

BANNER COUNTY APPENDIX

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County Profile

BANNER COUNTY

North Platte NRD Hazard Mitigation Plan 2021

Local Planning Team

Table BCO.1: Banner County Local Planning Team

NAME	TITLE	JURISDICTION
ROBERT GIFFORD	Commissioner	Banner County
ROBERT POST	Commissioner	Banner County
SHARON SANDBERG	Commissioner	Banner County
TOM NEAL	Road Superintendent	Banner County
TIM NEWMAN	Emergency Manager	Region 22 Emergency Management

Location, Geography, and Climate

Banner County is located in northwest Nebraska and is bordered by Scotts Bluff, Morrill and Kimball counties. The total area of Banner County is 746 square miles. Major waterways within the county include Pumpkin Creek, and Willow Creek. The county is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Most of Banner County lies in the plains topographic region, with the vast majority of the county's land characterized by agricultural fields.

Climate

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

Table BCO.2: Banner County Climate Normals

	BANNER COUNTY	STATE OF NEBRASKA
JULY NORMAL HIGH TEMP¹	88.0°F	87.4°F
JANUARY NORMAL LOW TEMP¹	14.1°F	13.8°F
ANNUAL NORMAL PRECIPITATION²	16.2"	23.8"
ANNUAL NORMAL SNOWFALL²	28.2"	25.9"

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

Transportation

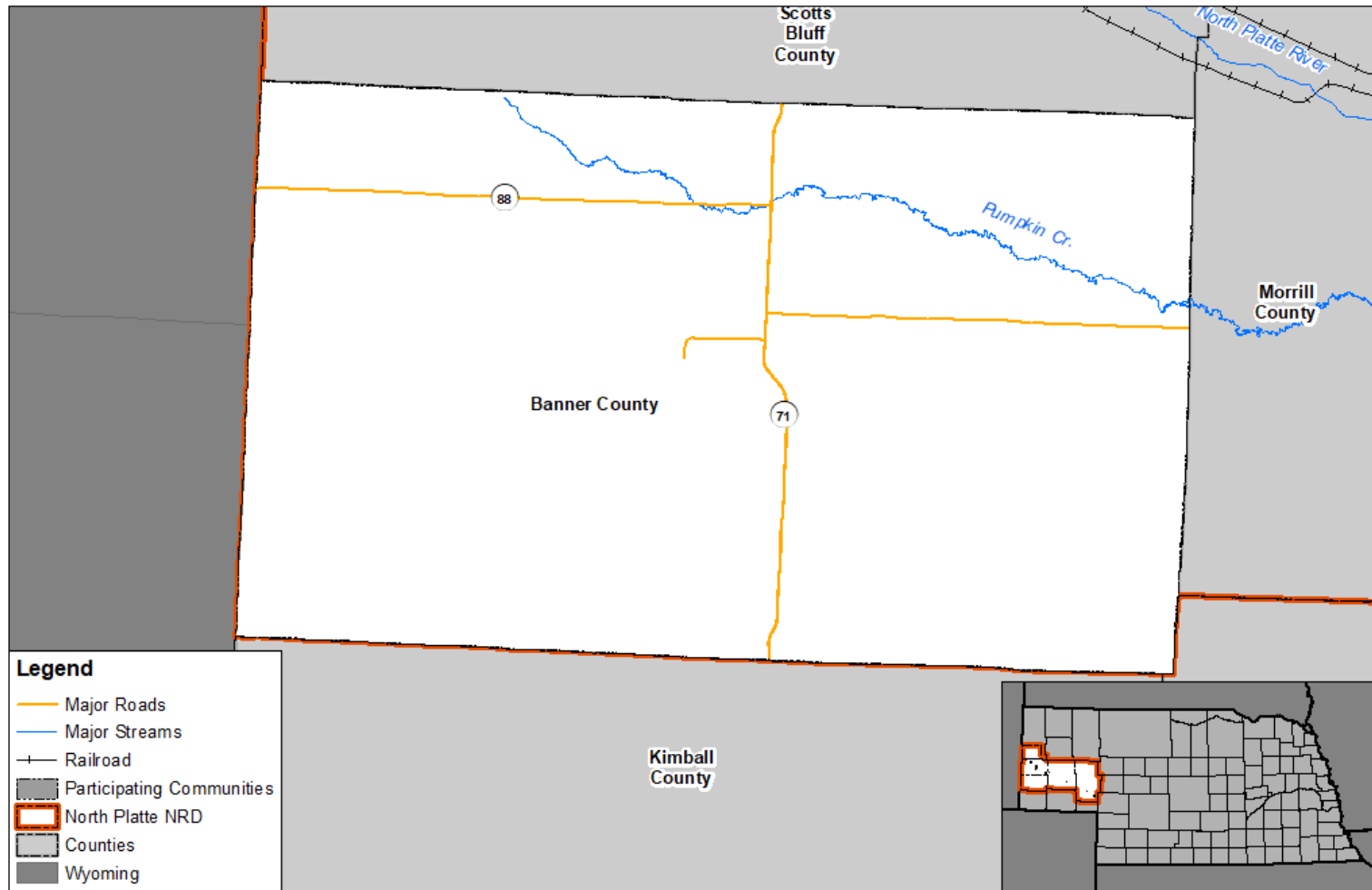
Banner County's major transportation corridors include Nebraska Highway 71, which runs North/South through the center of the county, and Nebraska Highway 88 which runs East/West through the north half of the county. According to the Nebraska Department of Transportation, Nebraska Highway 71 accommodates 2,400 vehicles per day, 345 of which are heavy commercial vehicles and Nebraska Highway 88 accommodates 670 vehicles per day, 110 of which are heavy commercial vehicles.³ In March 2021, Highways 71 and 88 were closed for three days which affected transportation throughout the county.

