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**Community Profile**

# **Village of Eustis**

**Central Platte NRD  
Hazard Mitigation Plan**

**2022**

## Local Planning Team

The Village of Eustis’ local planning team for the hazard mitigation plan are listed in the table below along with the meetings attended. All participant worksheets were filled out and returned by the community.

**Table EUS.1: Eustis Local Planning Team**

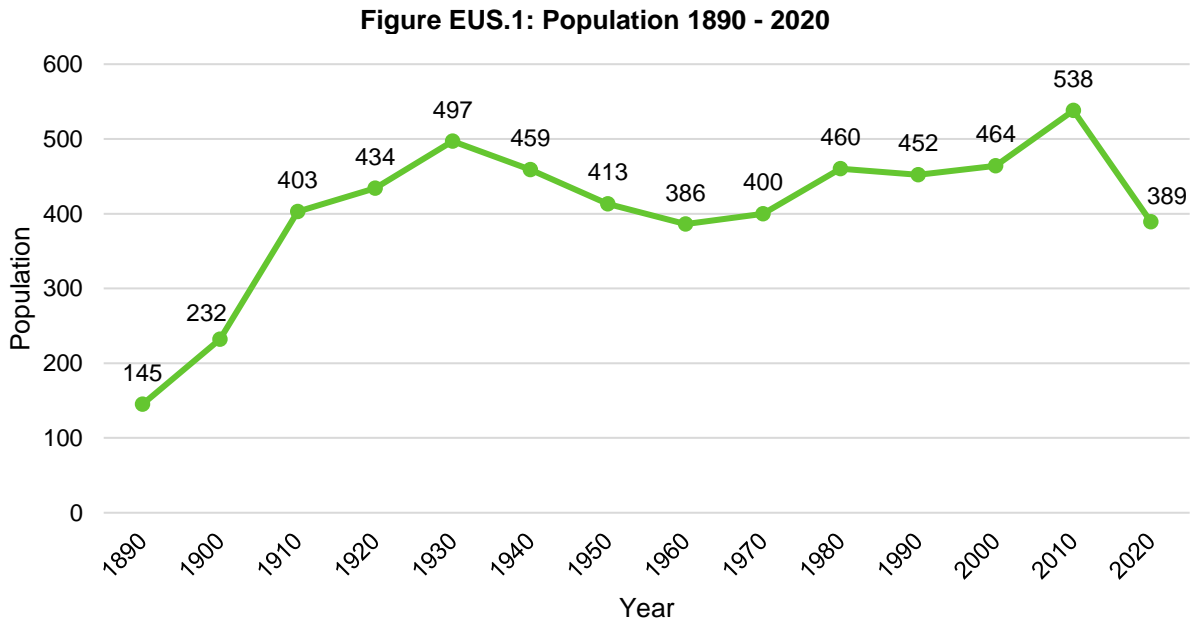
Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Mike Wolf	Board Chairman	Village of Eustis	-	Lexington
Susan Strong	Village Clerk / Floodplain Administrator	Village of Eustis	-	-
Zane Hoselton	Sewage Plant Operator / Street and Water Commissioner	Village of Eustis	-	Lexington

## Location and Geography

The Village of Eustis is in the southcentral portion of Frontier County and covers an area of 0.43 square miles. Nearby bodies of water include the Plum Cree, Johnson Reservoir, and Elwood Reservoir.

## Demographics

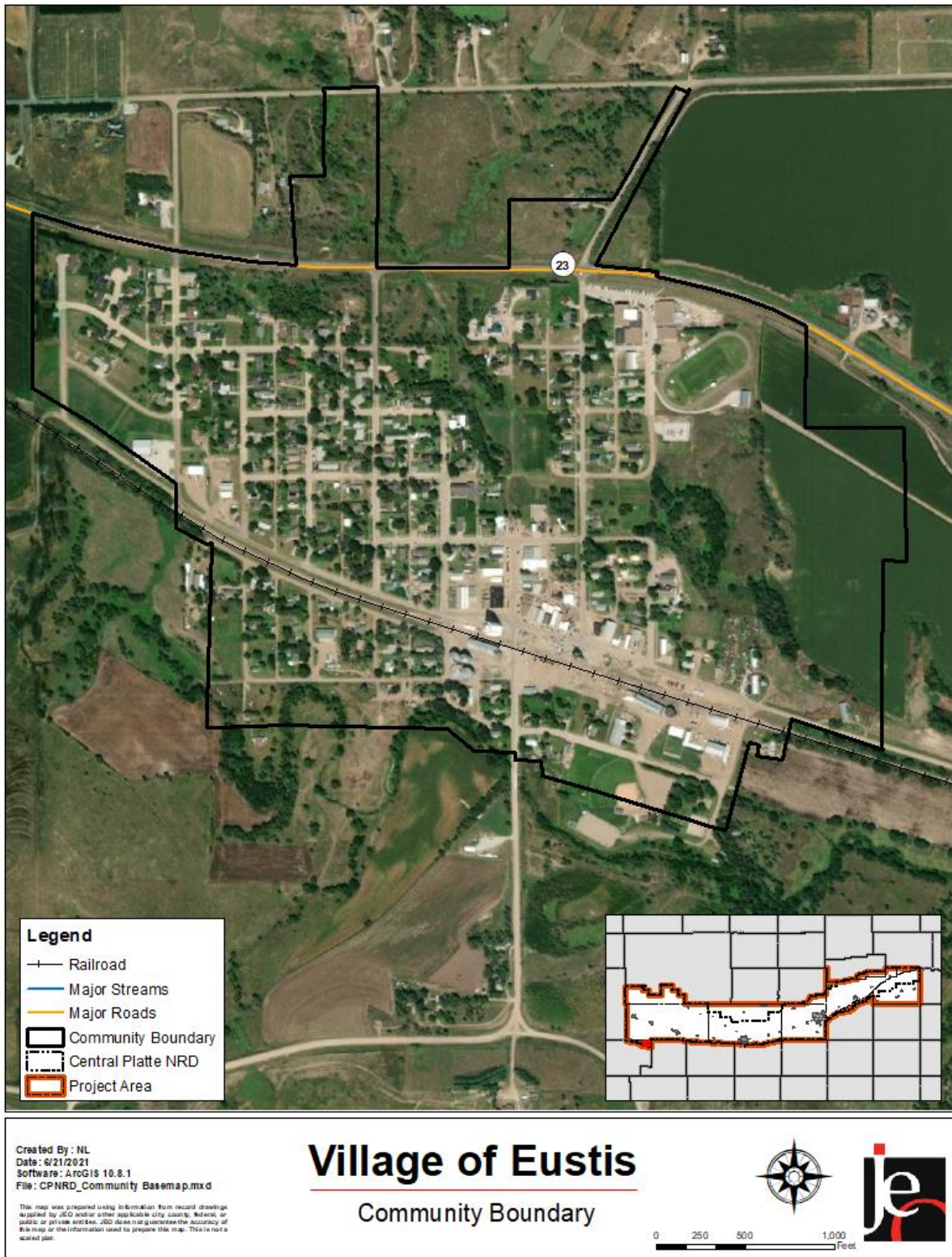
The following figure displays the historical population trend for the Village of Eustis. This figure indicates that the population of Eustis has been declining since 2010 to 389 people in 2020. A declining population can lead to more unoccupied housing that is not being maintained and is then at risk to high winds and other hazards. Furthermore, with fewer residents, there is decreasing tax revenue for the community, which could make implementation of mitigation projects more fiscally challenging. Eustis’s population accounted for 15% of Frontier County’s population in 2020.<sup>1</sup>



Source: U.S. Census Bureau

<sup>1</sup> United States Census Bureau. “2020 Decennial Census: P1: DEC Redistricting Data.” <https://data.census.gov/cedsci/>.

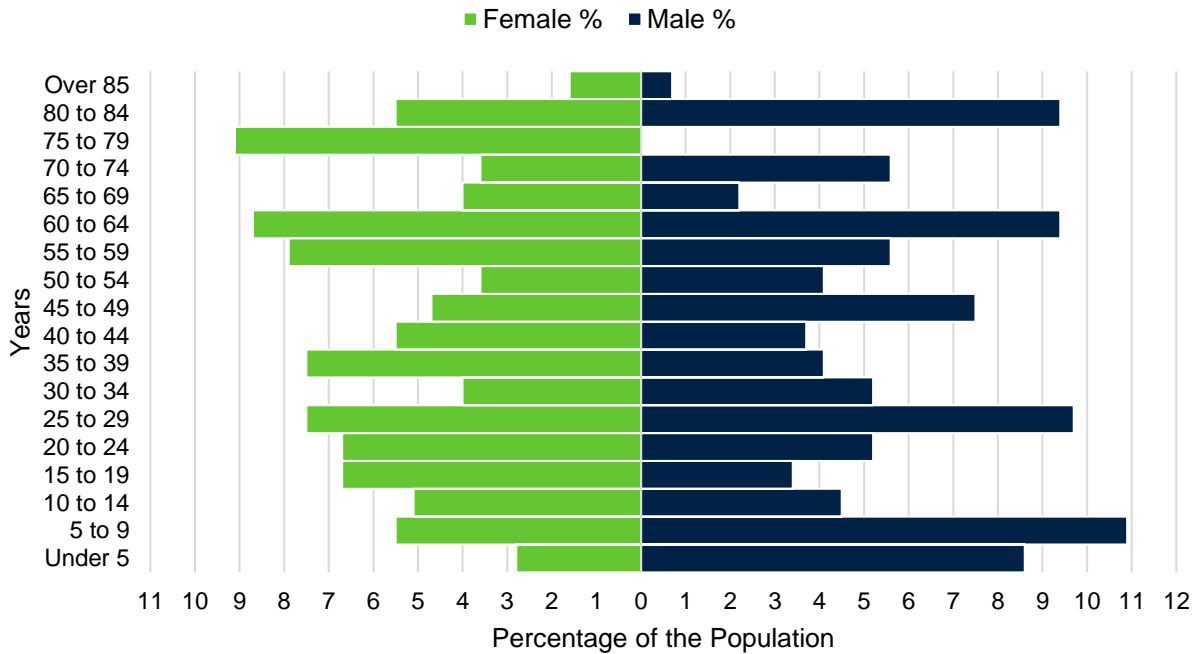
Figure EUS.2: Village of Eustis



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

- **1.7% is non-white.** Since 2010, Eustis grew more ethnically diverse. In 2010, 0.7% of the Eustis’s population was non-white. By 2019, 1.7% was non-white.<sup>2</sup>
- **Became Younger.** The median age of Eustis was 41.5 years in old 2019. The population grew younger since 2010, when the median age was 47.8.<sup>3</sup>

**Figure EUS.3: Eustis’s Population Pyramid**



The figure above shows Eustis’s population percentage broken down by sex and five-year age groups. Eustis’s population is mostly younger with a high percentage of the population below 40 years of age. A large percentage of the population is also between 55 and 65 years. This likely indicates stable population in the years to come.

## Employment and Economics

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

- **3.4% of people living below the poverty line.** The poverty rate (3.4%) in the Village of Eustis was lower than the state’s poverty rate (7.2%) in 2019.<sup>4</sup>
- **\$56,250 median household income.** Eustis’s median household income in 2019 (\$56,250) was \$5,000 lower than the state (\$61,439).<sup>4</sup>
- **3.6% unemployment rate.** In 2019 Eustis had a higher unemployment rate (3.6%) when compared to the state (2.3%).<sup>4</sup>

2 United States Census Bureau. “2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates.” <https://data.census.gov/cedsci/>.

3 United States Census Bureau. “2019 Census Bureau American Community Survey: S0101: Age and Sex.” <https://data.census.gov/cedsci/>.

4 United States Census Bureau. “2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics.” <https://data.census.gov/cedsci/>.

- **21.5% of workers commuted 30 minutes or more to work.** Fewer workers in Eustis commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (21.5% compared to 36.9%).<sup>5</sup>

## Major Employers

Major employers in the community include Eustis Farnam School District, Eustis Body Shop, Eustis Pool Hall, H and J Store, Day Care, and Eustis Plumbing. Many residents commute to Lexington and Cozad for employment.

## Housing

The age of housing may indicate which housing units were built prior to the development of state building codes. Those houses and vacant housing may be more vulnerable to hazard events if they are poorly maintained. Unoccupied housing may also suggest that future development may be less likely to occur. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe thunderstorms if those homes are not anchored correctly. There are no mobile home parks but there nine mobile homes throughout 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. Eustis's housing stock has:

- **58.4% of housing built prior to 1970.** Eustis has a larger share of housing built prior to 1970 than the state (58.4% compared to 46%).<sup>6</sup>
- **10.8% of housing units vacant.** Since 2010, Eustis's vacancy rate declined. In 2010 the vacancy rate was 15.1%. By 2019, 10.8% of housing units were vacant.<sup>6</sup>
- **3.2% mobile and manufacture housing.** The Village of Eustis had a smaller share of mobile and manufactured housing (3.2%) compared to the state (3.3%).<sup>6</sup>
- **17.9% renter-occupied.** The rental rate of Eustis was 17.9% in 2019. The percentage went up since 2010, when renter occupied housing was at 16%.<sup>6</sup>

## 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 Eustis is governed by a village board; other governmental offices and departments that may be involved in implementing hazard mitigation initiatives are listed below.

- Eustis Fire and Rescue
- Clerk / Floodplain Administrator
- Sewage Plant Operator / Street and Water Commissioner

## 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.

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

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



Municipal funds are sufficient to pursue small capital projects and a large portion of funds are not already dedicated to a specific project. Funds have increased slightly over recent years.

**Table EUS.3: Capability Assessment**

Survey Components/Subcomponents		Yes/No
<b>Planning &amp; Regulatory Capability</b>	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	Yes
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
	Building Codes	No
	National Flood Insurance Program	Yes
	Community Rating System	No
	Other (if any)	Water System Emergency Response Plan Wellhead Protection Plan
<b>Administrative &amp; Technical Capability</b>	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	Yes
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	Yes
	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		No
Gas/Electric Service Fees		No
Storm Water Service Fees		No
Water/Sewer Service Fees		Yes
Development Impact Fees		No
General Obligation Revenue or Special Tax Bonds		No
Other (if any)		-
<b>Education &amp; Outreach</b>	Local citizen groups or non-profit organizations focused on environmental protection, emergency	Yes

Survey Components/Subcomponents		Yes/No
<b>Capability</b>	preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	
	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>	Moderate
<b>Staff/expertise to implement projects</b>	Moderate
<b>Public support to implement projects</b>	Moderate
<b>Time to devote to hazard mitigation</b>	Moderate

## Plan Integration

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

### Comprehensive Plan (2012)

The comprehensive plan is designed to guide the future actions and growth of the village. It contains goals aimed at safe growth, directs development away from the floodplain, directs housing away from chemical storage facilities, and directs housing and vulnerable populations away from major transportation routes. The comprehensive plan will be updated by the end of 2022.

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

The village’s floodplain ordinance, zoning regulations, and subdivision regulations outline where and how development should occur in the future. These documents discourage development in the floodplain, discourage housing and vulnerable populations near chemical storage sites, and discourage housing and vulnerable populations along major transportation routes.

### Frontier County Local Emergency Operations Plan

Eustis is an annex in the Frontier 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**

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 human-caused 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.

**Future Development Trends**

Over the past five years, street improvements have been made and new housing is currently under construction. No structures were developed in the floodplain or other known hazardous areas. In the next five years, new housing could be built in the Bell John area.

**Community Lifelines**

**Transportation**

Eustis’s major transportation corridor includes State Highway 23, which has an average of 1,060 vehicles daily, 130 of which are trucks.<sup>7</sup> In addition the local planning team identified three county roads south of the village as a concern. Chemicals are regularly transported along all of these routes, but spills have been small with minimal damages. There is one Nebraska Kansas Colorado rail line traveling east to west on the southern edge of the village. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

**Hazardous Materials**

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

**Table EUS.4: Chemical Storage Sites**

Name	Address	Floodplain (Y/N)
Eustis 66 Service Inc	100 W Chandler St	N
Country Partners Cooperative	303 E Railroad St	N
Country Partners Cooperative	100 N Windom St	N

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

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

### Health and Medical Facilities

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

**Table EUS.5: Health and Medical Facilities**

Name	Type of Facility	Address	Number of Beds
<b>Community Medical Clinic</b>	Rural Health Clinic	106 E Railroad Street Eustis, NE 69028	-

Source: Nebraska Department of Health and Human Services<sup>9,10,11,12</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.

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

**Table EUS.5: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Fire and Rescue Building	N	Y	N
2	Well 1	N	N	N
3	School	N	N	N
4	Sewer Lagoon and Lift Station	N	Y	N
5	Village Office, Maintenance & Storage	N	N	N
6	Water Tower	N	N	N

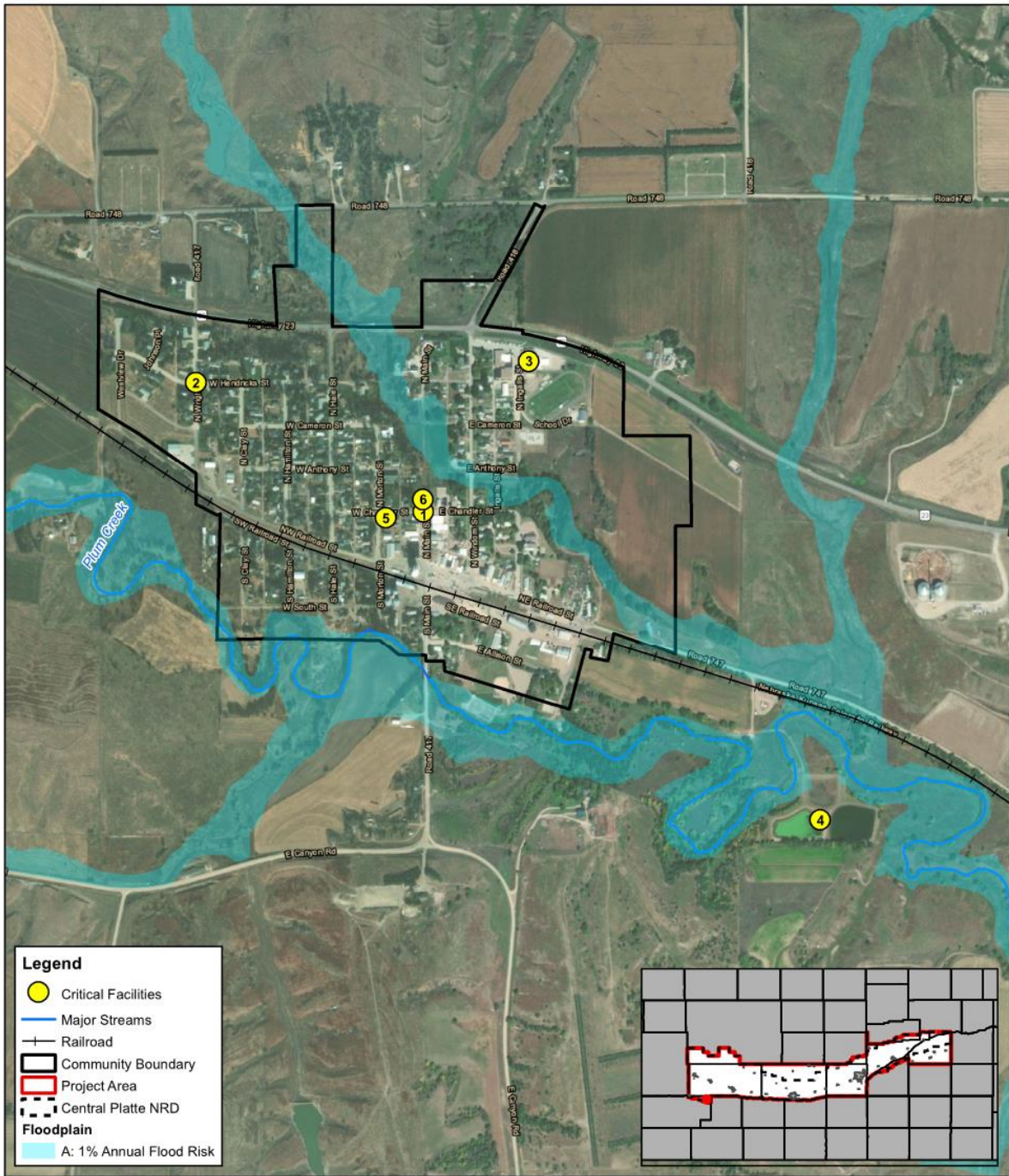
9 Department of Health and Human Services. 2021. “State of Nebraska: Assisted Living Facilities.” <https://dhhs.ne.gov/licensure/Documents/ALF%20Roster.pdf>.

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

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

12 Department of Health and Human Services. 2021. “State of Nebraska Roster: Rural Health Clinic.” [https://dhhs.ne.gov/licensure/Documents/RHC\\_Roster.pdf](https://dhhs.ne.gov/licensure/Documents/RHC_Roster.pdf).

