

MORRILL COUNTY APPENDIX

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County Profile

MORRILL COUNTY

**North Platte NRD
Hazard Mitigation Plan 2021**

Local Planning Team

Table MCO.1: Morrill County Local Planning Team

NAME	TITLE	JURISDICTION
SUSANNA BATTERMAN	County Commissioner	Morrill County
KAY ANDERSON	Deputy Emergency Manager	Morrill County
TRAVIS RODAK	County Attorney	Morrill County

Location, Geography, and Climate

Morrill County is located in northwest Nebraska and is bordered by Scotts Bluff, Banner, Cheyenne, and Garden County. The total area of Morrill County is 1,430 square miles. Major waterways within the county include the North Platte River, running through the center of the county. The county is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Most of Morrill County lies in the plains topographic region, with the vast majority of the county's land characterized by shrubland and herbaceous grassland.

Climate

The table below compares climate indicators with those of the entire state. Climate data is helpful in determining if certain events are higher or lower than normal. For example, if the high temperatures in the month of July are running well into the 90s, high heat events may be more likely which could impact vulnerable populations.

Table MCO.2: Morrill County Climate Normals

	MORRILL COUNTY	STATE OF NEBRASKA
JULY NORMAL HIGH TEMP¹	91.3°F	87.4°F
JANUARY NORMAL LOW TEMP¹	15.8°F	13.8°F
ANNUAL NORMAL PRECIPITATION²	17.8"	23.8"
ANNUAL NORMAL SNOWFALL²	38.1"	25.9"

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

Transportation

There are two major highways in the county: US HWY 26, US HWY 385, NE HWY 92, and NE HWY 88. According to the Nebraska Department of Transportation, the most traveled route is US HWY 385. The average daily traffic count for US HWY 385 is 4,135 vehicles, 580 of which are heavy commercial vehicles.³ The county also has two air landing strips dispersed throughout 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.

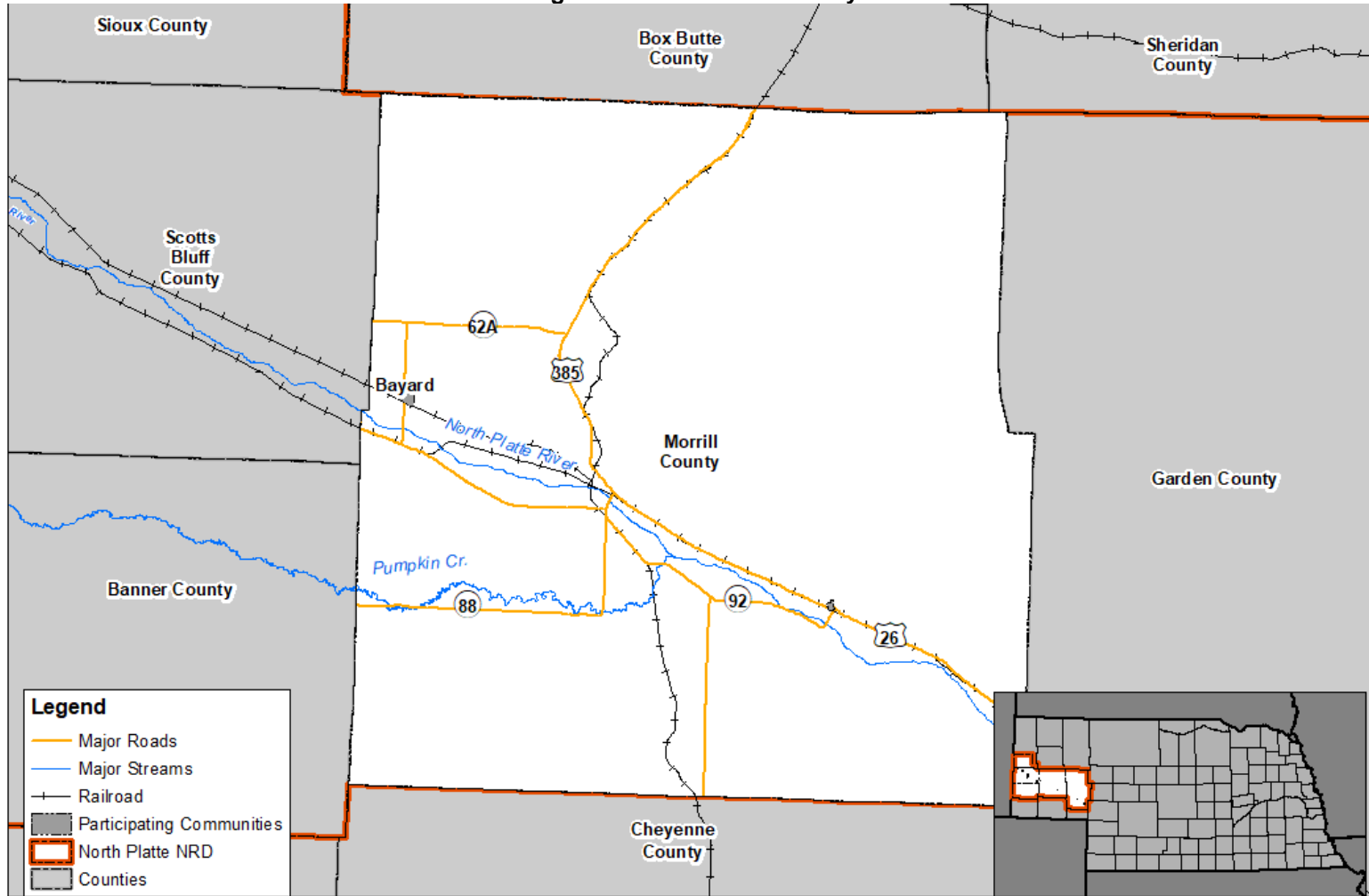
¹ National Centers for Environmental Information. "1981-2010 U.S. Climate Normals." Accessed December 2020. <https://www.ncdc.noaa.gov/cdo-web/datatools>.

² High Plains Regional Climate Center. "Monthly Climate Normals 1981-2010 – Bridgeport, NE." Accessed December 2020. <http://climod.unl.edu/>.

³ Nebraska Department of Transportation. 2018. "Interactive Statewide Traffic Counts Map." [map]. <https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.

SECTION SEVEN: MORRILL COUNTY COMMUNITY PROFILE

Figure MCO.1: Morrill County



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 Date: 9/3/2021
 Software: ArcGIS 10.7.1
 File Name: Planning Area - County Basemap.mxd

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Morrill County

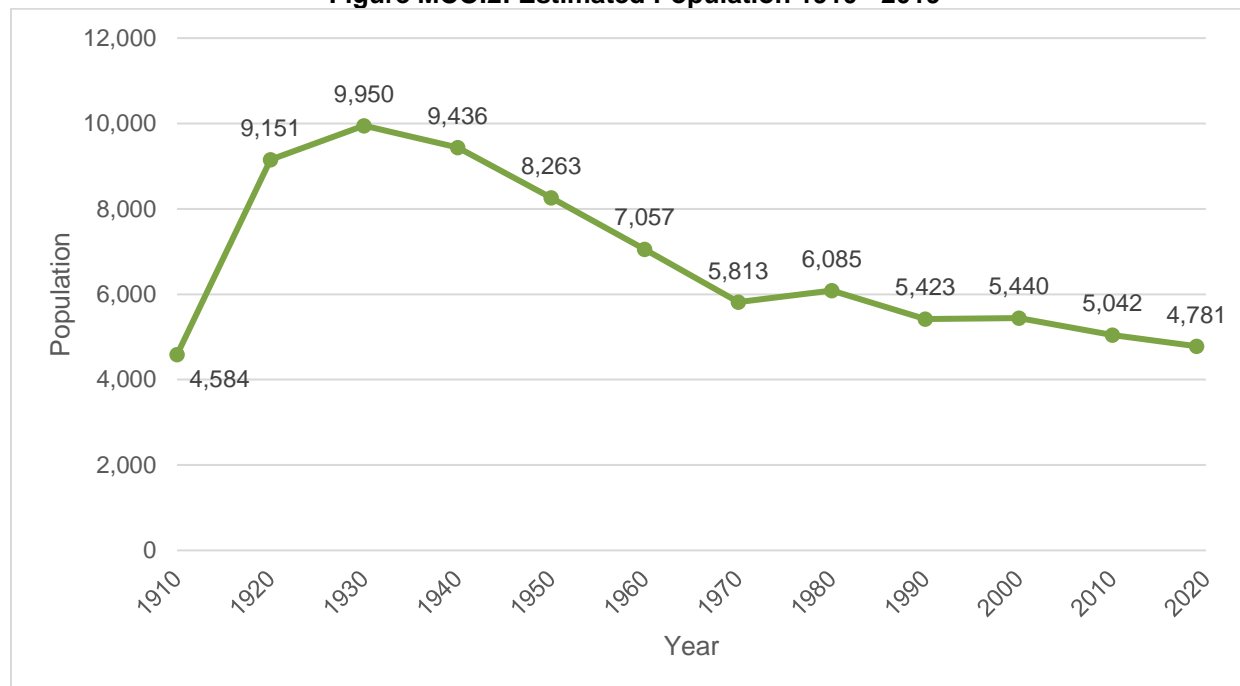
County Boundary

0 5 10 Miles

Demographics

The following figure displays the historical population trend from 1910 to 2019. This figure indicates that the population of Morrill County has decreased since 1980. The population in 2019 was estimated to be 4,781. A declining population can lead to more unoccupied housing that is not being maintained and is then at risk to high winds and other hazards. Furthermore, with fewer residents, there is decreasing tax revenue for the county, which can make implementation of mitigation projects fiscally challenging.

Figure MCO.2: Estimated Population 1910 - 2019



Source: U.S. Census Bureau⁴

The following table indicates Morrill County has a larger percentage of people under the age of five as the State of Nebraska. The county has a smaller percentage of people between the ages of 5 and 64 and a larger percentage of those over 64. The median age in Morrill County is larger than the state. This information is relevant to hazard mitigation 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 MCO.3: Population by Age

AGE	MORRILL COUNTY	STATE OF NEBRASKA
<5	6.1%	6.9%
5-64	73.8%	77.7%
>64	20.1%	15.4%
MEDIAN	43.3	36.5

Source: U.S. Census Bureau⁵

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

⁴ United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." [database file]. <https://data.census.gov>.
⁵ United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." [database file]. <https://data.census.gov>.

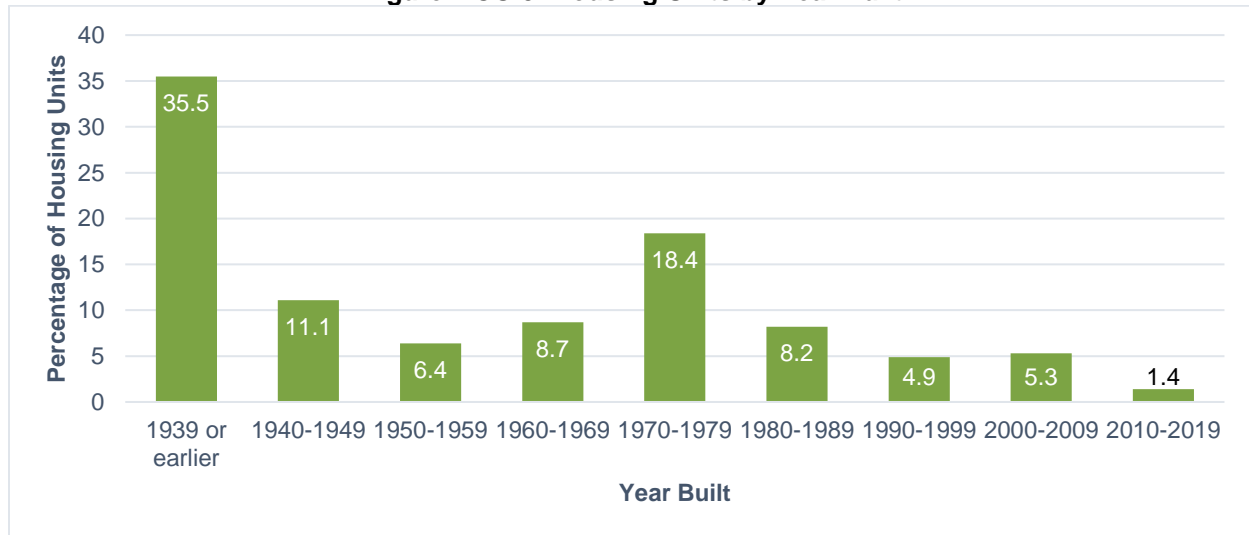
rest of the state. These economic indicators are relevant to hazard mitigation because they indicate lower economic strength compared to the state as a whole. Areas with economic indicators which are relatively low may influence a county’s level of resilience during hazardous events.

Table MCO.4: Housing and Income

	MORRILL COUNTY	STATE OF NEBRASKA
MEDIAN HOUSEHOLD INCOME	\$46,194	\$61,439
PER CAPITA INCOME	\$26,951	\$32,302
MEDIAN HOME VALUE	\$95,600	\$155,800
MEDIAN RENT	\$707	\$833

The following figure indicates that most houses in Morrill County were built in 1939 or earlier at 35.5 percent. According to the Census Bureau, the county has 2,441 housing units; with 80.0 percent of those units occupied. 8.1 percent of the county’s housing is classified as mobile homes. Housing age can serve as an indicator of risk as structures built prior to the development of state building codes may be more vulnerable to hazards. The State of Nebraska first adopted building codes in 1987, the state currently has adopted the 2018 International Building Code. Finally, locations 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. There are no mobile home parks in unincorporated areas of the county.

Figure MCO.3: Housing Units by Year Built



Source: U.S. Census Bureau⁶

Table MCO.5: Housing Units

JURISDICTION	TOTAL HOUSING UNITS				OCCUPIED HOUSING UNITS			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
MORRILL COUNTY	1,954	80.0%	487	20.0%	1,398	71.5%	556	28.5%
NEBRASKA	759,176	90.7%	78,300	9.3%	501,679	66.1%	257,497	33.9%

Source: U.S. Census Bureau⁷

⁶ United States Census Bureau. "2019 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." [database file]. <https://data.census.gov>.

⁷ United States Census Bureau. "2019 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." [database file]. <https://data.census.gov>.

Major Employers

According to 2018 Business Patterns Census Data, Morrill County had 107 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 MCO.6: Businesses in Morrill County

	TOTAL BUSINESSES	NUMBER OF PAID EMPLOYEES	ANNUAL PAYROLL (IN THOUSANDS)
TOTAL FOR ALL SECTORS (2012)	115	814	\$22,508
TOTAL FOR ALL SECTORS (2018)	107	719	\$26,688

Source: U.S Census Bureau⁸

Agriculture is also important to the economic fabric of Morrill County, and the state of Nebraska as a whole. Morrill County's 193 farms cover 423,063 acres of land, about 90.5% of the county's total area. 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 MCO.7: Morrill County Agricultural Inventory

MORRILL COUNTY AGRICULTURAL INVENTORY	
NUMBER OF FARMS	426
LAND IN FARMS (ACRES)	828,588

Source: USDA 2017 Census of Agriculture⁹

Future Development Trends

Over the past five years, Heartland Expressway has continued to be developed, a Cobblestone Hotel and Dollar General were built in Bridgeport, Morrill County Community Hospital added on to the current building, and the Jack and Jill Building was refurbished. In addition, the unincorporated area of Angora was demolished. None no new structures in the county were built in the floodplain. According to the 2018 American Community Survey estimates, Morrill County's population is decreasing. The local planning team attribute this to a lack of non-agricultural related jobs available. No new housing or business developments are planned in the next five years.

Structural Inventory and Valuation

GIS parcel data as of July 2021 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.

⁸ United States Census Bureau. "2018 Census Bureau American Community Survey: Geography Area Series County Business Patterns 2018 Business Patterns." [database file]. <https://data.census.gov>.

⁹ United States Department of Agriculture, National Agricultural Statistics Server. 2019. "2017 Census of Agriculture – County Data." <https://www.nass.usda.gov/Publications/AgCensus/2017/index.php>.

Table MCO.8: Morrill County Parcel Valuation

TOTAL NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	% OF IMPROVEMENTS IN FLOODPLAIN
2,788	\$298,103,734	524	\$48,979,506	19%

Source: County Assessor

*Floodplain generated through HAZUS

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are 22 chemical storage sites throughout Morrill County that contain hazardous chemicals. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. Locations of the sites can be found in the individual participant sections.