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

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

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

Figure BCO.1: Banner County

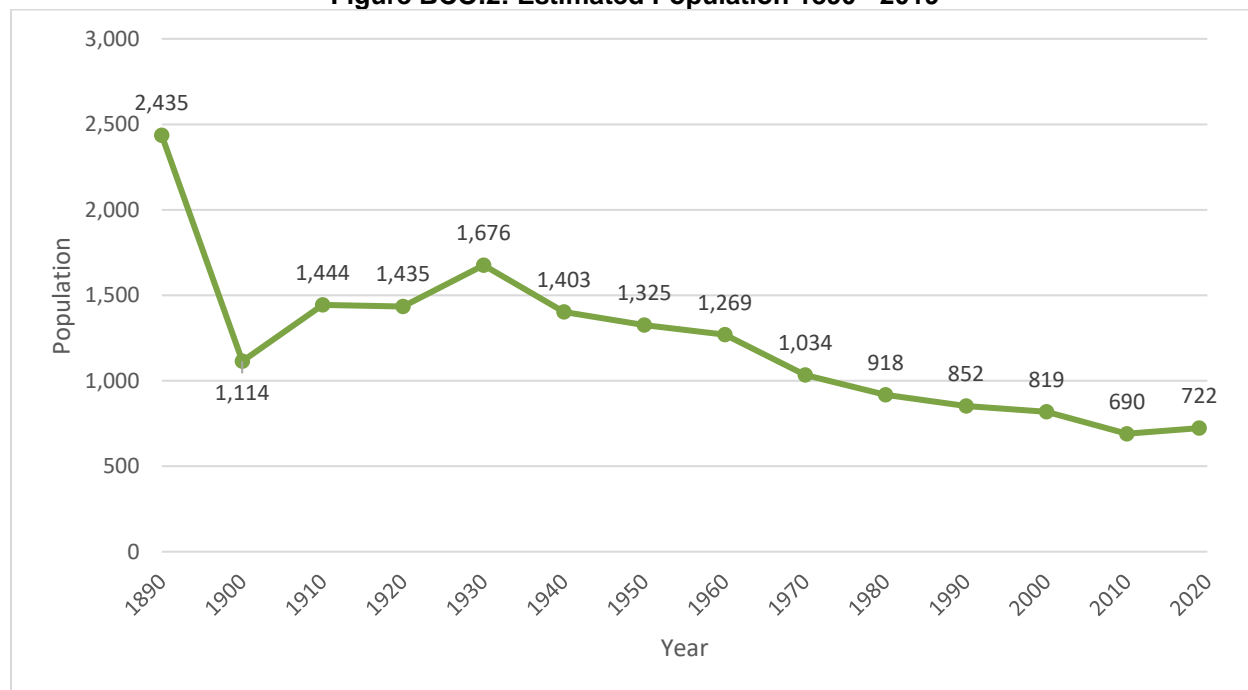


<p>Created By : NL Date : 3/5/2021 Software : ArcGIS 10.7.1 File Name : Planning Area - County Basemap.mxd</p> <p><small>This map was prepared using information from record drawings supplied by JEO and/or other applicable city, county, federal, or public or private entities. JEO does not guarantee the accuracy of this map or the information used to prepare this map. This is not a scaled plot.</small></p>	<h2>Banner County</h2> <p>County Boundary</p>	
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Demographics

The following figure displays the historical population trend from 1890 to 2019. This figure indicates that the population of Banner County has decreased since 1930 but increased slightly recently. The population in 2019 was estimated to be 722. This is relevant to hazard mitigation because counties with a growing population may be more prone to developing additional land and building new structures, while counties with declining populations may lack adequate funds to pursue mitigation projects. Net population growth may increase the number of people and properties vulnerable to hazards.

