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# **Red Willow County**

**Quad Counties  
Multi-Jurisdictional Hazard Mitigation Plan Update**

**2021**

## Local Planning Team

**Table RCO.1: Red Willow County Local Planning Team**

Name	Title	Jurisdiction
Alan Kotschwar	County Sheriff/Emergency Manager	Red Willow County
Diana Wilkinson	Deputy Emergency Manager	Red Willow County
Scott Clifford	County Surveyor/Floodplain Administrator	Red Willow County

## Location, Geography, and Climate

Red Willow County is located in southwestern Nebraska and is bordered by the State of Kansas and Hitchcock, Hayes, Frontier, and Furnas Counties. The total area of Red Willow County is 718 square miles. Red Willow County is in the topographic region of the dissected plains. This hilly land has moderate to steep slopes and sharp ridge crests which are remnants of the old plain eroded by water and wind. The Republican River flows through the county from west to east. Other major bodies of water include Beaver Creek, Driftwood Creek, and Red Willow Creek.

### Climate

The table below compares climate indicators with those of the entire state. Climate data are 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 RCO.2: Red Willow County Climate**

	Red Willow County	State of Nebraska
July Normal High Temp <sup>1</sup>	89.9°F	87.4°F
January Normal Low Temp <sup>1</sup>	13.9°F	13.8°F
Annual Normal Precipitation <sup>2</sup>	22.5"	23.8"
Annual Normal Snowfall <sup>2</sup>	28.8"	25.9"

Source: NCEI 1981-2010 Climate Normals<sup>1</sup>, High Plains Regional Climate Center, 1967-2020<sup>2</sup>  
 Precipitation includes all rain and melted snow and ice.

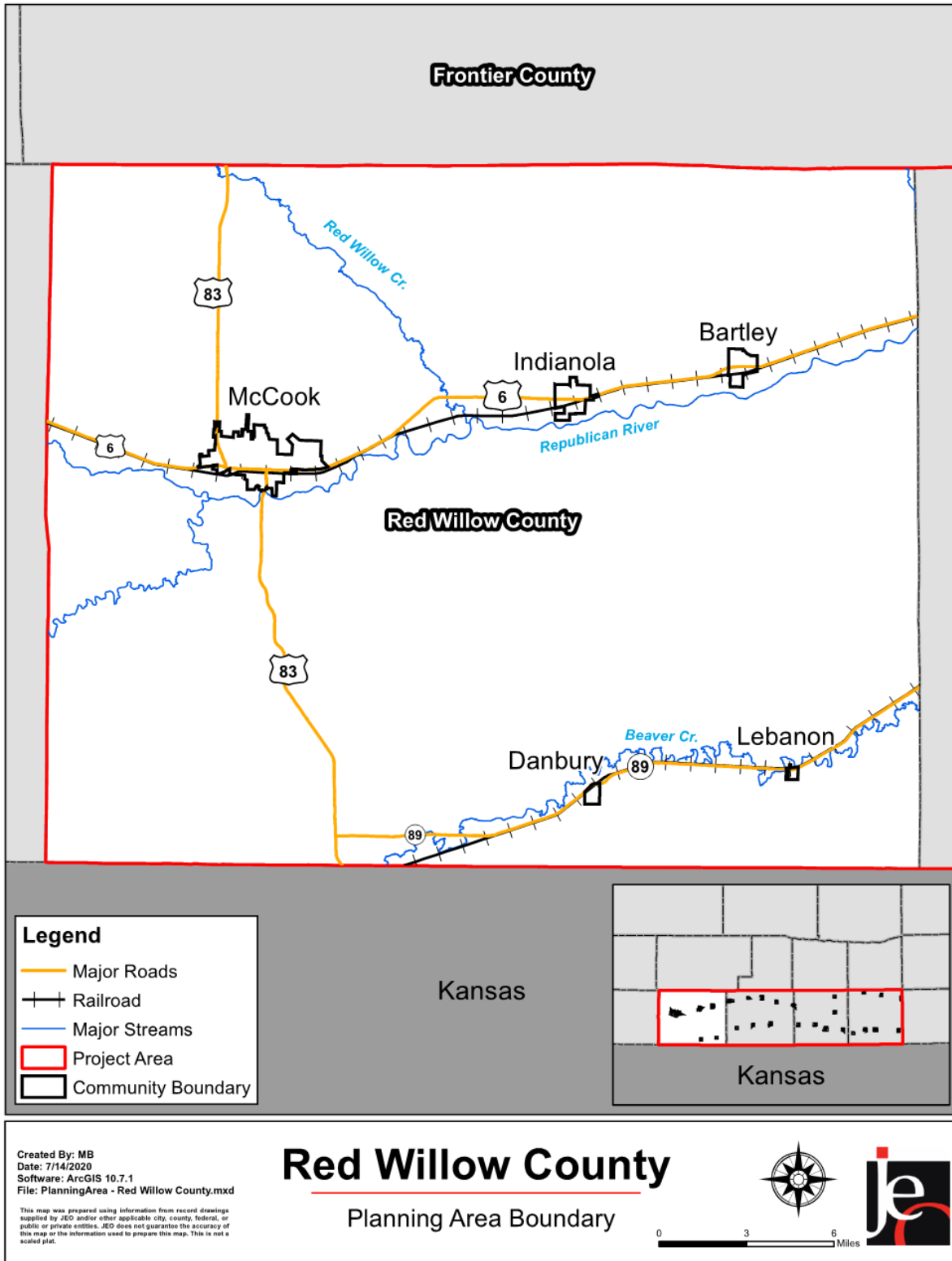
## Transportation

Red Willow County’s major transportation corridors include US Highway 6 and 83 and Nebraska State Highways 89. All three highways regularly carry agricultural chemicals. Chemical spills and accidents have occurred but are typically small in scale. A Burlington Northern Santa Fe Railway/Amtrak rail line runs east to west through the center of the county and a Nebraska Colorado Kansas Railway line runs northeast to southwest through the southeastern portion of the county. The county also has three air landing strips with two located near McCook and one near Bartley. Several critical facilities and vulnerable populations are located near transportation routes. The highways are the most concerning transportation routes due to chemical transportation and high vehicular traffic. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors, as well as areas more at risk of transportation incidents.

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

2 High Plains Regional Climate Center. “Monthly Climate Normals 1967-2020 – McCook, NE.” Accessed August 2020.  
<http://climod.unl.edu/>.

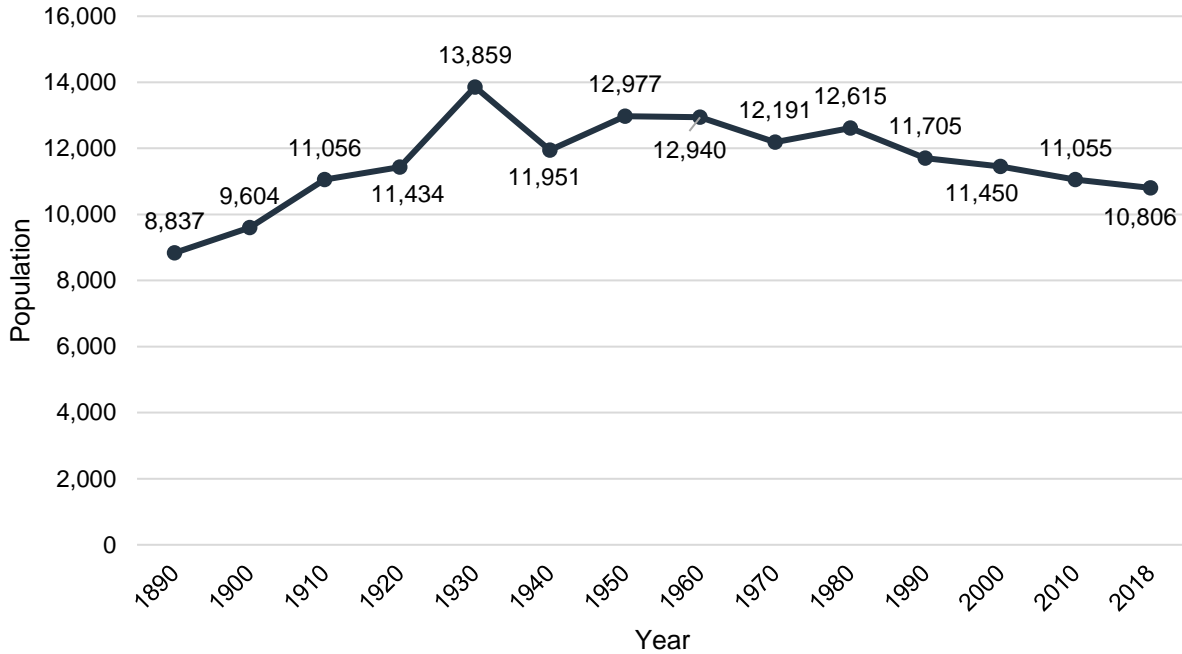
Figure RCO.1: Red Willow County



## Demographics, Economics, and Housing

The following figure displays the historical population trend from 1890 to 2018.<sup>3</sup> This figure indicates that the population of Red Willow County has been decreasing since 1980. A declining population can lead to more unoccupied and unmaintained housing that is then at risk to high winds and other hazards. Furthermore, with fewer residents, there is decreasing tax revenue for the county, which could make implementation of mitigation projects more fiscally challenging.

**Figure RCO.2: Population 1890 - 2018**



Source: U.S. Census Bureau

The following table indicates Red Willow County has a lower percentage of people under the age of five and a higher percentage over the age of 64 compared to the state. This is relevant to hazard mitigation because the very young and elderly populations may be at greater risk from certain hazards than others. For a more elaborate discussion of this vulnerability, please see Section Four: Risk Assessment.

**Table RCO.3: Population by Age**

Age	Red Willow County	State of Nebraska
<5	5.9%	6.9%
5-64	74.6%	78%
>64	19.5%	15.1%
<b>Median</b>	41.1	36.4

Source: U.S. Census Bureau<sup>3</sup>

The following table indicates that median household income and per capita income for the county are both lower than the State of Nebraska. Median home value and rent are also both lower than the rest of the state. Areas with relatively low economic indicators may be less resilient during hazardous events.

<sup>3</sup> United States Census Bureau. 2018. "S0101: Age and Sex." [database file]. <https://data.census.gov/cedsci/>.

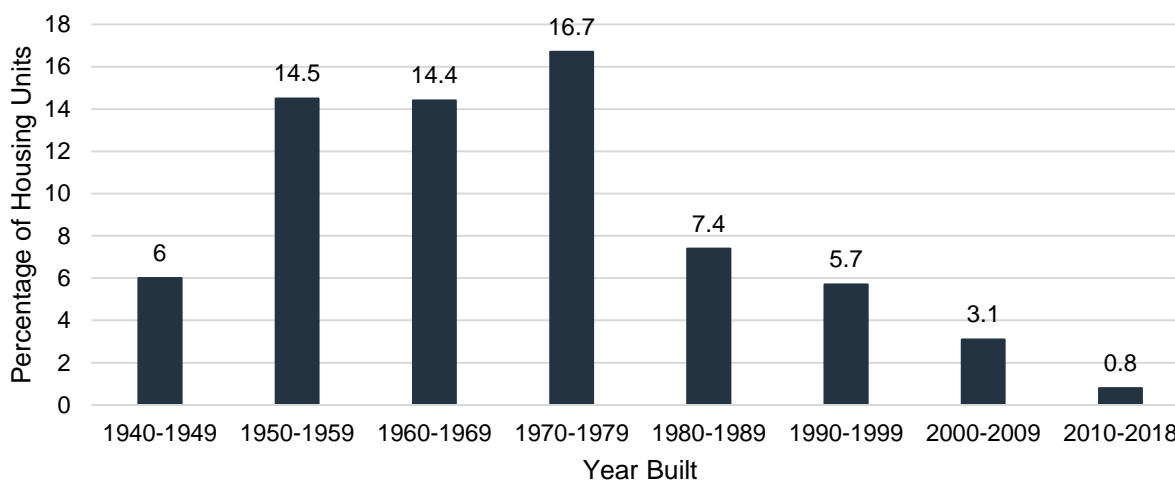
**Table RCO.4: Housing and Income**

	Red Willow County	State of Nebraska
<b>Median Household Income</b>	\$56,859	\$59,116
<b>Per Capita Income</b>	\$25,456	\$31,101
<b>Median Home Value</b>	\$99,600	\$147,800
<b>Median Rent</b>	\$618	\$805

Source: U.S. Census Bureau<sup>4,5</sup>

The following figure indicates that the majority of housing in Red Willow County was built between 1970 and 1979 (16.7%). According to 2018 ACS 5-year estimates, the county has 5,312 housing units with 83.9% of those units occupied. There are approximately 298 mobile homes in the county. Housing age can serve as an indicator of risk, as structures built prior to the development of state building codes may be at greater risk. Finally, residents that live in mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if not anchored correctly.

**Figure RCO.3: Housing Units by Year Built**



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

**Table RCO.5: Housing Units**

Jurisdiction	Total Housing Units				Occupied Housing Units			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Red Willow County</b>	4,459	83.9	853	16.1	3,279	73.5	1,180	26.5
<b>Nebraska</b>	754,063	90.8	76,686	9.2	498,567	66.1	255,496	33.9

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

### Major Employers

According to 2016 Business Patterns Census Data, Red Willow County had 415 business establishments. The following table presents the number of establishments, number of paid employees, and the annual payroll in thousands of dollars.

4 United States Census Bureau. 2018. "DP04: Selected Housing Characteristics." [database file]. <https://data.census.gov/cedsci/>.

5 United States Census Bureau. 2018. "DP03: Selected Economic Characteristics." [database file]. <https://data.census.gov/cedsci/>.

**Table RCO.6: Business in Red Willow County**

	Total Businesses	Number of Paid Employees	Annual Payroll (In Thousands)
<b>Total for All Sectors</b>	415	3,778	\$121,055

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

Agriculture is important to the economic fabric of the State of Nebraska. Red Willow County's 333 farms cover 439,377 acres of land, about 95.6% of the county's total area. Crop and livestock production are the visible parts of the agricultural economy, but many related businesses contribute to agriculture by producing, processing and marketing farm products. These businesses generate income, employment and economic activity throughout the region.

**Table RCO.7: Agricultural Inventory**

Agricultural Inventory	
<b>Number of Farms with Harvested Cropland</b>	333
<b>Acres of Harvested Cropland</b>	439,377

Source: USDA Census of Agriculture, 2017<sup>7</sup>

## Future Development Trends

Over the past five years, most new housing has occurred in McCook, but some other homes have been built throughout the county. No new structures were developed in the floodplain. According to the 2018 American Community Survey estimates, Red Willow County's population is declining. The local planning team attributes this to younger students leaving for college and not returning, better efficiencies in agriculture, poor farm prices, and a lack of employment opportunities. In the next five years, no housing developments are planned, but a new fuel station is in the process of being built.

## Parcel Improvements and Valuation

The planning team acquired GIS parcel data from the County Assessor to analyze the location, number, and value of property improvements (e.g., buildings, garages, sheds etc.) at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following tables.

**Table RCO.8: Parcel Improvements and Value in the 1% Annual Flood Risk Area**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
4,927	\$548,409,936	432	\$53,034,638	8.8%

Source: County Assessor, 2020

**Table RCO.9: Parcel Improvements and Value in the 0.2% Annual Flood Risk Area**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
4,927	\$548,409,936	38	\$2,651,612	0.8%

Source: County Assessor, 2020

6 United States Census Bureau. "2016 County Business Patterns and 2016 Nonemployer Statistics" [database file]. <https://factfinder.census.gov>.

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

## Community Lifelines

### Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are a total of 50 chemical storage sites throughout Red Willow County. The following table lists the names, locations, and floodplain status.

**Table RCO.10: Chemical Storage Fixed Sites**

Facility Name	Location	In Floodplain (Y/N)
Corey 13-27	Ravenswood Rd, McCook	N
Parker Hannifin Corporation	400 South St, McCook	N
Gerhold Concrete Co	101 E Railroad Service Rd, McCook	N
Frenchman Valley Farmers Co-op	102 E 3rd St, McCook	N
Mc Cook Daily Gazette	501 W 1st St, McCook	N
NPPD Mc Cook Peaking Unit	1901 N Highway 83, McCook	N
Red Willow Aviation	1900 Airport Rd, McCook	N
Sides Aerial Application	40096 US Highway 6, Bartley	N
BNSF Railway Company	101 Norris Ave, McCook	N
Ag Valley Co-op Non Stock	Jct 5th & C Sts, Indianola	N
Decatur Co-op Association	105 Grandville Ave, Danbury	N
Mc Cook Community Hospital	1301 E H St, McCook	N
Schmidt 2-24 & 4-24	Road 396, Indianola	N
Van Diest Supply Co Warehouse	71703 Highway 83, McCook	N
NDOT Mc Cook Yard	38764 US Highway 6, McCook	N
Frenchman Valley Farmers Co-op	301 W A St, McCook	N
Ag Valley Co-op Non Stock	110 S 5th St, Indianola	N
Nutrien Ag Solutions	101 Burlington Dr, McCook	N
CenturyLink	402 W 1st St, McCook	N
RAS Inc	Danbury	N
Decatur Co-op Association	Highway 89 W, Danbury	N
C Dutton Lease	Danbury	N
Barnesberger A/C Lease	Danbury	N
Thomas Lease	Drive 400, Danbury	N
State of Nebraska Lease	Lebanon	N
R Quadour Lease	Drive 400, Danbury	N
Macy Lease Southwest	Lebanon	N
Hardesty Lease	Danbury	N
Suess Field Unit	Road 382, McCook	N
Southeast Elm Creek Unit	McCook	N
Valmont Industries Inc	75 US Highway 83, McCook	N
Frenchman Valley Farmers Co-op	38385 Old Highway 6, McCook	N
Frenchman Valley Farmers Co-op	203 Karrer St, McCook	N
Cambridge Telephone Co	410 Commercial St, Bartley	N
Winfield United	402 Airport Rd, McCook	N
Van Diest Supply Co Liquid	206 Karrer St, McCook	N
Simplot Grower Solutions	106 Railroad Service Rd, McCook	N
Malleck Oil LLC	405 E A St, McCook	N
Malleck Oil LLC Propane	400 W A St, McCook	N
Red Willow Chemical & Fert	308 Airport Rd, McCook	N
Titan Machinery Inc	1601 N Highway 83, McCook	N



Facility Name	Location	In Floodplain (Y/N)
Extreme Ag Inc	72080 Road 407, Cambridge	N
Nebraska Bull Service	38364 Road 720, McCook	N
TTNS 1-8	Drive 724, McCook	N
Joan 1-7	Road 379, McCook	N
Goodenberger 1-7	Highway 89 W, Lebanon	N
Nalco Company LLC	38370 Drive 716, McCook	N
Haag A No 1	70759 Road 397, Danbury	N
Haag Unit 1	70814 Road 395, Danbury	N
NG Warehouse	5 Ind Park, McCook	N

Source: Nebraska Department of Environment and Energy, 2020<sup>8</sup>

### Critical Facilities

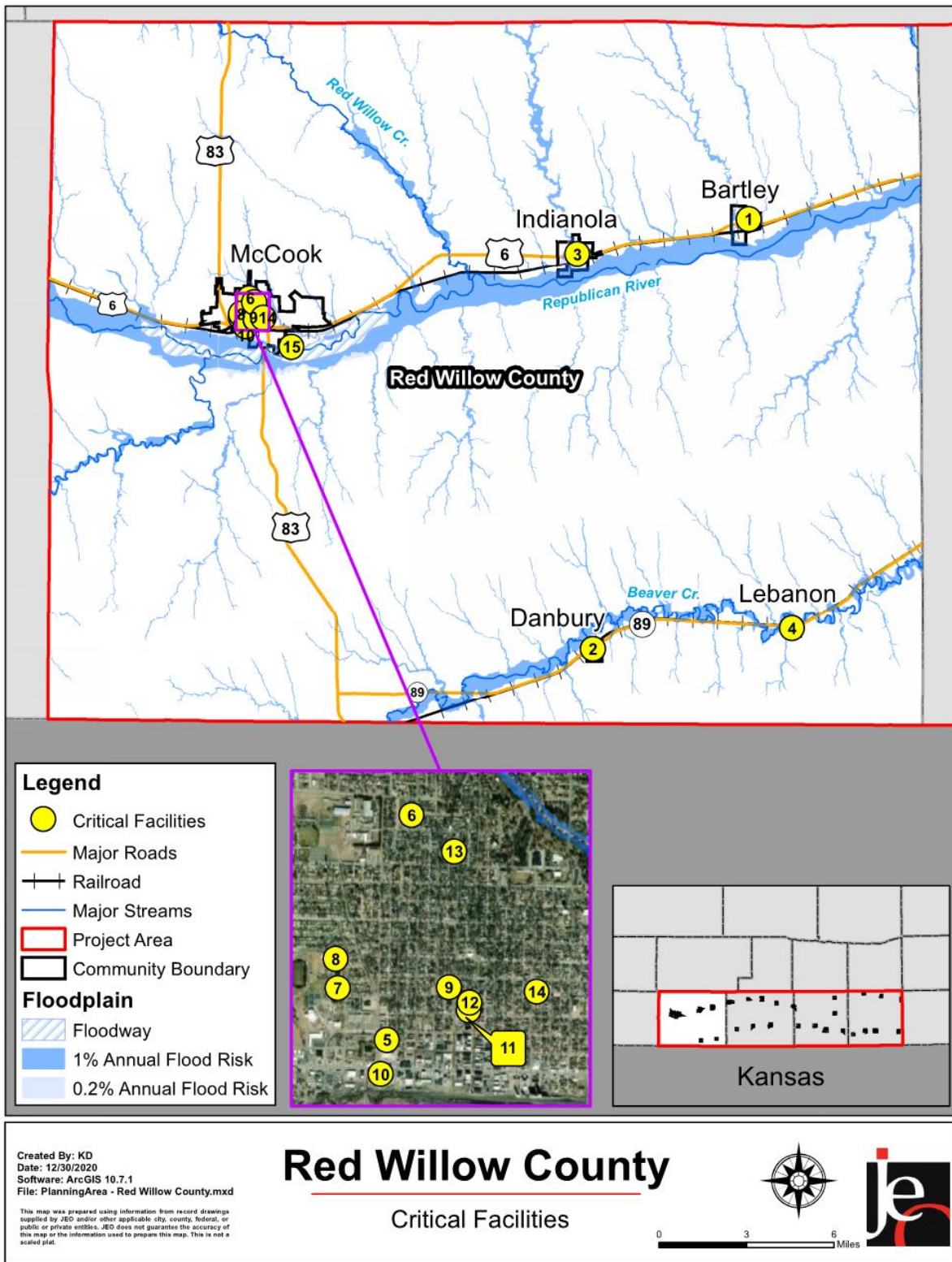
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during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

**Table RCO.11: Critical Facilities**

CF Number	Name	Community Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Bartley Village Hall	Y	Y	N
2	Danbury Village Hall	Y	N	N
3	Indianola City Hall	N	N	N
4	Lebanon Village Hall	N	N	N
5	McCook City Offices/Fire/Police	N	Y	N
6	McCook Schools – Elementary	Y	N	N
7	McCook Schools – High	Y	N	N
8	McCook Schools – Junior High	N	N	N
9	McCook Schools -Central Elementary	N	N	N
10	Public Works	N	N	N
11	Red Willow Courthouse	N	N	N
12	Red Willow Sheriff's Office	N	Y	N
13	Senior Center	N	Y	N
14	St. Patrick's School	Y	Y	N
15	Wastewater Plant	N	Y	N

<sup>8</sup> Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020. <https://deq-iis.ne.gov/tier2/tier2Download.html>.