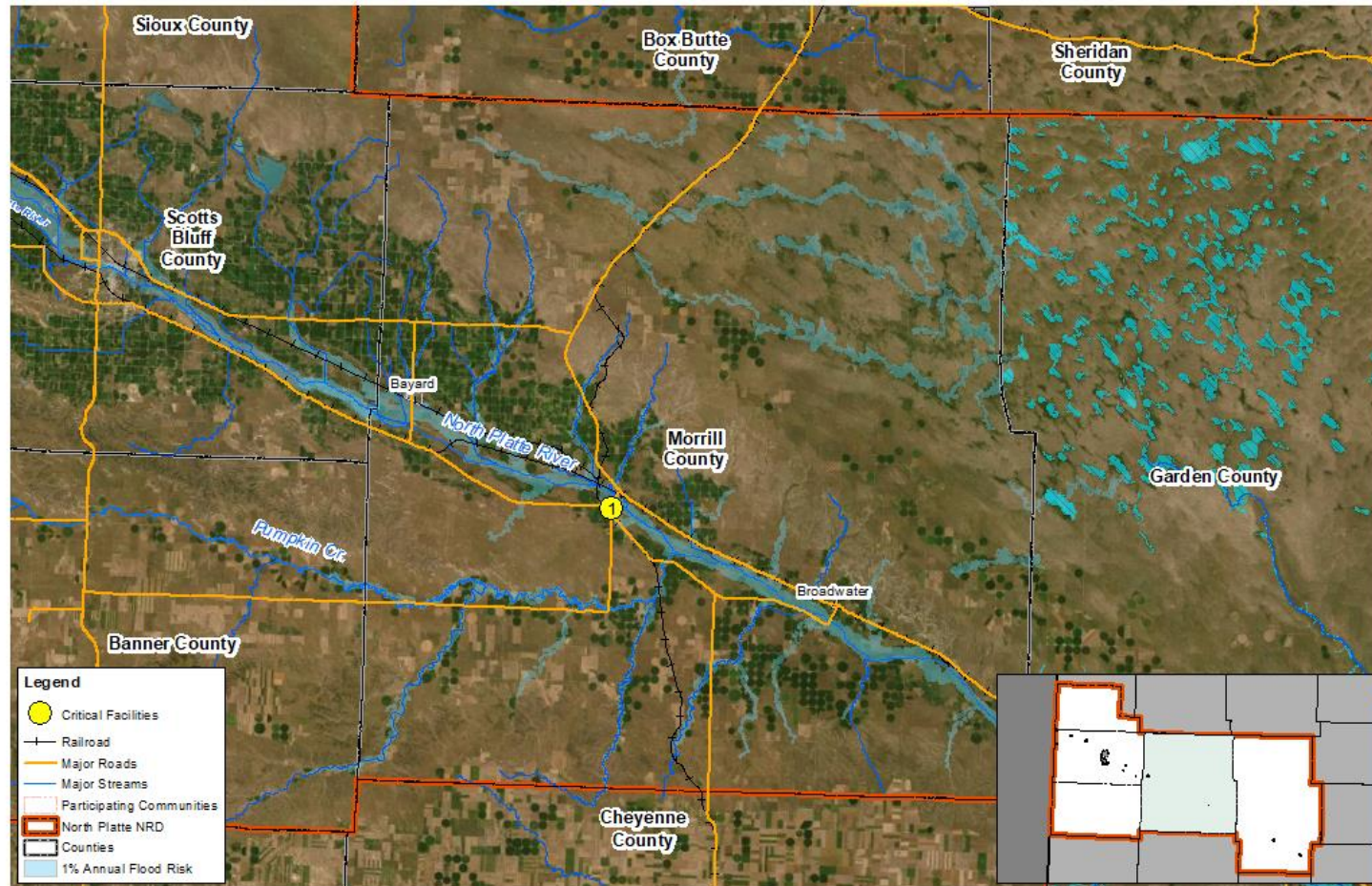
Critical Facilities

Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and are essential for returning the jurisdiction’s functions to normal during and after a disaster. 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 MCO.9: Critical Facilities

CF #	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Morrill County Courthouse	N	N	N

Figure MCO.3: Critical Facilities



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 File Name: CF - County Baseemap.mxd

Morrill County
 Critical Facilities

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*1% Annual Flood Risk is based off a HAZUS generated floodplain

Governance

A county's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Morrill County has a three-member board of commissioners and the following departments and offices.

- Assessor
- Attorney
- Clerk
- District Court
- Highway Superintendent
- Planning/Zoning
- Sheriff
- Surveyor
- Treasurer
- Veteran Services Officer
- Weed Superintendent

Capability Assessment

The capability assessment consisted of a Capability Assessment Survey completed by the jurisdiction and a review of local existing policies, regulations, plans, and the programs. The survey is used to gather information regarding the jurisdiction's planning and regulatory capability; administrative and technical capability; fiscal capability; and educational and outreach capability.

Table MCO.10: Capability Assessment

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

SECTION SEVEN: MORRILL COUNTY COMMUNITY PROFILE

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

Table MCO.11: Overall Capability

OVERALL CAPABILITY	LIMITED/MODERATE/HIGH
Financial resources needed to implement mitigation projects	Moderate
Staff/expertise to implement projects	Limited
Community support to implement projects	Limited
Time to devote to hazard mitigation	Limited

Plan Maintenance

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

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the County Board of Commissioners. The local planning team will review the plan no less than bi-annually and will include the public in the review and revision process by sharing on the county website and at county board meetings.

Plan Integration

Morrill County has limited planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan.

Comprehensive Plan (2020 Update)

Morrill County's Comprehensive Plan was last updated in 2020 but does not integrate hazard mitigation principles. The plan contains goals and objectives aimed at safe growth. The local planning team indicated that efforts will be made to ensure the objectives and strategies identified in the hazard mitigation plan will be integrated into the comprehensive plan for future updates.

Capital Improvements Plan

The county maintains a capital improvement plan which also acts as a 1- & 6- year road improvement plan. The plan includes storm water projects, upsizing of culverts and drainage structures, and upgrades and maintenance to storm sewer systems.

Morrill County Local Emergency Operations Plan (2019)

Morrill County update their Local Emergency Operations Plan (LEOP) in 2019. 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.

Historical Occurrences

The following table provides a statistical summary for hazards that have occurred in the county. The property damages from the NCEI Storm Events Database (January 1996 – September 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 for Morrill County between 2000 and 2020.

SECTION SEVEN: MORRILL COUNTY COMMUNITY PROFILE

Table MCO.12: Hazard Events for Morrill County

HAZARD TYPE		COUNT	PROPERTY	CROP ²
AGRICULTURAL DISEASE	Animal Disease ¹	6	50 animals	N/A
	Plant Disease ²	20	N/A	\$136,082
DAM FAILURE⁵		0	\$0	N/A
DROUGHT⁷		438/1,512 months	\$0	\$2,691,967
EARTHQUAKES⁸		0	\$0	\$0
EXTREME HEAT⁶		Avg. 5 days/yr	\$0	\$2,648,003
FLOODING⁹	Flash Flood	18	\$534,000	\$143,747
	Flood	2	\$0	
GRASS/WILDFIRE¹⁰ <i>Injuries: 1</i>		50	5,512 acres	\$150
HAZARDOUS MATERIALS - FIXED SITES³		5	\$0	N/A
HAZARDOUS MATERIALS - TRANSPORTATION⁴		8	\$3,440	N/A
LEVEE FAILURE¹¹		0	\$0	N/A
PUBLIC HEALTH EMERGENCY¹³ <i>Fatalities: 15</i>		469 cases		N/A
SEVERE THUNDERSTORMS⁹	Thunderstorm Wind <i>Average: 64 mph Range: 58-81 mph</i>	63	\$446,500	N/A
	Hail <i>Average: 1.4 in. Range: 0.75-4.5 in.</i>	198	\$884,000	\$22,392,473
	Heavy Rain	11	\$0	\$1,649,296
	Lightning	0	\$0	N/A
SEVERE WINTER STORMS⁹	Blizzard <i>Injuries: 1</i>	13	\$29,000	\$6,481,130
	Extreme Cold/Wind Chill	3	\$0	
	Heavy Snow	16	\$0	
	Ice Storm	0	\$0	
	Winter Storm	21	\$0	
	Winter Weather <i>Injuries: 2</i>	12	\$7,000	
TERRORISM¹²		0	\$0	N/A
TORNADOES AND HIGH WINDS⁹	Tornado <i>Average: EF0 Range: EF0-EF2</i>	19	\$2,990,000	\$0
	High Winds <i>Average: 50 mph Range: 40-73 mph</i>	40	\$47,500	\$4,789,107
TOTALS		505	\$4,943,940	\$40,931,955

N/A: Data not available
1 NDA (2014-2020)

SECTION SEVEN: MORRILL COUNTY COMMUNITY PROFILE

- 2 USDA RMA (2000-2020)
- 3 NRC 1990 – 2020
- 4 PHMSA (1971-2020)
- 5 Stanford NPPD (1911-2018)
- 6 NOAA 1889-2020
- 7 HPRCC (1897-2020)
- 8 USGS (1900-2020)
- 9 NCEI (January 1996 - September 2020)
- 10 NFS (January 2000 - May 2020)
- 11 USACE NLD (2020)
- 12 Global Terrorism Database (1970-2017)
- 13 Nebraska DHHS (Feb 12, 2021)

The following table provides a summary of hazards that have or have the potential to affect each participating jurisdiction in Morrill County. Each jurisdiction was evaluated for previous hazard occurrence and the probability of future hazard events on each of the 15 hazards profiled in this plan. The evaluation process was based on data collected and summarized in Table MCO.12; 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 have not been instances of dam failure in the county, there exists a possibility for a dam to fail in the future due to the presence of dams in the county.

Table MCO.13: Morrill County Hazard Matrix

HAZARD	MORRILL COUNTY	CITY OF BAYARD	CITY OF BRIDGEPORT	VILLAGE OF BROADWATER	BAYARD SCHOOL DISTRICT	BRIDGEPORT FIRE DISTRICT	BRIDGEPORT IRRIGATION DISTRICT	BRIDGEPORT PUBLIC SCHOOLS	BROADWATER VOLUNTEER FIRE DEPARTMENT
Agricultural Disease	X	X	X	X	X	X		X	X
Dam Failure	X	X	X	X	X	X	X	X	X
Drought	X	X	X	X	X	X	X	X	X
Earthquake	X	X	X	X	X	X	X	X	X
Extreme Heat	X	X	X	X	X	X	X	X	X
Flooding	X	X	X	X	X	X	X	X	X
Grass/Wildfire	X	X	X	X	X	X		X	X
Hazardous Materials - Fixed Sites	X	X	X	X	X	X	X	X	X
Hazardous Materials - Transportation	X	X	X	X	X	X	X	X	X
Levee Failure									
Public Health Emergency	X	X	X	X	X	X	X	X	X
Severe Thunderstorms	X	X	X	X	X	X	X	X	X
Severe Winter Storms	X	X	X	X	X	X	X	X	X
Terrorism	X	X	X	X	X	X	X	X	X

HAZARD	MORRILL COUNTY	CITY OF BAYARD	CITY OF BRIDGEPORT	VILLAGE OF BROADWATER	BAYARD SCHOOL DISTRICT	BRIDGEPORT FIRE DISTRICT	BRIDGEPORT IRRIGATION DISTRICT	BRIDGEPORT PUBLIC SCHOOLS	BROADWATER VOLUNTEER FIRE DEPARTMENT
Tornadoes and High Winds	X	X	X	X	X	X	X	X	X

County Hazard Prioritization

For additional discussion regarding area-wide hazards, please see *Section Four: Risk Assessment*. The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were added by the local planning team based on the identification of hazards of greatest concern, hazard history, and the jurisdiction’s capabilities.

Flooding

The Morrill County Local Planning Team identified flooding as one of the top concerns for the county. Most recently, the county experienced significant flooding events, where over 35 miles of county roads were damaged from both riverine and flash flooding. Specific areas of Morrill County are more vulnerable than others to flooding, especially near the North Platte River. The Local Planning Team indicated that the Main Street in Bridgeport, and the city’s water treatment plant is often damaged by flooding. The biggest concern for the county is flooding as a result of the North Platte River, however much of the City of Bridgeport has poor storm water drainage, which further compounds the flooding issues.

Hazardous Materials – Transportation

The Morrill County Local Planning Team identified hazardous materials - transportation as one of the top concerns for the county. The specific concerns the county has is how a chemical spill might affect the public, specifically on railroads and highways 385, 88 and 26. While no significant chemical events have occurred recently, the capacity for a significant chemical event is present, based on the number of chemicals regularly transported. The Local Planning Team does not know specific details regarding types of chemicals transported. Proximity of critical facilities to the transportation corridors makes this issue a bigger concern, many of the county’s critical facilities are located on a major transportation route, like an ethanol plant, cooperatives, city offices, courthouse, sheriff’s office, Simplot, police and fire departments. In the case of a major chemical spill local law enforcement or Region 21 Emergency Management Agency would be first to respond.

Severe Thunderstorms (Includes Hail)

The Morrill County Local Planning Team identified severe thunderstorms as one of the top concerns for the county. A typical severe thunderstorm in Morrill County makes travel across the county especially difficult, due to flooded roadways, downed power lines, and downed trees. Hail events have caused power outages, crop damages, vehicle damages, broken windows, and downed tree branches. A few factors make Morrill County more resilient to impacts from a severe thunderstorm: the Local Planning Team indicated that the county has plenty of backup generators to mitigate a prolonged power outage. The county has also outfitted all critical facilities with severe weather radios, to notify residents of severe weather. To prevent any lasting economic impacts

from severe thunderstorms, all municipal structures have been insured. Most of the county's power lines are above ground, which may increase the risk of prolonged power outage county-wide. The local planning team noted they would like to implement a county wide text message system.

Tornadoes and High Winds

The Morrill County Local Planning Team identified tornadoes as one of the top concerns for the county as a whole. The primary concerns of the Local Planning Team are centered on life safety, property damages, and damage to infrastructure. While no tornado events have struck Morrill County, tornadoes are common in the entire planning area. Some attributes of Morrill County make the county more resilient to tornadoes; the county does have backup systems in place for electronic records, in case of a power surge. While the county does not have safe rooms, community members may find refuge in church buildings, resident basements, and the county courthouse. In terms of awareness, the County Emergency Management offers text alerts during times of severe weather. Further, the county tests tornado sirens regularly, and hosts an annual weather spotter class. There are some attributes of Morrill County which affect the vulnerability of the county to tornadoes: 35 percent of the homes in Morrill County were built before 1940. Older homes contain older building materials and tend to be more vulnerable to lasting impacts from a tornado event and may cause shrapnel which damages other buildings.

Mitigation Strategy

Completed Mitigation and Strategic Actions

MITIGATION ACTION	EMERGENCY OPERATIONS
DESCRIPTION	Identify and establish an emergency operations center.
HAZARD(S)	All hazards
STATUS	The Bridgeport Fire Hall will act as the most likely emergency operations center location.

MITIGATION ACTION	TORNADO SAFETY
DESCRIPTION	Implement a tornado safety program.
HAZARD(S)	Tornadoes and High Winds
STATUS	Completed

Continued Mitigation and Strategic Actions

MITIGATION ACTION	CHANNEL AND BRIDGE IMPROVEMENTS
DESCRIPTION	Implement channel and bridge improvements to increase channel conveyance and decrease the base flood elevations.
HAZARD(S)	Flooding
ESTIMATED COST	\$100,000
FUNDING	General Budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

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MITIGATION ACTION	CIVIL SERVICE IMPROVEMENTS
DESCRIPTION	Improve emergency rescue and response equipment and facilities by providing additional or updating existing emergency response equipment. This can include fire trucks, ATV's water tanks/trucks, snow removal equipment, etc. This would also include developing backup systems for emergency vehicles and identifying and training additional personnel for emergency response.
HAZARD(S)	All hazards
ESTIMATED COST	\$100,000
FUNDING	General Budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Board of Commissioners, Region 21 Emergency Management
STATUS	Not Started

MITIGATION ACTION	DEVELOP FLOOD ASSISTANCE STRATEGIES
DESCRIPTION	Develop strategies to provide necessary services in the event of flooding.
HAZARD(S)	Flooding
ESTIMATED COST	\$1,000
FUNDING	General Budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

MITIGATION ACTION	DEVELOPMENT RESTRICTIONS
DESCRIPTION	Enhance floodplain regulations to restrict types of development allowed in the floodplain.
HAZARD(S)	Flooding
ESTIMATED COST	\$2,500
FUNDING	General Budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

MITIGATION ACTION	DRAINAGE DITCHES
DESCRIPTION	Deepen drainage ditches and clean out culverts.
HAZARD(S)	Flooding
ESTIMATED COST	\$15,000
FUNDING	General budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

MITIGATION ACTION	DRAINAGE STUDY / STORMWATER MASTER PLAN
DESCRIPTION	Preliminary drainage studies and assessments can be conducted to identify and prioritize design improvements to address site specific localized flooding/drainage issues to reduce and/or alleviate flooding. Storm water master plans can be developed to help identify storm water problem areas and potential drainage improvements.
HAZARD(S)	Flooding
ESTIMATED COST	\$5,000-\$15,000
FUNDING	General Budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

MITIGATION ACTION	EMERGENCY COMMUNICATION
DESCRIPTION	Establish an action plan to improve communication between agencies to better assist residents and businesses during and following emergencies. Establish inter-operable communications.
HAZARD(S)	All hazards
ESTIMATED COST	\$20,000
FUNDING	General Budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