Figure BCO.2: Estimated Population 1890 - 2019



Source: U.S. Census Bureau⁴

The following table indicates Banner County has a larger percentage of people under the age of five as the State of Nebraska. The county has a smaller percentage of people between the ages of 5 and 64 and a larger percentage of those over 64. The median age in Banner County is much larger than the state. This information is relevant to hazard mitigation as the very young and elderly populations may be at greater risk from certain hazards than others. For a more elaborate discussion of this vulnerability, please see *Section Four: Risk Assessment*.

Table BCO.3: Population by Age

AGE	BANNER COUNTY	STATE OF NEBRASKA
<5	8.7%	6.9%
5-64	69.8%	77.7%
>64	21.5%	15.4%
MEDIAN	46.4	36.5

Source: U.S. Census Bureau⁵

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

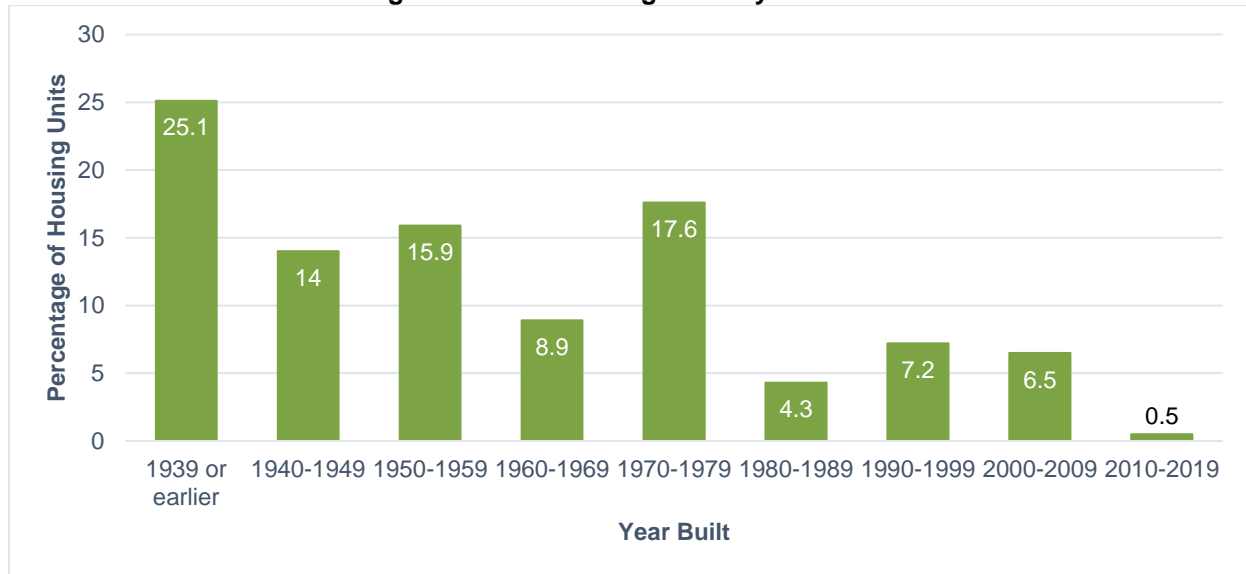
The following table indicates that median household income and per capita income for the county is lower than the State of Nebraska. Median home value and rent are also both lower than the rest of the state. These economic indicators are relevant to hazard mitigation because they indicate lower economic strength compared to the state as a whole. Areas with economic indicators which are relatively low may influence a county’s level of resilience during hazardous events.

Table BCO.4: Housing and Income

	BANNER COUNTY	STATE OF NEBRASKA
MEDIAN HOUSEHOLD INCOME	\$51,750	\$61,439
PER CAPITA INCOME	\$27,552	\$32,302
MEDIAN HOME VALUE	\$139,900	\$155,800
MEDIAN RENT	\$444	\$833

The following figure indicates that most houses in Banner County were built before 1980, with 25.1 percent being built in 1939 or earlier. According to the Census Bureau, the county has 415 housing units; with 68.2 percent of those units occupied. 5.1 percent of the county’s housing is classified as mobile homes. Housing age can serve as an indicator of risk as structures built prior to the development of state building codes may be more vulnerable to hazards. The State of Nebraska first adopted building codes in 1987, the state currently has adopted the 2018 International Building Code. Finally, locations with a substantial number of mobile homes may have a higher number of residents vulnerable to the impacts of high winds, tornadoes, and severe winter storms. There are no mobile home parks in unincorporated areas of the county.