Figure EUS.3: Critical Facilities



Created By: KD  
 Date: 4/13/2022  
 Software: ArcGIS 10.8.1  
 File: CPNRD\_CF Basemap.mxd

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

## Village of Eustis

### Critical Facilities



0 250 500 1,000 Feet

## 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 table.

**Table EUS.6: Parcel Improvements and Value in the 1% Annual Flood Risk Area**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
241	\$18,711,640	10	\$754,862	4.1%

Source: County Assessor, 2021

## Historical Occurrences

See the Dawson County profile for historical hazard events, including the number of events, damage estimates, and any fatalities or injuries. Although Eustis is located in Frontier County, historical occurrences are likely to be similar to Dawson County. Larger scale and more damaging events that impacted the community are discussed under Hazard Prioritization.

## Hazard Prioritization

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

### Flooding

The flood risk areas of concern for the village are located mostly to the south of the community with smaller areas in the center of the village. The area to the south includes the bridge on Main Street, that has flooded twice. The intersection of Windom and Anthony streets in the center of the village is directly impacted by the flood risk area. The creek next to Railroad Street has also flooded during a heavy rain event. A heavy rain event in May of 2008 resulted in \$150,000 in property damages and multiple road closures.

Eustis is a member of the NFIP, and the village’s Floodplain Administrator (Susan Strong) will oversee the commitments and requirements of the NFIP. The initial FIRM for the village was delineated in 3/1/1990 and the current effective map date is 4/2/2008. As of October 31, 2021, there are no NFIP policies in place. Eustis does not currently have any repetitive loss or severe repetitive loss structures.

### Severe Winter Storms

The most significant winter storm in recent memory occurred in December of 2009, when a foot of snow fell over three days. This storm resulted in many road closures and power outages throughout central Nebraska. Concerns about winter storms in Eustis center around losing power. This hazard has been largely mitigated with the construction of a new transmission line five years ago from Eustis to Elwood that has the capability to reroute power around damaged lines. The village has adequate snow removal equipment, including a payloader, small tractor, four-wheeler with a blade, sand/salt truck, dump truck, and grader that allow streets to be cleared within 24-hours. To date there have been no damages to critical facilities caused by winter storms. Approximately ten percent of the power lines in Eustis are buried, most of these on the west side



of the community. The snow routes in the village prioritize the downtown area and include three highway exits. There are five snow fences that are used: a 150-foot fence on the west end of town, a 100-foot fence near the well on Hendricks Street, a 160-foot fence near the water tower that reduces snow accumulation on Main Street, a 60-foot fence by the school on Wyndom Street, and a 200-foot fence that extends from Hendricks Street down Main Street. Mitigation plans include acquiring backup power generators for all critical facilities and educating the public on the hazards associated with severe winter storms.

### Tornadoes and High Winds

Two particularly significant tornadoes have occurred in the Village of Eustis. The first was in October of 2000, when two EF1 tornadoes touched down south of Eustis. This tornado blew out the windows of the house and garage, damaged fencing, machinery, a corral, and destroyed a machine shed and grain bin on one farm. A second farm sustained damage to irrigation pipes and trees, and a third had several outbuildings damaged. The second tornadic event occurred in June of 2014, when an annual celebration was disrupted by a funnel cloud in the late afternoon. Critical municipal records are protected with surge protectors on electronic devices. Eustis has two emergency sirens that effectively cover the community. In the event of a disaster, there are mutual aid agreements in place with Lexington, Cozad, Gothenburg, Farnam, Cambridge, Elwood, Overton, and Brady. Mitigation plans include providing backup generators for all critical facilities and educating the public on the hazards associated with tornadoes.

## Mitigation Strategy

### Kept Mitigation Actions

Mitigation Action	Alert Sirens
<b>Description</b>	Provide radio controls for warning sirens and install new sirens where lacking and remote activation.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Thunderstorms
<b>Estimated Cost</b>	\$10,000+
<b>Local Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	High
<b>Lead Agency</b>	Village Board
<b>Status</b>	Not Started

Mitigation Action	Backup and Emergency Generators
<b>Description</b>	A backup generator is needed for the north well.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$60,000
<b>Local Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	High
<b>Lead Agency</b>	Village Board
<b>Status</b>	Not Started

Mitigation Action	Improve Drainage
Description	Widen streets and raise grading to prevent flooding, including Windom Street and improvements to Anthony Street; water mains and sewer work may also be included.
Hazard(s) Addressed	Flooding
Estimated Cost	\$20,000+
Local Funding	General Fund
Timeline	2-5 Years
Priority	High
Lead Agency	Village Engineer
Status	Not Started

Mitigation Action	New Water Well
Description	Construct a new water well due to the contamination of an existing well.
Hazard(s) Addressed	Drought
Estimated Cost	\$100,000
Local Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Public Awareness/Education
Description	Obtain or develop hazard education materials; conduct multi-faceted public education; distribute fact sheets or maps at community events, public schools, other venues and to public and private communication systems; conduct scheduled siren/warning system tests; prepare educational materials listing safe rooms and shelters and evacuation plans; distribute educational materials listing safe rooms and shelters; purchase equipment such as overhead projectors and laptops to facilitate presentation of information.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$1,000+
Local Funding	General Fund
Timeline	Ongoing
Priority	Medium
Lead Agency	Village Board
Status	Public education is an ongoing activity in the village.

### Removed Mitigation Actions

Mitigation Action	Civil Service Improvements
Description	Improve emergency rescue and response equipment and facilities by providing additional or updating existing emergency response equipment. This could include fire equipment, ATVs, water tanks/truck, snow removal equipment, pumps, etc. This could also include adding additional trained Fireman and EMTs.
Hazard(s) Addressed	All Hazards
Status	Removed. This mitigation action would be better handled by the local fire department.



## **Plan Maintenance**

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

The Board Chairman and Village Clerk will be responsible for reviewing and updating the plan in the future. These individuals will review the plan annually during a public board meeting.

**District Profile**

**Central District Health  
Department**

**Central Platte NRD  
Hazard Mitigation Plan Update**

**2022**

## Local Planning Team

The Central District Health Department’s local planning team for the hazard mitigation plan are listed in the table below along with the meetings attended. All participant worksheets were filled out and returned by the health department.

**Table CDH.1: Central District Health Department Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Andrew Hills	Emergency Response Coordinator	Central District Health Department	Grand Island	Central City - Virtually

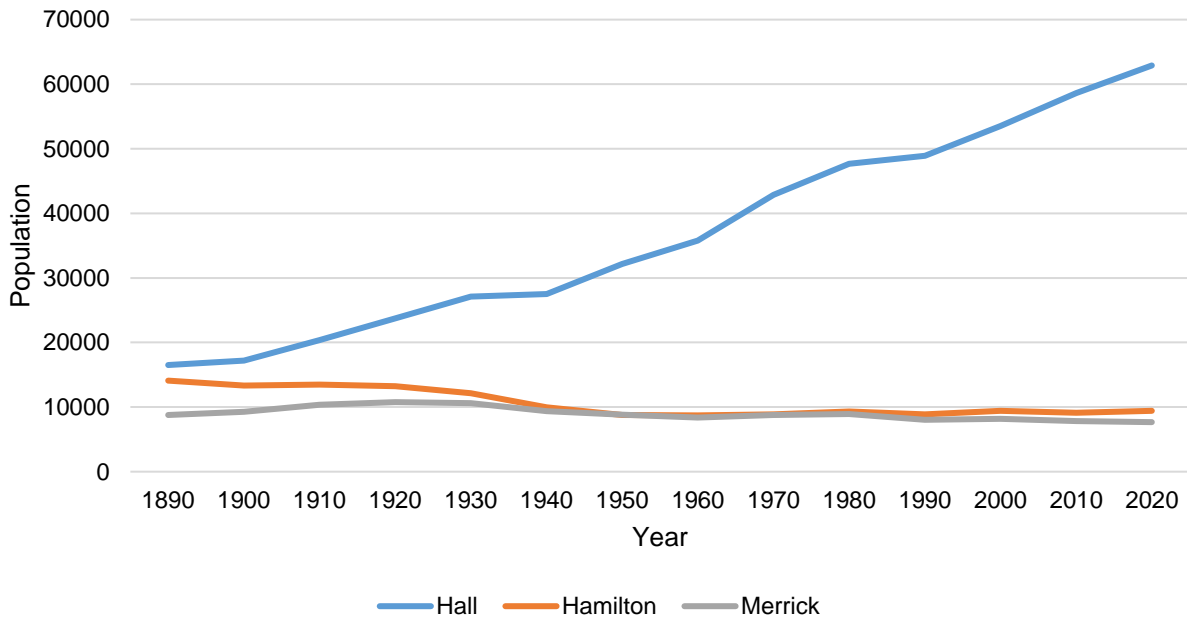
## Location and Geography

The Central District Health Department is headquartered in the City of Grand Island. The district serves the communities and rural areas in Hall, Hamilton, and Merrick counties.

## Demographics

The population served by the Central District Health Department has been increasing since 1960. However, the growth is primarily from Hall County. Hamilton and Merrick counties have both had a fairly stable population since the 1950s. The total population of the three-county district was 82,012 people in 2020.<sup>13</sup>

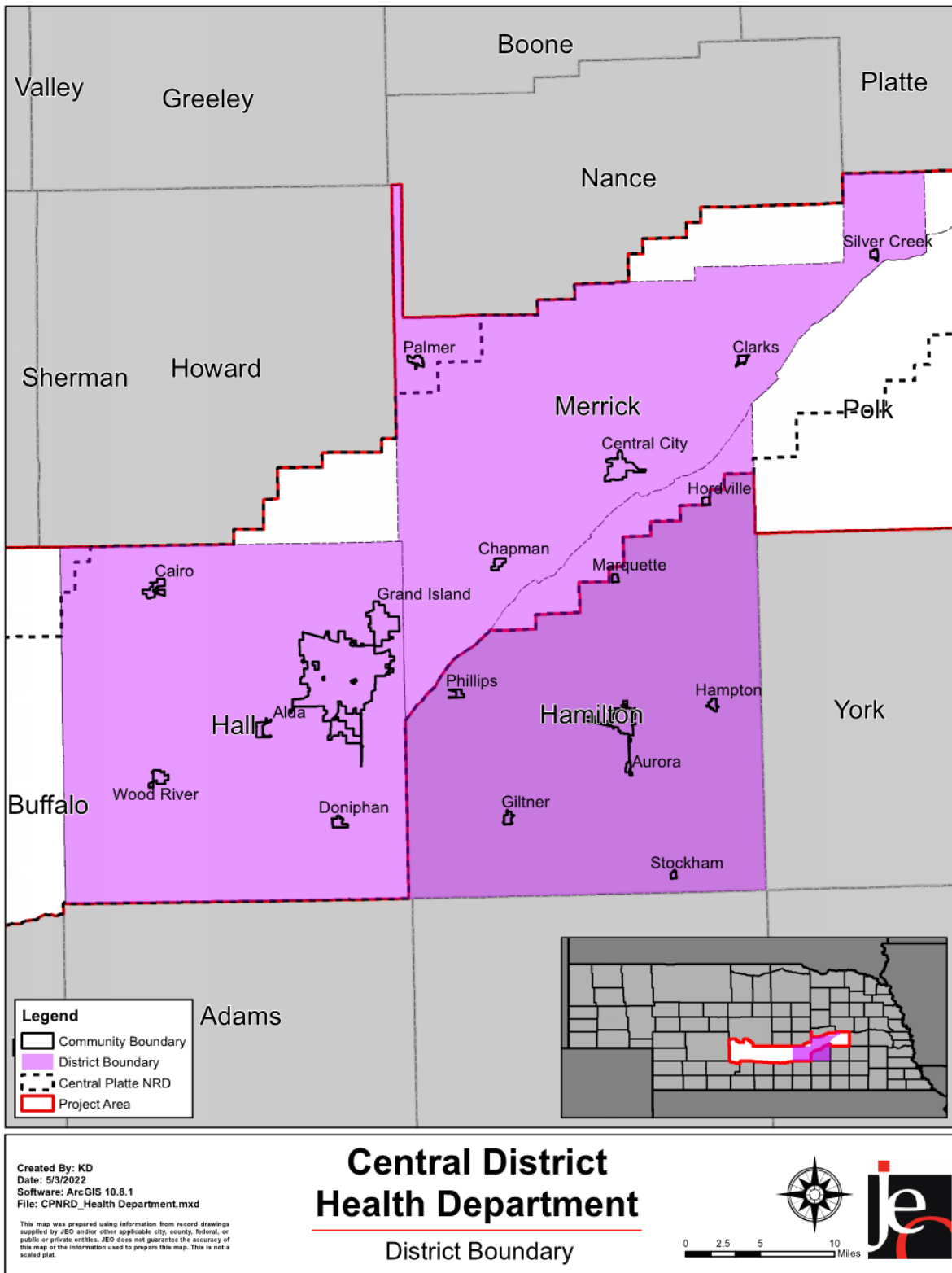
**Figure CDH.1: District County Population**



Source: U.S. Census Bureau

<sup>13</sup> United States Census Bureau. “2020 Decennial Census: P1: DEC Redistricting Data.” <https://data.census.gov/cedsci/>.

Figure CDH.2: Central District Health Department



The young, elderly, minority populations and poor may be more vulnerable to certain hazards than other groups. Looking at the Central District Health Department’s population:

- **37.3 median age.** The median age of the district was 37.3 years old in 2019. This is slightly higher than the state’s median age of 36.5.<sup>14</sup>
- **13.7% is non-white.** The district is less ethnically diverse than the state (13.7% is non-white compared to 21.59%).<sup>15</sup>
- **8.9% of people living below the poverty line.** The poverty rate in the district (8.9%) was higher than the state’s poverty rate (7.2%) in 2019.<sup>16</sup>

## Governance

The Central District Health Department is supervised by a 14-member Board of Health. They appoint the health director, who will oversee the implementation of hazard mitigation projects. Other positions are listed below.

- Infectious Disease Surveillance Coordinator
- Emergency Response Coordinator
- Health Promotion and Outreach Coordinator
- Project Coordinator
- Minority Health Coordinator
- WIC Program Coordinator
- Early Development Network Program Coordinator
- Water Testing Laboratory

## Capability Assessment

The mission of the health department is to protect and improve the health and wellbeing of the community. Due to the unique structure of health departments, the typical capability assessment table was not used. The following table summarizes the district’s overall capabilities. Program and services include community health, environmental health, emergency preparedness, and health projects. Public outreach activities include WIC, SNAP, community health programs, immigration services, vaccination clinics, drive-through Covid and flu testing, refugee services, food premises inspections, and water testing. Funding is primarily used to sustain current operations. Covid has brought in increase in funding recently but that is not likely to be sustained over time.

Table CDH.2: Overall Capability

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

14 United States Census Bureau. “2019 Census Bureau American Community Survey: S0101: Age and Sex.” <https://data.census.gov/cedsci/>.

15 United States Census Bureau. “2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates.” <https://data.census.gov/cedsci/>.

16 United States Census Bureau. “2019 Census Bureau American Community Survey: DP03: Selected Economic Characteristics.” <https://data.census.gov/cedsci/>.

## Plan Integration

The Central District Health Department has two planning documents that discuss or relate to hazard mitigation. Each plan is listed below. While neither are directly integrated with the hazard mitigation plan, they can provide helpful information. The health department will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

### Community Health Assessment (2021)

The community health assessment was written to monitor the health status and understand health issues facing the population in the district. Information in this document helps to educate and mobilize communities and their resources to improve the health of the population. While specific hazards are not discussed in the assessment, it contains demographic and health information that can be useful in the identification of vulnerable populations. It also contains a discussion of community themes and strengths.

### Community Health Improvement Plan (Underdevelopment)

A community health improvement plan is a long-term, systematic effort to address public health problems based on the results of community health assessment activities and the community health improvement process. This plan is currently in development and baseline data is being obtained from community partners.

## Future Development Trends

Over the past five years, there have been no major changes within the health department. Covid-19 and the various response activities has had the biggest impact on day-to-day operations. During the next five years, continuous changes in funding are anticipated but no major changes within the department are planned at this time.

## Community Lifelines

### Transportation

Interstate 80, US Highways 30, 34, 281, and Nebraska State Highways 2, 11, 14, 39, 66, and 92 all travel through the district. A Nebraska Central Railroad Company line, three Union Pacific Railroad lines, and two Burlington Northern Santa Fe Railway lines travel through the district. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors and areas more at risk of transportation incidents. The local planning team is particularly concerned with an increase in pressure on minor roads from heavy transport due to Interstate-80 being inadequate to handle the volume of traffic.

### Hazardous Materials

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are a total of 136 fixed chemical storage sites within the district's three county region.<sup>17</sup> Names and addresses of the sites can be found in the county participant sections or the Upper Big Blue NRD Hazard Mitigation Plan.

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<sup>17</sup> Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed May 2022.



### Health and Medical Facilities

The three-county region served by the Central District Health Department has four hospitals with a total of 254 beds.

**Table CDH 3: Hospital Locations**

County	Hospital Name	City	Number of Beds
Hall	Grand Island Regional Medical Center	Grand Island	67
Hall	Saint Francis Medical Center	Grand Island	155
Hamilton	Memorial Community Health	Aurora	12
Merrick	Merrick Medical Center	Central City	20

Source: Nebraska Department of Health and Human Services<sup>18</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.

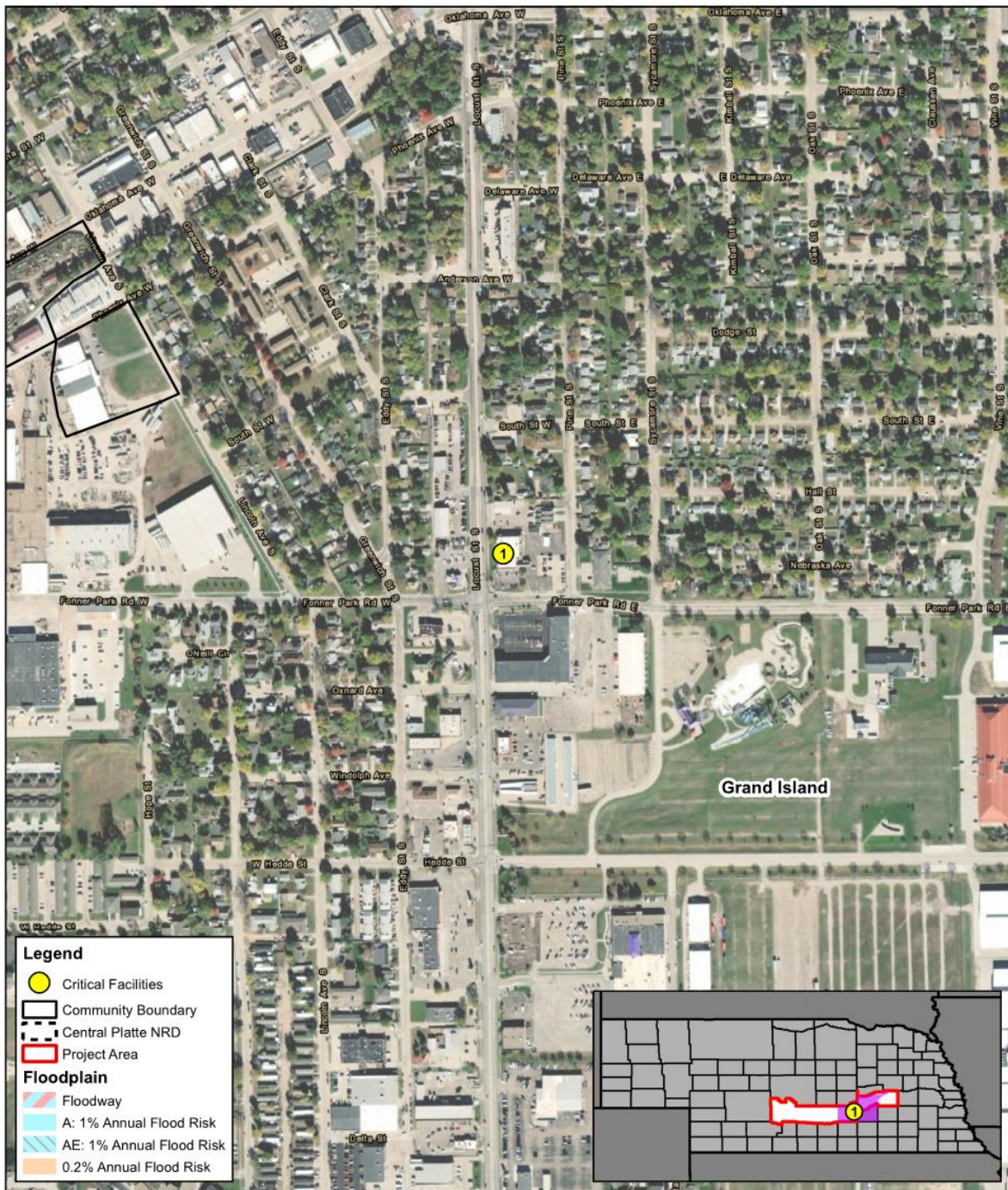
Although they may not be listed in the table below, critical infrastructure also includes power infrastructure, cell towers, alert sirens, water infrastructure, wastewater infrastructure, and roadways.

**Table CDH.4: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Central District Health Department Office	N	N	N

18 Department of Health and Human Services. 2022. "State of Nebraska Roster: Hospitals." <https://dhhs.ne.gov/licensure/Documents/Hospital%20Roster.pdf>.

