COUNTY PROFILE

BUTLER COUNTY

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table BLR.1: Butler County Local Planning Team

NAME	TITLE	JURISDICTION
Mark Doehling	Emergency Manager	Butler County
Greg Janak	County Board Member	Butler County
Breann Whitmore	Floodplain Administrator	Butler County

LOCATION AND GEOGRAPHY

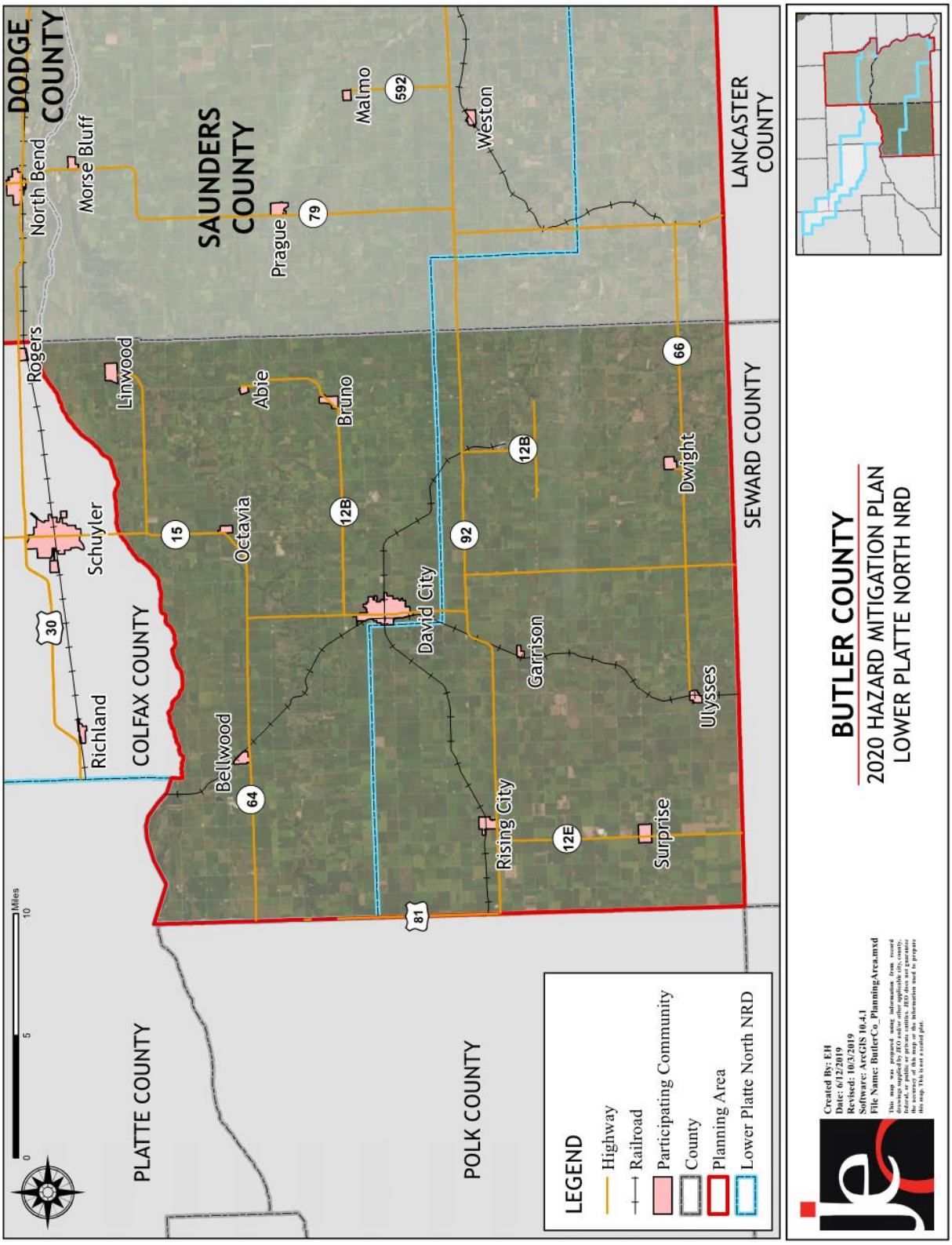
Butler County is located in east-central Nebraska and is bordered by Saunders, Seward, Polk, Colfax, and Platte counties. The total area of Butler County is 591 square miles. The Platte River forms its northern boundary. The southern portion of the county is comprised of the plains topographic regions and the northern portion is comprised of valleys. Most of the county's land is used for agricultural production.

TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors and areas more at risk of transportation incidents. Butler County's major transportation corridors include US Highway 81 and Nebraska State Highways 15, 64, 66, and 92. A Burlington Northern Santa Fe Railway rail line runs north to south through the county and a Nebraska Central Railroad Company rail line runs east to west. The county also hosts several air landing strips at the David City Municipal Airport. Each of these transportations routes is a source of vulnerability for the county.

Petroleum, anhydrous ammonia, farm chemicals like pesticides and fertilizers, and propane are regularly transported along these routes. The Keystone Pipeline System transports oil through the county, crossing under the Platte and Big Blue Rivers; presenting the risk of an oil leak. Significant transportation events have historically involved vehicles transporting materials to the landfill. In 2014, three miles east of Rising City of Highway 92, a head on collision between a truck going to the landfill and a pickup, spilled cattle intestines on the highway, closing the route for several hours while crews cleaned up the organs and fecal matter.

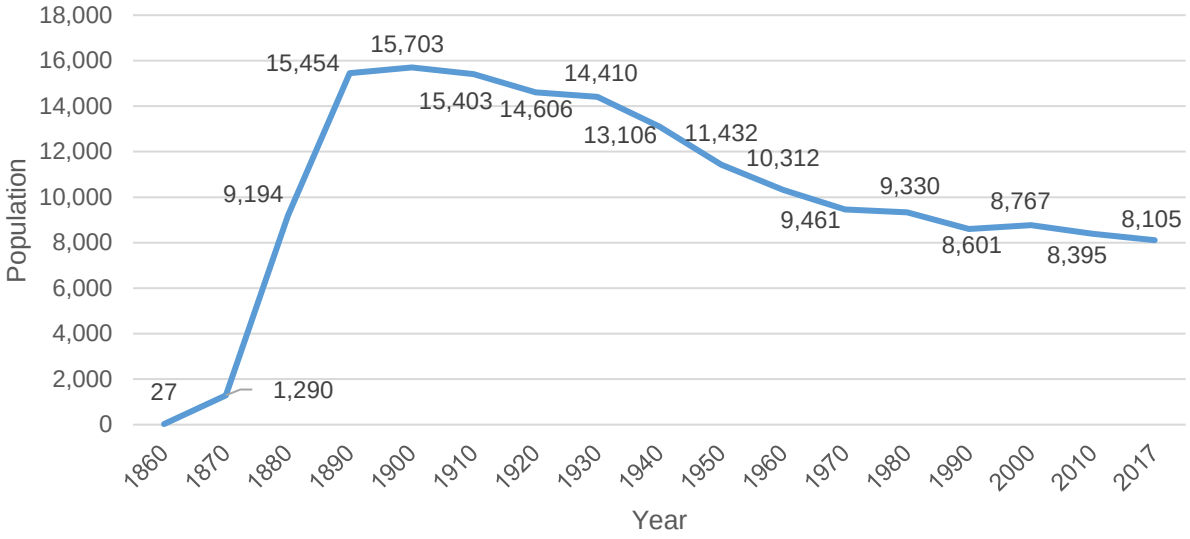
Figure BLR.1: Butler County



DEMOGRAPHICS, EMPLOYMENT, AND ECONOMICS

The following figure displays the historical population trend from 1860 to 2017. This figure indicates that the population of Butler County has been decreasing since 1900, possibly reducing the tax base to fund mitigation projects.