Figure BCO.3: Housing Units by Year Built



Source: U.S. Census Bureau⁶

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

Table BCO.5: Housing Units

JURISDICTION	TOTAL HOUSING UNITS				OCCUPIED HOUSING UNITS			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
BANNER COUNTY	283	68.2%	132	31.8%	197	69.6%	86	30.4%
NEBRASKA	759,176	90.7%	78,300	9.3%	501,679	66.1%	257,497	33.9%

Source: U.S. Census Bureau⁷

Major Employers

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

Table BCO.6: Businesses in Banner County

	TOTAL BUSINESSES	NUMBER OF PAID EMPLOYEES	ANNUAL PAYROLL (IN THOUSANDS)
TOTAL FOR ALL SECTORS (2012)	8	35	\$1,060
TOTAL FOR ALL SECTORS (2018)	7	38	\$1,253

Source: U.S. Census Bureau⁸

Agriculture is also important to the economic fabric of Banner County, and the state of Nebraska as a whole. Banner County's 193 farms cover 423,063 acres of land, about 88.6% of the county's total area. Crop and livestock production are the visible parts of the agricultural economy, but many related businesses contribute as well by producing, processing, and marketing farm and food products. These businesses generate income, employment, and economic activity throughout the region.

Table BCO.7: Banner County Agricultural Inventory

BANNER COUNTY AGRICULTURAL INVENTORY	
NUMBER OF FARMS	193
LAND IN FARMS (ACRES)	423,063

Source: USDA 2017 Census of Agriculture⁹

Future Development Trends

Over the past five years, six to eight new homes have been built and a few old residences have been demolished. None of the new houses were built in the floodplain. The county has improved or replaced three bridges and made improvements to several sections of county roadways. According to the 2019 American Community Survey estimates, Banner County's population is increasing. The local planning team attribute this to an increase in younger families. In the next five years, there are no planned housing or business developments at this time.

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

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

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

Structural Inventory and Valuation

GIS parcel data as of July 2021 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

Table BCO.8: Banner County Parcel Valuation

TOTAL NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	% OF IMPROVEMENTS IN FLOODPLAIN
687	\$39,717,921	96	\$6,663,724	14%

Source: County Assessor

*Floodplain generated through HAZUS

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are 52 chemical storage sites throughout Banner County that contain hazardous chemicals.¹⁰ In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. Locations of the sites can be found in the individual participant sections.