Figure RCO.4: Critical Facilities



## Historical Occurrences

The following table provides a statistical summary for hazards that have occurred in the county. The property damages from the NCEI Storm Events Database (January 1996 – December 2019) should be considered only as broad estimates. Crop damages reports come from the USDA Risk Management Agency for Red Willow County between 2000 and 2019.

**Table RCO.12: County Hazard Loss History**

Hazard Type		Count	Property Damage	Crop Damage <sup>2</sup>
<b>Animal and Plant Disease</b>	Animal Disease <sup>1</sup>	13	18 animals	N/A
	Plant Disease <sup>2</sup>	15	N/A	\$96,646
<b>Chemical Spills</b>	Fixed Site <sup>3</sup>	6	\$0	N/A
	Transportation <sup>4</sup>	19	\$8,109	N/A
<b>Dam Failure<sup>5</sup></b>		2	\$0	N/A
<b>Drought<sup>6</sup></b>		483 months out of 1,501	\$0	\$81,273,568
<b>Earthquake<sup>12</sup></b>		2	N/A	N/A
<b>Extreme Heat<sup>7</sup></b>		Avg 7 days/year	N/A	\$9,433,963
<b>Flooding<sup>8</sup></b>	Flash Flood	10	\$25,000	\$36,873
	Flood	4	\$200,000	
<b>Grass/Wildfires<sup>9</sup></b> <i>4 injuries</i>		261	1,334 acres	\$57,635
<b>Levee Failure<sup>11</sup></b>		0	\$0	N/A
<b>Severe Thunderstorms<sup>8</sup></b>	Thunderstorm Wind Average: 66 mph Range: 58-100 mph <i>5 injuries</i>	110	\$351,950	
	Hail Average: 1.17 inches Range: 0.75-4.5 inches <i>3 injuries</i>	187	\$252,000	\$17,424,398
	Heavy Rain	0	\$0	
	Lightning	4	\$7,000	
<b>Severe Winter Storms<sup>8</sup></b>	Blizzard	10	\$0	
	Extreme Cold/Wind chill	6	\$0	
	Heavy Snow	10	\$0	\$6,541,207
	Ice Storm	0	\$0	
	Winter Storm	16	\$0	
	Winter Weather	4	\$30,000	
<b>Terrorism<sup>10</sup></b>		1	\$0	N/A
<b>Tornadoes and High Winds<sup>8</sup></b>	High Winds Average: 67 mph Range: 64-68 mph	48	\$115,000	\$1,976,933
	Tornadoes Average: EF0 Range: EF0-EF2	20	\$1,106,500	\$0
<b>Total</b>		<b>748</b>	<b>\$2,095,559</b>	<b>\$116,841,222</b>

N/A: Data not available  
1 - NDA, 2014 – 2019

2 - USDA RMA, 2000 – 2019  
3 - NRC, 1990 - February 2019

## Section Seven | Red Willow County Profile

4 - PHMSA, 1971 - July 2020  
 5 - DNR Dam Inventory December 2020  
 6 - NOAA, 1893 - July 2020  
 7 - NOAA Regional Climate Center, 1893 - July 2020  
 8 - NCEI, 1996 - December 2019

9 - NFS, 2000 - 2018  
 10 - University of Maryland, 1970 - 2018  
 11 - USACE NLN, 1900 - July 2020  
 12 - USGS, 1900 - July 2020

The following table provides a summary of hazards that have affected or have the potential to affect each participating jurisdiction in Red Willow County. Each jurisdiction was evaluated for previous hazard occurrence and the probability of future hazard events on each of the 13 hazards profiled in this plan. The evaluation process was based on data collected and summarized in Table RCO.11; 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.

**Table RCO.13: Red Willow County and Community Hazard Matrix**

Hazard	Red Willow County	Village of Bartley	Village of Danbury	City of Indianola	City of McCook	Southwest Public Schools
Animal and Plant Disease	X	X	X	X	X	X
Chemical Spills	X	X	X	X	X	X
Dam Failure	X	X	X	X	X	X
Drought	X	X	X	X	X	X
Earthquake	X	X	X	X	X	X
Extreme Heat	X	X	X	X	X	X
Flooding	X	X	X	X	X	X
Grass/Wildfires	X	X	X	X	X	X
Levee Failure	X	X		X		
Severe Thunderstorms	X	X	X	X	X	X
Severe Winter Storms	X	X	X	X	X	X
Terrorism	X	X	X	X	X	X
Tornadoes and High Winds	X	X	X	X	X	X

### County Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the county. The planning team prioritized the selected hazards based on historical hazard occurrences, potential impacts, and the county's capabilities. For more information regarding regional hazards, please see *Section Four: Risk Assessment*.

#### Chemical Spills

According to the PHMSA, 19 chemical spills in Red Willow County have occurred during transportation, causing \$8,109 in property damage. In the event of a large chemical spill, the Red Willow Western HazMat Team would respond. This team has the appropriate equipment and training to resolve a hazardous materials spill. The local planning team is concerned with the different type of chemicals stored and potential plume types. Several critical facilities and vulnerable populations are located near both fixed chemical sites and major transportation routes. Some residents, but not all, are educated about the threat and appropriate response to a spill.

### **Dam Failure**

Although not identified as a top hazard of concern by the local planning team, there is a high hazard dam in the county. Figure RCO.5 shows location of dams in the county. There have been two dam failures in Red Willow County according to the NeDNR. No damages were reported from either event. For security reasons, dam inundation maps are not shown in the HMP, however, they can be found in the Red Willow County Local Emergency Operations Plan (LEOP). The LEOP estimates that 25% of the population could be affected by a dam failure. In addition to dams within the county, Enders Reservoir Dam, Swanson Reservoir Dam, and Hugh Butler Reservoir Dam are located upstream and could affect the county.

### **Drought**

The local planning team indicated that the county has experienced drought conditions in several years. Currently the county is in a drought and has been for most of 2020. Primary concerns related to drought include loss in crop production, increased risk of wildfires, economic impacts, stress on livestock, and a decrease in water tables. According to RMA data, drought has caused \$81,273,568 in crop losses from 2000 to 2019. The county water supply has been determined to be sufficient. If needed, water restrictions can be implemented across the county.

### **Flooding**

Although not identified as a top hazard of concern by the local planning team, there is a floodplain located in the county. It is located primarily along the Republican River, Beaver Creek, and their tributaries. NCEI data show the county experienced 14 flood events since 1996 causing \$225,000 in damages. The most damaging event occurred in May 2008, when flooding caused \$200,000 in damages to county roads. The county is a member of and continues to maintain good standing in the NFIP.

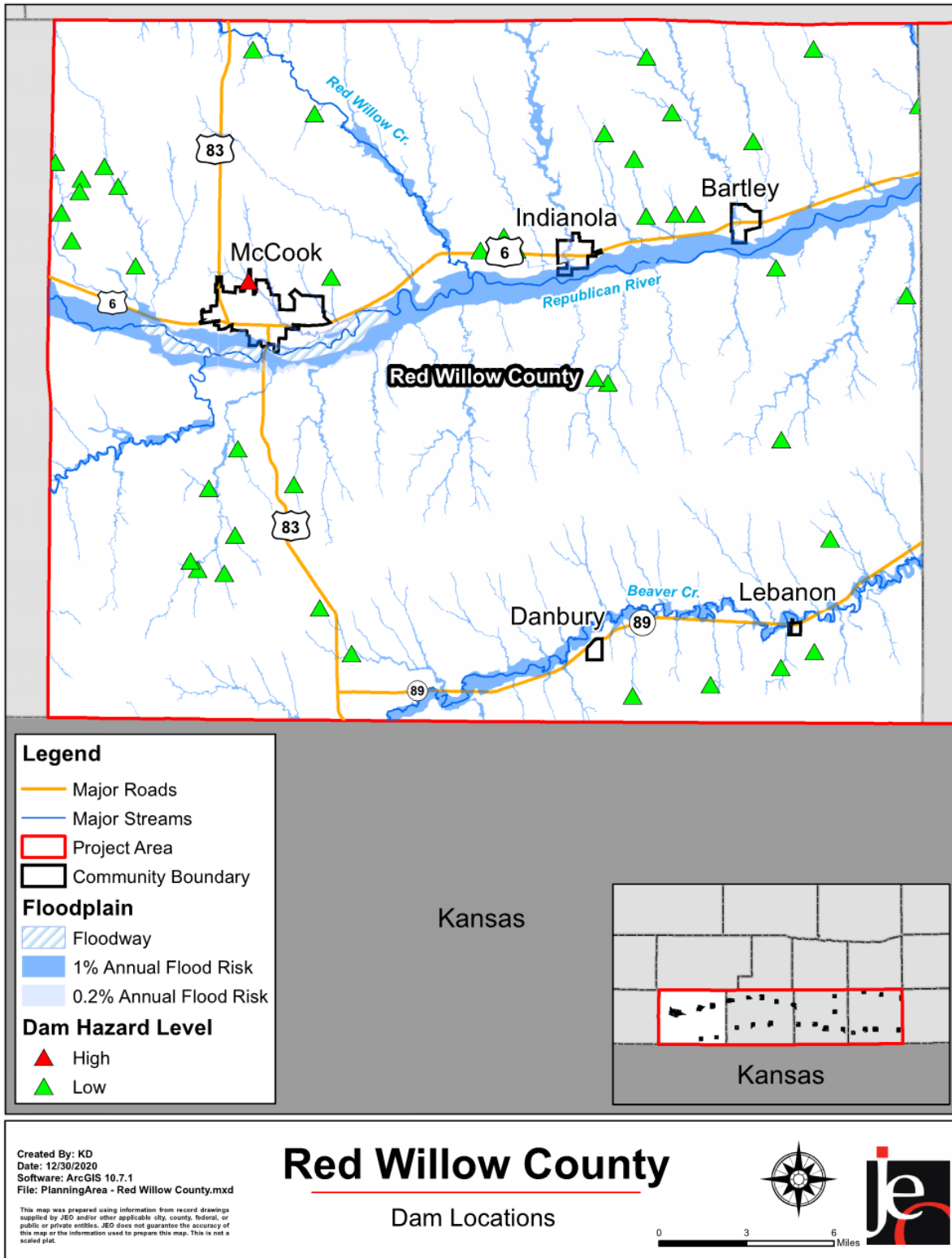
### **Severe Thunderstorms**

NCEI reported 301 severe thunderstorm (wind, rain, hail, and lightning) events between January 1996 and December 2019 that resulted in \$610,950 in property damage. RMA reported \$17,424,398 in crop damage. There were two injuries reported from a storm in July 2002 when a tarp blew down at a local rodeo that was still in progress. Three injuries occurred in August of 2011 during a hailstorm. Two people were hurt from broken glass due to hail and a third person broke her thumb when it was struck by a hail stone. County records are protected with surge protectors on electronic devices. Some critical facilities have identified as needing backup power generators. Critical facilities are equipped with weather radios and some have hail-resistant roofing. The county offers text alerts through Alert Sense for severe weather events.

### **Severe Winter Storms**

NCEI reported 46 severe winter storm events for the county, only one with reported damages totaling \$30,000. RMA reported \$6,541,207 in crop damage. Past events have caused downed powerlines and broken poles causing power outages. The local power providers regularly conduct maintenance and replace poles and lines. Concerns regarding severe winter storms include lost and stranded travelers, power outages, and livestock loss. Snow removal on county roads is handled by the county road crew in each district using trucks and graders. Snow removal resources have been deemed sufficient for local events.

Figure RCO.5: Dam Locations



### **Levee Failure**

Although not identified as a top hazard of concern by the local planning team, there are two levees in the planning area. One is located in the City of Indianola and one is located in the Village of Bartley. Figures RCO.6 and RCO.7 show the leveed areas in each community. The Bartley levee protects 433 people and 272 structures valued at \$99.1 million. The levee is not accredited through FEMA. The Indianola levee protects 436 people and 320 structures valued at \$143 million. The levee is FEMA accredited.

### **Tornadoes and High Winds**

The NCEI reported 20 tornadoes in the county between January 1996 and December 2019. In addition, the local planning team indicated that there was a tornado on the northeast side of McCook in 2020. An F2 tornado that occurred in August 1996 caused \$750,000 in property damage. An F1 tornado in June 1999 caused \$6,500 in damage. An EF1 tornado in May 2008 caused \$350,000 in property damage. In total the NCDC reported two EF/F2 tornadoes, three EF/F1 tornadoes, and 15 EF/F0 tornadoes. Churches and some office buildings serve as storm shelters but most of the county shelters in-place. Educational outreach is done in schools and retirement homes.

## **Governance**

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

- Assessor
- Attorney
- Clerk
- Clerk of District Court
- Emergency Manager/Sheriff
- Highway Superintendent/Floodplain Administrator
- Planning & Zoning
- Tourism
- Treasurer
- Weed Superintendent

Figure RCO.6: Bartley Leveed Area

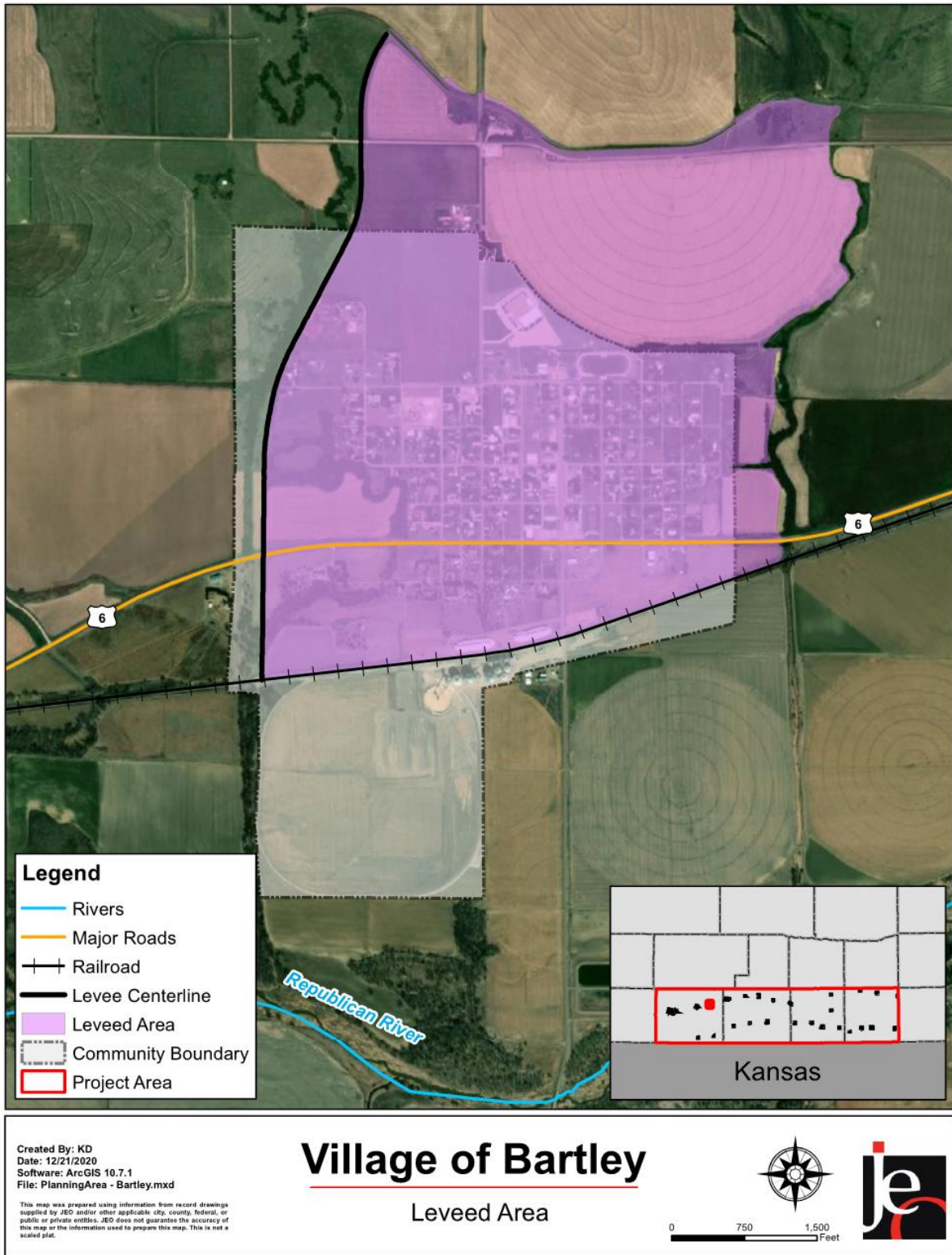
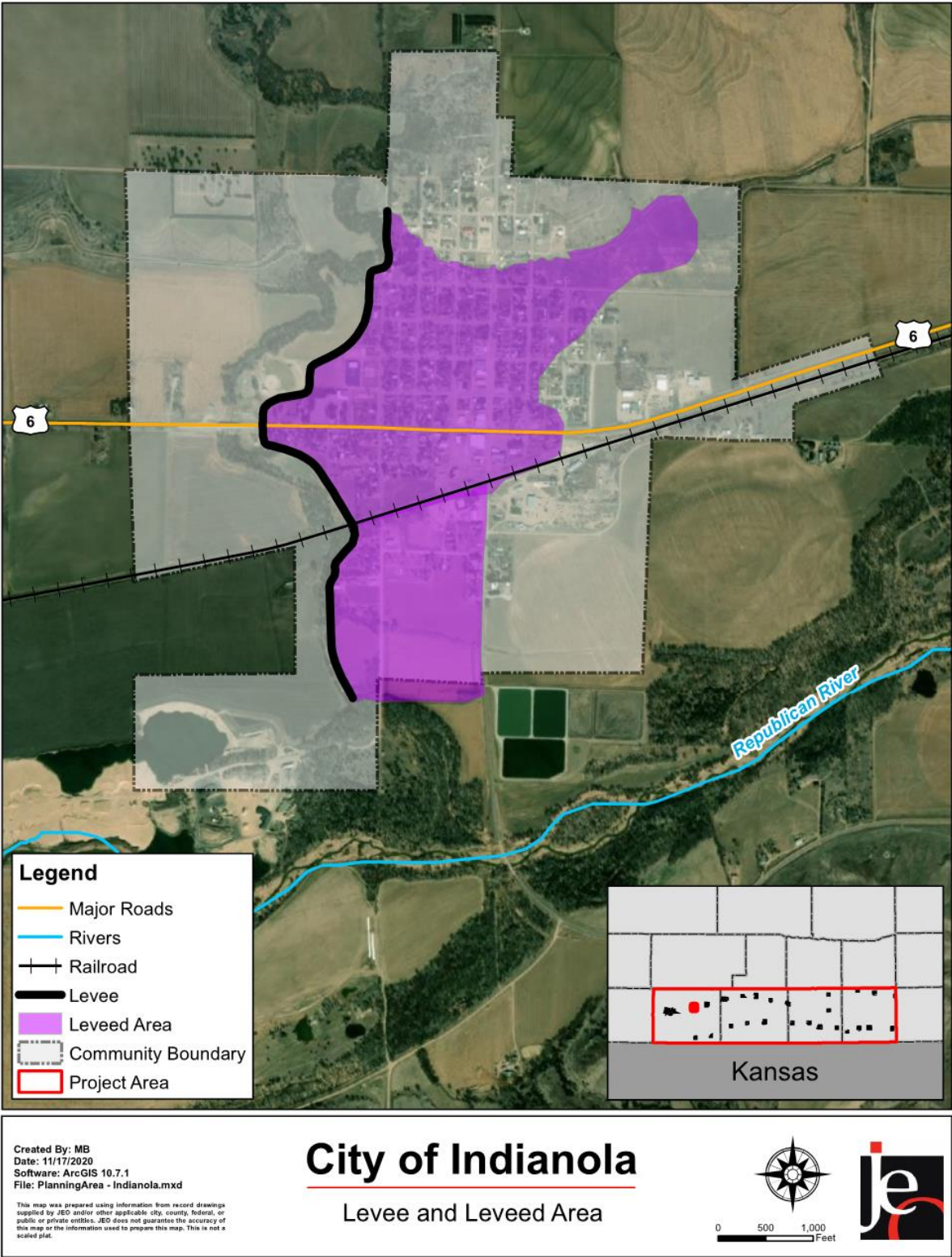




Figure RCO.7: Indianola Leveed Area



## Capability Assessment

The capability assessment consisted of a review of local existing policies, regulations, plans, and programs with hazard mitigation capabilities. The following tables summarize the county’s planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects. Red Willow County’s funds are limited to maintaining current facilities and systems and have slightly decreased over recent years.

**Table RCO.14: Capability Assessment**

Survey Components/Subcomponents		Yes/No
<b>Planning &amp; Regulatory Capability</b>	Comprehensive Plan	No
	Capital Improvements Plan	Yes
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
	Building Codes	Yes
	National Flood Insurance Program	Yes
	Community Rating System	No
Other (if any)	-	
<b>Administrative &amp; Technical Capability</b>	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess County's Vulnerability to Hazards	Yes
	Grant Manager	Yes
	Mutual Aid Agreement	Yes
Other (if any)	-	
<b>Fiscal Capability</b>	Capital Improvement Plan/ 1- & 6-Year Plan	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	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No

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

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

### Plan Integration

Red Willow County has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan. No other planning documents were identified during this process. The county will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

#### Building Code

Building codes set standards for constructed buildings and structures. The county has adopted the 2018 International Building Codes with no amendments.

#### Capital Improvements Plan

The Capital Improvements Plan identifies projects that the county would like to pursue. Projects identified include stormwater projects, upsizing culverts, improving transportation routes, and bridge improvements.

#### Floodplain Regulations, Zoning Ordinance (2012), and Subdivision Regulations

The county’s floodplain ordinance, zoning ordinance, and subdivision regulations outline where and how development should occur in the future. These documents direct development away from the floodplain, encourage the elevation of structures in the floodplain, and contain floodplain maps.

### Red Willow Local Emergency Operations Plan

The local emergency operations plan 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.

### Southwest Community Wildfire Protection Plan (2019)

The purpose of the Southwest Community Wildfire Protection Plan (CWPP) is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. This document is updated every five years and has been integrated with the current hazard mitigation plan.

## Mitigation Strategy

Red Willow County has the administrative staff and technical and fiscal capabilities to implement some mitigation projects without assistance. Larger projects such as safe rooms or drainage improvements may require that the county look to partner with the MRNRD, and other regional and state agencies.