Figure BLR.2: Population



Source: U.S. Census Bureau, 1860 - 2017[1]

The young, elderly, minority populations and poor may be more vulnerable to certain hazards than other groups. The following table indicates that the county is slightly older than the state, has less diverse population, and has a lower poverty rate. The per capita income in Butler County is lower than the State of Nebraska. A more detailed discussion of the vulnerabilities associated with age, ethnicity, and poverty can be found in *Section Four: Risk Assessment*.

Table BLR.2: Demographics

	BUTLER COUNTY	STATE OF NEBRASKA
Median age	43.5 years old	36.3 years old
Hispanic	3.0%	10.5%
Below the federal poverty line	7.8%	12.0%
Per capita income	$27,216	$29,866

Source: U.S. Census Bureau[2]

MAJOR EMPLOYERS

Communities with a diversified economy are more resilient to hazardous events, especially if certain industries are more impacted than others. Butler County hosts 206 business establishments. The following table presents the number of businesses, number of paid employees, and the annual payroll. Major employers in the county include the Frontier Co-op,

1 United States Census Bureau. "American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]. https://factfinder.census.gov/.

Timpte, Inc. and Henningsen foods. Based on the location of their community, many residents commute to the Cities of Wahoo, Columbus, Omaha, Fremont, and Lincoln for work.

Table BLR.3: Business in Butler County

	TOTAL BUISNESSES	NUMBER OF PAID EMPLOYEES	ANNUAL PAYROLL (IN THOUSANDS)
Total for all sectors	206	2,083	$76,493

Source: U.S Census Bureau[2]

Agriculture is important to the economic fabric of the State of Nebraska. Butler County's 530 farms cover 319,085 acres of land. Crop and livestock production are the visible parts of the agricultural economy, but many related businesses contribute to agriculture by producing, processing and marketing farm products. These businesses generate income, employment and economic activity throughout the region.

Table BLR.4: Agricultural Inventory

	AGRICULTURAL INVENTORY
Number of farms with harvested cropland	530
Acres of harvested cropland	319,085

Source: USDA Census of Agriculture, 2019[3]

HOUSING

Housing age can serve as an indicator of vulnerability, as structures that are poorly maintained or that were built prior to state building codes are at greater risk to damage from hazards. The following figure indicates that most of the housing in Butler County was built prior to 1970 (56.4 percent). The current Flood Insurance Rate Map (FIRM) was developed in August 2011. Housing built in the floodplain after the FIRM was adopted is built to a standard of 1 foot above the base flood elevation, as required by the floodplain ordinance; housing built prior to 2011 will be vulnerable to flood damage.

In the county, about 6.3% of housing units are mobile homes in the county; communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if those homes are not anchored correctly. In the unincorporated regions of Butler County, several mobile homes are in the Bay Meadows mobile park on Highway 81, two miles north of the Highway 64 Junction. Bay Meadows is located in the floodplain. Butler County has less renter-occupied but more vacant housing than the state. 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 renter's insurance or flood insurance, or to know their risks to flooding and other hazards. A significant number of unoccupied housing suggests that future development may be unlikely to occur in the area.

2 United States Census Bureau. "American Fact Finder: Geography Area Series County Business Patterns 2016 Business Patterns." [database file]. https://factfinder.census.gov.

3 U.S. Department of Agriculture. 2019. "2017 Census of Agriculture." https://www.nass.usda.gov/Publications/AgCensus/2017/.

Table BLR.5: Housing

	BUTLER COUNTY	STATE OF NEBRASKA
Housing built before 1970	56.4%	47.2%
Mobile and manufactured	6.3%	3.4%
Renter-occupied	20.1%	34.0%
Vacant	16.5%	9.2%

Source: U.S. Census Bureau[4,5]

FUTURE DEVELOPMENT TRENDS

Over the past five years, about 100 Benisch chicken houses, (associated with the Costco Chicken Processing Facility in the City of Fremont,) have been installed in the county, mainly just north of Rising City. They are regulated by the Nebraska Department of Environmental Quality. More chicken houses will be installed in the area in the coming years.

New chemical infrastructure has been built in the county. A new Timberline Energy Methane Plant was recently constructed near David City, outside of the floodplain. A new pumping station was installed in the Village of Bellwood for TransCanada Energy's Keystone Pipeline System oil pipeline. The proposed Keystone XL addition to the pipeline will also cross Butler County if approved.

According to census data, Butler County's population is declining as the population grows older and job opportunities become fewer. Farming, a historically major employment sector in the county, is providing fewer farm hand jobs as farming operations get larger and more automated to the detriment of local family farms. David City is seeing some population growth. They plan to annex land north of the city.

PARCEL IMPROVEMENTS AND VALUATION

GIS parcel data was acquired from the County Assessor. This data was analyzed for the location, number, and value of property improvements at the parcel level. Property improvements include any built structures such as roads, buildings, and paved lots. 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 BLR.6: Structural Inventory

NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	PERCENTAGE OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN
3,990	$345,421,345	709	17.8%	$58,794,730

Source: GIS Workshop/Butler County Assessor, 2019[6]

4 United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. https://factfinder.census.gov.

5 United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. https://factfinder.census.gov.

6 GIS Workshop/Butler County Assessor. 2019. [Personal correspondence].

CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy there are a total of three hazardous chemical storage sites in the unincorporated areas of Butler County. No sites are located in the floodplain. For chemical sites located within two miles of incorporated areas, please see each community's participant section. The Village of Brainard is profiled in the Lower Platte South NRD Hazard Mitigation Plan.

Table BLR.7: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN (YES/NO)
Butler County Landfill Inc	3588 R Rd, David City	No
Timberline Energy LLC	3580 R Rd, David City	No
TransCanada Pipelines Pump Station	1016 36 Rd, David City	No

Source: Nebraska Department of Environment and Energy, 2019[7]

Two especially large chemical storage facilities near David City and the Village of Bellwood store agricultural chemicals like fuel, anhydrous ammonia, and liquid fertilizer. The planning team is most concerned about methane explosions during rail and highway transportation and natural gas leaks from the Keystone pipeline. The landfill is also vulnerable to toxic chemical spills should its rubber lining be compromised. No significant spills have occurred to date, and no vulnerable populations are located near these fixed chemical sites. Residents near the landfill and pipeline are educated about the threat and appropriate response to chemical spills with mailers and educational exercises provided by the fire department. There are plans in place for spill response in these areas, including having local volunteer fire departments equipped with protective gear and training.

7 Nebraska Department of Environmental Quality. 2019. "Nebraska DEQ Tier 2 Data Download: 2018." https://deq-iis.ne.gov/tier2/.