Critical Facilities

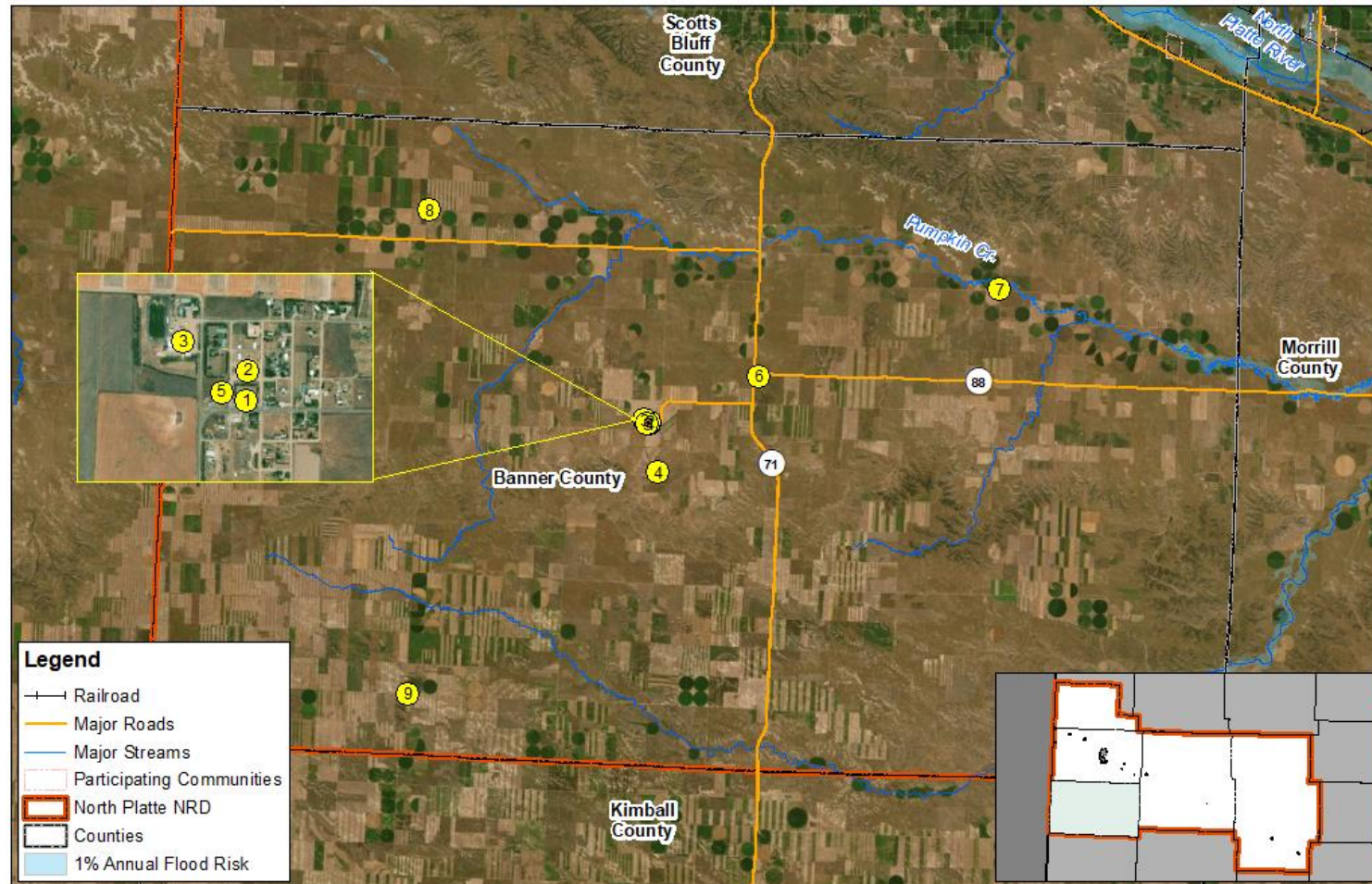
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and are essential for returning the jurisdiction's functions to normal during and after a disaster. Critical facilities were identified during the original planning process and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

Table BCO.9: Critical Facilities

CF #	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Courthouse / Warning Siren	N	Y	N
2	County Shop	N	N	N
3	Banner County School	Y	N	N
4	NRD Wells	N	N	N
5	Fire Department	N	N	N
6	Wyrulec Substation #1	N	N	N
7	Wyrulec Substation #2	N	N	N
8	Wyrulec Substation #3	N	N	N
9	High West Substation	N	N	N

¹⁰ Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed December 2020. <https://deq-iis.ne.gov/tier2/search.faces>.

Figure BCO.3: Critical Facilities



Created By: NL
 Date: 6/16/2021
 Software: ArcGIS 10.8.1
 File Name: CF - County Base map.mxd

Banner County
 Critical Facilities

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

0 4 8 Miles

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

Governance

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

- Clerk
- Treasurer
- Assessor
- Sheriff
- Attorney
- Veteran Services Officer
- Highway Superintendent
- Region 22 Emergency Manager

Capability Assessment

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

Table BCO.10: Capability Assessment

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

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

Table BCO.11: Overall Capability

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

Plan Maintenance

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

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

Plan Integration

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

Comprehensive Plan (2022 Update)

Banner County's comprehensive plan is currently under review to be updated in 2022. The plan contains goals and objectives aimed at safe growth. The local planning team indicated that efforts will be made to ensure the objectives and strategies identified in the hazard mitigation plan will be integrated into the comprehensive plan during its development.

Capital Improvements Plan

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

Historical Occurrences

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

Table BCO.12: Hazard Events for Banner County

HAZARD TYPE		COUNT	PROPERTY	CROP ²
AGRICULTURAL DISEASE	Animal Disease ¹	0	0 animals	N/A
	Plant Disease ²	22	N/A	\$247,248
DAM FAILURE⁵		2	\$0	N/A
DROUGHT⁷		438/1,512 months	\$0	\$8,840,374
EARTHQUAKES⁸		0	\$0	\$0
EXTREME HEAT⁶		Avg. 1 days/yr	\$0	\$1,284,784
FLOODING⁹	Flash Flood	6	\$250,000	\$457
	Flood	3	\$15,000	
GRASS/WILDFIRE¹⁰		13	102 acres	\$1,000
HAZARDOUS MATERIALS - FIXED SITES³		0	\$0	N/A
HAZARDOUS MATERIALS - TRANSPORTATION⁴		0	\$0	N/A