MITIGATION ACTION	EMERGENCY EXERCISE: HAZARDOUS SPILL
DESCRIPTION	Utilize exercise to prepare for potential explosions or hazardous spills. Ensure that nearby businesses and residents have appropriate plans in place.
HAZARD(S)	Hazardous Materials – Transportation
ESTIMATED COST	\$5,000
FUNDING	General Budget
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Board of Commissioners, Region 21 Emergency Management
STATUS	Not Started

SECTION SEVEN: MORRILL COUNTY COMMUNITY PROFILE

MITIGATION ACTION	EMERGENCY FUEL SUPPLY PLAN
DESCRIPTION	Plan to ensure adequate fuel supply is available during an emergency. Actions might include: prioritization and rationing plan for gasoline and diesel uses in extended loss of fuel supply or electric power supply; a plan to purchase local fuel supply, etc.
HAZARD(S)	All hazards
ESTIMATED COST	\$5,000
FUNDING	General Budget
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Board of Commissioners, Region 21 Emergency Management
STATUS	Not Started

MITIGATION ACTION	EMERGENCY MANAGEMENT EXERCISES
DESCRIPTION	Develop and facilitate an exercise to identify gaps in planning and to ensure that community response plans are sufficient to meet the needs of the jurisdiction.
HAZARD(S)	Flooding
ESTIMATED COST	\$2,500
FUNDING	Region 21 Budget
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Board of Commissioners, Region 21 Emergency Management
STATUS	Not Started

MITIGATION ACTION	FIRST AID TRAINING
DESCRIPTION	Promote first aid training for all residents.
HAZARD(S)	All hazards
ESTIMATED COST	\$5,000
FUNDING	General Budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Board of Commissioners, Local Fire Departments
STATUS	Not Started

MITIGATION ACTION	FLOODPLAIN MANAGEMENT
DESCRIPTION	Develop floodplain ordinances that prevent the storage of hazardous chemicals in the floodplain.
HAZARD(S)	Flooding, Hazardous Materials – Fixed Site
ESTIMATED COST	\$5,000
FUNDING	General Budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Board of Commissioners, Floodplain Coordinator
STATUS	Not Started

MITIGATION ACTION	GRADE CONTROL STRUCTURES
DESCRIPTION	Stream bed degradation occurs along many river and creeks. Grade control structures including sheet-pile weirs, rock weirs, ponds, road dams, etc. can be implemented to maintain the channel bed.
HAZARD(S)	Flooding
ESTIMATED COST	\$50,000
FUNDING	General Budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

MITIGATION ACTION	HAZARDOUS TREE REMOVAL
DESCRIPTION	Identify and remove hazardous limbs and/or trees.
HAZARD(S)	Tornadoes and High Winds, Severe Thunderstorms
ESTIMATED COST	\$5,000
FUNDING	General Budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

MITIGATION ACTION	IMPACT RESISTANT ROOF COVERINGS
DESCRIPTION	Use roofing materials that are resistant to hail impacts for new buildings. Retrofit existing building with hail resistant roofing.
HAZARD(S)	Severe Thunderstorms
ESTIMATED COST	\$10,000
FUNDING	General Budget
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

MITIGATION ACTION	IMPROVE/UPGRADE BRIDGES
DESCRIPTION	Investigate, design and retrofit or improve bridges to provide greater capacity and maintain or improve structural integrity during flood events.
HAZARD(S)	Flooding
ESTIMATED COST	\$50,000
FUNDING	General Budget
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

SECTION SEVEN: MORRILL COUNTY COMMUNITY PROFILE

MITIGATION ACTION	INFRASTRUCTURE ASSESSMENT STUDY
DESCRIPTION	Conduct an assessment of bridges in the county and assess other potential areas of concern.
HAZARD(S)	All hazards
ESTIMATED COST	\$20,000
FUNDING	General Budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

MITIGATION ACTION	LAND USE REGULATIONS
DESCRIPTION	Develop land use ordinances and regulations to prevent storage of chemicals near residential developments.
HAZARD(S)	Hazardous Materials – Transportation
ESTIMATED COST	\$2,500
FUNDING	General Budget
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

MITIGATION ACTION	MASTER PLAN TO PRIORITIZE ALL FLOOD RELATED PROJECTS
DESCRIPTION	Identify potential flooding sources and flood-vulnerable areas. Explore solutions and prioritize.
HAZARD(S)	Flooding
ESTIMATED COST	\$1,000
FUNDING	General Budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

MITIGATION ACTION	PROTECT ROOFTOP UTILITIES
DESCRIPTION	Retrofit utilities on building rooftops to provide protection from hail events.
HAZARD(S)	Severe Thunderstorms
ESTIMATED COST	\$10,000+
FUNDING	General Budget
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

MITIGATION ACTION	PUBLIC AWARENESS/EDUCATION
DESCRIPTION	Through activities such as outreach projects, distribution of maps and environmental education increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards. Also, educate citizens on water conservation methods, evacuation plans, etc. In addition, purchase equipment such as overhead projectors and laptops.
HAZARD(S)	All hazards
ESTIMATED COST	\$3,000
FUNDING	General Budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Region 21 Emergency Management
STATUS	Not Started

MITIGATION ACTION	REMOVE FLOW RESTRICTIONS
DESCRIPTION	Conduct a preliminary drainage assessment and/or design bridge improvements to reduce and/or alleviate flooding. Bridges typically serve as flow restrictions along streams and rivers. Cleanout and reshaping channel segments at bridge crossings can increase conveyance, reducing the potential for flooding. Replacing or modifying of bridges and other flow restrictions may be necessary to eliminate flooding threats and damages.
HAZARD(S)	Flooding
ESTIMATED COST	\$25,000
FUNDING	General Budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

MITIGATION ACTION	SHORT TERM RESIDENCY SHELTERS
DESCRIPTION	Design and construct short term shelters for rural residents after damage from an event. These structures would not serve as FEMA approved safe rooms. The building could also be used for things such as short-term sheltering during a high heat event for those without A/C. The building is not intended to be used for long term recovery, such as long-term displacement from floods, fires, etc. The number of shelters needed depends on the size of the building, population, proximity to users, etc.
HAZARD(S)	All hazards
ESTIMATED COST	\$100,000
FUNDING	General Budget
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Board of Commissioners, Region 21 Emergency Management
STATUS	Not Started

SECTION SEVEN: MORRILL COUNTY COMMUNITY PROFILE

MITIGATION ACTION	STORMWATER MANAGEMENT COMMITTEE
DESCRIPTION	Establish a stormwater development committee to oversee improvements to the stormwater system and to respond to community concerns.
HAZARD(S)	Flooding
ESTIMATED COST	Staff Time
FUNDING	General Budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

MITIGATION ACTION	SURGE PROTECTORS
DESCRIPTION	Purchase and install surge protectors on sensitive equipment in critical facilities.
HAZARD(S)	Tornadoes and High Winds
ESTIMATED COST	\$15,000
FUNDING	General Budget
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

MITIGATION ACTION	TRANSPORTATION DRAINAGE IMPROVEMENTS
DESCRIPTION	Make improvements to roadways and drainage ways to prevent damage to key transportation routes. Utilize geosynthetic products for repair and mitigation of damages. Consider covering of road washouts, culvert sizing headwalls, steep banks, slides, in-road springs, roadway edge armoring, low water crossings, pothole grading, weak foundations, gravel road maintenance, ditch linings, on steep grades, erosion protection, etc.
HAZARD(S)	Flooding
ESTIMATED COST	\$100,000
FUNDING	General Budget
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Board of Commissioners
STATUS	Not Started

MITIGATION ACTION	WEATHER RADIOS
DESCRIPTION	Conduct an inventory of weather radios at schools and other critical facilities and provide new radios as needed.
HAZARD(S)	All hazards
ESTIMATED COST	\$50 per radio
FUNDING	General Budget
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Board of Commissioners, Red Cross
STATUS	Not Started

Removed Mitigation and Strategic Actions

MITIGATION ACTION	BANK STABILIZATION
HAZARD(S)	Flooding
REASON FOR REMOVAL	The county would like to focus on other actions.

MITIGATION ACTION	BURY POWER AND SERVICE LINES
HAZARD(S)	Severe Thunderstorms
REASON FOR REMOVAL	The county would like to focus on other actions.

MITIGATION ACTION	COMMUNITY EDUCATION
HAZARD(S)	Hazardous Materials – Transportation
REASON FOR REMOVAL	This action will be incorporated into the Public Awareness/Education action.

Community Profile

CITY OF BAYARD

North Platte NRD Hazard Mitigation Plan 2021

Local Planning Team

Table BYD.1: Bayard Local Planning Team

NAME	TITLE	JURISDICTION
SHELLY BOWLIN	City Clerk/Treasurer	City of Bayard
GREG SCHMALL	Mayor	City of Bayard

Location and Geography

The City of Bayard is located in the western central portion of Morrill County and covers an area of 1,731 square miles. The major waterway in the area is the North Platte River which is located to the south of the community.

Transportation

There is one major highway that passes through Bayard, US HWY 26. According to the Nebraska Department of Transportation, the average daily traffic count for US HWY 26 is 2,120 vehicles per day, 170 of which are heavy commercial vehicles.¹⁰ There is one railroad line which goes through the southern portion of the city. The local planning team noted an increase in the number of traffic accidents which have occurred on the road leading into town, specifically on Highway 26, L62A, and Highway 92.

Demographics

Bayard's estimated population in 2019 was 1,067. The following figure displays the historical population trend from 1910 to 2019. This figure indicates that the population of Bayard has generally decreased since 2000. A declining population can lead to more unoccupied housing that is not being maintained and is then at risk to high winds and other hazards. Furthermore, with fewer residents, there is decreasing tax revenue for the community, which can make implementation of mitigation projects fiscally challenging. Bayard's population accounted for 22 percent of Morrill County's population in 2019.¹¹

¹⁰ Nebraska Department of Transportation. 2018. "Interactive Statewide Traffic Counts Map." [map]. <https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.

¹¹ United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." [database file]. <https://data.census.gov>.

Figure BYD.1: City of Bayard

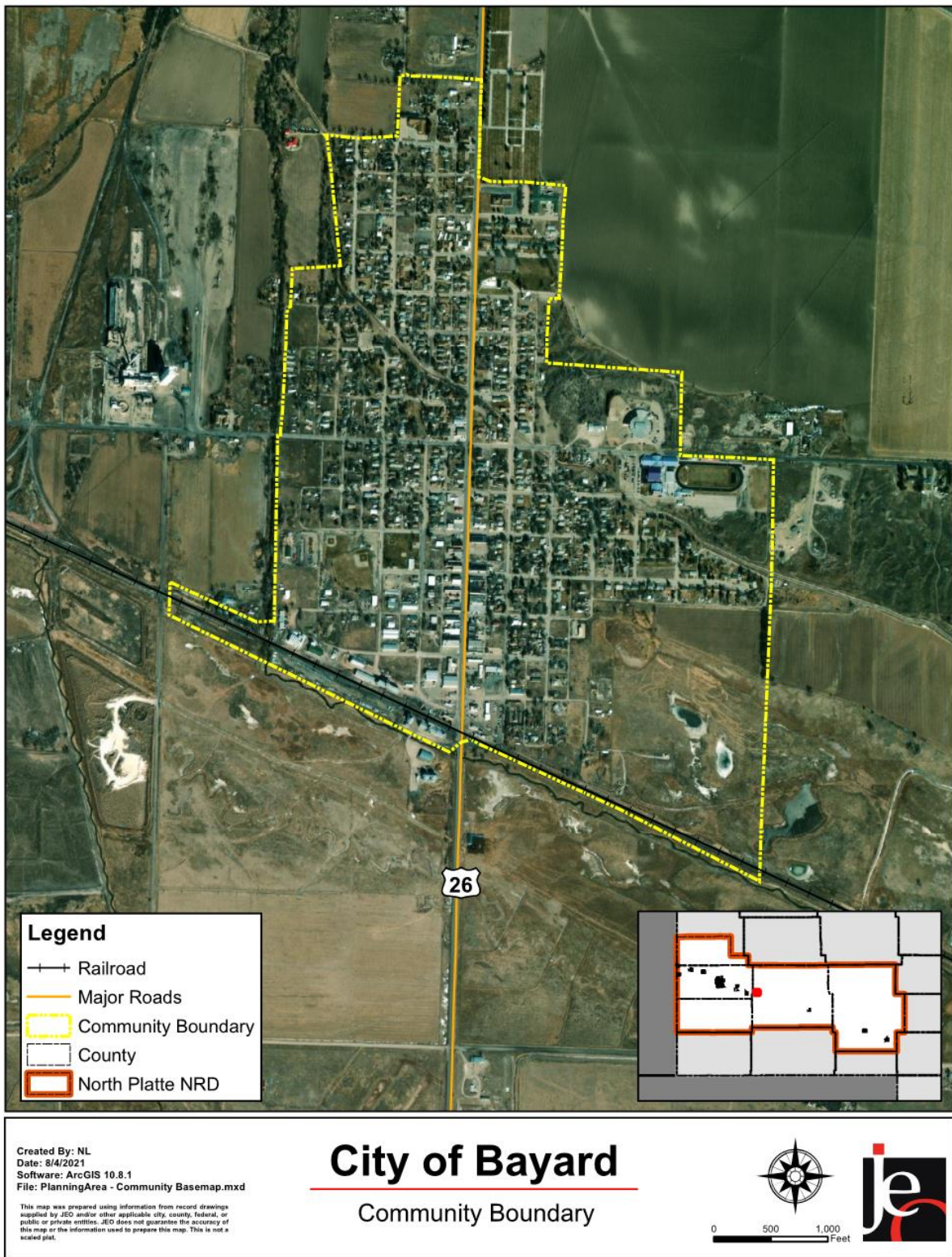
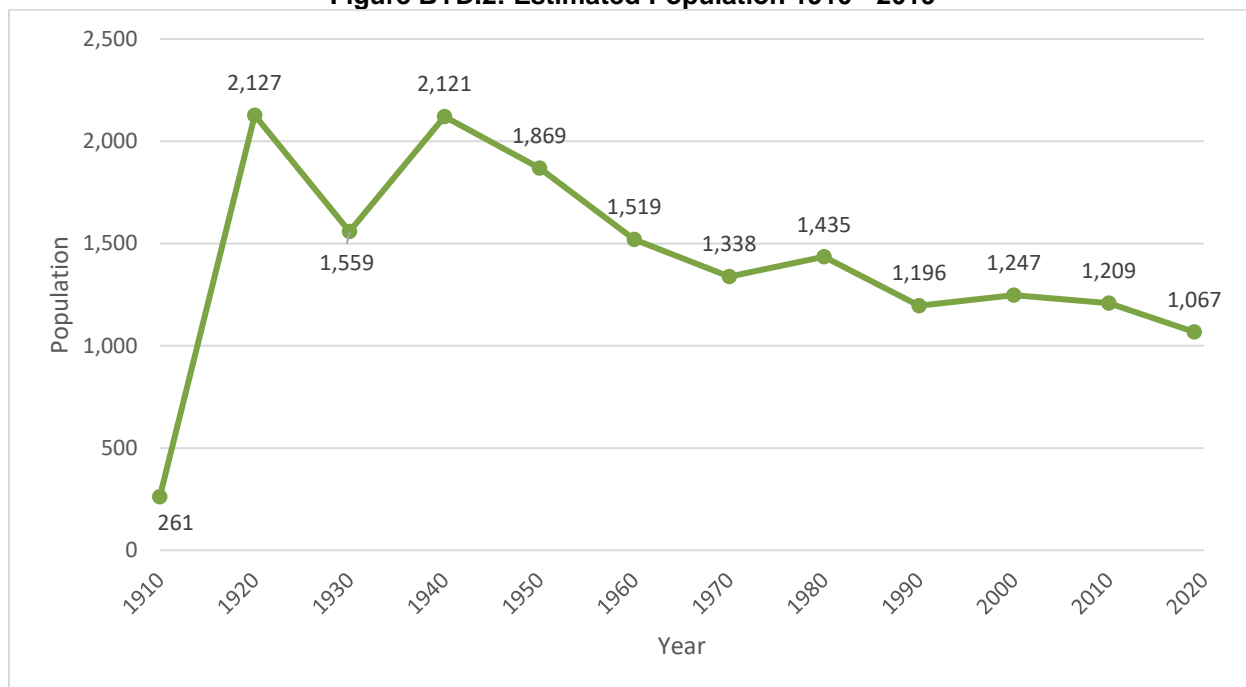


Figure BYD.2: Estimated Population 1910 - 2019

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, Bayard's population was:

- **Younger.** The median age of Bayard was 40.1 years old in 2019, compared with the county average of 42.3 years. Bayard's population became older since 2010, when the median age was 37.7 years old. Bayard had a similar proportion of people under 20 years old (25.8%) than the county (26.5%).¹³
- **More ethnically diverse.** Since 2010, Bayard grew more ethnically diverse. In 2010, 3.5% of Bayard's population was non-white. By 2019, 7.3% of Bayard's population was non-white. During that time, those who were non-white in the county stayed the same at 4.7%.¹⁴
- **More likely to be at the federal poverty line.** The poverty rate in Bayard (8.1% of families living below the federal poverty line) is more than the county's poverty rate (4.3%) in 2019.¹⁵

Employment and Economics

The city's economic base is a mixture of industries. In comparison to Morrill County, Bayard's economy had:

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Bayard included: Retail Trade, Transportation, and Educational Services.