CRITICAL FACILITIES

The planning team identified critical facilities necessary for Butler County's disaster response and continuity of operations per the FEMA Community Lifelines guidance. Critical facilities were identified during the 2015 planning process and revised for this plan update. The following table and figure provide a summary of the critical facilities for the county.

Table BLR.8: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Bellwood County Shed	No	No	No
2	Brainard County Shed	No	No	No
3	Brainard Cell Tower	No	No	No
4	Bruno County Shed	No	No	No
5	Bruno Paging Tower	No	Yes	No
6	Butler County Event Center	Yes	No	No
7	Butler County Health Care Center	No	Yes	No
8	Butler County Highway Department	No	Yes	No
9	Butler Tower Siren	No	Yes	No
10	County Courthouse, Sheriff's Office, & County Jail, 911 Dispatch, Butler County Siren	No	Yes	No
11	Dwight Tower	No	Yes	No
12	Rising City County Shed	No	No	Yes
13	Rising City Communication Tower	No	Yes	No
14	Ulysses County Shed	No	No	No
15	Yanka Cell Tower	No	No	No

Figure BLR.3: Critical Facilities

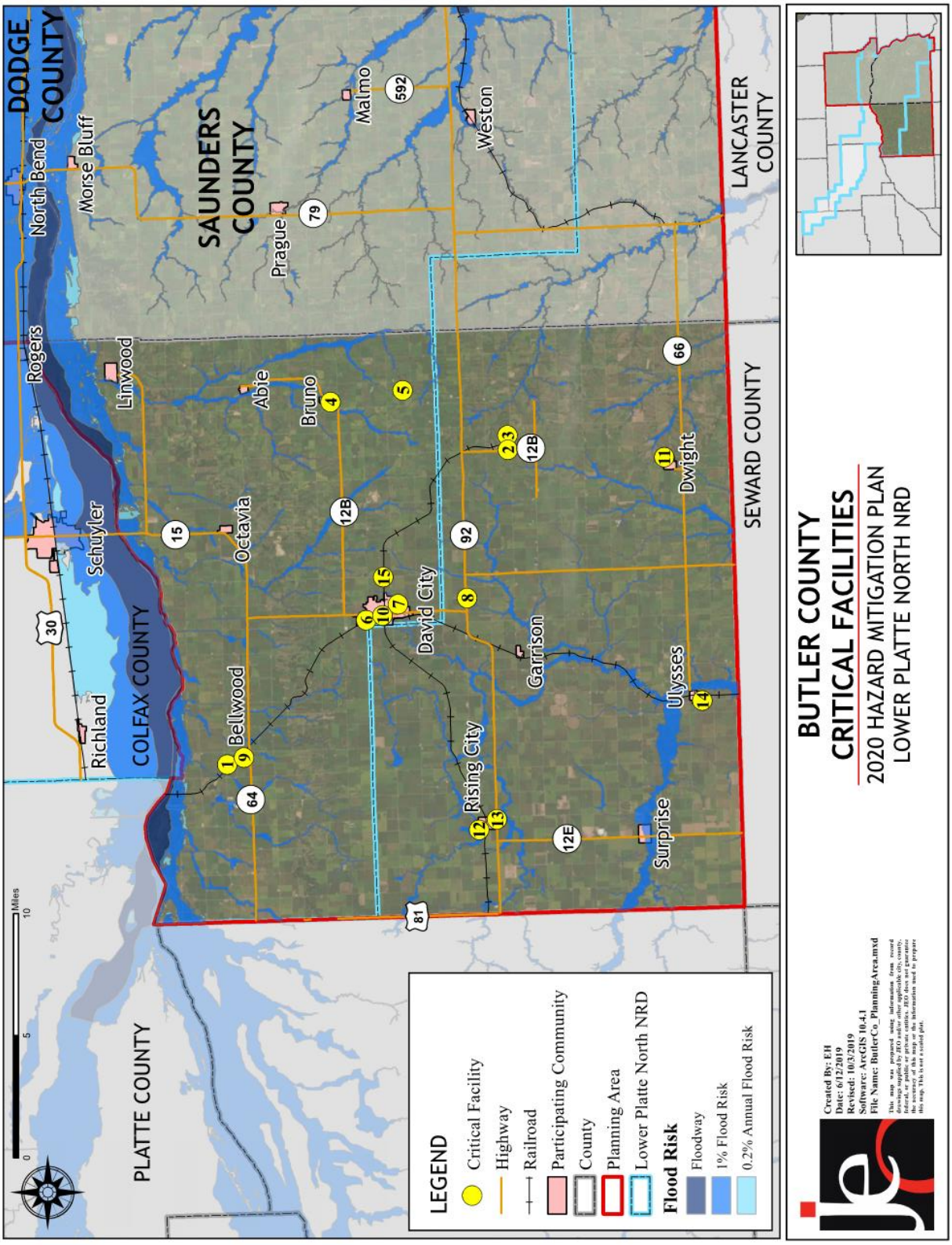
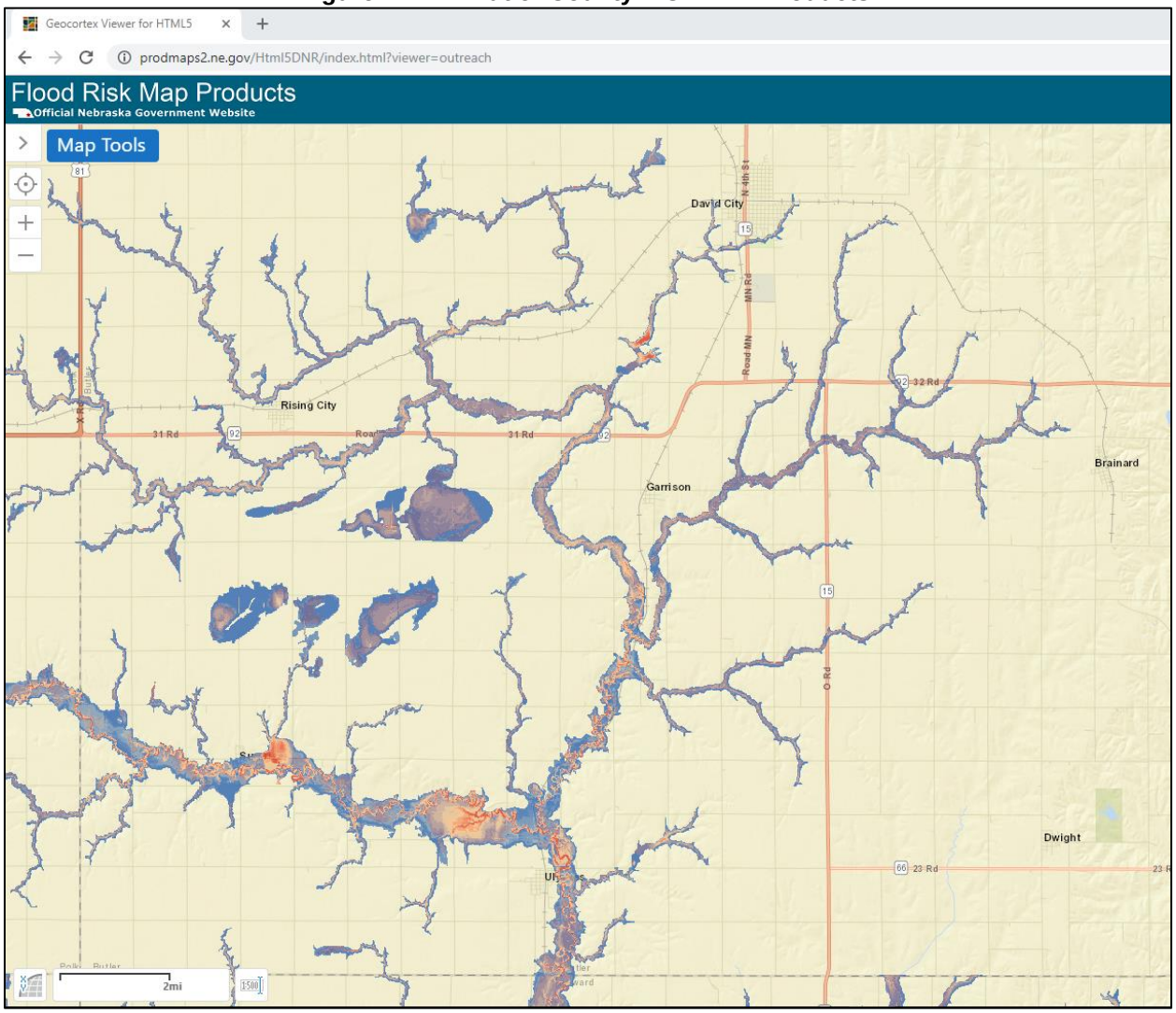


