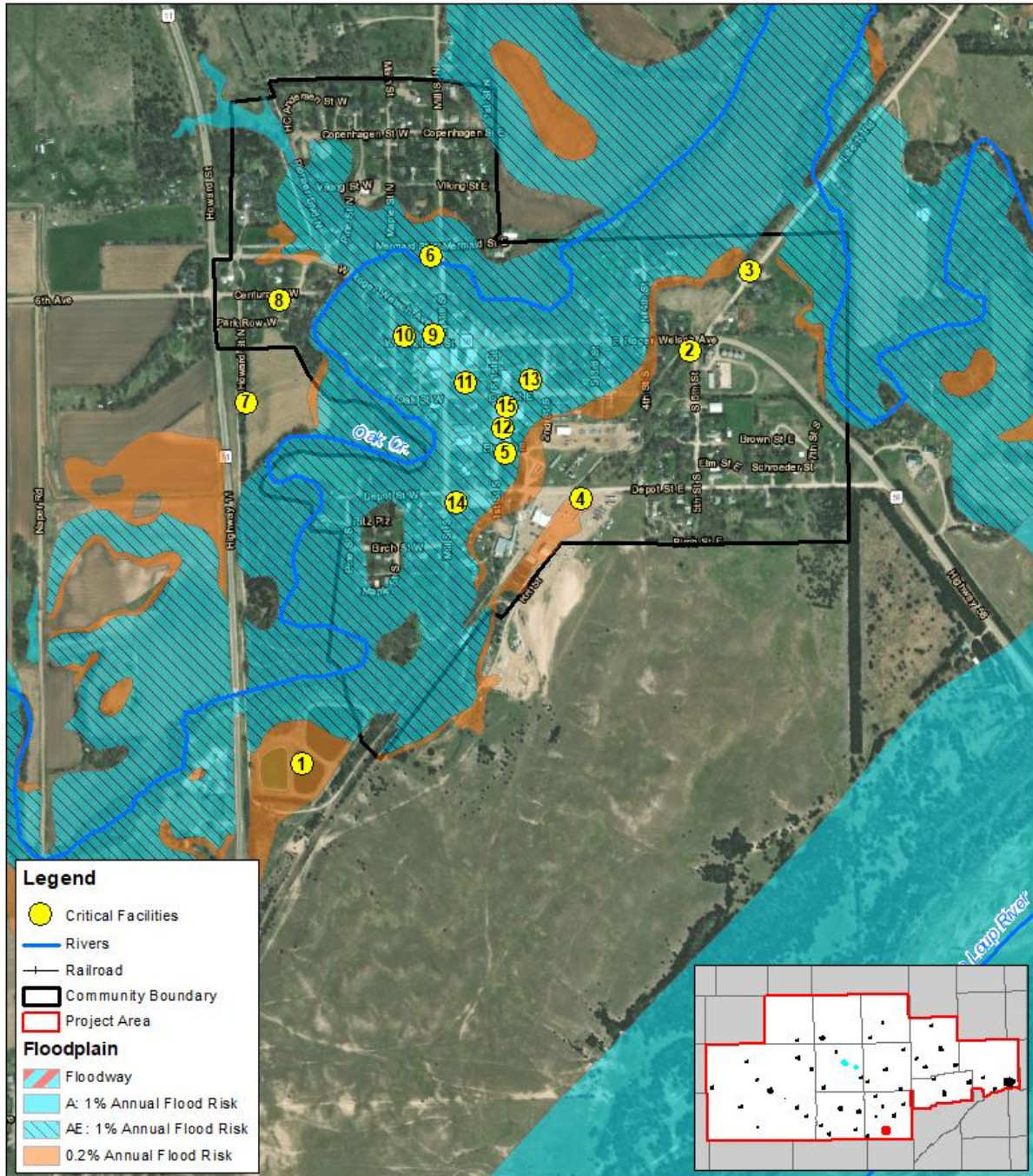
CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Lagoon	N	N	Y
2	Food, Water, and Shelter	Well #1	N	N	N
3	Food, Water, and Shelter	Liberty Rd. Lift Station	N	Y	N
4	Hazardous Materials	Co-op Fertilizer	N	N	Y
5	Food, Water, and Shelter	Main Lift Station	N	Y	Y
6	Food, Water, and Shelter	Mill Street Lift Station	N	Y	Y
7	Food, Water, and Shelter	Well #3	N	Y	N
8	Food, Water, and Shelter	Well, #2	N	Y	N
9	Safety and Security	Village Office	N	N	Y
10	Transportation	Nebraska Central Telephone	N	N	Y
11	Safety and Security	Fire Hall / Alert Siren	N	Y	Y
12	Food, Water, and Shelter	Water Tower	N	N	Y
13	Food, Water, and Shelter	Oak Street Manor	N	N	Y
14	Food, Water, and Shelter	Lutheran Church	N	N	Y
15	Food, Water, and Shelter	1st Baptist Church	N	N	Y

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

Health and Medical Facilities

No medical and health facilities are located within the village.

Figure DAN.3: Dannebrog Critical Facilities



Created By : KV
 Date : 5/28/2021
 Software : ArcGIS 10.8.1
 File : Lower Loup_Community Boundary.mxd

Village of Dannebrog
 Critical Facilities

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

0 315 630 Feet

Parcel Improvements and Valuation

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

Table DAN.7: Dannebrog Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
258	200	11,227,763	139	6,565,110	69.50%

Source: County Assessor, GIS Workshop

Table DAN.8: Dannebrog Flood Map Products

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
FIS	31093CV000B	7/7/2014	N/A
LOMR	16-07-2344P-310118	6/8/2017	Revision to FIS to include areas along Oak Creek
LOMA	15-07-0969X-310118	3/5/2015	Structure (residence) removed from SFHA
LOMA	17-07-2206A-310118	11/14/2017	Structure removed from SFHA
LOMA	18-07-0414A-310118	3/15/2018	Structure removed from SFHA
LOMA	19-07-0170A-310118	1/31/2019	Structure (residence) removed from SFHA
LOMA	19-07-0521A-310118	1/4/2019	Structure (residence) removed from SFHA
LOMA	19-07-1689A-310118	1/16/2020	Structure removed from SFHA

Source: FEMA Flood Map Service Center

Hazard Prioritization

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

Hazardous Materials (Fixed Site)

The local planning team has identified fixed site hazardous materials as a hazard of concern as it threatens property and health. On April 18, 1993 approximately 8,000 gallons of 10-34-0 fertilizer solution was released from a ruptured tank. The solution contaminated about 1,600 feet of E Depot Street and South First Street. No major impact to the village occurred from this incident.

Facilities such as the Village Shop and Howard County Road are within one block of Aurora Coop. The fire department and Aurora Coop have some local response resources, however, the closest hazmat team is located in Grand Island about 35 miles away. Some containment dikes have been built in the community.

Drought

The local planning team identified drought as a hazard of top concern due to threats to a weak water system in the community. The village has two wells that produce a total of 250 gpm. One well was drilled in 1991 that produces 150 gpm. The other well was drilled in 1981, rehabbed in 2020, and produces 100 gpm. The village water tower holds 40,000 gallons which is close to the daily use for the community in the winter. With such low water recovery rates, the village needs a water capacity of at least 100,000 to 150,000 gallons to hold more than one day of water and have reserves for fire protection.

Flooding

Dannebrog has 21 NFIP policies in-force for \$1,545,600. There are no repetitive flood loss properties in the Village of Dannebrog. Of the approximately 188 structures in the village, approximately 126 are located within the floodplain. The bodies of water of most concern for Dannebrog are Oak Creek, Middle Loup River, Sherman Reservoir, and a number of local farmer holding ponds. The local planning team indicated that the storm water drainage within town is such that most areas cannot handle a two-inch rain fall in 45 minutes without flooding the streets. Areas of the community that are prone to flooding starts at the lagoons going north to Mill St N & Mermaid St. E. Also starting at the very west end of Depot St W going east to Fourth St N and Roger Welsch E.

According to NCEI data, there have been five flooding events from 1996 to 2019 that have caused \$1,085,000 in property damages. The most recent flood in 2019 caused damage to the cemetery, park, streets, sewer system, and levee. During the flooding event, evacuations were necessary in the village. Overall, 58 residences in the community experienced impacts from the flooding. Of the 58 residences, 38 had some type of structural damage and were impacted directly by flood water and 20 were impacted by flooding of the sewer system. Four properties will be torn down from damages. There were 13 residences outside of the village that were impacted by flood waters and experienced structural damage. Another seven homes were impacted by flood waters but had no structural impacts.

The levee has been rebuilt and Oak Creek was cleared of debris in 2020. The village is currently looking at options to protect the sewer system and prevent creek water from backing up the storm sewer. The community is in need of a detention area to be built west of Dannebrog to contain water during a flooding event. Additionally, a flood gate would be beneficial where Oak Creek meets the Middle Loup River to prevent the river from backing up in town.

Levee Failure

There are no federally or state owned levees near Dannebrog. However, there is a locally owned levee located in the southwest corner of town which was designed to help with a 100-year flood. This levee is not FEMA certified. During the flooding in 2019 the levee was breached. Since the levee is locally owned, the community could not get outside financial assistance and had to rebuild

the levee with local funds. During the flooding event, if the levee had not breached, the southwest portion of the village would likely not have been impacted as heavily with flood waters.

Severe Thunderstorms (includes hail)

Local concerns regarding this hazard include the potential for homes and businesses to be destroyed and not rebuilt. Past thunderstorm events have damaged the roofs and siding of critical facilities. According to NCEI data, there have been 43 severe thunderstorm events from 1996 to 2019 that have caused \$490,000 in property damages. In September 2015, a large thunderstorm totaled most roofs in the village. Another storm in 2014, also totaled some roofs within the village. Critical municipal records are protected with surge protectors on electronic devices and most community critical facilities have backup generators. Approximately 100% of power lines are above ground in the community.

Severe Winter Storms

Local planning team concerns with severe winter storms includes power outages and impacts to mobility of emergency services during storms. In December 2006, an ice storm caused a power outage and significant damages to streets and trees within the village. Designated snow routes include North and South Mill Street, West and East Oak Street, and East depot Street. The village's utility department oversees removing snow within the village. Snow removal resources include a road grader, wheel loader, skid steer, five-yard dump truck, and two snow blowers. Resources are sufficient for most snow events. Local farmers can assist with snow removal if needed.

Tornadoes and High Winds

According to the NCEI, there have been two tornadoes near Dannebrog from 1996-2015 that caused \$175,000 in damages. The village has warning sirens that can be activated manually or by Howard County Dispatch. Sirens do not reach all areas of the community. Howard County Emergency Management offers Code Red text alerts. There are no safe rooms located within the village. In the event of a disaster, Dannebrog is a member of Twin Loup Mutual Aid with Boelus, Cairo, Rockville, Farwell, Ashton, Elba, St. Paul, and St. Libory.

To mitigate against this hazard the village needs additional warning sirens to reach all areas of the community. Sirens also need back-up power and activation via fire department hand-held radios.

Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	REDUCE STREAM & DRAINAGE BOTTLENECKS/FLOW RESTRICTIONS
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate restrictions and measures to prevent or reduce flood damage 2. Implement appropriate nonstructural or structural methods on an emergency or permanent basis (monitoring or warning systems, ice jam dusting, excavation or blasting, reshaping channel, tree and debris removal, acquire property and/or construct additional channels or other flow improvements)
HAZARD(S) ADDRESSED	Flooding
STATUS	The levee has been rebuilt and Oak Creek was cleared of debris in 2020.

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	<ol style="list-style-type: none"> 7. Identify and evaluate current backup and emergency generators 8. Obtain additional generators based on identification and evaluation 9. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
ESTIMATED COST	\$20,000 to \$75,000+ per generator
POTENTIAL FUNDING	Village General Fund, HMGP
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Utility Supervisor
STATUS	Most wells and stations have backup generators. The village office and future sirens will need redundant power.

OBJECTIVE	IMPROVE FLOOD AND DAM FAILURE WARNING SYSTEM
DESCRIPTION	<ol style="list-style-type: none"> 4. Evaluate current flood/water level alert and dam failure warning alert system 5. Implement improved alert measures 6. Increase/stricter inspection of dams
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$5,000+
POTENTIAL FUNDING	Village General Funds, Lower Loup NRD, HMGP
TIMELINE	5+ years
PRIORITY	High
LEAD AGENCY	Utility Supervisor
STATUS	Levee system has been repaired since 2019 flood breach. Alert sirens and emergency text alerts should be synched to flood hazard alerts.

SECTION SEVEN: VILLAGE OF DANNEBROG COMMUNITY PROFILE

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate current warning systems 2. Improve warning systems/develop new warning system 3. Obtain/Upgrade warning system equipment and methods 4. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 5. Identify location of weather warning radios 6. Improve weather radio system 7. Obtain/Upgrade weather radios
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms
ESTIMATED COST	\$50 per unit; \$5,000 to \$50,000 for radio/television broadcast system; \$15,000 to \$50,000 for sirens
POTENTIAL FUNDING	Village General Fund, HMGP
TIMELINE	5+ years
PRIORITY	High
LEAD AGENCY	Utility Supervisor
STATUS	This project has not yet been started. New sirens are needed on the edges of town to cover all residents.

