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COUNTY PROFILE

GREELEY COUNTY

Lower Loup Natural Resources District Hazard Mitigation Plan 2022

Local Planning Team

Table GRC.1: Greeley County Local Planning Team

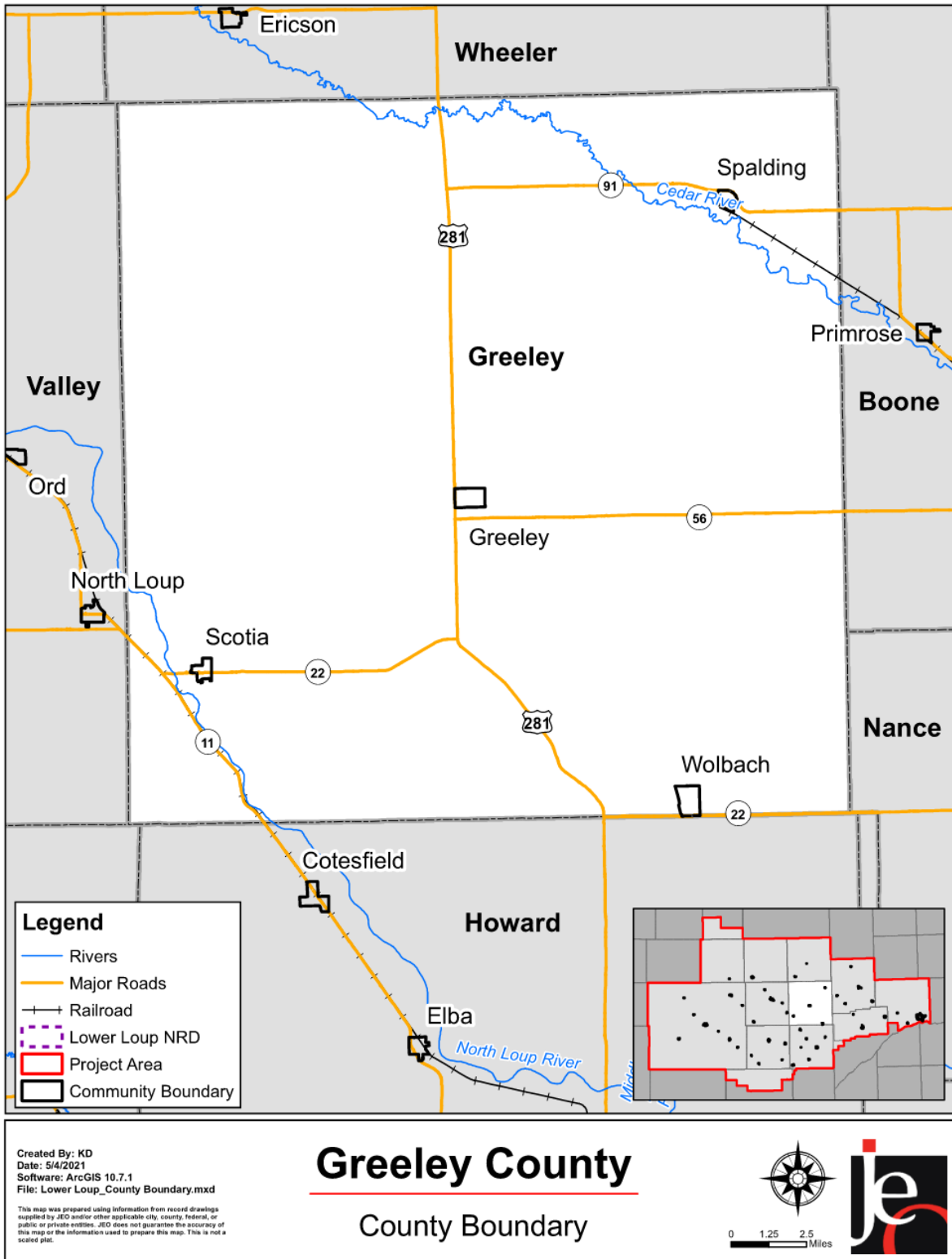
NAME	TITLE	JURISDICTION
ALMA BELAND	Director	Region 26 Emergency Management
FRANZ TRUMLER	Chairperson	Greeley County

Location, Geography, & Climate

Greeley County is located in central Nebraska and is bordered by Boone County, Wheeler County, and Howard County.

The total area of Greeley County is 571 square miles. Major waterways within the county include Cedar River in the northeast, and the North Loup River in the southwest. The county is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Most of Greeley County lies in the dissected plains topographic region, with the vast majority of the county’s land characterized by agricultural fields.

Figure GRC.1: Greeley County Jurisdictional Boundary



Climate

The average high temperature in Greeley County for the month of July is 86.5 degrees and the average low temperature for the month of January is 10.6 degrees. On average, Greeley County receives over 25 inches of rain and 28 inches of snowfall per year. The following table compares these climate indicators with those of the entire 11-county planning area and the state. Climate data is helpful in determining if certain events are higher or lower than normal. For example, if the high temperatures in the month of July are running well into the 90s, high heat events may be more likely which could impact vulnerable populations.

Table GRC.2: Greeley County Climate Normals

	GREELEY COUNTY	PLANNING AREA	STATE OF NEBRASKA
JULY NORMAL HIGH TEMP	86.5°F	62.7°F	87.4°F
JANUARY NORMAL LOW TEMP	10.6°F	12.1°F	13.9°F
ANNUAL NORMAL PRECIPITATION	25.8 inches	26.36 inches	24.0 inches
ANNUAL NORMAL SNOWFALL	28.8 inches	28.6 inches	28.2 inches

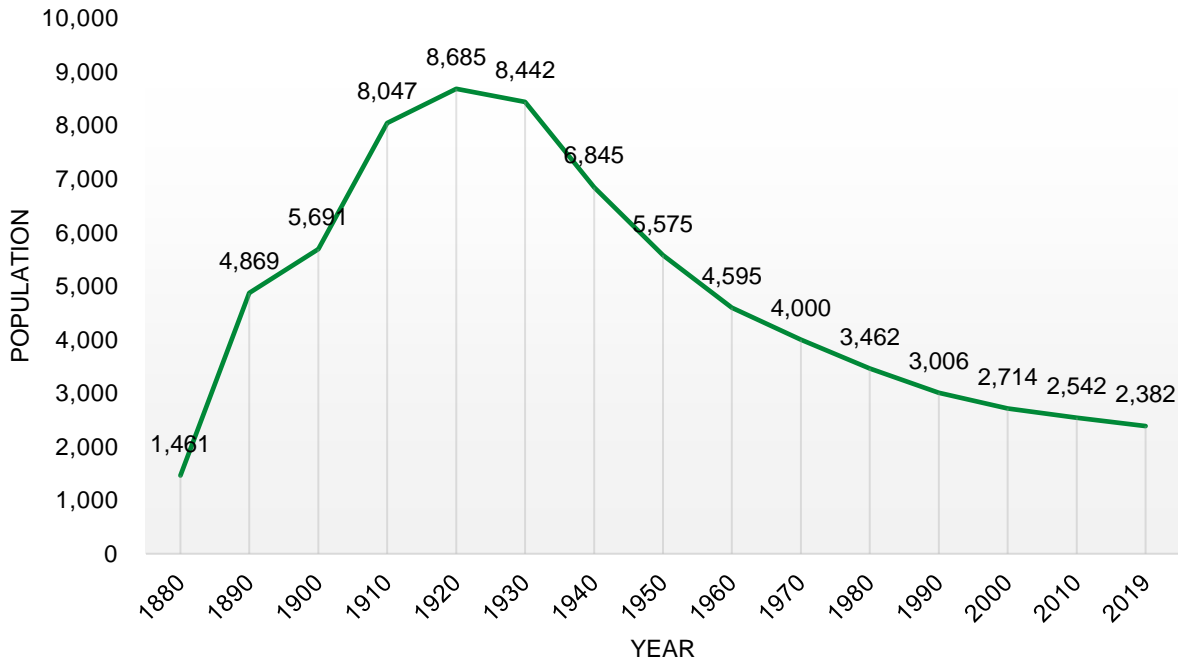
Source: NCEI 1991-2020 Climate Normals¹
 Precipitation includes all rain and melted snow and ice.

Demographics

The following figure displays the historical population trend from 1880 to 2019. This figure indicates that the population of Greeley County has been declining since 1930. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population will be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the county which could make implementation of mitigation actions more fiscally challenging.

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

Figure GRC.2: Greeley County Population 1880-2019



Source: U.S. Census Bureau²

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

Table GRC.3: Population by Age

AGE	GREELEY COUNTY	STATE OF NEBRASKA
<5	6.3%	6.9%
5-64	68.2%	78.1%
>64	25.3%	15.0%
MEDIAN AGE	45.5	36.4

Source: U.S. Census Bureau³

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

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

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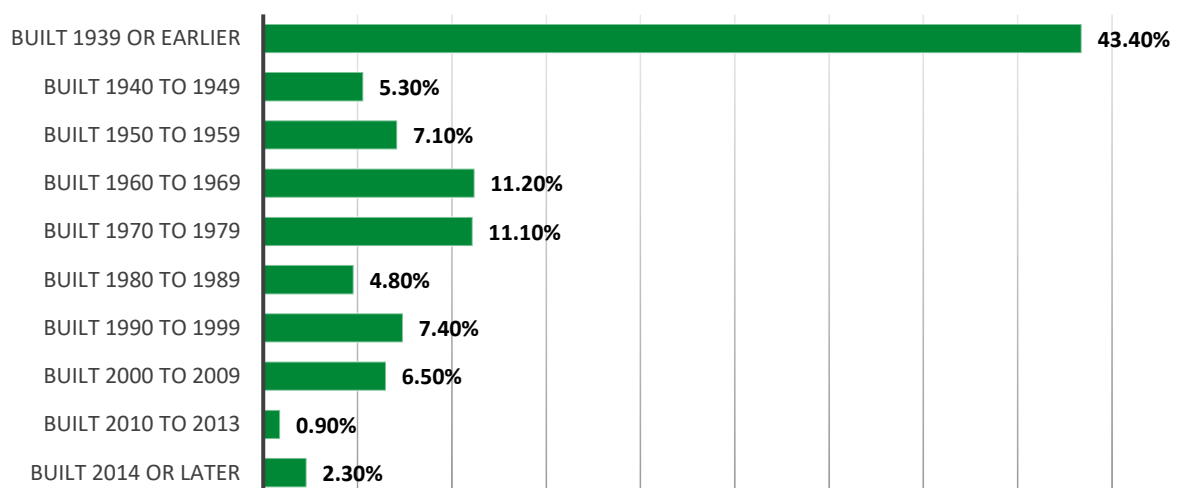
Table GRC.4: Housing and Income

AGE	GREELEY COUNTY	STATE OF NEBRASKA
MEDIAN HOUSEHOLD INCOME	\$47,869	\$59,116
PER CAPITA INCOME	\$26,553	\$31,101
MEDIAN HOME VALUE	\$72,700	\$147,800
MEDIAN RENT	\$536	\$805

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

The following figure indicates that the majority of the housing in Greeley County was built prior to 1940. According to the United States Census Bureau 2019 ACS 5-year estimates, the county has 1,302 housing units; with 78.3 percent of those units occupied. Approximately 3.1 percent of the county’s housing is classified as mobile homes. Housing age can serve as an indicator or risk as structures built prior to state building codes being developed may be at greater risk. The State of Nebraska first adopted building codes in 1987, with the International Building Code adopted in 2010. The current edition of the IBC was updated in 2018. Finally, communities with a substantial number of mobile homes may have a higher number of residents vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

Figure GRC.3: Housing Units by Age



Source: U.S. Census Bureau⁶

Table GRC.5: Housing Units

JURISDICTION	TOTAL HOUSING UNITS				OCCUPIED HOUSING UNITS			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
GREELEY COUNTY	1,019	78.3%	283	21.7%	825	81.0%	194	19.0%
NEBRASKA	754,063	90.8%	76,686	9.2%	498,567	67.1%	255,496	33.9%

Source: U.S. Census Bureau⁷

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

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

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

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

Employment Factors

According to 2018 Business Patterns Census Data, Greeley County had 68 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 GRC.6: Businesses in Greeley County

	TOTAL BUSINESSES	NUMBER OF PAID EMPLOYEES	ANNUAL PAYROLL (IN THOUSANDS)
TOTAL FOR ALL SECTORS (2014)	67	377	\$9,601
TOTAL FOR ALL SECTORS (2016)	67	316	\$9,273
TOTAL FOR ALL SECTORS (2018)	68	335	\$9,782

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

Agriculture is also important to the economic fabric of Greeley County, and the state of Nebraska as a whole. Greeley County's 215 farms cover 357,279 acres of land. Crop and livestock production are the visible parts of the agricultural economy, but many related businesses contribute as well by producing, processing and marketing farm and food products. These businesses generate income, employment and economic activity throughout the region.

Table GRC.7: Greeley County Agricultural Inventory

	2012 CENSUS	2017 CENSUS	PERCENT CHANGE
NUMBER OF FARMS WITH HARVESTED CROPLAND	389	215	-44.73%
ACRES OF HARVESTED CROPLAND	338,271	357,279	5.62%

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

Governance

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

Capabilities

The capability assessment consisted of a review of local existing policies, regulations, plans, and programs with hazard mitigation capabilities. The following tables summarize the jurisdiction's

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

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

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

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

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planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects.

Table GRC.13: Capability Assessment

		SURVEY COMPONENTS	YES/NO
PLANNING & REGULATORY CAPABILITY		Comprehensive Plan	Yes
		Capital Improvements Plan	No
		Economic Development Plan	Yes
		Local Emergency Operational Plan	Yes
		Floodplain Ordinance	Yes
		Zoning Ordinance	Yes
		Subdivision Regulation/Ordinance	Yes
		Building Codes	No
		Floodplain Management Plan	No
		Storm Water Management Plan	No
		National Flood Insurance Program	Yes
		Community Rating System	No
	Other (if any)		
ADMINISTRATIVE & TECHNICAL CAPABILITY		Planning Commission	Yes
		Floodplain Administration	No
		GIS Capabilities	No
		Chief Building Official	No
		Civil Engineering	No
		Local Staff Who Can Assess Community's Vulnerability to Hazards	No
		Grant Manager	No
		Mutual Aid Agreement	No
		Other (if any)	
FISCAL CAPABILITY		1 & 6 Year Plan	Yes
		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	Yes
		Water/Sewer Service Fees	Yes
		Development Impact Fees	No
		General Obligation Revenue or Special Tax Bonds	No
		Other (if any)	
EDUCATION AND OUTREACH		Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
		Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes

SURVEY COMPONENTS		YES/NO
	Natural Disaster or Safety related school programs	Yes
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	

Table GRC.14: Overall Capability

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

Plan Integration

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

Grants and Funding

The county's budget is primarily limited to maintaining current facilities and systems as overall funds have decreased over recent years. Currently funds are primarily dedicated to maintaining current equipment or upgrading areas damaged by recent storms.

Comprehensive Plan

The Greeley County Comprehensive Plan was last updated in 2015 but does not address natural hazards. The plan contains goals and objectives aimed at safe growth, limits future development growth near hazardous areas, and notes risks and vulnerabilities to power outages. There is currently no plan to update the county's Comprehensive Plan.

Ordinances and Regulations

The zoning ordinance: discourages development in the floodplain, identifies floodplain as parks or open space, requires more than one-foot above the base flood elevation in the floodplain, prohibits filling of wetlands, and discourages development near chemical storage sites.

Greeley County Local Emergency Operations Plan

The Greeley County Local Emergency Operations Plan (LEOP) establishes standardized policies, plans, guidelines, and procedures for emergency resources and governmental entities to respond and recover when a disaster event occurs. It contains information regarding direction and control,

communications and warning, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelters, and resource management. This plan is updated every five years.

Central Sandhills Community Wildfire Protection Plan

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Greeley County in June 2019. The purpose of the CWPP is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. This document is updated every five years.

Future Development Trends

In the past five years, grains bins and several new homes have been built. According to the census data, Greeley County’s population is declining. The local planning team indicated that the lack of employment opportunities is a factor in the population decline. Major flooding in 2019 impacted various infrastructure in the county, and repairs are still being completed.