Figure BLR.4: Butler County Risk MAP Products



Source: NeDNR

HISTORICAL OCCURRENCES

The following table provides a statistical summary for hazards that have occurred in the county. These are county-specific broad estimates.

Table BLR.9: County Hazard Loss History

HAZARD TYPE		COUNT	PROPERTY DAMAGE	CROP DAMAGE[2]
Agricultural disease	Animal disease[1]	17	1,243 animals	N/A
	Plant disease[2]	16	N/A	$52,346
Chemical spills (fixed site)[3]		6	$0	N/A
Chemical spills (transportation)[4]		0	$0	N/A
Dam failure[5]		2	$0	N/A
Drought[6]		412/1,492 months	N/A	$31,691,712
Extreme heat[7]		Avg. 4 days/year	N/A	$2,869,315
Flooding[8]	Flash flood	11	$111,000	$329,538
	Flood	15	$113,000	
Grass/wildfires[9] 1 injury		216	1,920 acres	$0
Hail[8] Range 0.75 – 4.0 in Average 1.2 in		112	$4,000,000	$3,150,749
High winds[8] Range 35 – 56 EG Average 50 EG		21	$5,000	$926,089
Levee failure[10, 11]		0	$0	$0
Severe thunderstorms[8] 7 injuries	Thunderstorm wind Range 50 – 85 EG Average 57 EG	68	$119,000	N/A
	Heavy rain	2	$0	$5,956,734
	Lightning	1	$0	N/A
Severe winter storms[8]	Blizzard	9	$0	$441,038
	Extreme cold/Wind chill	5	$0	
	Heavy snow	4	$1,000,000	
	Ice storm	2	$0	
	Winter storm	38	$0	
	Winter weather	9	$0	
Terrorism & civil disorder[12, 13]		0	$0	N/A
Tornadoes[8] Range EF0 – EF2 Average EF1		10	$173,000	$10,936

N/A: Data not available
1 - NDA, 2014 - 2019
2 - USDA RMA, 2000 - 2018
3 - NRC, 1990 - February 2019
4 - PHSMA, 1971 - May 2019
5 - Stanford NPDP, 1911 - 2018
6 - NOAA, 1895 - April 2019
7 - NOAA Regional Climate Center, 1897 - May 2019
8 - NCEI, 1996 - February 2019
9 - NFS, 2010 - 2018
10 - USACE NLD, 1900 - 2019
11 - USACE, 2019
12 - University of Maryland, 1970 - 2017
13 - University of Illinois, 1940 - 2017

The following table provides a summary of hazards that have or have the potential to affect each jurisdiction in Butler 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 BLR.9; 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 BLR.10: Butler County and Community Hazard Matrix

JURISDICTION	AG. DISEASE	CHEMICAL SPILLS – FIX SITE	CHEMICAL SPILLS – TRANSPORT.	DAM FAILURE	DROUGHT	EXTREME HEAT	FLOODING	GRASS/ WILDFIRE	HAIL	HIGH WINDS	LEVEE FAILURE	SEVERE T-STORMS	SEVERE WINTER STORMS	TERRORISM/ CIVIL DISORDER	TORANDOES
Butler County	X	X	X	X	X	X	X	X	X	X		X	X	X	X
Village of Abie	X	X	X		X	X	X	X	X	X		X	X	X	X
Village of Bellwood	X	X	X		X	X	X	X	X	X		X	X	X	X
City of David City	X	X	X		X	X	X	X	X	X		X	X	X	X
David City Fire Dept		X	X		X	X	X	X	X	X		X	X	X	X
David City Public Schools		X	X		X	X	X	X	X	X		X	X	X	X
Village of Dwight	X	X	X		X	X	X	X	X	X		X	X	X	X
Dwight Fire Dept.		X	X		X	X	X	X	X	X		X	X	X	X
Village of Garrison	X	X	X		X	X	X	X	X	X		X	X	X	X
Village of Linwood	X		X		X	X	X	X	X	X		X	X	X	X
Linwood Fire Dept.		X	X		X	X	X	X	X	X		X	X	X	X
Village of Octavia	X		X		X	X	X	X	X	X		X	X	X	X
Platte Township		X	X		X	X	X	X	X	X		X	X	X	X
Village of Surprise	X		X		X	X	X	X	X	X		X	X	X	X
Village of Ulysses	X	X	X		X	X	X	X	X	X		X	X	X	X

COUNTY HAZARD PRIORITIZATION

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

AGRICULTURAL ANIMAL AND PLANT DISEASE

With an influx of chickens from the Costco Processing Plant in Fremont, a large number of animals would be affected by a disease outbreak. This would impact security and require a mass fatality response – there are no plans in place for these scenarios. There are over 1,000 head of cattle in the county now and projections for 5.5 million chickens. The largest concentration of cattle gathers at the Columbus Livestock Pavilion while chickens will be gathered at the Costco Plant. No educational programs are currently offered to the public on agricultural diseases.

CHEMICAL SPILLS (TRANSPORTATION)

There are five highways and two rail lines in the county that carry hazardous materials. A semi trucking spilled animal waste from a packing house when it was involved in a wreck in 2015, three miles east of Rising City. Anhydrous ammonia, petroleum products, and alcohol are commonly carried along the rail lines in the county. The County Courthouse and Sheriff's Office are located just west of Highway 15 and within two blocks of both rail lines, making them vulnerable to spills. There are also several oil pipelines in the county that run the risk of leaking.

FLOODING

The March 2019 flooding event damaged personal property and washed out roads throughout the county. The Platte River, Blue River, and Skull Creek are most prone to flooding. The local planning team also noted that if the dam at Lake McConaughy was to fail, then areas along the Platte River would flood, causing damages to agricultural land and roadways. There are several low land areas in the county that have poor stormwater drainage. The county has no zoning ordinances and the FIRM was not adopted until 2011.