¹² United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." [database file]. <https://data.census.gov>.

¹³ United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." [database file]. <https://data.census.gov>.

¹⁴ United States Census Bureau. "2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates." [database file]. <https://data.census.gov>.

¹⁵ United States Census Bureau. "2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." [database file]. <https://data.census.gov>.

Morrill County's employment sectors included Agriculture, Retail Trade, Transportation, and Educational Services in 2019.¹⁶

- **Lower household income.** Bayard's median household income in 2019 (\$41,711) was about \$4,500 lower than the county (\$46,194).¹⁷
- **Slightly fewer long-distance commuters.** 46.2% of workers in Bayard commuted for fewer than 15 minutes, compared with 48.0% of workers in Morrill County. 27.8% of workers in Bayard commute 30 minutes or more to work, compared to 28.8% of the county workers.¹⁸

Major Employers

Major employers in Bayard include Chimney Rock Public Power, Simplot, Chimney Rock Villa, and Bayard Public School District. However, the majority of residents in town commute to either Alliance, Scottsbluff, Gering, Bridgeport, or Sidney for work.

Housing

In comparison to Morrill County, Bayard's housing stock was:

- **More owner occupied.** 76.4% of occupied housing units in Bayard are owner occupied compared with 71.5% of occupied housing in Morrill County in 2019.¹⁹
- **Older housing stock.** Bayard has a larger share of housing built prior to 1970 (71.9% compared to 61.7%).²⁰
- **More multifamily homes.** Although the predominant housing type in the city is single family detached, Bayard contains more multifamily housing with five or more units per structure compared to the county (4.5% compared to 2.1%). 83.6% of housing in Bayard was single-family detached, compared with 86.4% of the county's housing. Bayard has a smaller share of mobile and manufactured housing (1.2%) compared to the county (8.1%).²¹ There are two mobile park homes in the village – one on the north side and the other on the west side of the city. Other mobile homes are scattered throughout the city.

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

Future Development Trends

Over the past five years the city has seen several changes. New businesses have opened on Main Street including a new market and a new coffee shop. The local restaurant has changed management and the city demolished a dilapidated home on 3rd Avenue. The Census Bureau has indicated the population in town has declined in recent years which the local planning team attributes to the closure of a local sugar factory which employed a large percentage of residents. No other industries have or are planning to move into the area. Additionally, there has been an emigration of younger residents to the eastern part of the state.

¹⁶ United States Census Bureau. "2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." [database file]. <https://data.census.gov>.

¹⁷ United States Census Bureau. "2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." [database file]. <https://data.census.gov>.

¹⁸ United States Census Bureau. "2019 Census Bureau American Community Survey: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. <https://data.census.gov>.

¹⁹ United States Census Bureau. "2019 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." [database file]. <https://data.census.gov>.

²⁰ United States Census Bureau. "2019 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." [database file]. <https://data.census.gov>.

²¹ United States Census Bureau. "2019 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." [database file]. <https://data.census.gov>.

In the next five years the city is working on an additional housing opportunity and to repair several existing homes or empty lots for new construction. At this time there are no new commercial or industrial businesses planned in town.

Structural Inventory and Valuation

The planning team requested GIS parcel data from the County Assessor as of July 2021. This data allowed the planning team to analyze 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 BYD.2: Bayard Parcel Valuation

TOTAL NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	% OF IMPROVEMENTS IN FLOODPLAIN
941	\$50,729,477	157	\$5,276,916	17%

Source: County Assessor

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one chemical storage site in Bayard that contain hazardous chemicals. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

Table BYD.3: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS
Simplet Grower Solutions	201 Main St

Source: Nebraska Department of Environment and Energy²²

Critical Facilities

The local planning team identified critical facilities that are vital for disaster response, public shelter, 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 BYD.4: Critical Facilities

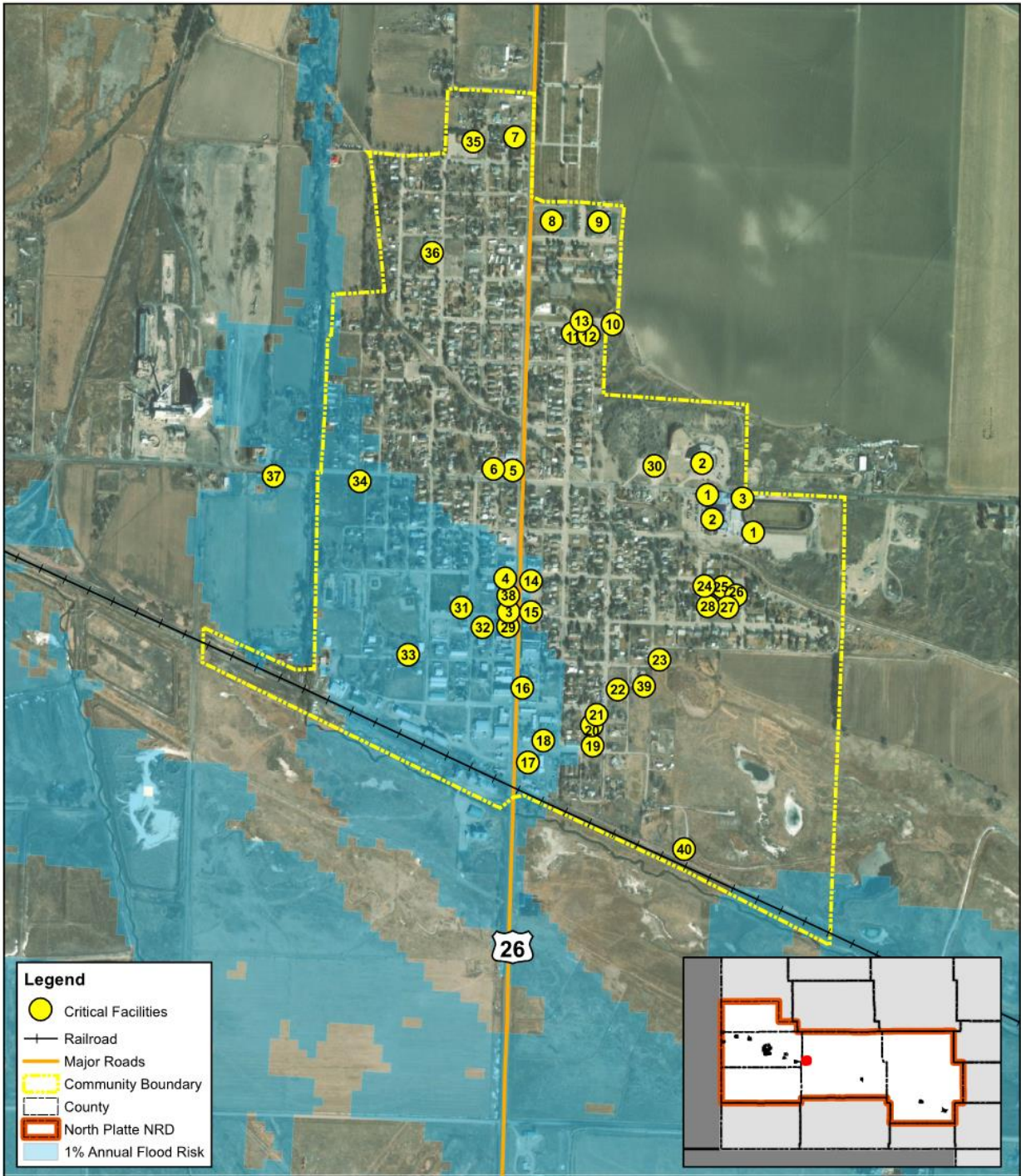
CF #	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	High School	Y	N	N
2	Elementary School	Y	N	N
3	Senior Center	N	N	Y
4	Reifschneider Gas Station	N	N	Y
5	Chimney Rock Public Power	N	N	N
6	Chimney Rock Public Power	N	N	N

²² Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed December 2020. <https://deq-iis.ne.gov/tier2/search.faces>.

SECTION SEVEN: CITY OF BAYARD COMMUNITY PROFILE

CF #	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
7	City of Bayard Substation	N	N	N
8	Faith United Church of Christ	Y	N	N
9	Chimney Rock Villa Assisted Living	N	N	N
10	Communication Tower	N	N	N
11	Water Tower	N	N	N
12	Well	N	N	N
13	Communication Tower	N	N	N
14	Fire Dept. - North	Y	Y	N
15	Police Department	Y	N	Y
16	Medical Clinic	Y	N	Y
17	Tiger Paws	N	N	Y
18	Fuel Storage	N	N	Y
19	Vale Verde Homes	N	N	N
20	Vale Verde Homes	N	N	N
21	Communication Equipment	N	N	N
22	Vale Verde Homes	N	N	N
23	Well	N	N	N
24	Assisted Living	N	N	N
25	Assisted Living	N	N	N
26	Assisted Living	N	N	N
27	Assisted Living	N	N	N
28	Assisted Living	N	N	N
29	City Offices	Y	N	Y
30	Bus Barn	Y	N	N
31	Library	Y	N	Y
32	City Maintenance Shed	N	N	Y
33	Fuel Storage	N	N	Y
34	Well	N	N	Y
35	Bayard Church of Christ	Y	N	N
36	Fuel Storage	N	N	N
37	City of Bayard - Substation	N	N	Y
38	US Post Office	N	N	Y
39	Water Treatment Plan	N	Y	N
40	Lift Station	N	N	N

Figure BYD.3: Critical Facilities



Created By: KD
 Date: 9/8/2021
 Software: ArcGIS 10.8.1
 File: CF - Community Basemap.mxd

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

City of Bayard

Critical Facilities



0 750 1,500 Feet

*1% Annual Flood Risk is based off a HAZUS generated floodplain

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Bayard has a mayor, a six-member city council, and the following offices.

- City Clerk
- City Treasurer
- Fire Department

Capability Assessment

The capability assessment consisted of a Capability Assessment Survey completed by the jurisdiction and a review of local existing policies, regulations, plans, and the programs. The survey is used to gather information regarding the jurisdiction's planning and regulatory capability; administrative and technical capability; fiscal capability; and educational and outreach capability.

Table BYD.5: Capability Assessment

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

SURVEY COMPONENTS/SUBCOMPONENTS		Yes/No
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	Yes
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
	Natural Disaster or Safety related school programs	Yes
	StormReady Certification	Yes
	Firewise Communities Certification	No
	Tree City USA	Yes
	Other (if any)	

Table BYD.6: Overall Capability

OVERALL CAPABILITY	LIMITED/MODERATE/HIGH
Financial resources needed to implement mitigation projects	Limited
Staff/expertise to implement projects	Moderate
Community support to implement projects	Limited
Time to devote to hazard mitigation	Moderate

Plan Maintenance

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

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the City Administrator and City Council. The plan will be reviewed no less than annually and will include the public in the

review and revision process by sharing information by posting information to the city website and sending letters to residents as needed.

Plan Integration

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

Comprehensive Plan (2017)

The comprehensive plan is designed to guide the future actions of the city and specifically addresses growth or development in the floodplain. It contains goals aimed at safe environmental growth, smart land use, discourages development in the floodplain. Currently there is no timeline to update the Comprehensive Plan.

Building Code (2018)

The building code sets standards for constructed buildings and structures. The city has adopted the 2018 International Building Codes.

Morrill County Local Emergency Operations Plan (2019)

The City of Bayard is an annex in the Morrill County Local Emergency Operations Plan (LEOP) last updated in 2019. 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.

Wildcat Hills Region Community Wildfire Protection Plan (2021)

The Nebraska Forest Service updated the Wildcat Hills Region Community Wildfire Protection Plan (CWPP) which includes Morrill County in July 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.

Historical Occurrences

See the Morrill County community profile for historical hazard events.

Hazard Prioritization

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

Agricultural Plant and Animal Disease

The city identified Agricultural Plant and Animal Disease as a hazard of concern due to the encroaching threat of Emerald Ash Borer. The city has a large amount of ash trees in town which are at risk of damage or mortality due to the borer. Dead and dying trees are more likely to lose limbs during storm events. The city and the Tree Board have worked to implement an Emerald Ash Borer Plan, with the intention of pursuing grants to remove and replace diseased trees and plan for future trees to be removed. A past tornado event in 2017 took out a large amount of city trees, especially in the cemetery and swimming pool park. These trees are slowly being replaced with non-Ash tree species.

Dam Failure

The city identified Dam Failure as a hazard of concern as there are two dams north of the city: Wildhorse Reservoir 5-A and 14-A. The inundation area of these dams would impact the city center if they were to fail. These dams are owned and maintained by Farmers Irrigation and Pathfinder Irrigation Districts and are inspected by NeDNR annually. During past flood events the dams have performed as expected.

Drought

The Local Planning Team indicated that drought is a top concern for Bayard. The primary concern of the city is largely an economic one, as much of the surrounding community is agricultural. Bayard recognizes the possibility of going into a drought at any time. The Local Planning Team defines drought as a “lack of sufficient water to meet the demands of the consumer”. While the City of Bayard does not monitor water status, the North Platte NRD does a good job of drought monitoring and awareness. Presently, the city has three wells, and a water tower to function as a reservoir for storage. The Local Planning Team ranks the water supply sufficient. Some factors make the city of Bayard more vulnerable to lasting impacts of drought: the community does not have a water conservation program in case of a drought event, nor does a landscape ordinance exist encouraging native plantings/establish irrigation limits. Both of these actions can be helpful when working to prevent drought impacts or water shortages.

Hazardous Materials – Transportation

The Local Planning Team indicated that chemical spills from a transportation event is a top concern for the city of Bayard. The concern of a chemical spill is primarily related to exposure to residents, fire, explosion, water contamination, soil contamination, and air contamination. In the past, an agricultural sprayer accidentally sprayed Main Street with an unknown chemical. No harmful side effects were felt as a result of this event. Both Highway 26 and Burlington Northern Railroad transport a large volume of agricultural chemicals into Bayard and the surrounding areas. While these vehicles are required to have chemical placards notating what is contained, the public seldom recognizes different chemicals by their chemical placard. The City of Bayard is especially concerned about a chemical event from Highway 26 affecting operations at critical facilities. The fire department, police department city office, medical clinic, and nursing homes are all located along Highway 26. In the case of a hazardous material spill, Bayard Fire Department, Morrill County Sheriff's Office, and local emergency management would be first to respond.

Severe Thunderstorms (includes Hail)

The Local Planning Team indicated that severe thunderstorms are a significant concern for the city. The summer months of 2013 and 2014 saw many damages from severe thunderstorms. The city experienced flash flooding, tree damages, wind, hail, and water damages to buildings and electrical outages. Past events have also produced significant damage to roofs and windows on both commercial and residential buildings. Going forward, the city is concerned about further damages to homes and businesses, as well as interruption of goods and services. To protect

against lasting impacts from severe thunderstorms, the city has outfitted computers with municipal records with backup systems to protect records from being erased and insured all municipal facilities. Residents can receive emergency storm alerts from the county and National Weather Service. The community has many trees city-wide, which need to be removed or trimmed. Older, sick trees can be extremely dangerous in thunderstorm events. The city does have a tree board and is working to trim trees on an ongoing basis. Several critical facilities need back up generators including wells, lift stations, the police department, city office, and local stores.

Severe Winter Storms

The Local Planning Team indicated that severe winter storms are a significant concern for the city. The winter and early spring months of 2012, 2013 and 2014 were especially difficult years for winter storms. The city experienced road closures, power outages, roofs collapsing, and heat failures. Going forward, the city is most concerned about the elderly population in Bayard, who may not be able to take care of themselves without access to power or without heat. The city uses Blackboard Connect to notify residents of any snow emergencies that occur in town. The city is also concerned about the interruption of goods and services during a severe winter storm event, which would have an effect on the economy. To expedite the process of snow removal, the city has established snow removal routes, which are a priority before any other streets in Bayard. The Bayard Street Department works to clear Highway 26, East 7th street, East 13th street, East 6th Street, 8th Street, and East 5th Street. To remove snow, the Streets Department uses a front-end loader, a dump truck, a grader, skid-steer with snow blower attachment, and has a salt/sand spreader. Using these resources alone, the city staff have a very hard time clearing roadways quickly. Bayard will be seeking funding for additional equipment and staff.

Tornadoes and High Winds

Tornadoes and high winds are common across the county and have impacted the city in the past. An EF1 tornado hit the city in 2017 and caused damage to local trees, power lines, homes, and the nursing home. There are two sirens in the city which are activated through Morrill County dispatch. These sirens are believed to hit all residents in town. There are no FEMA certified safe rooms in Bayard; however, many residents have basements in which to seek shelter. To help mitigate potential damages, the city's parks department has been working to remove hazardous trees around powerlines and in the public right of way.