### Continued Mitigation Actions

Mitigation Action	Floodplain Management
<b>Description</b>	Improve floodplain management practices such as adoption and enforcement of floodplain management requirements (Regulation of construction in SFHAs), floodplain identification and mapping (local request for map updates), description of community assistance and monitoring activities.
<b>Hazard(s) Addressed</b>	Flooding
<b>Estimated Cost</b>	Staff Time
<b>Funding</b>	Staff Time
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Floodplain Administrator, County Commissioners
<b>Status</b>	Not Started.

Mitigation Action	Storm Shelters/Safe Rooms
<b>Description</b>	Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, school, and other areas. The county identified the need of a structure at the fairgrounds with the capacity of approximately 200-250 people.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Thunderstorms
<b>Estimated Cost</b>	\$4,500+
<b>Funding</b>	General Fund
<b>Timeline</b>	2-5 Years
<b>Priority</b>	High
<b>Lead Agency</b>	County Commissioners
<b>Status</b>	Not Started.

Mitigation Action	Stormwater System and Drainage Improvements
Description	Undersized systems can contribute to localized flooding. Stormwater system improvements may include pipe upsizing and additional inlets. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other stormwater system improvements. County identified the southwest corner of the county as needing improvements.
Hazard(s) Addressed	Flooding
Estimated Cost	\$10,000-\$100,000+
Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	County Commissioners
Status	In Progress. Working with drainage group to complete drainage projects.

Mitigation Action	Stream Bank Stabilization/Grade Control Structure/Channel Improvements
Description	Bank degradation is occurring along many rivers and creeks. Stabilization improvements including rock rip rap, vegetative cover, j-hooks, boulder vanes, etc. can be implemented to reestablish the channel banks. Identified need of improvements along Republican River, between Perry Grain and Red Willow Crossing.
Hazard(s) Addressed	Flooding
Estimated Cost	\$10,000-\$100,000+
Funding	General Fund, Cost Share with NRD
Timeline	5+ Years
Priority	Medium
Lead Agency	County Commissioners
Status	Not Started.

Mitigation Action	Warning Systems
Description	Improve city cable TV interrupt warning system and implement telephone interrupts system such as Reverse 911.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$5,000
Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	County Commissioners
Status	Not Started.

### Removed Mitigation Actions

Mitigation Action	Maintain Good Standing In the NFIP
Hazard(s) Addressed	Flooding
Reason for Removal	While the county will continue to enforce floodplain regulations and maintain good standing in the NFIP, this project is considered an ongoing action.

**Community Profile**

# **Village of Bartley**

**Quad Counties  
Multi-Jurisdictional Hazard Mitigation Plan Update**

**2021**

## Local Planning Team

**Table BRT.1: Bartley Local Planning Team**

Name	Title	Jurisdiction
Ronni Harding	Village Clerk/Treasurer	Village of Bartley

## Location and Geography

The Village of Bartley is in northeastern Red Willow County and covers an area of 602 acres. The Republican River is located directly to the south of the community.

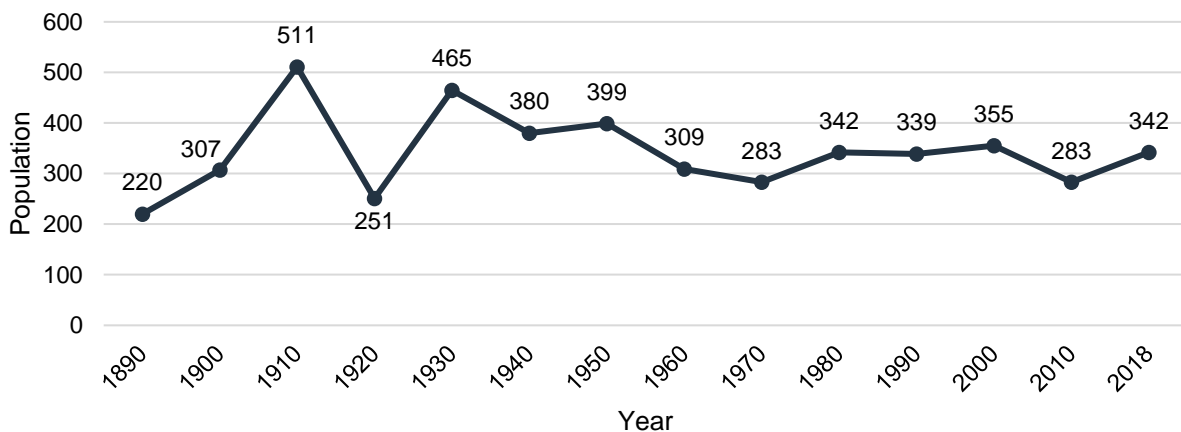
## Transportation

Bartley’s major transportation corridor includes US Highway 6. It is traveled by an average of 3,090 vehicles daily, 465 of which are trucks.<sup>9</sup> Agricultural chemicals and pesticides are regularly transported along the highway and other local routes. No chemical spills or large transportation incidents have occurred in the past. The village has one Burlington Northern Santa Fe Railway and Amtrak line traveling east to west on the village’s southern edge. One airport is located one mile west of the village. Highway 6, Commercial Street, Coke Street, and Road 402 are the transportation routes of concern as they are the primary north-south and east-west routes through the village. Several critical facilities are located near major transportation routes and can be seen on Figure BRT.3. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

## Demographics

The Village of Bartley’s population has increased since 2010 and sat around 342 people in 2018. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Growing populations also contribute to tax revenue, allowing communities to pursue additional mitigation projects. Bartley’s population accounted for 3.2% of Red Willow County’s population in 2018.<sup>10</sup>

**Figure BRT.1: Population 1890 - 2018**

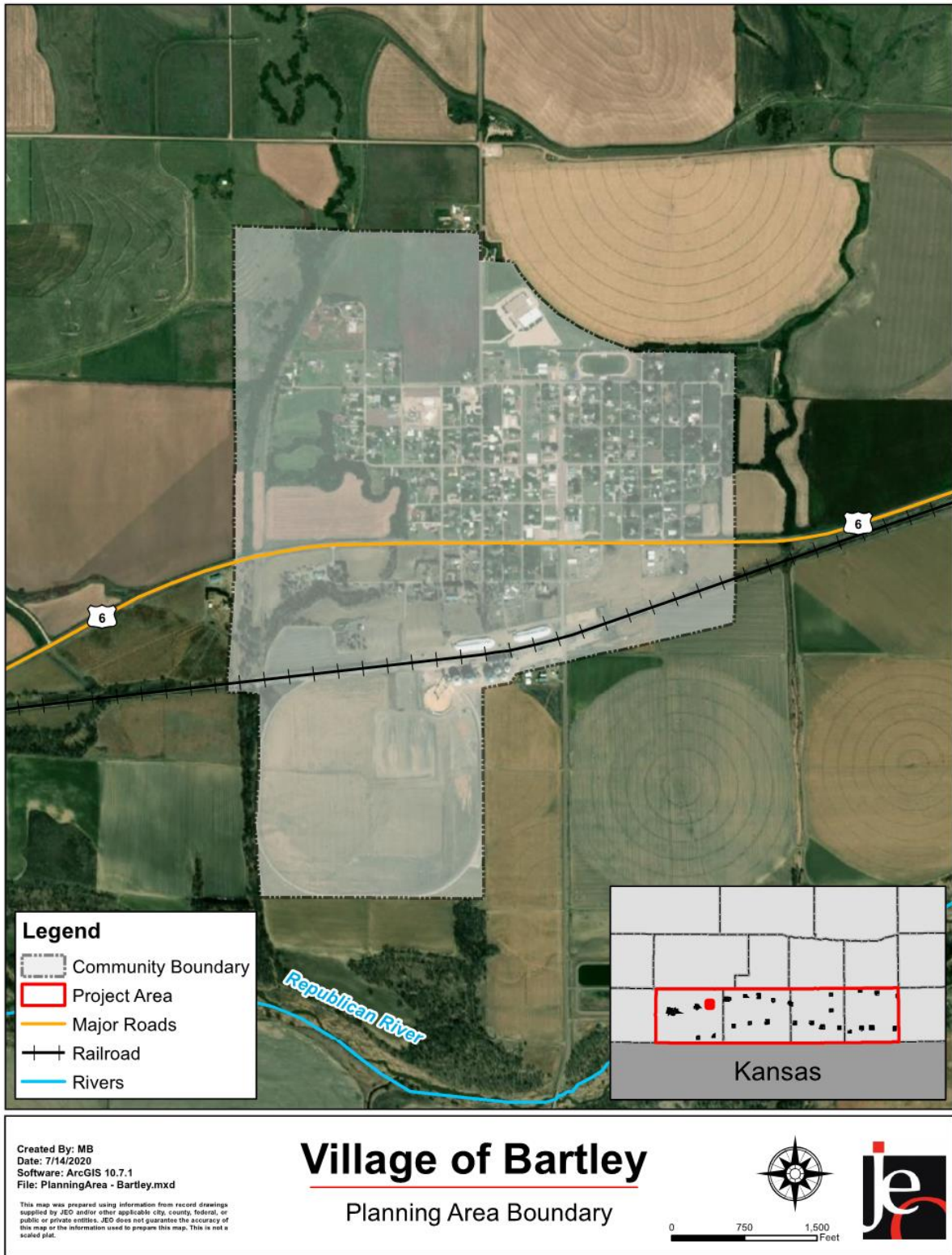


Source: U.S. Census Bureau

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

10 United States Census Bureau. 2018. "DP05: Demographic and Housing Estimates [database file]. <https://data.census.gov/cedsci/>.

Figure BRT.2: Village of Bartley





The young, elderly, minority, and low-income populations may be more vulnerable to certain hazards than other groups. In comparison to the county, Bartley's population was:

- **Older.** The median age of Bartley was 50.6 years old in 2018, compared with Red Willow County's median of 41.1 years. Bartley's population grew older since 2010, when the median age was 47.4 years old.<sup>10</sup>
- **Less ethnically diverse.** Since 2010, Bartley grew more ethnically diverse. In 2010, 1.8% of Bartley's population was non-white. By 2018, about 2.0% was non-white. During that time, the non-white population in the county declined from 4% in 2010 to 3.8% in 2018.<sup>10</sup>
- **More likely to be below the federal poverty line.** The poverty rate in the Village of Bartley (14.4% of people living below the federal poverty line) was higher than the county's poverty rate (9.7%) in 2018.<sup>11</sup>

## Employment and Economics

In comparison to Red Willow County, Bartley's economy had:

- **Different mix of industries.** Bartley's major employment sectors, accounting for 10% or more of employment each, were: agriculture, construction, transportation, and education.<sup>11</sup>
- **Lower median household income.** Bartley's median household income in 2018 (\$52,000) was about \$4,900 lower than the county (\$56,859).<sup>11</sup>
- **More long-distance commuters.** About 63.9% of workers in Bartley commuted for fewer than 15 minutes, compared with about 69.2% of workers in Red Willow County. About 15.4% of workers in Bartley commuted 30 minutes or more to work, compared to about 12.2% of county workers.<sup>12</sup>

## Major Employers

Major employers in Bartley include Ag Valley Co-op and Southwest Public Schools. The local planning team estimate that 40% of residents commute to Cambridge, Indianola, and McCook for employment.

## Housing

In comparison to Red Willow County, Bartley's housing stock was:

- **Older.** Bartley had a larger share of housing built prior to 1970 than the county (70.3% compared to 66.2%).<sup>13</sup>
- **More mobile and manufactured housing.** The Village of Bartley had a larger share of mobile and manufactured housing (7.9%) compared to the county (5.6%).<sup>13</sup>
- **Less renter-occupied.** About 16.9% of occupied housing units in Bartley were renter-occupied compared with 26.5% of occupied housing in Red Willow County.<sup>13</sup>
- **Less occupied.** Approximately 17.6% of Bartley's housing units were vacant compared to 16.1% of units in Red Willow County.<sup>13</sup>

The age of housing may indicate which housing units were built prior to the development of state building codes. Vacant housing stock may also be more vulnerable to hazard events if it is poorly

<sup>11</sup> United States Census Bureau. 2018. "DP03: Selected Economic Characteristics." [database file]. <https://data.census.gov/cedsci/>.

<sup>12</sup> United States Census Bureau. 2018. "S0802: Means of Transportation to Work by Selected Characteristics." [database file]. <https://data.census.gov/cedsci/>.

<sup>13</sup> United States Census Bureau. 2018. "DP04: Selected Housing Characteristics." [database file]. <https://data.census.gov/cedsci/>.

maintained. Unoccupied housing may also suggest that future development may be less likely to occur. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if those homes are not anchored correctly. There are six inhabited mobile homes spread out across the community. Renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have flood insurance, or to know their risks to flooding and other hazards.

### Future Development Trends

Over the past five years, new houses were built, new businesses moved in, and several homes were demolished. In addition, the village was able to use their nuisance abatement program to address several blighted properties. None of the new structures were developed in the floodplain. According to the 2018 American Community Survey estimates, Bartley’s population is growing. The local planning team attributes the growth to younger families moving in, middle aged individuals moving back to be closer to family, and the cleaning up of the community. In the next five years, no housing developments are planned. However, a Walker Mower business is currently being built and a proprietor is thinking of creating an RV park. In addition, the community is going through a downtown revitalization project that may remove three dilapidated buildings for use and new construction.

### Parcel Improvements and Valuation

The planning team acquired GIS parcel data from the County Assessor to analyze the location, number, and value of property improvements (e.g. buildings, garages, sheds etc.) at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following tables.

**Table BRT.2: Parcel Improvements and Value in the 1% Annual Flood Risk Area**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
193	\$14,495,180	8	\$6,490,028	4.1%

Source: County Assessor, 2020

**Table BRT.3: Parcel Improvements and Value in the 0.2% Annual Flood Risk Area**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
193	\$14,495,180	0	\$0	0%

Source: County Assessor, 2020

## Community Lifelines

### Critical Facilities

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

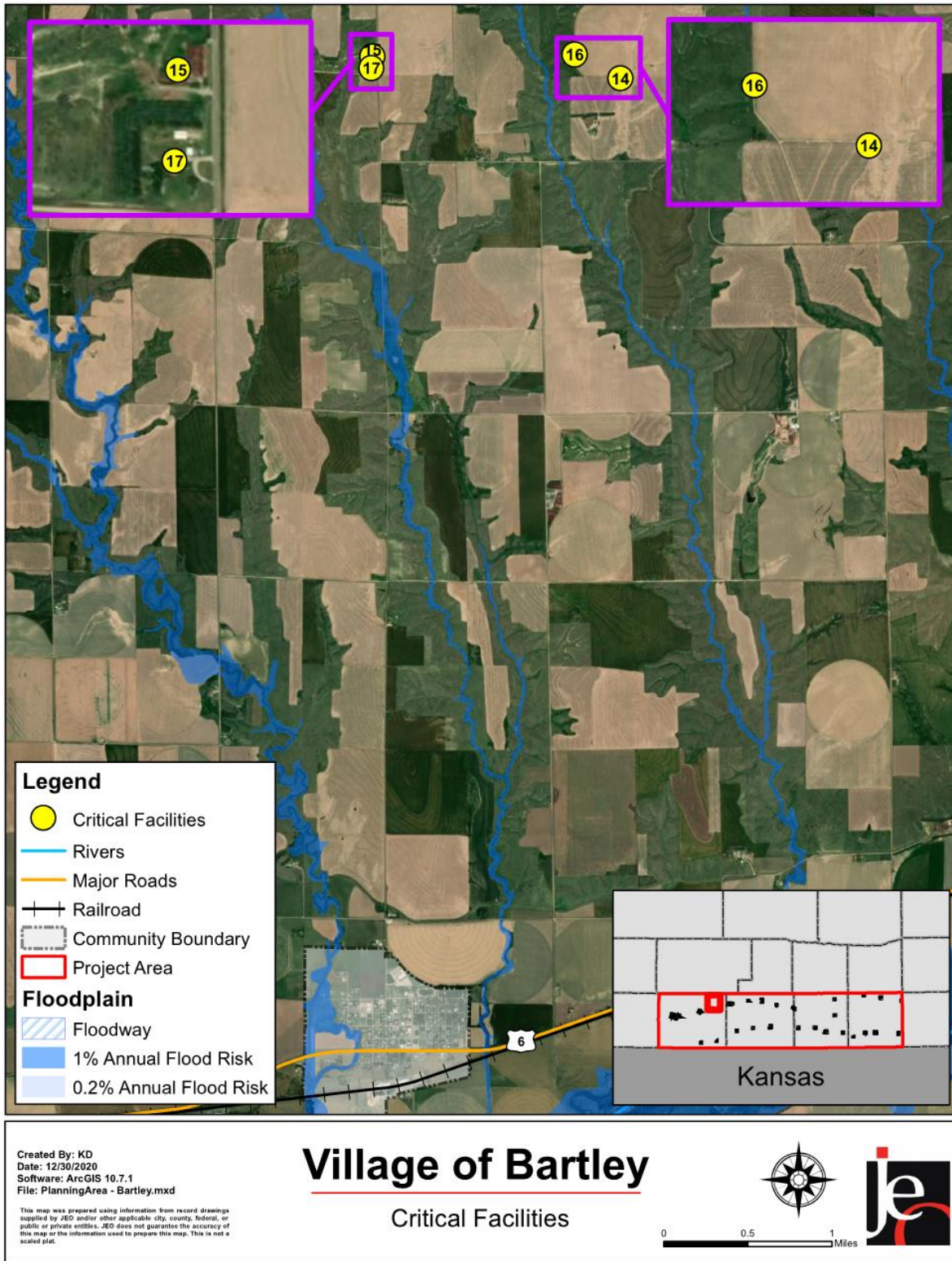
**Table BRT.4: Critical Facilities**

CF Number	Name	Community Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	AF & AM Lodge	N	N	N
2	Communication Facility	N	Y	N
3	Communication Facility	N	N	N
4	Communication Facility	N	N	N
5	Community Hall	N	N	N
6	County Shop	N	N	N
7	Fire Station/Ambulance	N	Y	N
8	Legion Hall	N	N	N
9	Lift Station	N	Y	N
10	School #1	N	N	N
11	School #2	N	N	N
12	School #3	Y	N	N
13	Water/Pump/Storage	N	N	N
14	Well (Downer)	N	N	N
15	Well (Hayes)	N	N	N
16	Well (Walkington)	N	N	N
17	BIC Station	N	N	N

Figure BRT.3: Critical Facilities 1-13



Figure BRT.4: Critical Facilities 14-17



## Historical Occurrences

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

## Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the community. The planning team prioritized the selected hazards based on historical hazard occurrences, potential impacts, and the community's capabilities. For more information regarding regional hazards, please see *Section Four: Risk Assessment*.

### Extreme Heat

In the event of extreme heat, the library, Legion Hall, AF & AM Lodge, Methodist Church, and the Fire and Rescue squads are available to assist vulnerable populations. Bartley has experienced several power outages in the past. Power outages during extreme heat events have the potential to cause injury or death to vulnerable populations without shelter from the heat or reliant on medical devices. Although not specifically designated, in the event of a power outage during an extreme heat event, facilities with backup generators would be used as cooling centers for residents.

### Flooding

Although not identified as a top hazard of concern by the local planning team, there is floodplain located on the western border of the community. NCEI data did not show any flood events for Bartley. The local planning team indicated that the village was not impacted by the March 2019 floods. The village is a member of, and maintains good standing with, the NFIP.

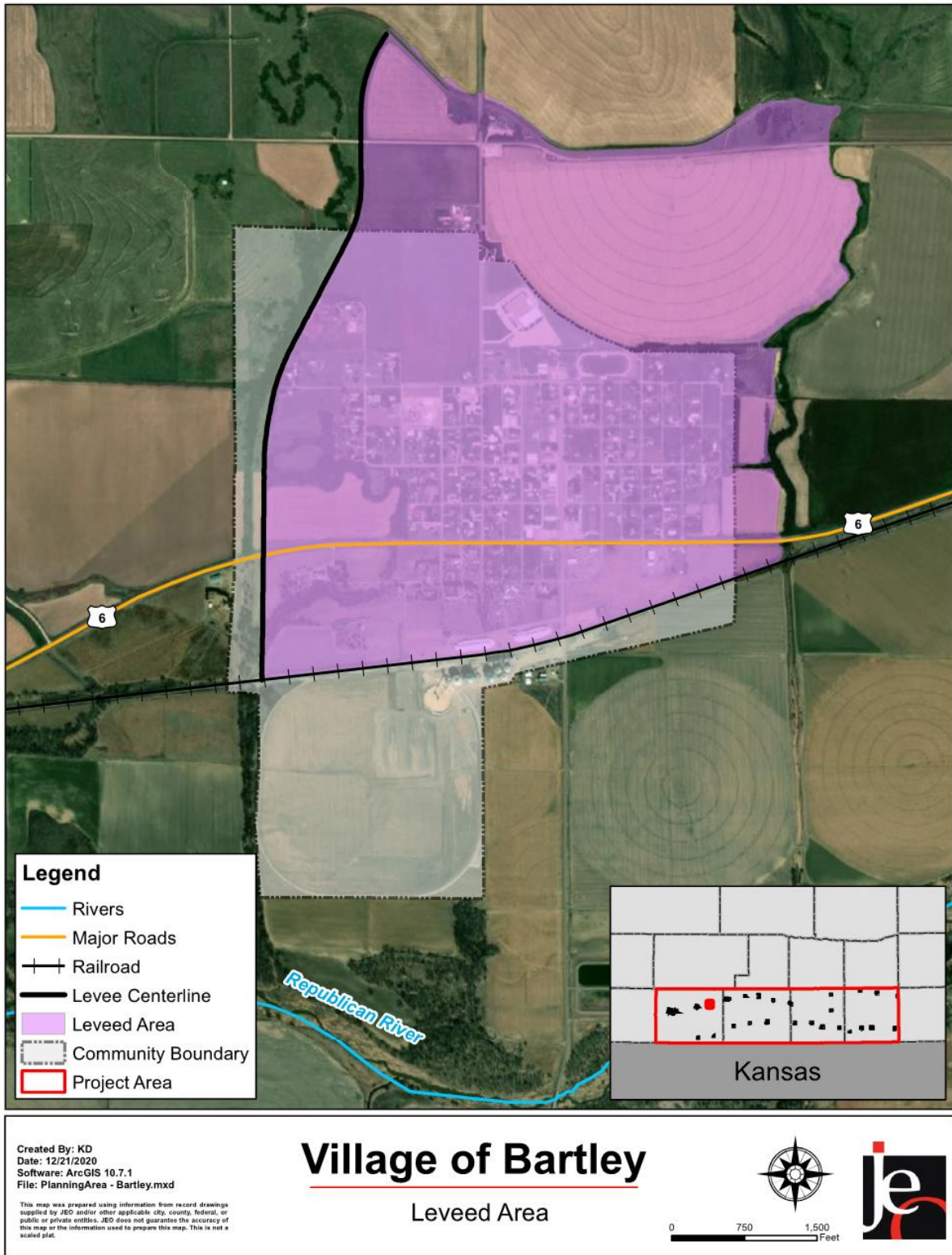
### Levee Failure

No historic levee failure has occurred in the village. However, levee failure is included in this plan due to the potentially catastrophic nature that a levee failure would have on the Village of Bartley. Prior to the levee being put in by the U.S. Army Corps of Engineers (USACE), flooding occurred regularly in the community. According to the national levee database, if the levee were to fail it would flood 433 people and 272 structures valued at \$99.1 million. USACE has educated board members on the condition of the levee and continual maintenance and tree removal is being done to protect the integrity of the levee. However, tree root balls need to be removed and soil needs to be replaced. In addition, a road that was cut through the levee needs to be removed and a bridge is needed over the area to replace the road. Figure BRT.5 shows the location of the levee and leveed area. The levee is a non-accredited levee system through FEMA.