Risk Mapping, Assessment, and Planning (Risk MAP) was completed for southwestern portions of Butler County and includes the communities of David City, Rising City, Garrison, Ulysses, and Surprise. As shown in Figure BLR.4, additional products, such as flood depths and percent annual or 30-year chance grids, are available to these communities to make informed decisions about reducing and communicating flood risk. To view this interactive map, visit https://prodmaps2.ne.gov/Html5DNR/index.html?viewer=outreach.

HIGH WINDS

High winds are a concern because they can cause damage to crop and infrastructure, including power lines and communication towers. Wind and tornadoes caused property damage in Surprise in 2006 and in Dwight and Ulysses in 2008. In preparation of a disaster event, municipal records will soon be managed by a provider with offsite data backup systems. There are no FEMA certified safe rooms in the county; residents can seek shelter in their homes or with neighbors. County emergency management does not offer emergency text alerts. The county does participate in Severe Awareness Weather Week by publishing an article in the local newspaper on disaster preparation and response.

TORNADOES

There have been two recent, significant tornadoes in Butler County – an EF1 tornado in 2006 in the Village of Surprise and an EF1 tornado in 2008 in the Villages of Dwight and Ulysses. In case of a disaster event, municipal record storage is being transferred to a new provider who offers offsite data storage. The county's warning sirens are radio controlled by dispatch. All are located in cities and villages instead of the county's rural areas. The county does not maintain any safe rooms so residents must seek shelter in their personal homes or with their neighbors. The County Emergency Manager does not offer emergency text alerts. Information on disaster preparation for residents of Butler County is offered in the local newspaper during Severe Weather Awareness Week. Mutual Aid Agreements to help with disaster events are in place with Colfax, Platte, Polk, Saunders, and Seward Counties.

GOVERNANCE

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

- County Clerk
- County Assessor
- County Treasurer
- Emergency Manager
- Highway Superintendent
- Floodplain Administrator
- Sheriff
- Surveyor

CAPABILITY ASSESSMENT

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

Table BLR.11: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Planning &	Comprehensive Plan	No
	Capital Improvements Plan	No

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Regulatory Capability	Economic Development Plan	Yes
	Emergency Operational Plan	Yes
	Floodplain Management Plan	Yes
	Storm Water Management Plan	No
	Zoning Ordinance	No
	Floodplain Ordinance	Yes
	Building Codes	No
	National Flood Insurance Program	Yes
	Community Rating System	No
	Other (if any)	
Administrative & Technical Capability	Planning Commission	No
	Floodplain Administration	Yes
	GIS Capabilities	Yes
	Chief Building Official	No
	Civil Engineering	No
	Local staff who can assess community's vulnerability to hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	
Fiscal Capability	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to levy taxes for specific purposes such as mitigation projects	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. (Ex. CERT Teams, Red Cross, etc.)	Yes
	Ongoing public education or information program (Ex. responsible water use, fire safety, household preparedness, environmental education, etc.)	Yes
	StormReady Certification	Yes
	Other (if any)	

Table BLR.12: Overall Capability Assessment

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

PLAN INTEGRATION

Butler County has an emergency operations plan, capital improvements plan, and floodplain regulations. The county's emergency operations plan was last updated in 2020 and discusses; communications, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelters, and resource management. The floodplain regulations limit density in the floodplain and require elevation of at least one foot above base flood elevation for all new construction. Butler County's capital improvements plan is for roads and is updated on an annual basis. No other examples of plan integration were identified. However, the community will seek out and evaluate any opportunities to integrate the results of the current HMP into other planning mechanisms and updates.

MITIGATION STRATEGY

COMPLETED MITIGATION ACTIONS

MITIGATION ACTION	HAZARDOUS TREE REMOVAL PROGRAM
Hazard(s) Addressed	High wind, tornadoes
Status	Completed in 2017 in two locations: 37th St & W Rd and 33rd St & T Rd. The program cost $8,000, funded by the Highway Department's annual budget.

MITIGATION ACTION	SAFE ROOMS
Hazard(s) Addressed	High wind, tornadoes
Status	A safe room was installed on the Butler County Fairgrounds in 2017 using $600,000 in bonds.

MITIGATION ACTION	STREAM BANK STAILIZATION/GRADE CONTROL STRUCTURES/CHANNEL IMPROVEMENTS
Hazard(s) Addressed	Flooding
Status	This project was ongoing from 2016 – 2018 in the Skull Creek Township, funded by tax dollars.

MITIGATION ACTION	FLOODPLAIN REGULATION ENFORCEMENTS AND UPDATES
Hazard(s) Addressed	Flooding
Status	Enforcing and updating the floodplain regulations has been ongoing since 2016, costing approximately $10,000 annually in tax dollars.

ONGOING AND NEW MITIGATION ACTIONS

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	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. Three generators were installed at: 332nd St & Ord St, Highway 92, and the Highway Department Building. The county would like a backup generator at the County Event Center
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by size
Funding	Local taxes
Timeline	2-5 years
Priority	Medium
Lead Agency	County emergency management agency
Status	Ongoing. Three generators were installed but additional are needed.

MITIGATION ACTION	COMMUNITY EDUCATION AND AWARENESS
Description	Through activities such as outreach projects, distribution of maps, and environmental education to increase public awareness of natural hazards and mitigation alternatives for both public and private entities, (including property owners, renters, and businesses). Also educate citizens on water conservation methods, evacuation plans, etc.
Hazard(s) Addressed	All hazards
Estimated Cost	Varies
Funding	Local tax dollars
Timeline	Ongoing
Priority	Low
Lead Agency	Floodplain Administrator
Status	Ongoing, targeted to homes in north Butler County along the floodway.

MITIGATION ACTION	EMERGENCY COMMUNICAITONS
Description	Update LEOP & local action plan to improve communication between agencies during and following emergencies through inter-operable communication methods.
Hazard(s) Addressed	All hazards
Estimated Cost	Varies
Funding	Local tax dollars
Timeline	1 year
Priority	Medium
Lead Agency	Emergency Manager
Status	The county has been and will continue to update communication methods as viable.

MITIGATION ACTION	FLOODPLAIN MANGEMENT
Description	Decrease the number of structures in the floodplain by raising structures or purchasing repetitive flood loss structures to use as recreation fields, picnic areas, etc.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	Local tax dollars
Timeline	2-5 years
Priority	Low
Lead Agency	Floodplain Administrator
Status	Not started but will be targeted to homes in north Butler County along the floodway.

REMOVED MITIGATION ACTIONS

MITIGATION ACTION	MAINTAIN GOOD STANDING WITH THE NATIONAL FLOOD INSURANCE PROGRAM
Hazard(s) Addressed	Flooding
Reason for Removal	While the county will continue to participate and maintain compliance in the NFIP, this is no longer considered a mitigation action by FEMA.

COMMUNITY PROFILE

VILLAGE OF ABIE

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table ABE.1: Village of Abie Local Planning Team

NAME	TITLE	JURISDICTION
David Polacek	Village Clerk	Village of Abie
Dennis Polacek	Chairperson of the Board	Village of Abie

LOCATION AND GEOGRAPHY

The Village of Abie is in northeastern Butler County and covers an area of 0.11 square miles. Abie is surrounded by agricultural land in the rolling hills topographic region of Nebraska. The land is used primarily for irrigated row-crop agriculture.