Mitigation Strategy

Continued Mitigation and Strategic Actions

MITIGATION ACTION	ALERT/WARNING SIRENS
DESCRIPTION	Perform an evaluation of existing alert sirens in order to determine sirens which should be replaced or upgraded. Install new sirens where lacking and remote activation.
HAZARD(S)	All hazards
ESTIMATED COST	\$25,000
FUNDING	General Fund
TIMELINE	1 year
PRIORITY	Medium
LEAD AGENCY	City Council, Region 21 Emergency Management
STATUS	This project has not yet been started.

MITIGATION ACTION	BACKUP GENERATORS
DESCRIPTION	Provide a portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters.
HAZARD(S)	All hazards
ESTIMATED COST	\$15,000-\$30,000
FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	City Administrator
STATUS	This project has not yet been started.

MITIGATION ACTION	DRAINAGE STUDY / STORMWATER MASTER PLAN
DESCRIPTION	Preliminary drainage studies and assessments can be conducted to identify and prioritize design improvements to address site specific localized flooding/drainage issues to reduce and/or alleviate flooding. Stormwater master plans can be conducted to perform a community-wide stormwater evaluation, identifying multiple problem areas and potential drainage improvements.
HAZARD(S)	Flooding
ESTIMATED COST	\$10,000-\$100,000
FUNDING	General Fund
TIMELINE	1 year
PRIORITY	Low
LEAD AGENCY	City Council
STATUS	This project has not yet been started.

SECTION SEVEN: CITY OF BAYARD COMMUNITY PROFILE

MITIGATION ACTION	ELECTRICAL SYSTEM LOOPED DISTRIBUTION/REDUNDANCIES
DESCRIPTION	Provide looped distribution service and other redundancies in the electrical system as a backup power supply in the event the primary system is destroyed or fails.
HAZARD(S)	Tornadoes and High Winds, Severe Winter Storms, Severe Thunderstorms
ESTIMATED COST	\$75,000 per mile
FUNDING	General Fund
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Utility Superintendent
STATUS	This project has not yet been started.

MITIGATION ACTION	FLOODPLAIN REGULATION UPDATES
DESCRIPTION	Update local floodplain regulations for structures located in the 1% annual flood risk area. Strict enforcement of the type of development and elevations of structures should be considered through issuance of building permits by any community or County.
HAZARD(S)	Flooding
ESTIMATED COST	\$4,000
FUNDING	General Fund
TIMELINE	1 year
PRIORITY	Low
LEAD AGENCY	City Council, Floodplain Administrator
STATUS	This project has not yet been started.

MITIGATION ACTION	MAINTAIN GOOD STANDING IN THE NFIP
DESCRIPTION	Maintain good standing with the National Flood Insurance Program (NFIP) including floodplain management practices/ requirements and regulation enforcements and updates.
HAZARD(S)	Flooding
ESTIMATED COST	Staff Time
FUNDING	General Fund
TIMELINE	Ongoing
PRIORITY	Low
LEAD AGENCY	City Council, Floodplain Administrator
STATUS	Bayard will continue to enforce floodplain management requirements, including regulating new construction in the Special Flood Hazard Areas.

MITIGATION ACTION	PUBLIC AWARENESS/EDUCATION
DESCRIPTION	Through activities such as outreach projects, distribution of maps and environmental education increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards. In addition, educate citizens on erosion control and water conservation methods.
HAZARD(S)	All hazards
ESTIMATED COST	\$500+
FUNDING	General Fund
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	City Council, Region 21 Emergency Management
STATUS	This project has not yet been started.

MITIGATION ACTION	SAFE ROOMS
DESCRIPTION	Assess, design and construct fully supplied safe rooms in highly vulnerable urban and rural areas such as mobile home parks, campgrounds, schools, and other such areas throughout the planning area. Assess the adequacy of current public buildings to be used as safe rooms. Construct safe rooms in areas of greatest need, either as new construction or retro fitting.
HAZARD(S)	Tornadoes, High Winds
ESTIMATED COST	\$200-\$300/sq ft stand alone; \$150-\$200/ sq ft addition/retrofit
FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	City Council
STATUS	This project has not yet been started.

MITIGATION ACTION	STABILIZE/ANCHOR FERTILIZER, FUEL, AND PROPANE TANKS AND SECURE AT-RISK DEVELOPMENT
DESCRIPTION	Anchor fuel tanks to prevent movement. If left unanchored, tanks could present a major threat to property and safety in a tornado or high wind event. "Tie downs" can be used to anchor manufactured homes to their pads or concrete foundations.
HAZARD(S)	Tornadoes, High Winds
ESTIMATED COST	\$1,000+
FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Low
LEAD AGENCY	City Council
STATUS	This project has not yet been started.

SECTION SEVEN: CITY OF BAYARD COMMUNITY PROFILE

MITIGATION ACTION	STORMWATER SYSTEM AND DRAINAGE IMPROVEMENTS
DESCRIPTION	Communities generally utilize underground storm water systems comprising of pipes and inlets to convey runoff. Undersized systems can contribute to localize flooding. Storm water system improvements may include pipe upsizing and additional inlets.
HAZARD(S)	Flooding
ESTIMATED COST	\$10,000-\$100,000+
FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Low
LEAD AGENCY	City Council
STATUS	This project has not yet been started.

MITIGATION ACTION	WEATHER RADIOS
DESCRIPTION	Conduct an inventory of weather radios at schools and other critical facilities and provide new radios as needed.
HAZARD(S)	All hazards
ESTIMATED COST	\$50 per radio
FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Police Department, Fire Department
STATUS	Some locations have been equipped, still working to outfit other locations.

Community Profile

CITY OF BRIDGEPORT

North Platte NRD Hazard Mitigation Plan 2021

Local Planning Team

Table BGP.1: Bridgeport Local Planning Team

NAME	TITLE	JURISDICTION
LAWRENCE HEINRICH	Public Works Director	City of Bridgeport
DORI HUCK	Clerk/Treasurer	City of Bridgeport
MIKE BEYER	Electric Foreman	City of Bridgeport
DAVE SMITH	Street Superintendent	City of Bridgeport

Location and Geography

The City of Bridgeport is located in the central portion of Morrill County and covers an area of 564 square miles. Major waterways in the area include the North Platte River which is located directly north of the community.

Transportation

There are three major highways that travel through Bridgeport, US HWY 26, US HWY 385, and NE HWY 88. According to the Nebraska Department of Transportation, the most traveled route is US HWY 385 with an average daily traffic count of 6,370 vehicles per day, 440 of which are heavy commercial vehicles.²³ There is one railroad line which runs along the western border of the city.

Demographics

Bridgeport's estimated population in 2019 was 1,686. The following figure displays the historical population trend from 1910 to 2019. This figure indicates that the population of Bridgeport has increased since 2010. 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. Bridgeport's population accounted for 35 percent of Morrill County's population in 2019.²⁴

²³ Nebraska Department of Transportation. 2018. "Interactive Statewide Traffic Counts Map." [map]. <https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.

²⁴ United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." [database file]. <https://data.census.gov>.

Figure BGP.1: City of Bridgeport

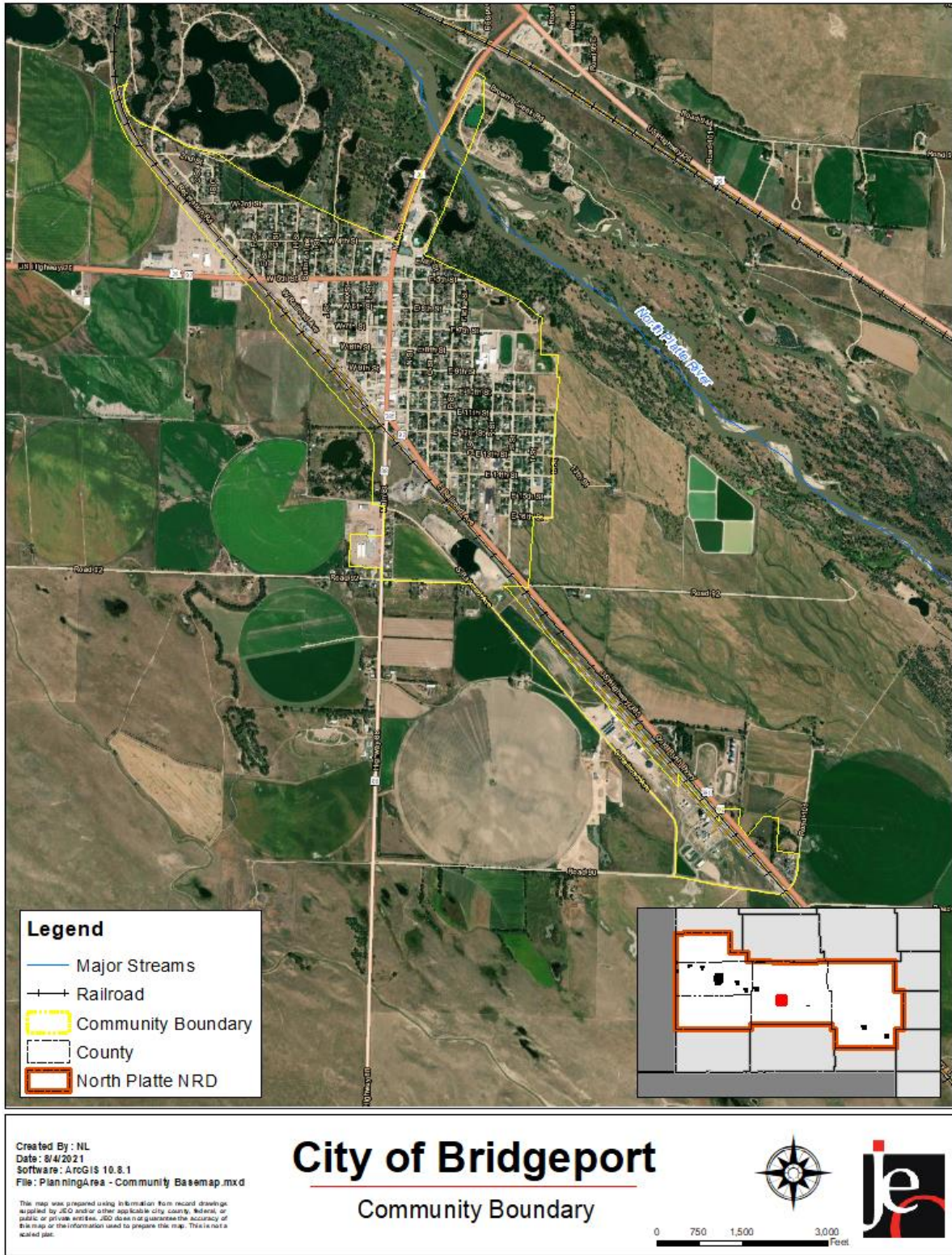
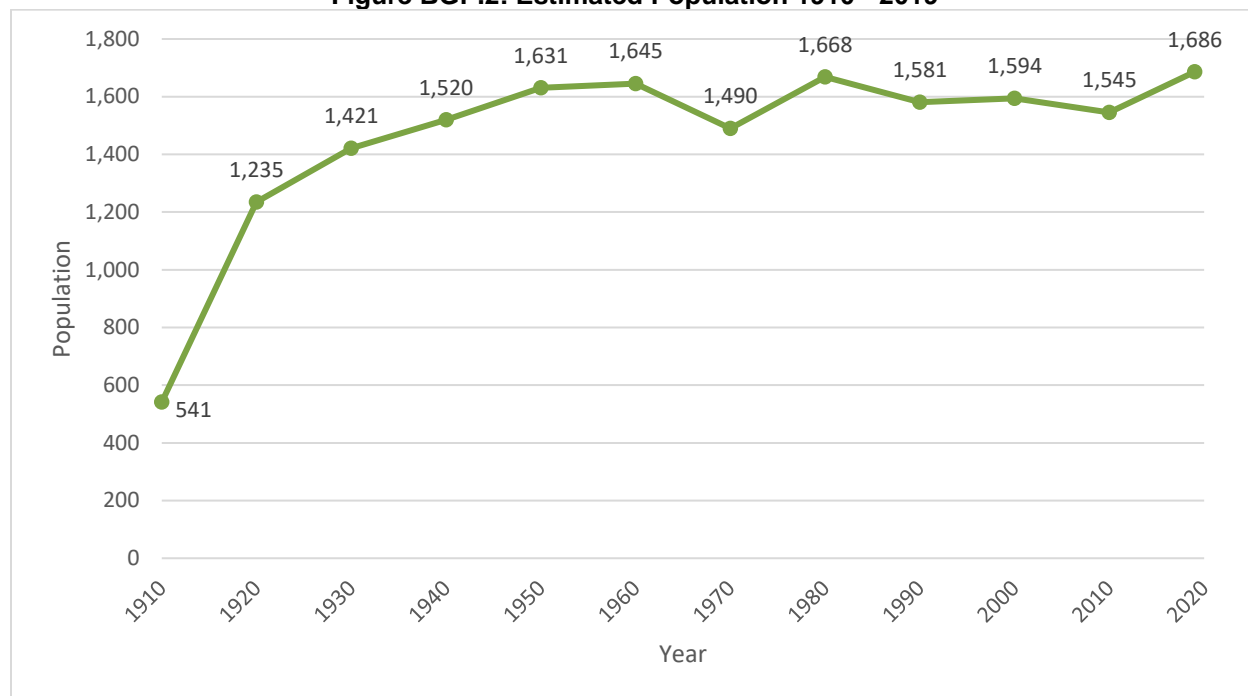


Figure BGP.2: Estimated Population 1910 - 2019

Source: U.S. Census Bureau²⁵

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

- **Younger.** The median age of Bridgeport was 37.9 years old in 2019, compared with the county average of 42.3 years. Bridgeport's population became older since 2010, when the median age was 34.8 years old. Bridgeport had a similar proportion of people under 20 years old (26.5%) than the county (26.5%).²⁶
- **As ethnically diverse.** Since 2010, Bridgeport grew slightly more ethnically diverse. In 2010, 4.6% of Bridgeport's population was non-white. By 2019, 4.9% of Bridgeport's population was non-white. During that time, those who were non-white in the county stayed the same at 4.7%.²⁷
- **More likely to be at the federal poverty line.** The poverty rate in Bridgeport (2.4% of families living below the federal poverty line) is more than the county's poverty rate (4.3%) in 2019.²⁸

Employment and Economics

The city's economic base is a mixture of industries. In comparison to Morrill County, Bridgeport's economy had:

- **Different mix of industries.** Employment sectors accounting for 10% or more of employment in Bridgeport included: Manufacturing and Educational Services. Morrill

²⁵ United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." [database file]. <https://data.census.gov>.

²⁶ United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." [database file]. <https://data.census.gov>.

²⁷ United States Census Bureau. "2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates." [database file]. <https://data.census.gov>.

²⁸ United States Census Bureau. "2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." [database file]. <https://data.census.gov>.

County's employment sectors included Agriculture, Retail Trade, Transportation, and Educational Services in 2019.²⁹

- **Higher household income.** Bridgeport's median household income in 2019 (\$47,467) was about \$1,300 higher than the county (\$46,194).³⁰
- **More long-distance commuters.** 57.1% of workers in Bridgeport commuted for fewer than 15 minutes, compared with 48.0% of workers in Morrill County. 31.9% of workers in Bridgeport commute 30 minutes or more to work, compared to 28.8% of the county workers.³¹

Major Employers

Major employers in Bridgeport include Morrill County, NDOT, Trinidad Benham, MCCH, Sonny's, City of Bridgeport, 21st Century, Bridgeport Ethanol Plant, Progress Rail, and Bridgeport Schools. A large portion of residents commute to Scottsbluff for employment as well.

Housing

In comparison to Morrill County, Bridgeport's housing stock was:

- **Similarly owner occupied.** 70.7% of occupied housing units in Bridgeport are owner occupied compared with 71.5% of occupied housing in Morrill County in 2019.³²
- **Younger housing stock.** Bridgeport has a smaller share of housing built prior to 1970 (57.2% compared to 61.7%).³³
- **More multifamily homes.** Although the predominant housing type in the city is single family detached, Bridgeport contains more multifamily housing with five or more units per structure compared to the county (3.6% compared to 2.1%). 86.1% of housing in Bridgeport was single-family detached, compared with 86.4% of the county's housing. Bridgeport has a larger share of mobile and manufactured housing (9.2%) compared to the county (8.1%).³⁴ The local planning team noted the northwest corner of the community is primarily mobile and manufactured homes.

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

Future Development Trends

Over the past five years minor developments and changes have been reported in the city. The Morrill County Community Hospital purchased two additional buildings on Main Street and remodeled them to their use. The local planning team noted that employment opportunities have increased in the city over the past five years which has led to additional growth. At this time there are no new residential or commercial developments planned for the next five years.

²⁹ United States Census Bureau. "2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." [database file]. <https://data.census.gov>.

³⁰ United States Census Bureau. "2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." [database file]. <https://data.census.gov>.

³¹ United States Census Bureau. "2019 Census Bureau American Community Survey: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. <https://data.census.gov>.

³² United States Census Bureau. "2019 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." [database file]. <https://data.census.gov>.

³³ United States Census Bureau. "2019 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." [database file]. <https://data.census.gov>.