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

New Mitigation Action – 2022 Plan

OBJECTIVE	STORMWATER SYSTEM IMPROVEMENTS
DESCRIPTION	1. Improve drainage in and around the community
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Varies by need
POTENTIAL FUNDING	Village General Funds, Lower Loup NRD, HMA
TIMELINE	5+ years
PRIORITY	High
LEAD AGENCY	Utility Supervisor
STATUS	This is a new mitigation action. Stormwater drainage improvements are needed include areas north to Mill St N & Mermaid St. E. Also starting at the very west end of Depot St W going east to Fourth St N and Roger Welsch E. The village may construct a detention area west of town to contain flood water or install a flood gate along levee system.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. The Village Clerk, Village Board, local Floodplain Manager, Utilities Superintendent, and County Emergency Manager will annually review the community's profile and notify and involve the public via at local board meetings.

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COMMUNITY PROFILE

VILLAGE OF ELBA

Lower Loup Natural Resources District Hazard Mitigation Plan 2022

Local Planning Team

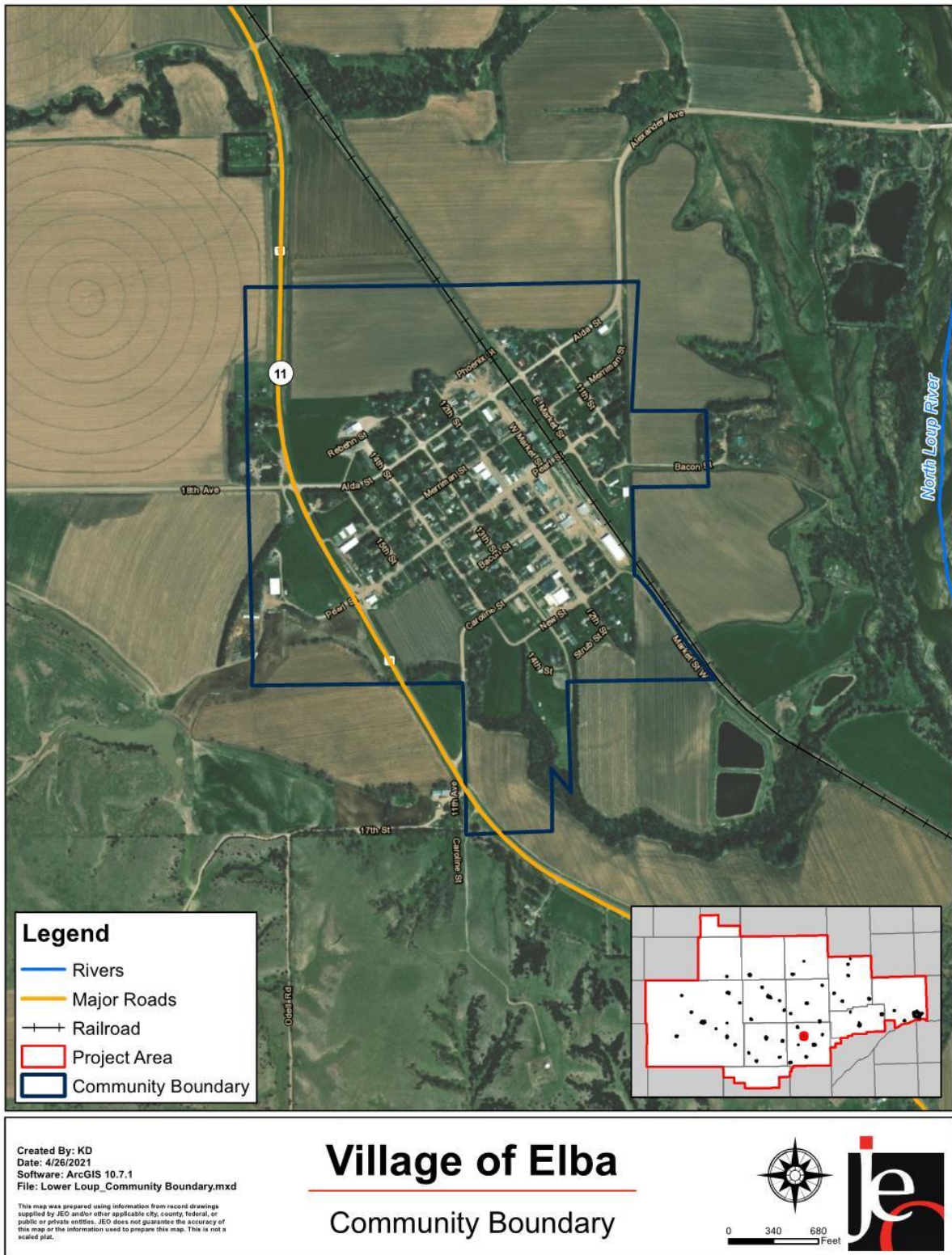
Table ELB.1: Village of Elba Local Planning Team

NAME	TITLE	JURISDICTION
ARLENE JOHNSON	Clerk/Treasurer	Village of Elba
CHRIS PEDERSEN	Chairperson	Village of Elba
RANDY FAABORG	Fire Chief	Elba Rural Fire District

Location and Geography

The Village of Elba is located in the northern portion of Howard County. The Village of Elba covers an area of 0.37 square miles. The North Loup River flows east of the Village. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Most of Elba lies in the plains topographic region, and is surrounded by agricultural fields.

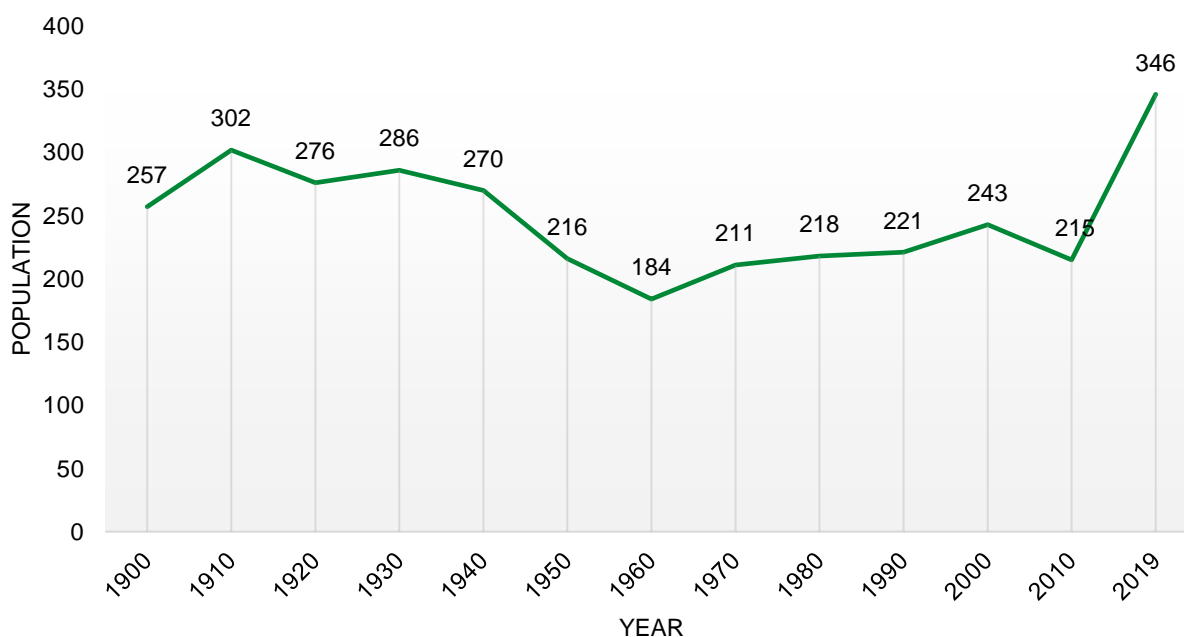
Figure ELB.1: Village of Elba Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1900 to 2019 (estimated). This figure indicates that the population of Elba experienced a decline from 2000 through 2010. Since 2010 the population has been increasing. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Increasing populations can also contribute to increasing tax revenues, allowing communities to pursue additional mitigation projects. The Village's population accounted for 5% of Howard County's Population in 2018.

Figure ELB.2: Elba Population 1900-2018



Source: U.S. Census Bureau⁴⁶

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

- **Younger.** The median age of Elba was 34 years old in 2019, compared with the County average of 43.1 years. Elba's population has grown younger since 2010, when the median age was 37.6 years old. Elba had a smaller proportion of people under 20 years old (22.8%) than the County (26.3%).⁴⁷
- **More ethnically diverse.** In 2010, 0% of Elba's population was Black or African American, 0% was other races, and 2.0% were two or more races. By 2019, 2.4% of Elba's population was two or more races. During that time, Howard County went from 0.2% to 0% American Indian, 0% to 1.4% other races and 0.5% to 1.6% two or more races from 2010 to 2019 respectively.⁴⁸

⁴⁶ United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]

⁴⁷ United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]

⁴⁸ United States Census Bureau. "2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

- **More likely to be at the federal poverty line.** The poverty rate of all persons in Elba (9.9%) was higher than the County (5.9%) in 2019.⁴⁹

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Elba included Agriculture, Construction, Manufacturing, Retail, and Education. In comparison Howard County's included Agriculture, Manufacturing, Retail, and Education.⁵⁰
- **Lower household income.** Elba's median household income in 2019 (\$52,500) was about \$7,000 lower than the County (\$59,348).⁵¹
- **Fewer long-distance commuters.** About 41.0% percent of workers in Elba commuted for fewer than 15 minutes, compared with about 36.3% of workers in Howard County. About 35.6% of workers in Elba commute 30 minutes or more to work, compared to about 38.0% of the County workers.⁵²

Major Employers

Major employers in the Village of Elba include Elba Public Schools, Trotter's Fertilizer, Charlie's Station, and Hamilton Apiaries. The local planning team noted that approximately 26% of residents commute to the surrounding communities of Grand Island, St. Paul, and Ord.

Housing

In comparison to the Howard County, Elba's housing stock was:⁵³

- **Less owner occupied.** About 65.5% of occupied housing units in Elba are owner occupied compared with 76.5% of occupied housing in Howard County in 2019.
- **Smaller share of aged housing stock.** Elba has fewer houses built prior to 1970 than the county (38.2% compared to 51.7%).
- **Fewer multi-family homes.** The predominant housing type in the Village is single family detached and Elba contains less multifamily housing with five or more units per structure than the County (0.0% compared to 1.5%). About 75.4% of housing in Elba was single-family detached, compared with 84.6% of the County's housing. Elba has a smaller share of mobile and manufactured housing (14.2%) compared to the County (6.2%)

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

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

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

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

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

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

Governance

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

Capabilities

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

Table ELB.2: Capability Assessment

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

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

Table ELB.3: Overall Capability

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

Plan Integration

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

Grants and Funding

The Village of Elba's funds are limited to maintaining current facilities and systems. For the next 30 years, the village owes an annual loan payment of \$36,504 to the USDA-RD for water improvements and an annual loan payment of \$23,000 to USDA-RD for street improvements. Therefore, while village funds have increased, so too have expenses. The village does have reserve funds but these are slated for operation and maintenance costs, as well as loan payments. In the last five years, Elba applied for and received a CDBG planning and public works grant for the village's 13th Street Paving and Drainage Improvements project and a safety grant from LARM.

Comprehensive Plan

Elba is included in the Howard County and Communities Comprehensive Plan which was last updated in 2015. The plan outlines future growth and development goals throughout the county for the communities of Boelus, Cotesfield, Cushing, Dannebrog, Elba, Farwell, and rural Howard County. The plan outlines the following goals which relate to hazard mitigation:

- **Land Use: Goal 1** Provide opportunities for development in an orderly, efficient and environmentally sound manner.
 - Limit future non-agricultural developments to locations which are relatively free of environmental constraints relating to soils, slope, flood plain, drainage, ground water endangered species or other natural resources.
- **Land Use: Goal 4** Work cooperatively with Federal, State, and adjoining County governments to develop compatible flood control measures.
- **Housing: Goal 3** Encourage future residential developments compatible with and complementary to existing residential areas.
 - Prohibit residential development in environmentally sensitive areas.
- **Public Infrastructure, Facilities, & Transportation: Goal 3** Provide adequate, efficient, and appropriate public utilities and services to both new and existing agricultural and residential developments.
 - Provide facilities and services in Rural Howard County and to each Village necessary to prevent degradation of the environment, including modern sewage treatment, refuse collection and disposal, street cleaning, proper disposal of animal waste and similar environmental control processes as necessary.

Capital Improvement Plan

The village updates the Capital Improvement Plan during the One- and Six-Year Plan planning process for their streets as well during their Two- and Ten-Year Plan for water improvements. Currently, CIP projects include the village's replacement of the bearings in a water well and improvements to street drainage.