### Severe Thunderstorms

NCEI reported 33 severe thunderstorms (wind, rain, hail, and lightning) between January 1996 and December 2019 that resulted in \$255,100 in property damage. Most of the damage came from one event that occurred in June 2000, when 2.5-inch hail caused \$250,000 in property damage. Critical municipal records are protected with surge protectors on electronic devices. There are a number of critical facilities that need backup power generators including: village office, Southwest Schools, community hall, and legion hall. Approximately five percent of primary power lines have been buried. Weather radios are located in the fire station and village office.

Figure BRT.5: Leveed Area



**Severe Winter Storms**

Severe winter weather occurs annually in Bartley and the rest of the planning area. In 2007, a major ice storm knocked down power lines and took out power for several days. Designated snow routes include Nebraska, Commercial, Walnut, and Coke Streets. Streets are cleared by village maintenance, and snow removal resources are sufficient for local events.

**Tornadoes and High Winds**

NCEI reported three tornadoes for the village. All three of the storms were rated as F/EF0. There were no reported damages; however, the local planning team indicated a tornado in 2000 damaged windows and siding. The community does not have a safe room. The only underground shelter is in the Methodist Church; and it is not ADA-accessible. In the event of a disaster, all the communities within Red Willow County have mutual aid agreements.

**Governance**

A community’s governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. The Village of Bartley is governed by a board of trustees; other governmental offices and departments are listed below.

- Clerk/Treasurer
- Utility Superintendent
- Volunteer Fire Department
- Volunteer Ambulance Squad
- Street Superintendent
- Planning Commission
- Library Board
- Library Director

**Capability Assessment**

The capability assessment consisted of a review of local existing policies, regulations, plans, and programs with hazard mitigation capabilities. The following tables summarize the community’s planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects. Bartley’s municipal funds are limited to maintaining current facilities but have increased due to TIF funding. A large portion of funds are already dedicated to downtown revitalization, infrastructure, and streets.

**Table BRT.5: Capability Assessment**

Survey Components/Subcomponents		Yes/No
<b>Planning &amp; Regulatory Capability</b>	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No (Creating in 2021)
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	No (Creating in 2021)
	Subdivision Regulation/Ordinance	No
	Floodplain Ordinance	Yes



Survey Components/Subcomponents		Yes/No
	Building Codes	Yes
	National Flood Insurance Program	Yes
	Community Rating System	No
	Other (if any)	Water System Emergency Response Plan
<b>Administrative &amp; Technical Capability</b>	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	-
	<b>Fiscal Capability</b>	Capital Improvement Plan/ 1- & 6-Year Plan
Applied for grants in the past		Yes
Awarded a grant in the past		Yes
Authority to Levy Taxes for Specific Purposes such as Mitigation Projects		Yes
Gas/Electric Service Fees		Yes
Storm Water Service Fees		No
Water/Sewer Service Fees		Yes
Development Impact Fees		No
General Obligation Revenue or Special Tax Bonds		No
Other (if any)		-
<b>Education &amp; Outreach Capability</b>	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	Yes
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
	Natural disaster or safety related school programs	Yes
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	-

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

## Plan Integration

The Village of Bartley has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan. In addition to those listed below, the village has 2000 wellhead protection ordinance and is currently in the process of creating a zoning ordinance and redevelopment plan. No other planning documents were identified during this process. The village will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

### Building Code (2021)

The building code sets standards for constructed buildings and structures. The village has adopted the 2018 International Building Codes. The only amendments to the code apply facilities that have twelve or fewer children/persons.

### Comprehensive Plan (2021)

The comprehensive plan is designed to guide the future actions of the village. It contains goals aimed at safe growth, directs development away from the floodplain, encourages infill, directs development away from chemical storage sites, encourages elevation of structures in the floodplain, directs housing away from major transportation routes, and encourages the preservation of open space. Updates for the comprehensive plan will begin in 2021.

### Floodplain Regulations (2009) and Subdivision Regulations (1988)

The village’s floodplain regulations and subdivision regulations outline where and how development should occur in the future. These documents contain floodplain maps and discourage development in the floodplain.

### Red Willow Local Emergency Operations Plan (2016)

The Village of Bartley is an annex in the Red Willow 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.

### Water System Emergency Response Plan (2018)

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

## Mitigation Strategy

The Village of Bartley has limited fiscal capabilities and administrative support available for implementing mitigation projects. The village will continue to benefit from strong partnerships, such as with the county and MRNRD, and will need to explore outside funding assistance for project implementation.

### Continued Mitigation Actions

Mitigation Action	Backup and Emergency Generators
<b>Description</b>	Provide a portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations, and other critical facilities. Facilities that need a generator are Fire and Rescue, Village Office, Schools, Community Hall, Church, Legion Hall, and Library.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$5,000+
<b>Funding</b>	Surplus fees from the electrical system
<b>Timeline</b>	5+ Years
<b>Priority</b>	High
<b>Lead Agency</b>	Board of Trustees
<b>Status</b>	In Progress. A generator was added to the fire and rescue building and lift station.
Mitigation Action	Drainage Study/Stormwater Master Plan
<b>Description</b>	Drainage studies can be conducted to identify and prioritize improvements to address site specific localized flooding/drainage problems. Stormwater master plans can be conducted to perform a community-wide stormwater evaluation, identifying multiple problem areas, and potentially multiple drainage improvements for each.
<b>Hazard(s) Addressed</b>	Flooding
<b>Estimated Cost</b>	\$10,000 - \$100,000+
<b>Funding</b>	General Budget
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Low
<b>Lead Agency</b>	Board of Trustees
<b>Status</b>	Not Started.
Mitigation Action	Public Awareness/Education
<b>Description</b>	Activities such as outreach projects, distribution of maps and environmental education increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards. In addition, educate citizens on erosion control and water conservation methods. Educate residents on response and rescue plans for all hazard types.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$500+
<b>Funding</b>	General Budget
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Board of Trustees
<b>Status</b>	Not Started.

Mitigation Action	Storm Shelters/Safe Rooms
Description	Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, school, and other areas.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Thunderstorms
Estimated Cost	\$4,500+
Funding	Village Funds
Timeline	5+ Years
Priority	High
Lead Agency	Board of Trustees, Emergency Manager
Status	Not Started.

Mitigation Action	Stormwater System and Drainage Improvements
Description	Undersized systems can contribute to localized flooding. Stormwater system improvements may include pipe upsizing and additional inlets. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other stormwater system improvements.
Hazard(s) Addressed	Flooding
Estimated Cost	\$10,000 - \$100,000+
Funding	General Budget
Timeline	1 Year
Priority	Low
Lead Agency	Board of Trustees
Status	Not Started.

Mitigation Action	Weather Radios
Description	Conduct an inventory of weather radios at schools and other critical facilities.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$50 per radio
Funding	General Budget
Timeline	2-5 Years
Priority	Low
Lead Agency	Board of Trustees, Fire Department
Status	In Progress. Weather radios are located at the fire station and village office.

### Removed Mitigation Actions

Mitigation Action	Maintain Good Standing in NFIP
Hazard(s) Addressed	Flooding
Reason for Removal	While the community will continue to participate and maintain compliance in the NFIP, this project is considered an ongoing action.

**Community Profile**

# **Village of Danbury**

**Quad Counties  
Multi-Jurisdictional Hazard Mitigation Plan Update**

**2021**

## Local Planning Team

Table DBR.1: Danbury Local Planning Team

Name	Title	Jurisdiction
Shirley Axtell	Village Clerk/Treasurer	Village of Danbury
Eugene Axtell	Board Chairperson	Village of Danbury

## Location and Geography

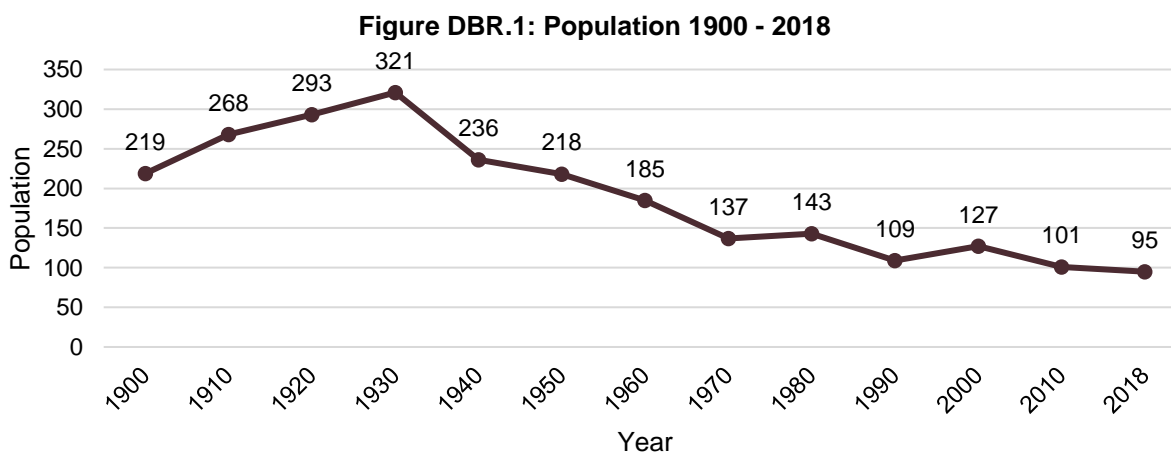
The Village of Danbury is in south-central Red Willow County and covers 208 acres. One waterway, Beaver Creek, passes north and east of the village. The Kansas border is located two miles to the south of the community.

## Transportation

Danbury’s major transportation corridor is State Highway 89. It is traveled by an average of 460 vehicles daily, 45 of which are trucks.<sup>14</sup> Chemicals regularly transported on the highway include gas, diesel, propane, and farm chemicals. No chemical spills have occurred on local routes. The Nebraska Kansas Colorado Railway line that was located on the northern edge of the community has been closed. The local planning team is concerned with speeds that are taken as cars drive through the community. Main Street has a 65-mph speed limit, but the street curves and houses are located very close to the road. Three people have been killed at the intersection. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

## Demographics

The Village of Danbury’s population has been declining since 2000 to around 95 people in 2018. A declining population can lead to more unoccupied and unmaintained housing that is then at risk to high winds and other hazards. Furthermore, with fewer residents, there is decreasing tax revenue for the community, which could make implementation of mitigation projects more fiscally challenging. Danbury’s population accounted for 0.9% of Red Willow County’s population in 2018.<sup>15</sup>

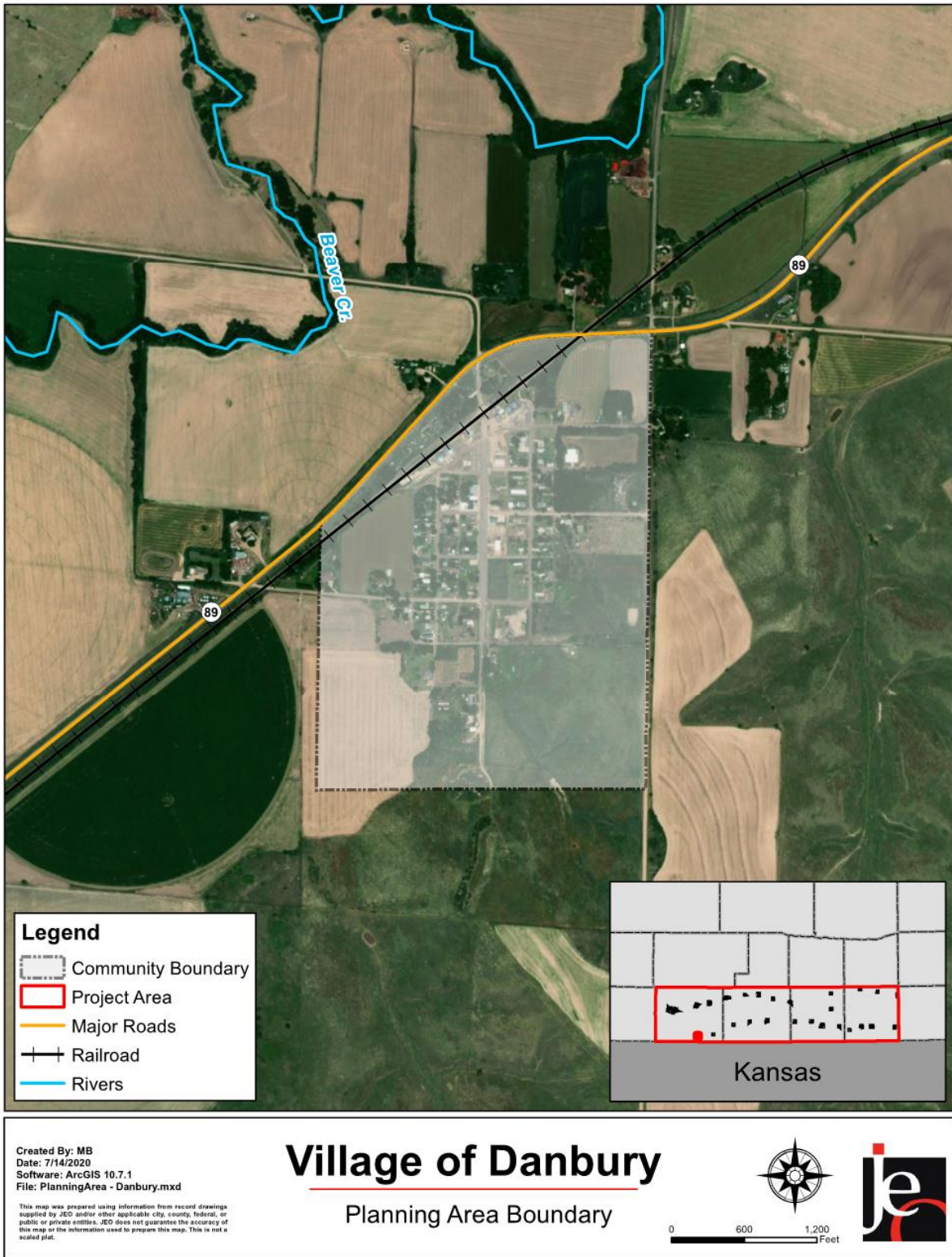


Source: U.S. Census Bureau (1900-2010), Local Planning Team (2018)

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

15 United States Census Bureau. 2018. "DP05: Demographic and Housing Estimates [database file]. <https://data.census.gov/cedsci/>.

Figure DBR.2: Village of Danbury



The young, elderly, minority, and low-income populations may be more vulnerable to certain hazards than other groups. In comparison to the county, Danbury's population was:

- **Older.** The median age of Danbury was 54.5 years old in 2018, compared with Red Willow County's median of 41.1 years. Danbury's population grew older since 2010, when the median age was 48.3 years old.<sup>15</sup>
- **Similarly ethnically diverse.** Since 2010, Danbury grew more ethnically diverse. In 2010, 1.0% of Danbury's population was non-white. By 2018, about 3.3% was non-white. During that time, the non-white population in the county declined from 4.0% in 2010 to 3.8% in 2018.<sup>15</sup>
- **Much more likely to be below the federal poverty line.** The poverty rate in the Village of Danbury (21.1% of people living below the federal poverty line) was higher than the county's poverty rate (9.7%) in 2018.<sup>16</sup>

## Employment and Economics

In comparison to Red Willow County, Danbury's economy had:

- **Different mix of industries.** Danbury's major employment sectors, accounting for 10% or more of employment each, were: agriculture, manufacturing, transportation, and education.<sup>16</sup>
- **Lower median household income.** Danbury's median household income in 2018 (\$29,750) was about \$27,100 lower than the county (\$56,859).<sup>16</sup>
- **More long-distance commuters.** About 22.2% of workers in Danbury commuted for fewer than 15 minutes, compared with about 69.2% of workers in Red Willow County. About 40.7% of workers in Danbury commuted 30 minutes or more to work, compared to about 12.2% of county workers.<sup>17</sup>

### Major Employers

Major employers in Danbury include the Decatur Co-op, U.S. Postal Service, and Red Willow County Roads Department. The local planning team estimate that 25% to 30% of residents commute to McCook, Oberlin, and Bartley for employment.

## Housing

In comparison to Red Willow County, Danbury's housing stock was:

- **Older.** Danbury had a larger share of housing built prior to 1970 than the county (93.3% compared to 66.2%).<sup>18</sup>
- **More mobile and manufactured housing.** The Village of Danbury had a larger share of mobile and manufactured housing (9.3%) compared to the county (5.6%).<sup>18</sup>
- **Less renter-occupied.** About 18.6% of occupied housing units in Danbury were renter-occupied compared with 26.5% of occupied housing in Red Willow County.<sup>18</sup>
- **Less occupied.** Approximately 42.7% of Danbury's housing units were vacant compared to 16.1% of units in Red Willow County.<sup>18</sup>

16 United States Census Bureau. 2018. "DP03: Selected Economic Characteristics." [database file]. <https://data.census.gov/cedsci/>.

17 United States Census Bureau. 2018. "S0802: Means of Transportation to Work by Selected Characteristics." [database file]. <https://data.census.gov/cedsci/>.

18 United States Census Bureau. 2018. "DP04: Selected Housing Characteristics." [database file]. <https://data.census.gov/cedsci/>.



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

### Future Development Trends

Over the past five years, two different storage unit companies have been added and the co-op added a new grain bin. No new housing has been built. None of the new structures are located in the floodplain. According to the 2018 American Community Survey estimates, Danbury’s population is declining. The local planning team attribute this to an aging population. In the next five years, no housing developments or businesses are planned.

### Parcel Improvements and Valuation

The planning team acquired GIS parcel data from the County Assessor to analyze the location, number, and value of property improvements (e.g. buildings, garages, sheds etc.) at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following tables.

**Table DBR.2: Parcel Improvements and Value in the 1% Annual Flood Risk Area**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
76	\$1,758,952	0	\$0	0%

Source: County Assessor, 2020

**Table DBR.3: Parcel Improvements and Value in the 0.2% Annual Flood Risk Area**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
76	\$1,758,952	0	\$0	0%

Source: County Assessor, 2020

## Community Lifelines

### Critical Facilities

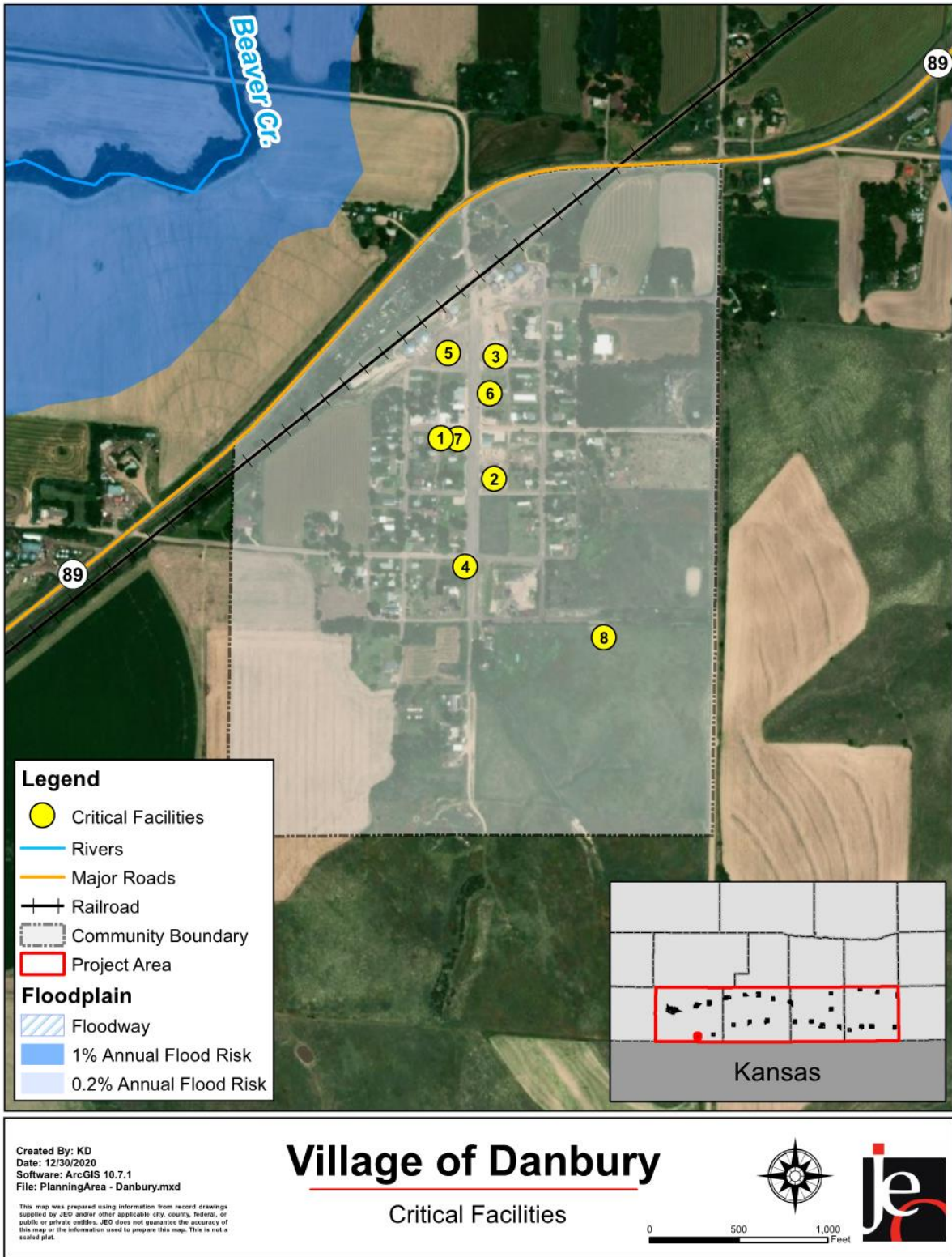
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction’s functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during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

**Table DBR.4: Critical Facilities**

CF Number	Name	Community Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Community Center	Y	N	N
2	County Roads Building	N	N	N
3	Fire and Rescue Building	N	N	N
4	Fire Well	N	N	N
5	Fueling Station	N	N	N
6	Post Office	N	N	N
7	Telephone BW Telcom	N	Y	N
8	Water Tower	N	N	N
9*	Wells	N	Y	N

*\*Wells are not mapped but are located several miles to the east of the community.*

Figure DBR.3: Critical Facilities



## Historical Occurrences

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

## Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the community. The planning team prioritized the selected hazards based on historical hazard occurrences, potential impacts, and the community's capabilities. For more information regarding regional hazards, please see *Section Four: Risk Assessment*.