SECTION SEVEN: BANNER COUNTY COMMUNITY PROFILE

HAZARD TYPE		COUNT	PROPERTY	CROP ²
LEEVE FAILURE¹¹		0	\$0	N/A
PUBLIC HEALTH EMERGENCY¹³		31 cases		N/A
SEVERE THUNDERSTORMS⁹	Thunderstorm Wind <i>Average: 62 mph</i> <i>Range: 58-75 mph</i>	20	\$15,000	N/A
	Hail <i>Average: 1.2 in.</i> <i>Range: 0.75-3 in.</i>	100	\$91,000	\$13,609,970
	Heavy Rain	4	\$0	\$1,600,366
	Lightning	0	\$0	N/A
	SEVERE WINTER STORMS⁹	Blizzard	14	\$5,016,000
	Extreme Cold/Wind Chill	3	\$0	
	Heavy Snow	20	\$0	\$4,323,427
	Ice Storm	0	\$0	
	Winter Storm	27	\$125,000	
	Winter Weather	0	\$0	
TERRORISM¹²		0	\$0	N/A
TORNADOES AND HIGH WINDS⁹	Tornado <i>Average: EF0</i> <i>Range: EF0-EF2</i>	15	\$355,000	\$9,475
	High Winds <i>Average: 55 mph</i> <i>Range: 40-76 mph</i> <i>Injuries: 2</i>	51	\$5,500	\$9,475
TOTALS		298	\$5,872,500	\$34,467,000

N/A: Data not available

1 NDA (2014-2020)

2 USDA RMA (2000-2020)

3 NRC 1990 – 2020

4 PHMSA (1971-2020)

5 Stanford NPDP (1911-2018)

6 NOAA 1889-2020

7 HPRCC (1897-2020)

8 USGS (1900-2020)

9 NCEI (January 1996 - September 2020)

10 NFS (January 2000 - May 2020)

11 USACE NLD (2020)

12 Global Terrorism Database (1970-2017)

13 Nebraska DHHS (Feb 12, 2021)

The following table provides a summary of hazards that have or have the potential to affect each participating jurisdiction in Banner County. Each jurisdiction was evaluated for previous hazard occurrence and the probability of future hazard events on each of the 15 hazards profiled in this plan. The evaluation process was based on data collected and summarized in Table BCO.13; previous impacts or the potential for impacts to infrastructure, critical facilities, people, and the economy; and the proximity to certain hazards such as dams and levees. For example, while there have not been instances of dam failure in the county, there exists a possibility for a dam to fail in the future due to the presence of dams in the county.

Table BCO.13: Banner County Hazard Matrix

HAZARD	BANNER COUNTY	BANNER COUNTY SCHOOL DISTRICT
Agricultural Disease	X	X
Dam Failure	X	X
Drought	X	X
Earthquake	X	X
Extreme Heat	X	X
Flooding	X	X
Grass/Wildfire	X	X
Hazardous Materials - Fixed Sites	X	X
Hazardous Materials - Transportation	X	X
Levee Failure		
Public Health Emergency	X	X
Severe Thunderstorms	X	X
Severe Winter Storms	X	X
Terrorism	X	X
Tornadoes and High Winds	X	X

County Hazard Prioritization

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

Animal and Plant Disease

Much of the economy of Banner County is in agricultural animals, specifically cattle. While no true agricultural animal diseases have broken out recently, the local planning team did mention a scare with Hand, Foot, and Mouth disease from previous occurrences. The largest concern of the local planning team is shipping through the county, and cattle in transit. The county has two cattle feed lots, which elevates concerns of a significant disease outbreak. Education on animal disease is not done through the county, however local veterinarians may offer educational material.

Flooding

During the 2019 bomb cyclone, flooding washed out many county roads impacting transportation, causing long detours, and impassible roads. The event caused economic loss in the county due to crop loss, lost time due to transportation issues, and increased county road department costs to repair and replace roads.

The local planning team indicated that Banner County experiences a lot of flooding in the southern half of the county. Most often, this is flash flooding, not linked to riverine flooding. Typically, the worst flooding events occur in the spring, when snowmelt is combined with frozen ground, which does not allow infiltration. The biggest issue associated with flooding is low water crossings, which flood quickly during heavy rains. Much of the flood waters drain from Wyoming, which compounds the flooding issues in Banner County. The most common area of concern for the planning team is located on CR-17, and CR-6. When these particular areas flood, the county works to place barricades to prevent residents from attempting to cross the flood waters. Detours from CR-17

and CR-6 may result in a 25-mile detour. To help mitigate the risk of flooding the county is upgrading roads, installing more culverts, and upsizing existing culverts.