Ordinances and Regulations

While the village does have zoning regulations, there are no plans to update the zoning ordinance, floodplain ordinance, or subdivision regulations. The village's zoning ordinance does not limit development in the floodplain, wildland urban interface, or the ETJ.

Building Code (2018)

The building code sets standards for constructed buildings and structures. The village follows the 2018 International Building Code as adopted by the State of Nebraska.

Howard County Local Emergency Operations Plan

The village has an annex in the Howard 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.

Central Platte Community Wildfire Protection Plan

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

Other Plans

The Village of Elba has an evacuation plan, last updated in 2019, as well a drought management plan adopted in April 2002. The village's Emergency Response Plan defines drought locally and outlines the actions that will be taken in the event of a drought. Additionally, the village has a stormwater management plan and a wellhead protection plan, both completed in 2017.

Future Development Trends

In the past five years, the village paved five blocks of 13th street with sidewalks and storm sewers. Two new houses and a fire station have been built. Trotter Fertilizer built a new building. New businesses in the community are Circle C Ag, Wilson River Bottom Express, Jen's Place. Several improvements have been made to residences in the community and three houses and one garage have been demolished. Two residents have plans to build houses in the next five years. According to the census data, Elba's population is increasing, which the planning team attributes to a low cost of living, improving infrastructure, a good education system, fire department, and low crime rates.

Community Lifelines

Transportation

Elba's major transportation corridors include Highway 11, which runs north-south, on the western edge of Elba. N-11 accommodates on average 1,545 vehicles per day, 200 of which are heavy commercial vehicles. The Nebraska Central Railroad Company has a rail line that runs through the center of the city. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

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

ELB.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
TROTTER FERTILIZER INC	515 Market St	N
NEBRASKA CENTRAL TELEPHONE CO	614 Pearl St	N

Source: Nebraska Department of Environment and Energy⁵⁴

⁵⁴ Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

Critical Facilities

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

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

Table ELB.5: Elba Critical Facilities

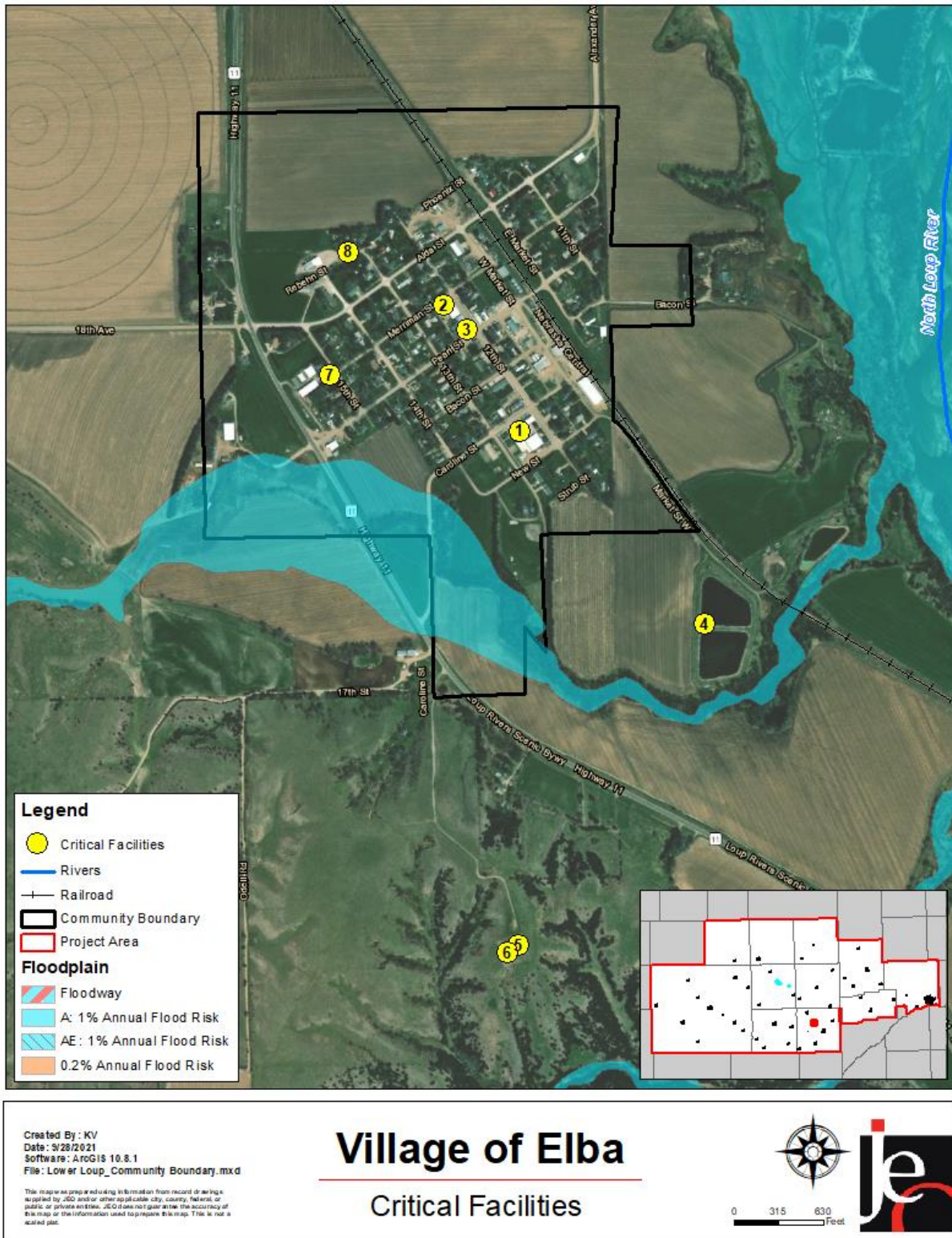
CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Public School	N	N	N
2	Safety and Security	Fire Department	N	N	N
3	Safety and Security	Village Hall	N	N	N
4	Energy	Wastewater Treatment	N	N	N
5	Food, Water, and Shelter	Water Tank	N	N	N
6	Food, Water, and Shelter	Water Well	N	N	N
7	Food, Water, and Shelter	Water Well	N	N	N
8	Food, Water, and Shelter	Water Well	N	N	N

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

Health and Medical Facilities

No medical and health facilities are located within the village.

Figure ELB.3: Elba Critical Facilities



Parcel Improvements and Valuation

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

Table ELB.7: Elba Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
189	153	7,075,474	5	196,195	3.27%

Source: County Assessor, GIS Workshop

Table ELB.8: Elba Flood Map Products

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
LOMA	20-07-0020A-310514	10/16/2019	Portion of property removed from SFHA
FLOOD INSURANCE STUDY	31093CV000B	7/7/2014	N/A

Source: FEMA Flood Map Service Center

Hazard Prioritization

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

Hazardous Materials (Transportation)

The transportation route of most concern is the railroad track that runs along the east side of town. Since the ethanol plant in Ord was built, the community has seen more rail traffic carrying ethanol. As there have been a number of ammonia tanks in Elba, a transportation accident or derailment has the potential to cause an ammonia leak. The school is located a block away from the railroad tracks, and the village office is three blocks away. Additionally, anhydrous ammonia tanks are stored one block from the school and a spill could threaten the public health and safety of residents. Howard County Emergency Management hosted an emergency exercise that focused on a chemical spill due to a train derailment. The village also maintains an emergency phone contact list for the village as well as residents in the village which is updated when possible. The village received an emergency response guidebook from the local emergency manager that can be used to educate and prepare the fire department and local residents. The village will use the guidebook to assess equipment needs and upgrade where necessary and also encourage resident to cooperate with local officials in the event of a spill.

Drought

The main concern regarding drought is the lack of water to meet community needs, especially in the event of a fire. In 2012, the village watched static water levels go down in their wells, and nitrate levels go up. Past nitrate concerns have led the village to explore an additional well and quarterly monitoring efforts. Well number seven in the village tested at one time for nitrate levels of 8 mg/L but is down to 4-5 mg/L now. The newer well number six tested lower at around 1.25 mg/L. Water supplies were sufficient in 2012 as many residents voluntarily stopped watering their lawns. Between August and November 2019, well number seven was out of service for repairs, but water resources were sufficient at the time through careful monitoring.

Elba has an Emergency Response Plan that assists them in the event of a drought. The Plan defines drought locally and establishes the actions the village will take in a drought event. The village board has the authority to order a reduction in the use of water or shut off the use of water for any good and sufficient cause. Presently, the village has ordinances in place to limit the usage of water in the event of a drought. Past dry conditions have caused water bills to go up for residents and force them to stop watering their lawns. Wells in the community are metered and recorded during the week and are checked for drawdowns on a regular basis. Residents also have monitored water meters and the village keeps a close eye on meters with unexplained high usage. Water operators within Howard County meet with the Howard County Emergency Manager to discuss concerns and management practices. The village plans to continue regular maintenance checks and restricting water supplies during future drought events.

Flooding

Elba participates in the NFIP, however, does not have any policies in-force. There are no repetitive flood loss properties in the Village of Elba. The local concern regarding flooding in Elba is that flooding would damage the east sewer lagoon and pollute the North Loup River. Localized flooding has also contributed to regular sewer backups.

During the major flooding in 2019, some flooding occurred in the village but had minimal impact on the community. Village facilities were high enough to avoid most flood waters and most of the water dissipated quickly. One resident with an older house had water in their basement due to a drainage ditch being filled in nearby. No evacuations were necessary, and no damages were reported. The village has worked to ensure drainage ditches are clear and plans to maintain them in the future.

Severe Thunderstorms (includes hail)

Elba experiences several thunderstorms every year. These storms sometimes lead to short-term power outages. The main concerns regarding power outages include pumping water and oxygen dependent residents. Howard Greeley Public Power District keeps power lines free of trees and will provide a small generator for oxygen dependent people in the event of a power outage.

According to NCEI data, the village has had 27 severe thunderstorm events between 1996 and 2018 that caused approximately \$277,000 in property damages. In 2005, a thunderstorm with 100 mph winds damaged and destroyed many trees within Elba. The streets were blocked with large branches and power lines were downed. There are a number of hazardous trees that need to be removed in town. Trees have been damaged by early freezing and the pine moth. Past thunderstorms have also damaged the warning system in town.

There is an off-site backup of municipal records every day. The village has an oral agreement in place to receive a generator at the west well in the event of a power outage. However, if a hazard event is widespread, that generator may not be available. The village is in need of a generator at the village hall for the control panel to operate wells. The fire department also needs a generator to be able to resume operations and provide services in an emergency. Power lines are buried at the community park and other various spots throughout the community. Approximately less than two percent of power lines are buried in the village. To mitigate against hail, the west wellhouse and concession stand at the park have metal roofs.

Severe Winter Storms

The main concern regarding severe winter storms is the potential for an extended power outage and blocked roads for residents and emergency responders. In a past snowstorm, a resident in need of a heart transplant had to be transported by the Elba Fire Department. On New Year's Eve 2006, an ice storm covered Elba with a ½ inch of ice. The storm caused a power outage that lasted three days. As many homes are heated with electricity, many residents left town after turning their water on, so that pipes wouldn't freeze. This led to low water levels. The gas station could not pump fuel due to the power outage.

Most people commute to other communities for work, so clearing the roads after a winter storm is important. The community has designated snow routes. Board members are in charge of snow removal and operate the maintainer, tractor, grader, and loader. Equipment is also available locally for hire. Private residents also assist in clearing sidewalks with skid-loaders. Typically snow removal resources are sufficient for local needs.

Tornadoes and High Winds

The main concerns with this hazard are downed trees and power lines which can lead to power outages. High winds may also damage buildings and blow debris into the streets. When residents sign up for water/sewer services they are informed that the United Methodist Church is always open and can be used as shelter in the event of a tornado. The Catholic Church, Community Center, and Fire Hall may also be used in the event of a storm; however, they may be locked. Elba has a warning siren that is activated by Region 26 or the Howard County Sheriff's Office. Howard County Emergency Management offers text alerts to warn residents of an impending storm. Educational outreach activities are done through the school and fire department.

The village has lost a lot of pine trees that are being removed by property owners. Howard Greeley Rural Public Power District removes trees and branches that impact power lines and the village has an ordinance in place that includes dead trees as a nuisance to address safety concerns.

Public Health Epidemic

Public Health Epidemic was identified as a new hazard of top concern, primarily spurred by the emergence of COVID-19 across the State of Nebraska. The Village of Elba has not experience significant human disease outbreaks. The village's exposure to severe disease outbreaks has been mostly limited to bars and family-related groups. However as the community is very tightknit there is an increased vulnerability of transmission.

Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	CITY DISASTER/EMERGENCY RESPONSE PLAN
DESCRIPTION	<ol style="list-style-type: none"> 1. Develop a Comprehensive Village Disaster and Emergency Response Plan 2. Update Comprehensive Village Disaster and Emergency Response Plan
HAZARD(S) ADDRESSED	All Hazards
STATUS	The village's Emergency Response Plan is updated annually and includes relevant information as needed.