Community Lifelines

Transportation

Greeley County’s major transportation corridors include Highway 281 and Highway 91. The county also has two rail lines from the Nebraska Central Railroad Company, in the southwest and northeast corners of the county. The Greeley Municipal Airport is also within Greeley County. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the county, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are nine chemical storage sites throughout Greeley County which house hazardous materials. For a description of chemical sites located in incorporated areas, please see the jurisdiction’s participant section.

Critical Facilities

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

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

Table GRC.9: Greeley County Critical Facilities

CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Central Valley High School	Y	N	N
2	Transportation	County Roads Shop	N	Y	N
3	Safety and Security	Courthouse	Y	Y	N
4	Communications	Future Tower Site	N	N	N
5	Safety and Security	Greeley Fire Department	Y	Y	N
6	Transportation	Greeley County Roads Shop	Y	Y	N
7	Energy	Power Sub Station	N	Y	N
8	Communications	Region 26 Tower	N	N	N
9	Food, Water, and Shelter	Sacred Heart Auditorium/Community Center	Y	Y	N
10	Food, Water, and Shelter	Scotia Elementary School	N	N	N
11	Food, Water, and Shelter	Water Pressure Pump	N	N	N

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

Health and Medical Facilities

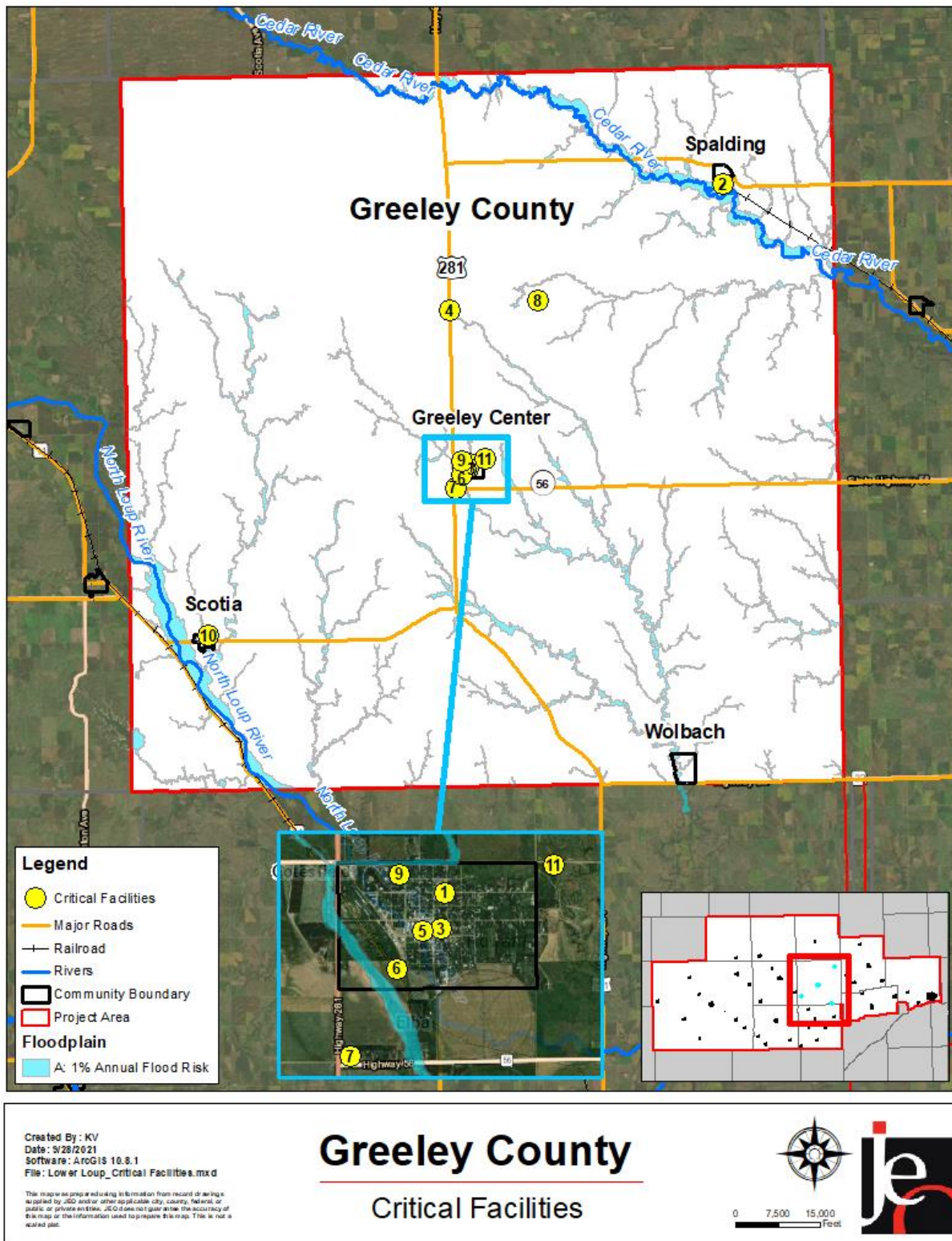
The following medical and health facilities are located within the county. The Greeley Care Home has a backup generator in case of significant hazard events which disrupt power to the community.

Table GRC.4: Greeley County Critical Facilities

TYPE OF FACILITY	FACILITY NAME	COMMUNITY	NUMBER OF LICENSED BEDS
Long Term Care	Greeley Care Home	Greeley	26

Source: DHHS Care Rosters, 2021

Figure GRC.4: Greeley County Critical Facilities



Parcel Improvements and Valuation

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

Table GRC.8: Greeley County Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
3,450	1298	86,289,105	245	15,834,200	18.88%

Source: County Assessor, GIS Workshop

Table GRC.13: Garfield County Flood Map Products

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
LOMA	19-07-0823A-310440	2/20/2019	Structure removed from SFHA

Source: FEMA Flood Map Service Center

Historical Occurrences

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

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

Table GRC.10: Hazard Risk Assessment – Greeley County

Hazard Type		Greeley County		
		Count	Property	Crop
Agricultural Disease	Animal Disease ²	16	205 Animals	N/A
	Plant Disease ³	8	N/A	\$207,483
Dam Failure ⁷		1	\$0	N/A
Drought ⁸		444 out of 1,512 Months	\$0	\$10,226,045
Earthquakes ¹¹		1	\$0	\$0
Extreme Heat ⁹		Avg 5 Days per Year	\$0	\$3,956,596
Flooding ¹	Flash Flood	6	\$370,000	\$80,898
	Flood	1	\$2,000,000	
Grass/Wildfires ⁴		176	17,406 Acres	\$59,075
Hazardous Materials	Chemical Spills (Fixed Site) ⁵	1	\$0	N/A

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Hazard Type		Greeley County		
		Count	Property	Crop
	Chemical Spills (Transportation) ⁶	0	\$0	N/A
Levee Failure ¹²		N/A	N/A	N/A
Public Health Emergency ¹³		~214 cases, 1 death	N/A	N/A
Severe Thunderstorms ¹	Hail Average: 1.18" Range: 0.75"-2.75"	102	\$2,524,000	\$8,518,087
	Heavy Rain	8	\$250,000	\$2,488,250
	Lightning	0	\$0	N/A
	Thunderstorm Wind Average: 57.9mph Range: 52-77mph	27	\$4,267,000	N/A
Severe Winter Storms ¹	Blizzard	10	\$650,000	\$439,301
	Extreme Cold/Wind Chill	2	\$0	
	Heavy Snow	4	\$0	
	Ice Storm	5	\$1,020,000	
	Winter Storm	36	\$140,000	
	Winter Weather	35	\$5,000	
Terrorism ¹⁰		1	\$0	N/A
Tornadoes & High Winds ¹	High Winds Average: 46.9mph Range: 35-56mph	15	\$1,014,080	\$3,511,358
	Tornadoes Average: EF0 Range: EF0/F0-F1	7	\$215,000	\$38,143
Totals		462	\$12,455,080	\$29,487,093

1 - NCEI, Jan 1996-Dec 2020

2 - USDA, 2014-2020

3 - USDA RMA, 2000-2020

4 - NFS, 2000- April 2020

5 - NRC, 1990-2020

6 - PHSMA, 1971- Jan 2021

7 - NeDNR Dam Safety Division, 2021

8 - NOAA, 1895-2020

9 - HPRCC & NOAA Regional Climate Center, 1983-2021

10 - Global Terrorism Database, 1970-2017

11 - USGS, 1900-2021

12 - USACE, 2021

13 - NE DHHS, May 12, 2021(COVID only)

The following table provides a summary of hazards that have or have the potential to affect each jurisdiction in the county. Each jurisdiction was evaluated for previous hazard occurrence and the probability of future hazard events on each of the hazards profiled in this plan. The evaluation process was based on data collected and summarized in the previous table; previous impacts or the potential for impacts to infrastructure, critical facilities, people, and the economy; and the proximity to certain hazards such as dams and levees. There are no mapped levees in the county.

Table GRC.11: Greeley County and Communities Hazard Matrix

JURISDICTION	AG DISEASE	DAM FAILURE	DROUGHT & EXTREME HEAT	EARTHQUAKES	FLOODING	GRASS/ WILDFIRE	HAZARDOUS MATERIALS	LEVEE FAILURE	PUBLIC HEALTH EMERGENCY	SEVERE THUNDERSTORMS	SEVERE WINTER STORMS	TERRORISM	TORNADOES & HIGH WINDS
GREELEY COUNTY	X	X	X	X	X	X	X		X	X	X	X	X
GREELEY VILLAGE	X	X	X	X	X	X	X		X	X	X	X	X
SCOTIA	X	X	X	X	X	X	X		X	X	X	X	X
SPALDING	X		X	X	X	X	X		X	X	X	X	X
WOLBACH	X		X	X	X	X	X		X	X	X	X	X

Hazard Prioritization

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

Dam Failure

There are ten dams in Greeley County. One of these dams has been identified as a high hazard dam. If a dam were to fail, the likely impacts would include loss of property and loss of roads that affect emergency response. If the upstream dam Virginia Smith Dam were to fail, it could affect approximately two percent of the county's population. The high hazard dam in Greeley County at Davis Creek Reservoir would likely only impact communities in within the county. The Sherman reservoir, located in northeastern Sherman County, is filled by the Arcadia diversion dam canal.

Table GRC.16: Dams in Greeley County

	NUMBER OF DAMS	MINIMAL	LOW	SIGNIFICANT	HIGH
GREELEY COUNTY	10	0	9	0	1
PLANNING AREA	135	5	119	6	5

Source: NeDNR, 2017

Table GRC.17: High Hazard Dams

NIDID	DAM NAME	LOCATION
NE02342	Davis Creek Dam	Davis Creek Reservoir (south of North Loup)

Source: NeDNR, 2017

In 2003 and 2019, the Spalding dam failed above the power plant. Repairs were completed on the dam by the power plant.

Flooding

Greeley County participates in the NFIP but does not have any policies in-force. There are no repetitive flood loss properties in unincorporated areas of Greeley County. The local planning team indicated significant flooding events have occurred in Scotia, North Loup, and Spalding. Flooding also occurs along small creeks throughout the county. Areas bordering the Cedar River and Loup River were identified as most prone to flooding. Major flooding in 2010 and 2019 resulted in infrastructure damage for the county. Greeley County is still in the process of completing repairs. According to NCEI data, flooding in 2010 resulted in \$300,000 in property damages in the county. Flooding in 2019 resulted in \$2,000,000 in property damages in the county. To mitigate against this hazard in the future, the county is looking into the possibility of raising some roads.

Grass/Wildfire

The concern regarding grass/wildfires in the county is the loss of farms and loss of property. Significant fires in the past have led to the loss of feed for cattle. Each community within the county has a fire department that is funded by rural fire districts and staffed by local volunteers.

Severe Thunderstorms (includes Hail)

Severe thunderstorms have the potential to cause damages to property and crops throughout the county. The high winds, hail, and flooding from these storms can have a large economic impact on the county as well. Hail can cause the destruction of property and crops. Hail has resulted in approximately 10 million dollars' worth of property and crop damages in Greeley County. The local planning team indicated that there are hazardous trees throughout the county that need to be removed. These trees could cause damages to property or electrical infrastructure and cause power outages. Greeley County has weather radios in critical facilities. According to NCEI data, there have been 137 severe thunderstorm events in the county from 1996 to 2019 that resulted in over \$7 million in property damages. According to the local planning team, in July 2021, the county experienced high winds.

Severe Winter Storms

The local concerns regarding severe winter storms include the loss of power to rural homes, and emergency response to rural residents when the roads are blocked with snow. The county handles snow removal and according to the local planning team, the snow removal resources are sufficient for current needs.

Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	SNOW/ICE REMOVAL PROGRAM
DESCRIPTION	<ol style="list-style-type: none"> 1. Revise and improve snow and ice removal program for streets 2. Address situations such as plowing snow, ice removal, parking during snow, ice removal and removal of associated storm debris 3. Improve capabilities to rescue those stranded in blizzards and increase the capacity to which snow can be removed from roadways after an event
HAZARD(S) ADDRESSED	Severe Winter Storms
STATUS	Equipment has been repaired/updated and snow routes have been identified.

OBJECTIVE	UPDATE COMPREHENSIVE PLAN
DESCRIPTION	<ol style="list-style-type: none"> 1. Update comprehensive plan 2. Integrate plan with Hazard Mitigation Plan components
HAZARD(S) ADDRESSED	All Hazards
STATUS	Comprehensive Plan updated in 2015 and effective until 2025.

OBJECTIVE	WILDFIRE HAZARD IDENTIFICATION AND MITIGATION SYSTEM (WHIMS)
DESCRIPTION	<ol style="list-style-type: none"> 1. Develop a hazard rating system through the use of GIS to identify and rate areas of the region for their relative wildfire hazard
HAZARD(S) ADDRESSED	Grass/Wildfire
STATUS	This system now runs through Region 26 and includes the county.

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate current backup and emergency generators 2. Obtain additional generators based on identification and evaluation 3. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$20,000 to \$75,000+ per generator
POTENTIAL FUNDING	County General Fund
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	Greeley County Emergency Manager
STATUS	One backup generator has been purchased with the county looking into funding opportunities for a second.

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OBJECTIVE	BACKUP MUNICIPAL RECORDS
DESCRIPTION	1. Develop protocol for backup of critical municipal records
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$0-\$100 for external hard drive
POTENTIAL FUNDING	County Tax
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started.

OBJECTIVE	CHANNEL AND BRIDGE IMPROVEMENTS
DESCRIPTION	1. Implement channel and bridge improvements to increase channel conveyance and decrease the base flood elevations
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$250,000
POTENTIAL FUNDING	County Tax, State Buyback Program, County Bridge Match Program
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started. The county has begun adding these improvements to the 1&6 Year Plan.

OBJECTIVE	COMMUNITY EDUCATION AND AWARENESS
DESCRIPTION	<ol style="list-style-type: none"> 1. Establish a community education program to increase awareness related to household level mitigation actions 2. Utilize outreach projects and the distribution of maps 3. Purchasing equipment such as projectors and laptops to facilitate presentation of information
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$3,000+
POTENTIAL FUNDING	County Tax
TIMELINE	5+ Years
PRIORITY	High
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started.

OBJECTIVE	COMMUNITY MASTER PLAN AND FLOOD PROJECTS
DESCRIPTION	1. Identify potential flooding sources and flood-vulnerable areas 2. Explore solutions and prioritize them
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$10,000+
POTENTIAL FUNDING	County Tax
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started.

OBJECTIVE	CONTINUITY PLANNING
DESCRIPTION	1. Develop continuity plans for critical community services 2. Encourage businesses to develop continuity plans
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$5,000+ Staff Time
POTENTIAL FUNDING	County Tax
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started.

OBJECTIVE	DATABASE OF VULNERABLE POPULATIONS
DESCRIPTION	1. Work with stakeholders to develop a database of vulnerable populations and the organizations which support them
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$2,000 Staff Time
POTENTIAL FUNDING	County Tax
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started.

OBJECTIVE	DEFENSIBLE SPACE
DESCRIPTION	1. Install a defensible space around the community owned facilities
HAZARD(S) ADDRESSED	Grass/Wildfire
ESTIMATED COST	\$5,000+, varies
POTENTIAL FUNDING	County tax
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	County Commissioners
STATUS	The county is currently evaluating specific areas of concern.