Grass/Wildfire

The county has experienced wildfires in the past, the worst of which was the Hubbard Gap Fire in 2020. The fire covered 4,000 acres and took six days to control. Total cost in fire suppression from the event was \$700,000. To prevent lasting impacts from wildfires, Banner County has signed Mutual Aid Agreements with neighboring communities to help if they should experience an event which exhausts Banner County's resources. The county also helps fund the Rural Fire Board to maintain and upgrade fire equipment as needed. Most homes in Banner County are situated on grass lots and defensible spaces around structures are encouraged.

Hazardous Materials – Transportation

The local planning team indicated that Banner County experiences a lot of chemical transportation, on Highway 71 and Highway 88. The local planning team is presently unaware of specific chemicals which are being transported along these routes. To the south of Banner County is a chemical recycling/disposal site called "Clean Harbors", typically, trucks will utilize Highway 71 through the center of Banner County to bring waste to the recycling plant. These vehicles are biggest concern for the county. If a large chemical spill were to occur the Nebraska Hazardous Incident Team or Scottsbluff Fire Department Hazmat Team would respond as there are no hazmat teams in the county. Some individuals in the county are trained on spill response but the county does not have the resources to respond.

Severe Winter Storms

The county has experienced significant winter storm events in the past. The most significant event in recent history occurred in 2019 and 2021. During these events, blizzard conditions caused large scale travel impacts and short-term power outages. Several critical facilities including the school, fire hall, and county shop are in need of backup generators. A generator was recently installed at the county courthouse. In order to clear the most homes as fast as possible, the county has designated snow routes, these are main county roads, and school bus routes. To prevent snow drifts on roadways, the county mows weeds in the ditches adjacent to roadways. According to the local planning team, current resources are sufficient for local events. The county has one truck with a plow, six maintainers, two loaders, and a skid steer to assist with snow removal events.

Tornadoes and High Winds

Tornadoes occur frequently, about once every two years, and the county has historically experienced damages about once every 10 years. The county is more vulnerable to lasting impacts as a result of tornadoes due to the age of the housing stock in Banner County. Older homes traditionally are more vulnerable to tornado events and are also known to create shrapnel to harm other nearby homes. However, some characteristics of the county make the county more resilient to hazard events, for instance most of the homes in the county have basements, which may be a safe place to seek refuge in a tornado event. Safe rooms in the county are located at the courthouse and school building. Also, Region 22 Emergency Management subscribes to CodeRED emergency text alert systems, which is an opt-in messaging system, built to let others know about nearby severe weather. The volunteer fire department also does storm spotting in the county. The county participates in the Storm Ready program through the National Weather Service. Recently an alert siren was installed for the community of Harrisburg.

Mitigation Strategy

Completed Mitigation and Strategic Actions

MITIGATION ACTION	WEATHER RADIOS
DESCRIPTION	Conduct an inventory of weather radios at schools and other critical facilities and provide new radios as needed. Locations include Banner County School, bank, and courthouse.
HAZARD(S)	All hazards
STATUS	Completed

Continued Mitigation and Strategic Actions

MITIGATION ACTION	BACKUP GENERATOR
DESCRIPTION	Provide portable or stationary sources of backup or redundant power supplies, municipal wells, lift stations, and other critical facilities and shelters.
HAZARD(S)	Tornadoes and High Winds, Severe Winter Storms, Severe Thunderstorms
ESTIMATED COST	\$15,000-\$30,000
FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Courthouse Staff
STATUS	In Progress. A generator at the courthouse was added using HMP funds. There are still other locations that need generators.

MITIGATION ACTION	CIVIL SERVICE IMPROVEMENTS
DESCRIPTION	Purchase a rotary snowplow to assist with snow removal.
HAZARD(S)	Severe Winter Storms
ESTIMATED COST	\$20,000
FUNDING	General Fund
TIMELINE	1 year
PRIORITY	Medium
LEAD AGENCY	Highway Superintendent
STATUS	Not Started

SECTION SEVEN: BANNER COUNTY COMMUNITY PROFILE

MITIGATION ACTION	EDUCATION PROGRAMS
DESCRIPTION	The county commissioners intend to review the Banner County LEOP for the purposes of reviewing protocol for agricultural animal and plant disease.
HAZARD(S)	Agricultural Animal and Plant Disease
ESTIMATED COST	Staff Time
FUNDING	General Fund
TIMELINE	1 year
PRIORITY	Low
LEAD AGENCY	County Board
STATUS	In Progress. The LEOP is reviewed annually and updated every five years.