OBJECTIVE	STORM SHELTER IDENTIFICATION
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify any existing private or public storm Shelters
HAZARD(S) ADDRESSED	Severe Thunderstorms, High Winds, Tornadoes
STATUS	The Elba United Methodist Church basement has been identified as an existing storm shelter.

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	<ol style="list-style-type: none"> 10. Identify and evaluate current backup and emergency generators 11. Obtain additional generators based on identification and evaluation 12. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$20,000 to \$75,000+ per generator
POTENTIAL FUNDING	Village General Fund
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project is in the works. The village plans to use a tractor and PTO to pump water in the case of emergency, however, they are considering purchasing a used generator.

SECTION SEVEN: VILLAGE OF ELBA COMMUNITY PROFILE

OBJECTIVE	COMMUNITY EDUCATION AND AWARENESS
DESCRIPTION	<ol style="list-style-type: none"> 1. Establish a community education program to increase awareness related to household level mitigation actions 2. Utilize outreach projects and the distribution of maps 3. Purchasing equipment such as projectors and laptops to facilitate presentation of information
HAZARD(S) ADDRESSED	Chemical Spills – Transportation
ESTIMATED COST	\$3,000+
POTENTIAL FUNDING	Village General Fund
TIMELINE	1 Year
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	This project is not yet started.

OBJECTIVE	HAZARDOUS SPILL EMERGENCY EXERCISE
DESCRIPTION	<ol style="list-style-type: none"> 1. Utilize exercise to prepare for potential explosions or hazardous spills 2. Ensure that nearby business and residents have appropriate plans in place
HAZARD(S) ADDRESSED	Chemical Spills – Transportation
ESTIMATED COST	\$5,000+
POTENTIAL FUNDING	Village General Fund
TIMELINE	1 Year
PRIORITY	High
LEAD AGENCY	Howard County Emergency Manager
STATUS	This project is in the works. The village and fire department agreed to share resources and that the fire department will be the lead agency.

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate current warning systems 2. Improve warning systems/develop new warning system 3. Obtain/Upgrade warning system equipment and methods 4. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 5. Identify location of weather warning radios 6. Improve weather radio system 7. Obtain/Upgrade weather radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$15,000+
POTENTIAL FUNDING	Village General Fund
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Village Board, Howard County Emergency Manager
STATUS	This project is in the works.

OBJECTIVE	PUBLIC SAFE ROOMS & POST-DISASTER STORM SHELTERS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate existing safe rooms and/or storm shelters 2. Improve and/or construct safe rooms and/or storm shelters 3. Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
HAZARD(S) ADDRESSED	\$150/sf for retrofit; \$300/sf for new construction
ESTIMATED COST	HMGP, Village General Fund
POTENTIAL FUNDING	\$150/sf for retrofit; \$300/sf for new construction
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Village Office, Howard County Emergency Manager
STATUS	This project is in the works. The Elba United Methodist Church basement has been identified and used as a shelter.

OBJECTIVE	SURGE PROTECTORS
DESCRIPTION	<ol style="list-style-type: none"> 1. Purchase and install surge protectors on sensitive equipment in critical facilities
HAZARD(S) ADDRESSED	Severe Thunderstorms
ESTIMATED COST	\$25 per unit
POTENTIAL FUNDING	Village General Fund
TIMELINE	1 Year
PRIORITY	High
LEAD AGENCY	Village Board, Village Clerk
STATUS	This project is in the works. The Village has surge protectors installed, but the Elba Fire Hall does not yet have them.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. The Village Board Chairperson, Clerk-Treasurer, Fire Chief, and Utilities Superintendent will annually review the village's profile. They will notify and involve the public of the review in notices for public hearings, at Board meetings, and in the Board minutes.

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COMMUNITY PROFILE

VILLAGE OF FARWELL

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

Local Planning Team

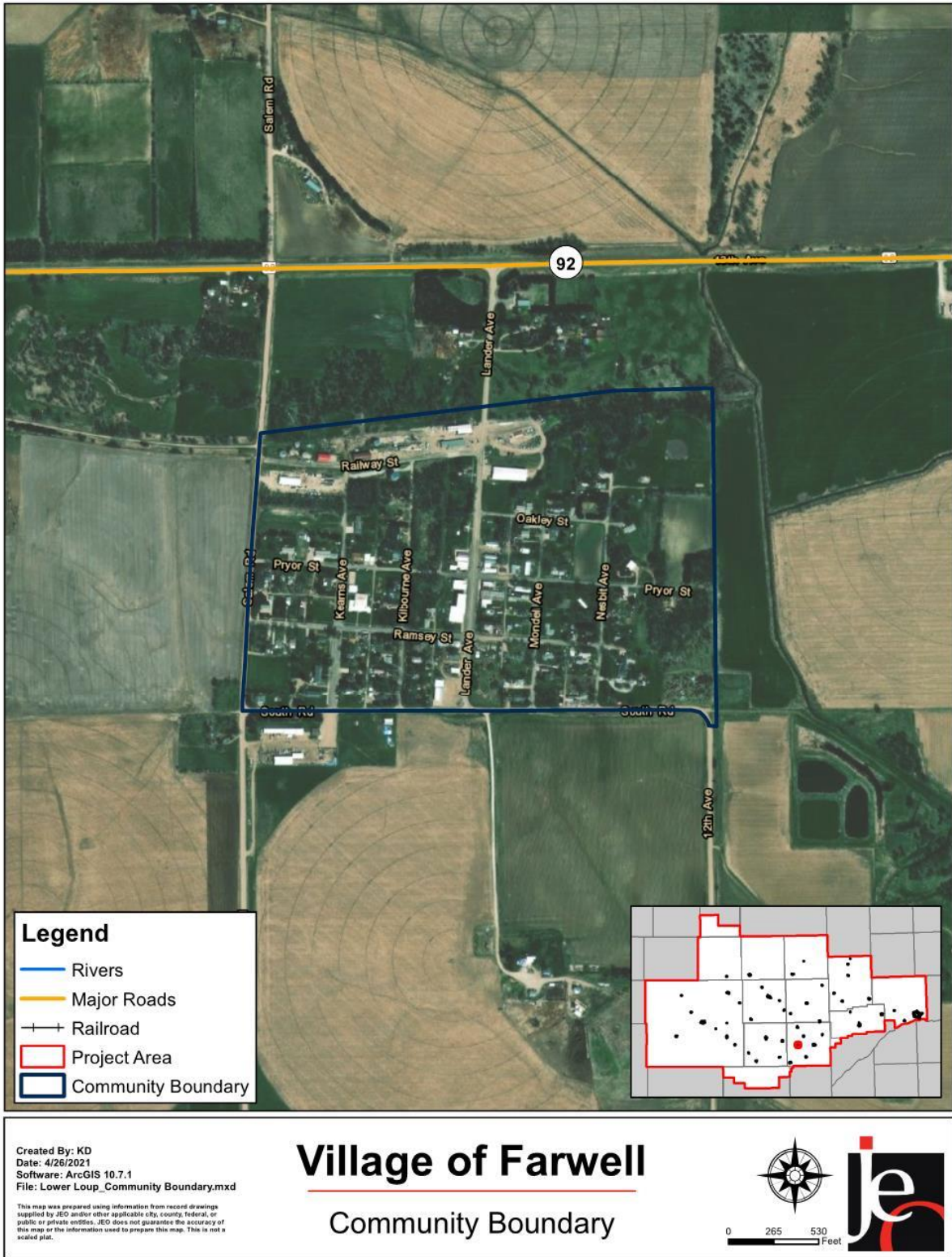
Table FAR.1: Village of Farwell Local Planning Team

NAME	TITLE	JURISDICTION
TIMEREE ANDREASEN	Board Chairwoman	Village of Farwell
TRACEY LUKASIEWICZ	Clerk/Treasurer	Village of Farwell

Location and Geography

The Village of Farwell is located in the western portion of Howard County. The Village of Farwell covers an area of 0.17 square miles. There are no major water ways near Farwell. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Most of Farwell lies in the dissected plains topographic region, and is surrounded by agricultural fields.

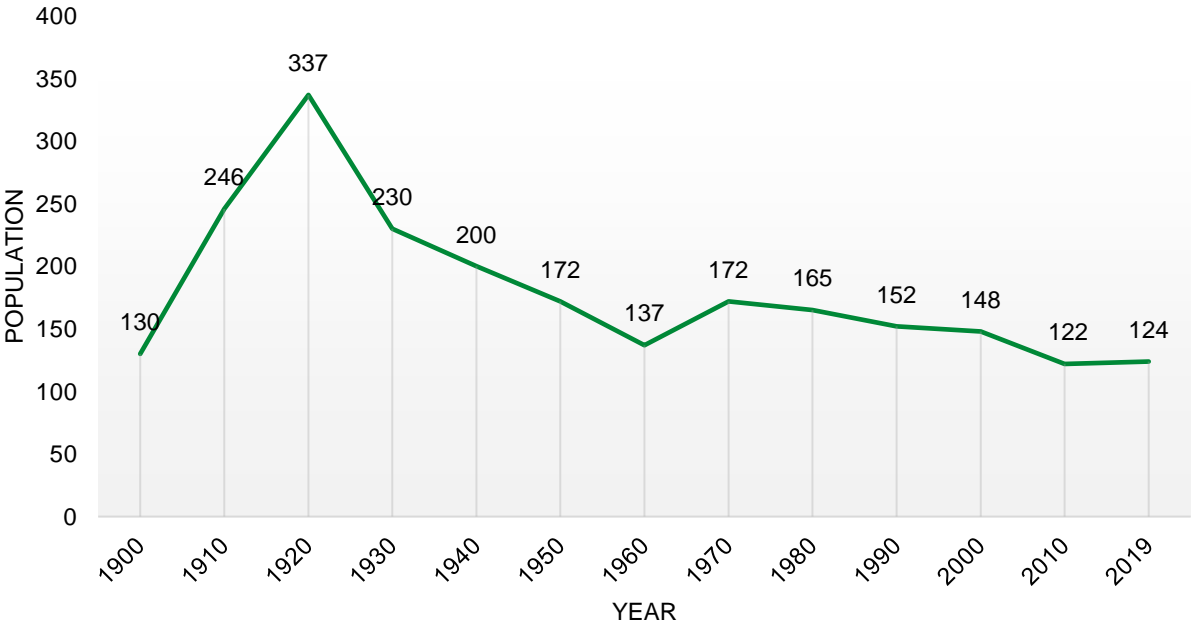
Figure FAR.1: Village of Farwell Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1900 to 2019 (estimated). This figure indicates that the population of Farwell experienced a decline from 1970 through 2010. Since 2010, the population has been increasing. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Increasing populations can also contribute to increasing tax revenues, allowing communities to pursue additional mitigation projects. The Village’s population accounted for 2% of Howard County’s Population in 2019.

Figure FAR.2: Farwell Population 1900-2019



Source: U.S. Census Bureau⁵⁵

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

- **Older.** The median age of Farwell was 49.5 years old in 2019, compared with the County average of 43.1 years. Farwell’s population has grown older since 2010, when the median age was 37.1years old. Farwell had a smaller proportion of people under 20 years old (19.4%) than the County (26.3%).⁵⁶
- **Less ethnically diverse.** In 2010, 0% of Farwell’s population was Black or African American, 0% was other races, and 0% were two or more races. By 2019, 0% of Farwell’s population was two or more races. During that time, Howard County went from 0.2% to 0% American Indian, 0% to 1.4% other races and 0.5% to 1.6% two or more races from 2010 to 2019 respectively.⁵⁷

⁵⁵ United States Census Bureau. “2019 American Fact Finder: S0101: Age and Sex.” [database file]
⁵⁶ United States Census Bureau. “2019 American Fact Finder: S0101: Age and Sex.” [database file]
⁵⁷ United States Census Bureau. “2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates.” [database file]

- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Farwell (0%) was lower than the County (5.9%) in 2019.⁵⁸

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Farwell included Manufacturing, Retail, and Education. In comparison Howard County's included Agriculture, Manufacturing, Retail, and Education.⁵⁹
- **Higher household income.** Farwell's median household income in 2019 (\$61,250) was about \$2,000 higher than the County (\$59,348).⁶⁰
- **Fewer long-distance commuters.** About 23.5% percent of workers in Farwell commuted for fewer than 15 minutes, compared with about 36.3% of workers in Howard County. About 51.5% of workers in Farwell commute 30 minutes or more to work, compared to about 38.0% of the County workers.⁶¹

Major Employers

Major employers in the Village of Farwell include: Farwell Irrigation District and Trotter Fertilizer. The local planning team noted approximately 75 percent of residents commute to the surrounding communities of Grand Island, St. Paul, and Ord.