Figure CDH.3: Critical Facilities



Created By: KD  
 Date: 5/3/2022  
 Software: ArcGIS 10.8.1  
 File: CPNRD\_Health Department.mxd

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

# Central District Health Department

## Critical Facilities



0 125 250 500 Feet

## Historical Occurrences

See the Hall County profile, Merrick County profile, or Upper Big Blue NRD Hazard Mitigation Plan 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 department. The local planning team prioritized the selected hazards based on historical hazard occurrences, potential impacts, and the department's capabilities. For more information regarding regional hazards, please see *Section Four | Risk Assessment*.

### Animal and Plant Disease

A large-scale animal disease outbreak could have a major impact on both public health and also the economy of the region. The local planning team indicated that most planning for an outbreak is out of date. Specific diseases of concern include foot and mouth disease, swine flu, and bird flu. Currently there is an ongoing avian flu outbreak in Nebraska. As of April 13, 2022, it has been found in Merrick County but not the other two counties.

### Extreme Heat

Extreme heat is a concern for the health department because there are no dedicated heat shelters in the area. With climate change, there is likely to be an increase in the number and severity of extreme heat events. Extreme heat can also stress infrastructure and cause power outages. The department's office does not have a backup generator and an extended power outage would cause issues for the department.

### Grass/Wildfire

The primary grass/wildfire concern from a public health point of view is the smoke generated from a fire causing respiratory problems for nearby communities. This can be especially problematic as the smoke can come from fires outside the three-county region or even the state. Fires are likely to increase due to more drought conditions. The Central District Health Department provides updates on air quality to residents as much as possible.

### Public Health Emergency

During the ongoing Covid-19 pandemic, the Central District Health Department was responsible for information dissemination, monitoring, testing, and vaccine administration. The department is currently offering vaccine clinics Mondays-Friday and Covid testing Mondays-Thursdays by appointment. Educational materials are put out about the importance of social distancing, masking, quarantine, isolation, and hand washing. The initial confused state and national response and subsequent public dissatisfaction with public health interventions serve to make response to future outbreaks extremely complicated.

### Tornadoes and High Winds

The health department's primary concerns regarding tornadoes and high winds are damage to structures, loss of utilities, and road closures. The local planning team indicated that tornadoes and high winds appear to be increasing in both frequency and extent with little additional mitigation being done in the counties. In the event of a tornado, the health department will support local first responders as needed. The Central District Health Department does not currently have a safe room for staff.



## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Backup and Emergency Generators
Description	Purchase a backup generator for the department office.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$40,000+
Local Funding	Department Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Health Director, Emergency Response Coordinator
Status	Not Started

Mitigation Action	Protected Walkways and Parking
Description	Increase shade over public walkways and the car park areas on health department property. This can be done by expanding existing grass areas and planting trees to create shade.
Hazard(s) Addressed	Extreme Heat
Estimated Cost	\$50,000
Local Funding	Department Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Health Director, Emergency Response Coordinator
Status	Not Started

### Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside planning documents, during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. The Emergency Response Coordinator will be responsible for reviewing and updating the plan in the future. This will be done bi-annually, and updates will be discussed during a public board meeting.

**NRD Profile**

# **Central Platte Natural Resources District**

**Central Platte NRD  
Hazard Mitigation Plan Update**

**2022**

## Local Planning Team

Central Platte Natural Resources District’s (NRD) local planning team for the hazard mitigation plan are listed in the table below along with the meetings attended. All participant worksheets were filled out and returned by the NRD.

**Table CPN.1: Central Platte Natural Resources District Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Lyndon Vogt	General Manager	Central Platte NRD	-	-
Jesse Mintken	Assistant Manger	Central Platte NRD	All Meetings	All Meetings
Courtney Widup	Water Resources Technician	Central Platte NRD	-	Grand Island

## Location and Geography

The Central Platte NRD is located in southcentral Nebraska, encompassing 2,136,304 acres and is comprised of all or parts of Buffalo, Custer, Dawson, Frontier, Hall, Hamilton, Howard, Merrick, Nance, Platte, and Polk Counties. Major waterways in the area include 205 miles of the Platte River, 49.9 miles of the North Channel, and 173 miles of the Wood River. The Central Platte NRD’s topographic regions include the broad Platte River valley lowlands, loess hills, dissected plains, and sandhills.<sup>19</sup> In the western section, the upland tablelands merge into the rolling loess hills, which in turn drop into the flat lowlands of the valley. These lowlands, in some areas, consist of several flat terraces with relatively steep slopes between the terraces. The dissected plains and loess hills have a very well-developed drainage pattern that discharge onto poorly drained flat valley lands. The valley is broad through the central portion and the drainage pattern becomes less well developed toward the eastern end of the district.

The Platte River is an important feature of the district. It is also the largest river in the state, traversing the entire length of the state from west to east and serving as a major tributary to the Missouri River. With origins in Colorado, the Platte is formed by two branches, the North and South Platte, converging near the City of North Platte. While there are some minor tributaries in the NRD that flow into the Platte, the major tributaries of the Loup and Elkhorn Rivers, join the Platte east of the district. The Platte River is too shallow for navigation and is used primarily for irrigation, recreation, generation of hydroelectric power and as habitat for wildlife.

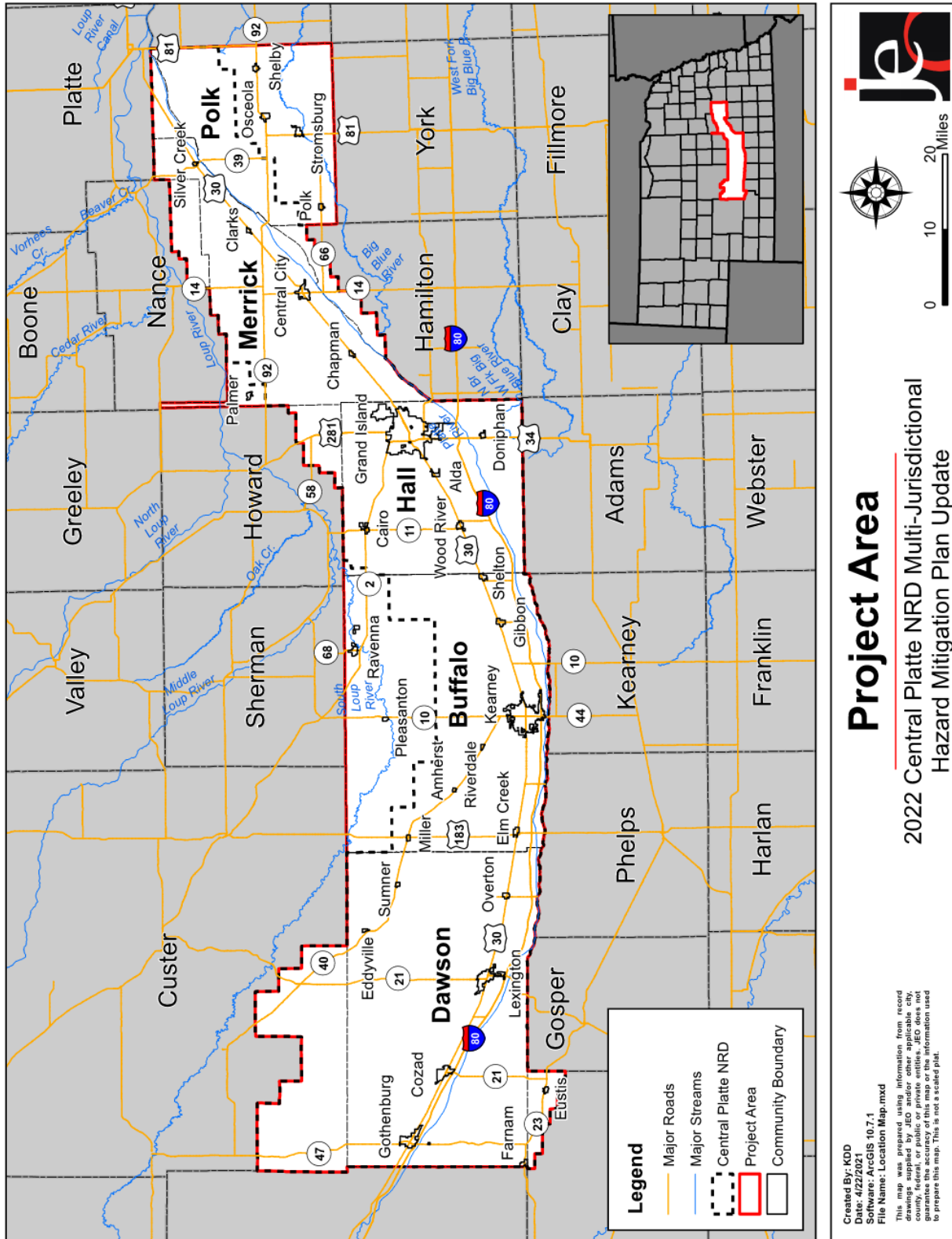
## Demographics

The NRD does not collect the demographic information of their population, nor does the U.S. Census Bureau recognize the NRD as a distinct unit. As a result, there is no population data generated specifically for the NRD. For information regarding population data, please refer to a specific jurisdiction’s community profile or to *Section Three | Demographics and Asset Inventory*.

<sup>19</sup> Center for Applied Rural Innovation. “Topographic Regions Map of Nebraska.” 2001. <http://digitalcommons.unl.edu/caripubs/62>.



Figure CPN.1: Central Platte Natural Resources District



## Governance

The NRD is governed by a group of 21 elected Board of Directors and entrusted with a broad range of responsibilities to protect and enhance Nebraska’s many natural resources. The NRD serves both incorporated and unincorporated areas within the district and has the capability to administratively assist villages, cities, and counties with mitigation actions (most commonly flood control and drainage improvements). The following positions may help implement mitigation projects:

- General Manager
- Assistant Manager
- Administrative Assistant
- Communications Assistant
- Cozad Ditch Staff
- GIS Coordinator
- GIS Image Analyst
- Hydrologist
- Information/Education Specialist
- Precision Conservation Specialist
- Projects Assistant
- Range Management Specialist
- Resources Conservationist
- Secretary/CPNRD
- Thirty Mile Irrigation District Staff
- Water Resources Specialist
- Water Resources Technician
- Water Quality Specialist

## Capability Assessment

The NRD has the authority to levy taxes for specific purposes and to issue general obligation bonds to finance certain projects. The NRD also regularly engages in public education and information programs related to hazard mitigation in the area, and routinely works with other counties, cities, and villages within their jurisdictional boundaries.

Due to the unique structure of the NRD, the typical capability assessment table was not used. The following table summarizes the district’s overall capabilities. District funds are sufficient to pursue small new capital projects with a large portion of funds already dedicated to several projects. Funds have stayed the same over recent years.

**Table CPN.2: Overall Capability**

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

## Plan Integration

The purpose of the NRD is to protect and enhance the state's natural resources through programs and projects, which align closely with hazard mitigation. The NRD has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan. The NRD will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

### **Basin-Wide Plan for Joint Integrated Water Resources Management of Over Appropriated Portions of the Platte River Basin (2019)**

The Basin-Wide Plan is a cooperative effort by several NRDs located in the over appropriated portion of the Platte River Basin, including North Platte NRD, South Platte NRD, Twin Platte NRD, Tri-Basin NRD, and Central Platte NRD. The purpose of this plan is to meet the requirements for portions of the Upper Platte River Basin that have been designated as over appropriated and achieve the goals and objectives described in *Neb. Rev. Stat. 46-715(2)*. Goals include (1) sustaining a fully appropriated condition while maintaining economic viability and welfare, (2) preventing flow reductions that would cause non-compliance with any interstate compact or agreement, (3) partnering with municipalities and industries to maximize conservation, (4) identifying disputes between groundwater users and surface water appropriators and implementing solutions, and (5) keeping the plan current and stakeholders informed. Also identified are actions that need to be taken to meet those goals.

### **Cooperative Hydrology Study**

The Cooperative Hydrology Study (COHYST) is a hydrologic study of the Platte River drainage basin in central Nebraska. COHYST involves developing an integrated model of basin hydrology to calculate river and aquifer effects of different management scenarios. The goal is to support water management to maintain the region's extensive irrigation economy and protect river habitats used by endangered species.

### **Drought Management Plan (2020)**

The purpose of the Drought Management plan is to define drought for the NRD and identify processes in order to respond to and manage the impacts of future drought events. The plan includes a risk and vulnerability assessment for drought, identifies potential drought monitoring protocols, and identifies mitigation and management actions. Projects from the 2017 HMP that related to drought were included in this plan.

### **Elm and Turkey Creeks Watershed Flood Risk Reduction Plan (Under Development)**

The primary purpose of the Elm and Turkey Creeks Watershed Flood Risk Reduction Plan is flood risk reduction within and near the communities of Elm Creek and Kearney. It will identify projects within the watershed to help reduce flood risk and damages to agricultural property, homes, and businesses. This plan is being funded by the Central Platte NRD and NRCS through the Watershed and Flood Prevention Operations (WFPO) Program and is anticipated to be completed by mid-2022. Projects identified in the plan with a positive benefit-cost ratio will be reviewed for inclusion in the HMP.

### **Groundwater Quantity and Quality Management – Rules and Regulations (2018)**

The Rules and Regulations adopted by the Central Platte NRD establish procedures for the implementation of management practices to conserve and protect groundwater supplies and to prevent the contamination or improper use of groundwater. It does this through certification of irrigation acres, groundwater transfers, the groundwater exchange program, rotation, allocation, flow meters, and chemigation requirements. The document also contains requirements for groundwater use in fully and over appropriated areas and undertakes a long-term solution for the widespread high nitrate-nitrogen problems in the district.

### **Integrated Management Plan (2009)**

The Integrated Management Plan's, in cooperation with the Nebraska Department of Natural Resources, aim is to achieve and/or maintain a balance between water uses and water supplies so that the economic viability, social and environmental health, safety, and welfare can be achieved and maintained for both the short and long term. Goals include:

1. To secure any future water supply projects that are shown to be feasible, beneficial and desirable.
2. To provide for a total consumption of water that does not exceed a fully appropriated status.
3. To maintain the district's water resources for present and future generations while promoting programs that allow economic growth.
4. To provide, for present and future generations, an adequate supply of quality water for feasible and beneficial uses.
5. To minimize and/or resolve conflicts between water users.
6. To ensure that the plan complies with law and interstate agreements, and to meet basin-wide goals.

### **Long Range Implementation Plan (2021)**

The Long-Range Implementation Plan summarizes the planned district activities and includes projections of financial, manpower, and land right needs of the district for the next five years, as well as a specific needs assessment upon which the NRD's long range implement plan is reviewed and updated. Specific project areas include flood control and drainage, soil conservation and erosion control, water quality, water quantity, fish and wildlife habitat, forestry management, range management, outdoor recreation, pollution control and solid waste disposal, and information and education.

### **Master Plan (2021)**

The purpose of the NRD is to protect and enhance the state's natural resources through programs and projects, which align closely with hazard mitigation. The Master Plan outlines an action plan for the NRD through 2031. Goals are identified within each of the NRD's consolidated areas of responsibilities, listed below:

- Soil Conservation and Erosion Control
  - To use each acre within its capability and to treat each acre according to its needs as set forth in the technical guidelines adopted by the district.
- Flood Prevention, Control, and Channel Rectification
  - To control floodwaters and/or to provide open floodways that will keep floodwater damages to an acceptable minimum.

- Drainage
  - To help provide where needed and feasible, the open and closed drainage systems to dispose of excess surface and subsurface water from non-wetland areas.
- Groundwater, Surface Water, and Water Supply
  - To assure an adequate supply of water for feasible & beneficial uses, through the proper management, conservation, development and utilization of the district's water resources.
- Water Quality, Pollution Control, Solid Waste Disposal, and Sanitary Drainage
  - To protect and enhance the quality of groundwater and surface water within the district.
- Fish and Wildlife Habitat
  - The conservation and enhancement of fish and wildlife resources for the benefit of the people.
- Forestry Management
  - To develop and manage trees and shrubs for the production of raw material for wood products; to reduce wind velocities; to conserve moisture; and to reduce wind erosion for the comfort of the people, livestock and wildlife; and for environmental recreation and aesthetic benefits.
- Outdoor Recreation
  - To meet the parks and recreation needs of the district.
- Range Management
  - To have rangelands in the district in a "high good" or "low excellent" condition.
- Pollution Control and Solid Waste Disposal
  - To protect and enhance the quality of land, air, surface water and groundwater within the district.
- Information and Education
  - Help the public develop a connection with natural resources conservation and management through accurate knowledge and understanding of the district's objectives.

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

The primary purpose of the Spring and Buffalo Creeks Flood Risk Reduction Plan is flood risk reduction within and near the community of Lexington and Dawson County. It will identify projects within the watershed to help reduce flood risk and damages to agricultural property, homes, and businesses, as well as opportunities for groundwater recharge, threatened and endangered species habitat improvements, and recreation. This plan is being funded by the Central Platte NRD and NRCS through the Watershed and Flood Prevention Operations (WFPO) Program. Projects identified in the plan with a positive benefit-cost ratio will be reviewed for inclusion in the HMP.

### **Wood River Watershed Flood Risk Reduction Plan (Under Development)**

The primary purpose of the Wood River Watershed Flood Risk Reduction Plan is flood risk reduction within and near the communities of Riverdale, Kearney, Gibbon, Shelton, Wood River, Alda, and Grand Island. It will identify projects within the watershed to help reduce flood risk and damages to agricultural property, homes, and businesses. This plan is being funded by the Central Platte NRD and NRCS through the Watershed and Flood Prevention Operations (WFPO) Program. Projects identified in the plan with a positive benefit-cost ratio will be reviewed for inclusion in the HMP.

### **Wood River Watershed Study (2020)**

This study was conducted by the Nebraska Silver Jackets to develop the 1% Annual Exceedance Probability (AEP) frequency flow data for the communities of Kearney, Gibbon, Shelton, Wood River, Alda, and Grand Island. Results reflect that the flow frequency is larger than the effective Flood Insurance Study for the Kearney to Alda reach of the Wood River. The results also estimate a 1% AEP peak discharge that is 15% less than the current design for the Grand Island diversion channel. This study will help support ongoing WFPO studies and future NFIP mapping efforts in the region.

### **Future Development Trends**

Over the past five years, the NRD completed several PSM structures. In the next five years, the Watershed Flood Risk Reduction Plans will be completed and an additional PSM drop structure will be built. The NRD is also looking at moving offices to a different location in Grand Island. Retention cells for flood control will be built at the new office.

### **Community Lifelines**

#### **Transportation**

The Central Platte NRD's major transportation corridors include Interstate 80, US Highways 30, 34, 81, 183, and State Highway 281. The major railroads which travel through the NRD include the Burlington-Northern Santa Fe Railway, Union Pacific Railroad, and Nebraska Central Railroad Company. There are several airports across the area including Grand Island Central Regional Airport, Kearney Regional Airport, Jim Kelly Field, and Quinn Field. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors, as well as areas more at risk to transportation incidents.

#### **Hazardous Materials**

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are a total of 238 chemical sites throughout the NRD which house hazardous materials.<sup>20</sup> A list of sites can be found in individual county and community profiles. In the event of a chemical spill, the local fire departments and emergency response may be the first to respond to the incident.