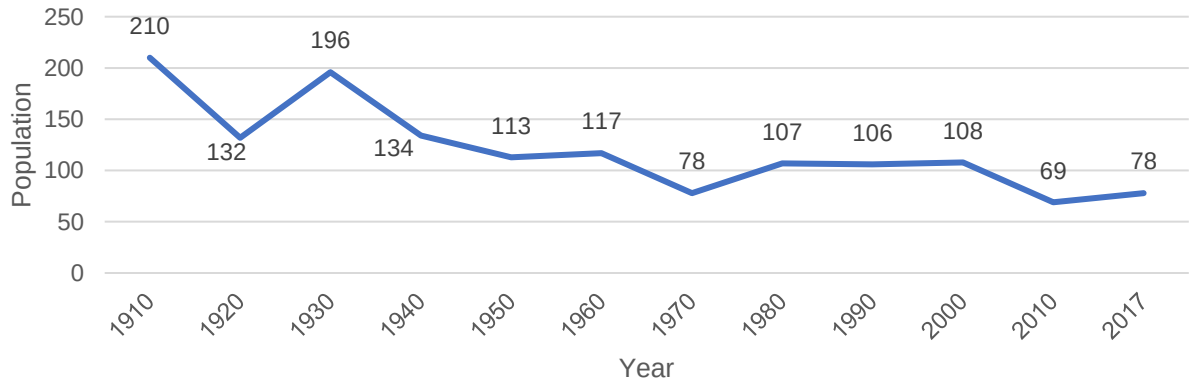
TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community and areas more at risk of transportation incidents. Abie is connected to State Highway 15 by Nebraska State Spur 12B. State Spur 12B is traveled by a total annual average of 540 vehicles daily, 45 of which are trucks.[8] State Spur 12B is the transportation route of most concern for the community because of its heavy traffic. Anhydrous ammonia is also transported on this route seasonally.

DEMOGRAPHICS

While Abie's population grew from 69 people in 2010 to about 78 people in 2017, the general trend suggests a decrease in the population. A decreasing population generally increases a community's vulnerability to hazards because of a reduced tax base to fund mitigation projects and more vacant housing. Abie's population accounted for 1.0% of Butler County's population in 2017.[9]

Figure ABE.3: Population



Source: U.S. Census Bureau, 1910 - 2017

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

9 United States Census Bureau. "American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]. https://factfinder.census.gov/.

Figure ABE.2: Village of Abie

The young, elderly, minority populations and poor may be more vulnerable to certain hazards than other groups. In comparison to the county, the Village of Abie was:

- **Slightly older.** The median age of Abie was 49.2 years old in 2017, compared with Butler County's median of 43.5 years. However, Abie had a much lower proportion of people over 65 years old (7.7%) than the county (19.9%). Abie's population grew older since 2010, when the median age was 41.6 years old.[2]
- **Less ethnically diverse**. Since 2010, Abie retained a relatively homogenous population – in 2017 none of Abie's population was Hispanic or Latino. From 2010 to 2017, the Hispanic population in the county grew slightly from 2.3% in 2010 to 3.0% in 2017.[2]
- **Less likely to be below the federal poverty line.** The poverty rate in Abie (2.6% of people living below the federal poverty line) was lower than the county's poverty rate (7.8%) in 2017.[10]

EMPLOYMENT AND ECONOMICS

The Village of Abie's economic base is a mixture of industries. In comparison to Butler County, Abie's economy had:

- **Larger mix of industries.** Five major employment sectors, accounting for 10% or more of employment each, were: construction; manufacturing; retail trade; transportation and warehousing; and educational services, healthcare, and social assistance.[3]
- **Slightly lower per capita income.** Abie's per capita income in 2017 ($26,251) was about $965 lower than the county ($27,216).[3]
- **More commuters, but fewer long-distance commuters.** About 11.1% workers in Abie commuted for fewer than 15 minutes, compared to about 41.9% of workers in Butler County. About 13.0% of workers in Abie commuted 30 minutes or more to work, compared to about 31.4% of county's workers.[11]

MAJOR EMPLOYERS

Cerucnick Construction is headquartered in the Village of Abie. A local bar and grill also employ village residents. Employment opportunities are limited causing many residents to commute to Schuyler for work.

HOUSING

In comparison to Butler County, the Village of Abie's housing stock was:[12]

- **Newer.** Abie had a smaller share of housing built prior to 1970 than the county (48.8% compared to 56.4%).
- **More mobile and manufactured housing.** Abie had a larger proportion of mobile and manufactured housing (9.8%) compared to the county (6.3%). There is only one mobile

10 United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. https://factfinder.census.gov/.
11 United States Census Bureau. "American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. https://factfinder.census.gov/.
12 United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. https://factfinder.census.gov/.

home in the community, located at the intersection of 3rd Street and Ash Street; it is unoccupied.

- **Slightly less renter-occupied**. About 16.1% of occupied housing units in Abie were renter-occupied compared with 20.1% of occupied housing in Butler County.
- **Unoccupied.** Approximately 24.4% of Abie's housing units were vacant compared to 16.5% of units in Butler County.

The age of housing may indicate which housing units were built prior to the development of state building codes. Homes built within a flood hazard area before the adoption of their community's Flood Rate Insurance Map (FIRM) are not likely to be built above the 1% annual chance floodplain. Older and vacant housing stock may also be more vulnerable to hazard events if it is poorly maintained. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if those homes are not anchored correctly. Renter occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have renter's insurance or flood insurance, or to know their risks to flooding and other hazards. A significant number of unoccupied housing suggests that future development may be unlikely to occur in the area.

FUTURE DEVELOPMENT TRENDS

There have been no new developments in the Village of Abie in the past ten years. No new industries or housing developments are planned. The village's aging population is the main contributor it's decreasing population.

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, paved lots, roads, etc.) at the parcel level. The data did not contain the number of structures on each parcel. The parcel data was analyzed to determine the number and valuation of property improvements located in the 1% annual chance floodplain. A summary of the results of this analysis is provided in the following table.

Table ABE.2: Parcel Improvements and Value in the Floodplain

NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	PERCENTAGE OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN
56	$1,385,355	3	5.4%	$92,335

Source: GIS Workshop/Butler County Assessor, 2019[13]

13 GIS Workshop/Butler County Assessor. 2019. [Personal correspondence].

CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one fixed hazardous chemical storage sites within two miles of the Village of Abie. The following table lists this site.

Table ABE.3: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	IN FLOODPLAIN (YES/NO)
Oop Inc	Jct 1st & Maple Sts	No

Source: Nebraska Department of Environment and Energy, 2019[14]

Abie is most vulnerable to chemical spills during transportation, particularly of anhydrous ammonia or agricultural chemicals. Vulnerable populations are located approximately two blocks from the Oop Inc anhydrous ammonia plant on the intersection of 1st Street and Maple Street. These residents are educated on the threat and appropriate response to spills. The Abie Volunteer Fire Department has the appropriate gear and training to respond to a spill.