³⁴ United States Census Bureau. "2019 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." [database file]. <https://data.census.gov>.

Structural Inventory and Valuation

The planning team requested GIS parcel data from the County Assessor as of July 2021. This data allowed the planning team to analyze 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 BGP.2: Bridgeport Parcel Valuation

TOTAL NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	% OF IMPROVEMENTS IN FLOODPLAIN
772	\$107,278,007	35	\$5,922,020	5%

Source: County Assessor

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are 17 chemical storage sites in Bridgeport that contain hazardous chemicals. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

Table BGP.3: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS
TURVEY 1-A	Road 92
BRIDGEPORT AMPRIDE	102 W 5th St
PANHANDLE CO-OP ASSN FERT/BULK	425 W Railroad Ave
STATE-DUNLAP 1 & 3	Road 92
NDOT BRIDGEPORT YARD	510 E Highway 385
CENTURYLINK	1001 N St
WAPA BRIDGEPORT SUBSTATION	Highway 26 W
PROGRESS RAIL SERVICES CORP	9516 Road 98
WAITMAN 1 LEASE	Roads 88 & 81 S
SOUTH BRIDGEPORT D UNIT	Roads 88 & 92
MATADOR UNIT	Road 14
NUTRIEN AG SOLUTIONS	9262 S Railroad Ave
ROSS 1-R TANK BATTERY	Road 62
RUEHMAN 1	Road 78
BRIDGEPORT ETHANOL LLC	9216 County Road 90 St
BRIDGEPORT BATCH PLANT	428 W Railroad Ave
COOP LINDBERG 32-4	Roads 74 & 81

Source: Nebraska Department of Environment and Energy³⁵

³⁵ Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed December 2020. <https://deg-iis.ne.gov/tier2/search.faces>.

Critical Facilities

The local planning team identified critical facilities that are vital for disaster response, public shelter, 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.

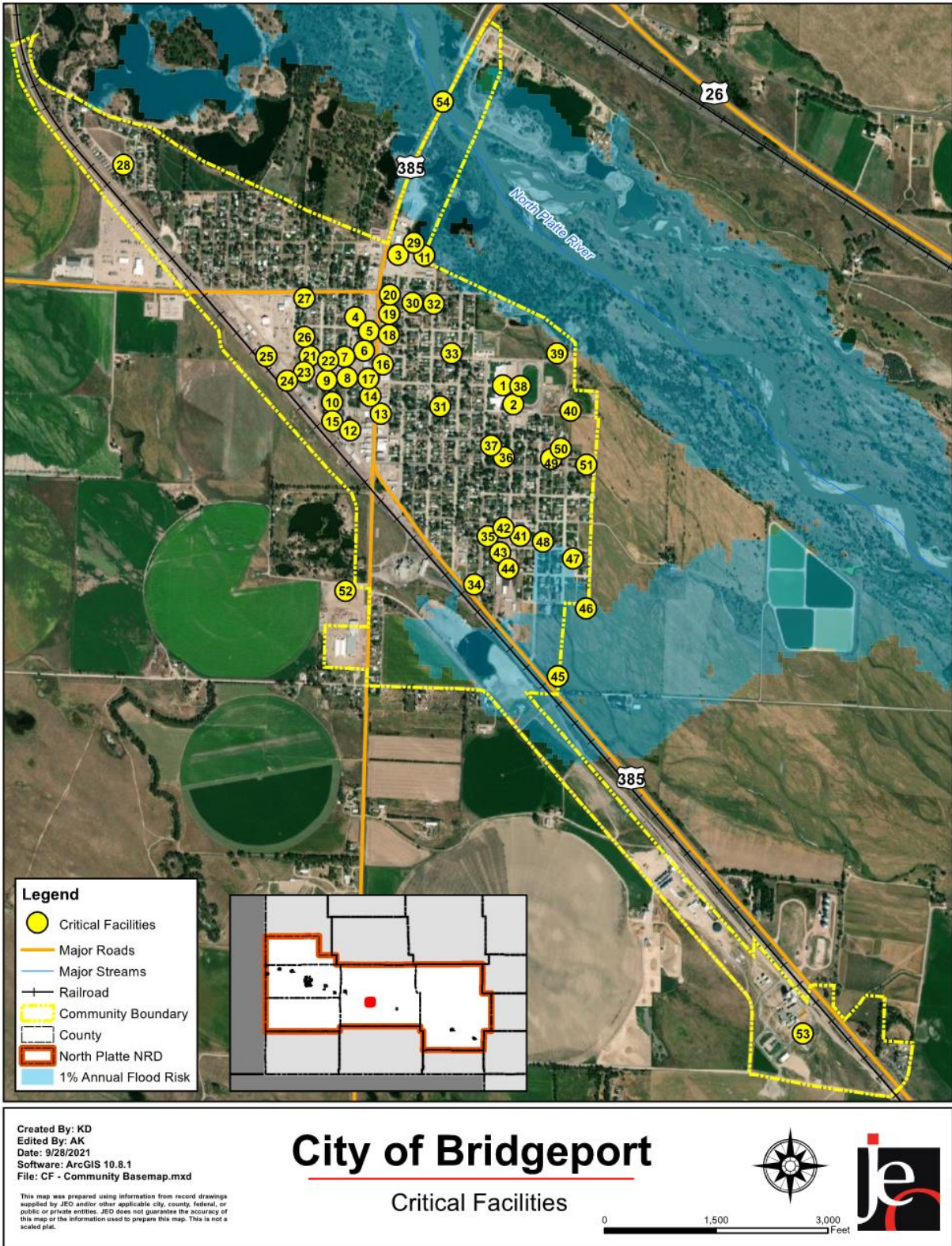
Table BGP.4: Critical Facilities

CF #	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	School	Y	N	N
2	School	Y	N	N
3	Community Center	Y	N	N
4	Sherriff	Y	Y	N
5	County Courthouse	Y	Y	N
6	County Offices	N	Y	N
7	American Legion	N	N	N
8	Morrill County Police Annex	N	N	N
9	County Weed Control	N	N	N
10	City Street Dept	N	N	N
11	Water Tower	N	N	N
12	US Post Office	Y	N	N
13	USDA Service Center	N	N	N
14	City Office/ Utilities Department	Y	N	N
15	Police Dept	N	N	N
16	Library	Y	N	N
17	DNR Field Office	N	N	N
18	Masons	Y	N	N
19	UNL Extension Office	N	N	N
20	St Paul's Lutheran	Y	N	N
21	Tennis Courts	N	N	N
22	Park	N	N	N
23	County Highway Dept	Y	N	N
24	Fuel	N	N	N
25	Fuel	N	N	N
26	Church of Christ	Y	N	N
27	Assembly Of God	Y	N	N
28	Park	N	N	N
29	Pool	N	N	N
30	Seventh Day Adventist	N	N	N
31	Headstart	N	N	N
32	Skyview at Bridgeport Nursing Home	Y	Y	N
33	All Souls Catholic Church	Y	N	N
34	Community Church	Y	N	N
35	Faith Baptist	Y	N	N
36	Park	N	N	N

SECTION SEVEN: CITY OF BRIDGEPORT COMMUNITY PROFILE

CF #	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
37	Well	N	Y	N
38	Football Field & Facility	N	N	N
39	Water Services	N	Y	N
40	Ball Fields	N	N	N
41	County Hospital	Y	Y	N
42	County Hospital Resource Center	Y	Y	N
43	NDOR	N	N	N
44	Fuel	N	N	N
45	Comm Tower	N	N	Y
46	Well	N	Y	Y
47	Church	Y	N	N
48	Medical Center	Y	Y	N
49	First Presbyterian Church	N	N	N
50	Park	N	N	N
51	Well	N	N	N
52	Rural Fire District 1	Y	N	N
53	Ethanol	N	Y	N
54	Bridge	N	N	Y

Figure BGP.3: Critical Facilities



*1% Annual Flood Risk is based off a HAZUS generated floodplain

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Bridgeport has a mayor, a four-member city council, and the following offices.

- Clerk/Treasurer
- Public Works Director
- Attorney
- Utility Foreman
- Streets Superintendent
- Fire Chief
- Sewage Plant Operator
- Park & Recreation
- Planning Commission Chairman

Capability Assessment

The capability assessment consisted of a Capability Assessment Survey completed by the jurisdiction and a review of local existing policies, regulations, plans, and the programs. The survey is used to gather information regarding the jurisdiction's planning and regulatory capability; administrative and technical capability; fiscal capability; and educational and outreach capability.

Table BGP.5: Capability Assessment

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

SURVEY COMPONENTS/SUBCOMPONENTS		Yes/No
	Mutual Aid Agreement	Yes
	Other (if any)	
Fiscal Capability	Capital Improvement Plan/ 1 & 6 Year plan	No
	Applied for grants in the past	Yes
	Awarded a grant in the past	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 & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	Yes
	Other (if any)	

Table BGP.6: Overall Capability

OVERALL CAPABILITY	LIMITED/MODERATE/HIGH
Financial resources needed to implement mitigation projects	Moderate
Staff/expertise to implement projects	Moderate
Community support to implement projects	High
Time to devote to hazard mitigation	Limited

Plan Maintenance

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

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the City Administrator and City Council. The plan will be reviewed no less than annually and will include the public in the review and revision process by sharing information by posting information to the city website and sending letters to residents as needed.

Plan Integration

The City of Bridgeport has several planning documents that relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan. The city will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates. Currently there is not a plan or schedule related to the update of other (non-HMP) local planning mechanisms, thus there is no formal strategy for plan integration at this time. The priorities and mitigation strategies included in this plan will be revisited annually, as established in the plan review section of this document, for consideration during the development of the annual budget. As resources are available mitigation projects will be implemented.

Comprehensive Plan (2012)

The comprehensive plan is designed to guide the future actions of the city and addresses hazards profiled in the HMP including hail, tornadoes, and flooding. It contains goals aimed at safe growth and encourages infill development. Currently there is no timeline to update the Comprehensive Plan.

Building Code (2020)

The building code sets standards for constructed buildings and structures. The city has adopted the 2020 International Building Codes.

Floodplain Ordinance (1987), Zoning Ordinance (2019)

The city's floodplain ordinance, zoning ordinance, and subdivision regulations outline where and how development should occur in the future. These documents discourage development in the floodplain, limit population density in the floodplain, include well setback requirements, and outlines water restrictions if needed. These documents are reviewed and amended as needed.

Morrill County Local Emergency Operations Plan (2019)

The City of Bridgeport is an annex in the Morrill County Local Emergency Operations Plan (LEOP) last updated in 2019. 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.

Wildcat Hills Region Community Wildfire Protection Plan (2021)

The Nebraska Forest Service updated the Wildcat Hills Region Community Wildfire Protection Plan (CWPP) which includes Morrill County in July 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.

Historical Occurrences

See the Morrill County community profile for historical hazard events.

Hazard Prioritization

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

Flooding

According to the Local Planning Team, the most significant flooding events in Bridgeport occurred in late May/ early June of 2010, and late May/early June of 2015. During the 2010 event, the city experienced primarily damages in the businesses on Main Street. During the 2015 event, the city experienced "catastrophic failure" of the sanitary sewer and overflowing of that system. Areas especially prone to flooding in Bridgeport include: Main Street, and the intersection of "S" and 13th streets. The intersection of "S" and 13th Streets is very close to the Morrill County Community Hospital, and may present complicated transportation issues, should the intersection flood. The city experiences primarily flash flooding on Main Street, and properties bordering Dugout Creek. The Local Planning Team has also indicated that the community struggles with poor storm water drainage issues, which may compound the issue of flooding. The city identified the need to develop and implement a stormwater drainage system inspection and cleanup process.

Severe Thunderstorms (Includes Hail)

According to the Local Planning Team, severe thunderstorms are a top concern for Bridgeport. The Local Planning Team indicated that severe thunderstorms occur on a yearly basis, which is consistent with the planning area. Generally, impacts of severe thunderstorms are heavy rains causing flooding and damaging hail. The city has worked to minimize effects of a severe thunderstorm by putting surge protectors on electronic devices containing municipal records. Bridgeport has also placed a generator in the nursing home, which may need to be replaced. Two lift stations have been identified which need backup generators: Trinidad and Bomgaars. To improve awareness of severe weather events, the city has installed weather radios in critical facilities. There are a few attributes of Bridgeport which make the community more susceptible to lasting impacts from a severe thunderstorm, specifically regarding hazardous trees. The city struggles to maintain trees on a consistent basis. Due to Bridgeport's older housing stock, with more than 35 percent of homes being built before 1940, these homes are liable to more significant damages because of the aging of building materials. Older homes also may be found as a source for shrapnel affecting other homes nearby.

Severe Winter Storms

According to the Local Planning Team, severe winter storms are a top concern for Bridgeport. Heavy snow and winds in March 2019 caused major power outages throughout the city and

blocked many arterial roads in the city. During the February 2021 extreme cold snap power outages occurred and many sewer lines froze solid. The most significant concern for the City of Bridgeport is transportation for fire/ EMS and damages to power lines. The City of Bridgeport has worked to minimize the impact of severe winter storms purchasing and maintaining many vehicles for snow removal, including a road grader, a snow blower, dump trucks, a pay loader, and a bobcat. The Bridgeport Local Planning Team believes that current resources are sufficient for local events. Emergency snow routes have been identified in the city which include 11th Street, South Street, Main Street, 5th Street, Railroad Avenue, and Recreation Road.

Tornadoes and High Winds

According to the Local Planning Team, tornadoes are a top concern for the community. The primary concern for the city is catastrophic damage because of a tornado. The NCEI reports five tornado events which have impacted Bridgeport or the surrounding area. These events caused an estimated \$320,000 in property damages. More recently high wind events in the county have brought down powerlines and caused outages lasting several hours to days.

In an effort to protect Bridgeport from lasting impacts from a tornado, the city has worked to backup billing records two to three times per week, to protect against a storm surge of electricity. While the community does not have designated safe rooms, they have made agreements with local churches, which are to open their doors during tornado warnings. The city has several emergency alert sirens which are checked and updated regularly for functionality. The sirens are placed to reach all portions of the city. To prepare for large-scale disasters that may exhaust Bridgeport’s response resources, the city has signed multiple mutual aid agreements with neighboring fire departments to assist in an emergency. To increase awareness of a severe weather event, Region 21 Emergency Management does offer opt-in text alerts through CodeRED. In addition, the Cheyenne Weather Service also provides an annual in-service for weather awareness.

Mitigation Strategy

Completed Mitigation and Strategic Actions

MITIGATION ACTION	TREE CITY USA
DESCRIPTION	Work to become a Tree City USA through the National Arbor Day Foundation in order to receive direction, technical assistance, and public education on how to establish a hazardous tree identification and removal program in order to limited potential tree damage and damages caused by trees in a community when a storm event occurs. The four main requirements include: 1) Establish a tree board; 2) Enact a tree care ordinance; 3) Establish a forestry care program; 4) Enact an Arbor Day observance and proclamation.
HAZARD(S)	Severe Thunderstorms, Tornadoes and High Winds, Severe Winter Storms
STATUS	The city joined the Tree City USA program in 2020.

Continued Mitigation and Strategic Actions

MITIGATION ACTION	BACKUP GENERATORS
DESCRIPTION	Bridgeport currently has an inadequate generator at the Skyview nursing home and will require one at the lift station.
HAZARD(S)	All hazards
ESTIMATED COST	\$15,000-\$30,000
FUNDING	Nursing Home Revenues, Donations, City Utility Revenues
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Skyview Board of Directors, Utilities Department
STATUS	Currently pricing out new generators and planning for installation.

MITIGATION ACTION	ELECTRICAL SYSTEM LOOPED DISTRIBUTION/REDUNDANCIES
DESCRIPTION	Provide looped distribution service and other redundancies in the electrical system as a backup power supply in the event the primary system is destroyed or fails.
HAZARD(S)	Tornadoes and High Winds, Severe Winter Storms, Severe Thunderstorms
ESTIMATED COST	\$40,000 per mile
FUNDING	City Electrical Fees
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	City Utilities Department
STATUS	Currently rebuilding northwest section of town and acquiring materials. Overall goal is to improve redundancy.

MITIGATION ACTION	FLOODPLAIN REGULATIONS UPDATES
DESCRIPTION	Updates local floodplain regulations for structures located in the 100-year floodplain. Strict enforcement of the type of development and elevations of structures should be considered through issuance of building permits by any community or County. Continue education of building inspectors or Certified Floodplain Managers. Encourage building regulations for storm-resistance structures.
HAZARD(S)	Flooding
ESTIMATED COST	Staff time
FUNDING	General Fund
TIMELINE	1-5 years
PRIORITY	Medium
LEAD AGENCY	Streets Department
STATUS	The city's planning commission is currently working on regulations and the permitting process.