#### **Critical Facilities**

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

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

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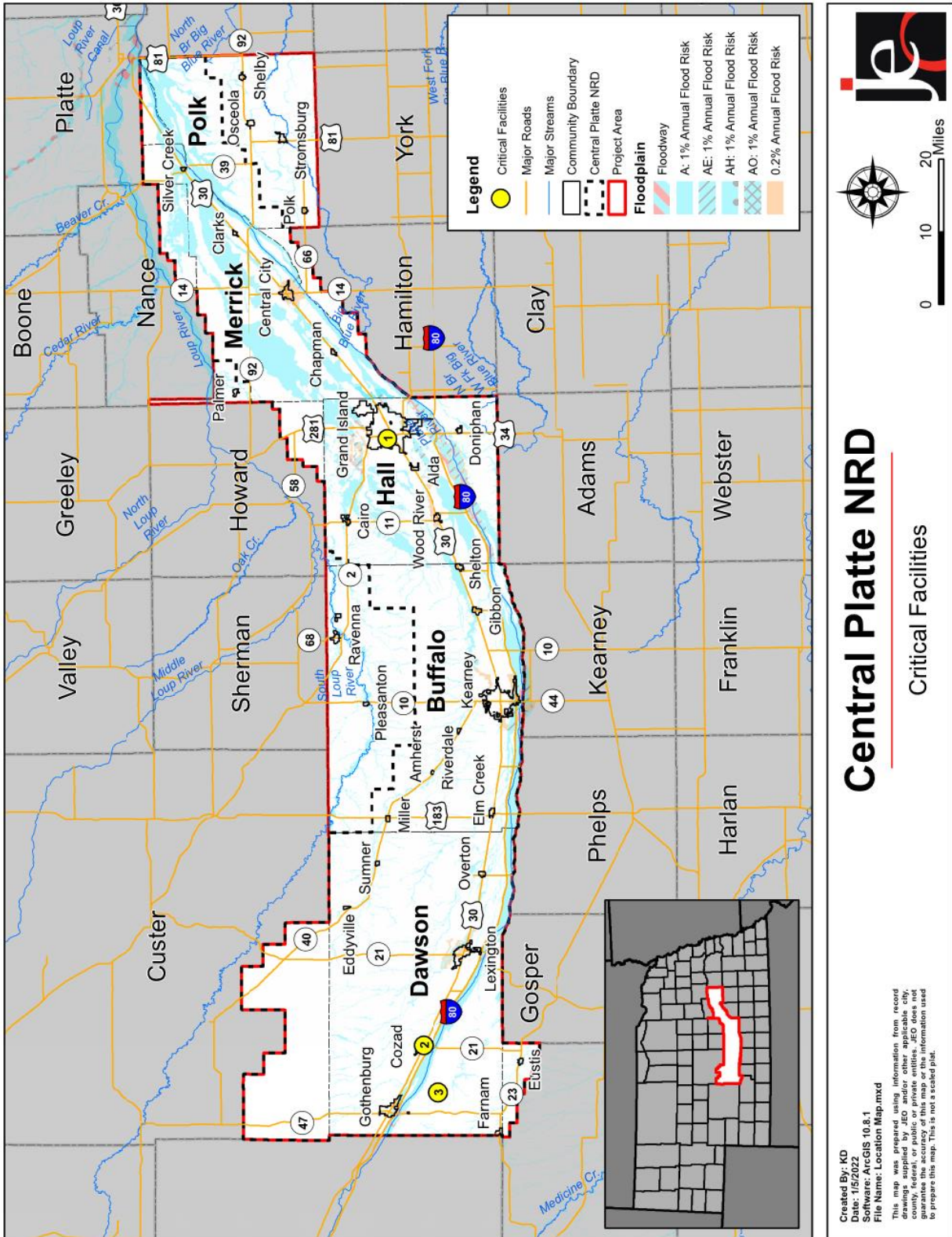
<sup>20</sup> Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed June 2021. <https://deq-iis.ne.gov/tier2/tier2Download.html>.



**Table CPN.3: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	CPNRD Offices/Shop	N	N	N
2	Cozad Ditch Shop/Office	N	N	N
3	30-Mile Irrigation District Office / CPNRD Field Office and Shop	N	N	N

Figure CPN.2: Critical Facilities



## Historical Occurrences

The following table provides a statistical summary for hazards that have occurred in NRD. Data covers all of Dawson, Buffalo, Hall, Merrick, and Polk Counties. The property damages from the NCEI Storm Events Database (January 1996 – June 2021) should be considered only as broad estimates. Crop damages reports come from the USDA Risk Management Agency for all five counties between 2000 and 2020. Larger scale and more damaging events that impacted the NRD are discussed under Hazard Prioritization.

**Table CPN.4: NRD Hazard Loss History**

Hazard Type		Count	Property Damage	Crop Damage <sup>2</sup>
<b>Animal &amp; Plant Disease</b>	Animal Disease <sup>1</sup>	98	3,303 animals	N/A
	Plant Disease <sup>2</sup>	59	N/A	\$770,256
<b>Dam Failure<sup>5</sup></b>		5	N/A	N/A
<b>Drought<sup>6</sup></b>		444 of 1,513 months	\$0	\$76,993,162
<b>Earthquakes<sup>12</sup></b>		1	\$0	N/A
<b>Extreme Heat<sup>7</sup></b>		Avg. 5 Days a Year	N/A	\$25,937,061
<b>Flooding<sup>8</sup></b> <i>1 Fatality, 1 Injury</i>	Flash Flood	47	\$42,655,000	\$4,140,050
	Flood	37	\$9,118,000	
<b>Grass/Wildfires<sup>9</sup></b> <i>3 Fatalities, 7 Injuries</i>		1,460	41,435 acres	\$248,598
<b>Hazardous Materials Release</b> <i>1 Fatality, 9 Injuries</i>	Fixed Site <sup>3</sup>	148	\$0	N/A
	Transportation <sup>4</sup>	183	\$1,325,150	N/A
<b>Levee Failure<sup>11</sup></b>		0	\$0	N/A
<b>Public Health Emergency</b>		Undefined	N/A	N/A
<b>Severe Thunderstorms<sup>8</sup></b> <i>25 Injuries</i>	Thunderstorm Wind	540	\$34,940,000	\$190,074,924
	Hail	957	\$117,794,000.00	
	Heavy Rain	94	\$587,000	
	Lightning	8	\$492,000	
	Blizzard	50	\$905,000	
<b>Severe Winter Storms<sup>8</sup></b> <i>4 Fatalities, 12 Injuries</i>	Extreme Cold/Wind Chill	17	\$0	\$3,613,366
	Heavy Snow	16	\$0	
	Ice Storm	35	\$23,325,000	
	Winter Storm	216	\$1,265,000	
	Winter Weather	179	\$160,000	
<b>Terrorism<sup>10</sup></b>		1	\$0	N/A
<b>Tornadoes and High Winds<sup>8</sup></b> <i>10 Injuries</i>	Tornadoes	68	\$30,425,000	\$6,490,000
	High Winds	190	\$5,966,400.00	\$24,439,112
<b>Total</b>		<b>4,410</b>	<b>\$268,957,550</b>	<b>\$332,706,530</b>

N/A: Data not available  
 1 - NDA, 2014 – April 2021  
 2 - USDA RMA, 2000 – 2020  
 3 - NRC, 1990 – February 2020  
 4 - PHSMA, 1971 – June 2021  
 5 – DNR Communication, July 2021

6 - NOAA, 1895 – January 2021  
 7 - NOAA Regional Climate Center, 1878 – June 2021  
 8 - NCEI, 1996 – June 2021  
 9 - NFS, 2000 - 2020  
 10 - University of Maryland, 1970-2018  
 11 – USACE NLN, 1900 – June 2021

## 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 NRD. The local planning team prioritized the selected hazards based on historical hazard occurrences, potential impacts, and the NRD's capabilities. For more information regarding regional hazards, please see *Section Four | Risk Assessment*.

### Dam Failure

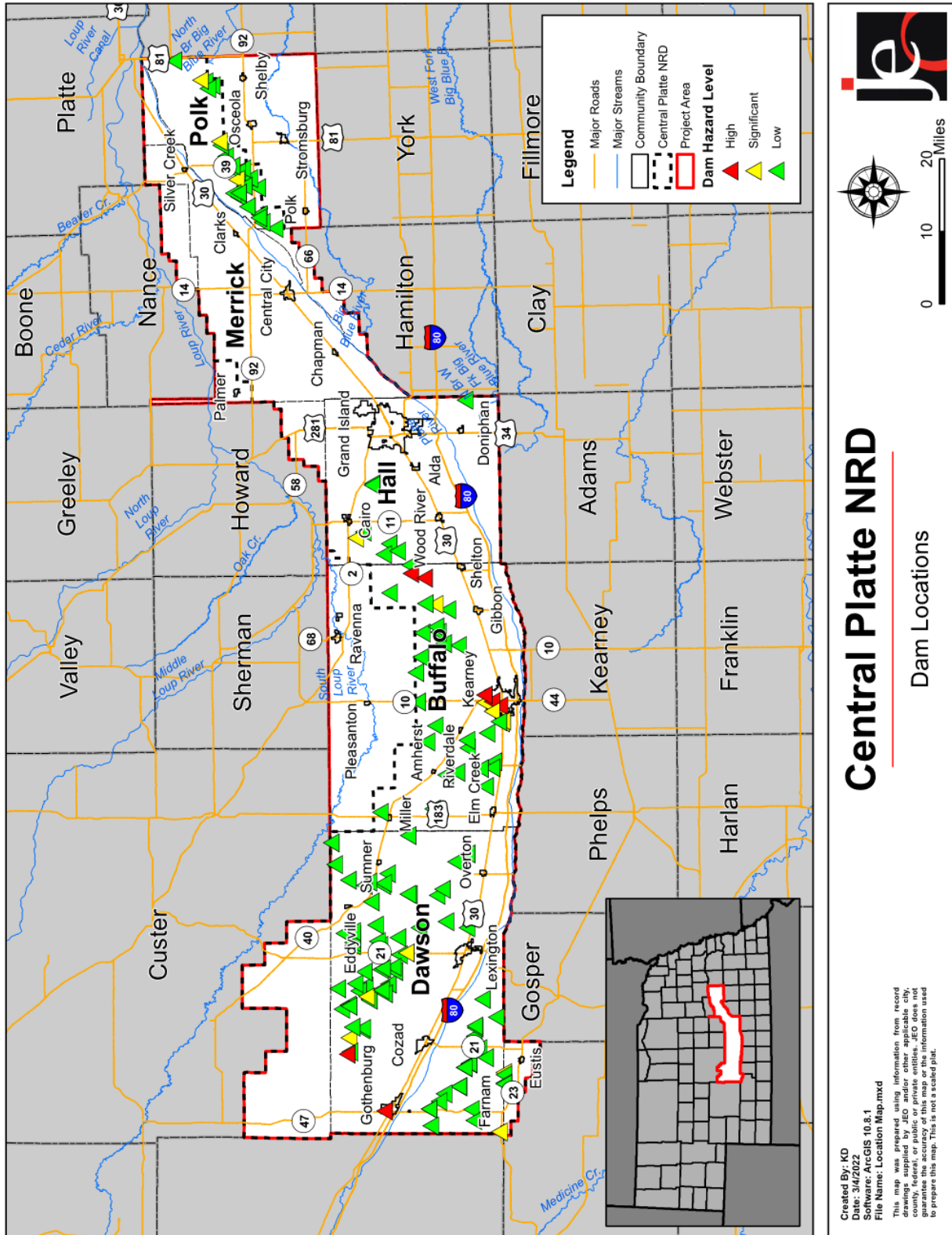
There are 151 dams located within the NRD boundary. Seven dams are high hazard, 15 are significant hazard, and the rest are low hazard dams. Figure CPN.3 shows the location of the dams within the NRD. The Central Platte NRD owns 28 dams, all of which are low hazard dams. Dam failure has occurred five times with no reported property damages and minimal cropland damage. There are also two upstream dams that could affect the NRD, the Kingsley Dam and the Jeffrey Dam. A failure of the Kingsley Dam would cause widespread flooding damages to communities and properties located along the Platte River. In 2019, the board approved a contract to conduct an inventory of dams that are one acre or larger within the district. The project also included evaluating up to 150 existing and potential dam and other structure sites. The following dam updates will initiate a long-term plan to replace, update, or remove the aging structures.

- Box Elder 5A in Buffalo County: Channel improvements downstream, dredging around the drawdown, riprap along the dam face.
- Clear Creek 5 in Polk County: Complete replacement of the drawdown with structural Elements, riprap along the dam face, repair of slough in auxiliary spillway, leveling of a low portion of the top of the dam.
- Jones 1A in Polk County: Replace riser and spillway pipe.

### Earthquakes

Custer County experienced an earthquake about six years ago. The earthquake resulted in some concerns related to NRD-owned dams in the region, especially since one structure historically has problems with cracks developing in the earthen dam. In response to the event, the NRD hired an engineering firm to assist in the assessment of these structures and development of a plan to address identified deficiencies. The result of this process was the development of a protocol regarding how flood risk reduction structures will be addressed following any future earthquake events.

Figure CPN.3: Dam Locations

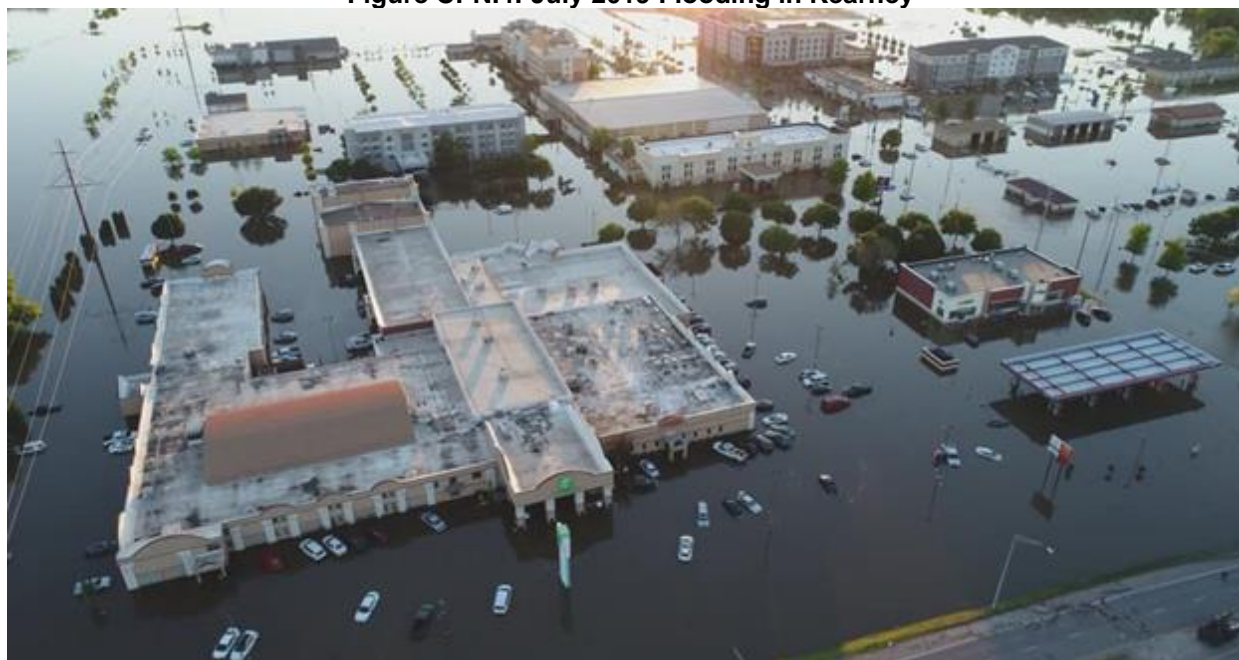




## Flooding

Flooding is a regular occurrence within the NRD boundaries with several large-scale damaging flood events occurring very recently. NCEI data since 1996 reports 84 flood event within district resulting in an estimated \$51,773,000 in property damage. Three events were particularly damaging. On May 11, 2005, flash flooding across Buffalo, Hall, Dawson, and Merrick Counties resulted in \$11,000,000 in damages. Wood River and Grand Island saw the most damages with 12 people in Wood River and 36 homes in Grand Island needing to be evacuated. On March 13, 2019, flooding impacted Buffalo, Hall, and Merrick Counties. Transportation became an issue with large portions of Highway 30 closed due to floodwaters. Several rural homeowners had to drive through pastures to get to and from their homes. It was estimated that \$5,000,000 in roadway damages occurred in Buffalo and Hall Counties. Several ethanol plants in the district could not get ethanol to market because of damaged rail lines throughout the NRD and surrounding areas. Federal disaster declarations were given to Buffalo, Hall, and Merrick Counties. On July 8, 2019, flash flooding caused \$32,000,000 in damages to Buffalo and Dawson Counties. Highway 30 was closed due to floodwaters from Shelton to Elm Creek. Major damages occurred to the southside of Kearney and at least 300 people had to be evacuated. In Elm Creek many roads and basements were flooded. The City of Lexington issued a disaster declaration due to the disruption of utility services.

**Figure CPN.4: July 2019 Flooding in Kearney**



*Source: City of Kearney*

The NRD owns and/or sponsors several flood risk reduction structures. As such, there is concern related to the ongoing maintenance of these structures, deficiencies, and needed improvements to assist with the functionality of these structures. In addition, the NRD identified concerns related to ice jams that can result in flooding events during the winter and/or spring melt. In the past, Merrick, Dawson and Buffalo Counties have all experienced some level of flooding resulting from ice jams.

The Central Platte NRD works with landowners and other agencies to minimize damages caused by flooding. The NRD has invested in flood reduction projects across the NRD ranging from dams, levees, diversion channels, and detention cells. The following is a list of flood risk reduction projects identified by the NRD. This list does not cover all projects completed by the NRD. Additional information about these projects can be found on the NRD's website: <https://www.cpnrd.org/flood-reduction/projects-built/>.

- Amick Acres Project
- Buffalo Creek Watershed-Structures
- Cairo Downtown Improvement Project
- City of Gibbon Drainage Project
- Clarks Floodplain
- Clear Creek Watershed
- Doniphan Drainage
- Elm Creek/Turkey Creek Watershed
- Kearney Northeast Flood Control Project
- Kearney West Clearing Project
- Kirkpatrick Memorial Park Lake
- Lake Helen
- Lepin Ditch Flood Control Project
- Moores Creek Flood Control Project
- Odessa Area Flood Control Project
- Platte County Project
- Prairie Creek Clearing Project
- Prairie-Silver Flood Control Project
- Upper Prairie Silver Moores Project
- Silver Creek Watershed
- Warm Slough/Trouble Creek Flood Control Project
- Wood River Watershed
- Wood River Flood Control Project

One recent project that significantly reduced damages from the 2019 floods is the Upper Prairie Silver Moores Project (UPSM). The USPM project was a multi-year flood risk reduction project designed to reduce flooding risk for northwestern Grand Island. Goals of the project included reducing flooding, updating FEMA flood maps, and educating citizens on the risks associated living near flood control structures. The project entailed the construction of a detention cell on both the east and west sides of Dannenbrog Road, construction of dry dams, and the construction of the Silver Creek RB Levee. It was estimated that Grand Island avoided \$47 million in potential damages in March 2019 because of the project. In addition, 600 properties were removed from the 100-year floodplain. Additional information about the UPSM project can be found on the NRD's website: <https://www.floodsafe-cpnrd.org/>.

Three separate watershed flood risk reduction plans are currently under development within the NRD: the Elm and Turkey Creeks Watershed Flood Risk Reduction Plan, the Wood River Watershed Flood Risk Reduction Plan, and Spring and Buffalo Creek Watershed Flood Risk Reduction Plan. The plans will identify projects within the various watersheds to help reduce flood risk and damages to agricultural property, homes, and businesses. Projects deemed feasible in the plan will be added to this HMP once the planning process has concluded.



**Figure CPN.4: Upper Prairie Silver Moores Project Construction**



*Source: Central Platte NRD*

Based on the flooding observations and impacts experienced during the March 2019 flood event, a Flood Risk Assessment near the City of Grand Island is underway for selected areas along Silver Creek and Moores Creek. As part the flood risk assessment for these areas, available flood risk models will be utilized to develop additional flood risk scenarios based on March 2019 flooding observations. In addition, building footprint data and field visits will identify flood impact vulnerabilities and risks in these areas.

These flood impact observations and risk assessment findings will be utilized to identify potential flood risk reduction mitigation actions. The mitigation actions will be identified and prioritized based on the most at-risk buildings and property considering the risk assessment. It is anticipated the potential mitigation action alternatives considered will include but not necessarily be limited to structural mitigation actions (levees, diversion channels, floodplain storage), nonstructural mitigation actions (floodproofing, elevation, acquisition), and programmatic actions (NFIP participation, flooding studies, capital improvement programs). Once the Flood Risk Assessment is completed it will be added to this hazard mitigation plan as an appendix, and recommended mitigation actions integrated into the appropriate jurisdictional profiles.

Other impediments have intensified the potential for flooding such as the growth of invasive species in the local waterways. Phragmites are an invasive species of large perennial grasses that grow in wetlands and intensify the compounding of water in areas that have historically not

retained water. In recent years, the NRD has applied for and been awarded Riparian Vegetation Management grants through the State of Nebraska to address this problem, but there has been limited success. With the grasses being perennial, they return season after season, and unless all areas with the invasive species are addressed, the best that can be hoped for is to manage the most intensive infestations and to prioritize which areas are treated. This is a multi-jurisdictional issue affecting all NRDs along waterways. The state would benefit from the development of an annual fund to assist in managing this situation.

The NRD now owns a 50% share of the 30-Mile Irrigation district which maintains water distribution channels that provide irrigation waters to agricultural producers. The NRD is the management authority associated with this irrigation district, and while they are not part of the ownership structure for the Southside Irrigation District, they are in a long-term agreement to manage the system. These structures help provide water for agriculture during periods of drought and are vulnerable to impacts during flooding events as canals can be washed out and damaged.

### **Grass/Wildfires**

The NRD is not responsible for fighting wildfires but can assist in the reduction of fuel loads by encouraging landowners to utilize best management practices. There is an area near Kearney where the population of red cedar trees presents a serious concern. In the past, the NRD has assisted in land management and hazard mitigation through several avenues, including: the removal of red cedar, a native tree species that intensifies fire frequency and intensity; cost share programs to encourage landowners to decrease grazing on agricultural lands; and collaboration in controlled burns to assist in fuel load management.