SECTION SEVEN: GREELEY COUNTY PROFILE

OBJECTIVE	DRAINAGE STUDY/STORMWATER MASTER PLAN
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and prioritize design improvements with preliminary drainage studies and assessments 2. Address site specific localized flooding/drainage issues 3. Identify stormwater problem areas and potential drainage improvements with Stormwater Master Plans
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$15,000+
POTENTIAL FUNDING	County Tax
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Region 44 Emergency Management
STATUS	The county is currently exploring funding opportunities.

OBJECTIVE	FIRE PREVENTION PROGRAM/PLANNING AND TRAINING
DESCRIPTION	<ol style="list-style-type: none"> 1. Participate in the Nebraska Forest Service Wildland Fire Protection Program (training in wildfire suppression training, equipment, pre-suppression planning, wildfire prevention, aerial fire suppression, etc.)
HAZARD(S) ADDRESSED	Grass/Wildfire
ESTIMATED COST	\$100 per person
POTENTIAL FUNDING	County Tax
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started.

OBJECTIVE	FIREWISE COMMUNITY
DESCRIPTION	<ol style="list-style-type: none"> 1. Work with the Nebraska Forest Service and US Forest Service to become a Firewise Communities/USA participant 2. Develop a Community Wildfire Protection Plan 3. Train landowners about creating defensible spaces 4. Enact ordinances and building codes to increase defensible space, improve building materials to reduce structure ignitability, and increase access to structures by responders 5. Develop and implement brush and fuel thinning projects
HAZARD(S) ADDRESSED	Grass/Wildfire
ESTIMATED COST	\$10,000+ annual, staff time
POTENTIAL FUNDING	County tax
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started.

OBJECTIVE	FIRST AID TRAINING
DESCRIPTION	1. Promote first aid training for all residents
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$100 per person
POTENTIAL FUNDING	County Tax
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	County Commissioners
STATUS	The county helps organize both school and business trainings.

OBJECTIVE	EMERGENCY EXERCISE: FLOODING
DESCRIPTION	1. Develop and facilitate exercises to identify gaps in planning and to ensure sufficient community response plans to meet jurisdiction needs in case of flooding events
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$5,000+
POTENTIAL FUNDING	County Tax
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started. Additional emphasis has been placed on this following the March 2019 floods.

OBJECTIVE	IMPACT RESISTANT ROOF COVERINGS
DESCRIPTION	<ol style="list-style-type: none"> 1. Use roofing materials that are resistant to hail impacts for new buildings 2. Retrofit existing buildings with hail resistant roofing 3. Encourage the use of hail resistant roofing for any new constructions
HAZARD(S) ADDRESSED	Severe Thunderstorms, Hail
ESTIMATED COST	\$2.50 per sq ft
POTENTIAL FUNDING	County Tax
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	County Commissioners
STATUS	In the works. Numerous county properties have been retrofitted with more resistant materials.

SECTION SEVEN: GREELEY COUNTY PROFILE

OBJECTIVE	IMPROVE DRAINAGE
DESCRIPTION	<ol style="list-style-type: none"> 1. Improve storm sewers and drainage patterns in and around the community 2. Deepen drainage ditches and clean out culverts
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$5,000+
POTENTIAL FUNDING	County Tax
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started.

OBJECTIVE	IMPROVE ELECTRICAL SERVICE
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate hardening, retrofitting, looping and/or burying of power lines and related infrastructure and/or comparable protection measures 2. 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 3. Implement measures to improve electrical service 4. Bury power lines for future construction
HAZARD(S) ADDRESSED	Severe Thunderstorms, Severe Winter Storms
ESTIMATED COST	\$50,000+
POTENTIAL FUNDING	County Tax
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started.

OBJECTIVE	IMPROVE EMERGENCY COMMUNICATIONS
DESCRIPTION	<ol style="list-style-type: none"> 1. Develop/Improve Emergency Communication Action plan 2. Implement Emergency Communication Action Plan 3. Establish inner-operable communications 4. Obtain/Upgrade Emergency Communication Facilities/Equipment 5. Obtain/Upgrade/Distribute Weather Warning Radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$1,000+ Staff Time
POTENTIAL FUNDING	County Tax
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started.

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate current warning systems 2. Improve warning systems/develop new warning system 3. Obtain/Upgrade warning system equipment and methods 4. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 5. Identify location of weather warning radios 6. Improve weather radio system 7. Obtain/Upgrade weather radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	Unknown
POTENTIAL FUNDING	County General Fund, Village General Fund
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	Greeley County Emergency Manager, Village Boards
STATUS	Currently evaluating and updating sirens in each village as needed.

OBJECTIVE	REDUCE TREE DAMAGE & DAMAGE FROM TREES
DESCRIPTION	<ol style="list-style-type: none"> 1. Conduct tree inventory 2. Develop tree maintenance/trimming program 3. Implement tree maintenance/trimming program 4. Remove hazardous limbs and/or trees
HAZARD(S) ADDRESSED	Severe Thunderstorms
ESTIMATED COST	\$50 per tree
POTENTIAL FUNDING	County Tax
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started.

OBJECTIVE	RELOCATE MUNICIPAL INFRASTRUCTURE
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate current placement and vulnerability of municipal infrastructure 2. Acquire Geographic Information System (GIS) to relocate municipal infrastructure (water lines, sewer lines, etc.)
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$1,500 Single user and Staff Time
POTENTIAL FUNDING	County Tax
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	County Commissioners
STATUS	The county is currently working with GIS to map all municipal infrastructure at risk.

SECTION SEVEN: GREELEY COUNTY PROFILE

OBJECTIVE	PUBLIC SAFE ROOMS & POST-DISASTER STORM SHELTERS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate existing safe rooms and/or storm shelters 2. Improve and/or construct safe rooms and/or storm shelters 3. Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$150/sf for retrofit; \$300/sf for new construction
POTENTIAL FUNDING	HMGP, PDM, Donations, County General Fund
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Greeley County Emergency Manager
STATUS	County Emergency Management is currently working with each community to find where shelters are available and what additional improvements are needed.

OBJECTIVE	SNOW FENCES
DESCRIPTION	<ol style="list-style-type: none"> 1. Construct snow fences to protect main transportation routes and critical facilities from excessive snow drifting and road closure
HAZARD(S) ADDRESSED	Severe Winter Storms
ESTIMATED COST	\$50 per 100 linear feet
POTENTIAL FUNDING	County Tax
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started.

OBJECTIVE	STATIC DETECTORS
DESCRIPTION	<ol style="list-style-type: none"> 1. Utilize static detectors to detect lightning strikes, predict distance to lightning and monitor whether storms are approaching/moving away from the detector.
HAZARD(S) ADDRESSED	Severe Thunderstorms
ESTIMATED COST	\$250+
POTENTIAL FUNDING	County Tax
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started.

OBJECTIVE	STREAM BED/BANK STABILIZATION
DESCRIPTION	1. Evaluate current stream bed and bank stabilization needs 2. Implement stream bed and bank stabilization improvements including grade control structures, rock rip rap, vegetative cover, etc.
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$10,000+ varies by scope
POTENTIAL FUNDING	County Tax
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	County Commissioners
STATUS	County is reevaluating areas of concern after March 2019 flood event.

OBJECTIVE	SURGE PROTECTORS
DESCRIPTION	1. Purchase and install surge protectors on sensitive equipment in critical facilities
HAZARD(S) ADDRESSED	Severe Thunderstorms
ESTIMATED COST	\$25 per unit
POTENTIAL FUNDING	County Tax
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	County Commissioners
STATUS	Currently evaluating quantity needs.

OBJECTIVE	TREE PLANTING
DESCRIPTION	1. Develop city tree planting and maintenance guidelines
HAZARD(S) ADDRESSED	High Winds, Severe Thunderstorms
ESTIMATED COST	\$500, staff time
POTENTIAL FUNDING	County tax
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started.

SECTION SEVEN: GREELEY COUNTY PROFILE

OBJECTIVE	WATER STORAGE & AVAILABILITY ASSESSMENT
DESCRIPTION	1. Evaluate the need to expand water storage capacity through new means (new water tower, stand pipe, etc.) to provide a safe water supply for the community and additional water for fire protection.
HAZARD(S) ADDRESSED	Grass/Wildfire
ESTIMATED COST	\$20,000+
POTENTIAL FUNDING	County Tax
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	County Commissioners
STATUS	County is currently updating system.

OBJECTIVE	WATER SYSTEM IMPROVEMENTS
DESCRIPTION	<ol style="list-style-type: none"> 1. Make water system improvements to include additional fire hydrants/increase supply and pressure to effectively fight fires and meet increasing demands 2. Update/improve water distribution system (identifying and replacing leaky pipes, assisting residents in identifying inefficiencies, transitioning to smart irrigation systems, etc.) 3. Upgrade water district infrastructure to decrease likelihood of damages and improve water system for emergency use
HAZARD(S) ADDRESSED	Grass/Wildfire
ESTIMATED COST	\$10,000+, varies by scope
POTENTIAL FUNDING	County Tax
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	County Commissioners
STATUS	County is currently updating system.

OBJECTIVE	WILDFIRE PROTECTION PLAN
DESCRIPTION	<ol style="list-style-type: none"> 1. Complete and/or update a Community Wildfire Protection Plan 2. Enable a community to plan how it will reduce the risk of wildfire
HAZARD(S) ADDRESSED	Grass/ Wildfire
ESTIMATED COST	\$20,000
POTENTIAL FUNDING	County Tax
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started.

OBJECTIVE	WIND BREAKS STUDIES
DESCRIPTION	1. Conduct a study to identify areas in need of "shelter belts" or wind breaks
HAZARD(S) ADDRESSED	Severe Winter Storms, High Winds, Severe Thunderstorms
ESTIMATED COST	\$7,500+
POTENTIAL FUNDING	County Tax
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	County Commissioners
STATUS	This project has not yet been started.

Removed Mitigation Actions

OBJECTIVE	INFRASTRUCTURE ASSESSMENT STUDY
DESCRIPTION	1. Conduct an assessment of bridges in the county and assess other potential areas of concern
HAZARD(S) ADDRESSED	All Hazards
REASON FOR REMOVAL	This project was identified as not a priority for the county.

OBJECTIVE	PARCEL EVALUATION
DESCRIPTION	1. Conduct a study examining parcels located in the flood prone areas 2. Identify mitigation measures that can reduce future impacts
HAZARD(S) ADDRESSED	Flooding
REASON FOR REMOVAL	Parcel information is available via County Assessor for properties located in the floodplain.

Plan Maintenance

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

The local planning team is responsible for reviewing and updating this profile as changes occur or after a major event. The local planning team will include the County Board of Commissioners, Attorney, Zoning Administration, Highway Superintendent, and Region 26 EMA. The plan will be reviewed no less than bi-annually and will include the public in the review and revision process by sharing information at local council meetings.

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COMMUNITY PROFILE

VILLAGE OF GREELEY

Lower Loup Natural Resources District Hazard Mitigation Plan 2022

Local Planning Team

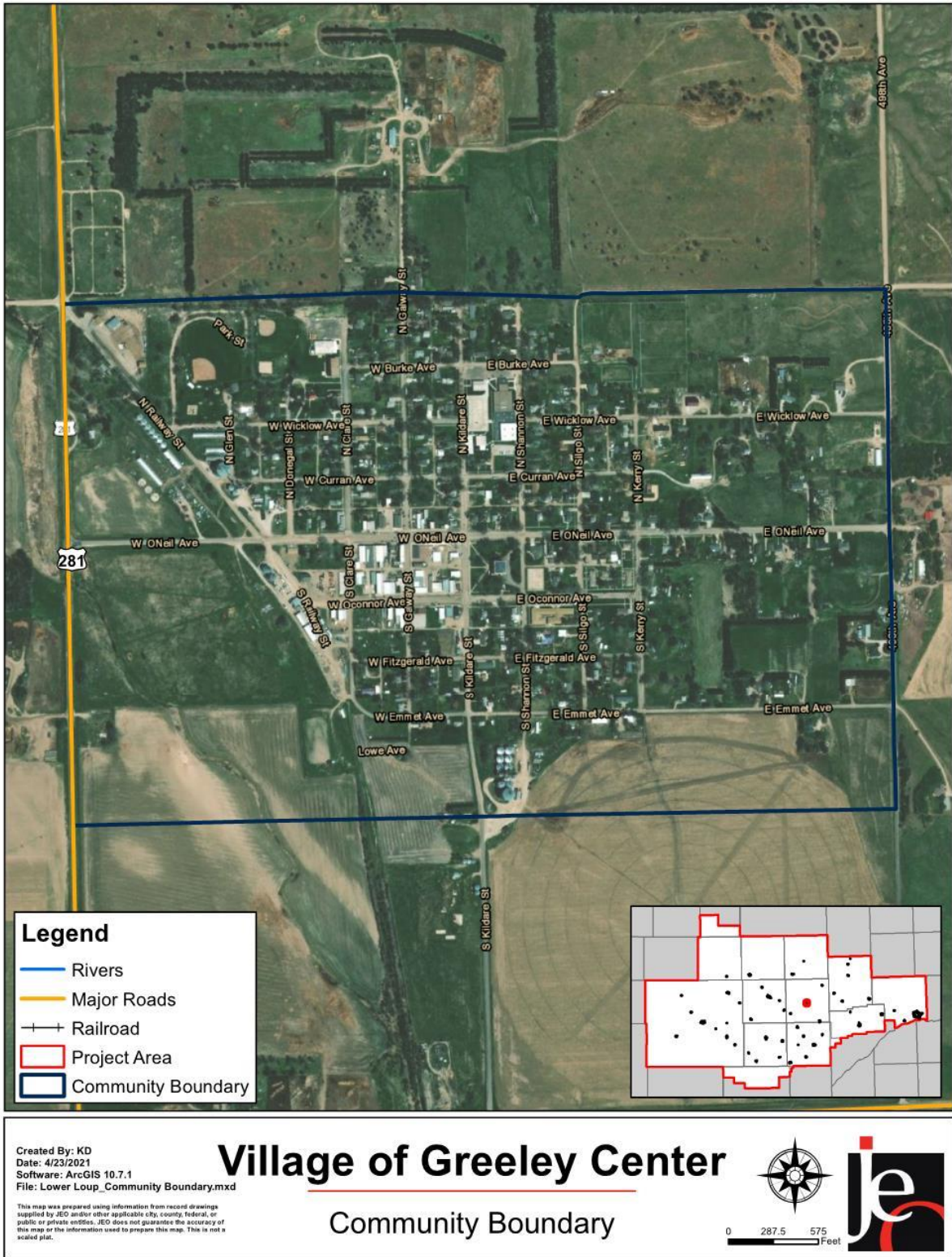
Table GRE.1: Village of Greeley Local Planning Team

NAME	TITLE	JURISDICTION
KARLA COSTELLO	Clerk/Treasurer	Village of Greeley
BOB LAMMERS	Chairman	Village of Greeley
RON MOREARTY	Utilities Supervisor	Village of Greeley

Location and Geography

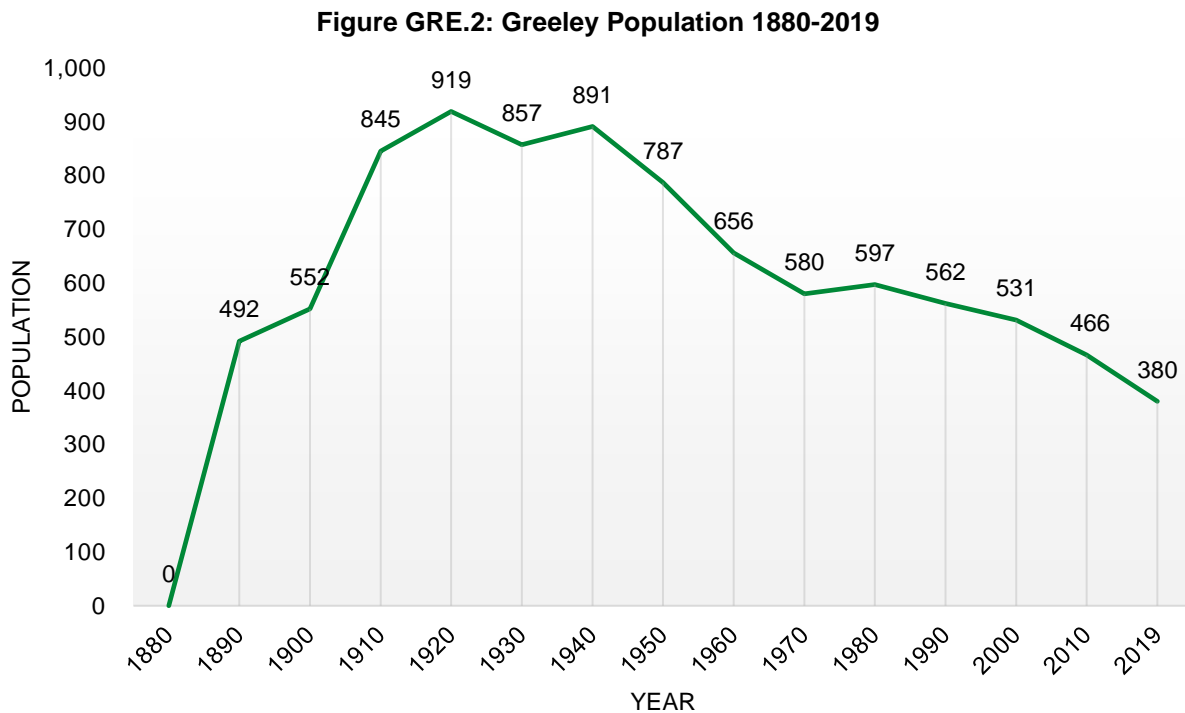
The Village of Greeley Center (referred to as Greeley) is located in central Greeley County. The Village of Greeley covers an area of 0.63 square miles. There are no major water ways near Greeley. The village lies in the plains topographic region and is surrounded by agricultural fields.