SECTION SEVEN: CITY OF BRIDGEPORT COMMUNITY PROFILE

MITIGATION ACTION	LEVEE IMPROVEMENTS
DESCRIPTION	Levees serve to provide flood protection to businesses and residents during large storm events. Improvements to existing levees will increase flood protection. If possible, the structure may be designed to FEMA standards to provide 1% Annual Flood Risk Area protection providing additional flood insurance benefits. Improve the levee north of Bridgeport
HAZARD(S)	Flooding, Levee Failure
ESTIMATED COST	\$500,000+
FUNDING	General Fund, HMA, USACE
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	City Street Department
STATUS	City is currently working on maintenance and inspections to maintain levee condition.

MITIGATION ACTION	MAINTAIN GOOD STANDING IN THE NFIP
DESCRIPTION	Maintain good standing with the National Flood Insurance Program (NFIP) including floodplain management practices/ requirements and regulation enforcements and updates.
HAZARD(S)	Flooding
ESTIMATED COST	Staff Time
FUNDING	General Fund
TIMELINE	Ongoing
PRIORITY	Medium
LEAD AGENCY	Streets Department
STATUS	Bridgeport will continue to enforce floodplain management requirements, including regulating new construction in the Special Flood Hazard Areas.

MITIGATION ACTION	POWER, SERVICE, ELECTRICAL, AND WATER DISTRIBUTION LINES
DESCRIPTION	Communities can work with their local Public Power District or Electricity Department to identify vulnerable transmission and distribution lines and plan to bury lines underground, upgrade, or retrofit existing structures to be less vulnerable to storm events.
HAZARD(S)	Tornadoes and High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
ESTIMATED COST	\$50,000-\$70,000
FUNDING	City Electrical Fees
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	City Electrical Department
STATUS	City currently working on plans to replace main feed spacer cable and potentially move to underground line.

SECTION SEVEN: CITY OF BRIDGEPORT COMMUNITY PROFILE

MITIGATION ACTION	PUBLIC AWARENESS/EDUCATION
DESCRIPTION	Through activities such as outreach projects, distribution of maps and environmental education increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards. In addition, educate citizens on erosion control and water conservation methods.
HAZARD(S)	All hazards
ESTIMATED COST	\$500+
FUNDING	General Fund
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	City Administrator
STATUS	City working to redistribute this work amongst city staff.

MITIGATION ACTION	SAFE ROOM
DESCRIPTION	Assess, design and construct fully supplied safe rooms in highly vulnerable urban and rural areas such as mobile home parks, campgrounds, schools, and other such areas throughout the planning area. Assess the adequacy of current public buildings to be used as safe rooms.
HAZARD(S)	Tornadoes and High Winds
ESTIMATED COST	\$200-\$300/ sq ft stand alone, \$150-\$200/sq ft addition/retrofit
FUNDING	General Fund, HMA
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	City Council
STATUS	This project has not yet been started.

MITIGATION ACTION	STORMWATER SYSTEM AND DRAINAGE IMPROVEMENTS
DESCRIPTION	Bridgeport may utilize stormwater systems comprising of ditches, culverts, or drainage ponds to convey runoff.
HAZARD(S)	Flooding
ESTIMATED COST	\$10,000-\$100,000
FUNDING	Street Department Funds
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	City Street Department
STATUS	City working on identifying storm drain system improvements and upgrades as needed.

SECTION SEVEN: CITY OF BRIDGEPORT COMMUNITY PROFILE

MITIGATION ACTION	WEATHER RADIOS
DESCRIPTION	Conduct an inventory of weather radios at schools and other critical facilities and provide new radios as needed.
HAZARD(S)	All hazards
ESTIMATED COST	\$50 per radio
FUNDING	General Fund
TIMELINE	1 year
PRIORITY	Medium
LEAD AGENCY	City Administrator
STATUS	This project has not yet been started.

Community Profile

VILLAGE OF BROADWATER

**North Platte NRD
Hazard Mitigation Plan 2021**

Local Planning Team

Table BWR.1: Broadwater Local Planning Team

NAME	TITLE	JURISDICTION
SUSAN KELLY	Board Chair	Village of Broadwater
MARLENE YEAGER	Village Clerk/Treasurer	Village of Broadwater
TIM BONRAD	Board Member	Village of Broadwater

Location and Geography

The Village of Broadwater is located in the south central portion of Morrill County and covers an area of 0.16 square miles. Major waterways in the area include the North Platte River which is located to the south of the community.

Transportation

There are two major highways that travel near Broadwater, US HWY 26 and NE HWY 92. According to the Nebraska Department of Transportation, the average daily traffic count for US HWY 26 is 2,040 vehicles per day, 390 of which are heavy commercial vehicles. NE HWY 92 has an average daily traffic count of 255 vehicles per day, 55 of which are heavy commercial vehicles.³⁶ There is one railroad line which goes through the southern portion of the city. No significant transportation crashes or spills have occurred locally.

Demographics

Broadwater estimated the population in 2019 was 115. The following figure displays the historical population trend from 1920 to 2019. This figure indicates that the population of Broadwater has decreased since 2010. A declining population can lead to more unoccupied housing that is not being maintained and is then at risk to high winds and other hazards. Furthermore, with fewer residents, there is decreasing tax revenue for the community, which can make implementation of mitigation projects fiscally challenging. Broadwater's population accounted for three percent of Morrill County's population in 2019.³⁷

³⁶ Nebraska Department of Transportation. 2018. "Interactive Statewide Traffic Counts Map." [map]. <https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.

³⁷ United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." [database file]. <https://data.census.gov>.

Figure BWR.1: Village of Broadwater

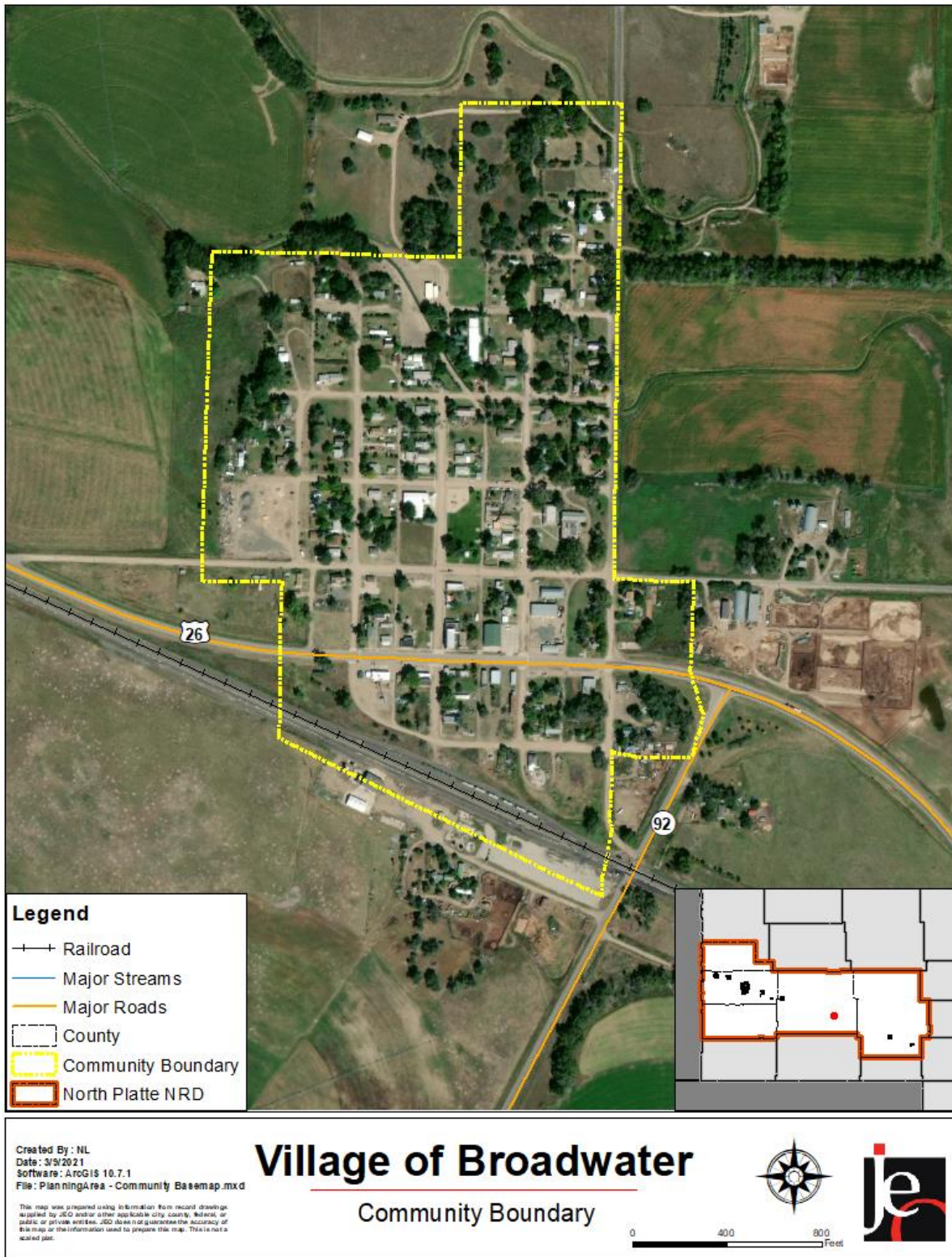
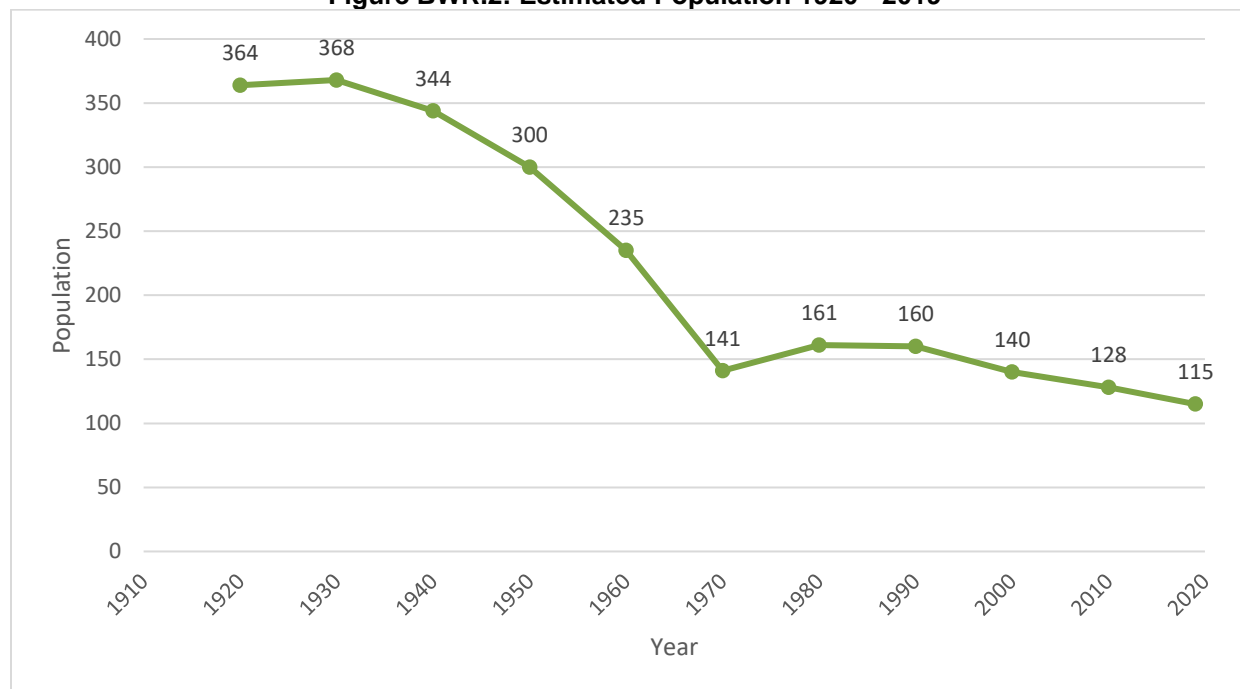


Figure BWR.2: Estimated Population 1920 - 2019

Source: U.S. Census Bureau³⁸, 2019; Local Planning Team

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

- **Older.** The median age of Broadwater was 44.2 years old in 2019, compared with the county average of 42.3 years. Broadwater's population became younger since 2010, when the median age was 51.2 years old. Broadwater had a smaller proportion of people under 20 years old (20.5%) than the county (26.5%).³⁹
- **As ethnically diverse.** Since 2010, Broadwater became less ethnically diverse. In 2010, 15.4% of Broadwater's population was non-white. By 2019, 4.4% of Broadwater's population was non-white. During that time, those who were non-white in the county stayed the same at 4.7%.⁴⁰
- **As likely to be at the federal poverty line.** The poverty rate in Broadwater (4.1% of families living below the federal poverty line) is similar to the county's poverty rate (4.3%) in 2019.⁴¹

Employment and Economics

The city's economic base is a mixture of industries. In comparison to Morrill County, Broadwater's economy had:

- **Different mix of industries.** Employment sectors accounting for 10% or more of employment in Broadwater included: Agriculture, Construction, Retail Trade, Transportation, Arts and Entertainment, and Other Services. Morrill County's employment

³⁸ United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." [database file]. <https://data.census.gov>.

³⁹ United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." [database file]. <https://data.census.gov>.

⁴⁰ United States Census Bureau. "2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates." [database file]. <https://data.census.gov>.

⁴¹ United States Census Bureau. "2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." [database file]. <https://data.census.gov>.

sectors included Agriculture, Retail Trade, Transportation, and Educational Services in 2019.⁴²

- **Lower household income.** Broadwater's median household income in 2019 (\$32,361) was about \$13,800 lower than the county (\$46,194).⁴³
- **Fewer long-distance commuters.** 22.0% of workers in Broadwater commuted for fewer than 15 minutes, compared with 48.0% of workers in Morrill County. 13.8% of workers in Broadwater commute 30 minutes or more to work, compared to 28.8% of the county workers.⁴⁴

Major Employers

Major employers in and near Broadwater include Broadwater County Store and farm/feedlot operations. Most residents commute to Bridgeport, Sidney, or Scottsbluff for employment.

Housing

In comparison to Morrill County, Broadwater's housing stock was:

- **Less owner occupied.** 60.0% of occupied housing units in Broadwater are owner occupied compared with 71.5% of occupied housing in Morrill County in 2019.⁴⁵
- **Older housing stock.** Broadwater has a larger share of housing built prior to 1970 (80.8% compared to 61.7%).⁴⁶
- **Less multifamily homes.** Although the predominant housing type in the city is single family detached, Broadwater contains less multifamily housing with five or more units per structure compared to the county (0% compared to 2.1%). 86.9% of housing in Broadwater was single-family detached, compared with 86.4% of the county's housing. Broadwater has a larger share of mobile and manufactured housing (13.1%) compared to the county (8.1%).⁴⁷

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. There are four mobile homes located in the community.

Future Development Trends

Over the past five years, the number of abandoned and unlivable homes has increased, and a few homes were completely remodeled. Publicly, a new shelter with bathrooms was built in the park, water tower equipment was updated, water meters were updated, and all sewer lines were flushed and repaired. In the next five years, a housing developments or businesses are planned at his time.

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

⁴³ United States Census Bureau. "2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." [database file]. <https://data.census.gov>.

⁴⁴ United States Census Bureau. "2019 Census Bureau American Community Survey: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. <https://data.census.gov>.

⁴⁵ United States Census Bureau. "2019 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." [database file]. <https://data.census.gov>.

⁴⁶ United States Census Bureau. "2019 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." [database file]. <https://data.census.gov>.

⁴⁷ United States Census Bureau. "2019 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." [database file]. <https://data.census.gov>.

Structural Inventory and Valuation

The planning team requested GIS parcel data from the County Assessor as of July 2021. This data allowed the planning team to analyze 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 BWR.2: Broadwater Parcel Valuation

TOTAL NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	% OF IMPROVEMENTS IN FLOODPLAIN
205	\$2,455,380	0	-	-

Source: County Assessor

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are two chemical storage sites in Broadwater that contain hazardous chemicals. In addition, the local planning team was concerned with a nearby ethanol plant and nearby feedlots. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

Table BWR.3: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS
Lapaseotes Feedlot	7651 Road 115
Panhandle Co-op Fertilizer	Co-op Rd

Source: Nebraska Department of Environment and Energy⁴⁸

In addition to the list provided by NDEE, the local planning team identified the following feedlots of concern in the area: Loxterkamp Feedlot, Wiggins Feedlot, Livingston Feedlot, Two Bar Land & Cattle, and Walther Farms Potato Storage.

Critical Facilities

The local planning team identified critical facilities that are vital for disaster response, public shelter, 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.