### **Levee Failure**

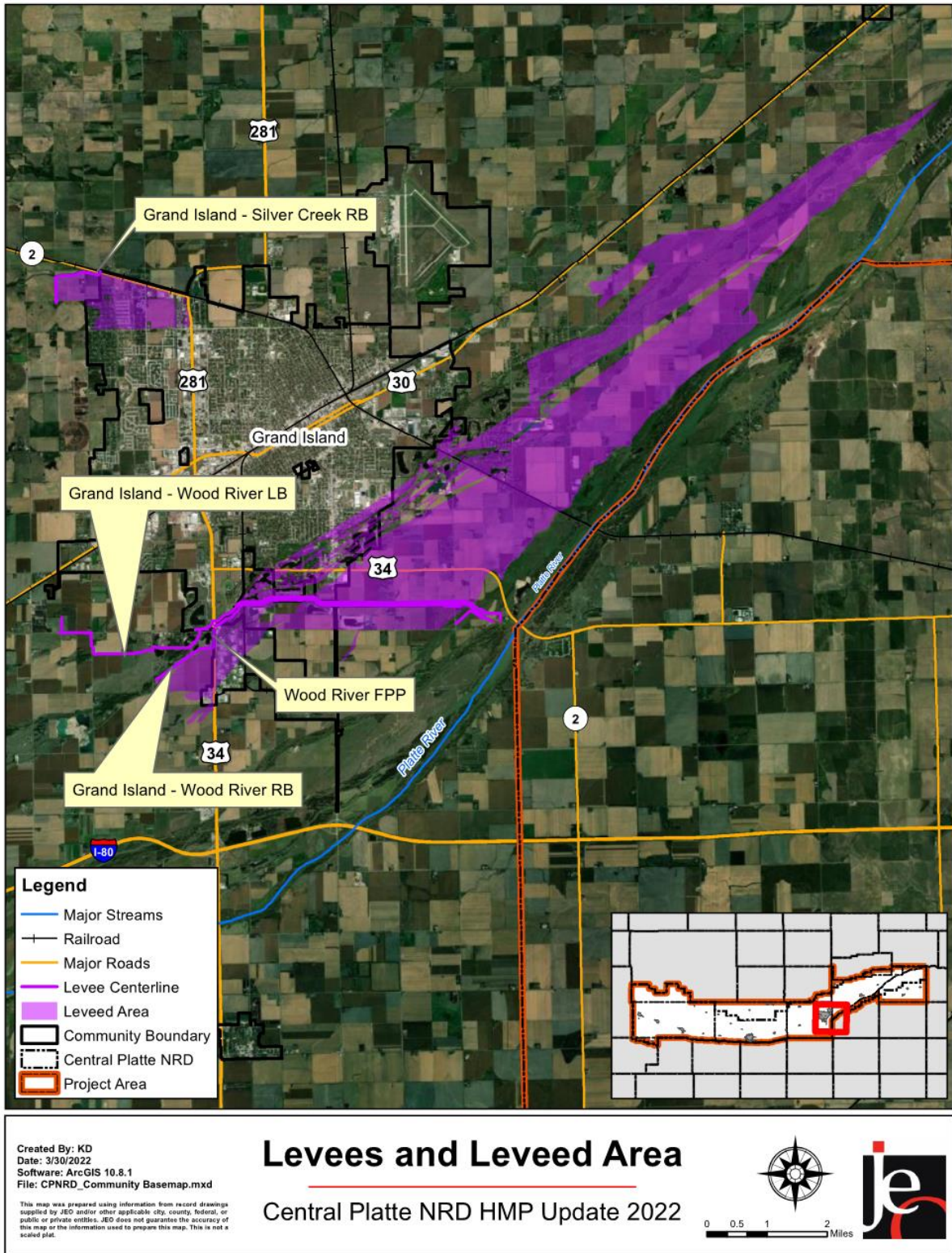
Levee failure may cause loss of life and injuries as well as damages to property, the environment, and the economy. There are four levee systems in or near Grand Island, Grand Island – Silver Creek RB, the Wood River FPP, Grand Island – Wood River RB, and Grand Island – Wood River LB. These levees protect 9,428 people and 3,833 buildings with a combined property value of \$936 million. The Grand Island – LB accounts for most of the protected people and buildings. The figure below shows the locations of the levees. There have been no reports of levee failure in the CPNRD. An Emergency Preparedness Plan (EPP) for the levees is being developed in coordination with the City of Grand Island and County Emergency Management. The EPP will include stakeholder roles and responsibilities, a risk awareness communication plan, an evacuation plan, and an activation process. The figure below shows the location of the levees and leveed area.

### **Tornadoes and High Winds**

While there has not been a recent event, the NRD is concerned about their recreational areas and the vulnerability of these areas to tornadic events during camping season. Specifically, the NRD is concerned with the lack of protection available to people in these recreational areas. The NRD might consider an installation of safe rooms at recreation areas in the future as improvements and/or upgrades are implemented. There are, however, no current plans or financial resources dedicated to address this issue.



Figure CPN.4: Levees and Leveed Area



## Mitigation Strategy

### Completed Mitigation Actions

<b>Mitigation Action</b>	<b>Develop a Drought Management Plan</b>
<b>Description</b>	Work with relevant stakeholders to develop a drought management plan; identify water monitoring protocols; outline drought responses; identify opportunities to reduce water consumption; establish the jurisdictional management procedures.
<b>Hazard(s) Addressed</b>	Drought
<b>Status</b>	Drought Management Plan was completed in 2020.

<b>Mitigation Action</b>	<b>Develop an Emergency Preparedness Plan</b>
<b>Description</b>	Develop an Emergency Preparedness Plan (EPP) for the Levee System in coordination with County Emergency Management and the NRD.: the plan should include stakeholder roles and responsibilities, a risk communication plan, emergency activation levels, activation process, evacuation plan, and training and exercise plan.
<b>Hazard(s) Addressed</b>	Levee Failure
<b>Status</b>	The Emergency Preparedness Plan has been completed.

### New Mitigation Actions

<b>Mitigation Action</b>	<b>Dam Updates and Improvements</b>
<b>Description</b>	Replace, update, or remove aging structures of NRD owned dams. Identified dams include Box Elder 5A, Clear Creek 5, and Jones 1A.
<b>Hazard(s) Addressed</b>	Dam Failure, Flooding
<b>Estimated Cost</b>	Varies by Project
<b>Local Funding</b>	General Fund
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	General Manager
<b>Status</b>	The bidding process is anticipated in the Spring of 2021 with construction to begin in the Fall of 2021.

<b>Mitigation Action</b>	<b>Improve Groundwater Quality</b>
<b>Description</b>	Implement projects to monitor and improve groundwater quality across the NRD.
<b>Hazard(s) Addressed</b>	Drought, Flooding
<b>Estimated Cost</b>	Unknown
<b>Local Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	General Manager
<b>Status</b>	Planning Stage

Mitigation Action	Project Scoping
<b>Description</b>	Evaluate potential flood risk reduction alternatives as identified through either the NRCS WFPO or Grand Island Flood Risk Assessment including project scoping and implementation.
<b>Hazard(s) Addressed</b>	Flooding
<b>Estimated Cost</b>	Varies by Project
<b>Local Funding</b>	General Fund, WFPO
<b>Timeline</b>	2-5 Years
<b>Priority</b>	High
<b>Lead Agency</b>	General Manager, Assistant General Manager
<b>Status</b>	The Wood River, Elm and Turkey Creeks, and Spring and Buffalo Creeks Watershed Flood Risk Reduction Plans and Grand Island Flood Risk Assessment are all currently under development. No formal alternatives have yet been determined; however, several alternatives are under further review for each program with communities in the district.

### Kept Mitigation Actions

Mitigation Action	Backup and Emergency Generators
<b>Description</b>	Identify and evaluate current backup and emergency generators; obtain additional generators based on identification and evaluation; provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters. A generator is needed for the Wood River Levee site and will be needed at the new office.
<b>Hazard(s) Addressed</b>	Tornadoes and High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
<b>Estimated Cost</b>	\$3,500+
<b>Local Funding</b>	General Fund
<b>Timeline</b>	5 Years
<b>Priority</b>	Low
<b>Lead Agency</b>	Assistant General Manager
<b>Status</b>	Not Started

Mitigation Action	Bladder Gates
<b>Description</b>	Install bladder gates to facilitate diversion of water to headgates for 30 Mile / Cozad Canals
<b>Hazard(s) Addressed</b>	Flooding
<b>Estimated Cost</b>	\$2 million - \$3 million
<b>Local Funding</b>	General Fund, 30 Mile / Cozad Canal Funds
<b>Timeline</b>	3-5 Years
<b>Priority</b>	High
<b>Lead Agency</b>	General Manager
<b>Status</b>	Not Started

Mitigation Action	Evaluate Stream Channelization / Bank Stabilization
Description	Evaluate current stream bed and bank stabilization needs; implement stream bed and bank stabilization improvements including grade control structures, rock rip rap, vegetative cover, etc.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Local Funding	General Fund
Timeline	Ongoing
Priority	Medium
Lead Agency	Assistant General Manager
Status	The NRD currently cost shares with private landowners to evaluate and implement stabilization needs.

Mitigation Action	Flood Monitoring and Forecasting
Description	Evaluate restrictions and measures to prevent or reduce flood damage; implement appropriate nonstructural or structural methods on an emergency or permanent basis (monitoring or warning systems, ice jam dusting, excavation or blasting, reshaping channel, tree and debris removal, acquire property and/or construct additional channels or other flow improvements).
Hazard(s) Addressed	Flooding
Estimated Cost	\$5,000
Local Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	Assistant General Manager
Status	Planning Stage

Mitigation Action	Improve Flood and Stormwater Detention/Retention Capacity
Description	Evaluate current stormwater and flood water capacity; implement measures to improve flood water and stormwater capacity.
Hazard(s) Addressed	Flooding
Estimated Cost	\$25,000 - \$100,000+
Local Funding	General Fund
Timeline	Ongoing
Priority	Medium
Lead Agency	Assistant General Manager
Status	This is an ongoing effort as areas of improvement are identified.

Mitigation Action	Phragmites Reduction
Description	Elimination of invasive weeds from waterways in the district; work within the NRD and with neighboring NRDs to eliminate phragmites from the Platte River and other waterways in the region.
Hazard(s) Addressed	Flooding
Estimated Cost	\$7 million
Local Funding	General Fund
Timeline	Ongoing
Priority	High
Lead Agency	Assistant General Manager
Status	NRD had limited success in eliminating phragmites, but the grasses are perennial and need constant management. Currently the NRD does a cost share with landowners and partners with the Platte River Invasive Weed group to manage phragmites.



Section Seven | Central Platte Natural Resources District Profile

Mitigation Action	Reduce Water Demand / Improve Drought Education
Description	Conduct water use study to evaluate/implement methods to conserve water/reduce consumption; evaluate/implement water use restriction ordinance; identify/evaluate current/additional potable water sources; develop or obtain drought education materials to conduct multi-faceted public education and awareness program.
Hazard(s) Addressed	Drought
Estimated Cost	Varies
Local Funding	General Fund
Timeline	Ongoing
Priority	Medium
Lead Agency	Information and Education
Status	This is an ongoing project with publications going out 1-2 times a year.

Mitigation Action	Rehabilitate Flood Control Structures
Description	Rehabilitate flood control structures (i.e. dams) to assist in the retiming of water releases and to increase water storage capacity within the district: this will help ease flooding concerns, ensure water availability improvements for periods of drought, assist with the protection of vulnerable species, and assist with aquifer recharge.  Dredge dams to restore the structures to their previous capacity, increase water retention abilities and improving water availability during periods of drought: this would also enable structures to better store water during periods with high precipitation.
Hazard(s) Addressed	Flooding, Drought
Estimated Cost	\$200,000
Local Funding	General Fund
Timeline	3-5 Years
Priority	High
Lead Agency	Assistant General Manager
Status	Ongoing project every 3-5 years.

Mitigation Action	Remove Invasive Species
Description	Support property owners in removing species that intensify wildfire vulnerability, specifically, remove red cedar trees.
Hazard(s) Addressed	Grass/Wildfire
Estimated Cost	\$200,000
Local Funding	General Fund, Nebraska Forest Service Funds
Timeline	Ongoing
Priority	Medium
Lead Agency	Range Management
Status	Ongoing. The NRD has a cost share with private landowners available and grants to assist with hiring burn crews.

Mitigation Action	Upgrade Irrigation Channels
Description	Upgrade irrigation channels to reduce damages during flood events: this may include lining canals and/or increasing storage reservoirs to ensure water availability during critical management periods. Locations include Spring and Buffalo Creek.
Hazard(s) Addressed	Flooding
Estimated Cost	Unknown
Local Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	General Manager
Status	Planning Stage

### Removed Mitigation Actions

Mitigation Action	Dredge Dams
Description	Dredge dams to restore the structures to their previous capacity, increase water retention abilities and improving water availability during periods of drought: this would also enable structures to better store water during periods with high precipitation.
Hazard(s) Addressed	Flooding, Drought
Status	This mitigation action will be combined with the “Rehabilitate Flood Control Structures” action.

Mitigation Action	Headgates for Water Diversion and Flood Control
Description	Install automated headgates for water diversion and flood control: at this time, the NRD struggles to access gates during periods of high water – this project would require new gates to be installed as it is not possible to automate the current gates.
Hazard(s) Addressed	Flooding, Drought
Status	Removed as this project is longer needed as the detention cell is easy to operate and Wood River has power.

### Plan Maintenance

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

Central Platte NRD last reviewed their section of the HMP in 2020 and no changes or revisions were identified. The Assistant General Manager will be responsible for reviewing and updating the plan annually in the future. The public will be notified through discussions at NRD Board Meetings and social media.

**Fire District Profile**

# **Fire Districts Profile**

**Central Platte NRD  
Hazard Mitigation Plan**

**2022**

## District Planning Teams

Each fire districts' local planning team members for the hazard mitigation plan are listed in the table below along with the meetings attended. All participant worksheets were filled out and returned by the various fire districts.

**Table FD.1: District Planning Team Members**

Name	Title	Fire District	R1 Meeting	R2 Meeting
<b>Brad Wells</b>	Fire Chief	Central City Volunteer Fire Department	Central City	Central City
<b>Tyson Coble</b>	Assistant Fire Chief	Doniphan Fire District	Grand Island	Recording
<b>Fred Boon</b>	Assistant Fire Chief	Eddyville Fire District	-	Lexington
<b>Tyler Hillmer</b>	Fire Chief	Elm Creek Fire District	-	Virtual
<b>Rick Brown</b>	Fire Chief	Gibbon Volunteer Fire District	Virtual	Virtual
<b>Chad Dixon</b>	Fire Chief	Pleasanton Fire District	Virtual	Virtual

## Location and Geography

Landscapes within the planning area include riparian woodlands, mixed grass prairie, and farmland. Very dense and unhealthy wooded areas and encroachment of eastern redcedar lead to an increased risk of grass/wildfires. Eastern redcedar occurs along the Platte and Loup Rivers and has encroached into prairies and woodlands in Dawson and Buffalo Counties. Other areas of concern include the edges of municipalities and wooded areas along rivers and creeks. Water sources for fighting fires include ponds, stock tanks, municipal water systems, private wells, Platte River, South Loup River, Wood River, and Big Blue River.<sup>21,22</sup> Figure FD.1 shows the location of all the fire districts in the planning area.

**Table FD.2: Acres Covered**

Participating Fire District	Acres Covered
<b>Central City Volunteer Fire Department</b>	94,000
<b>Doniphan Fire District</b>	57,664
<b>Eddyville Fire District</b>	123,520
<b>Elm Creek Fire District</b>	90,000
<b>Gibbon Volunteer Fire District</b>	128,000
<b>Pleasanton Fire District</b>	96,000

21 Nebraska Forest Service. 2019. "Central Platte Community Wildfire Protection Plan". <https://nfs.unl.edu/community-wildfire-protection-plan>.

22 Nebraska Forest Service. 2021. "Loess Canyons Region Community Wildfire Protection Plan". <https://nfs.unl.edu/community-wildfire-protection-plan>.



## Demographics

See the individual community and county profiles for regional demographic information. The table below gives an approximate number of people served for each participating district.

**Table FD.3: Populations Served**

Participating Fire District	Population Served
Central City Volunteer Fire Department	6,000
Doniphan Fire District	2,000
Eddyville Fire District	500
Elm Creek Fire District	1,000
Gibbon Volunteer Fire District	10,000
Pleasanton Fire District	950

## Staffing

Each fire district is supervised by a fire chief and a board of directors or rural fire board who will oversee the implementation of hazard mitigation projects. The number of staff and type for each participating district is listed below. The Central City Volunteer Fire Department and Gibbon Volunteer Fire District are also governed by a city council for any matters within the cities.

**Table FD.4: Staffing**

Participating Fire District	Number of Staff	Type
Central City Volunteer Fire Department	34	Volunteer
Doniphan Fire District	23	Volunteer
Eddyville Fire District	35	Volunteer
Elm Creek Fire District	23	Volunteer
Gibbon Volunteer Fire District	34	Volunteer
Pleasanton Fire District	26	Volunteer

## Capability Assessment

Due to the unique structure of fire districts, the typical capability assessment table was not used. The following table summarizes each district's overall resources. In addition, each district can utilize mutual aid, county, and state resources if needed during large-scale events.

**Table FD.5: Overall Resources**

Participating Fire District	Aerial	Pumper	Tanker	Pumper / Tanker	Grass Truck	Utility Truck	Rescue Units	Special Teams	Special Equipment
Central City Volunteer Fire Department	-	2	3	2	2	1	2	HazMat Ops	HazMat Decon Trailer
Doniphan Fire District	-	2	2	1	2	-	1	-	1 Ambulance
Eddyville Fire District	-	1	2	-	4	-	-	-	Gator with Fire Skid
Elm Creek Fire District	-	1	1	1	2	-	1	-	1 Ambulance, Gator with Fire Skid
Gibbon Volunteer Fire District	-	3	2	-	4	1	2	Hazmat EMS	Hazmat and Command Trailers



Participating Fire District	Aerial	Pumper	Tanker	Pumper / Tanker	Grass Truck	Utility Truck	Rescue Units	Special Teams	Special Equipment
Pleasanton Fire District	-	1	1	1	2	-	1	-	UTV with Fire-EMS Skid, Cascade Trailer

**Table FD.6: Mutual Aid Agreements**

Participating Fire District	Mutual Aid Partnerships
Central City Volunteer Fire Department	Loup Platte #2 Mutual Aid
Doniphan Fire District	Platte Valley Mutual Aid; Hastings Area Mutual Aid
Eddyville Fire District	Central Nebraska Mutual Aid
Elm Creek Fire District	Buffalo County Mutual Aid
Gibbon Volunteer Fire District	Buffalo County Mutual Aid; Central Nebraska VF Association
Pleasanton Fire District	Buffalo County Mutual Aid

## Plan Integration

Each fire district has standard operating procedures (SOPs) or standard operating guidelines (SOGs). The SOPs/SOGs outline the district’s response to a variety of different calls that could be received. In addition, the districts are included in either the 2021 Loess Canyons Community Wildfire Protection Plan (CWPP) or the 2019 Central Platte CWPP. These CWPPs discussed county specific historical wildfire occurrences and impacts, identified areas most at risk from wildfires, discussed protection capabilities, and identified wildfire mitigation strategies. These documents are updated every five years. Finally, each county has its own Local Emergency Operation Plan (LEOP). Annex F in these LEOPs covers fire services by listing the county fire departments, mutual aid partners, and equipment lists. Each LEOP is updated every one to five years by the county emergency management. Each fire district will work to integrate the hazard mitigation plan into any future planning documents.

## Future Development Trends

### Central City Volunteer Fire Department

A new fire station was built in 2014. Within the city, additional housing was built along the rural-urban boarder and along the waterfront. In addition, the local ethanol plant added on to the existing facility. In the next five years the department anticipates continued growth of the waterfront areas.

### Doniphan Fire District

There have been no changes within the fire district over the past five years. In the next five years, the district plans on adding a new grass rig.

### Eddyville Fire District

Over the past five years, the district has updated some fire trucks and increased the total number of trucks. In addition, fire gear was also updated. In the next five years, a new alert siren is needed and new fire hall is needed in the long term.

### **Elm Creek Fire District**

Over the past five years, housing developments have occurred in rural areas outside the Village of Elm Creek. In the next five years, equipment and trucks will be updated as the annual budget allows.

### **Gibbon Volunteer Fire District**

Over the past five years, new housing subdivisions were added within the district. In the next five years, the current fire hall has plans to be updated.

### **Pleasanton Fire District**

Within the Pleasanton Fire District, a new large subdivision around the golf course on the south end of the district and new housing was added in the Village of Pleasanton. This increases the number of homes to cover and increases fire risk, as new subdivisions are likely to be built in the Wildland Urban Interface. In the next five years, the district plans on building a new fire hall. The district was given a large lot on the north side of Pleasanton to build the new fire hall.