Housing

In comparison to the Howard County, Farwell's housing stock was:⁶²

- **More owner occupied.** About 92.3% of occupied housing units in Farwell are owner occupied compared with 76.5% of occupied housing in Howard County in 2019.
- **Larger share of aged housing stock.** Farwell has more houses built prior to 1970 than the county (96.9% compared to 51.7%).
- **Fewer multi-family homes.** The predominant housing type in the Village is single family detached and Farwell contains less multifamily housing with five or more units per structure than the County (0.0% compared to 1.5%). About 96.9% of housing in Farwell was single-family detached, compared with 84.6% of the County's housing. Farwell has a smaller share of mobile and manufactured housing (3.1%) compared to the County (6.2%)

The local planning team noted that there are two mobile homes located in the community and over 75 percent of housing was built before 1940. Blighted properties are also an issue throughout the community. This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

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

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

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

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

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

Governance

A community’s governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Farwell has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The village has a five member village board and the following offices: clerk/treasurer, engineer, sewer/water/street commissioner, and volunteer fire department. Additional departments who could assist with hazard mitigation related activities include: Twin Loup Mutual Aid, Howard County Roads, and the State Department of Roads.

Capabilities

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

Table FAR.2: Capability Assessment

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

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

Table FAR.3: Overall Capability

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

Plan Integration

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

Grants and Funding

The Village of Farwell's funds are limited to maintaining current facilities and systems. There are no major projects planned for the next five years. Funds for the village have remained relatively stable over recent years.

Comprehensive Plan

Farwell is included in the Howard County and Communities Comprehensive Plan which was last updated in 2015. The plan outlines future growth and development goals throughout the county for the communities of Boelus, Cotesfield, Cushing, Dannebrog, Elba, Farwell, and rural Howard County. The plan outlines the following goals which relate to hazard mitigation:

- **Land Use: Goal 1** Provide opportunities for development in an orderly, efficient and environmentally sound manner.
 - Limit future non-agricultural developments to locations which are relatively free of environmental constraints relating to soils, slope, flood plain, drainage, ground water endangered species or other natural resources.
- **Land Use: Goal 4** Work cooperatively with Federal, State, and adjoining County governments to develop compatible flood control measures.
- **Housing: Goal 3** Encourage future residential developments compatible with and complementary to existing residential areas.
 - Prohibit residential development in environmentally sensitive areas.
- **Public Infrastructure, Facilities, & Transportation: Goal 3** Provide adequate, efficient, and appropriate public utilities and services to both new and existing agricultural and residential developments.
 - Provide facilities and services in Rural Howard County and to each Village necessary to prevent degradation of the environment, including modern sewage treatment, refuse collection and disposal, street cleaning, proper disposal of animal waste and similar environmental control processes as necessary.

Building Codes (2018)

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

Howard County Local Emergency Operations Plan

The village has an annex in the Howard 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.

Central Platte Community Wildfire Protection Plan

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

Future Development Trends

In the past five years, the Lukasewicz Furniture Store closed. The store owned eight buildings and has sold all of them. Three new businesses have opened, including the local bar which opened in December 2018. The community no longer has a bank, and the local post office has reduced hours. Many homes and buildings are deteriorating and in need of repair. The local planning team indicated that the census estimates are accurate, and that Farwell's population is increasing due to people moving to smaller towns that are more affordable. Farwell has limited housing stock available for new residents, however.

Community Lifelines

Transportation

Farwell's major transportation corridors include Highway 92, which runs east-west, along the north side of Farwell. N-92 accommodates on average 1,165 vehicles per day, 115 of which are heavy commercial vehicles. Farwell does not have rail lines. The local planning team noted that Highway 92 is in need of repair due to asphalt breakdown and cracks in the road. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one chemical storage site throughout Farwell which houses hazardous materials. In the event of a chemical spill, the local fire department would be the first to respond to the incident. The local planning team also identified the Farwell Irrigation District as a potential chemical storage facility of concern as they use chemicals to treat irrigation canals to control weeds. Additional response resources include Twin Loups Mutual Aid and Grand Island Hazmat.

Table FAR.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
TROTTER FERTILIZER INC.	501 Lander Ave	

Source: Nebraska Department of Environment and Energy⁶³

Critical Facilities

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

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

⁶³ Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

Table FAR.5: Farwell Critical Facilities

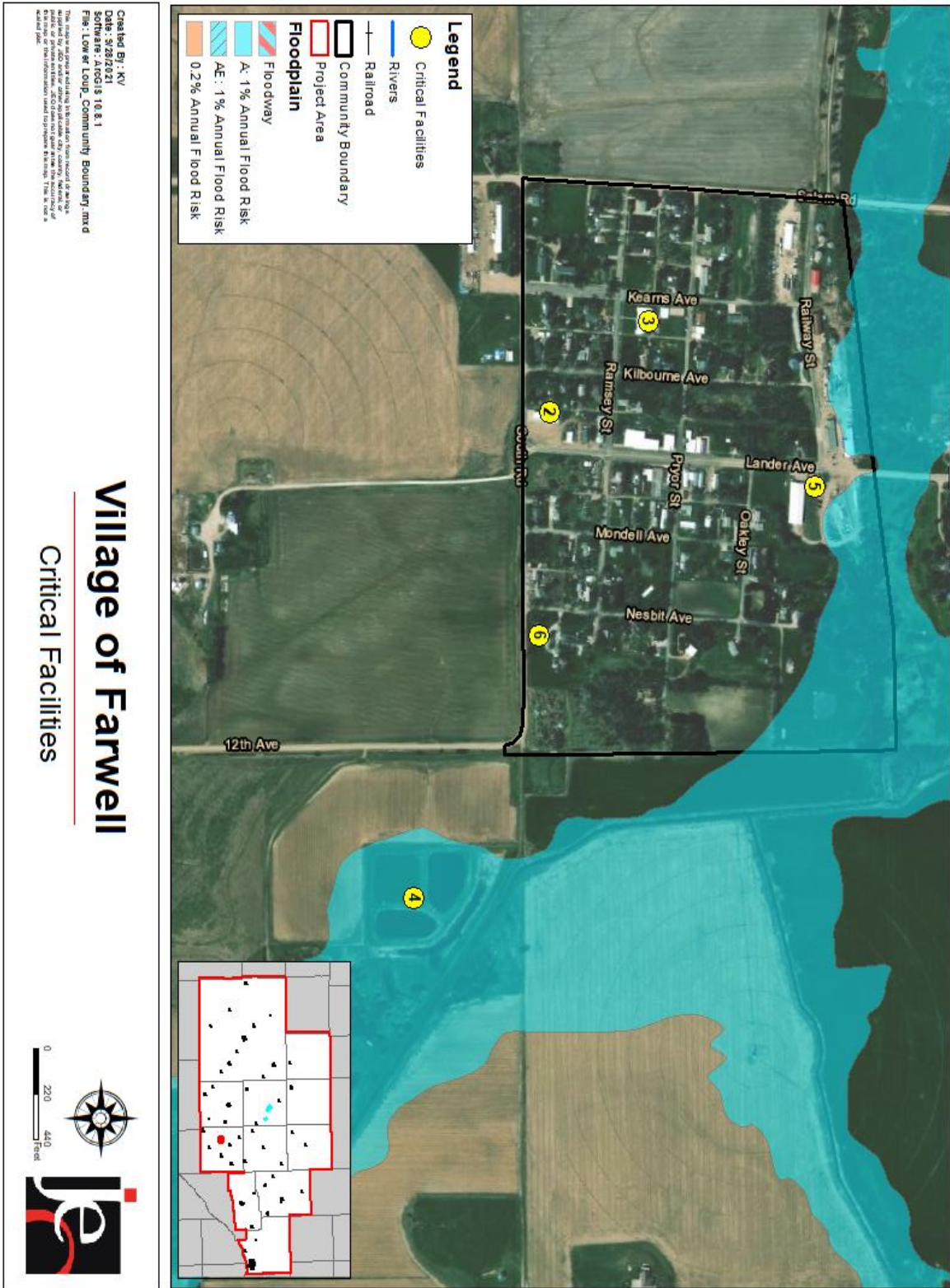
CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Safety and Security	Community Hall	Y	Y	N
2	Safety and Security	Farwell Fire Department	N	N	N
3	Food, Water, and Shelter	Ramsey School	N	N	N
4	Food, Water, and Shelter	Sewage Lagoon	N	N	Y
5	Hazardous Materials	Trotter Fertilizer	N	N	N
6	Food, Water, and Shelter	Water Tower	N	N	N

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

Health and Medical Facilities

No medical and health facilities are located within the village.

Figure FAR.3: Farwell Critical Facilities



Parcel Improvements and Valuation

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

Table FAR.7: Farwell Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
134	110	4,166,799	5	681,466	4.55%

Source: County Assessor, GIS Workshop

Table FAR.8: Farwell Flood Map Products

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
FIS	31093CV000B	7/4/2014	N/A

Source: FEMA Flood Map Service Center

Hazard Prioritization

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

Hazardous Materials (Fixed Site)

Due to the proximity of the chemical fixed sites to the rest of the community, local concerns focus on the ability to move residents in the event an evacuation is necessary. There are elderly individuals that reside in the community and would have a difficult time evacuating. Although no spills or leaks have occurred in the past, the hazard remains a concern for the community. A chemical spill may also affect the local economy as Trotter Fertilizer is a major employer within the Village.

Severe Winter Storms

The local concern regarding this hazard focuses on the potential for power outages. Past ice storms have knocked down power lines, causing Farwell to be without power for approximately 12 hours. Nearly all power lines within the community are above ground, and thus more vulnerable to winter storms. The Farwell Irrigation District and local farmers remove snow for the community. If Farwell Irrigation District no longer operated, the village would be left without snow removal services. There are no designated snow routes in the village.

Tornadoes and High Winds

Farwell has warning sirens that are activated by the Howard County dispatch. The community does not have any safe rooms available for community members seeking shelter during a tornadic event. The county offers the Code Red warning system. Local educational outreach efforts include

Storm Awareness Week. In the event of a disaster, the village has mutual aid agreements with neighboring communities.

Local concerns regarding high winds include potential damage to power lines and the cleanup and disposal of tree damage. Recent significant events in May 2014 and September 2015 caused damages across the community.

Flooding

Flooding was not identified as a hazard of top concern but there are floodplain areas to the north and east of the village. Farwell does not participate in the NFIP and has no repetitive flood loss properties located in the community.

Mitigation Strategy

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	13. Identify and evaluate current backup and emergency generators 14. Obtain additional generators based on identification and evaluation 15. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$20,000 to \$75,000+ per generator
POTENTIAL FUNDING	Village General Funds, HMGP
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	Village Board, Fire Department
STATUS	This project has not yet been started.

OBJECTIVE	PUBLIC SAFE ROOMS & POST-DISASTER STORM SHELTERS
DESCRIPTION	1. Identify and evaluate existing safe rooms and/or storm shelters 2. Improve and/or construct safe rooms and/or storm shelters 3. Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Thunderstorms
ESTIMATED COST	\$150/sf for retrofit; \$300/sf for new construction
POTENTIAL FUNDING	Village General Funds, HMGP
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	Village Board, Fire Department
STATUS	This project has not yet been started.

OBJECTIVE	REDUCE WATER DEMAND/IMPROVE DROUGHT EDUCATION
DESCRIPTION	<ol style="list-style-type: none"> 1. Conduct water use study to evaluate/implement methods to conserve water/reduce consumption 2. Evaluate/implement water use restriction ordinance 3. Identify/evaluate current/additional potable water sources 4. Develop or obtain drought education materials to conduct multi-faceted public education and awareness program
HAZARD(S) ADDRESSED	Drought
ESTIMATED COST	\$5,000+; Education \$1,000+
POTENTIAL FUNDING	Village General Funds, HMGP
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	Village Utilities
STATUS	This project has not yet been 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 (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. The Village Clerk, Village Board, and County Emergency Manager will annually review the community's profile and notify and involve the public via at local board meetings.