### Drought

The NCEI reported that Danbury experienced 483 months in drought from 1895 to 2019. No monetary damages were reported by the local planning team, but power outages have occurred in the past. During the 2012 drought, the village reported not allowing outdoor watering from 9:00 AM to 9:00 PM. The village does not have a drought monitoring board or drought plan. The village monitors the water supply during drought and has regulations to restrict lawn watering to every other day. The village has sufficient water supply and is not looking for additional sources.

### Grass/Wildfires

Pasture and crop land directly border the community so the possibility of a wildfire spreading into the village is high. In addition, there are many lots in the community that have not been properly cared for so fuel load is also high, and fires could spread quickly. Grass and wildfire have not caused damage in the village, but several have occurred to the north. Danbury's fire department is made up of volunteers and several community members are firefighters. To help reduce the occurrence of grass/wildfires, residents can only burn in open containers and they must get a written permit from the fire chief. Defensible spaces are encouraged but not required so participation is an issue.

### Severe Thunderstorms

In 2011 the village reported two thunderstorms with hail. One storm occurred in June and the other in August. Due to the hail damage, several homeowners replaced their roofs with metal roofs which are more hail-resistant than traditional roofing materials. Village-owned properties have hail insurance that the village pays. The village has surge protectors to protect devices that contain municipal records and the community wells have backup generators. None of the village's critical facilities have weather radios.

### Severe Winter Storms

Severe winter storms occur regularly in Danbury and the rest of the planning area. The village does not have designated snow routes and does not use snow fences. Streets in the village are cleared by a combination of county road crews and village maintenance crews using graders and a backhoe. This equipment is sufficient for the village after most snowstorms. Farmers have also helped remove snow during past large snowstorms.

### Tornadoes and High Winds

The NCEI reported three tornadoes in the village between January 1996 and December 2019. An F1 tornado in June 1999 caused \$6,500 in damage. The two other reported tornadoes were both rated as an F0 and occurred in June 1999 and October 2000. There is one siren in the community and is activated during severe weather warnings. The village uses discs and flash drives to backup municipal records and has handwritten backup records going back four years. The county

offers text alerts to residents and pager alerts are available for fire department volunteers. Most residents can take shelter in their homes during tornadoes; the county emergency manager has designated the community center and First Presbyterian Church as other locations where shelter can be taken. There are no safe rooms in the community that would meet FEMA standards.

### Governance

A community’s governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. The Village of Danbury is governed by a village board made up of a chairman and four trustees; other governmental offices and departments are listed below.

- Village Clerk
- Utility Superintendent/Water Commissioner
- Volunteer Fire Department
- Street Superintendent
- Parks and Recreation
- Maintenance

### Capability Assessment

The capability assessment consisted of a review of local existing policies, regulations, plans, and programs with hazard mitigation capabilities. The following tables summarize the community’s planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects. Danbury’s municipal funds are limited to maintaining current facilities and systems and have stayed the same over recent years. A large portion of funds are already dedicated to water and street projects. The village has applied for a water study grant.

**Table DBR.5: Capability Assessment**

Survey Components/Subcomponents		Yes/No
<b>Planning &amp; Regulatory Capability</b>	Comprehensive Plan	No
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	No
	Subdivision Regulation/Ordinance	No
	Floodplain Ordinance	No
	Building Codes	No
	National Flood Insurance Program	No
	Community Rating System	No
	Other (if any)	Wellhead Protection Plan, Water System Emergency Response Plan
<b>Administrative &amp; Technical</b>	Planning Commission	No
	Floodplain Administration	No
	GIS Capabilities	No

Survey Components/Subcomponents		Yes/No
<b>Capability</b>	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	-
<b>Fiscal Capability</b>	Capital Improvement Plan/ 1- & 6-Year plan	No
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	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)	-
<b>Education &amp; Outreach Capability</b>	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	No
	Natural disaster or safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	-

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

**Plan Integration**

The Village of Danbury has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan. No other planning documents were identified during this process. The village will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

**Red Willow Local Emergency Operations Plan (2016)**

The Village of Danbury is an annex in the Red Willow 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.

**Water System Emergency Plan**

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

**Wellhead Protection Plan**

The purpose of wellhead protection plans is to protect the public drinking water supply wells from contamination. It includes identifying potential sources of groundwater contamination in the area and managing the potential contaminant sources.

**Mitigation Strategy**

The Village of Danbury has limited fiscal capabilities and administrative support available for implementing mitigation projects. The village will continue to benefit from strong partnerships, such as with the county and MRNRD, and will need to explore outside funding assistance for project implementation.

**Continued Mitigation Actions**

Mitigation Action	Public Awareness/Education
<b>Description</b>	Activities such as outreach projects, distribution of maps and environmental education increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards. In addition, educate citizens on erosion control and water conservation methods. Educate residents on response and rescue plans for all hazard types.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$500+
<b>Funding</b>	General Budget
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Village Board, County Emergency Management
<b>Status</b>	Not Started.

Mitigation Action	Storm Shelters/Safe Rooms
Description	Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, school, and other areas.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Thunderstorms
Estimated Cost	\$4,500+
Funding	General Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	Village Board
Status	Not Started.

Mitigation Action	Stormwater and Drainage Improvements
Description	Undersized systems can contribute to localized flooding. Stormwater system improvements may include pipe upsizing and additional inlets. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other stormwater system improvements. Culverts in the village need to be repaired.
Hazard(s) Addressed	Flooding
Estimated Cost	\$10,000 - \$100,000+
Funding	Street Fund
Timeline	5+ Years
Priority	Low
Lead Agency	Village Board
Status	Not Started. Funding has not been available.



**Community Profile**

# **City of Indianola**

**Quad Counties  
Multi-Jurisdictional Hazard Mitigation Plan Update**

**2021**

## Local Planning Team

Table IDL.1: Indianola Local Planning Team

Name	Title	Jurisdiction
Mitchell Nelms	Utility Superintendent	City of Indianola

## Location and Geography

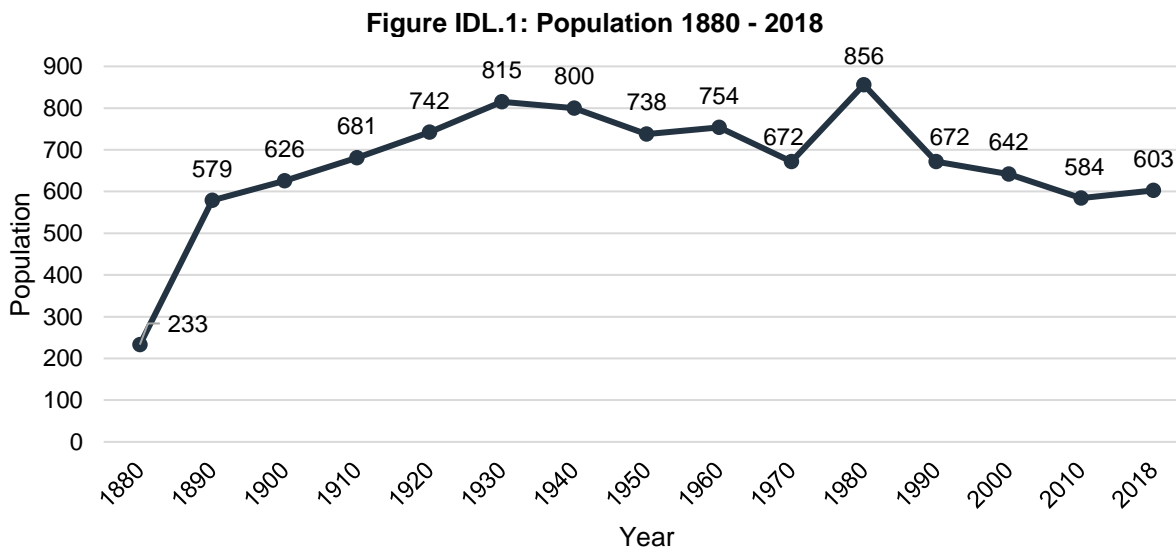
The City of Indianola is in northcentral Red Willow County and covers 1.2 square miles. The topographic region Indianola lies in is the dissected plains. This hilly land has moderate to steep slopes and sharp ridge crests. They are remnants of the old plain eroded by water and wind. The Republican River flows to the south of the city.

## Transportation

Indianola’s major transportation corridor is US Highway 6. It is traveled by an average of 3,405 vehicles daily, 465 of which are trucks.<sup>19</sup> The city has one Burlington Northern Santa Fe Railway/Union Pacific/Amtrak line traveling west to east on the southern portion of the community. Highway 6 is the transportation route of most concern due to the high amount of vehicle traffic. No large chemical spills or accidents have occurred locally. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

## Demographics

The City of Indianola’s population has been increasing since 2010 to around 603 people in 2018. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Growing populations also contribute to tax revenue, allowing communities to pursue additional mitigation projects. Indianola’s population accounted for 5.6% of Red Willow County’s population in 2018.<sup>20</sup>

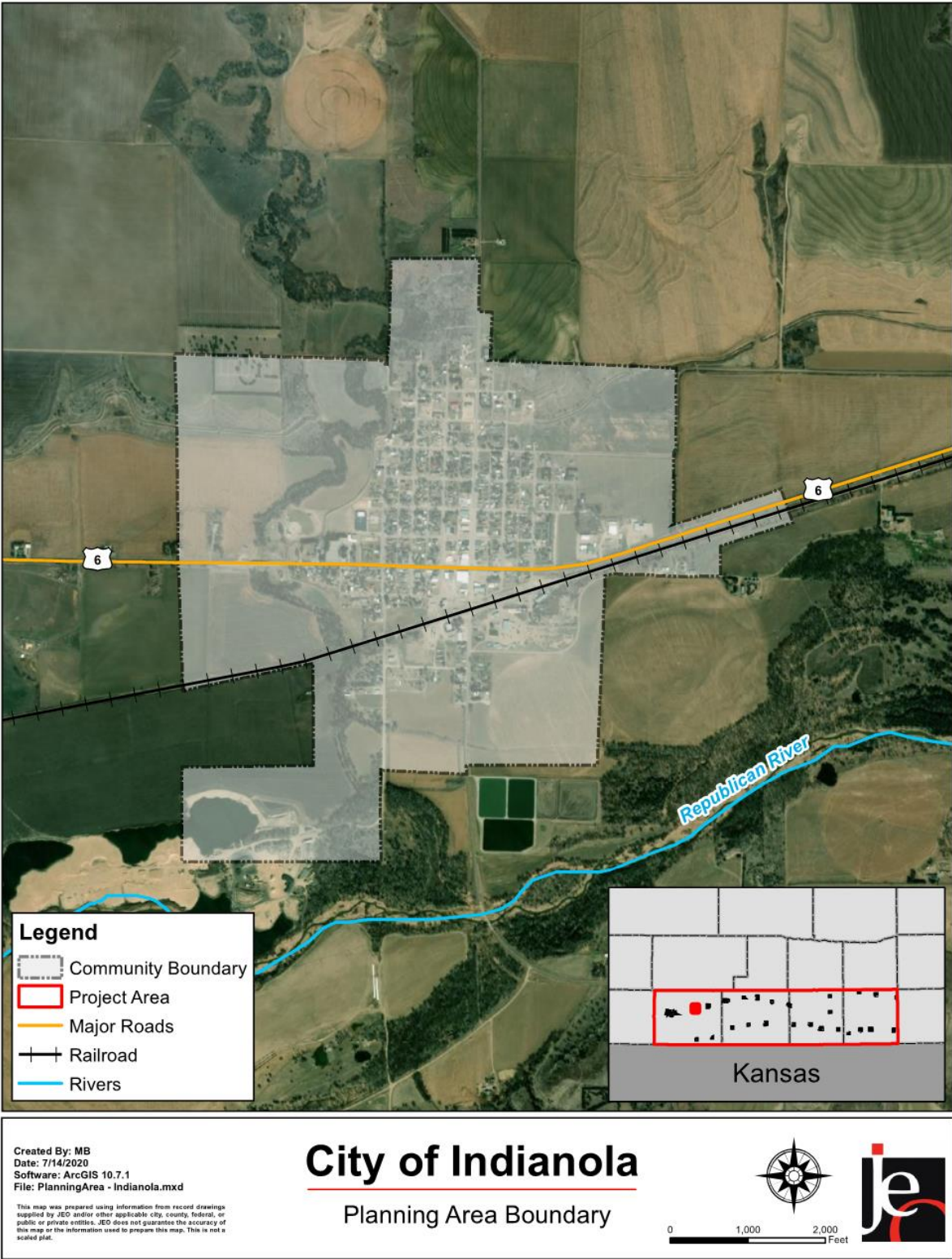


Source: U.S. Census Bureau

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

20 United States Census Bureau. 2018. "DP05: Demographic and Housing Estimates [database file]. <https://data.census.gov/cedsci/>.

Figure IDL.2: City of Indianola



The young, elderly, minority, and low-income populations may be more vulnerable to certain hazards than other groups. In comparison to the county, Indianola's population was:

- **Older.** The median age of Indianola was 50.4 years old in 2018, compared with Red Willow County's median of 41.1 years. Indianola's population grew older since 2010, when the median age was 42.8 years old.<sup>20</sup>
- **Less ethnically diverse.** Since 2010, Indianola grew less ethnically diverse. In 2010, 1.9% of Indianola's population was non-white. By 2018, about 0.5% was non-white. During that time, the non-white population in the county declined from 4% in 2010 to 3.8% in 2018.<sup>20</sup>
- **More likely to be below the federal poverty line.** The poverty rate in the City of Indianola (13.8% of people living below the federal poverty line) was higher than the county's poverty rate (9.7%) in 2018.<sup>21</sup>

## Employment and Economics

In comparison to Red Willow County, Indianola's economy had:

- **Similar mix of industries.** Indianola's major employment sectors, accounting for 10% or more of employment each, were retail trade and education.<sup>21</sup>
- **Lower median household income.** Indianola's median household income in 2018 (\$44,833) was about \$12,000 lower than the county (\$56,859).<sup>21</sup>
- **More long-distance commuters.** About 30% of workers in Indianola commuted for fewer than 15 minutes, compared with about 69.2% of workers in Red Willow County. About 16.6% of workers in Indianola commuted 30 minutes or more to work, compared to about 12.2% of county workers.<sup>22</sup>

## Major Employers

Major employers in the community include Ag Valley Co-op, Adams Bank & Trust, Lords Inc., Rocket Inn, Schaffert Manufacturing, Southwest Elementary School, and Tri-Valley Medical Clinic. The local planning team estimates that 90% of residents commute to McCook or Cambridge for employment.

## Housing

In comparison to Red Willow County, Indianola's housing stock was:

- **Older.** Indianola had a larger share of housing built prior to 1970 than the county (70.4% compared to 66.2%).<sup>23</sup>
- **More mobile and manufactured housing.** The City of Indianola had a larger share of mobile and manufactured housing (6.8%) compared to the county (5.6%).<sup>23</sup>
- **Less renter-occupied.** About 19.1% of occupied housing units in Indianola were renter-occupied compared with 26.5% of occupied housing in Red Willow County.<sup>23</sup>
- **Similarly occupied.** Approximately 15.7% of Indianola's housing units were vacant compared to 16.1% of units in Red Willow County.<sup>23</sup>

21 United States Census Bureau. 2018. "DP03: Selected Economic Characteristics." [database file]. <https://data.census.gov/cedsci/>.

22 United States Census Bureau. 2018. "S0802: Means of Transportation to Work by Selected Characteristics." [database file]. <https://data.census.gov/cedsci/>.

23 United States Census Bureau. 2018. "DP04: Selected Housing Characteristics." [database file]. <https://data.census.gov/cedsci/>.

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

### Future Development Trends

Over the last five years, one building was demolished and a private residence garage was built near the levee with approval from the Army Corps of Engineers. According to the 2018 American Community Survey estimates, Indianola's population is growing. The local planning team attributes this to cheap housing options. In the next five years, no housing developments or businesses are planned.

### Parcel Improvements and Valuation

The planning team acquired GIS parcel data from the County Assessor to analyze the location, number, and value of property improvements (e.g. buildings, garages, sheds etc.) at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following tables.

**Table IDL.2: Parcel Improvements and Value in the 1% Annual Flood Risk Area**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
280	\$18,859,417	8	\$685,377	2.9%

Source: County Assessor, 2020

**Table IDL.3: Parcel Improvements and Value in the 0.2% Annual Flood Risk Area**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
280	\$18,859,417	1	\$112,603	0.4%

Source: County Assessor, 2020

## Community Lifelines

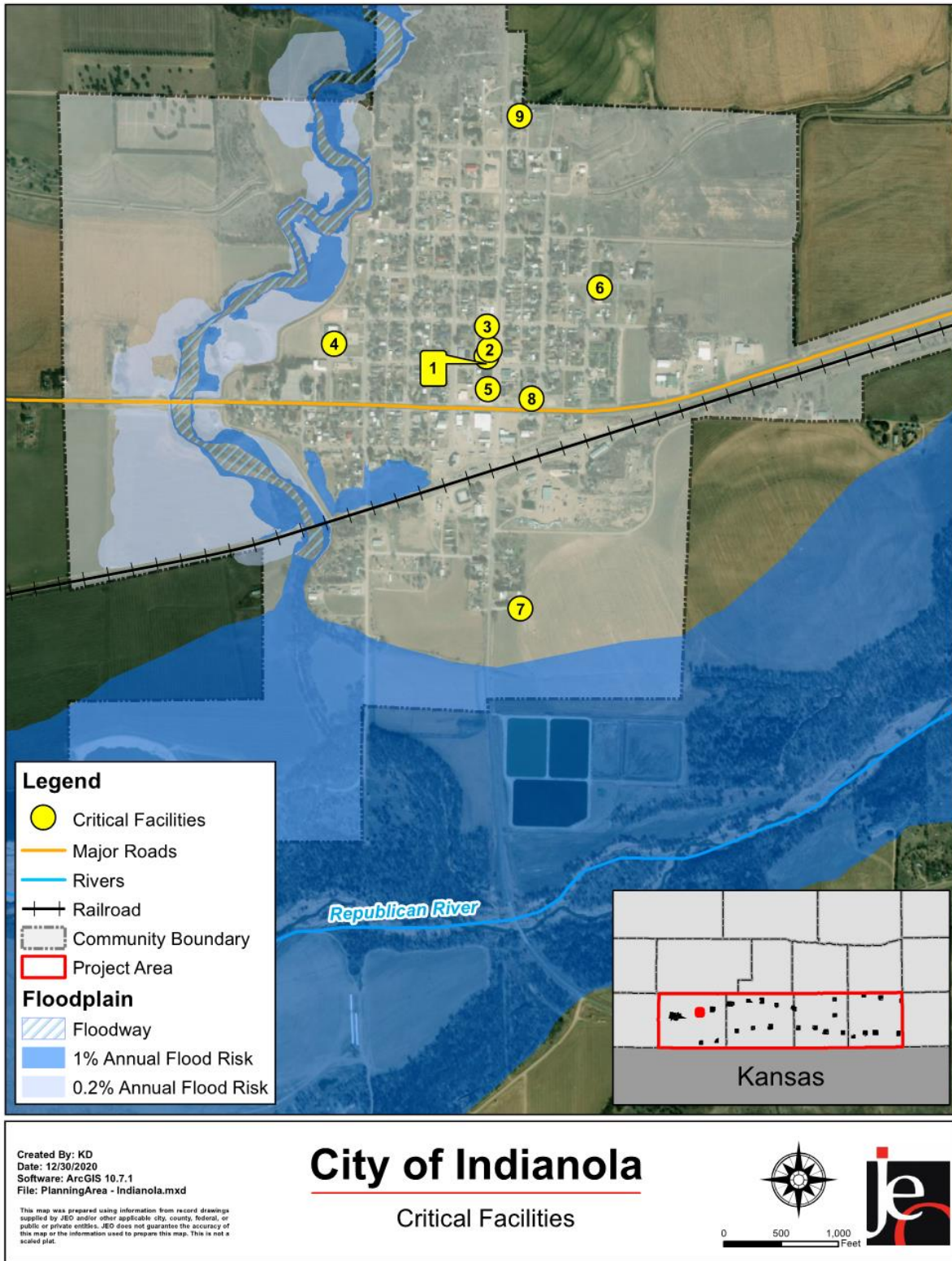
### Critical Facilities

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

**Table IDL.4: Critical Facilities**

CF Number	Name	Community Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	City Office	N	N	N
2	City Shop	N	N	N
3	Community Building	Y	N	N
4	Elementary School	N	Y	N
5	Fire Station	N	N	N
6	Lift Station #1	N	Y	N
7	Lift Station #2	N	N	N
8	McCook Community Hospital	N	Y	N
9	Water Tower	N	N	N

Figure IDL.3: Critical Facilities



## Historical Occurrences

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

## Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the community. The planning team prioritized the selected hazards based on historical hazard occurrences, potential impacts, and the community's capabilities. For more information regarding regional hazards, please see *Section Four: Risk Assessment*.

### Dam Failure

Although not identified as a top hazard of concern by the local planning team, the community is located directly downstream from the Red Willow Dam. Dam failure has not affected Indianola in the past but, if the Red Willow Dam were to fail, it would likely flood locations within the special flood hazard area. Figure IDL.4 shows the locations of nearby dams.

### Drought

Drought was identified as a significant concern by the local planning team. The Indianola economy depends on the surrounding agricultural producers. A drought affecting these agricultural producers would have significant economic impacts on Indianola. The water supply has been identified as sufficient for municipal needs. Indianola does not have a drought plan and is unable to implement water restrictions during times of drought.

### Flooding

There have been no reported flooding events in the City of Indianola according to the NCEI. The local planning team also indicated that city was not impacted by the March 2019 flood event. However, there is floodplain and floodway in the city. It is located in the southern and eastern portions of the community. Indianola is a member of the NFIP and there are no repetitive loss properties as of November 2019.