## **Community Lifelines**

### **Transportation**

Interstate 80, US Highways 30, 34, 81, 183, 281, and 283 and Nebraska State Highways 2, 10, 11, 14, 21, 39, 40, 44, 47, 66, 69, and 92 all travel through the planning area. The most traveled route is Interstate 80 near Grand Island with an average of 24,080 vehicles daily, 8,210 of which are trucks.<sup>23</sup> A Union Pacific Railroad line runs through the north part of the planning area. A Burlington North Railway line runs through part of Hall and Buffalo Counties. A Nebraska Central Railroad Company line runs through the northern portion of Hall County. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors, areas more at risk of transportation incidents, and high-risk spill areas. The Central City Volunteer Fire Department identified nursing homes and assisted care centers as difficult to evacuate due to the high number of occupants. The Doniphan Fire District identified Amick Acres as a potential area that might be difficult to evacuate due to flood risk and very few ingress and egress routes. The Eddyville Fire District indicated that there are not enough roads through the canyon area north of the Village of Eddyville. The Pleasanton Fire District identified that the west side of Pleasanton may be difficult to evacuate as some streets only have one way in and out. In addition, the district has three subdivisions with only one way in and out.

### **Hazardous Materials**

Information on Tier II chemical storage sites can be found in the county and community profiles.

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

### Critical Facilities

Each participating district 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 each fire district.

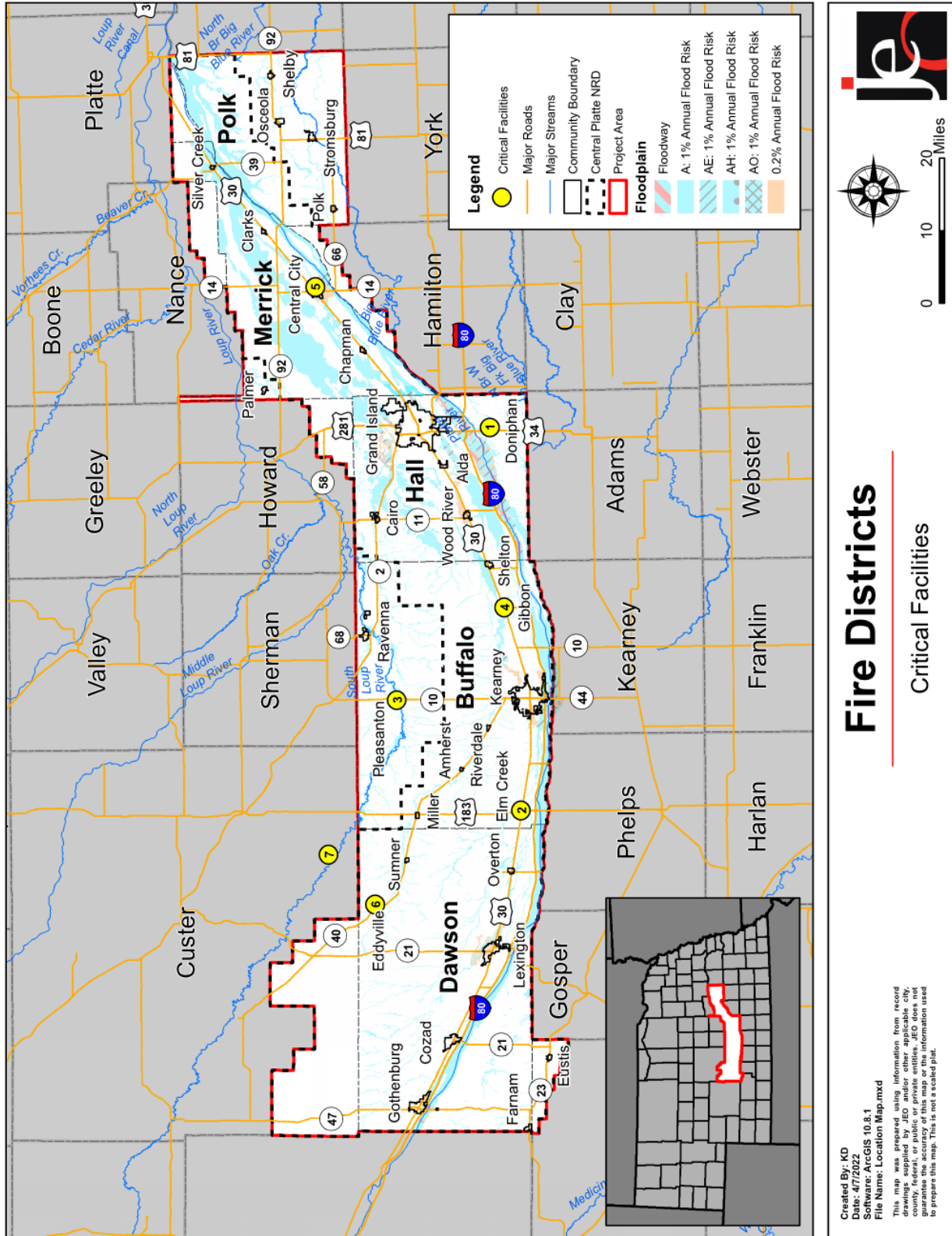
Although they may not be listed in the table below, critical infrastructure also includes power infrastructure, cell towers, alert sirens, water infrastructure, and roadways.

**Table FD.7: Critical Facilities**

CF Number	Name	Mass Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Doniphan Fire District – Fire Hall	N	Y	N
2	Elm Creek Fire District – Village Office/Fire Station	N	Y	N
3	Pleasanton Fire District – Fire Hall	N	N	Y (1%)
4	Gibbon Volunteer Fire District – Fire Hall	N	Y	N
5	Central City Volunteer Fire Department – Fire Station	N	Y	Y (0.2%)
6	Eddyville Fire District – Fire Hall #1	N	N	N
7	Eddyville Fire District – Fire Hall #2	N	N	N/A

*N/A: Custer County does not have a digitally mapped floodplain.*

Figure FD.2: Critical Facilities



## Historical Occurrences

See the county profiles for historical hazard events, including the number of events, damage estimates, and any fatalities or injuries. Larger scale and more damaging events that impacted the fire districts are discussed under Hazard Prioritization.

## Hazard Prioritization

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

**Table FD.7: Hazard Prioritization by Participating Fire District**

Hazards	Central City Volunteer Fire Department	Doniphan Fire District	Eddyville Fire District	Elm Creek Fire District	Gibbon Volunteer Fire District	Pleasanton Fire District
Animal and Plant Disease						
Dam Failure						
Drought			X	X	X	
Earthquake						
Extreme Heat						
Flooding		X		X	X	X
Grass/Wildfire	X	X	X	X	X	X
Hazardous Materials Release		X		X	X	X
Levee Failure						
Public Health Emergency	X					
Severe Thunderstorms	X	X	X	X	X	
Severe Winter Storms	X	X	X	X	X	
Terrorism						
Tornadoes and High Winds		X	X	X	X	X

### Drought

Drought can affect fire districts in several ways. Due to the dry conditions during a drought, vegetation can become extremely dry which increases the risk of wildfires starting. The dry conditions can also make it difficult to contain wildfires as they are more likely to spread quickly. Drought can also affect the water supply, making it harder for the fire districts to find water sources if needed during a response.

### Flooding

As first responders, fire districts will be a part of the response and recovery efforts during any major flood event. Even minor flooding can impact roadways throughout the planning area. Closed roads and poor road conditions can impact response times for fire districts. The Doniphan Fire District identified Amick Acres as a location with a high flood risk that may also be difficult to evacuate. The Elm Creek Fire District and Gibbon Volunteer Fire District indicated that Highway 30 has been closed in the past due to flooding.

#### Gibbon Volunteer Fire District

The district identified two flooding events that affected travel, one in March 2019 and one in July 2019. In addition, there is not proper drainage in the community which causes flooding. The river on the edge of the community causes water to have nowhere to go during a flood event.

#### Pleasanton Fire District

The South Loup River traverses the length of the district from west to east. It divides the district in half with the Village of Pleasanton and Fire Hall located on the north bank. The closest hospital is in Kearney and that is south of the river. It may be difficult to get there during flood events. In the spring of 2019, the district experienced significant flooding in Pleasanton. The fire district evacuated the south part of the village that had water running through it. The fire hall was also evacuated because it was in the floodplain. Water did not enter the building but was within a few inches.

### **Grass/Wildfires**

Grass/Wildfires are the primary responsibility of the fire districts. Specific grass/wildfire concerns for each participating district are discussed below.

#### Central City Volunteer Fire Department

Central City Volunteer Fire Department reported 23 grass/wildfire events since 2000. These events burned a total of 104 acres. No injuries were reported. In the last several years the fire department has seen an increase in the number of homes on the rural-urban fringe increasing the risk of wildfire impacting the community.

#### Doniphan Fire District

Accurate records for fires were only kept for Doniphan Fire starting in late 2016. Since then, the district has had 54 grass/wildfire events that caused an estimated \$7,000 in losses. There are multiple large grass and crop areas in the fire district that are a hazard. Along the Platte River is especially concerning for the district as river ground is difficult to access due to a lack of roads. The current grass rig for the district is 17 years old and other apparatus in use for grass fires range in age from 32-38 years old. Having a reliable apparatus to quickly respond to grass fires is becoming a bigger and bigger problem.

#### Eddyville Fire District

The local planning team identified the canyon areas to the north and east as the biggest concern for the district. There are many areas within the canyons where the fire trucks cannot get into. In addition, eastern redcedar has become established in that area as well. Since 2000, Eddyville Fire has reported eight grass/wildfire events. Two of the events were large with one burning 320 acres and the other burning 480 acres.

#### Elm Creek Fire District

Elm Creek Fire District reported 14 grass/wildfire events since 2000. The largest event occurred in September 2002 and burned 15 acres. Areas most at risk to fire include pasture ground on the north side of the district, crop ground, and areas along Interstate 80 and the Platte River due to difficulties with navigation.



#### Gibbon Volunteer Fire District

The local planning team identified the areas north and south of Gibbon as the areas most at risk to wildfire. Since 2000 the Gibbon Volunteer Fire District has responded to 93 reported fire events. The fires burned approximately 250 acres and caused \$370 in damages.

#### Pleasanton Fire District

The district has multiple subdivisions in a rural setting that are in the wildland urban interface with limited water supplies. In March 2015, the district had a large wildfire in rough terrain that threatened and came within 100 feet of one of those subdivisions. The district reported responding to 39 fires since 2000. The largest fire occurred in March 2010 and burned 600 acres of grassland.

### **Hazardous Materials Release**

Fire districts are some of the first responders to a hazardous materials spill. Although many districts do not have or have minimal training for hazmat response, they will help in evacuation, containment, securing a permitter around the spill, and give medical attention to any injured individuals.

#### Doniphan Fire District

The Doniphan Fire District is primarily concerned with Magellan Pipeline Company that has a large fuel pipeline with storage onsite. In addition, lots of hazardous chemicals are transported down Interstate 80 and Highway 280. The district has three members trained to Hazardous Materials Operations Level, but more are needed.

#### Elm Creek Fire District

The Elm Creek is primarily concerned with Rusty's Fertilizer, Interstate 80, Highway 183, and the Union Pacific Railway line. All house or carry large amounts of chemicals daily. Union Pacific releases a bulletin on high hazard loaded trains and their schedule. If a spill were to occur the Buffalo County Hazmat Team would respond. Volunteers in the department have situational training on spill response but more is needed.

#### Gibbon Volunteer Fire District

Primary concerns are Interstate 80, Highway 30, and the rail lines. In addition, the planning team identified four agricultural chemical businesses in the district. Agricultural chemicals are mostly transported through the district, but the rail line also carries various hazardous materials daily. If a hazardous spill were to occur, the fire district staff would work with the county hazmat team to contain and clean the spill. The fire district and county hazmat team walk through each chemical storage facility yearly with Tier II reports.

#### Pleasanton Fire District

There is an agricultural fertilizer operation on the northeast side of Pleasanton which stores a large amount of anhydrous ammonia certain times during the year. Large amounts of fuel and fertilizer are also stored there. No major spills have occurred, but the village may need to be evacuated in the event of a leak. Local routes also regularly carry agricultural chemicals. Many of these roads are heavily trafficked and are gravel. In the event of a large spill the district would rely on the regional hazmat team with some members trained to an operations level. Fire district members regularly tour the sites that house chemicals and participate in roundtable scenarios, but additional training is needed.

### Public Health Emergency

Public health emergencies can severely impact staffing of fire districts and can cause resources to be stretched thin. Firefighters are at higher risk of contracting an illness as they may not be able to implement all health safety measures when performing their job. Many fire districts also include or serve as the local EMT. During a public health emergency there is likely to be more EMT calls, which may cause staffing and resource issues. Risk of contracting the illness also increases as staff may be around more infected individuals than normal.

### Severe Thunderstorms

Lightning is a major cause of grass/wildfires in the planning area. Hail can cause damage to district owned buildings and vehicles. In addition, severe thunderstorms can cause power outages and can knockout communication. If needed fire districts will help with response and recovery efforts for a severe thunderstorm event. Many districts perform storm spotting to help with notification to the public. The Central City Volunteer Fire Department specifically mentioned that the growing use of different apps and social media platforms has increased misinformation and affected public response.

### Severe Winter Storms

Severe winter storms can negatively impact response times due to closed roads and hazardous travel conditions. In addition, ice and heavy snow can cause power and communication outages. Fires have also occurred due to downed power lines during ice storms. Fire districts will help in response and recovery efforts during and after a severe winter storm.

### Tornadoes and High Winds

Like severe thunderstorms, tornadoes and high winds can cause power outages, knockout communication, and cause damage to district owned buildings and vehicles. High winds are a primary factor in fire spread and can make it difficult for districts to contain a wildfire. As first responders, fire districts will be a part of the response and recovery efforts during any major tornado or high wind event. Many districts perform storm spotting to help with notification to the public. Travel after a tornado or high wind event can also be impacted due to downed power lines and tree limbs.

## Mitigation Strategy

Most fire districts have limited financial resources with annual budgets limited to maintaining current facilities and equipment. As such, each district will continue to utilize existing relationships with local, county, state, and federal agencies in the implementation of mitigation projects.

### New Mitigation Actions

#### Central City Volunteer Fire Department

Mitigation Action	Purchase Response Equipment
<b>Description</b>	Purchase equipment for fire and other hazard response.
<b>Hazard(s) Addressed</b>	Grass/Wildfire
<b>Estimated Cost</b>	\$10,000
<b>Local Funding</b>	Donations
<b>Timeline</b>	Ongoing
<b>Priority</b>	High
<b>Lead Agency</b>	Fire Chief
<b>Status</b>	This is an ongoing action.

Section Seven | Fire Districts Profile

Mitigation Action	Response to New Storm Shelter
Description	Determine how to notify the public, how to handle traffic flows, and what additional infrastructure will be needed.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Thunderstorms
Estimated Cost	Staff Time
Local Funding	Staff Time
Timeline	2-5 Years
Priority	High
Lead Agency	Fire Chief, Central City, Central City Public Schools, County Emergency Management
Status	Not Started

Doniphan Fire District

Mitigation Action	Purchase Response Equipment
Description	Purchase updated response apparatus and a grass rig for grass/wildfire response. The current equipment is becoming unreliable.
Hazard(s) Addressed	Grass/Wildfire
Estimated Cost	\$100,000+
Local Funding	General Budget
Timeline	2-5 Years
Priority	High
Lead Agency	Fire Chief, Fire Board
Status	A new grass rig was initially budgeted, but funds had to go towards SCBAs.

Eddyville Fire District

Mitigation Action	Alert Sirens
Description	The current siren for the village doesn't work all the time and needs to be replaced.
Hazard(s) Addressed	Tornadoes and High Winds
Estimated Cost	\$15,000+
Local Funding	General Budget
Timeline	2-5 Years
Priority	High
Lead Agency	Fire Chief, Fire Board, Village of Eddyville
Status	Not Started

Mitigation Action	New Fire Hall
Description	A new fire hall is needed for the district
Hazard(s) Addressed	All Hazards
Estimated Cost	\$200,000+
Local Funding	General Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	Fire Chief, Fire Board
Status	Not Started

## Elm Creek Fire District

Mitigation Action	Storm Shelter / Safe Room
Description	Identify and evaluate existing safe rooms and/or storm shelters; improve and/or construct safe rooms and/or storm shelters; design and construct storm shelters and safe rooms in highly vulnerable areas.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Thunderstorms
Estimated Cost	Unknown
Local Funding	General Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	Fire Chief, Fire Board
Status	Not Started

## Gibbon Volunteer Fire District

Mitigation Action	Purchase Response Equipment
Description	Purchase equipment for fire and other hazard response.
Hazard(s) Addressed	Grass/Wildfire
Estimated Cost	\$100,000
Local Funding	General Budget
Timeline	2-5 Years
Priority	High
Lead Agency	Fire Chief
Status	Starting to budget and plan for updating equipment.

Mitigation Action	Reduce Bottlenecks / Flow Restrictions
Description	Clean Wood River to reduce flow restrictions and make water flow better through the river.
Hazard(s) Addressed	Flooding
Estimated Cost	\$50,000
Local Funding	General Budget
Timeline	2-5 Years
Priority	Medium
Lead Agency	Fire Chief, City of Gibbon, Central Platte NRD
Status	Not Started

Mitigation Action	Wildfire Response Training/Exercises
Description	Perform additional wildfire response training and exercises for staff.
Hazard(s) Addressed	Grass/Wildfire
Estimated Cost	Staff Time
Local Funding	Staff Time
Timeline	Ongoing
Priority	High
Lead Agency	Fire Chief
Status	Training staff is an ongoing action.

Pleasanton Fire District

Mitigation Action	Backup and Emergency Generators
Description	A backup generator is needed at the Fire Hall to power the hall and warning siren.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$40,000
Local Funding	General Budget
Timeline	2-5 Years
Priority	Medium
Lead Agency	Rural Fire Board, Fire Chief
Status	Not Started

Mitigation Action	Increase Rural Water Supply
Description	Additional rural water supply is needed to help protect the expanding rural subdivisions.
Hazard(s) Addressed	Grass/Wildfire
Estimated Cost	\$100,000
Local Funding	General Budget
Timeline	1 Year
Priority	High
Lead Agency	Rural Fire Board, Fire Chief
Status	Started to identify possible locations.

Mitigation Action	New Fire Hall
Description	A new Fire Hall is needed that is not located in the floodplain.
Hazard(s) Addressed	Flooding
Estimated Cost	\$2,000,000
Local Funding	Fundraisers, Bonding
Timeline	2-5 Years
Priority	Medium
Lead Agency	Rural Fire Board, Fire Chief
Status	Land and dirt work has been donated. The district has started a fundraising campaign for the building.

## Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside planning documents, during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. The table below shows who will be responsible for reviewing the profile, the frequency of review, and how the public will be involved.

**Table FD.8: Plan Maintenance**

Participating Fire District	Reviewers	Frequency	Public Involvement
Central City Volunteer Fire Department	Fire Chief	Bi-Annually	Social Media, Board Meetings
Doniphan Fire District	Fire Chief	Annually	Board Meetings
Eddyville Fire District	Assistant Fire Chief	Bi-Annually	Board Meetings
Elm Creek Fire District	Fire Chief, City Administrator	Annually	Social Media, Public Meetings
Gibbon Volunteer Fire District	Fire Chief, President, Secretary	Annually	Board Meetings, Newspaper, Facebook Page, Notices at Local Businesses
Pleasanton Fire District	Fire Chief, Rural Board, Fire Department	Annually	Annual Newsletter, Board Meetings, Social Media



**District Profile**

**Four Corners Health  
Department**

**Central Platte NRD  
Hazard Mitigation Plan Update**

**2022**

## Local Planning Team

The Four Corners Health Department’s local planning team for the hazard mitigation plan are listed in the table below along with the meetings attended. All participant worksheets were filled out and returned by the health department.

**Table FCH.1: Four Corners Health Department Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
<b>Thomas Barnett</b>	Emergency Response Coordinator	Four Corners Health Department	Lexington – Virtually	Virtual

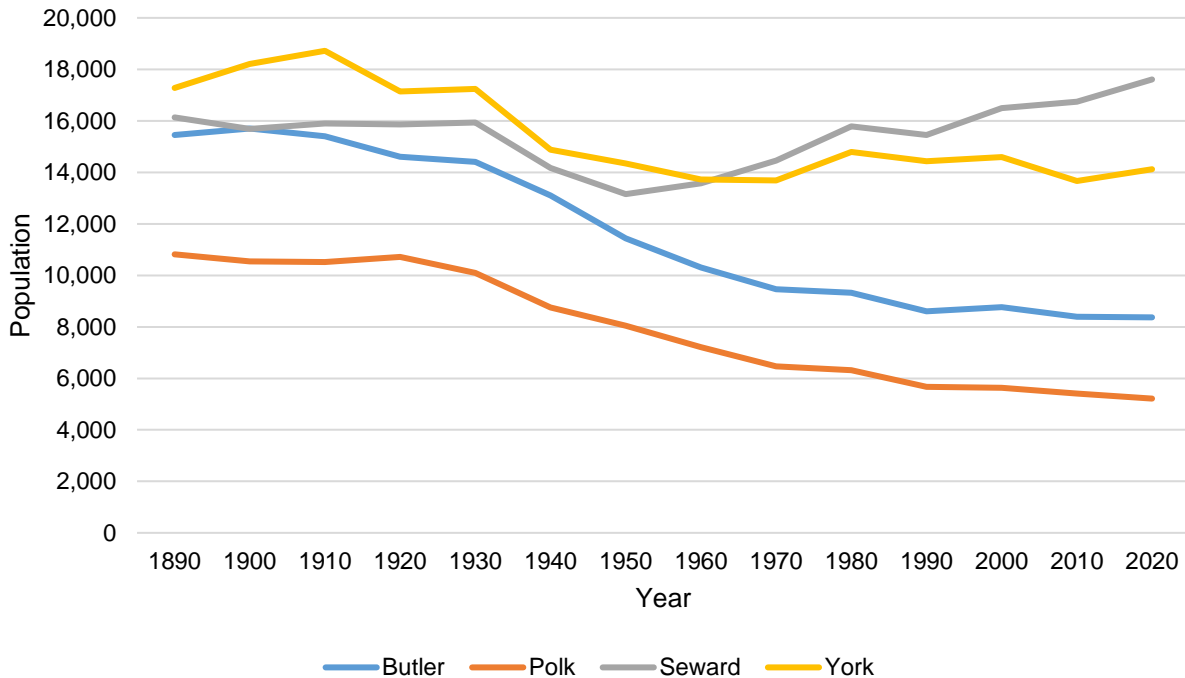
## Location and Geography

The Four Corners Health Department is headquartered in the City of York. The district serves communities in Butler, Polk, Seward, and York counties.