COMMUNITY PROFILE

CITY OF ST. PAUL

Lower Loup Natural Resources District Hazard Mitigation Plan 2022

Local Planning Team

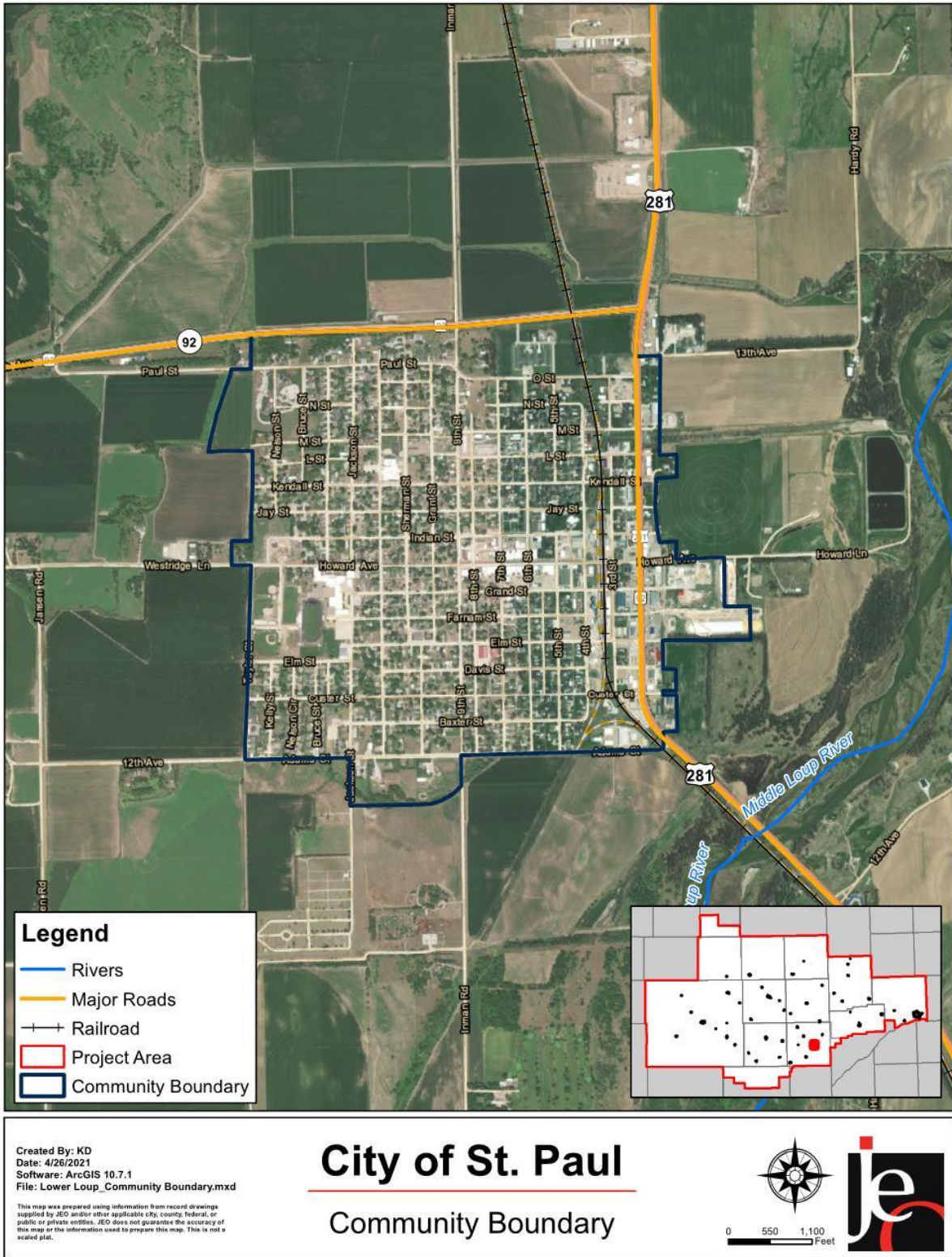
Table STP.1: City of St. Paul Local Planning Team

NAME	TITLE	JURISDICTION
CHUCK SCHMID	Council Member	City of St. Paul
JOEL BERGMAN	Mayor	City of St. Paul
MATT HELZER	Utilities Superintendent	City of St. Paul
RON TUBBS	Emergency Manager	Howard County

Location and Geography

The City of St. Paul is located in central Howard County. The City of St. Paul covers an area of 1.11 square miles. The Middle Loup River flows east of the city limits. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Most of St. Paul lies in the sandhills and valleys topographic regions and is surrounded by agricultural fields.

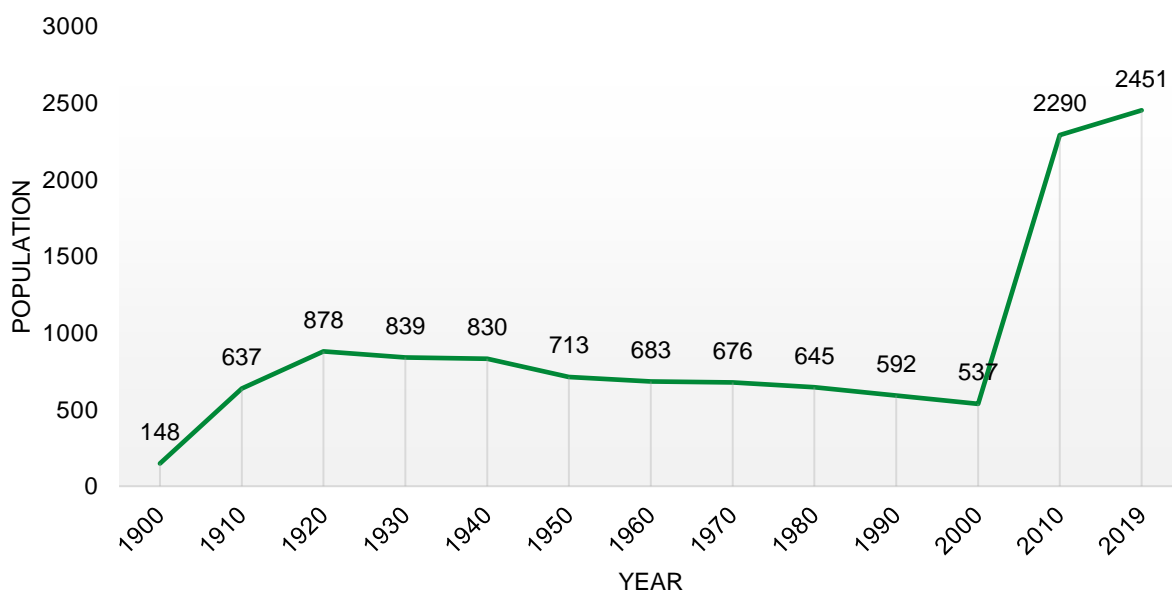
Figure STP.1: City of St. Paul Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1900 to 2019 (estimated). This figure indicates that the population of St. Paul experienced a decline from 1920 through 1960. Since 2000, however, the population has had a dramatic increase. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Increasing populations can also contribute to increasing tax revenues, allowing communities to pursue additional mitigation projects. The City's population accounted for 38% of Howard County's Population in 2019.

Figure STP.2: St. Paul Population 1900-2019



Source: U.S. Census Bureau⁶⁴

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

- **Older.** The median age of St. Paul was 39.9 years old in 2019, compared with the County average of 43.1 years. St. Paul's population has grown older since 2010, when the median age was 42.7 years old. St. Paul had a larger proportion of people under 20 years old (28.4%) than the County (26.3%).⁶⁵
- **Less ethnically diverse.** In 2010, 1.3% of St. Paul's population was Black or African American, 0% was other races, and 0.2% were two or more races. By 2019, only 0% of St. Paul's population was two or more races. During that time, Howard County went from 0.2% to 0% American Indian, 0.0% to 1.4% other races and 0.5% to 1.6% two or more races from 2010 to 2019 respectively.⁶⁶
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in St. Paul (4.9%) was lower than the County (5.9%) in 2019.⁶⁷

⁶⁴ United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]

⁶⁵ United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]

⁶⁶ United States Census Bureau. "2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

⁶⁷ United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in St. Paul included Manufacturing, Retail, and Education. In comparison Howard County's included Agriculture, Manufacturing, Retail, and Education.⁶⁸
- **Higher household income.** St. Paul's median household income in 2019 (\$60,250) was about \$900 higher than the County (\$59,348).⁶⁹
- **Fewer long-distance commuters.** About 40.5% percent of workers in St. Paul commuted for fewer than 15 minutes, compared with about 36.3% of workers in Howard County. About 37.9% of workers in St. Paul commute 30 minutes or more to work, compared to about 38.0% of the County workers.⁷⁰

Major Employers

Major employers in the City of St. Paul include: Howard County Community Hospital, St. Paul Public Schools, Howard County, Brookefield Park Nursing Facility, City of St. Paul, Matelyn Retirement Community, and Howard-Greeley Rural Public Power District. The planning team noted that 75% of residents commute to Grand Island.

Housing

In comparison to the Howard County, St. Paul's housing stock was:⁷¹

- **Less owner occupied.** About 68.8% of occupied housing units in St. Paul are owner occupied compared with 76.5% of occupied housing in Howard County in 2019.
- **Smaller share of aged housing stock.** St. Paul has fewer houses built prior to 1970 than the county (30.8% compared to 51.7%).
- **More multi-family homes.** The predominant housing type in the City is single family detached and St. Paul contains more multifamily housing with five or more units per structure than the County (2.9% compared to 1.5%). About 79.7% of housing in St. Paul was single-family detached, compared with 84.6% of the County's housing. St. Paul has a smaller share of mobile and manufactured housing (1.1%) compared to the County (6.2%)

The planning team noted that there are 11 mobile homes in the community. This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

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

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

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

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

Governance

A community’s governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. St. Paul has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The city has a four-member city council, mayor, and the following offices: clerk/treasurer, utility superintendent, sewage plant operator, street commissioner, zoning administrator, economic development director, volunteer fire department, and police department. Additional departments who can help with implementing hazard mitigation activities include: Howard County Emergency Management, Howard County Sheriff’s Office, Howard County Department of Roads, Howard Greeley Rural Public Power District, Nebraska Department of Transportation, and Nebraska State Patrol.

Capabilities

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

Table STP.2: Capability Assessment

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

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

Table STP.3: Overall Capability

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

Plan Integration

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

Grants and Funding

The City of St. Paul's funds are able to maintain current facilities and systems with some leeway for additional projects. The city receives additional income from sales tax, KENO, and utility fees. The city does have one bond in place that is currently being paid off which provided improvements

to Howard Avenue. The city has received grants in the past to assist with project implementation including a Downtown Revitalization grant through CDBG. In the coming years the city has identified in the budget funds to renovate the council chambers and purchase a new ambulance.

Comprehensive Plan

St. Paul's Comprehensive Plan was last updated in 2015 and integrates hazard mitigation in the following ways: notes the location of floodplain areas surrounding the city which inhibit future development; encourage preservation of open space or parks in hazard-prone areas; encourages infill development; and to reduce energy use per capita.

Ordinances and Regulations

The City of St. Paul's Municipal Code is updated on an as needed basis and available to the public online. The code does not address natural hazards such as flooding or wildfire but does identify a Wellhead Protection Area for public water supply system protection. The city's Zoning Ordinance does include some development within the 100-year floodplain; however, additional building requirements are in place for these areas. The ordinance includes floodplain overlay districts, prohibits development in the floodplain unless granted a special permit, and requires a base flood elevation of at least one foot for all structures in the floodplain.

The Zoning Ordinance does identify "a community building shall be provided which shall include at a minimum a storm shelter for park residents." This facility shall be designated as a storm shelter by FEMA.

Howard County Local Emergency Operations Plan

The City of St. Paul has an annex in the Howard 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.

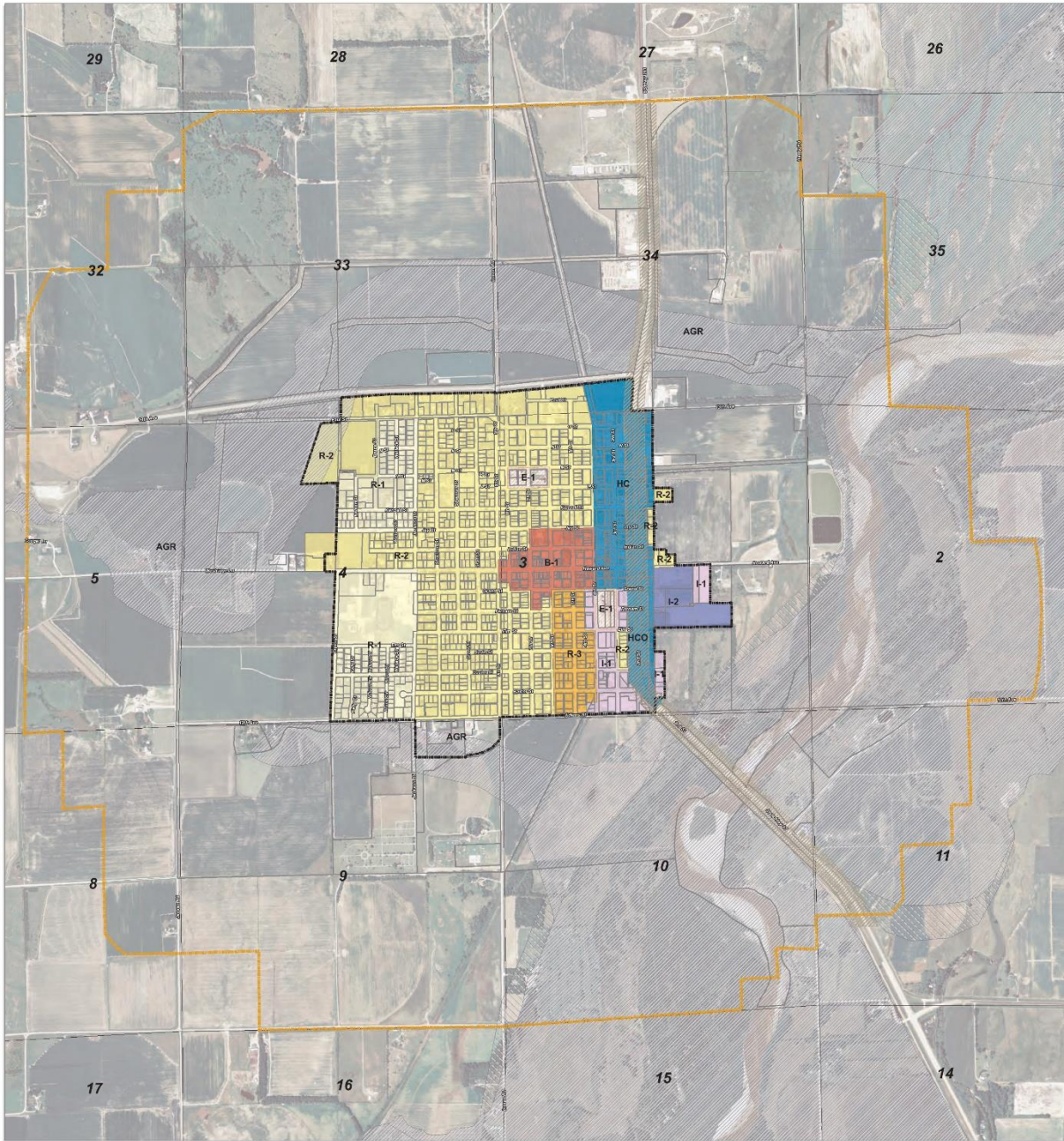
Central Platte Community Wildfire Protection Plan

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

Other Plans

St. Paul has a drought response plan that provides the city council with the authority to enact water restrictions to conserve public water supply.