CRITICAL FACILITIES

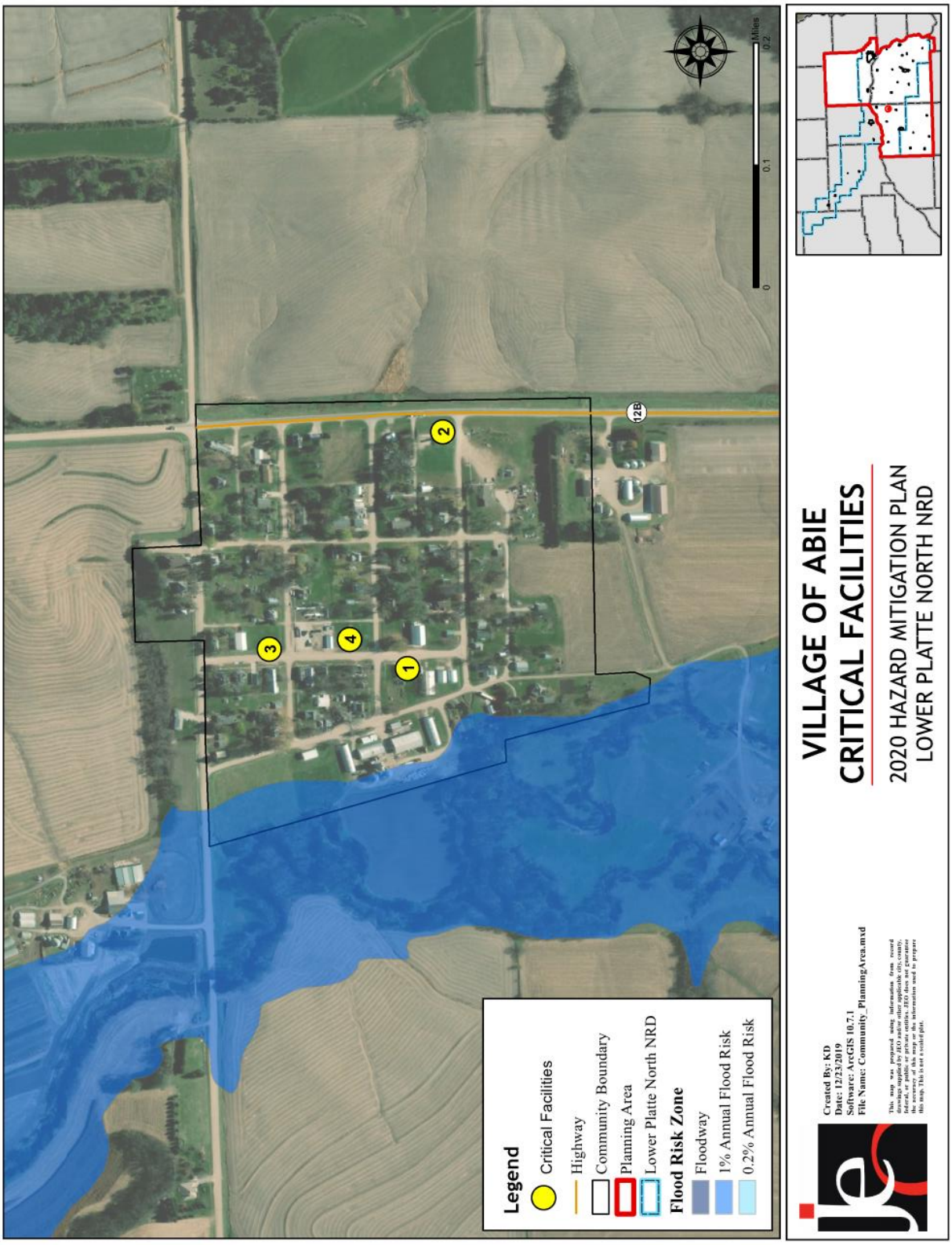
The planning team identified critical facilities necessary for the Village of Abie's disaster response and continuity of operations per the FEMA Community Lifelines guidance. Critical facilities were identified during the 2015 planning process and revised for this plan update. The following table and figure provide a summary of the critical facilities for the community.

Table ABE.4: Critical Facilities

CF NUMBER	NAME	RED CROSS SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Fire Hall	No	Yes	No
2	Water Tower	No	No	No
3	Well	No	Yes	No
4	Well	No	Yes	No

14 Nebraska Department of Environmental Quality. 2019. "Nebraska DEQ Tier 2 Data Download: 2018." https://deq-iis.ne.gov/tier2/.

Figure ABE.3: Critical Facilities



HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

CHEMICAL FIXED SITES

Anhydrous ammonia is the most likely chemical to spill at a fixed chemical storage site in Abie. While no spills have happened in the community to date, a future spill could have acute effects on the community because some residential homes are located within two blocks of the local co-op. These residents have been educated about the threat and appropriate response to a spill. The local volunteer fire department and their mutual aid has the appropriate gear and training to respond to a spill.

CHEMICAL TRANSPORTATION

Anhydrous ammonia is frequently transported to and from the local co-op. Highway Spur 12B is the transportation route of most concern because it is the one most heavily traveled with vehicles transporting chemicals. This route is especially busy during the spring and fall when agricultural chemicals from the co-op are being applied in the area. Residential homes are located along this route.

HAIL

Room damage is the most pressing concern regarding hailstorms. Critical facilities are not fitted with hail resistant building materials but are insured against hail damage. The village does not have a tree board to protect trees from damage and they do not educate residents on building with hail resistant building materials.

SEVERE WINTER STORMS

The water tower, wells, and fire hall are all vulnerable to damage during severe winter storms. Only approximately 20% of the power lines in the village are buried, making them vulnerable to heavy snow and ice storms. Snow removal is done by a private contractor using their motor-grader, and usually takes about two hours depending on the amount of snow.

TORNADOES

Abie has not experienced a tornado in the past, but a future event could be catastrophic. Municipal records are not protected from a disaster with a backup system. The village's siren reaches all areas of the town however, there are no FEMA certified safe rooms so residents must seek shelter in their own homes. County Emergency Management offers text alerts to the fire department. The local fire department offers a yearly course on tornado safety. In case of a disaster Mutual Aid Agreements are in place with all communities in the county.

GOVERNANCE

The Village of Abie is governed by a five-member village board; other governmental offices and departments are listed below. The community government will oversee the implementation of hazard mitigation projects.

- Clerk
- Treasurer
- Water Commissioner
- Engineer
- Volunteer Fire Department

CAPABILITY ASSESSMENT

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

Table ABE.5: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Planning & Regulatory Capability	Comprehensive Plan	No
	Capital Improvements Plan	No
	Economic Development Plan	No
	Emergency Operational Plan	County
	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)	
Administrative & Technical Capability	Planning Commission	No
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	Yes
	Local Staff Who Can Assess Community's Vulnerability to Hazards	No
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	
Fiscal Capability	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes

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

Table ABE.6: Overall Capability Assessment

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 INTEGRATION

Abie has an emergency operations plan and a wellhead protection. The village is an annex to Butler County's 2015 emergency operations plan. It covers communications and warning, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelter, and resource management. The wellhead protection plan includes well setback requirements and has a water conservation plan. No other examples of plan integration were identified. However, the community will seek out and evaluate any opportunities to integrate the results of the current HMP into other planning mechanisms and updates.