### Severe Thunderstorms

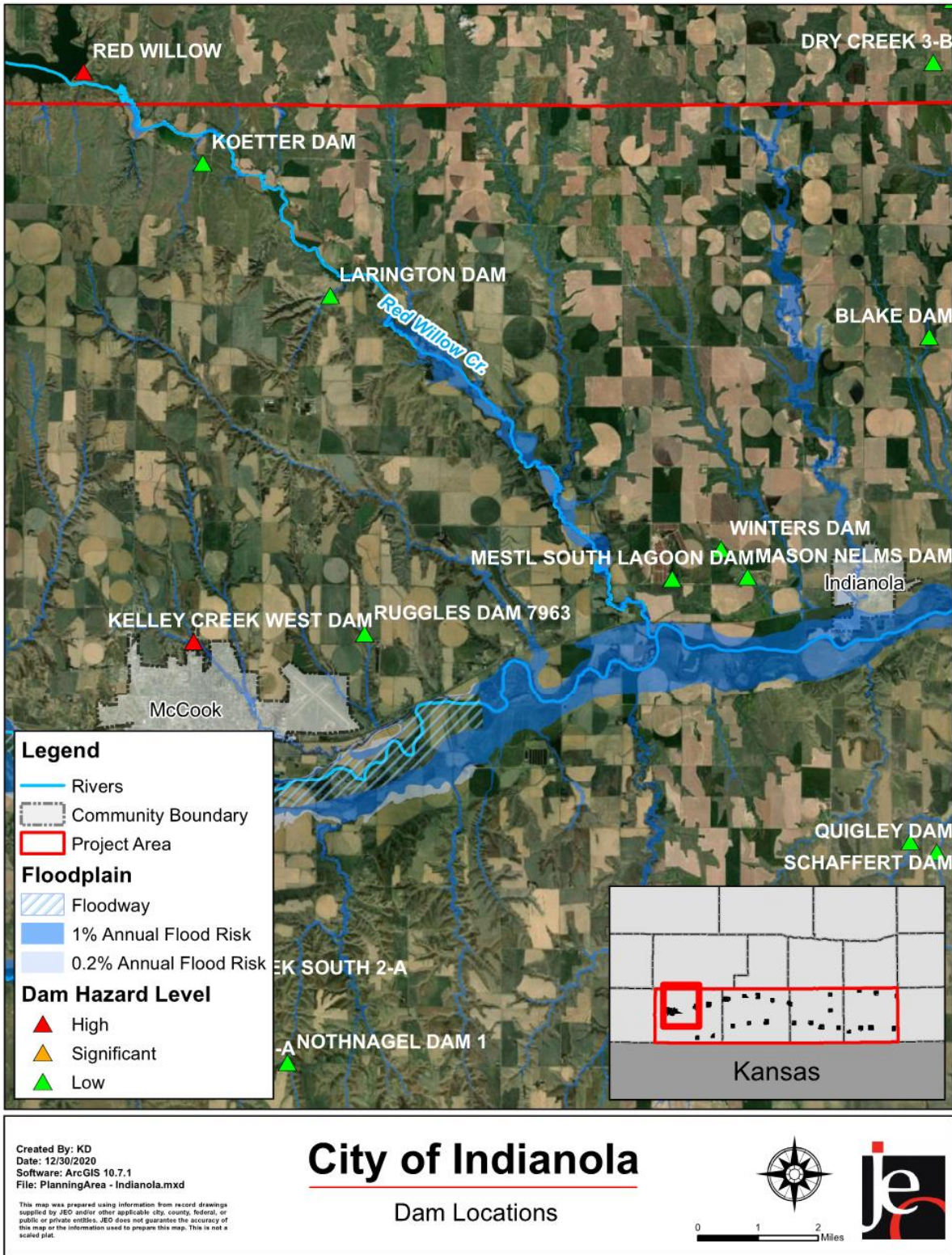
The NCEI reported 20 thunderstorm events for Indianola that have caused \$14,100 in damages. In June 2018, a severe thunderstorm wind event caused \$2,000 in damages, and damaged a camper trailer and trees. Severe thunderstorms are a regular part of the climate in Indianola and the rest of the planning area. Thunderstorms occur several times a year, even if they have not been reported. Critical municipal records are protected with surge protectors on electronic devices. Many of the critical facilities have hail-resistant materials and are all insured. Hazardous trees are not a concern for the local planning team as many have been trimmed or removed.

### Severe Winter Storms

There are no designated snow routes, but the city clears the streets, and especially works to keep Main Street clear. Snow removal resources have been determined sufficient by the local planning team. In the event of power loss, one of the lift stations has a backup generator and the elementary school also has a backup generator. The elementary school can be used as a sheltering location if needed.



Figure IDL.4: Dam Locations



### **Levee Failure**

Indianola is protected with a 1.2-mile levee on the west side of the community. According to the local planning team, the levee is FEMA accredited and provides 100-year flood protection. The levee is owned by the Army Corps of Engineers. The levee protected area contains the majority of structures within the community. According to the Nation Levee Database, there are 436 people, 320 structures, and \$143 million of property value protected by the levee. If the levee were to fail, structures such as homes, and infrastructure such as streets and sewers would be damaged from flooding. Figure IDL.5 shows the location of the levee and the leveed area.

### **Tornadoes and High Winds**

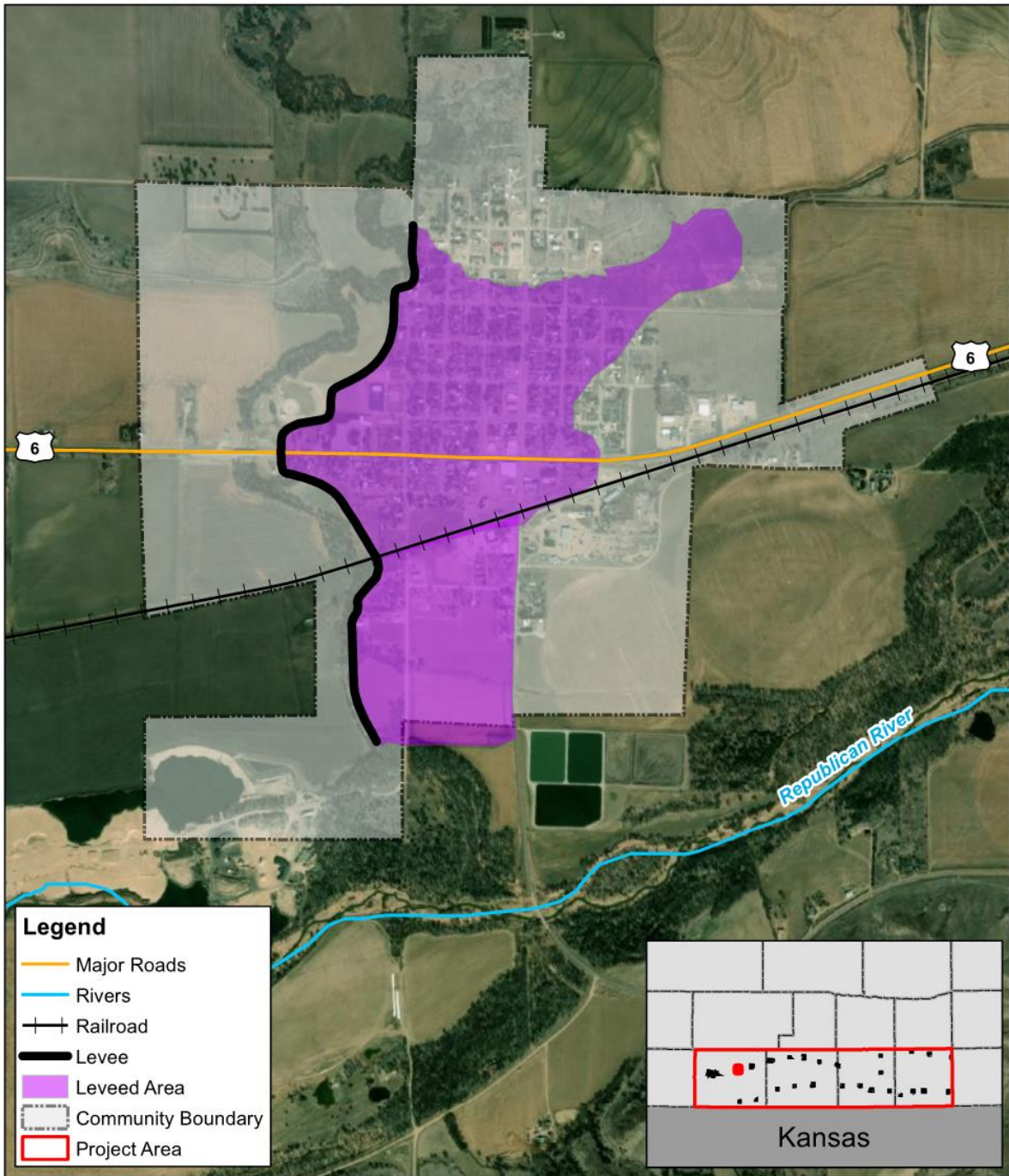
Tornadoes have the ability to cause significant damage and loss of life. In 1996, an F2 tornado in Indianola caused \$750,000 in property damages. At the time, a power failure prevented the warning siren from being activated in Indianola. There is a data backup system for municipal records. Storm shelter is located at 120 N. 4th Street. Mutual Aid Agreements are in place with neighboring communities.

## **Governance**

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. The City of Indianola is governed by a city council; other governmental offices and departments are listed below.

- Clerk
- Utilities
- Fire Department
- Ambulance
- Planning Commission

IDL.5: Levee and Levee Protected Area

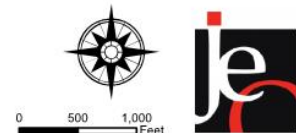


Created By: MB  
Date: 11/17/2020  
Software: ArcGIS 10.7.1  
File: PlanningArea - Indianola.mxd

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

# City of Indianola

## Levee and Leveed Area



## Capability Assessment

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

**Table IDL.5: Capability Assessment**

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

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

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

### Plan Integration

The City of Indianola has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan. In addition, the city has a 2012 Capital Improvements Plan that has not been integrated with the hazard mitigation plan. No other planning documents were identified during this process. The city will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

#### Building Code (2012)

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

#### Comprehensive Plan (2017)

The comprehensive plan is designed to guide the future actions of the city. It contains goals aimed at safe growth, directs development away from the floodplain, directs development away from chemical storage sites, encourage infill development, directs housing away from major transportation routes, and encourages preservation of open space. This plan will be updated in 2027.

#### Floodplain Ordinance (2011), Zoning Ordinance (2012), and Subdivision Regulations (2017)

The city’s floodplain regulations, zoning ordinance, and subdivision regulations outline where and how development should occur in the future. These documents contain floodplain maps, prohibit development within the floodplain, discourage development near chemical storage site, include

well setback requirements, discourage development along major transportation routes, and include the ability to implement water restrictions.

### **Red Willow County Local Emergency Operations Plan (2016)**

The City of Indianola is an annex in the Red Willow 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.

### **Water System Emergency Response Plan (2018)**

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

### **Wellhead Protection Plan (2012)**

The purpose of wellhead protection plans is to protect the public drinking water supply wells from contamination. It includes identifying potential sources of groundwater contamination in the area and managing the potential contaminant sources.

## **Mitigation Strategy**

The City of Indianola has limited fiscal capabilities and administrative support available for implementing mitigation projects. The city will continue to benefit from strong partnerships, such as with the county and MRNRD, and will need to explore outside funding assistance for project implementation. The city has experience applying for grants and has been awarded some in the past.

### **Completed Mitigation Actions**

<b>Mitigation Action</b>	<b>Backup and Emergency Generators</b>
<b>Description</b>	Provide a portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations, and other critical facilities.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Status</b>	Completed. A generator has been installed at the lift station.

### **Continued Mitigation Actions**

<b>Mitigation Action</b>	<b>Alert/Warning Sirens</b>
<b>Description</b>	Perform an evaluation of existing alert sirens in order to determine sirens which should be replaced or the placement of new sirens. The city installed a new siren in 2008. Identified need to modify sirens to remote activated.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$15,000+
<b>Funding</b>	General Budget
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Fire Department, Utilities Supervisor
<b>Status</b>	Not Started.

Mitigation Action	Civil Service Improvements
<b>Description</b>	Improve emergency rescue and response equipment and facilities by providing additional or updating existing emergency response equipment. This can include fire trucks, ATVs, water tanks/trucks, snow removal equipment, etc. This would also include developing backup systems for emergency vehicles and identifying and training additional personnel for emergency response.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	Varies
<b>Funding</b>	General Fund, Rural Fire District Funds
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Utilities Supervisor, City Council, Fire Department
<b>Status</b>	Not Started.
Mitigation Action	Drainage Study/Stormwater Master Plan
<b>Description</b>	Drainage studies can be conducted to identify and prioritize improvements to address site specific localized flooding/drainage problems. Stormwater master plans can be conducted to perform a community wide stormwater evaluation, identifying multiple problem areas, and potentially multiple drainage improvements for each.
<b>Hazard(s) Addressed</b>	Flooding
<b>Estimated Cost</b>	\$10,000 - \$100,000+
<b>Funding</b>	General Fund, CDBG
<b>Timeline</b>	5+ Years
<b>Priority</b>	Low
<b>Lead Agency</b>	Utilities Supervisor, City Council
<b>Status</b>	Not Started.
Mitigation Action	Public Awareness/Education
<b>Description</b>	Activities such as outreach projects, distribution of maps and environmental education increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards. In addition, educate citizens on erosion control and water conservation methods. Educate residents on response and rescue plans for all hazard types.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$500+
<b>Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	City Council, Utilities Supervisor, County Emergency Manager, Fire Department
<b>Status</b>	Not Started.

Mitigation Action	Stormwater System and Drainage Improvements
Description	Stormwater system improvements may include pipe upsizing and additional inlets. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other stormwater system improvements. The city has identified Main Street as needing improvement.
Hazard(s) Addressed	Flooding
Estimated Cost	\$10,000 - \$100,000+
Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	City Council, Utilities Supervisor
Status	Not Started.

Mitigation Action	Stream Bank Stabilization/Grade Control Structure/Channel Improvement
Description	Bank degradation is occurring along many rivers and creeks. Stabilization improvements including rock rip rap, vegetative cover, j-hooks, boulder vanes, etc. can be implemented to reestablish the channel banks. Rip rap was installed in 2015.
Hazard(s) Addressed	Flooding
Estimated Cost	\$10,000 - \$100,000+
Funding	General Fund, Middle Republican NRD Funds
Timeline	5+ Years
Priority	High
Lead Agency	Utilities Supervisor
Status	Not Started.

### Removed Mitigation Actions

Mitigation Action	Maintain Good Standing in the NFIP
Hazard(s) Addressed	Flooding
Reason for Removal	While the city will continue to maintain good standing in the NFIP by enforcing floodplain regulations, this project is considered an ongoing action.



**Community Profile**

# **City of McCook**

**Quad Counties  
Multi-Jurisdictional Hazard Mitigation Plan Update**

**2021**

## Local Planning Team

**Table MCK.1: McCook Local Planning Team**

Name	Title	Jurisdiction
Nate Schneider	City Manager / Floodplain Administrator	City of McCook

## Location and Geography

The City of McCook is in northwestern Red Willow County and covers an area of 5.4 square miles. McCook is the county seat for Red Willow County. The topographic region McCook lies in is that of the dissected plains. This hilly land has moderate to steep slopes and sharp ridge crests. They are remnants of the old plain eroded by water and wind. The Republican River flows to the south of the city.

## Transportation

McCook’s major transportation corridors include US Highway 6 and 83. Highway 83 connects McCook to I-80 and I-70. Highway 6 runs east to west through the community. The most traveled route is Highway 6 with an average of 13,185 vehicles daily, 585 of which are trucks.<sup>24</sup> The city has one Burlington Northern Santa Fe Railway/Amtrak line traveling east to west on the southern portion of the community. There is one airport located near the city, but no recent accidents at the airport. Highway 6 and Highway 83 are the transportation routes of most concern due to chemical transportation and traffic. Several critical facilities are located near major transportation routes. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

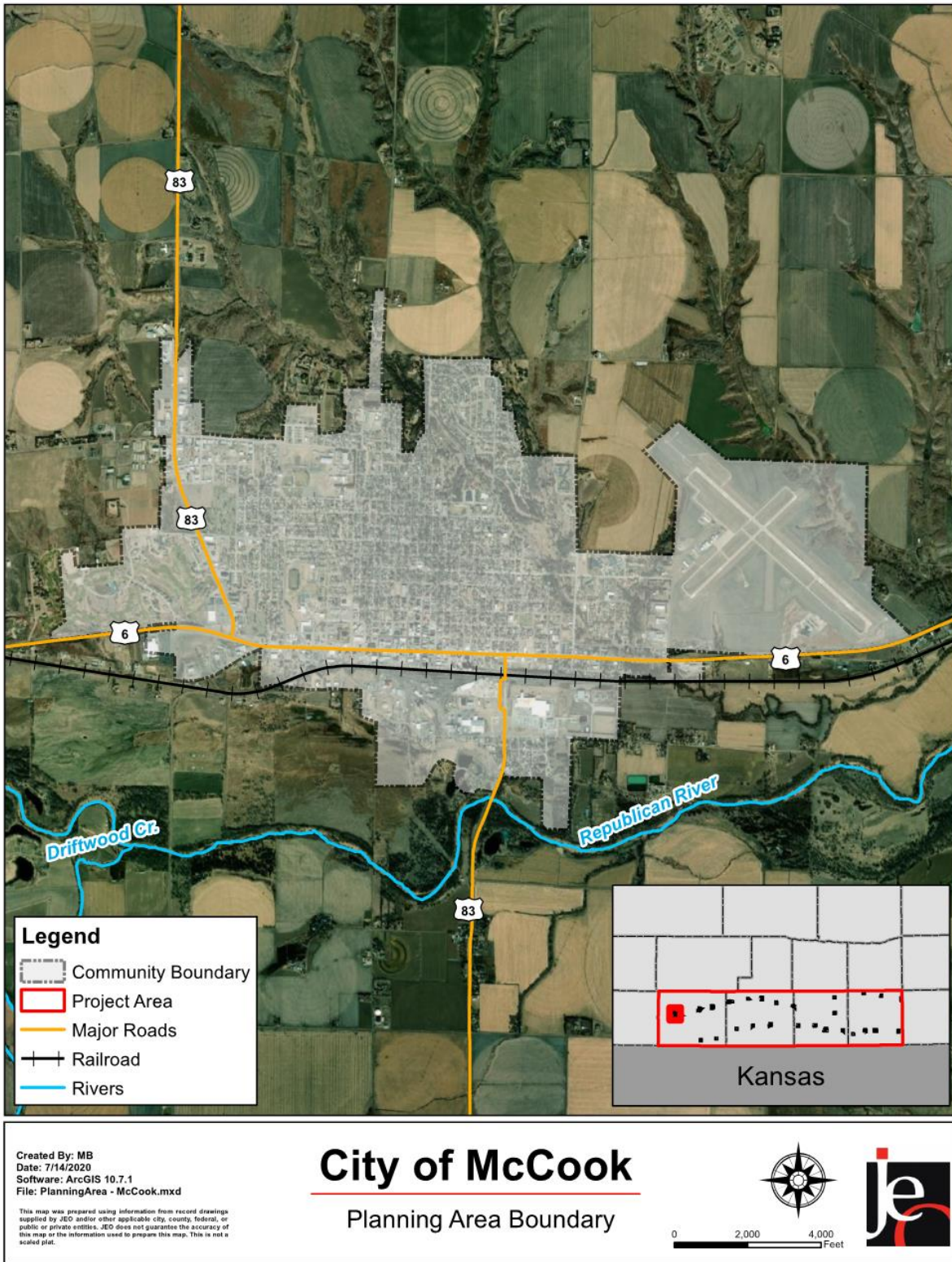
## Demographics

The City of McCook’s population has been declining since 1980 to around 7,580 people in 2018. A declining population can lead to more unoccupied and unmaintained housing that is then at risk to high winds and other hazards. Furthermore, with fewer residents, there is decreasing tax revenue for the community, which could make implementation of mitigation projects more fiscally challenging. McCook’s population accounted for 70.1% of Red Willow County’s population in 2018.<sup>25</sup>

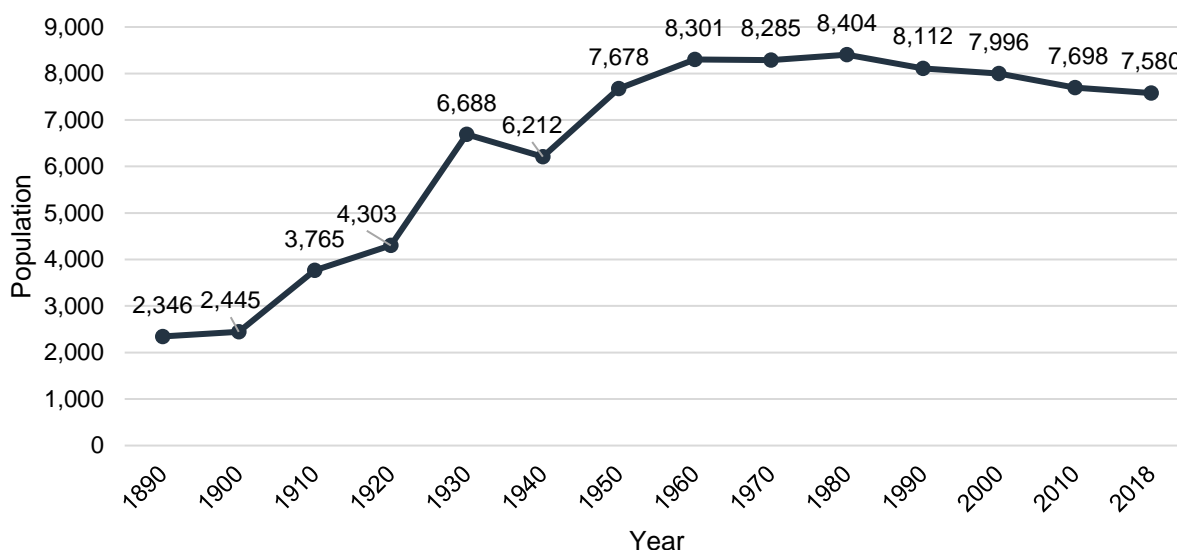
24 Nebraska Department of Roads. 2018. “Interactive Statewide Traffic Counts Map.” [map]. <https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.

25 United States Census Bureau. 2018. “DP05: Demographic and Housing Estimates [database file].” <https://data.census.gov/cedsci/>.

Figure MCK.1: City of McCook



**Figure MCK.2: Population 1890 - 2018**



Source: U.S. Census Bureau

The young, elderly, minority, and low-income populations may be more vulnerable to certain hazards than other groups. In comparison to the county, McCook's population was:

- **Younger.** The median age of McCook was 37.4 years old in 2018, compared with Red Willow County's median of 41.1 years. McCook's population grew younger since 2010, when the median age was 38.6 years old.<sup>25</sup>
- **Equally ethnically diverse.** Since 2010, McCook became less ethnically diverse. In 2010, 4.2% of McCook's population was non-white. By 2018, about 3.6% was non-white. During that time, the non-white population in the county declined from 4% in 2010 to 3.8% in 2018.<sup>25</sup>
- **Less likely to be below the federal poverty line.** The poverty rate in the City of McCook (7.8% of people living below the federal poverty line) was lower than the county's poverty rate (9.7%) in 2018.<sup>26</sup>

## Employment and Economics

In comparison to Red Willow County, McCook's economy had:

- **Similar mix of industries.** McCook's major employment sectors, accounting for 10% or more of employment each, were manufacturing, retail trade and education.<sup>26</sup>
- **Lower median household income.** McCook's median household income in 2018 (\$44,473) was about \$12,400 lower than the county (\$56,859).<sup>26</sup>
- **Fewer long-distance commuters.** About 80.1% of workers in McCook commuted for fewer than 15 minutes, compared with about 69.2% of workers in Red Willow County. About 10.1% of workers in McCook commuted 30 minutes or more to work, compared to about 12.2% of county workers.<sup>27</sup>

<sup>26</sup> United States Census Bureau. 2018. "DP03: Selected Economic Characteristics." [database file]. <https://data.census.gov/cedsci/>.