Figure GRE.1: Village of Greeley Center Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1880 to 2019 (estimated). This figure indicates that the population of Greeley has been declining since 1940. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. The Village's population accounted for 12% of Greeley County's Population in 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, Greeley' population was:

- **Older.** The median age of Greeley was 58.9 years old in 2019, compared with the County average of 45.5 years. Greeley's population has grown older since 2010, when the median age was 45.8 years old. Greeley had a smaller proportion of people under 20 years old (16.4%) than the County (25.6%).¹³
- **Less ethnically diverse.** In 2010, 100% of Greeley's population was White, non-Hispanic. By 2019, about 1.4% of Greeley's population was Black or African American and 1.7% was American Indian. During that time, Greeley County went from 0% to 0.3% American

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

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

Indian, 0% to 0.9% other races and 0.5% to 0.7% two or more races from 2010 to 2019 respectively.¹⁴

- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Greeley (0.0%) was lower than the County (7.2%) in 2019.¹⁵

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Greeley included Agriculture and Education. In comparison Greeley County's included Agriculture, Retail, and Education.¹⁶
- **Lower household income.** Greeley's median household income in 2019 (\$41,750) was about \$6,000 lower than the County (\$47,869).¹⁷
- **Fewer long-distance commuters.** About 59.7% percent of workers in Greeley commuted for fewer than 15 minutes, compared with about 55.6% of workers in Greeley County. About 11.7% of workers in Greeley commute 30 minutes or more to work, compared to about 19.6% of the County workers.¹⁸

Major Employers

Major employers in the community include Central Valley Public Schools, Greeley County, Country Partners Co-op Rapid Stop, and Greeley Care Home. A large number of residents commute to Grand Island for work, according to the planning team.

Housing

In comparison to the Greeley County, Greeley's housing stock was:¹⁹

- **Less owner occupied.** About 62.4% of occupied housing units in Greeley are owner occupied compared with 81.0% of occupied housing in Greeley County in 2019.
- **Smaller share of aged housing stock.** Greeley has fewer houses built prior to 1970 than the county (62.1% compared to 67.0%).
- **More multi-family homes.** The predominant housing type in the Village is single family detached and Greeley contains more multifamily housing with five or more units per structure than the County (10.8% compared to 1.3%). About 74.2% of housing in Greeley was single-family detached, compared with 89.2% of the County's housing. Greeley has a smaller share of mobile and manufactured housing (2.1%) compared to the County (3.1%). According to the local planning team, there are two mobile homes in Greeley.

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,

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

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

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

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

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

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

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

Governance

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

Capabilities

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

Table GRE.2: Capability Assessment

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

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

Table GRE.3: Overall Capability

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

Plan Integration

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

Grants and Funding

The Village of Greeley's municipal funds have remained steady over recent years and are limited to maintaining current facilities and systems. The village has not applied for or received grants in the past to assist with project implementation.

Comprehensive Plan

Greeley's Comprehensive Plan does not integrate natural hazard mitigation components. At this time there is no timeline to update the Comprehensive Plan.

Building Codes

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

Ordinances and Regulations

Greeley's zoning ordinance restricts development in the floodplain and requires flood proofing design or materials to be used. The village follows requirements as set by the State of Nebraska for zoning ordinances including a base flood elevation of one foot for structures in the floodplain. Greeley's subdivision regulations specify that any new subdivision shall have adequate drainage to reduce flooding risk.

Greeley County Local Emergency Operations Plan

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

Central Sandhills Community Wildfire Protection Plan

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Garfield County in June 2019. The purpose of the CWPP is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. This document is updated every five years.

Future Development Trends

In the past five years, there have been two new houses built in Greeley, and another is currently under construction. The local hardware store closed recently, and a local individual purchased the building. There was also significant street damage sustained during the 2019 flood event. A street re-pavement project is scheduled to take place in the Spring of 2022 for the west end of O'Neill Street, with new streetlights, sidewalks, drainage, and water main being installed. The planning team noted that drainage from the ditch on the north side and throughout the community needs to be improved.

According to census data, the population in Greeley has declined in recent years. The planning team attributes this to a lack of adequate housing in the village, as some older homes are not

currently habitable. The planning team noted, however, that families have moved back to the community in the last year so the population trend may be changing.

Community Lifelines

Transportation

Greeley's major transportation corridors include Highway 281 with 1,960 vehicles per day, and Highway 56 with 410 vehicles per day. Greeley does not have rail lines. According to the planning team, no significant transportation events have occurred locally. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are two chemical storage sites throughout Greeley which house hazardous materials. No chemical spills have occurred locally, according to the planning team. In the event of a chemical spill, the fire department and sheriff/deputies would be the first to respond.

Table GRE.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
COUNTRY PARTNERS COOPERATIVE	100 S Railroad Ave	N
NDOT GREELEY YARD	401 N Railway St	N

Source: Nebraska Department of Environment and Energy²⁰

Critical Facilities

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

The American Red Cross has agreements with Greeley Care Home to serve as a mass care facility during disaster events. The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table GRE.5: Greeley Critical Facilities

CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Consolidated High School	N	N	N
2	Food, Water, and Shelter	Sacred Heart Gym	Y	N	N
3	Hazardous Materials	Co-op	N	N	N

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

SECTION SEVEN: VILLAGE OF GREELEY COMMUNITY PROFILE

CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
4	Safety and Security	Greeley Center Fire Department	N	N	N

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

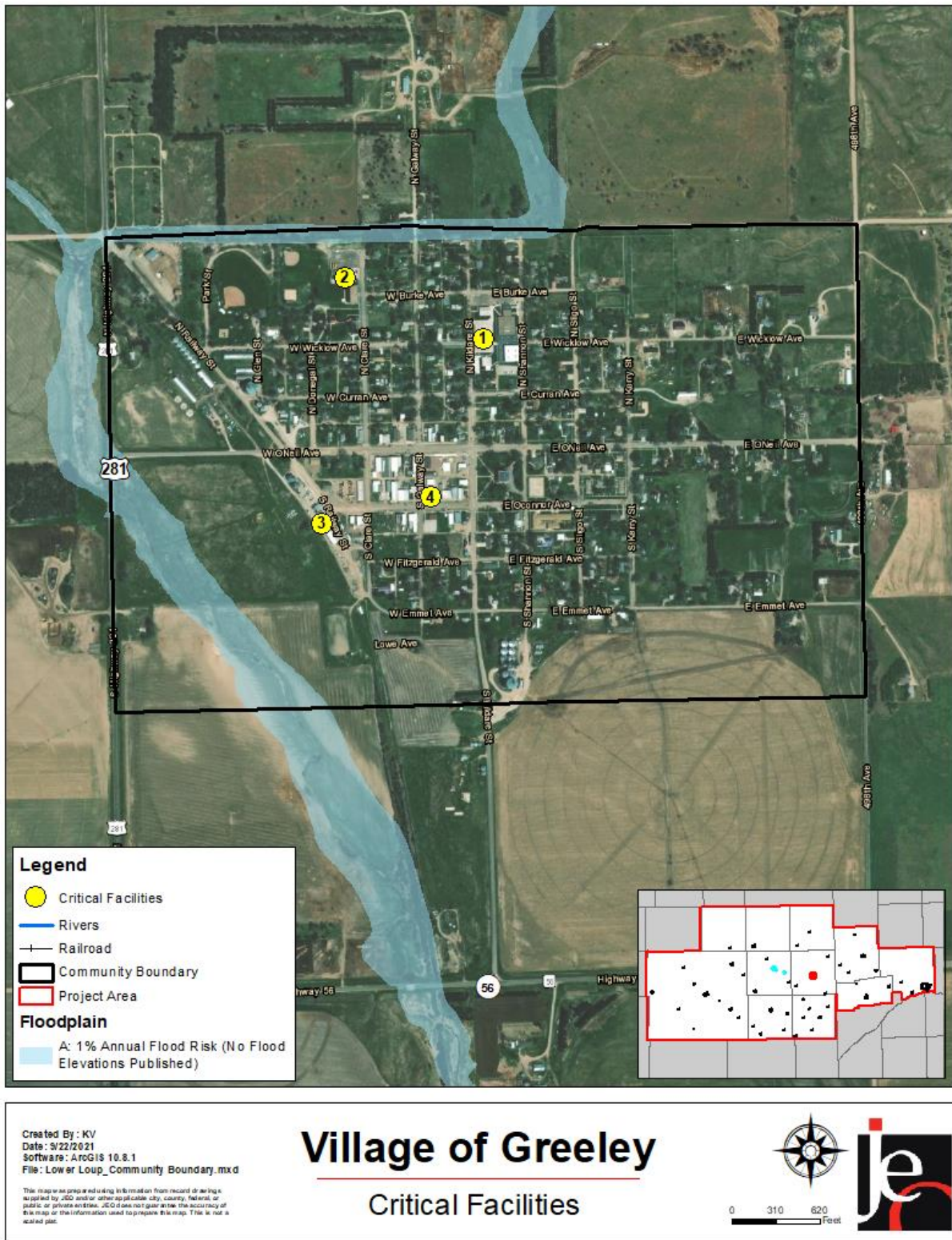
Health and Medical Facilities

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

Table GRE.6: Greeley Critical Facilities

TYPE OF FACILITY	ADDRESS	NUMBER OF LICENSED BEDS
ASSISTED LIVING FACILITY	Greeley Assisted Living	12
LONG TERM CARE FACILITIES	Greeley Care Home	26
RURAL HEALTH CLINIC	Greeley Medical Clinic	N/A

Figure GRE.3: Greeley Critical Facilities



Parcel Improvements and Valuation

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

Table GRE.7: Greeley Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
348	263	16,985,330	9	740,515	3.42%

Source: County Assessor, GIS Workshop

Table GRE.8: Greeley Flood Map Products

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
LOMA	10-07-1985A-310373	9/14/2010	Property removed from SFHA

Source: FEMA Flood Map Service Center

Hazard Prioritization

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

Hazardous Materials (Transportation)

Local concerns focus on the potential for injuries and loss of life in the event of a chemical spill. The transportation routes of greatest concern are Highway 281 and Highway 56. The local planning team indicated that chemicals are regularly transported along these local routes. According to PHMSA, no transportation-related chemical spills have occurred in Greeley from 1971 to 2021. The fire department has some protective gear and training to respond to a chemical spill, according to the planning team.

Flooding

Greeley participates in the NFIP but does not have any policies in force. There are no repetitive flood loss properties in the Village of Greeley. Concerns for flooding include potential contamination from flood waters and damages to buildings and public infrastructure. According to the local planning team, water drains from the north side of town before dispersing east and west on its way south.

The NCEI recorded one flood event in Greeley from 1996 to February 2021. That event occurred in May 2004 and caused \$50,000 in property damage and \$500,000 in crop damage when three inches of rain fell and washed-out country roads and crops in the area. According to the planning team, flooding in 2019 resulted in two homes sustaining moderate to severe damages.

Additionally, the sewer plant was under water for about a week and many streets were damaged considerably. Projects identified as being need in the future include enlarging the drainage ditch on the north side of town and installing a bigger culvert under Galway Street.

Severe Thunderstorms

The local planning team indicated that severe thunderstorms were a concern due to the potential for property damages, power outages, and flooding. According to the NCEI, there were 42 severe thunderstorm events in Greeley between 1996 and February 2021. These events resulted in \$478,000 in property damage and \$7,475,000 in crop damage. Past storms have blown down branches and trees onto roads, vehicles, and homes.

Tornadoes and High Winds

Tornadoes have the potential to cause significant property damages and loss of life. According to the NCEI, there have been four tornadic events near Greeley from 1996 to February 2021. These tornadoes touched down outside of the corporate limits and knocked over irrigation pivots, causing \$125,000 in damages. During that same period, the NCEI recorded 15 high wind events in Greeley County, resulting in approximately \$1 million in property damage. No injuries or fatalities were reported to have occurred from these events.

Mitigation Strategy

Continued Mitigation Actions

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

SECTION SEVEN: VILLAGE OF GREELEY COMMUNITY PROFILE

OBJECTIVE	PUBLIC SAFE ROOMS & POST-DISASTER STORM SHELTERS
DESCRIPTION	<ol style="list-style-type: none"> 1. Identify and evaluate existing safe rooms and/or storm shelters 2. Improve and/or construct safe rooms and/or storm shelters 3. Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$150/sf for retrofit; \$300/sf for new construction
POTENTIAL FUNDING	HMGP, PDM, Donations, Greeley General Fund
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Village Board, Greeley County Emergency Manager
STATUS	The American Legion can act as a post-disaster storm shelter; however, there is currently no FEMA-certified safe room in the village.

OBJECTIVE	REDUCE STREAM & DRAINAGE BOTTLENECKS/FLOW RESTRICTIONS
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate restrictions and measures to prevent or reduce flood damage 2. Implement appropriate nonstructural or structural methods on an emergency or permanent basis (monitoring or warning systems, ice jam dusting, excavation or blasting, reshaping channel, tree and debris removal, acquire property and/or construct additional channels or other flow improvements)
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$10,000 to \$50,000 for studies; \$10,000+ for infrastructure
POTENTIAL FUNDING	Greeley General Fund
PRIORITY	Low
TIMELINE	5+ Years
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

OBJECTIVE	REDUCE STORM WATER DAMAGE
DESCRIPTION	<ol style="list-style-type: none"> 1. Conduct stormwater drainage study to evaluate restrictions, capacity, level of protection, alternative improvements, prioritize improvements, etc. 2. Evaluate and implement recommendations or comparable measures (open ditch and culvert improvements, underground piping, retention and detention facilities to decrease runoff, etc.) 3. Evaluate storm water ordinance 4. Implement improved storm water ordinance
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$10,000 to \$75,000 for studies; \$10,000+ for infrastructure
POTENTIAL FUNDING	Greeley General Fund
PRIORITY	Low
TIMELINE	5+ Years
LEAD AGENCY	Village Board
STATUS	The village has identified the need to enlarge the drainage ditch on the north side of town and install a bigger culvert under Galway Street.

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

Plan Maintenance

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

The Village Board, fire department, local school officials, Greely Care Home administrator are responsible for reviewing and updating this profile as changes occur or after a major event. The profile will be reviewed no less than bi-annually. The public will be notified and involved in the update review process through various methods including local board meetings.