## Demographics

The population served by the Four Corners Health Department has been increasing since 2010. Butler and Polk counties slightly declined in population, while Seward and York counties grew in population. The total population of the four-county region was 47,337 people in 2020.<sup>24</sup>

**Figure FCH.1: District County Population**



Source: U.S. Census Bureau

24 United States Census Bureau. “2020 Decennial Census: P1: DEC Redistricting Data.” <https://data.census.gov/cedsci/>.



The young, elderly, minority populations and poor may be more vulnerable to certain hazards than other groups. Looking at the Four Corners Health Department's population:

- **40.4 median age.** The median age of the district was 40.4 years old in 2019. This is older than the state's median age of 36.5.<sup>25</sup>
- **7.6% is non-white.** The district is less ethnically diverse than the state (7.6% is non-white compared to 21.59%).<sup>26</sup>
- **7.8% of people living below the poverty line.** The poverty rate in the district (7.8%) was slightly higher than the state's poverty rate (7.2%) in 2019.<sup>27</sup>

## Governance

The Four Corners Health Department is supervised by a 10-member Board of Health. They appoint the executive director, who will oversee the implementation of hazard mitigation projects. The health department's Emergency Response Coordinator manages all training records for personnel and conducts refresher courses as necessary. All full-time personnel are expected to be trained in the incident command structure as well as the National Incident Management System via the following courses: IS 100, 200, 700, and 800. Other offices are listed below.

- Public Health Nurse Manager/Community Education Coordinator
- Community Planner
- Disease Surveillance/Environmental Health
- Emergency Response Coordinator
- Mental Health Practitioner
- Public Health Nurse
- Health Educator
- Community Health Worker

## Capability Assessment

The mission of the health department is to promote health, prevent disease, and protect the environment, improving the health of the Four Corners Community. The health department regularly engages in program and services such as immunizations, environmental health, healthy living, healthy baby, diabetes resources, safety/care seats, oral health, emergency preparedness, health issues, tobacco prevention, Covid-19 information, and veteran services.

Approximately 50%-60% of department funds are grant based with the remaining coming from infrastructure and LB1060 funds. As such, a large portion of funds are project-specific and thus restricted. Most new capital projects must be obtained through new grant funding. The recent Covid-19 pandemic has resulted in an increase in overall funding, however, that increase is not guaranteed for future budget cycles. Mitigation related grants or funds received by the health department have been for household hazardous wastes. Additional mitigation efforts are done as a partner agency at the municipal, county, or state level.

Due to the unique structure of health departments, the typical capability assessment table was not used. The following table summarizes the district's overall capabilities.

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

26 United States Census Bureau. "2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates." <https://data.census.gov/cedsci/>.

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

**Table FCH.2: Overall Capability**

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

## Plan Integration

Four Corners Health Department maintains an all-hazards emergency response plan which is updated regularly. In addition, the health department coordinates with local emergency management and health systems to prepare for and respond to emergencies.

## Future Development Trends

Most changes over the past five years at Four Corners Health Department have been in the area of personnel (e.g., resignations and hirings). Changes in the next five years are dependent upon future funding levels and due to the viability of that funding, cannot be predicted with any degree of accuracy.

## Community Lifelines

### Transportation

The Four Corner Health Department’s primary transportation concern is the potential inundation of main highways throughout the jurisdiction. Interstate 80, US Highways 6, 34, 81, and Nebraska State Highways 15, 39, 64, 66, 69, 92, 103 all travel through the district. Many of these highways are regularly flood or are near bodies of water and if inundated, nearby jurisdictions would be cut off from evacuation and delivery routes. A Nebraska Central Railroad Company line and three Burlington Northern Santa Fe Railway lines travel through the district. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors and areas more at risk of transportation incidents.

### Hazardous Materials

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are a total of 108 fixed chemical storage sites within the district’s four county region.<sup>28</sup> Names and addresses of the sites can be found in the county participant sections, Upper Big Blue NRD Hazard Mitigation Plan, or the Lower Elkhorn Hazard Mitigation Plan.

### Health and Medical Facilities

The four-county region served by the Four Corners Health Department has four hospitals with a total of 85 beds.

**Table FCH 2: Hospital Locations**

County	Hospital Name	City	Number of Beds
Butler	Butler County Health Care Center	David City	20
Polk	Annie Jeffrey Memorial County Health Center	Osceola	16
Seward	Seward Memorial Hospital	Seward	24
York	York General Health Care Services	York	25
York	Henderson Health Care Services	Henderson	13

Source: Nebraska Department of Health and Human Services<sup>29</sup>

<sup>28</sup> Nebraska Department of Environment and Energy. “Search Tier II Data.” Accessed January 2022.

<sup>29</sup> Department of Health and Human Services. 2022. “State of Nebraska Roster: Hospitals.” <https://dhhs.ne.gov/licensure/Documents/Hospital%20Roster.pdf>.

### Critical Facilities

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

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

**Table FCH.3: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Main Office	N	Y	N
2	Polk County Health Department	N	N	N



Figure FCH.3: Critical Facilities 1

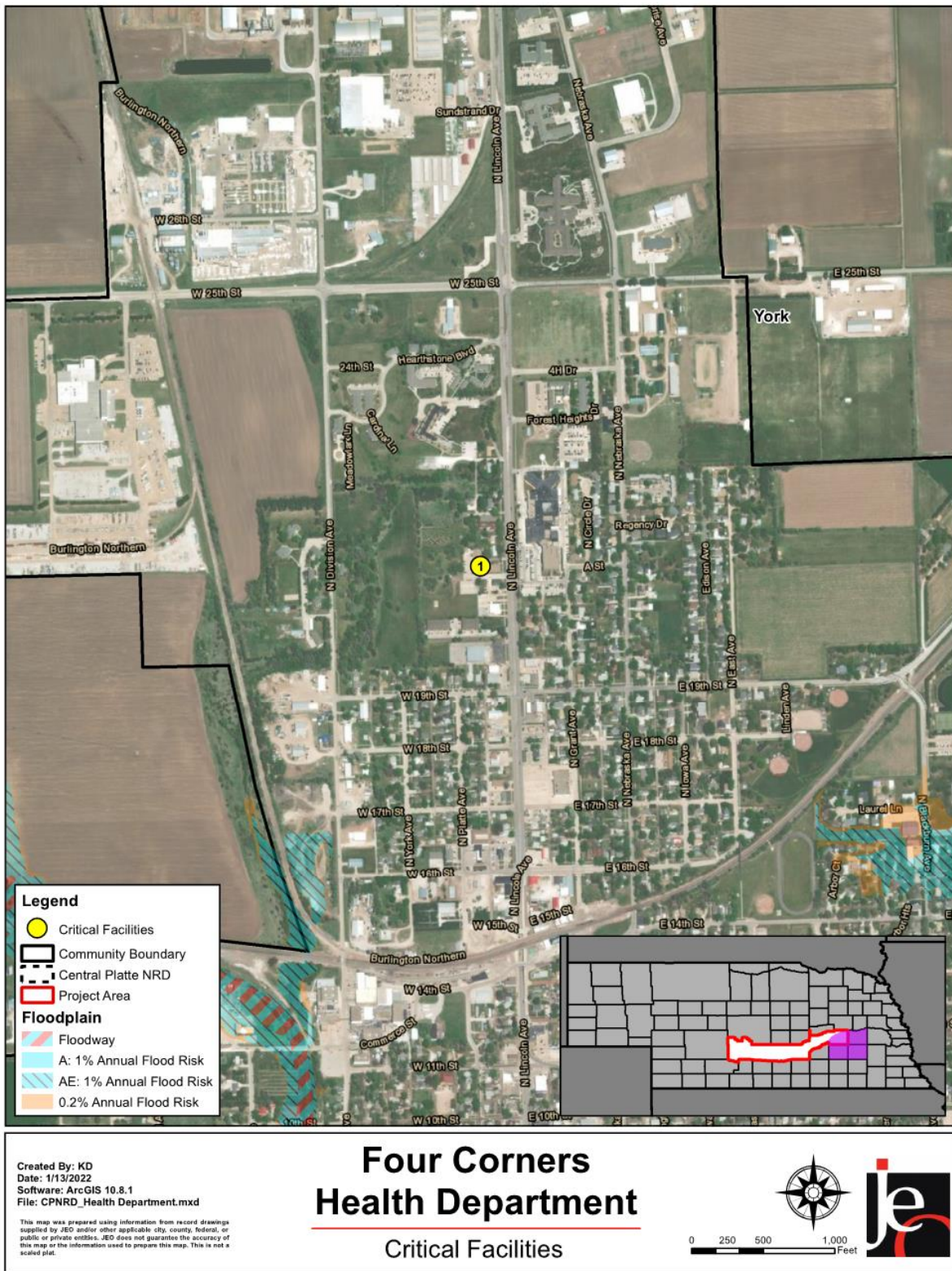
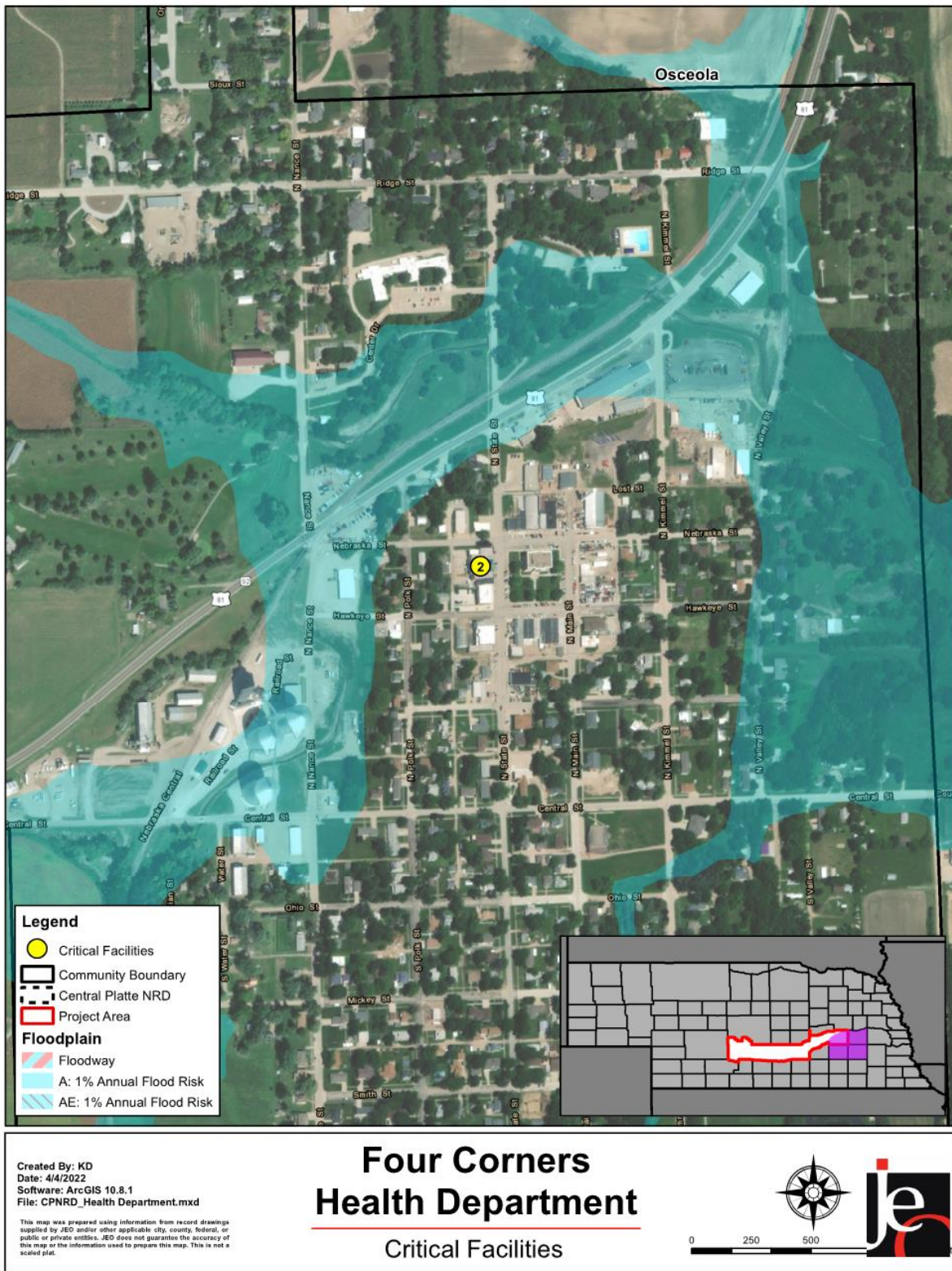




Figure FCH.4: Critical Facilities 2



## Historical Occurrences

See the Polk County profile, Upper Big Blue NRD Hazard Mitigation Plan, or Lower Elkhorn Hazard Mitigation Plan for historical hazard events, including the number of events, damage estimates, and any fatalities or injuries. Larger scale and more damaging events that impacted the health department are discussed under Hazard Prioritization.

The following table provides a summary of hazards that have or have the potential to affect the Four Corners Health Department. The district was evaluated for previous hazard occurrence and the probability of future hazard events on each of the 14 hazards profiled in this plan. The evaluation process was based on data collected; 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 FCH.4: Four Corners Health Department Hazard Matrix**

Hazard	Four Corners Health Department
Animal and Plant Disease	X
Dam Failure	X
Drought	X
Earthquakes	X
Extreme Heat	X
Flooding	X
Grass/Wildfires	X
Hazardous Materials Release	X
Levee Failure	X
Public Health Emergency	X
Severe Thunderstorms	X
Severe Winter Storms	X
Terrorism	X
Tornadoes and High Winds	X

## 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 department. The local planning team prioritized the selected hazards based on historical hazard occurrences, potential impacts, and the department’s capabilities. For more information regarding regional hazards, please see *Section Four: Risk Assessment*.

### Flooding

In the spring of 2019, flooding occurred throughout the four-county area. The flooding prompted evacuations and caused major damages to homes and businesses. The Four Corners Health Department was involved in the emergency response during the flood by assisting with community recovery, emergency operation coordination, information sharing, medical countermeasure dispensing and administration, medical material management and distribution, and responder safety and health. The health department’s role in recovery operations was minimal. After the 2019 floods, after action reports were completed to better identify areas for improvement for future flooding events. Concerns for this hazard include life and safety, property damage, well contamination, non-pharmaceutical intervention needs, and medical intervention needs. Continual review and improvement of emergency operations plans will be needed to reduce risk to the department and communities.

### **Hazardous Materials Release**

Within the Four Corners Health Department jurisdiction, there are chemical storage locations near communities, rail lines that carry hazardous chemicals, and numerous pipelines. However, the health department does not currently regulate any of these chemical storage locations. It is important that local populations maintain vigilance for any potential hazardous materials release. In the event of a hazardous material release, the health department would be available in whatever capacity required by the emergency manager. The health department can assist with fatality management, mass care, medical countermeasure dispensing and administration, medical material management and distribution, and responder safety and health among other capabilities.

### **Public Health Emergency**

There have been two pandemics which have impacted the health department. The first was the H1N1 pandemic of 2009-2010. The second is the ongoing Covid-19 pandemic. Both of these instances impacted the department's ability to provide programming to the public, as well as normal daily operation due to the amount of manpower and resources required. Primary concerns related to public health emergencies are life and safety, disruption of services, non-pharmaceutical intervention needs, and medical intervention needs.

After the H1N1 pandemic the department created pandemic plans; however, they were not intended to be used in a long-term setting like the current Covid-19 pandemic. After action reports are beginning to be conducted for the current pandemic but will take time in identifying what improvements will be needed to better prepare for future pandemics. Identified impacts from the COVID-19 include:

- Staffing issues
- Testing availability
- Vaccination ability
- Information dissemination
- Combating mis/disinformation
- Provider/staff mental health

Throughout the pandemic Four Corners Health Department has followed the recommended guidance of both the CDC and the Nebraska Department of Health and Human Services. Additional health measures, however, were enacted at the local level throughout the district.

### **Severe Winter Storms**

Severe winter storms can cause power outages, disruption of services due to poor travel conditions, and injury to vulnerable populations. The Four Corners Health Department has a backup generator to handle any losses in power. In the event of a severe winter storm, the health department can assist with fatality management, mass care, medical countermeasure dispensing and administration, medical material management and distribution, and responder safety and health among other capabilities. The Four Corners jurisdiction has not had a formal emergency declaration based on severe winter storms. However, it is not uncommon for winter storms to prompt the opening of emergency shelters in various communities.

## Tornadoes and High Winds

Tornados have the potential to cause significant damages to critical facilities, power outages, and loss of life. The health department building has a designated shelter basement where all staff would go in the event of a tornado. All vital records are stored in an interior room of the building. Should power be lost, the building is equipped with a backup generator.

In May 2014, a tornado struck within department’s jurisdiction causing large-scale property damage. After action reports were completed for this tornado, specifically addressing volunteer coordination centers to better identify areas for improvement. Concerns include property damage, public safety, and disruption of services. The health department is available to provide post disaster assistance through volunteer management, fatality management, mass care, medical countermeasure dispensing and administration, medical material management and distribution, and responder safety and health among other services.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Assist Vulnerable Populations
<b>Description</b>	Organize outreach to vulnerable populations, including establishing and promoting accessible heating or cooling centers in the community. Create a database to track those individuals at high risk of death, such as the elderly, homeless, etc. Informing residents of shelter locations and evacuation routes.
<b>Hazard(s) Addressed</b>	Extreme Heat, Severe Winter Storms
<b>Estimated Cost</b>	Staff Time
<b>Local Funding</b>	Staff Time
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Emergency Response Coordinator, Community Education Coordinator, Executive Director
<b>Status</b>	Not Started

Mitigation Action	Protect Critical Facilities and Equipment
<b>Description</b>	Install lightning protection devices and methods, such as lightning rods and grounding, on communications infrastructure and other critical facilities. Install and maintaining surge protection on critical electronic equipment.
<b>Hazard(s) Addressed</b>	Severe Thunderstorms
<b>Estimated Cost</b>	Unknown
<b>Local Funding</b>	General Budget
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Emergency Response Coordinator, Executive Director
<b>Status</b>	Not Started

Mitigation Action	Public Awareness/Education
<b>Description</b>	Educate citizens regarding the dangers of various natural hazards and the steps they can take to protect themselves when they occur. Annually distributing flood protection safety pamphlets or brochures to the owners of flood-prone property. Encouraging homeowners to install carbon monoxide monitors and alarms. Educating citizens that all fuel-burning equipment should be vented to the outside. Promote the use of weather radios. Support severe weather awareness week. Establish a “hazard awareness week” in coordination with the media to promote hazard awareness (seasonal). Establish an interactive website for educating the public on hazard mitigation and preparedness measures. Establish hazard information centers. Provide hazard vulnerability checklists for homeowners to conduct their own inspections. Participating in Nation Weather Service StormReady Program.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	Staff Time
<b>Local Funding</b>	Staff Time
<b>Timeline</b>	Ongoing
<b>Priority</b>	Medium
<b>Lead Agency</b>	Community Education Coordinator, Emergency Response Coordinator, Executive Director
<b>Status</b>	Not Started

### Plan Maintenance

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

The Emergency Response Coordinator will be responsible for reviewing and updating the plan on a bi-annual basis. The plan review will be part of the regular board meetings which are open to the public. The public review process will be included in the review.



**District Profile**

**Two Rivers Public Health  
Department**

**Central Platte NRD  
Hazard Mitigation Plan Update**

**2022**

## Local Planning Team

Two Rivers Public Health Department’s local planning team for the hazard mitigation plan are listed in the table below along with the meetings attended. All participant worksheets were filled out and returned by the health department.