<sup>27</sup> United States Census Bureau. 2018. "S0802: Means of Transportation to Work by Selected Characteristics." [database file]. <https://data.census.gov/cedsci/>.

## Major Employers

Major employers in McCook include Valmont Industries, Parker Hannifin, McCook Community Schools, McCook Community Hospital, and Mid-Plains Community College. The local planning team indicated that 38.7% of residents commute to other communities for employment. The top two locations are North Platte and Kearney.

## Housing

In comparison to Red Willow County, McCook's housing stock was:

- **Older.** McCook had a larger share of housing built prior to 1970 than the county (68.6% compared to 66.2%).<sup>28</sup>
- **Less mobile and manufactured housing.** The City of McCook had a smaller share of mobile and manufactured housing (4.5%) compared to the county (5.6%).<sup>28</sup>
- **More renter-occupied.** About 30.3% of occupied housing units in McCook were renter-occupied compared with 26.5% of occupied housing in Red Willow County.<sup>28</sup>
- **More occupied.** Approximately 14.9% of McCook's housing units were vacant compared to 16.1% of units in Red Willow County.<sup>28</sup>

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

## Future Development Trends

Over the past few years, with TIF assistance three housing projects have been established: North Pointe, Clary Village, and Quillan Courts. Six homes were built in North Pointe and 28 homes were built between Clary Village and Quillan Courts. All three housing projects included stormwater detention ponds. TIF funding has also been used to bring in new businesses including Next Coenras, Holiday Inn, and the Cobblestone Inn. McCook has also made infrastructure improvements to accommodate these projects. None of the new structures were developed in the floodplain. McCook's problem resolution team has worked to decrease the number of nuisance properties in the community. According to the 2018 American Community Survey estimates, McCook's population is declining. The local planning team attribute the decline to a reduction in the number of family farms, the increase in the number of corporate and large farms, and the inability to retain young adults ages 19 to 30. In the next five years, additional ground in the businesses park will need to be added to accommodate new light and heavy industries. The city has also updated its Blight and Substandard Study to include land that would be appropriate for future residential and business expansions.

<sup>28</sup> United States Census Bureau. 2018. "DP04: Selected Housing Characteristics." [database file]. <https://data.census.gov/cedsci/>.

## Parcel Improvements and Valuation

The planning team acquired GIS parcel data from the County Assessor to analyze the location, number, and value of property improvements (e.g. buildings, garages, sheds etc.) at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following tables.

**Table MCK.2: Parcel Improvements and Value in the 1% Annual Flood Risk Area**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
3,306	\$377,343,258	78	\$8,844,953	2.4%

Source: County Assessor, 2020

**Table MCK.3: Parcel Improvements and Value in the 0.2% Annual Flood Risk Area**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
3,306	\$377,343,258	22	\$982,302	0.7%

Source: County Assessor, 2020

## Community Lifelines

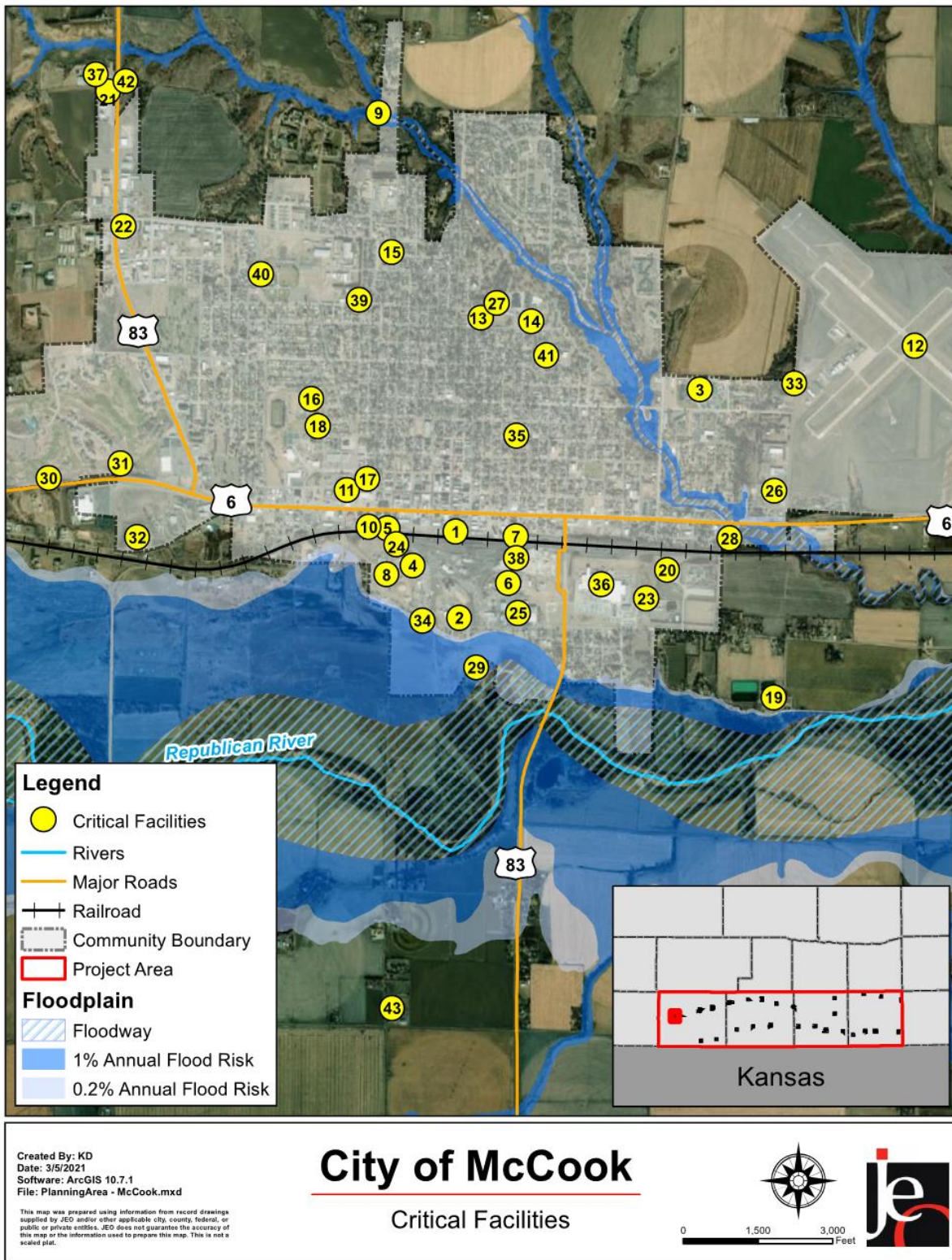
### Critical Facilities

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

Table MCK.4: Critical Facilities

CF Number	Name	Community Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	BNSF Depot	N	N	N
2	City Maintenance Complex	N	N	N
3	Community Hospital	N	Y	N
4	Nutrien Ag Solutions	N	N	N
5	Frenchman Valley Feedmill	N	N	N
6	Frenchman Valley Fertilizer	N	N	N
7	Frenchman Valley Grain Elevator	N	N	N
8	Household Hazardous Waste Facility	N	N	N
9	Kelly Creek Flood Control Dam	N	N	Y (Floodway)
10	Malleck Oil/Propane Storage	N	N	N
11	McCook Auditorium	N	Y	N
12	McCook Ben Nelson Regional Airport	N	N	N
13	McCook Community College Brooks Hall Dorm	N	N	N
14	McCook Community College Event Center	N	Y	N
15	McCook Elementary School	Y	N	N
16	McCook Jr. High School	Y	N	N
17	McCook Municipal Building	N	Y	N
18	McCook Sr. High School	Y	N	N
19	McCook Wastewater Treatment	N	Y	Y (1%)
20	Next Generation	N	N	N
21	NPPD Sub Station and Office Building	N	N	N
22	NPPD Sub Station	N	N	N
23	NPPD Sub Station	N	N	N
24	NPPD Sub Station	N	N	N
25	Parker Hannifin	N	Y	N
26	Red Willow Aviation / Fertilizer	N	N	N
27	Sewer Lift Station	N	Y	N
28	Sewer Lift Station	N	Y	N
29	Sewer Lift Station	N	Y	Y (1%)
30	Sewer Lift Station	N	Y	N
31	Sewer Lift Station	N	Y	N
32	Solid Waste Transfer Station	N	N	N
33	Black Hills Sub Station	N	N	N
34	Black Hills Sub Station	N	N	Y (0.2%)
35	St. Patrick School	N	N	N
36	Valmont Industries	N	Y	N
37	Van Diest North	N	N	N
38	Van Diest South	N	N	N
39	Water Booster Pump Station	N	Y	N
40	Water Tower West	N	Y	N
41	Water Tower East	N	Y	N
42	Work Ethic Camp	N	Y	N
43	McCook Drinking Water Plant	N	Y	N

Figure MCK.3: Critical Facilities





## Historical Occurrences

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

## Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the community. The planning team prioritized the selected hazards based on historical hazard occurrences, potential impacts, and the community's capabilities. For more information regarding regional hazards, please see *Section Four: Risk Assessment*. The City of McCook was part of a group that included the High Plains Region Climate Center, the Nebraska State Climate Office, UNL Public Policy Center, UNL Community and Regional Planning Program, and the City of Lincoln that participated in a workshop to study climate data and implement the results in the community.

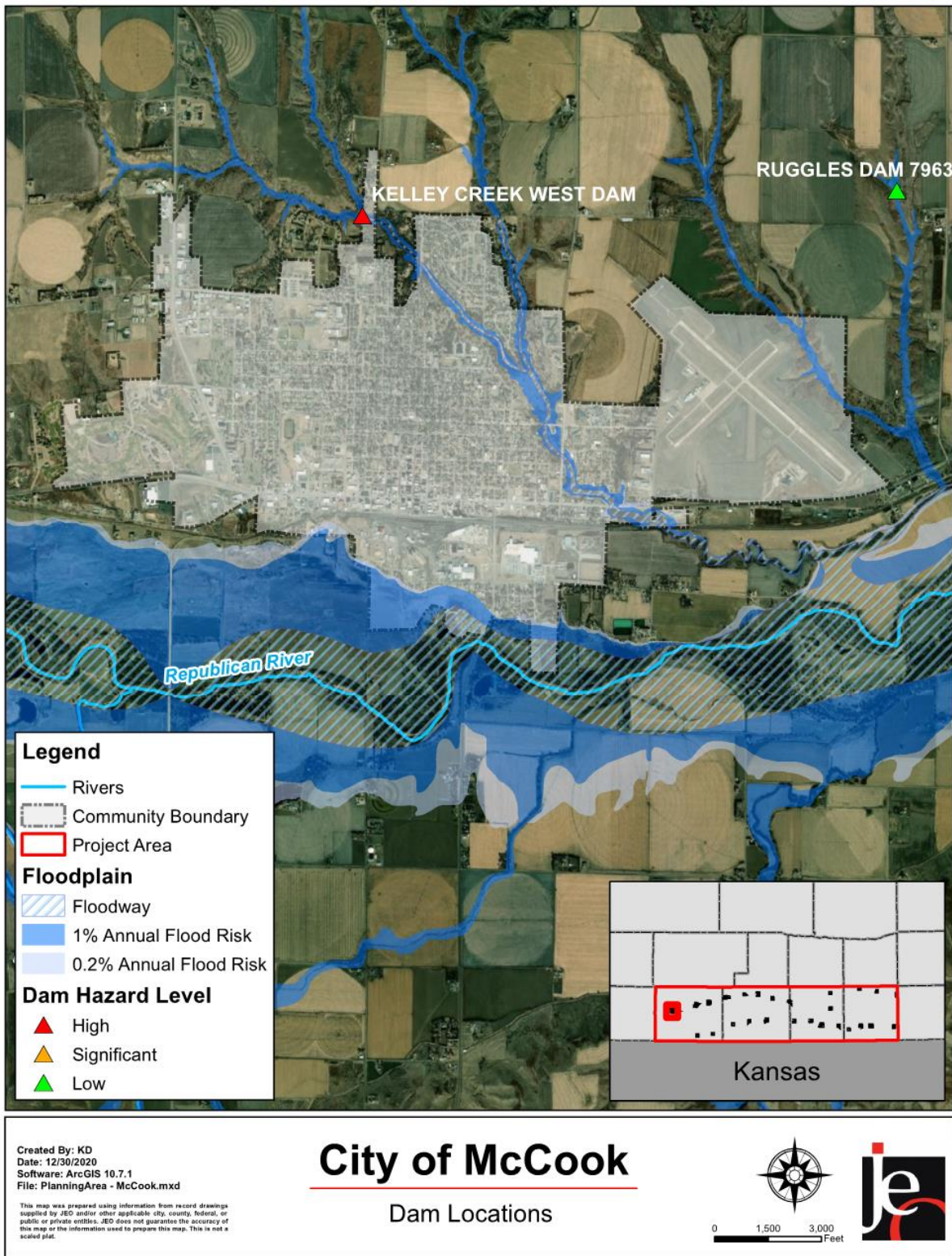
### Chemical Spills

The PHMSA reported 19 chemical spills in McCook, causing a total of \$8,109 in damages. The largest spill was 3,980 LGA of crude oil in 1985, after a rollover accident. The local planning team also identified two other spills that have occurred locally. In 2013, a deliberate bleach and ammonia spill occurred at Wal-Mart. An investigation in 1995 revealed that there was a diesel release at the BNSF facility that occurred over a 40- to 50-year period. Remedial efforts using extraction wells and monitoring were implemented after the investigation. The routes of most concern for the city are Highway 6, Highway 83, and the rail line that passes through McCook. There are numerous chemicals that pass through the city on the highways and railroad. Some of the chemicals include sulfuric acid, ammonium nitrates, ethanol, anhydrous ammonia, diesel, gasoline, and other combustible and corrosive material. The McCook Municipal Center is located within 500 feet of the railroad and 400 feet of Highway 6. The WEC is located just off highway 83 on the north side of the city. If a spill were to occur the McCook Fire Department, Police Department, and Red Willow County Sheriff/Emergency Manager would respond to the incident. The city has had community-wide tabletop exercises with a variety of participants for chemical spills.

### Dam Failure

Although not identified as a top hazard of concern by the local planning team, there is a high hazard dam located near the community. The Kelley Creek West Dam is located on the northern edge of the city. This dam has not failed in the past, but if it were to fail, it would likely cause flooding within the special flood hazard areas. Figure MCK.4 shows the locations of nearby dams.

Figure MCK.4: Dam Locations



### **Extreme Heat**

During 2013, the city reported temperatures over 100°F on several occasions. The city has not reported any damages due to heat. McCook has concerns with extreme heat causing stresses on infrastructure. Almost half of the critical facilities in the city have backup generators. If the city were to lose power due to heat, most critical facilities would still be able to function. During an extreme heat event, the city will set up cooling centers as needed. The last time the city used cooling centers was in 2013. There are numerous organizations that helped assist vulnerable populations during these events including the hospital, Southwest Nebraska Public Health, Mid-Nebraska Community Services, and the senior center.

The community is also concerned with dry conditions during an extreme heat event leading to an increase in wildfires. In 2018, a wildfire occurred north of McCook. Residents in the northern portion of the community were evacuated. Multiple jurisdictions responded to put out the fire and only one residential property was destroyed. Dry conditions have also required the City of McCook to implement water restrictions and have caused economic issues due to agricultural struggles. The city has held tabletop exercises regarding fire-related scenarios in the past.

### **Flooding**

Although not identified as a top hazard of concern by the local planning team, there is floodplain located in the city. It comes primarily from the Republican River and its tributaries on the southern border of the community. NCEI data since 1996 shows McCook as experienced 11 flooding events resulting in \$225,000 in damages. The local planning team said the city was not impacted by the March 2019 flood event. The city is a member of and continues to maintain good standing with the NFIP.

### **Severe Thunderstorms**

The city dealt with significant thunderstorms in 2011 and 2014 with the majority of the damage from those storms caused by hail. The local planning team indicated that these storms caused significant damages to roofs, windows, and crops. Past hail events have caused damages to critical facilities. The city does protect electronic devices with surge protectors. Half of the critical facilities have backup generators, and all of the critical facilities have weather radios. Some of the critical facilities have been retrofitted with hail-resistant building material and the municipal buildings are insured through the city. The city will remove hazardous trees as necessary and has a tree board to help with the replacement of trees. The city has participated in tornado/severe storm tabletop exercises.

### **Severe Winter Storms**

Severe winter storms are an annual occurrence in the city and across the planning area. One person was injured in December 2006 when her vehicle skidded on icy roads just south of McCook and her vehicle rolled. There were also two injuries in a January 2011 accident that resulted in two minor injuries during a freezing rain event. The city also reported powerlines were damaged in a 2006 winter storm. To help with snow removal the city has designated snow routes that get cleared before other streets. The city will also use snow fences when needed along the major transportation routes that are open air such as Highway 6 and Highway 83. The city is responsible for clearing its streets and is able to handle typical events. However, the city had to hire outside help during a snow event in 2016. Snow removal equipment has been updated over the last two or three budget cycles to help with snow removal efforts.

**Tornadoes and High Winds**

NCEI reported four tornadoes for the city that did not cause any damage. All four of the storms were rated as F/EF0 on the Fujita Scale. An additional tornado was reported by the local planning team in May of 2019. The event occurred five miles north of the community and caused damage to agricultural property and associated structures. The city does have a backup system for municipal records. There are no safe rooms in the city, but eight buildings have been designated by the city and the county sheriff as protective shelters. These locations include the three public schools, the First Baptist Church, St. Patrick’s Catholic Church, the United Methodist Church, the YMCA, and the Southwest Public Health Department. The city also offers emergency alerts to residents and sirens have been upgraded so that they can be controlled remotely. The McCook Police Department handles storm watching and notification. Community-wide tabletop exercises have been held to practice response during tornado events.

**Governance**

A community’s governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. The City of McCook is governed by a city council; other governmental offices and departments are listed below.

- Airport
- Building and Zoning
- City and Attorney
- City Clerk/Treasurer
- City Manager
- Fire Department
- Parks
- Police Department
- Streets
- Utilities
- Public Works
- Senior Center

**Capability Assessment**

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

**Table MCK.5: Capability Assessment**

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

Survey Components/Subcomponents		Yes/No
	Floodplain Ordinance	Yes
	Building Codes	Yes
	National Flood Insurance Program	Yes
	Community Rating System	No
	Other (if any)	Wellhead Protection Plan
<b>Administrative &amp; Technical Capability</b>	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	Yes
	Chief Building Official	Yes
	Civil Engineering	Yes
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	Yes
	Mutual Aid Agreement	Yes
	Other (if any)	-
<b>Fiscal Capability</b>	Capital Improvement Plan/ 1- & 6-Year Plan	Yes
	Applied for grants in the past	Yes
	Awarded a grant in the past	No
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	Yes
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	-
<b>Education &amp; Outreach Capability</b>	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	Yes
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
	Natural disaster or safety related school programs	Yes
	StormReady Certification	Yes (Community Hospital)
	Firewise Communities Certification	No
	Tree City USA	Yes
	Other (if any)	Social Media Updates

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

## Plan Integration

The City of McCook has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan. In addition, the city annually reviews capital projects although there is no formal document for this effort. No other planning documents were identified during this process. The city will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

### Building Codes (2020)

The building code sets standards for constructed buildings and structures. The city has adopted the 2018 International Building Codes (IBC). Amendments to the IBC include fee schedules, permit requirements, footing designs, and connections to lawn irrigation systems.

### Comprehensive Plan (2013)

The comprehensive plan is designed to guide the future actions of the city. It contains goals aimed at safe growth, directs development away from the floodplain, encourages infill development, directs development away from chemical storage sites, and directs housing and vulnerable populations away from major transportation routes. In addition, severe weather, tornado awareness, winter storms, floods, and chemical spills are discussed. This plan will be updated in 2023.

### Floodplain Ordinance (2013), Zoning Ordinance (2016), and Subdivision Regulations (2014)

The city's floodplain regulations, zoning ordinance, and subdivision regulations outline where and how development should occur in the future. These documents prohibit development in the floodplain, discourage development near chemical storage sites, discourage development along major transportation routes, and include the ability to implement water restrictions. All three documents will be reviewed and updated in 2023.

### Red Willow Local Emergency Operations Plan (2016)

The City of McCook is an annex in the Red Willow 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.

## Mitigation Strategy

McCook's municipal funds are sufficient to pursue small capital projects but grant funds would be needed to complete larger projects. Funds have increased over recent years but so have the city's expenses. A large portion of funds are already dedicated to storm drainage projects. The city will likely need grant assistance to help pay for many of the projects listed below. The city has experience applying for FEMA grants but has not been awarded any.

**New Mitigation Actions**

Mitigation Action	Emergency Communications
<b>Description</b>	Improve emergency rescue, law enforcement, fire and emergency services, city utility, and public works emergency communications by upgrading the radio system console to allow for the use of computer aided dispatch. This would also include upgrading all mobile radios in vehicles and all handheld portable radios to allow for enhanced and improved communications.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$400,000
<b>Funding</b>	General Fund
<b>Timeline</b>	2-5 Years
<b>Priority</b>	High
<b>Lead Agency</b>	Police Department, Fire Department, Sheriff's Department, Public Works
<b>Status</b>	Planning Stage. The police department and fire department have established a committee to review and make recommendations for the logistics of the system.

**Continued Mitigation Actions**

Mitigation Action	Alert/Warning Sirens
<b>Description</b>	Perform an evaluation of existing alert sirens in order to determine sirens which should be replaced or the placement of new sirens. Identified need to modify sirens to remote activated.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Thunderstorms
<b>Estimated Cost</b>	\$15,000+
<b>Funding</b>	Sales Tax, General Fund
<b>Timeline</b>	2-5 Years
<b>Priority</b>	High
<b>Lead Agency</b>	City Council, County Emergency Manager
<b>Status</b>	In Progress. Sirens have been updated to a remote programming system.

Mitigation Action	Backup Municipal Records
<b>Description</b>	Develop system to backup critical municipal records. Develop a GIS mapping system.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$100 for external hard drive; \$15,000+ for GIS mapping system
<b>Funding</b>	General Fund
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Fire Department, Police Department, Public Works
<b>Status</b>	In Progress. GIS mapping of water lines, sewer lines, and fire hydrants is currently underway. The city will add additional layers in the future.

Mitigation Action	Civil Service Improvements
<b>Description</b>	Improve emergency rescue and response equipment and facilities by providing additional or updating existing emergency response equipment. This can include fire trucks, ATVs, water tanks/trucks, snow removal equipment, etc. This would also include developing backup systems for emergency vehicles and identifying and training additional personnel for emergency response.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	Varies
<b>Funding</b>	Sales Tax, General Fund
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Fire Department, Police Department, Public Works
<b>Status</b>	In Progress. The city continuously reviews and updates capital stock to meet demand.

Mitigation Action	Drainage Study/Stormwater Master Plan
<b>Description</b>	Drainage studies can be conducted to identify and prioritize improvements to address site specific localized flooding/drainage problems. Stormwater master plans can be conducted to perform a community wide stormwater evaluation, identifying multiple problem areas, and potentially multiple drainage improvements for each.
<b>Hazard(s) Addressed</b>	Flooding
<b>Estimated Cost</b>	\$10,000 - \$100,000+
<b>Funding</b>	CDBG, General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Public Works
<b>Status</b>	Not Started.