Figure STP.3: St. Paul Zoning Map



Legend

Zoning Districts

- AGR Agricultural Residential
- B-1 Low Density Residential
- R-2 Medium Density Residential
- R-3 High Density Residential
- R-1 Medium Density Residential
- R-1 Single-Family Residential
- HC Highway Commercial
- I-1 Light Industrial
- I-2 Heavy Industrial
- HCO Highway Corridor Overlay
- PSD Planned Development

Jurisdictional Boundaries

- ETJ Boundary
- Corporate Limits
- Parishes from Howard County
- Section Lines

Other

- FP Flood Plain Overlay
- 100-year Floodplain
- 500-year Floodplain

THIS IS TO CERTIFY THAT THIS IS THE OFFICIAL ZONING MAP REFERRED TO IN ARTICLE 4, SECTION 4.3 OF THE CITY OF ST. PAUL ZONING ORDINANCE NO. 952. THIS OFFICIAL ZONING MAP SUPERSEDES AND REPLACES ANY OR ALL OTHER OFFICIAL ZONING MAPS ADOPTED PRIOR TO THIS DATE ADOPTED ON THIS 18TH DAY OF MAY, 2015.

MAYOR			CITY CLERK		
REVISION DATE	ORD. NO.	SIGNATURE	REVISION DATE	ORD. NO.	SIGNATURE

City of St. Paul
Howard County, Nebraska
Official Zoning Map

0 0.25 0.5
Miles

Hosted by: C. Smith
 Date: January 2015
 Version: June 2015
 Reference: ANCSA Title
 File: 10046800

Data should be used for general planning purposes and regulatory measures.
 This map was prepared using information from sources provided to JEO and is not intended to be used for legal, survey, or other purposes.
 JEO does not guarantee the accuracy of the map or the information used to prepare this map. This is not a warranty.

Howard County was created from Howard County on 10/20/2014 for purposes of this map. The area may change periodically due to subdivision of land and change of ownership.

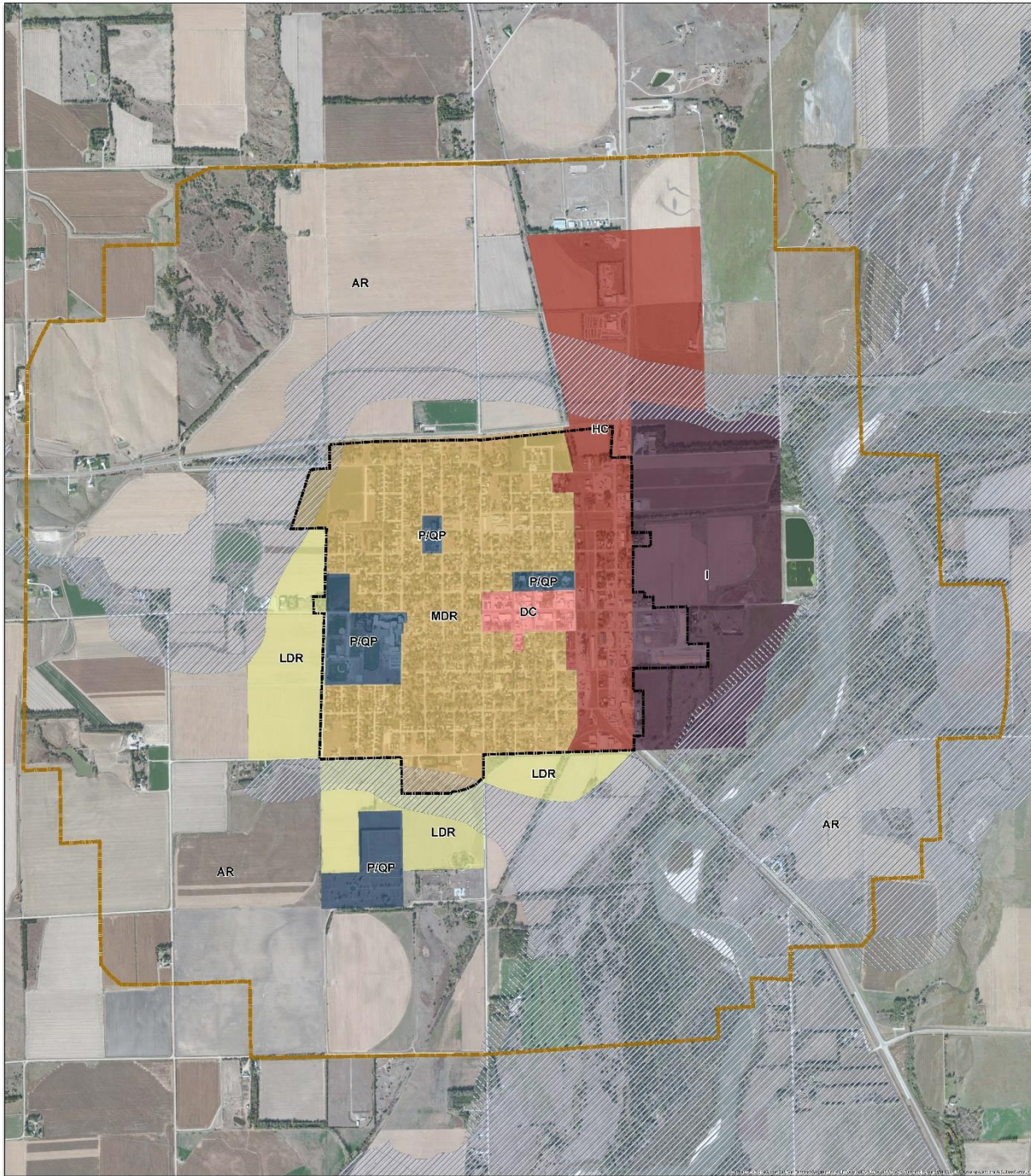
The Road Hazard Overlay Districts shown on this map are a generalized representation of the 100-year and 500-year floodplain boundaries shown on the following FEMA maps: 1505010001 and 1505010002.
 Howard County File #: 1505010001, 1505010002



JEO CONSULTING GROUP INC.

Future Development Trends

St. Paul has experienced a trend of steady growth over the years. This trend will likely continue as St. Paul has residential and commercial developments planned in the near future. In the past five years, the community has added the Middle Loup Subdivision for light industrial use, MAD Development and Prairie Hills Subdivision for single family housing, demolished mobile homes and single-family houses to develop duplexes, demolished houses for commercial use, and installed several new blocks of street paving. The local planning team indicated that the census estimates are accurate, and that Dannebrog's population is increasing due to a clean community, good educational and medical facilities, and proximity to Grand Island. In the next five years, the community plans to expand pre-school options and build a new grocery store.

Figure STP.3: St. Paul Future Land Use Map



Legend		City of St. Paul, Nebraska	
Future Land Use		General Future Land Use	
AR Agricultural Residential	Corporate Limits	<p>Created By: TRC Date: April 2013 2013-04-23 File: 10046830</p> <p>This map was created using data collected by AEG surveying crews equipped with Trimble 560 GNSS surveying system. There is no charge a lot owner information provided by City officials. The copyright of this drawing is owned by TRC. All other information, shown in the drawing is the property of the City of St. Paul.</p> <p>Horizontal Datum: NAD 83 Vertical Datum: NAVD 83</p>	
LDR Low Density Residential	Extraterritorial Jurisdiction		
MDR Medium Density Residential	100-Year Floodplain		
DC Downtown Commercial	500-Year Floodplain		
HC Highway Commercial			
I Industrial			
P/QP Public/Quasi-Public			
 1:7,500 0 750 1,500 2,250 3,000 Feet			

Community Lifelines

Transportation

St. Paul's major transportation corridors include Highway 92, which runs east-west on the north edge of the city, and US Highway 281, which runs north-south on the east side of St. Paul. Highway 92 accommodates 2,890 vehicles per day, 280 of which are heavy commercial vehicles, and Highway 281 accommodates 6,130 vehicles per day, 610 of which are heavy commercial vehicles. The Nebraska Central Railroad Company has a rail line along the eastern side of the city. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are seven chemical storage sites throughout St. Paul which house hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. Additional response resources include the Twin Loup mutual aid and the regional hazmat team in Grand Island. The local planning team noted that response resources are insufficient and that additional training is necessary to appropriately respond to a spill event.

Table STP.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
AURORA CO-OP ELEVATOR COMPANY	614 2nd St	No
JIM'S TRUCK STOP INC	1417 2nd St	No
LOUP VALLEY SUPPLY INC	302 Howard Ave	No
NDOT ST PAUL YARD	1355 Highway 281	No
AURORA CO-OP ELEVATOR COMPANY	1009 Twin Forks Ln	No
ST PAUL READY MIX PLANT	406 4th St	No
VERIZON WIRELESS ST PAUL DT	954 13th Ave	Yes

Source: Nebraska Department of Environment and Energy⁷²

Critical Facilities

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

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

Table STP.5: St. Paul Critical Facilities

CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Health and Medical	Hospital	N	Y	N

⁷² Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
2	Food, Water, and Shelter	St. Paul Public School	Y	N	N
3	Food, Water, and Shelter	St. Paul Water Plant	N	Y	N
4	Safety and Security	St. Paul Fire Department	N	N	N
5	Communications	Cell Tower	N	N	N
6	Communications	Cell Tower	N	N	Y
7	Food, Water, and Shelter	Wastewater Treatment	N	Y	N
8	Food, Water, and Shelter	Well	N	N	N
9	Food, Water, and Shelter	Water Tower	N	N	N
10	Food, Water, and Shelter	St. Paul Catholic Life Center	Y	N	N
11	Communications	911 Center	Y	Y	N
12	Food, Water, and Shelter	Housing Authority	N	N	N
13	Food, Water, and Shelter	Civic Center	Y	N	N
14	Food, Water, and Shelter	Christ Lutheran Church	Y	N	N

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

Health and Medical Facilities

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

Table STP.6: St. Paul Critical Facilities

NAME OF FACILITY	TYPE OF FACILITY	NUMBER OF LICENSED BEDS
HOWARD COUNTY MEDICAL CENTER	Rural Health Clinic	10
MATELYN RETIREMENT COMMUNITY	Assisted Living Facility	66
BROOKFIELD PARK	Long Term Care Facility	70