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COMMUNITY PROFILE

VILLAGE OF SCOTIA

Lower Loup Natural Resources District Hazard Mitigation Plan 2022

Local Planning Team

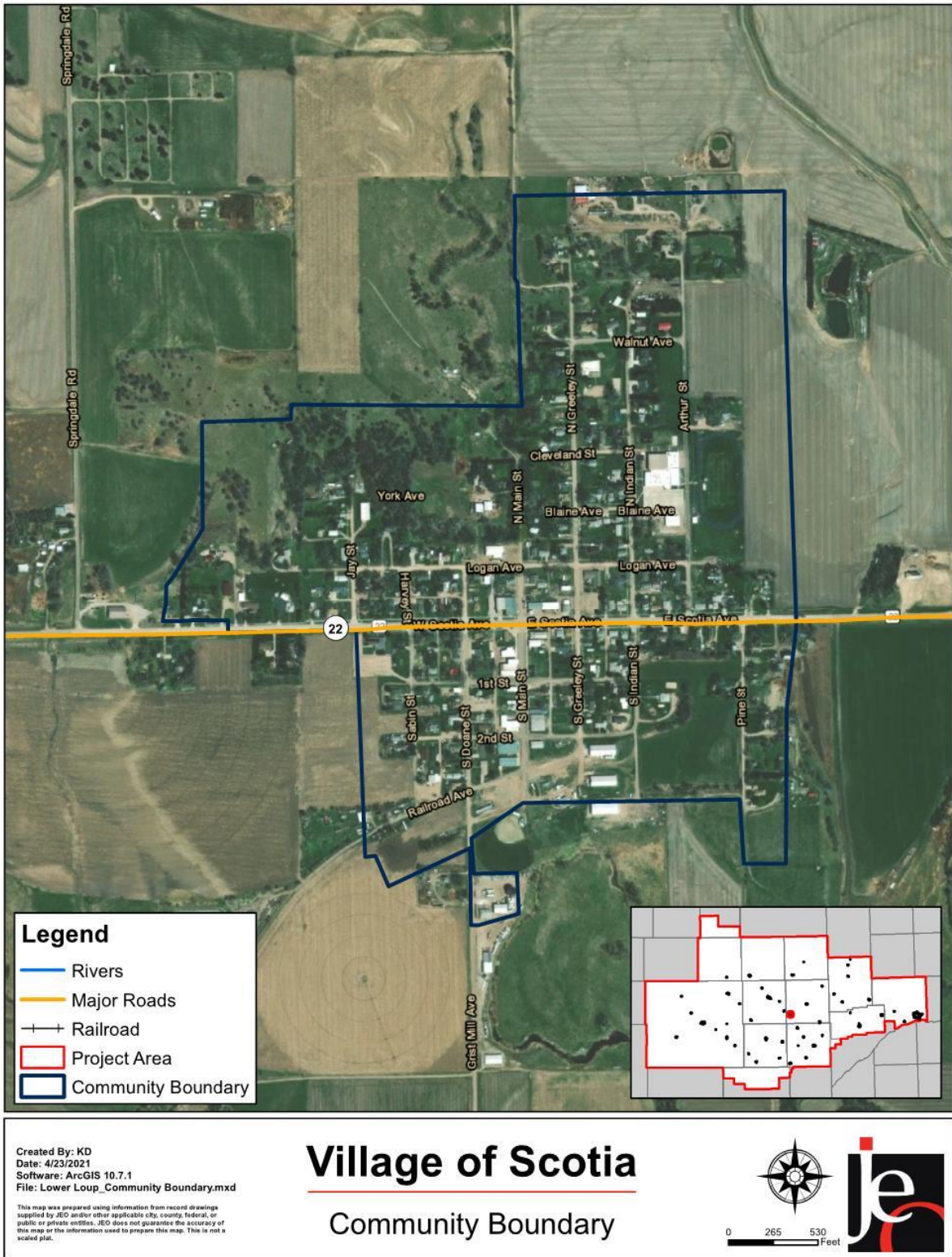
Table SCO.1: Village of Scotia Local Planning Team

NAME	TITLE	JURISDICTION
CARRIE HANSEN	CLERK	VILLAGE OF SCOTIA

Location and Geography

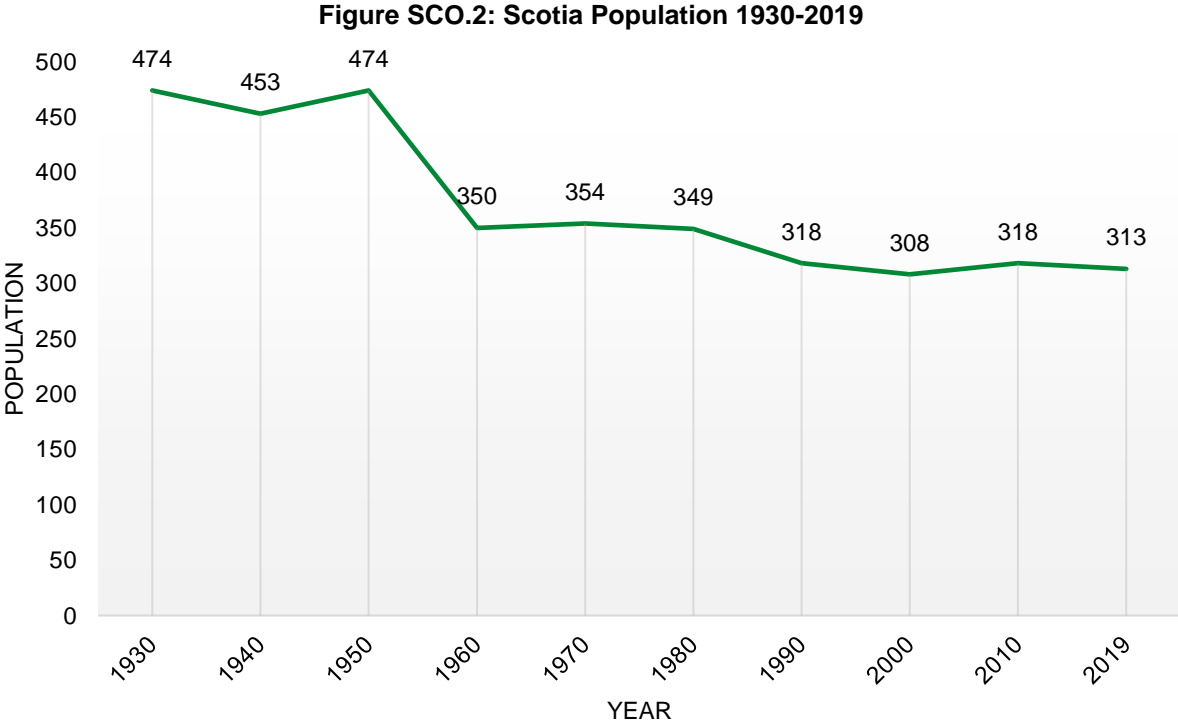
The Village of Scotia is located in southwestern Greeley County. The Village of Scotia covers an area of 0.35 square miles. The North Loup River is located west of the village. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Scotia lies in the dissected plains topographic regions, and is surrounded by agricultural fields.

Figure SCO.1: Village of Scotia Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1880 to 2019 (estimated). This figure indicates that the population of Scotia experienced a steady increase until 2000. After 2000, the population had a major decrease and has been steadily declining since. The local planning team attributed the decline to a lack of jobs and an aging population. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. The Village’s population accounted for 13% of Greeley County’s Population in 2019.



Source: U.S. Census Bureau²¹

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

- **Younger.** The median age of Scotia was 36.4 years old in 2019, compared with the County average of 45.5 years. Scotia’s population has grown younger since 2010, when the median age was 41.5 years old. Scotia had a larger proportion of people under 20 years old (30.1%) than the County (25.6%).²²
- **More ethnically diverse.** In 2010, 2.2% of Scotia’s population was Black or African American, 0% was other races, and 0% were two or more races. By 2019, about 3.0% of Scotia’s population was two or more races. During that time, Greeley County went from

²¹ United States Census Bureau. “2019 American Fact Finder: S0101: Age and Sex.” [database file]
²² United States Census Bureau. “2019 American Fact Finder: S0101: Age and Sex.” [database file]

0% to 0.3% American Indian, 0% to 0.9% other races and 0.5% to 0.7% two or more races from 2010 to 2019 respectively.²³

- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Scotia (2.1%) was lower than the County (7.2%) in 2019.²⁴

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Scotia included Agriculture, Construction, Retail, and Education. In comparison Greeley County's included Agriculture, Retail, and Education.²⁵
- **Slightly Lower household income.** Scotia's median household income in 2019 (\$47,679) was about \$200 lower than the County (\$47,869).²⁶
- **Fewer long-distance commuters.** About 43.3% percent of workers in Scotia commuted for fewer than 15 minutes, compared with about 55.6% of workers in Greeley County. About 18.6% of workers in Scotia commute 30 minutes or more to work, compared to about 19.6% of the County workers.²⁷

Major Employers

Major employers in the Village of Scotia include Trotter Inc. and Central Valley Schools. Most residents work in the surrounding areas but may also commute to Greeley, Ord, St. Paul and, Grand Island.

Housing

In comparison to the Greeley County, Scotia's housing stock was:²⁸

- **Slightly more owner occupied.** About 81.6% of occupied housing units in Scotia are owner occupied compared with 81.0% of occupied housing in Greeley County in 2019.
- **Smaller share of aged housing stock.** Scotia has fewer houses built prior to 1970 than the county (66.4% compared to 67.0%).
- **Fewer multi-family homes.** The predominant housing type in the Village is single family detached and Scotia contains fewer multifamily housing with five or more units per structure than the County (0.0% compared to 1.3%). About 96.0% of housing in Scotia was single-family detached, compared with 89.2% of the County's housing. Scotia has a smaller share of mobile and manufactured housing (2.0%) compared to the County (3.1%). The local planning team noted there were approximately two mobile homes remaining in the community.

This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further,

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

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

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

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

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

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

unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Scotia has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The Village has a five member village board and the following offices: clerk/treasurer, utility superintendent, volunteer fire department, and street commissioner. Additionally, local churches and County Emergency Management may assist with emergency response and mitigation activities.

Capabilities

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

Table SCO.2: Capability Assessment

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

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

Table BAR.3: Overall Capability

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

Plan Integration

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

Grants and Funding

The Village of Scotia's municipal funds have remained steady over recent years and are very limited to maintaining current facilities and systems. The village has not applied for or received grants in the past to assist with project implementation.

Comprehensive Plan

Scotia Comprehensive Plan does not integrate natural hazard mitigation components. At this time there is no timeline to update the Comprehensive Plan.

Building Codes

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

Ordinances and Regulations

The village follows requirements as set by the State of Nebraska for zoning ordinances including a base flood elevation of one foot for structures in the floodplain.

Greeley County Local Emergency Operations Plan

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

Central Sandhills Community Wildfire Protection Plan

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Garfield County in June 2019. The purpose of the CWPP is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. This document is updated every five years.

Future Development Trends

There have been few changes in the village over the past five years. No new commercial or residential properties were developed in the community and there have been no new businesses. The population in Scotia has remained relatively stable over the past several decades however there is a n aging population in town which may lead to declining population trends in the future. There are no new developments planned for the next five years.

Community Lifelines

Transportation

Scotia's major transportation corridors include Highway 22, which runs east-west, through the center of Scotia. N-22 accommodates on average 1,010 vehicles per day, 135 of which are heavy

commercial vehicles. The Nebraska Central Railroad Company has a rail line outside the western portion of the village. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are two chemical storage sites throughout Scotia which house hazardous materials.

Table SCO.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
RIVERSIDE FERTILIZER & PROPANE	80272 Grist Mill Ave	Y
NEBRASKA CENTRAL TELEPHONE CO	501 Scotia Ave	N

Source: Nebraska Department of Environment and Energy²⁹

Critical Facilities

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

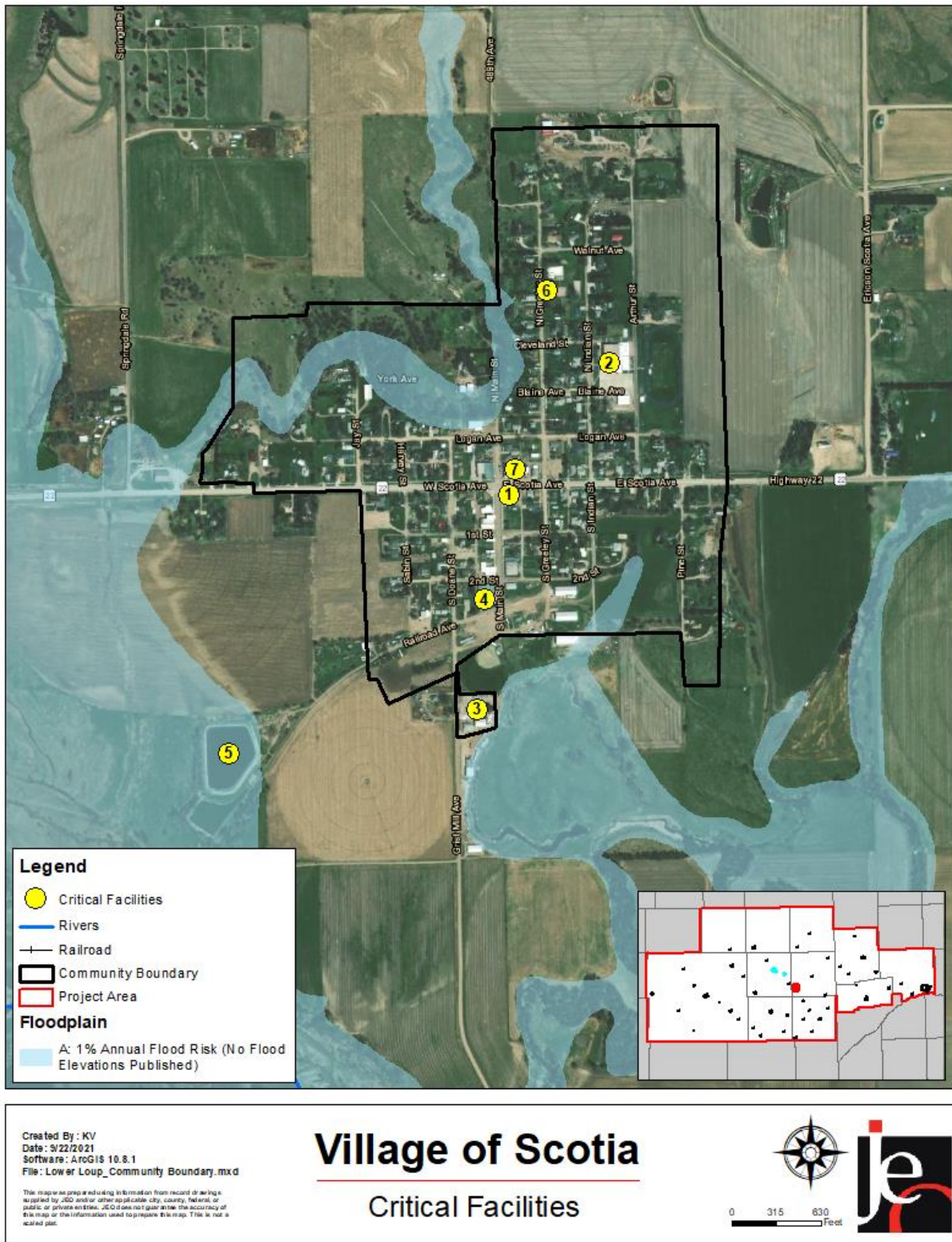
The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table SCO.5: Scotia Critical Facilities

CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Community Building	N	N	N
2	Food, Water, and Shelter	North Loup High School	N	N	N
3	Hazardous Materials	Riverside Fertilizer	N	N	N
4	Safety and Security	Scotia Fire Hall	N	Y	N
5	Food, Water, and Shelter	Sewage Lagoon	N	N	Y
6	Food, Water, and Shelter	Village Well #2004-1	N	Y	N
7	Energy	Whoa and Go Fuel Station	N	N	N

²⁹ Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

Figure SCO.3: Scotia Critical Facilities



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

Health and Medical Facilities

No medical and health facilities are located within the village.

Parcel Improvements and Valuation

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

Table SCO.7: Scotia Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
249	179	12,830,280	16	650,655	8.94%

Source: County Assessor, GIS Workshop

Table SCO.8: Scotia Flood Map Products

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
LOMA	20-07-1173A-310316	7/28/2020	Structure (residence) removed from SFHA

Source: FEMA Flood Map Service Center

Hazard Prioritization

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

Drought

Drought concerns the local planning team due to the potential for water shortages and economic impacts. The local planning team defined drought as a sustained lack of rain. In 2012, the village experienced extremely low water levels during the drought period. The surrounding areas and community is heavily reliant on the agricultural sector. The water supply has been sufficient during past droughts. However, the village has the authority to implement water restrictions if there are water supply shortages. The village's water supply is metered and the village checks the wells for pumping volumes regularly.