Mitigation Action	Hazardous Tree Removal
<b>Description</b>	Identify and remove hazardous trees and limbs.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Thunderstorms, Severe Winter Storms
<b>Estimated Cost</b>	\$20,000
<b>Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	High
<b>Lead Agency</b>	Public Works Department
<b>Status</b>	In Progress. The city monitors and takes steps to remove potential issues when identified.



<b>Mitigation Action</b>	<b>Power Service, Electrical, and Water Distribution Lines</b>
<b>Description</b>	McCook can work with McCook Public Power and the city utilities department to identify vulnerable transmission and distribution lines and plan to bury lines underground or retrofits existing structures to be less vulnerable to storm events. Electrical Utilities shall be required to use underground construction methods where possible for future installation of power lines.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$50,000 - \$70,000 per mile
<b>Funding</b>	Water Fund, Sewer Fund, Private Investments
<b>Timeline</b>	5+ Years
<b>Priority</b>	High
<b>Lead Agency</b>	Utilities Department, McCook Public Power
<b>Status</b>	In Progress. There have been some power lines buried in the city, but more work is needed.
<b>Mitigation Action</b>	<b>Public Awareness/Education</b>
<b>Description</b>	Through activities such as outreach projects, distribution of maps and environmental education increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards. In addition, educate citizens on erosion control and water conservation methods. Educate residents on response and rescue plans for all hazard types.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$500+
<b>Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Fire Department, County Emergency Manager
<b>Status</b>	In Progress. Education is handled throughout the year but additional outreach is still needed.
<b>Mitigation Action</b>	<b>Stabilize/Anchor Fertilizer, Fuel, and Propane Tanks</b>
<b>Description</b>	Anchor fuel tanks to prevent movement if left unanchored tanks could present major threat to property and safety in a tornado or high wind event. The city would like to see this occur at the transfer station (1801 W Old Hwy 6).
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Thunderstorms
<b>Estimated Cost</b>	\$1,000+
<b>Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	Low
<b>Lead Agency</b>	Public Works, Utilities Department
<b>Status</b>	Not Started

Mitigation Action	Storm Shelters / Safe Rooms
Description	Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, school, and other areas. Karrer Park has been identified as an area in need. The city would like the safe room to hold 20 to 30 people.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Thunderstorms
Estimated Cost	\$4,500+
Funding	City Sales Tax Fund
Timeline	5+ Years
Priority	High
Lead Agency	Public Works, Parks Department
Status	Not Started. Currently waiting on the financial ability to fund this project.

Mitigation Action	Stormwater System and Drainage Improvements
Description	Larger communities generally utilize underground stormwater systems comprising of pipes and inlets to convey runoff. Undersized systems can contribute to localized flooding. Stormwater system improvements may include pipe upsizing and additional inlets. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other stormwater system improvements. Looking at W Q Street; A Street Ditch and N Hwy 83.
Hazard(s) Addressed	Flooding
Estimated Cost	\$10,000 - \$100,000+
Funding	Sales Tax, Assessments, Private Funds
Timeline	5+ Years
Priority	High
Lead Agency	Public Works
Status	In Progress. A large stormwater drainage project was completed in 2019 on West 5 <sup>th</sup> St, West 4 <sup>th</sup> St, and Wet E St. Additional projects still needed.

Mitigation Action	Stream Bank Stabilization / Grade Control / Channel Improvement
Description	Bank degradation is occurring along many rivers and creeks. Stabilization improvements including rock rip rap, vegetative cover, j-hooks, boulder vanes, etc. can be implemented to reestablish the channel banks.
Hazard(s) Addressed	Flooding
Estimated Cost	\$10,000 - \$100,000+
Funding	General Fund
Timeline	5+ Years
Priority	Low
Lead Agency	Public Works
Status	Not Started

Mitigation Action	Weather Radios
Description	Conduct an inventory of weather radios at school and other critical facilities.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$50 per radio
Funding	General Fund, Private Funds
Timeline	5+ Year
Priority	High
Lead Agency	Fire Department, County Emergency Manager
Status	In Progress. Radio systems are continuously updated.

**Removed Mitigation Actions**

<b>Mitigation Action</b>	<b>Flood Prone Property Acquisition (East 11<sup>th</sup> &amp; East H St)</b>
<b>Hazard(s) Addressed</b>	Flooding
<b>Reason for Removal</b>	Based on observations, the City of McCook does not believe this area is at risk for flooding. They have had substantial rain events since 2016 and this area has not had problems
<b>Mitigation Action</b>	<b>Maintain Good Standing in the NFIP</b>
<b>Hazard(s) Addressed</b>	Flooding
<b>Reason for Removal</b>	While the city will continue to maintain good standing in the NFIP by enforcing floodplain regulations, this project is considered an ongoing action.

**School District Profile**

# **Southwest Public Schools**

**Quad Counties  
Multi-Jurisdictional Hazard Mitigation Plan Update**

**2021**

## Local Planning Team

**Table SPS.1: Southwest Public Schools Local Planning Team**

Name	Title	Jurisdiction
R. Todd Porter	Superintendent	Southwest Public Schools

## Location

Southwest Public Schools is located in eastern Red Willow County and serves two schools. The school district provides services to students in the communities of Bartley, Indianola, Danbury, Lebanon, and Wilsonville.

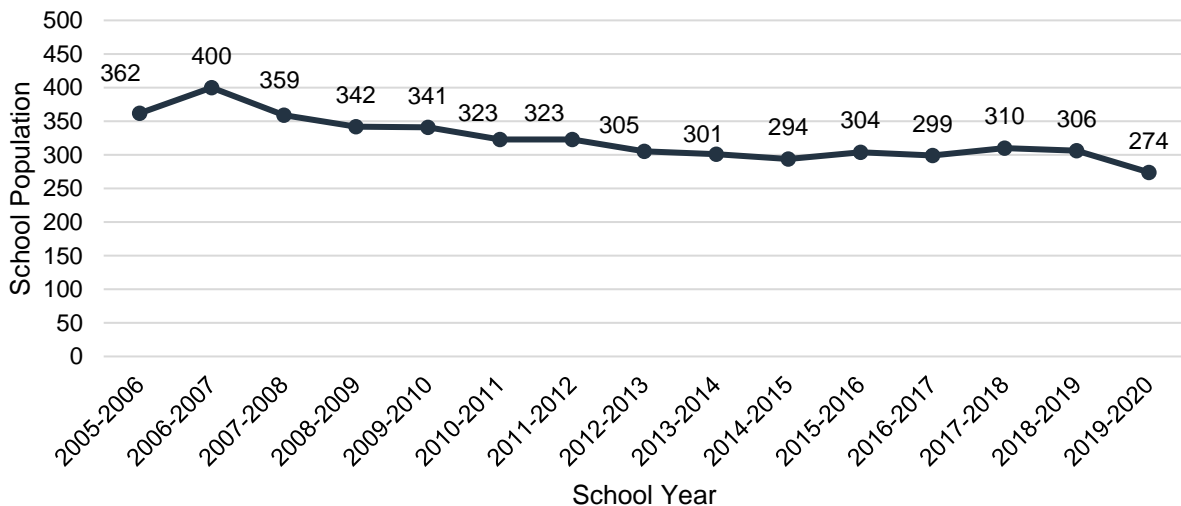
## Transportation

Major transportation routes in the district include US Highways 6 and 83 and State Highways 47 and 89. The most traveled route is Highway 6 is traveled by a total annual average of 4,330 vehicles daily, 480 of which are trucks.<sup>29</sup> A Burlington Northern Santa Fe Railway/Amtrak line travels east to west through center of the district and a Nebraska Kansas Colorado Railway line runs east to west through the southern part of the district. All transportation routes are of equal concern, although county road maintenance can be an issue due to poor road conditions. The district owns 12 buses and approximately 150 students are bused to and from school. Transportation information is important to hazard mitigation plans because it suggests areas more at risk of transportation incidents.

## Demographics

The following figure displays the historical student population trend starting with the 2005-06 school year and ending with the 2019-20 year. It indicates that the student population has been declining since 2017. There are 274 students enrolled in the district.<sup>30</sup> The local planning team expects little change in student enrollment in the coming years.

**Figure SPS.1: Student Population 2005-2019**

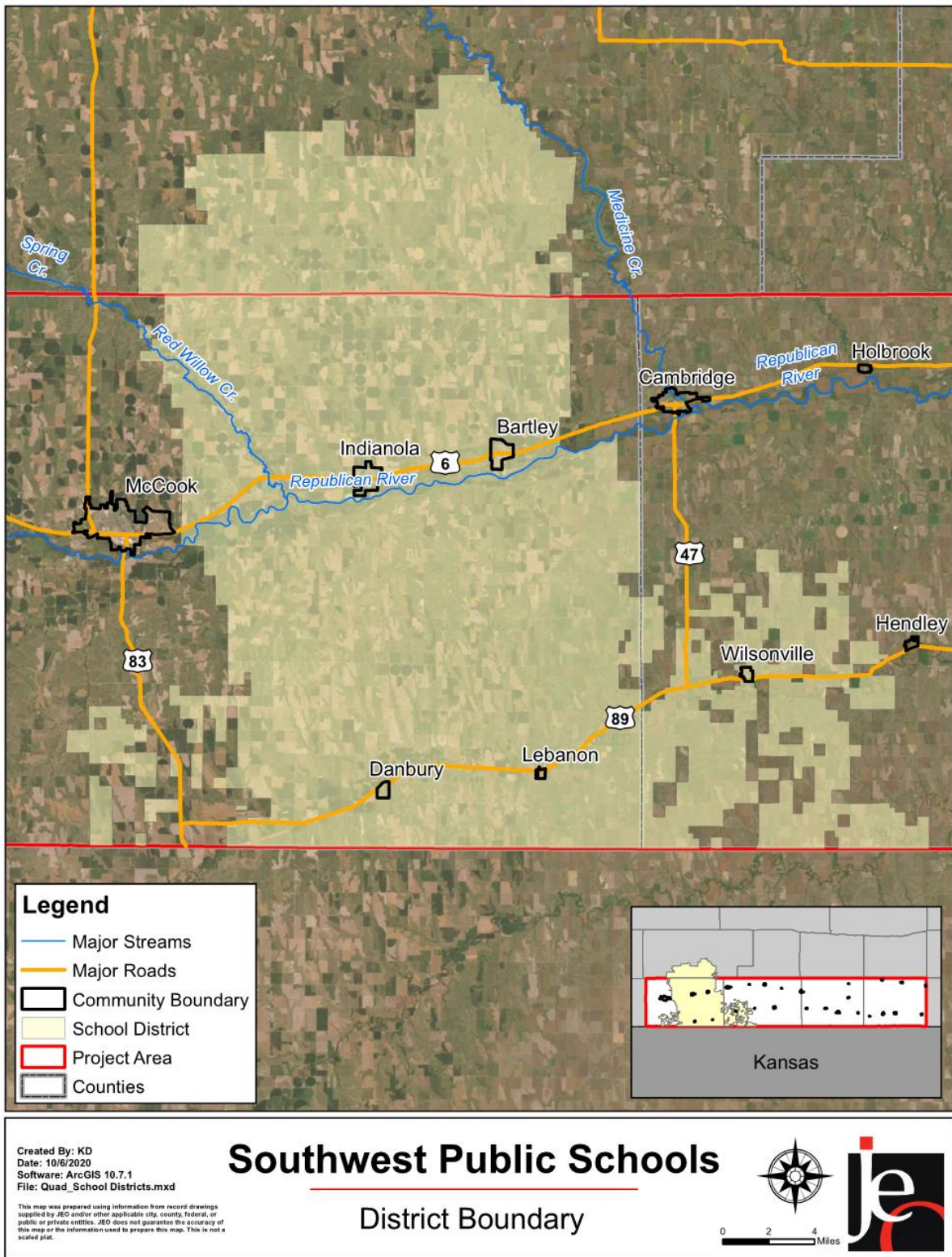


Source: Nebraska Department of Education

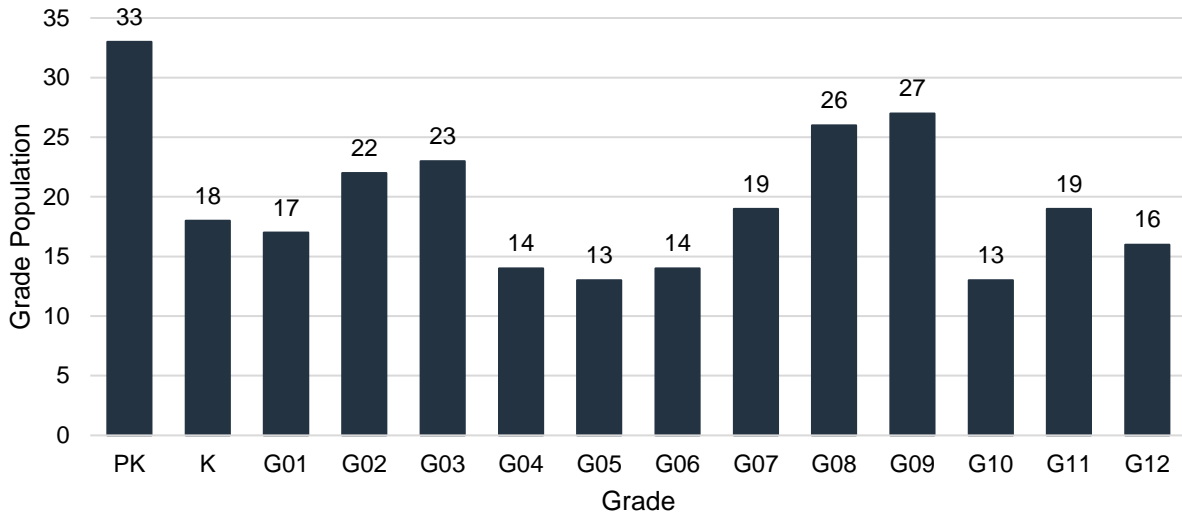
29 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." <https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.

30 Nebraska Department of Education. October 2020. "2019-2020 Education Profile for District: Southwest Public Schools." <https://nep.education.ne.gov/snapshot.html#73-0179-000>.

Figure SPS.2: Southwest Public Schools



**Figure SPS.3: Number of Students by Grade, 2019-2020**



Source: Nebraska Department of Education

The figure above indicates that the largest number of students are in the pre-kindergarten, 9th, and 8th grades. The lowest population of students are in 5th and 10th grades. According to the Nebraska Department of Education (NDE), 50.4% of students receive either free or reduced priced meals at school. This is higher than the state average of 46%. Additionally, nearly 12% of students are in the Special Education Program. These particular students may be more vulnerable during a hazardous event than the rest of the student population.

**Table SPS.2: Student Statistics, 2019-2020**

	School District	State of Nebraska
<b>Free/Reduced Priced Meals</b>	50.4%	45.6%
<b>School Mobility Rate</b>	11.1%	10.3%
<b>English Language Learners</b>	N/A	7.4%
<b>Special Education Students</b>	12.0%	15.6%

Source: Nebraska Department of Education<sup>31</sup>  
 N/A: Information is not available when less than 10 students

## Future Development Trends

Over the last five years, the district constructed a new outdoor concession stand and track. There are currently no construction plans slated for the next five years. Any new construction is required to follow local building codes.

## Community Lifelines

### Critical Facilities

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

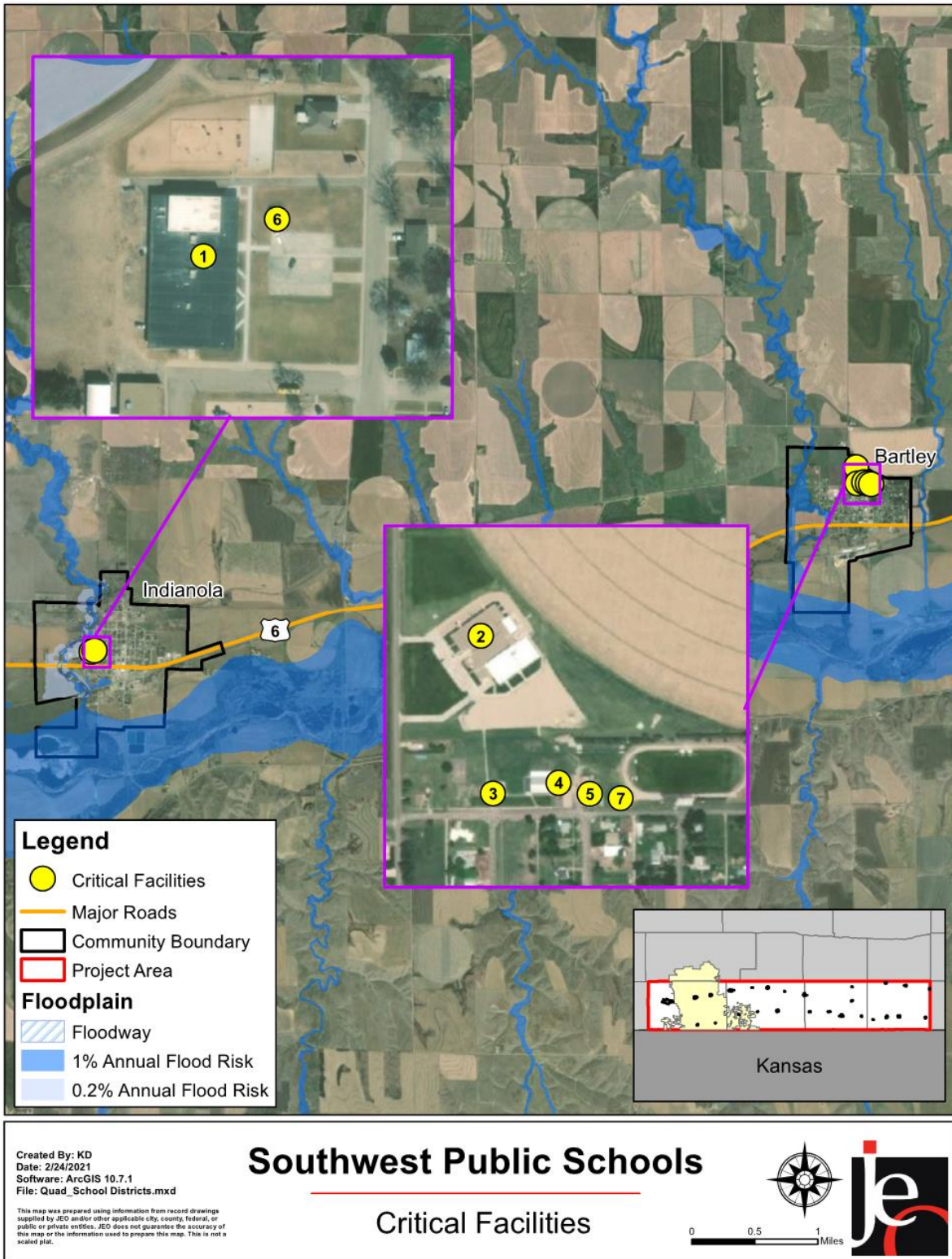
31 Nebraska Education Profile. “School Report Card.” Accessed October 2020. <https://nep.education.ne.gov//Districts/Index/73-0179-000?DataYears=20192020&type=#program-participation>.

**Table SPS.3: Critical Facilities**

CF Number	Name	Community Shelter (Y/N)	Safe Room (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Southwest Elementary School	N	N	N	N
2	Southwest Jr.-Sr. High School and Concession Stand	Y	N	N	N
3	Practice Gym	N	N	N	N
4	Bus Barn – Bartley	N	N	N	N
5	Bus Barn – Bartley	N	N	N	N
6	Maintenance Shop – Indianola	N	N	N	N
7	Maintenance Shop	N	N	N	N



Figure SPS.4: Critical Facilities



## Historical Occurrences

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

## Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the district. The planning team prioritized the selected hazards based on historical hazard occurrences, potential impacts, and the district's capabilities. For more information regarding regional hazards, please see *Section Four: Risk Assessment*.

### Extreme Heat

The district experiences extreme heat several times annually. Extreme heat can put a strain on the local electrical supply, causing power outages. The school district needs backup power generators. Exposure to extreme heat can cause injuries or death. School-aged children are especially vulnerable to extreme heat events. There has been early dismissal during past extreme heat events.

### Severe Thunderstorms

NCEI does not gather occurrence data by school district. However, hail and other severe thunderstorm events are a frequent occurrence in the school district and the rest of the planning area. The local planning team indicated that minor damage has occurred to school property due to hail. All buildings owned by the school district have hail and other storm damage insurance. The district's primary concern related to severe thunderstorms is keeping students and staff safe.

### Severe Winter Storms

Severe winter storms occur annually in the school district. Severe winter storms can cause power outages, which result in dangerous cold conditions. If the school loses power, students and staff must be dismissed. Winter storms can restrict the mobility of students and staff, often resulting in school cancellations. Schools are typically shut down twice a year due to severe winter storms and hazardous road conditions. Snow removal on school property is handled by the maintenance staff.

### Tornadoes and High Winds

There have been no recorded tornadoes in the school district. However, tornadoes frequently occur in the planning area. Tornadoes have the potential to cause significant property damages, injuries, and loss of life. The school district performs two tornado drills per year. During a tornado, students and staff are instructed to go to interior rooms and hallways. Education about tornado response is located in the district's safety plan.

## Administration

The school district has a superintendent and two principals. The school board is made up of a six-member panel.

- Communications
- Curriculum/Assessment
- Facilities
- Finance Department
- Human Resources

- Learning Coaches
- Library/Media Services
- PARA Education
- Technology
- Transportation

## Capability Assessment

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

**Table SPS.4: Capability Assessment**

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

Survey Components/Subcomponents		Yes/No
	Intruder	2 / year
	Bus evacuation	2 / year
	Evacuation	2 / year
	Other (if any)	-

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

### Plan Integration

The school district has an emergency operation plan last updated in 2017, the Southwest Schools Emergency Preparedness Procedures. It covers procedures for students, staff, and administration during a tornado, AED event, emergency lockdown, fire, fire drills, intruder in the building, bomb threat, hostage situation, hazardous materials spill, and bus accident. It also includes floor plans, evacuation routes, sheltering locations, and emergency numbers. All staff and administration are familiar with the plan.

### Mitigation Strategy

Funds for the Southwest Public School District are usually sufficient to pursue new capital projects and have increased over recent years. Although a large portion of funds is not already dedicated to a specific project, the district will still likely need grant assistance to help pay for the actions listed below. The district has applied for and been awarded grants in the past.

### Continued Mitigation Actions

Mitigation Action	Backup and Emergency Generators
<b>Description</b>	Provide a source of backup power to ensure redundant power supplies, municipal wells, lift stations, and other critical facilities.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$120,000
<b>Funding</b>	General Fund
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	School Board, Superintendent
<b>Status</b>	Not Started.

### Removed Mitigation Actions

Mitigation Action	Safe Rooms and Storm Shelters
<b>Description</b>	Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, school, and other areas.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Thunderstorms
<b>Reason for Removal</b>	The district has shelter locations and would like to focus on other actions.