MITIGATION ACTION	EMERGENCY EXERCISE: HAZARDOUS SPILL
DESCRIPTION	Utilize tabletop exercises with regional emergency manager to prepare for potential hazardous spills. The county will also add emergency phone numbers/ phone tree in case of a petroleum leak at a nearby pump.
HAZARD(S)	Hazardous Materials Fixed Site, Hazardous Materials Transportation
ESTIMATED COST	\$3,000
FUNDING	General Fund
TIMELINE	1 year
PRIORITY	Medium
LEAD AGENCY	Banner County Fire Department, Region 22 Emergency Manager
STATUS	Not Started. An exercise was planned in conjunction with Vigilant Guard exercise but was cancelled due to Covid-19.

MITIGATION ACTION	EMERGENCY WATER SUPPLIES
DESCRIPTION	Identify landowners who would be willing to let emergency services use their water sources, in the case of emergency.
HAZARD(S)	Grass/Wildfires
ESTIMATED COST	\$500
FUNDING	Fire Department General Fund
TIMELINE	1 year
PRIORITY	Low
LEAD AGENCY	Fire Department
STATUS	In Progress. Some sources have been established and the Fire Chief is in the process of making contacts for new sources and mapping locations.

SECTION SEVEN: BANNER COUNTY COMMUNITY PROFILE

MITIGATION ACTION	STABILIZE/ANCHOR FERTILIZER, FUEL, AND PROPANE TANKS AND SECURE AT-RISK DEVELOPMENT
DESCRIPTION	Anchor fuel tanks to prevent movement. If left unanchored, tanks could present a major threat to property and safety in a tornado or a high wind event. "Tie downs" can be used to anchor manufactured homes to their pads, or concrete foundations.
HAZARD(S)	Tornadoes and High Winds
ESTIMATED COST	\$1,000
FUNDING	Property Taxes
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Highway Superintendent
STATUS	Not Started

MITIGATION ACTION	STORM SHELTER / SAFE ROOMS
DESCRIPTION	Assess, design and construct fully supplied safe rooms in highly vulnerable urban and rural areas such as mobile home parks, campgrounds, schools and other such areas throughout the planning area. Assess the adequacy of current public buildings to be used as safe rooms. Construct safe rooms in areas of greatest need, either as new construction or retrofitting. Location is likely the county courthouse.
HAZARD(S)	Tornadoes and High Winds, Severe Thunderstorms
ESTIMATED COST	\$200-\$300 sq ft stand alone; \$150-\$200
FUNDING	Property Tax
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Sheriff's Office
STATUS	Not Started

MITIGATION ACTION	STORM WATER SYSTEM AND DRAINAGE IMPROVEMENTS
DESCRIPTION	Drainage structures need to be improved near the school and the community of Harrisburg. Locations include the ditch near Banner County Schools and drainage structures for Harrisburg streets.
HAZARD(S)	Flooding
ESTIMATED COST	\$10,000-\$100,000
FUNDING	Roads Department
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Highway Superintendent
STATUS	In Progress. Work is about 50% completed.

SECTION SEVEN: BANNER COUNTY COMMUNITY PROFILE

MITIGATION ACTION	STREAM BANK STABILIZATION / GRADE CONTROL STRUCTURES / CHANNEL IMPROVEMENTS
DESCRIPTION	Stream bank/ bank degradation can occur along many rivers and creeks. Stabilization improvements including rock rip rap, vegetative cover, j-hooks, and boulder vanes can be implemented to reestablish the channel banks.
HAZARD(S)	Flooding
ESTIMATED COST	\$50,000-\$100,000
FUNDING	Property Taxes
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Highway Superintendent
STATUS	In Progress. Roads (1, 2, 6, 7, 13, 16, 17, 19, 22, 23, 35, 39, 57, & 63) are in the process of having new culverts added, or upsized, or rebuilt. 80% of the work from the NEMA/FEMA grants has been completed. There are still a dozen culverts to go in and road work to go along with that.

Removed Mitigation and Strategic Actions

MITIGATION ACTION	PUBLIC AWARENESS/EDUCATION
DESCRIPTION	Through activities such as outreach projects, distribution of maps and environmental education increase public awareness of natural hazards to both public and private property owners, renters, businesses and local officials about hazards and ways to protect people and property from these hazards. In addition, educate citizens on erosion control and water conservation methods.
HAZARD(S)	All hazards
STATUS	Removed. Function is carried out by UNL extension and others.