Source: Nebraska Department of Health and Human Services^{73,74,75,76}

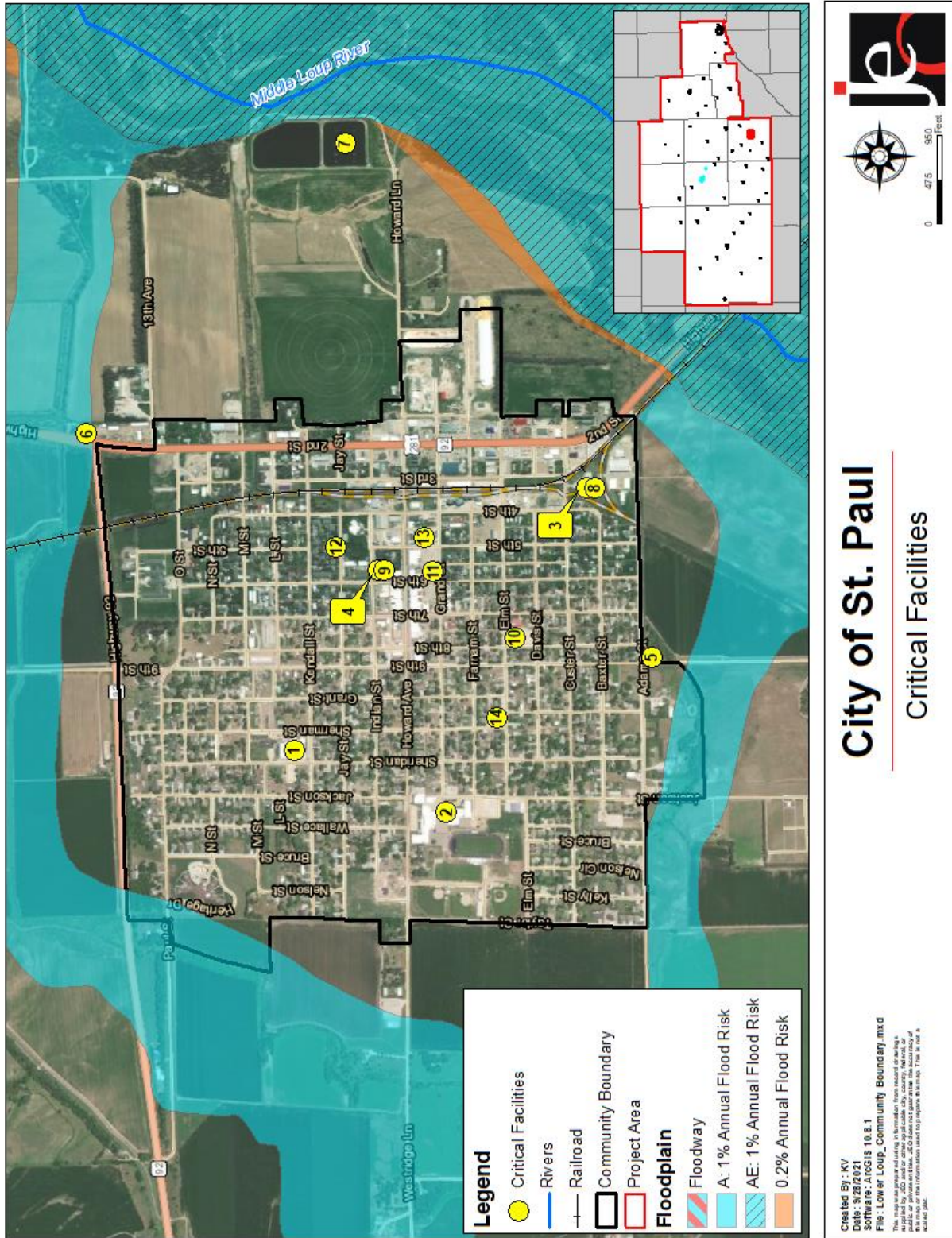
⁷³ Department of Health and Human Services. 2021. "State of Nebraska: Assisted Living Facilities." <https://dhhs.ne.gov/licensure/Documents/ALF%20Roster.pdf>.

⁷⁴ Department of Health and Human Services. 2021. "State of Nebraska Roster: Hospitals." <https://dhhs.ne.gov/licensure/Documents/Hospital%20Roster.pdf>.

⁷⁵ Department of Health and Human Services. 2021. "State of Nebraska Roster: Long Term Care Facilities." <https://dhhs.ne.gov/licensure/Documents/LTCRoster.pdf>.

⁷⁶ Department of Health and Human Services. 2021. "State of Nebraska Roster: Rural Health Clinic." https://dhhs.ne.gov/licensure/Documents/RHC_Roster.pdf.

Figure STP.4: St. Paul Critical Facilities



Parcel Improvements and Valuation

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

Table STP.7: St. Paul Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
1,206	1,077	169,564,934	3	4,155,118	0.28%

Source: County Assessor, GIS Workshop

Table STP.8: St. Paul Flood Map Products

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
FLOOD INSURANCE STUDY	31093CV000B	07/07/2014	NA
LOMA	14-07-2354A-310119	8/5/2014	Portion of property removed from SFHA
LOMA	15-07-0012A-310119	11/20/2014	Structure (residence) removed from SFHA
LOMA	15-07-1198A-310119	5/4/2015	Structure (garage/acc) removed from SFHA
LOMA	15-07-1790A-310119	8/12/2015	Structure (residence) removed from SFHA
LOMA	16-07-1137A-310119	4/20/2016	Portion of property removed from SFHA
LOMA	16-07-1921A-310119	8/16/2016	Portion of property removed from SFHA
LOMA	17-07-1869A-310119	7/28/2017	Structure (accessory) removed from SFHA
LOMA	17-07-2301A-310119	9/15/2017	Structure (accessory) removed from SFHA
LOMA	18-07-0447A-310119	3/14/2018	Structure (residence) removed from SFHA
LOMA	19-07-0491A-310119	1/4/2019	Portion of property removed from SFHA
LOMA	20-07-0448A-310119	2/14/2020	Portion of property removed from SFHA
LOMA	20-07-0515A-310119	2/6/2020	Portion of property removed from SFHA

Source: FEMA Flood Map Service Center

Hazard Prioritization

For additional discussion regarding area-wide hazards, please see *Section Four: Risk Assessment*. A full list of historical hazard occurrences can be found in the Howard County

jurisdictional profile. The hazards discussed in detail below were selected by the local planning team from the regional hazard list as the relevant hazards for the jurisdiction. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities.

Drought

The main concern with drought in the community is related to water availability. During the summer of 2012, a drought caused a strain on the public water supply. During that drought period, water levels dropped to almost critical levels. Drought concerns the local planning team due to the demand on public water supply and the increased risk of fires. In the community, drought is defined as lack of rain and monitoring of water levels in municipal wells. Municipal wells are monitored, and all residential and commercial water use is metered. During past events the city has not had to restrict water use but can implement restrictions if necessary. The public water supply in St. Paul is monitored by a SCADA system and all commercial and residential water is metered in the community. Currently, water resources in the community are sufficient. To mitigate against this hazard the city plans to continue ongoing education through the local newspapers and social media channels.

Flooding

St. Paul has three NFIP policies in-force for \$507,500. There are no repetitive flood loss properties in the city of St. Paul. The city identified the northwest edge of town as having poor stormwater drainage and that the city built a berm to prevent flooding. Areas of the community most prone to flooding include the northwest and southeast sides of the city.

During the major flooding in 2019, Highway 281 became a main corridor for additional travelers with restricted highway access in the northern part of the state. During the event, the community experienced major erosion of the north bank of the Middle Loup River which comprises of the railroad bridge and Highway 281. The erosion threatened the city water and highway system. There was also flooding on the northwest side of town due to a small tributary of the Middle Loup River. Additional impacts from the flooding includes damage to houses, limited vehicle access in areas of the community, and lift stations constantly pumping. No evacuations were necessary. As a result of the 2019 flooding, a culvert/berm was constructed to alleviate flooding on the northwest side of town. The city also plans to research potential funding sources for additional projects and assist landowners in obtaining permits to protect riverbanks.

Hazardous Materials (Transportation)

St. Paul has an increased likelihood of chemical spills during transportation due to the proximity of Highway 92, Highway 281, and the Nebraska Central Railroad Company rail line. The local planning team indicated that ethanol, fertilizers, and other chemicals are regularly transported along these local routes. There was a recent incident that involved a car/train accident resulting in the vehicle catching fire. To mitigate against this hazard, the city plans to maintain ongoing communication with the railroad and attend pipeline training and annual training opportunities. New and current first responders in the community are in need of additional training.

Severe Thunderstorms (includes hail)

The primary concerns regarding severe thunderstorms are the potential for damages to property and infrastructure, as well as power outages. Severe thunderstorms occur several times a year

in St. Paul. According to the NCEI, thunderstorms have caused \$455,000 in property damages since 1996, and \$2,255,000 in hail damages. Weather radios are located at critical facilities. Municipal records are protected with surge protectors on electronic devices. Many critical facilities have a generator. However, the school and St. Paul civic center were identified as needing backup generators. Approximately 40% of powerlines in the community are buried. Most critical facilities are not fitted with hail resistant materials. The local planning team is continuing to look into funding sources to implement mitigation strategies in critical facilities.

Severe Winter Storms

Local concerns regarding severe winter storms focus on the shutdown of transportation routes, the inability of first responders to reach residents in need, and power outages. In February 2016, a severe winter storm dropped over 14 inches of snow onto St. Paul. According to the local planning team, there have not been any structural damages to critical facilities associated with severe winter storms in recent history. Emergency snow routes are designated by city council and published in the paper and advertised on social media channels annually.

In order to mitigate the impacts from these storms, approximately 40% of the power lines are buried. City Utilities is in charge of snow removal and snow removal resources include three snowplows, two payloaders, one road grader, four dump trucks, one skid steer, one tractor, and one UTV with a blade. The local planning team noted that the city is in need of more snowplows and updated equipment.

Tornadoes and High Winds

In 1984, an F3 tornado touched down a half mile southwest of St. Paul and moved north northeast for eight miles through the north central portions of town. At least two homes were completely destroyed and 67 were damaged. This tornadic event also destroyed sixteen buildings on the county fairgrounds. Local concerns regarding tornadoes focus on the ability to warn residents and the availability of adequate shelter. Howard County Emergency Management offers text alerts in the event of an impending tornado. The city has four warning sirens throughout town but has identified the northeast part of town as a location in need of a warning siren. The city has identified the ballfields and housing authority as locations in need of shelter. There are hazardous trees located along residential streets and the city utility department continually monitors trees that are encroaching on power lines. The city plans to continue monitoring tree health and hazards in the community and educate the public about overhanging branches.

Mitigation Strategy

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	16. Identify and evaluate current backup and emergency generators 17. Obtain additional generators based on identification and evaluation 18. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
ESTIMATED COST	\$20,000 to \$75,000+ per generator
POTENTIAL FUNDING	City General Fund, HMGP, School General Fund
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Howard County Emergency Management, School Board
STATUS	The school and St. Paul civic center were identified as needing backup generators

OBJECTIVE	IMPROVE EMERGENCY COMMUNICATIONS
DESCRIPTION	1. Develop/Improve Emergency Communication Action plan 2. Implement Emergency Communication Action Plan 3. Establish inner-operable communications 4. Obtain/Upgrade Emergency Communication Facilities/Equipment 5. Obtain/Upgrade/Distribute Weather Warning Radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$5,000+
POTENTIAL FUNDING	City General Fund, HMGP
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Howard County Emergency Management, Utilities Department, Fire Department
STATUS	This project has not yet been started.

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate current warning systems 2. Improve warning systems/develop new warning system 3. Obtain/Upgrade warning system equipment and methods 4. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 5. Identify location of weather warning radios 6. Improve weather radio system 7. Obtain/Upgrade weather radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	Varies by Project
POTENTIAL FUNDING	City General Fund, HMGP
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Howard County Emergency Management, Utilities Department
STATUS	The city has four warning sirens throughout town but has identified the northeast part of town as a location in need of a warning siren.

OBJECTIVE	PUBLIC SAFE ROOMS & POST-DISASTER STORM SHELTERS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate existing safe rooms and/or storm shelters 2. Improve and/or construct safe rooms and/or storm shelters 3. Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
HAZARD(S) ADDRESSED	Tornadoes, high winds, Severe Thunderstorms
ESTIMATED COST	\$150/sf for retrofit; \$300/sf for new construction
POTENTIAL FUNDING	Bonds, HMGP, City General Fund
TIMELINE	5+ years
PRIORITY	High
LEAD AGENCY	Howard County Emergency Management, Utilities Department
STATUS	The city has identified the ballfields and housing authority as locations in need of shelter.

OBJECTIVE	PUBLIC EDUCATION ON HAZARD EVENTS AND PREPAREDNESS
DESCRIPTION	<ol style="list-style-type: none"> 1. Obtain or develop materials about hazards 2. Conduct multifaceted public education 3. Distribute fact sheet at community events, schools, other venues 4. Conduct scheduled siren/warning system tests 5. Prepare/distribute educational materials listing safe room and shelters
HAZARD(S) ADDRESSED	Tornadoes, Severe Thunderstorms, Severe Winter Storms, Flooding, Dam Failure
ESTIMATED COST	\$5,000+
POTENTIAL FUNDING	City General Fund
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Utilities Department, Howard County Emergency Management
STATUS	The city plans to educate the public about overhanging branches.

OBJECTIVE	REDUCE TREE DAMAGE & DAMAGE FROM TREES
DESCRIPTION	<ol style="list-style-type: none"> 1. Conduct tree inventory 2. Develop tree maintenance/trimming program 3. Implement tree maintenance/trimming program 4. Remove hazardous limbs and/or trees
HAZARD(S) ADDRESSED	Severe Thunderstorms, Severe Winter Storms, Tornadoes, Hail, High Winds
ESTIMATED COST	\$50 per tree
POTENTIAL FUNDING	City General Fund
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Utilities Department
STATUS	There are hazardous trees located along residential streets which should be trimmed. The local planning team noted the city is currently behind on tree trimming activities. The city utility department continually monitors trees that are encroaching on power lines.

Plan Maintenance

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

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The city's Mayor, Utility Superintendent, City Council, City Clerk, and County Emergency Manager will review the city's profile no less than annually. They will notify the public via public notices and at City Council public hearings.