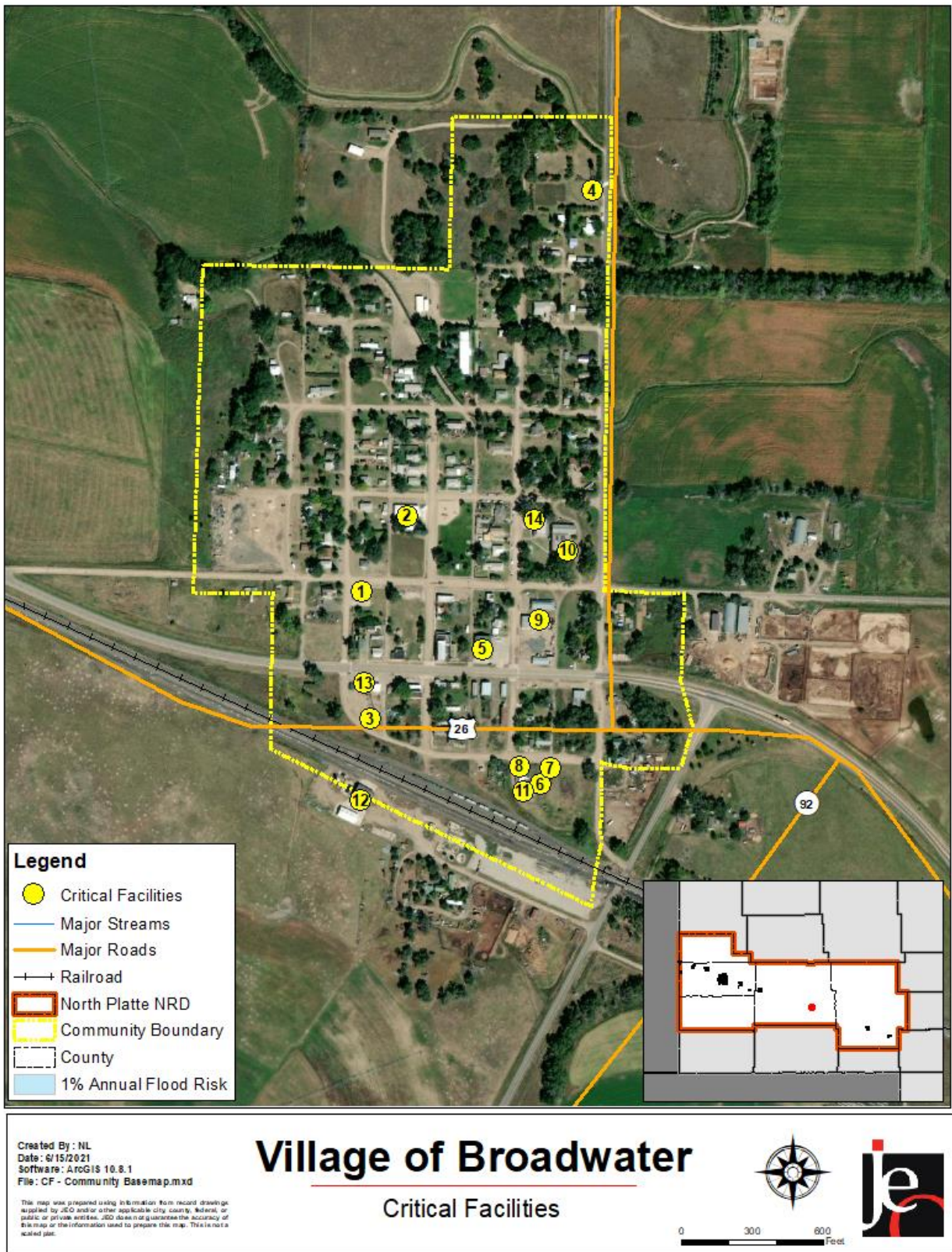
⁴⁸ Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed December 2020. <https://deg-iis.ne.gov/tier2/search.faces>.

SECTION SEVEN: VILLAGE OF BROADWATER COMMUNITY PROFILE

Table BWR.4: Critical Facilities

CF #	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	US Post Office	N	N	N
2	Messiah Lutheran Church	N	N	N
3	Communication Tower	N	N	N
4	Water Tower	N	Contract	N
5	Rural Fire Department	N	Y	N
6	Well 551	N	Contract	N
7	Well 571	N	Contract	N
8	City Hall	N	Contract	N
9	County Highway Department	N	N	N
10	Old School	N	N	N
11	Substation	N	N	N
12	Fuel Storage	N	N	N
13	Broadwater Country Store	N	N	N
14	Broadwater Library	N	N	N

Figure BWR.3: Critical Facilities



*1% Annual Flood Risk is based off a HAZUS generated floodplain

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Broadwater has a five-member village board and the following offices.

- City Clerk
- Attorney
- Fire Chief
- Street Superintendent
- Water Operator
- Engineer
- Librarian

Capability Assessment

The capability assessment consisted of a Capability Assessment Survey completed by the jurisdiction and a review of local existing policies, regulations, plans, and the programs. The survey is used to gather information regarding the jurisdiction's planning and regulatory capability; administrative and technical capability; fiscal capability; and educational and outreach capability.

Table BWR.5: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	Yes
	Emergency Operational Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	No
	Floodplain Ordinance	No
	Building Codes	Yes
	National Flood Insurance Program	No
	Community Rating System	No
	Other (if any)	
Administrative & Technical Capability	Planning Commission	Yes
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	
Fiscal	Capital Improvement Plan/ 1 & 6 Year plan	Yes

SURVEY COMPONENTS/SUBCOMPONENTS		Yes/No
Capability	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	No
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	No
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	

Table BWR.6: Overall Capability

OVERALL CAPABILITY	LIMITED/MODERATE/HIGH
Financial resources needed to implement mitigation projects	Limited
Staff/expertise to implement projects	Limited
Community support to implement projects	Moderate
Time to devote to hazard mitigation	Limited

Plan Maintenance

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

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the Village Clerk, Village Board Chairperson, and the Board of Trustees. The plan will be reviewed no less than annually and will include the public in the review and revision process by sharing information by posting information to the city website and sending letters to residents as needed.

Plan Integration

The Village of Broadwater has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan.

Building Code (2020)

The building code sets standards for constructed buildings and structures. The village has adopted the 2020 International Building Codes.

Comprehensive Plan

The comprehensive plan is designed to guide the future actions of the village. It contains goals aimed at safe growth and directs development away from hazardous areas. At this time there is no timeline to update the Comprehensive Plan.

Floodplain Ordinance, Zoning Ordinance

The village's floodplain ordinance and zoning ordinance outline where and how development should occur in the future. These documents discourage development in the floodplain and limit population density in the floodplain. These documents are reviewed and amended as needed on an annual basis.

Morrill County Local Emergency Operations Plan (2019)

The Village of Broadwater is an annex in the Morrill County Local Emergency Operations Plan (LEOP) last updated in 2019. 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.

Wildcat Hills Region Community Wildfire Protection Plan (2021)

The Nebraska Forest Service updated the Wildcat Hills Region Community Wildfire Protection Plan (CWPP) which includes Garden County in July 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.

Historical Occurrences

See the Morrill County community profile for historical hazard events.

Hazard Prioritization

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

Animal and Plant Disease

While there have not been any significant incidents of animal disease, this would be a tremendous concern for the economy of the village. Because much of Broadwater is an agricultural-based economy, an animal disease would present a large issue to the people of Broadwater. Broadwater is surrounded by feed lots and pastureland, housing cattle for the summer. Wild animals and domestic cats spreading disease is also a concern for the village. Foxes are regularly spotted in the community and outdoor cats became a problem. Broadwater encourages owners to spray and neuter their pets and encourages the clean of properties to deter animals from making their homes in the debris. Presently, there are no plans in place in case of an outbreak at the village level, but the community would likely utilize the county's Local Emergency Operations Plan for reference of Animal and Plant Disease.

Drought

Drought is extremely common in the entire planning area, such that Broadwater went below normal rainfall for six years and water rates had to be increased. The increased water rates have helped lower consumption considerably. In the case of a drought occurrence, the county would do most monitoring and response for the area. Morrill County has both a drought monitoring board and a drought response plan in case of a significant drought. The water sources of Broadwater are currently sufficient with a water tower, and two wells, all of which are metered. Broadwater monitors wells monthly and typically more often during the summer. While the community does not presently have a specific water conservation plan, Broadwater began metering water, so that the village will have a better idea of consumption, especially during drought events. Water tower equipment and water meters were updated within the past five years.

Flooding

The most significant flood event occurred in 2008, when a ditch broke in the community and flooded streets and multiple basements. Recently heavy rains have caused runoff issues on a couple of streets. The highest concern for community members is an irrigation ditch which runs through the village on the northeast side. The streets in Broadwater are often a low point in the community, allowing for flash flooding on roadways. The local planning team indicated that a potential solution may be elevating roadways, to force water into drainage ditches. To help reduce the impacts of flooding, the village does roadway grading and adding of gravel to prevent future runoff damage. In addition, work has been done on a storm drainage ditch on the south side of the community. Railroad ties were placed in the area to help slow down erosion. The village would like to add railroad ties to other areas of the ditch in the future.

Grass/Wildfire

Broadwater is surrounded on all sides by farmland and pastures. With recent drought and high wind events, the risk of wildfire impacting the community is high. The village is served by the 18-member volunteer Broadwater Fire Department. The Broadwater Fire Department reported 60 fire events from 2000 to 2020. The largest event occurred on July 12th, 2003, which an equipment fire caused 1,168-acres to burn. The community encourages residents to include defensible space around buildings and shares information about fire prevention via the local newsletter.

Methods to help reduce risk from grass and wildfire events include additional clean-up days in the village to remove debris or potential fuels.

Severe Winter Storms

During the extremely cold temperatures in February 2021, the water tower froze because the heater in the control box was unable to heat the pressure valve enough. The village was able to run the well directly to the lines, so customers were never without water. Water pressure was just lower than normal. Since then, the control system and control box were upgraded to prevent this from happening again. The local planning team indicated that the highest concerns during a severe winter storm is that all people in the village have electricity heat and the ability to get medication/ transportation to the hospital. In order to improve response to these hazard events, Broadwater has established snow routes along Main Street, just north of Highway 26. The village does not own any equipment to do snow removal and have had to contract that out in the past. However, during the winter of 2020/21 Broadwater was unable to contract with anyone local, so snow was not removed during or after storms. This cause issues with people getting vehicles stuck in the snow and limited travel for many residents until the streets melted.

Tornadoes and High Winds

In 2018, two high wind events caused tree damage throughout the community. Two tornadoes have been reported near the village, however, no damages occurred. The primary concern for the community members is getting the public to a safe place. Many of Broadwater’s homes have basements, offering more refuge for residents than a ranch-style home. For those community members without basements, some community members can find refuge at the interior hallways at the village offices. Additionally, to increase awareness for tornado events, the Morrill County Sheriff’s Office sends text alerts to the community. The Broadwater Fire Department also provides an annual storm spotter training. The Village Hall and fire department have weather radios. Recently a new alert siren was installed and can be heard throughout the community.

Mitigation Strategy

Completed Mitigation and Strategic Actions

MITIGATION ACTION	ALERT/WARNING SIRENS
DESCRIPTION	Preform and evaluation of existing alert sirens in order to determine sirens which should be replaced or upgraded. Install new sirens where lacking and remote activation.
HAZARD(S)	All hazards
STATUS	Completed. Worked with Region 21 Emergency Management to receive the siren and have it installed.

MITIGATION ACTION	CIVIL SERVICE IMPROVEMENTS
DESCRIPTION	Improve emergency rescue and response equipment and facilities by providing additional or updating existing emergency response equipment’s. This could include fire equipment, ATVs, water tanks/truck, snow removal equipment, pumps, etc.
HAZARD(S)	All hazards
STATUS	Completed. Replaced fire extinguishers in buildings. Had safety lights installed in the well house and shop.

New Mitigation and Strategic Actions

MITIGATION ACTION	ABANDONED PROPERTY CLEANUP
DESCRIPTION	Cleanup/remove abandoned properties through the city and their debris.
HAZARD(S)	All hazards
ESTIMATED COST	\$5,000-\$10,000 per property
FUNDING	General Fund
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	This is a new mitigation action. Village is currently researching contractors to do the work.

Continued Mitigation and Strategic Actions

MITIGATION ACTION	BACKUP GENERATOR
DESCRIPTION	Provide a portable or stationary source of backup power to old village hall, shop, and wells.
HAZARD(S)	Tornadoes and High Winds, Severe Winter Storms, Severe Thunderstorms
ESTIMATED COST	\$15,000-\$30,000
FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	Not Started. The village has contracted with Nebraska Machinery in Scottsbluff to provide a generator within two hours of an outage that may last longer than a couple of hours.

MITIGATION ACTION	COMPREHENSIVE DISASTER PLAN
DESCRIPTION	Establish or update Comprehensive Village Disaster and Emergency Response/Rescue Plan.
HAZARD(S)	All hazards
ESTIMATED COST	\$6,000+
FUNDING	General Fund
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Village Board, Region 21 Emergency Management, Fire Department
STATUS	In Progress. Plan is reviewed and updated annually.

SECTION SEVEN: VILLAGE OF BROADWATER COMMUNITY PROFILE

MITIGATION ACTION	DRAINAGE STUDY / STORMWATER MASTER PLAN
DESCRIPTION	Preliminary drainage studies and assessments can be conducted to identify and prioritize design improvements to address site specific localized flooding/ drainage issues to reduce and/or alleviate flooding. Stormwater master plans can be conducted to perform a community-wide stormwater evaluation, identifying multiple problem areas and potential drainage improvements.
HAZARD(S)	Flooding
ESTIMATED COST	\$10,000-\$20,000
FUNDING	General Fund
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	Not Started. The village continues to monitor problem areas and address with the best possible improvement for prevention.

MITIGATION ACTION	EMERGENCY COMMUNICATIONS
DESCRIPTION	Establish an action plan to improve communication between agencies to better assist residents and businesses during and following emergencies. Establish inter-operable communications.
HAZARD(S)	All hazards
ESTIMATED COST	\$10,000+
FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board, Region 21 Emergency Management, Fire Department
STATUS	In Progress. Radio upgrades and communication plans are currently be addressed.

MITIGATION ACTION	EVACUATION PLAN
DESCRIPTION	Establish a plan to effectively evacuate residents during storm events and major flooding.
HAZARD(S)	All hazards
ESTIMATED COST	\$2,000+
FUNDING	General Fund
TIMELINE	1 year
PRIORITY	Medium
LEAD AGENCY	Village Board, Region 21 Emergency Management, Fire Department
STATUS	Not Started

SECTION SEVEN: VILLAGE OF BROADWATER COMMUNITY PROFILE

MITIGATION ACTION	FIRE WISE COMMUNITY
DESCRIPTION	Work to become a Firewise Community USA participant through the Nebraska Forest Service and US Forest Service in order to educate homeowners, community leaders, planners, developers, and others in the effort to protect people, property, and natural resources from the risk of wildland fire.
HAZARD(S)	Wildfire
ESTIMATED COST	\$20,000
FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board, Fire Department
STATUS	Not Started. The village does trim trees and has fire safety pamphlets available in the village office area.

MITIGATION ACTION	FLOOD PRONE PROPERTY ACQUISITION
DESCRIPTION	Voluntary acquisition and demolition of properties prone to flooding will reduce the general threat of flooding for communities. Additional this can provide flood insurance benefits to those communities within the NFIP. Repetitive loss structures are typically highest priority.
HAZARD(S)	Flooding
ESTIMATED COST	\$100,000+
FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	Not Started

MITIGATION ACTION	FLOODPLAIN REGULATION UPDATES
DESCRIPTION	Update local floodplain regulations for structures located in the 100-year floodplain. Strict enforcements of the type of development and elections of structures should be considered through issuance of building permits by any community or County. Continue education of building inspectors or Certified Floodplain Managers. Encourage building regulations for storm-resistance structures.
HAZARD(S)	Flooding
ESTIMATED COST	\$4,000
FUNDING	Staff Time
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	Not Started

SECTION SEVEN: VILLAGE OF BROADWATER COMMUNITY PROFILE

MITIGATION ACTION	PARTICIPATE IN THE NFIP
DESCRIPTION	Enable property owners to purchase insurance protection against flood losses. Good standing enables participants to apply for PDM and HMGP cost share.
HAZARD(S)	Flooding
ESTIMATED COST	Staff Time
FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board, Floodplain Administrator
STATUS	Not Started

MITIGATION ACTION	PUBLIC AWARENESS/EDUCATION
DESCRIPTION	Through activities such as outreach projects, distribution of maps and environmental education increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards. In addition, educate citizen on erosion control and water conservation methods.
HAZARD(S)	All hazards
ESTIMATED COST	\$500+
FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board, Region 21 Emergency Management
STATUS	In Progress. Continue to work with Region 21 Emergency Management and send out newsletters updating and informing residents of possible risks and hazards and education to prevent them.

MITIGATION ACTION	STORMWATER SYSTEM AND DRAINAGE IMPROVEMENTS
DESCRIPTION	Smaller communities may utilize storm water systems comprising of ditches, culverts, or drainage ponds to convey runoff.
HAZARD(S)	Flooding
ESTIMATED COST	\$10,000-\$100,000
FUNDING	General Fund
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Sewer Department
STATUS	Not Started. The village monitors problem areas closely.

SECTION SEVEN: VILLAGE OF BROADWATER COMMUNITY PROFILE

MITIGATION ACTION	WEATHER RADIOS
DESCRIPTION	Conduct an inventory of weather radios at schools and other critical facilities and provide new radios as needed.
HAZARD(S)	All hazards
ESTIMATED COST	\$50 per radio
FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	Not Started