Flooding and Dam Failure

Scotia participates in the NFIP but does not have any policies in force. There are no repetitive flood loss properties in the Village of Scotia. The closest bodies of water that are of concern for

the village are Mira Creek and the North Loup River. Additionally, the Bredthauer Dam upstream and to the northwest of North Loup is a concern for the village. In June of 2010, heavy rain caused the failure of six dams across the planning area including Bredthauer Dam. The dam failure caused extensive flooding in North Loup but primarily avoided Scotia. NCEI estimated property damages totaling one million dollars from this event.

Primary concerns for flooding pertain to poor stormwater drainage. During the March 2019 flood event the small creek north of the village flooded but no significant damages were reported in the village. Private properties adjacent to the creek are at the greatest risk of flood impacts. Infiltration in the sewer mains cause problems at the sewer lagoon.

Severe Thunderstorms

Past severe thunderstorms have caused heavy tree damage and power outages. The local planning team indicated concerns for vulnerable populations such as the elderly and low income residents during thunderstorm events. There are hazardous trees that need to be removed throughout the community. Critical municipal records are protected with surge protectors on electronic devices. There are no buried powerlines in the village, increasing local risk to power outages; however, both the fire hall and wells have backup generators.

Severe Winter Storms

Damage from ice and wind and power outages are a concern for the village. Previous winter storms have knocked down power lines and caused power outages. The village identified the need of a generator to operate the community building as an emergency shelter in the event of a severe winter storm. Village maintenance and volunteers are in charge of removing snow within the village. The village's snow removal equipment includes plows on two pickups and a backhoe. Snow removal resources were identified as insufficient for local needs. The village identified the need for a dump truck to assist in snow removal.

Tornadoes and High Winds

The major concern for the local planning team is the lack of options for residents seeking shelter during a tornadic event. Municipal records are backed up regularly on a flash drive. The community has warning sirens; however, they are in need of backup systems. Region 26 offers text alerts and manages the alert sirens. In the event of a disaster, the village has mutual aid agreements through the Water and Wastewater Agency Response Networks (WARN). The local planning team noted there are some hazardous trees around the community; however, the majority of those are on private property and are the responsibility of the homeowner.

Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	REDUCE WATER DEMAND/IMPROVE DROUGHT EDUCATION
ACTIONS	<ol style="list-style-type: none"> 1. Conduct water use study to evaluate/implement methods to conserve water/reduce consumption 2. Evaluate/implement water use restriction ordinance 3. Identify/evaluate current/additional potable water sources 4. Develop or obtain drought education materials to conduct multi-faceted public education and awareness program
HAZARD(S) ADDRESSED	Drought
STATUS	The village sends information out about local drought conditions and well metering.

OBJECTIVE	IMPROVE/PROVIDE ADEQUATE BACKUP AND EMERGENCY GENERATORS
ACTIONS	<ol style="list-style-type: none"> 1. Identify and evaluate current backup and emergency generators 2. Obtain additional generators based on identification and evaluation 3. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
STATUS	A new backup generator was purchased for the well generators.

Continued Mitigation Actions

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

OBJECTIVE	IMPROVE EMERGENCY COMMUNICATION
ACTIONS	<ol style="list-style-type: none"> 1. Develop/Improve Emergency Communication Action plan 2. Implement Emergency Communication Action Plan 3. Establish inner-operable communications 4. Obtain/Upgrade Emergency Communication Facilities/Equipment 5. Obtain/Upgrade/Distribute Weather Warning Radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$5,000+
POTENTIAL FUNDING	Village General Fund
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Village Board, Greeley County Emergency Manager
STATUS	This project has not yet been started.

OBJECTIVE	REDUCE STREAM & DRAINAGE BOTTLENECKS/FLOW RESTRICTIONS
ACTIONS	<ol style="list-style-type: none"> 1. Evaluate restrictions and measures to prevent or reduce flood damage 2. Implement appropriate nonstructural or structural methods on an emergency or permanent basis (monitoring or warning systems, ice jam dusting, excavation or blasting, reshaping channel, tree and debris removal, acquire property and/or construct additional channels or other flow improvements)
HAZARD(S) ADDRESSED	Flooding, Heavy Precipitation
ESTIMATED COST	\$10,000 to \$50,000 for studies; \$10,000+ or more to enlarge ditches, culverts, pipes; unknown for stream channel, crossing structures or bridge improvements
POTENTIAL FUNDING	Local Tax Dollars
TIMELINE	2-5 years
PRIORITY	Low
LEAD AGENCY	Village Board
SUPPORT AGENCY	LLNRD
STATUS	This project has not yet been started.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the Village Board, Village Clerk, and Fire Chief. The local planning team will review the plan annually or as changes occur and will include the public in the review and revision process by sharing information at village board meetings.

COMMUNITY PROFILE

VILLAGE OF SPALDING

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

Local Planning Team

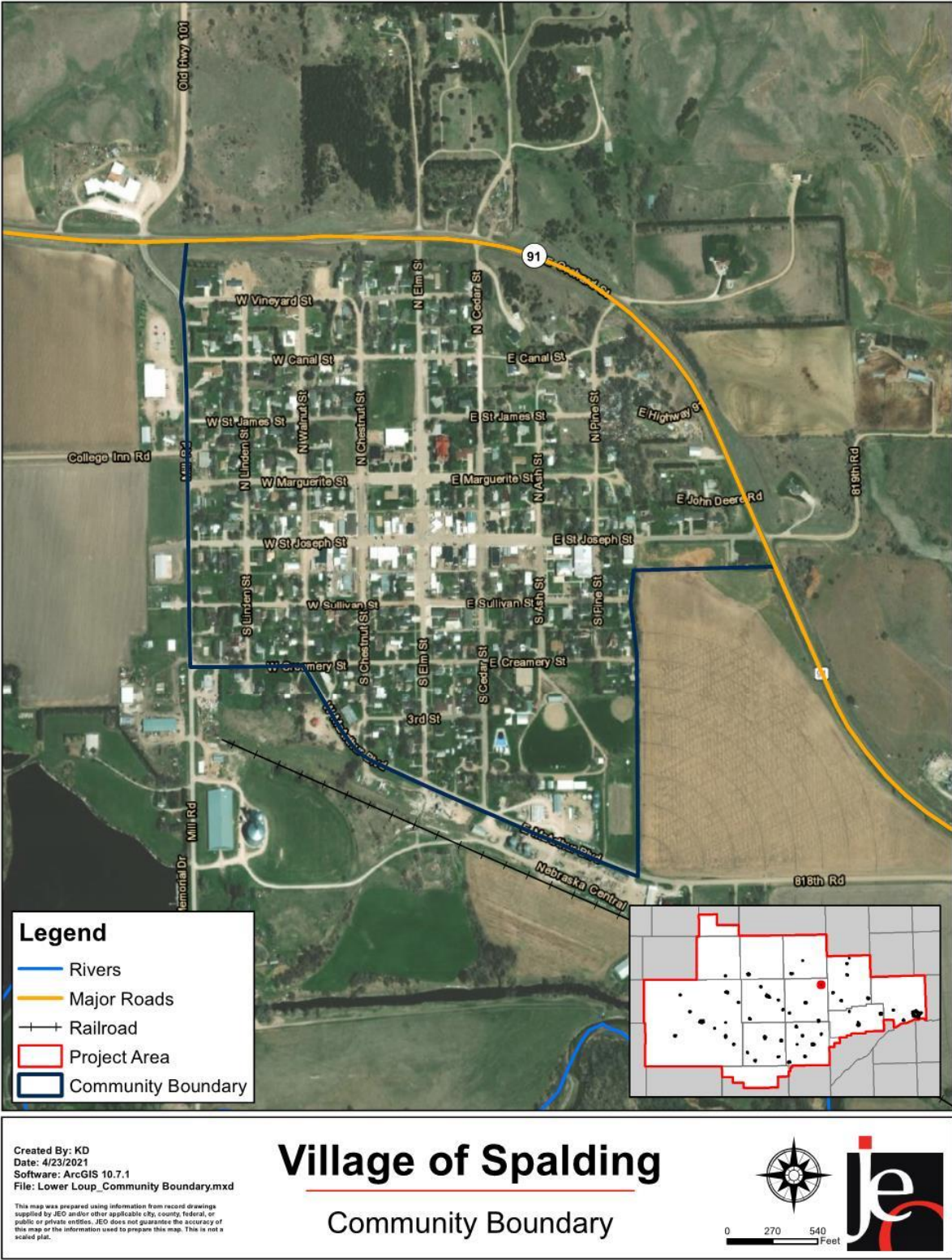
Table SPA.1: Village of Spalding Local Planning Team

NAME	TITLE	JURISDICTION
ED CARLIN	Board Member	Village of Spalding
JACKIE HERLEY	Village Clerk	Village of Spalding

Location and Geography

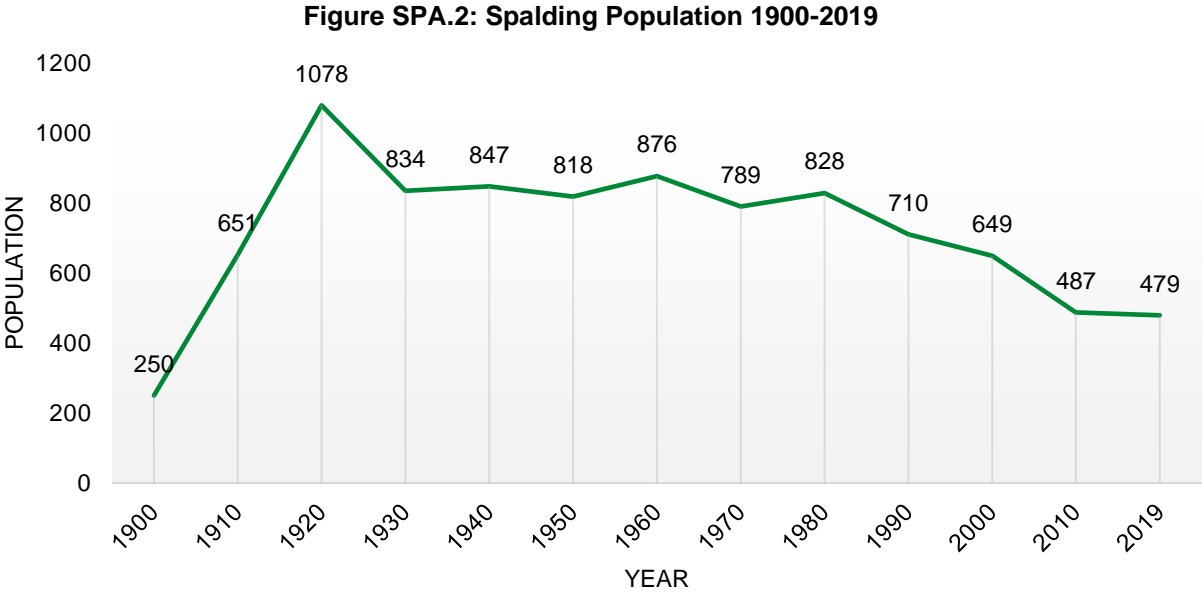
The Village of Spalding is located in the northeastern portion of Greeley County. The Village of Spalding covers an area of 0.32 square miles. The Cedar River is located south of the village. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Most of Spalding lies in the dissected plains topographic region, and is surrounded by agricultural fields.

Figure SPA.1: Village of Spalding Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1900 to 2019 (estimated). This figure indicates that the population of Spalding experienced varying declines and increases in population from 1920 through 1970. Since the 1980’s the population has been in a steady decline. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. The Village’s population accounted for 20% of Greeley County’s Population in 2019.



Source: U.S. Census Bureau³⁰

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

- Older.** The median age of Spalding was 45.8 years old in 2019, compared with the County average of 45.5 years. Spalding’s population has grown older since 2010, when the median age was 40.2 years old. Spalding had a smaller proportion of people under 20 years old (20.9%) than the County (25.6%).³¹
- Less ethnically diverse.** In 2010, 0% of Spalding’s population was Black or African American, 0% was other races, and 2.1% were two or more races. By 2019, only 0% of Spalding’s population was two or more races. During that time, Greeley County went from 0% to 0.3% American Indian, 0% to 0.9% other races and 0.5% to 0.7% two or more races from 2010 to 2019 respectively.³²

³⁰ United States Census Bureau. “2018 American Fact Finder: S0101: Age and Sex.” [database file]
³¹ United States Census Bureau. “2018 American Fact Finder: S0101: Age and Sex.” [database file]
³² United States Census Bureau. “2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates.” [database file]

- **More likely to be at the federal poverty line.** The poverty rate of all persons in Spalding (9.7%) was higher than the County (7.2%) in 2019.³³

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Spalding included Agriculture, Retail, Finance, and Education. In comparison Greeley County's included Agriculture, Retail, and Education.³⁴
- **Lower household income.** Spalding's median household income in 2019 (\$41,875) was about \$5,900 lower than the County (\$47,869).³⁵
- **Fewer long-distance commuters.** About 61.8% percent of workers in Spalding commuted for fewer than 15 minutes, compared with about 55.6% of workers in Greeley County. About 19.9% of workers in Spalding commute 30 minutes or more to work, compared to about 19.6% of the County workers.³⁶

Major Employers

The major employers in the Village of Spalding include the County Partners Co-op. The local planning team noted approximately five to ten percent of residents commute to the nearby community of Albion.

Housing

In comparison to the Greeley County, Spalding's housing stock was:³⁷

- **More owner occupied.** About 82.7% of occupied housing units in Spalding are owner occupied compared with 81.0% of occupied housing in Greeley County in 2019.
- **Larger share of aged housing stock.** Spalding has more houses built prior to 1970 than the county (74.9% compared to 67.0%).
- **More multi-family homes.** The predominant housing type in the village is single family detached and Spalding contains more multifamily housing with five or more units per structure than the County (3.2% compared to 1.3%). About 89.2% of housing in Spalding was single-family detached, compared with 89.2% of the County's housing. Spalding has a larger share of mobile and manufactured housing (5.4%) compared to the County (3.1%)

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

33 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

34 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

35 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

36 United States Census Bureau. "2018 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]

37 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Governance

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

Capabilities

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

Table SPA.2: Capability Assessment

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

SURVEY COMPONENTS		YES/NO
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	
EDUCATION AND OUTREACH	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	Yes
	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 BAR.3: Overall Capability

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

Plan Integration

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

Grants and Funding

The Village of Spalding's municipal funds have remained steady over recent years and are limited to maintaining current facilities and systems. There are currently no large-scale projects currently earmarked in the community budget.

Comprehensive Plan

Spalding's Comprehensive Plan does not integrate natural hazard mitigation components. At this time there is no timeline to update the Comprehensive Plan.

Building Codes

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

Ordinances and Regulations

The village follows requirements as set by the State of Nebraska for zoning ordinances including a base flood elevation of one foot for structures in the floodplain.

Greeley County Local Emergency Operations Plan

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

Central Sandhills Community Wildfire Protection Plan

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Garfield County in June 2019. The purpose of the CWPP is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. This document is updated every five years.

Future Development Trends

There have been few changes in the village over the past five years. No new commercial or residential properties were developed in the community and there have been no new businesses. The Nebraska Central Railroad Company used to have a rail line along the southern side of the village, but it has since been decommissioned. The local planning team indicated that the census estimates are accurate, and that Spalding's population is declining due to a lack of housing and employment opportunities. There are no new developments planned for the next five years.