**Table TRH.1: Two Rivers Public Health Department Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
<b>Kraig Johnson</b>	Emergency Response Coordinator	Two Rivers Public Health Department	Lexington	Virtual
<b>Katie Mulligan</b>	Planning Section Supervisor	Two Rivers Public Health Department	-	-
<b>Matt Larson</b>	Healthcare Coalition Coordinator	Tri-Cities Medical Response System	-	-

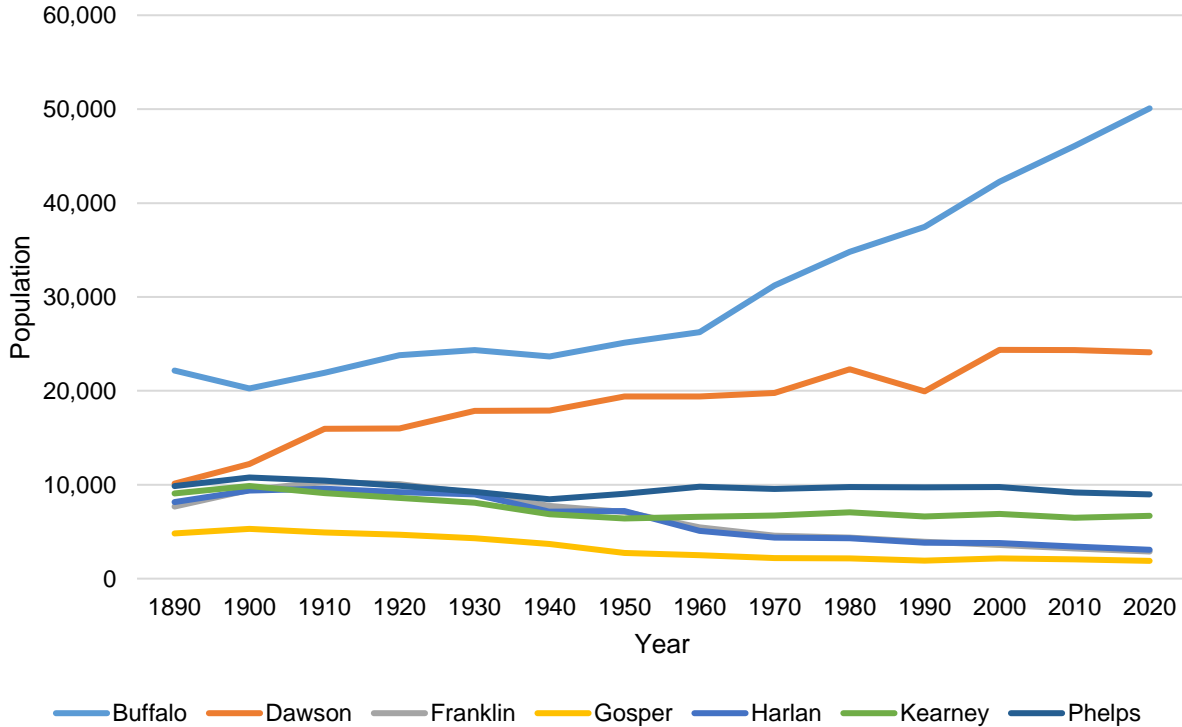
## Location and Geography

The Two Rivers Public Health Department is headquartered in the City of Kearney. The district serves communities in Buffalo, Dawson, Franklin, Harlan, Gosper, Kearney, and Phelps counties.

## Demographics

The population served by the Two Rivers Public Health Department has been increasing since 1960. However, the growth is primarily from Buffalo County. Dawson, Franklin, Gosper, Harlan, and Phelps counties have all declined in population since 2010. The total population of the seven-county region was 99,726 people in 2020.<sup>30</sup>

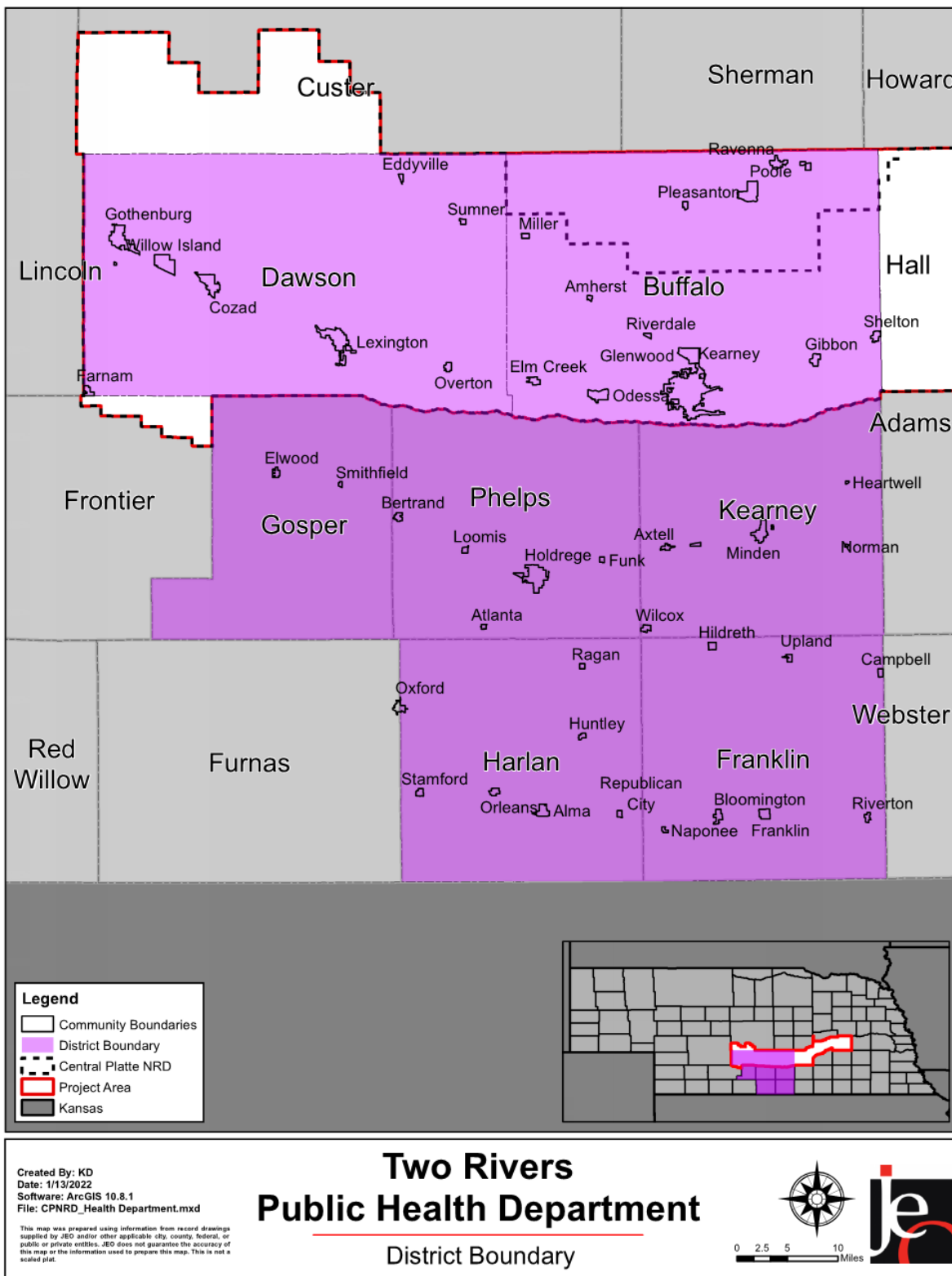
**Figure TRH.1: District County Population**



Source: U.S. Census Bureau

30 United States Census Bureau. “2020 Decennial Census: P1: DEC Redistricting Data.” <https://data.census.gov/cedsci/>.

Figure TRH.2: Two Rivers Public Health Department



The young, elderly, minority populations and poor may be more vulnerable to certain hazards than other groups. Looking at the Two Rivers Public Health Department's population:

- **36.5 median age.** The median age of the district was 36.5 years old in 2019. This is the same as the state's median age of 36.5.<sup>31</sup>
- **17.7% is non-white.** The district is less ethnically diverse than the state (17.7% is non-white compared to 21.59%).<sup>32</sup>
- **12.5% of people living below the poverty line.** The poverty rate in the district (12.5%) was higher than the state's poverty rate (7.2%) in 2019.<sup>33</sup>

## Governance

The Two Rivers Public Health Department is supervised by a 19-member Board of Health. They appoint the health director, who will oversee the implementation of hazard mitigation projects. Other offices are listed below.

- Community Health Nurses
- Epidemiologist
- Health Educators
- Dental Hygienist
- Emergency Response Coordinator
- Community Health Worker
- Program Nurse

All full-time personnel are trained and certified in ICS 100, 200, 700, and 800. Leadership is additionally trained in ICS 300 and 400. The Emergency Response Coordinator schedules numerous tabletop exercises with staff and outside partners on how to prepare, respond, and recover from emergency situations.

## Capability Assessment

The mission of the health department is to engage collaborative partners, community leaders, and the public to promote healthy lifestyles, provide preventative education, assure environmental quality, and create more health and safe communities for all who live within the district. Due to the unique structure of health departments, the typical capability assessment table was not used. The following table summarizes the district's overall capabilities. Program and services include emergency response, opioid overdose prevention, addressing health disparities, vaccinations, disease surveillance and investigations, chronic disease prevention, healthy options, lifestyle change programs, and dental health.

The recent COVID pandemic has resulted in an increase in health department funds, however, this increase is not guaranteed for future budget cycles.

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31 United States Census Bureau. "2019 Census Bureau American Community Survey: S0101: Age and Sex." <https://data.census.gov/cedsci/>.

32 United States Census Bureau. "2019 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates." <https://data.census.gov/cedsci/>.

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

**Table TRH.2: Overall Capability**

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

## Plan Integration

Two Rivers Public Health Department has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan. The health department will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

### All-Hazards Emergency Operations Plan

The districts all-hazards emergency operations plan established policies, procedures, and guidelines for emergency response and recovery when a disaster event occurs. It contains information regarding direction, communication, emergency public information, resource management, and mass care. The health department coordinates with local emergency management and local health systems to prepare for disasters.

### Community Health Assessment (2020)

The community health assessment was written to monitor the health status and understand health issues facing the population in the district. Information in this document helps to educate and mobilize the community and its resources to improve the health of the population. While specific hazards are not discussed in the assessment, it contains demographic and health information that can be useful in the identification of vulnerable populations.

### Community Health Improvement Plan (2020)

A community health improvement plan is a long-term, systematic effort to address public health problems based on the results of community health assessment activities and the community health improvement process. This plan includes goals and strategies to improve access to care, a safe environment, mental health, and suicide prevention. It also includes a Strengths, Weaknesses, Opportunities, and Threats assessment.

## Future Development Trends

Over the past five years, Two Rivers Public Health Department has experienced changes in office location and staffing fluctuation. The health department previously had two office locations, one in Kearney and one in Holdrege. Since June 2020, Two Rivers only office has been located at 516 W. 11<sup>th</sup> Street in Kearney. In February 2022, the office space on 11<sup>th</sup> Street was expanded to increase staffing space and supply areas. Staffing is currently three times the number of staff in 2019, this is primarily due to the pandemic. During the next five years, continuous changes in funding are anticipated. As funding changes due to COVID and other public health emergencies, the number and quality of staffing will also change, making it inherently difficult to hire and keep quality employees.

## Community Lifelines

### Transportation

Interstate 80, US Highways 6, 30, 34, 136, 183, 283 and Nebraska State Highways 2, 4, 10, 21, 23, 40, 44, 47, 68, 74, 89 all travel through the district. Three Nebraska Kansas Colorado Railroad lines, an Amtrak line, a Union Pacific Railroad line, and a Burlington Northern Santa Fe Railway line travel through the district. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors and areas more at risk of transportation incidents. The local planning team is particularly concerned with make sure the main routes to hospitals stay open.

### Hazardous Materials

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are a total of 205 fixed chemical storage sites within the district’s seven county region.<sup>34</sup> Names and addresses of the sites can be found in the county participant sections, Quad Counties Hazard Mitigation Plan, or the Tri-Basin NRD Hazard Mitigation Plan.

### Health and Medical Facilities

The seven-county region served by the Two Rivers Public Health Department has 11 hospitals with a total of 455 beds.

**Table TRH 3: Hospital Locations**

County	Hospital Name	City	Number of Beds
Buffalo	CHI Health Good Samaritan	Kearney	174
Buffalo	CHI Health Richard Young Behavioral Health	Kearney	61
Buffalo	Kearney Ambulatory Surgical Center	Kearney	0
Buffalo	Kearney Regional Medical Center	Kearney	93
Dawson	Cozad Community Hospital	Cozad	20
Dawson	Gothenburg Memorial Hospital	Gothenburg	14
Dawson	Lexington Regional Health Center	Lexington	25
Phelps	Phelps Memorial Health Center	Holdrege	25
Kearney	Kearney County Health Services	Minden	10
Harlan	Harlan County Health System	Alma	19
Franklin	Franklin County Memorial Hospital	Franklin	14

Source: Nebraska Department of Health and Human Services<sup>35</sup>

34 Nebraska Department of Environment and Energy. “Search Tier II Data.” Accessed January 2022.

35 Department of Health and Human Services. 2022. “State of Nebraska Roster: Hospitals.”

<https://dhhs.ne.gov/licensure/Documents/Hospital%20Roster.pdf>.



### Critical Facilities

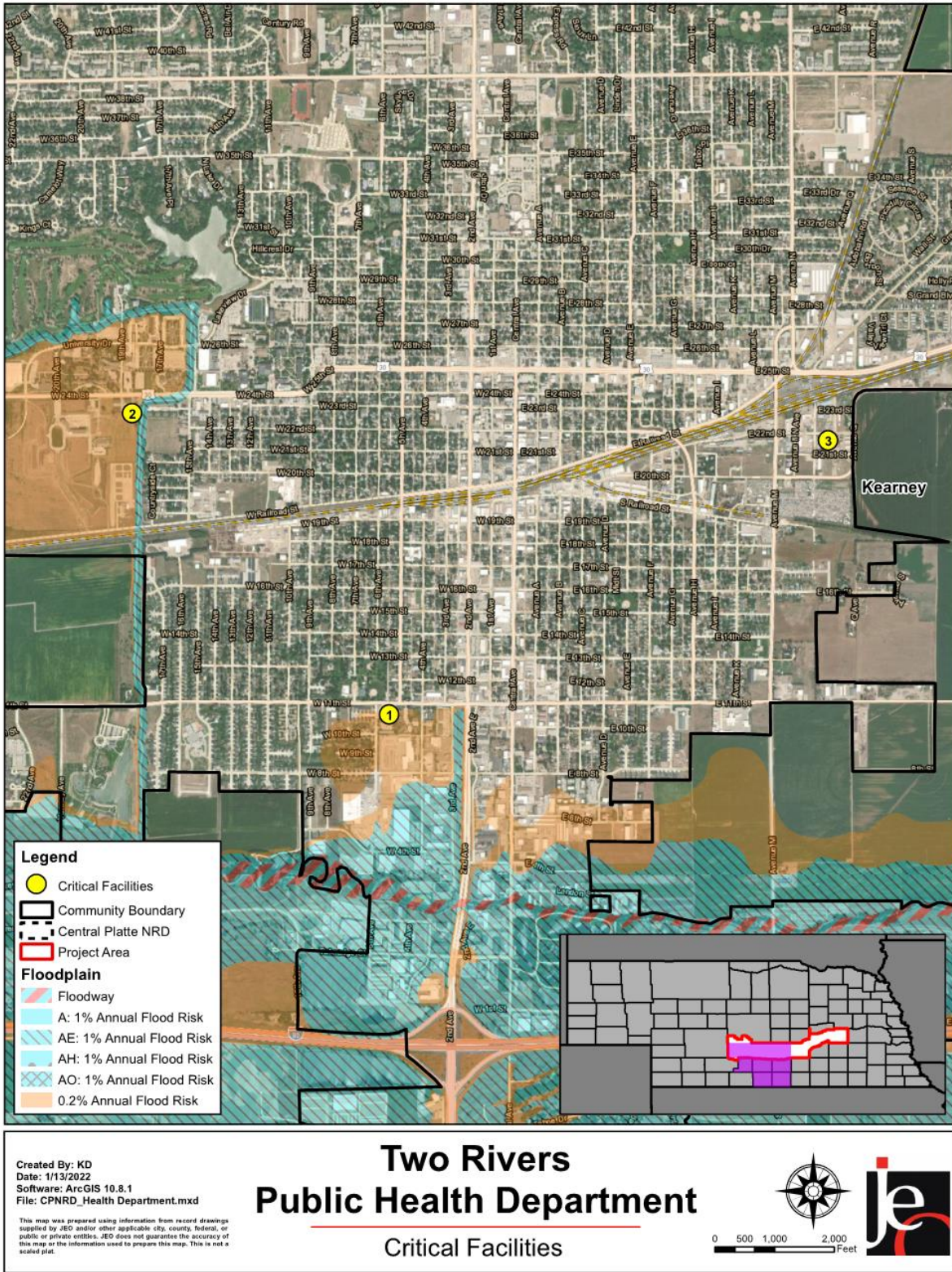
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction’s functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during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

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

**Table TRH.4: Critical Facilities**

CF Number	Name	Mass Care (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Two Rivers Public Health Department Office	N	N	Y (0.2%)
2	Two Rivers Public Health Department Storage	N	N	Y (0.2%)
3	TRMRS Storage	N	N	N

Figure TRH.3: Critical Facilities



## Historical Occurrences

See the Dawson County profile, Buffalo County profile, Tri-Basin NRD Hazard Mitigation Plan, or Quad Counties Hazard Mitigation Plan 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 department. The local planning team prioritized the selected hazards based on historical hazard occurrences, potential impacts, and the department's capabilities. For more information regarding regional hazards, please see *Section Four | Risk Assessment*.

### Flooding

Flooding can result in the loss of public utilities, water supply contamination or compromise, and the potential need for reunification of people. In the event of extensive flooding, health concerns such as water safety, the identification of and remediation of mold problems, and agricultural impacts are top concerns for the Two Rivers Health Department. Flooding can also cut off critical access to medical facilities, pharmacies, and primary care facilities which can be especially harmful to socially vulnerable populations. During the 2019 floods, various communities within the region were impacted by flooding. After the 2019 flooding event, the health department became an active participant on the Long-Term Recovery Committee.

### Hazardous Materials Release

While the health department does not currently regulate any chemical storage locations, it is important that local populations maintain vigilance for any potential hazardous materials release. The most critical stages of a hazardous materials release are the initial response and evacuation procedures. Two Rivers Health Department provides support to local partners, Fire/EMS, and emergency management. In the event of a large chemical spill, the health department would assist in the evacuation process and help displaced people by providing short-term housing through partners and basic needs assistance such as food, water, medication, and shelter.

### Public Health Emergency

During the ongoing Covid-19 pandemic, Two Rivers Health Department was responsible for information dissemination, monitoring, testing, and vaccine administration. Throughout the pandemic, the department has seen impacts to staffing levels, problems with testing and vaccine availability, struggles with information and misinformation, and has experienced provider and staff burnout. The impacts seen across the seven-county area include changes to various guidelines such as those regarding masking, schooling, and public gatherings, and a large impact to the overall mental health of the entire population.

### Severe Thunderstorms

Severe thunderstorms can cause structural damage, power outages, and disruption of communication services. During a severe thunderstorm, Two Rivers Health Department would support first responders and citizens in any initial response. The health department will also provide any necessary vaccinations, such as tetanus, to rescuers and citizens. All files are kept as both hard copies and digital backups in third-part cloud storage and most electronics are equipped with surge protectors. Future thunderstorm hazard mitigation actions include providing backup generators to the critical facilities without backup sources of power and construction of a safe room.



**Severe Winter Storms**

The main concerns during a severe winter storm are staff’s ability to report to work, power loss, and the blockage of transportation routes used to get functional needs populations to necessary appointments. During a severe winter storm, the health department will assist other partners (Meals on Wheels, Agency on Aging, first responders) as needed. The health department would like to have a backup generator for the office in the event of a prolonged power outage.

**Tornadoes and High Winds**

The health department’s primary concerns regarding tornadoes and high winds are the danger of debris, loss of utilities, road closures, and the mental health impact. The health department’s jurisdiction has been impacted by tornadoes and high winds in the past. In the event of a tornado, the health department will support local first responders, provide any needed vaccinations, and assist with re-unification processes. The Two Rivers Health Department does not currently have a safe room for staff, but the department would like to build one in the future.

**Mitigation Strategy**

**New Mitigation Actions**

Mitigation Action	Backup and Emergency Generators
Description	Protect critical facilities and equipment from power loss with a backup generator and GFCI for all equipment.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$30,000
Local Funding	Department Funds
Timeline	2-5 Years
Priority	High
Lead Agency	Health Director, Emergency Response Coordinator
Status	Not Started

Mitigation Action	Storm Shelter / Safe Room
Description	Construction of a safe room for all staff in accordance with FEMA standards.
Hazard(s) Addressed	Tornado and High Winds, Severe Thunderstorms
Estimated Cost	\$25,000
Local Funding	Department Funds
Timeline	5+ Years
Priority	Medium
Lead Agency	Health Director, Emergency Response Coordinator, Contracted Construction Company
Status	Not started

**Plan Maintenance**

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside planning documents, during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. The Emergency Response Coordinator and Planning Section Supervisor will be responsible for reviewing and updating the plan in the future. This will be done bi-annually, and updates will be discussed during a public board meeting.