Community Lifelines

Transportation

Spalding's major transportation corridors include Highway 91, which runs east-west, around the northeastern portion of Spalding. Highway 91 accommodates on average 1,195 vehicles per day, 150 of which are heavy commercial vehicles. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

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

Table SPA.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
COUNTRY PARTNERS COOPERATIVE	310 E Railroad Ave	No
TROTTER FERTILIZER INC	50448 Highway 91	No
COUNTRY PARTNERS COOPERATIVE	50567 Highway 91	No

Source: Nebraska Department of Environment and Energy³⁸

Critical Facilities

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

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

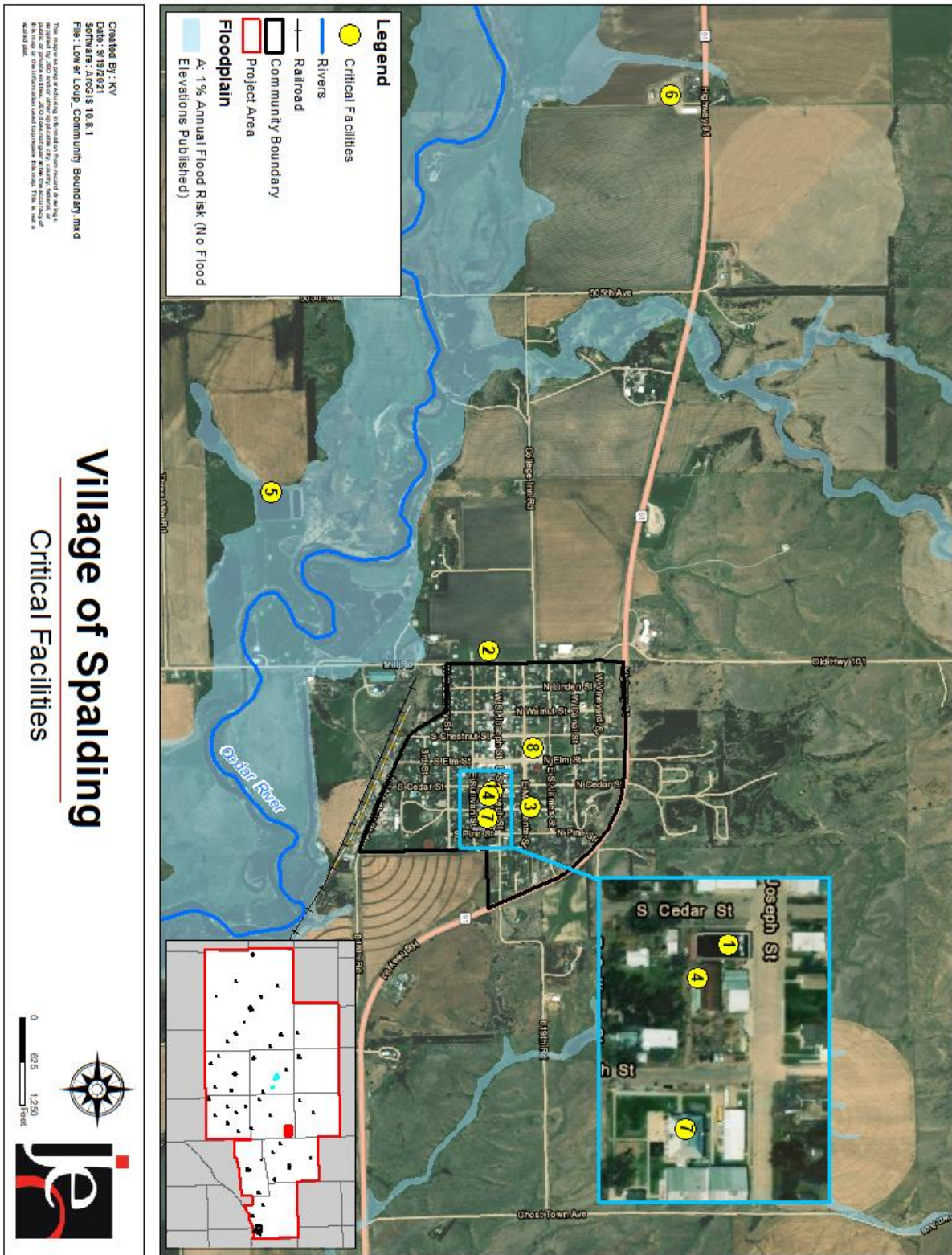
Table SPA.5: Spalding Critical Facilities

CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Safety and Security	Village Office	N	N	N
2	Safety and Security	Fire Hall	Y	Y	N
3	Food, Water, and Shelter	Water Well	N	N	N
4	Food, Water, and Shelter	Water Well	N	N	N
5	Food, Water, and Shelter	Sewage Lagoon	N	N	Y
6	Hazardous Materials	Trotter Fertilizer	N	N	N
7	Food, Water, and Shelter	School	N	N	N
8	Food, Water, and Shelter	School	N	N	N
9	Energy	Electric Substation*	N	Y	N

*indicates facility is not mapped

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

Figure SPA.3: Spalding Critical Facilities



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

Health and Medical Facilities

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

Table SPA.6: Spalding Critical Facilities

NAME OF FACILITY	TYPE OF FACILITY	NUMBER OF LICENSED BEDS
SPALDING MEDICAL CLINIC	Rural Health Clinic	N/A

Source: Nebraska Department of Health and Human Services^{39,40,41,42}

Parcel Improvements and Valuation

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

Table SPA.7: Spalding Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
339	266	17,235,030	0	0	0.00%

Source: County Assessor, GIS Workshop

Hazard Prioritization

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

Dam Failure

The Spalding Dam, which is municipally owned, is located approximately a quarter mile south of the city limits. The dam failed in September 2001 which damaged the golf course, club house, and golf cart sheds. In the event of a major dam failure, emergency housing could be provided at

³⁹ Department of Health and Human Services. 2021. "State of Nebraska: Assisted Living Facilities." <https://dhhs.ne.gov/licensure/Documents/ALF%20Roster.pdf>.

⁴⁰ Department of Health and Human Services. 2021. "State of Nebraska Roster: Hospitals." <https://dhhs.ne.gov/licensure/Documents/Hospital%20Roster.pdf>.

⁴¹ Department of Health and Human Services. 2021. "State of Nebraska Roster: Long Term Care Facilities." <https://dhhs.ne.gov/licensure/Documents/LTCRoster.pdf>.

⁴² Department of Health and Human Services. 2021. "State of Nebraska Roster: Rural Health Clinic." https://dhhs.ne.gov/licensure/Documents/RHC_Roster.pdf.

the fire hall. The village plans to implement water monitoring and gate improvements which includes a diversion dam gate update.

Flooding

Spalding participates in the NFIP but does not have any policies in-force. There are no repetitive flood loss properties in the Village of Spalding. The last significant flooding event identified occurred in July 2010. The Cottonwood Green Golf Course Club House has been damaged by previous flooding events. Riverine flooding along the Cedar River is more of a concern than flash flooding within the village. During the major flooding in 2019, flood waters damaged the hydro-electric plant and transfer station. The diversion dam was also damaged with heavy washout. The event also caused power loss and damage to village buildings. The village needs flood gate improvements to mitigate against future flooding.

Severe Thunderstorms

Local concerns regarding hail focus on the potential for property damages. According to the NCEI, there have been 24 hail events in Spalding from 1996 to 2019. These hail events caused \$1,630,000 in property damages. Past severe thunderstorm events have downed power lines and damaged buildings and vehicles. The water well and sewage plant have backup generators. Only about five percent of power lines in the community are buried. Critical facilities have not been fitted with hail resistant building materials. The village is actively researching and budgeting for an additional generator for a second well.

Severe Winter Storms

The last significant severe winter storm occurred in February 2007. The main concerns regarding severe winter storms include the potential for damage to electrical infrastructure, power outages, transportation difficulty, and heating capabilities in homes with power outages. Village employees are in charge of removing snow within the village. Snow removal resources include a plow, tractor, and skid loader. Snow removal resources are sufficient for local needs, but the village could use some equipment updates in the future.

Tornadoes and High Winds

Major concerns regarding tornadoes and high winds include structural and tree damage in the community. Municipal records are backed up onto a flash drive twice a week. The village warning sirens are activated remotely through Region 26 Emergency Management in Taylor or manually. Community members seeking shelter during a tornadic event can go to the fire hall. Region 26 Emergency Management offers text alerts to warn residents of an impending event. In the event of a disaster, the village is a member of the Loup Valley Mutual Aid.

Mitigation Strategy

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	<ol style="list-style-type: none"> 4. Identify and evaluate current backup and emergency generators 5. Obtain additional generators based on identification and evaluation 6. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
ESTIMATED COST	\$20,000 to \$75,000+ per generators
POTENTIAL FUNDING	Spalding General Fund, HMGP
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Greeley County Emergency Manager, Village Board
STATUS	The village is currently exploring funding opportunities for well #2.

OBJECTIVE	COMMUNITY EDUCATION AND AWARENESS
DESCRIPTION	<ol style="list-style-type: none"> 1. Establish a community education program to increase awareness related to household level mitigation actions 2. Utilize outreach projects and the distribution of maps 3. Purchasing equipment such as projectors and laptops to facilitate presentation of information
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$3,000+
POTENTIAL FUNDING	Spalding General Fund
TIMELINE	2-5 years
PRIORITY	Low
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

OBJECTIVE	IMPROVE EMERGENCY COMMUNICATION
DESCRIPTION	<ol style="list-style-type: none"> 1. Develop/Improve Emergency Communication Action plan 2. Implement Emergency Communication Action Plan 3. Establish inner-operable communications 4. Obtain/Upgrade Emergency Communication Facilities/Equipment 5. Obtain/Upgrade/Distribute Weather Warning Radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$5,000+
POTENTIAL FUNDING	Spalding General Fund
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Greeley County Emergency Manager, Village Board
STATUS	This project has not yet been started.

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

New Mitigation Actions – 2022 Plan

OBJECTIVE	DIVERSION DAM GATE UPDATE
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate dam gate status for current capabilities and needs 2. Implement a diversion dam gate update to reduce flood impacts to the village
HAZARD(S) ADDRESSED	Flooding, Dam Failure
ESTIMATED COST	Unknown
POTENTIAL FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This is a new mitigation action.

OBJECTIVE	ACQUIRE/UPDATE SNOW REMOVAL EQUIPMENT
DESCRIPTION	<ol style="list-style-type: none"> 1. Acquire update additional snow removal equipment and resources
HAZARD(S) ADDRESSED	Severe Winter Storms
ESTIMATED COST	\$25,000
POTENTIAL FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This is a new mitigation action.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to

SECTION SEVEN: VILLAGE OF SPALDING COMMUNITY PROFILE

other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. The Village Board members, Village Clerk, and county emergency management will annually review the community's profile and notify and involve the public by sharing information at local board meetings.

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COMMUNITY PROFILE

VILLAGE OF WOLBACH

Lower Loup Natural Resources District
Hazard Mitigation Plan 2022

Local Planning Team

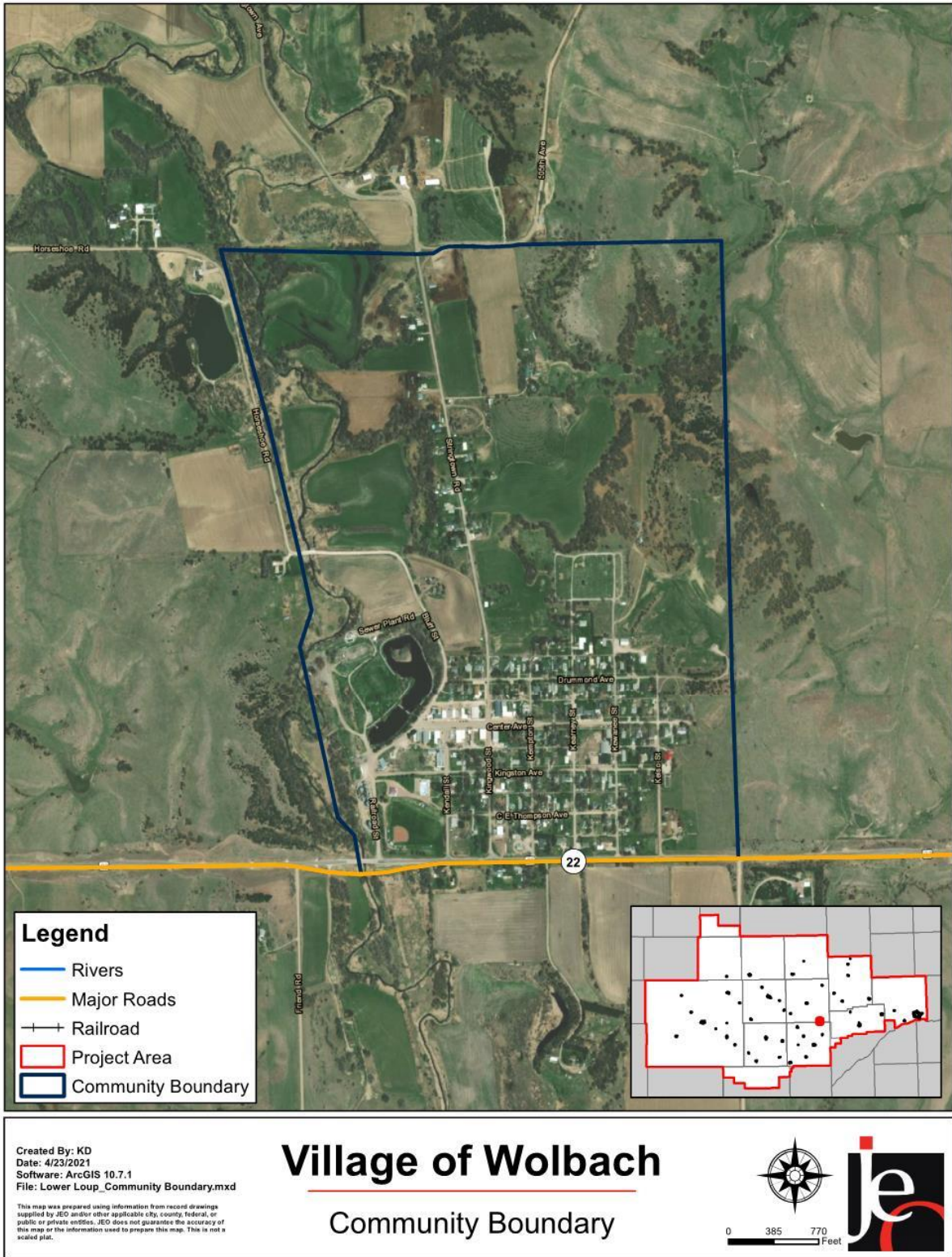
Table WOL.1: Village of Wolbach Local Planning Team

NAME	TITLE	JURISDICTION
RICK BROWN	Board Member	Village of Wolbach
ROGER LUKASIEWICZ	Board Member	Village of Wolbach
SCOTT NELSON	Chairman	Village of Wolbach
SHELBY STEENSON	Clerk/Treasurer	Village of Wolbach

Location and Geography

The Village of Wolbach is located in the southeastern portion of Greeley County. The Village of Wolbach covers an area of 0.70 square miles. Spring Creek is located on the west side of Wolbach. The area is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Most of Wolbach lies in the dissected plains topographic region, and is surrounded by agricultural fields.

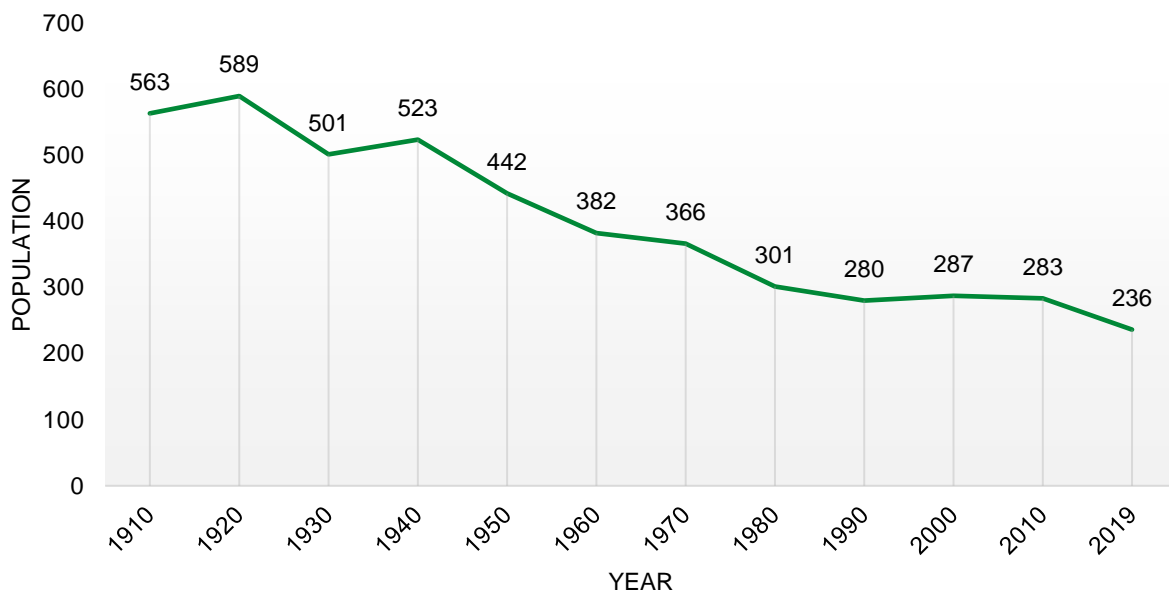
Figure WOL.1: Village of Wolbach Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1910 to 2019 (estimated). This figure indicates that the population of Wolbach experienced a decline from 1940 through 1990. During 2000 the population grew, however, since then the population has been in a steady decline. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. The Village's population accounted for 10% of Greeley County's Population in 2019.

Figure WOL.2: Wolbach Population 1910-2019



Source: U.S. Census Bureau⁴³

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

- **Younger.** The median age of Wolbach was 44.2 years old in 2019, compared with the County average of 45.5 years. Wolbach's population has grown younger since 2010, when the median age was 54.5 years old. Wolbach had a larger proportion of people under 20 years old (27.4%) than the County (25.6%).⁴⁴
- **Less ethnically diverse.** In 2010, 0% of Wolbach's population was Black or African American, 0% was other races, and 0% were two or more races. By 2019, about 2.7% of Wolbach's population was two or more races. During that time, Greeley County went from 0% to 0.3% American Indian, 0% to 0.9% other races and 0.5% to 0.7% two or more races from 2010 to 2019 respectively.⁴⁵

⁴³ United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

⁴⁴ United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

⁴⁵ United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

- **More likely to be at the federal poverty line.** The poverty rate of all persons in Wolbach (13.2%) was higher than the County (7.2%) in 2019.⁴⁶

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Wolbach included Information and Education. In comparison Greeley County's included Agriculture, Retail, and Education.⁴⁷
- **Lower household income.** Wolbach's median household income in 2019 (\$43,750) was about \$4,100 lower than the County (\$47,869).⁴⁸
- **More long-distance commuters.** About 39.3% percent of workers in Wolbach commuted for fewer than 15 minutes, compared with about 55.6% of workers in Greeley County. About 34.5% of workers in Wolbach commute 30 minutes or more to work, compared to about 19.6% of the County workers.⁴⁹

Major Employers

Major employers in the Village of Wolbach include nearby hog farm operations. The local planning team noted that a large percentage of resident's commute to the surrounding communities of St. Paul, Spalding, Grand Island, and Greeley.

Housing

In comparison to the Greeley County, Wolbach's housing stock was:⁵⁰

- **More owner occupied.** About 87.1% of occupied housing units in Wolbach are owner occupied compared with 81.0% of occupied housing in Greeley County in 2019.
- **Larger share of aged housing stock.** Wolbach has more houses built prior to 1970 than the county (78.6% compared to 67.0%).
- **Fewer multi-family homes.** The predominant housing type in the Village is single family detached and Wolbach contains less multifamily housing with five or more units per structure than the County (0.0% compared to 1.3%). About 94.1% of housing in Wolbach was single-family detached, compared with 89.2% of the County's housing. Wolbach has a smaller share of mobile and manufactured housing (0.0%) compared to the County (3.1%)

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

46 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

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Capabilities

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

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

Table BAR.3: Overall Capability

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

Plan Integration

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

Grants and Funding

The Village of Wolbach's municipal funds have remained steady over recent years and are limited to maintaining current facilities and systems. A large portion of available municipal funds are dedicated to improving transportation routes, specifically repaving Drummond and Center Streets. The city has previously applied for and been awarded a CDBG to assist with street improvements. The village is also currently discussing potential upgrades and cleaning schedules for the sewer drains. A private contractor will clear each drain on an alternating schedule.

Comprehensive Plan

Wolbach's Comprehensive Plan was last updated in 2015 but does not integrate natural hazard mitigation components. At this time there is no timeline to update the Comprehensive Plan.

Building Codes

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

Ordinances and Regulations

While the village does not have zoning regulations or building codes, the village follows requirements as set by the State of Nebraska including a base flood elevation of one foot for structures in the floodplain.

Greeley County Local Emergency Operations Plan

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

Central Sandhills Community Wildfire Protection Plan

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Garfield County in June 2019. The purpose of the CWPP is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. This document is updated every five years.

Future Development Trends

In the past five years there have been no changes in the village. According to census data, Wolbach's population is decreasing. The local planning team attributes the decline to an aging community and lack of employment opportunities.

Community Lifelines

Transportation

Wolbach's major transportation corridors include Highway 22, which runs east-west on the south side of the village. Highway 22 accommodates 760 vehicles per day, 80 of which are heavy commercial vehicles. Wolbach does not have rail lines. During the major flooding in 2019, Highway 22 was a major transportation route for nearby communities that had roads shut down due to flooding. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are two chemical storage sites throughout Wolbach which house hazardous materials. In the event of a chemical spill, the Wolbach Fire and Rescue Department would be first to respond. Additional response resources include the Region 26 Hazmat team.

Table WOL.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
COUNTRY PARTNERS COOPERATIVE	410 N Highway 22	N
S&P Ag INC	79910 Stringtown Ave	N (directly adjacent to)

Source: Nebraska Department of Environment and Energy⁵¹

Critical Facilities

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

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

Table WOL.5: Wolbach Critical Facilities

CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Sewer Plant	Y	Y	N
2	Safety and Security	Fire Hall	Y	N	N
3	Food, Water, and Shelter	School	Y	N	N
4	Food, Water, and Shelter	Lutheran Church	Y	N	N
5	Food, Water, and Shelter	Methodist Church	Y	N	N

⁵¹ Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

SECTION SEVEN: VILLAGE OF WOLBACH COMMUNITY PROFILE

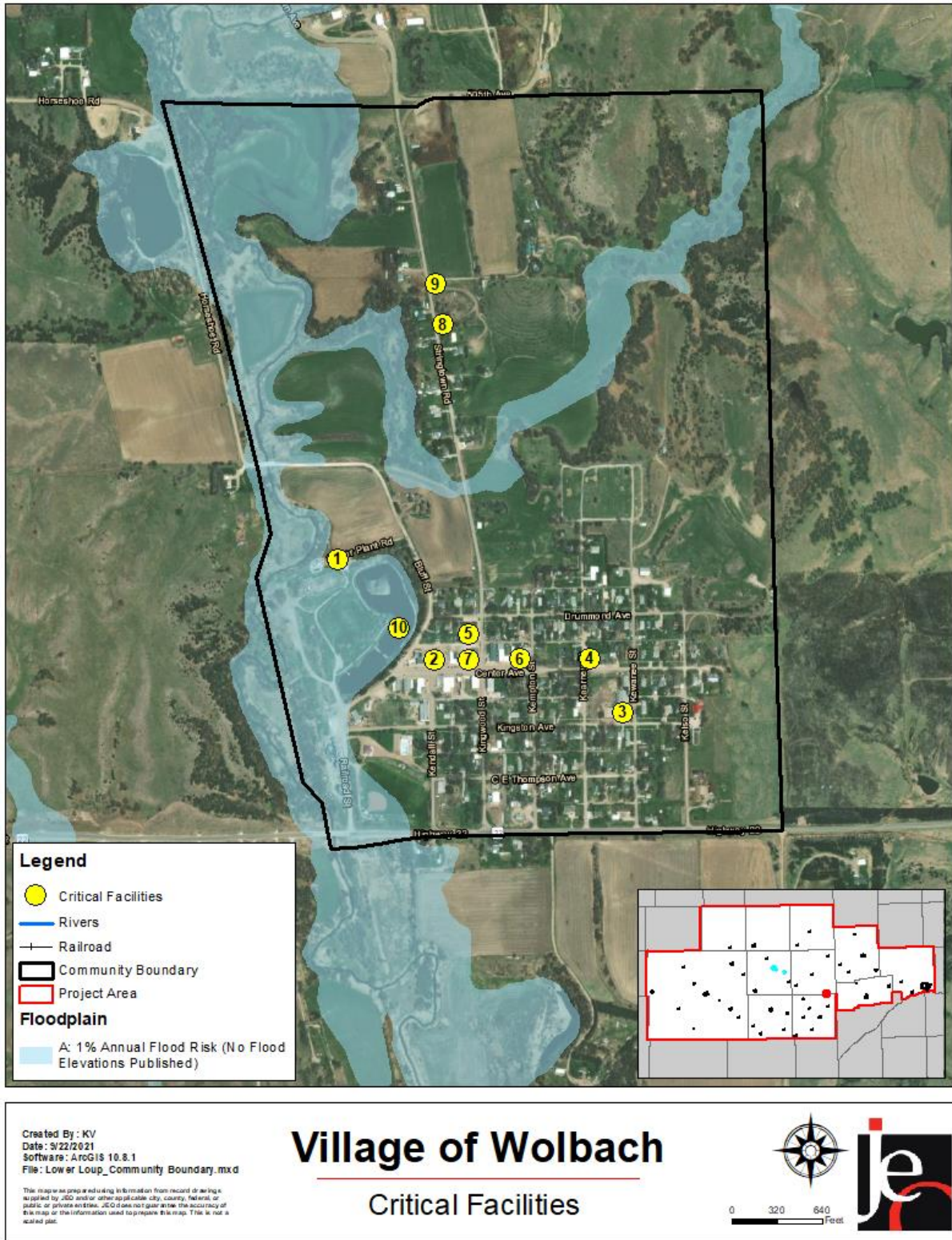
CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
6	Safety and Security	City Building	Y	N	N
7	Safety and Security	Community Center	Y	N	N
8	Safety and Security	Well House 851	N	N	N
9	Safety and Security	Well House 881	N	N	N
10	Safety and Security	Water Reservoir	N	N	Y

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

Health and Medical Facilities

No medical and health facilities are located within the village.

Figure WOL.3: Wolbach Critical Facilities



Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table. There are no Flood Map Products currently available for the Village of Wolbach.

Table WOL.7: Wolbach Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
233	175	6,879,095	14	912,710	8.00%

Source: County Assessor, GIS Workshop

Hazard Prioritization

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

Extreme Heat

Extreme heat is a concern for Wolbach due to the stress on the electrical grid and potential for power outages. During an extreme heat event, the community center can be utilized as a cooling center. The fire department would be available to assist vulnerable populations in the community, such as the elderly or people with medical conditions. The fire department would rely on those populations contacting them. Additionally, the community center could be used as a cooling center if needed. Currently the village is working with the fire department to get generators installed in the community center. The village is also looking into funding/grants to purchase equipment.

Flooding

Local concerns focus on the potential for damages to bridges and access to the sewer plant. Wolbach participates in the NFIP but does not have any policies in-force. There are no repetitive flood loss properties in the Village of Wolbach. During the major flooding in 2019, flood waters rose over eight feet in four hours and caused water to reach the bottom of the main bridge on Highway 22. If the bridge had been flooded, residents would have no way out of the community. The event also flooded the park and overtook the pond. Flood waters were close to reaching the sewer plant and causing damage. The waters also took out two semi-trucks located at the park, took out two grain bins and the road they were on, and destroyed the rodeo grounds at the park. The pond lost all of its fish and picnic areas and the campground were destroyed. Low areas in the village that are prone to flooding include the areas along the creek, the park/rodeo grounds, Grossart’s Propane tank, and Houtby’s grain bins. No evacuations were necessary. The village board is looking into developing a hazard board and an action plan to implement to mitigate against future hazards.

Grass/Wildfires

The Wolbach rural fire department is responsible for responding to grass/wildfires. Concerns regarding grass/wildfires in Wolbach focus on the potential for property damages and loss of life. Buildings have been lost in a recent fire. However, the buildings were not inhabited, and no one was injured in the fire. In 2014, a controlled burn located south of Wolbach in Howard County became out of control due to high winds. The fire burned for miles before firefighters were able to control the blaze. Education may be needed for residents regarding proper safety measures while burning. The community has a volunteer fire department, and several members work out of town, slowing the response. The fire department is in need of more people and equipment to improve response resources.

Severe Thunderstorms (includes hail)

Severe thunderstorms have the potential for property damages and power outages. One past thunderstorm in 2014 caused significant hail damages to roofs throughout the community and took the roof off of the grocery store. According to NCEI data, there have been 24 severe thunderstorm events in the community from 1996 to 2017 that caused \$660,000 in property damages. Critical municipal records are protected with surge protectors on electronic devices. Many critical facilities do have backup power. The water well does have a PTO generator, but is in need of another backup generator. Approximately ten percent of power lines are buried in the community.

Severe Winter Storms

Local concerns regarding severe winter storms include getting emergency personnel where they need to be and food security. The community does not have a grocery store and residents would not be able to get supplies if they are snowed in for a long period. A severe winter storm in February of 2016 dropped over a foot of snowfall onto the area and had very high winds. People were unable to get out of their driveways and streets for a long period of time. Village maintenance and volunteers are in charge of snow removal in the community. Local snow removal equipment includes a loader, a pickup truck with a blade, and a side by side with a blade. Snow removal resources are sufficient for local needs.

Tornadoes and High Winds

In 1963, a tornadic event damaged some homes and businesses within Wolbach. Warning sirens within Wolbach are activated by Region 26 Emergency Management or the fire department. Region 26 offers Code Red text alerts to warn residents about an impending tornadic event. A few years ago, a high wind event caused numerous trees to come down. Volunteer help assisted in the cleanup lasting two days. The local planning team indicated that there are hazardous trees that need to be removed. In the event of a power outage, municipal records are regularly backed up on flash drives.

Mitigation Strategy

Continued Mitigation Actions

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

OBJECTIVE	EXPAND WATER CAPACITIES AND SUPPLIES
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate the need to expand water storage capacity through new means (new water tower, stand pipe, etc.) to provide a safe water supply for the community and additional water for fire protection.
HAZARD(S) ADDRESSED	Grass/Wildfires
ESTIMATED COST	\$20,000+
POTENTIAL FUNDING	Wolbach General Fund, Bond
TIMELINE	2-5 Years
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

OBJECTIVE	IMPROVE CONSTRUCTION STANDARDS & BUILDING SURVIVABILITY
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate building standards/codes/requirements 2. Implement new or improved building standards/codes/requirements 3. Promote use of higher codes and standards, such as fortified for Safer Living Standard, in order to provide greater protection for any new construction or building retrofits
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$5,000+; Staff Time
POTENTIAL FUNDING	Wolbach General Fund
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Village Board, Village Clerk
STATUS	This project has not yet been started.

SECTION SEVEN: VILLAGE OF WOLBACH COMMUNITY PROFILE

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

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

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

SECTION SEVEN: VILLAGE OF WOLBACH COMMUNITY PROFILE

OBJECTIVE	REDUCE TREE DAMAGE & DAMAGE FROM TREES
DESCRIPTION	<ol style="list-style-type: none"> 1. Conduct tree inventory 2. Develop tree maintenance/trimming program 3. Implement tree maintenance/trimming program 4. Remove hazardous limbs and/or trees
HAZARD(S) ADDRESSED	High Winds, Severe Thunderstorms, Severe Winter Storms
ESTIMATED COST	\$0 to \$5,000+
POTENTIAL FUNDING	Wolbach General Fund
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Village Board, LLNRD
STATUS	The village is currently marking hazardous trees which should be removed or trimmed.

OBJECTIVE	REDUCE STREAM & DRAINAGE BOTTLENECKS/FLOW RESTRICTIONS
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate restrictions and measures to prevent or reduce flood damage 2. Implement appropriate nonstructural or structural methods on an emergency or permanent basis (monitoring or warning systems, ice jam dusting, excavation or blasting, reshaping channel, tree and debris removal, acquire property and/or construct additional channels or other flow improvements)
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	\$10,000 to \$50,000 for studies; \$10,000+ for infrastructure
POTENTIAL FUNDING	Wolbach General Fund, FMA
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Village Board, LLNRD
STATUS	This project has not yet been started.

New Mitigation Actions – 2022 Plan

OBJECTIVE	ACQUIRE/IMPROVE WILDFIRE RESPONSE RESOURCES
DESCRIPTION	<ol style="list-style-type: none"> 1. Evaluate current wildfire response resources 2. Purchase, train, coordinate with local fire departments to improve current capabilities
HAZARD(S) ADDRESSED	Wildfire
ESTIMATED COST	Varies
POTENTIAL FUNDING	General Fund, Fire Department
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Village Board, Rural Fire Department
STATUS	This is a new mitigation action.

Plan Maintenance

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