MITIGATION STRATEGY

ONGOING AND NEW MITIGATION ACTIONS

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	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
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by size
Funding	General Fund
Timeline	1-3 years
Priority	High
Lead Agency	Village Board
Status	New action. Not started

MITIGATION ACTION	IMPLEMENT DROUGHT WATER CONSERVATION REGULATIONS
Description	Develop a plan and implement a program to conserve water use by the citizens during elongated periods of drought. Potential restrictions on water could include limitation on lawn watering, car washing, and other non-essential residential uses.
Hazard(s) Addressed	Drought, grass/wildfire
Estimated Cost	$0
Funding	None
Timeline	5+ years
Priority	Low
Lead Agency	Village Board
Status	The Village Board is considering implementing a drought ordinance for non-essential water use to use during future drought events

COMMUNITY PROFILE

VILLAGE OF BELLWOOD

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table BEL.1: Village of Bellwood Local Planning Team

NAME	TITLE	JURISDICTION
Angie Wellman	Village Clerk & Floodplain Administrator	Village of Bellwood
Paul Nickolite	Utilities Superintendent	Village of Bellwood
Scott Romshek	Board Member	Village of Bellwood

LOCATION AND GEOGRAPHY

The Village of Bellwood is in the northwestern portion of Butler County and covers an area of 0.24 square miles. Bellwood is in the Platte River Valley, 2.5 miles north of the river. The land around the village is used primarily for irrigated row-crop agriculture.

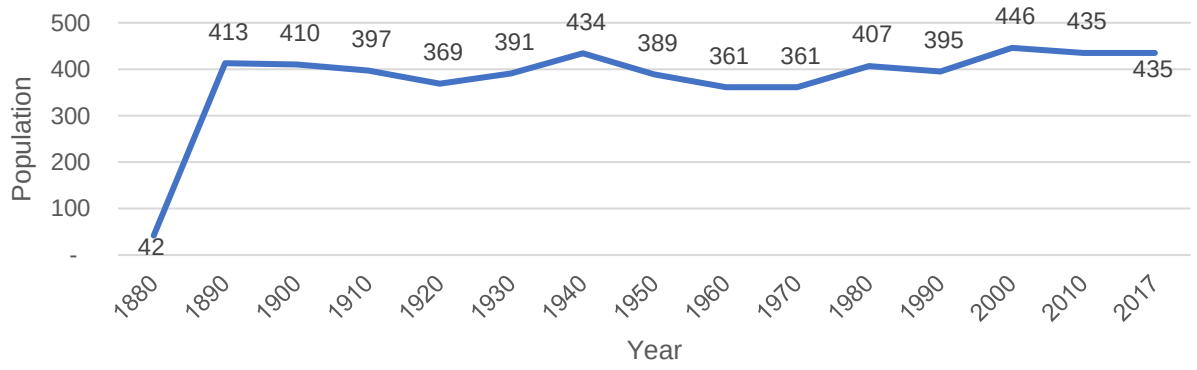
TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community and areas more at risk of transportation incidents. Bellwood's major transportation corridor is State Highway 64. It is traveled by a total annual average of 3,005 vehicles daily, 285 of which are trucks.[15] The Village has one Burlington Norther Santa Fe Railway line traveling northwest to southeast on the eastern edge of the village. These two transportation routes are most at risk of a transportation incident because of their heavy traffic, though no significant ones have occurred to date. Chemicals are transported along both routes.

DEMOGRAPHICS

The Village of Bellwood's population has been stable at about 435 people since 2010, providing a stable tax base that could fund mitigation projects. Bellwood's population accounted for 3.8% of Butler County's population in 2017.[16]

Figure BEL.1: Population

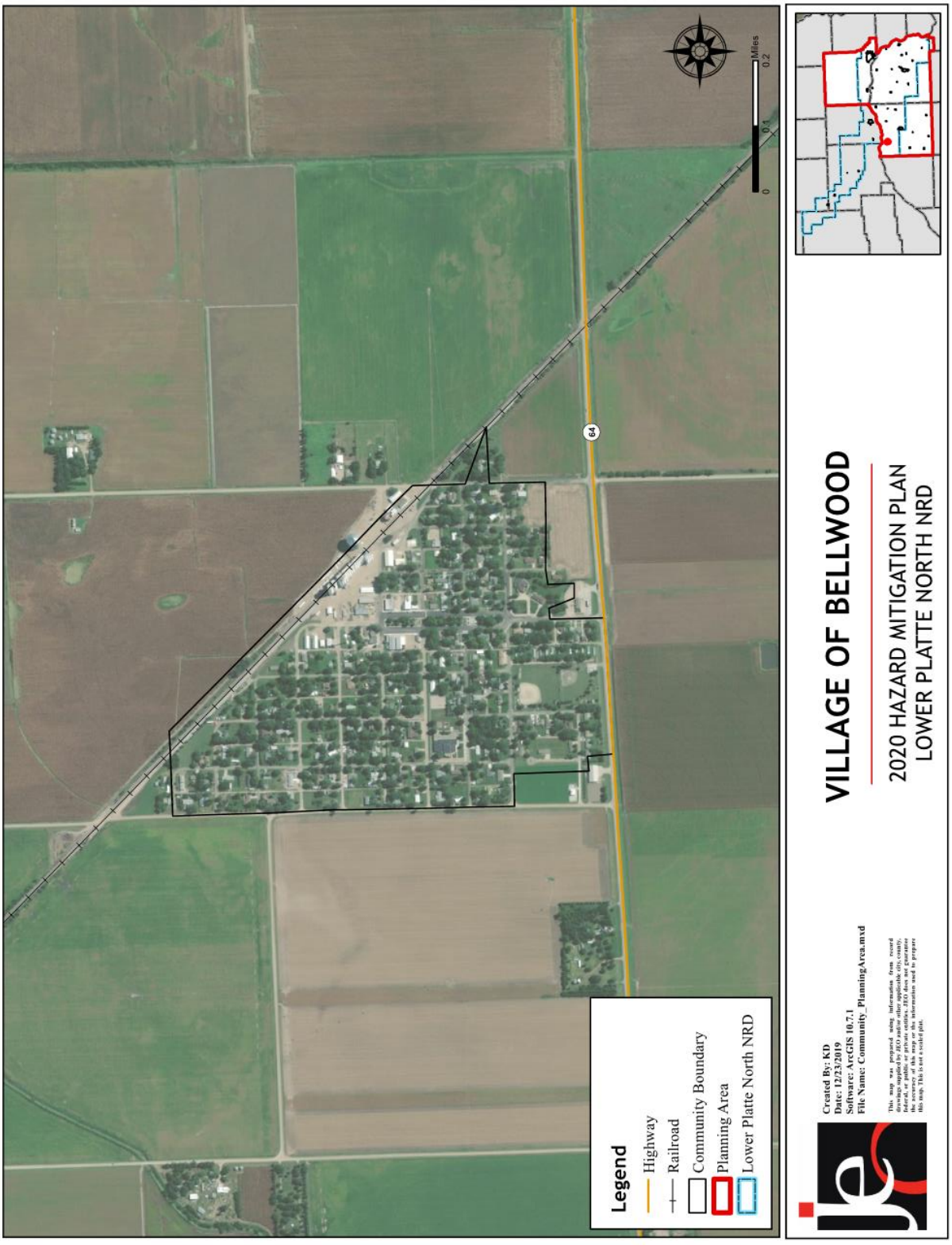


Source: U.S. Census Bureau, 1880 - 2017

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

16 United States Census Bureau. "American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]. https://factfinder.census.gov/.

Figure BEL.2: Village of Bellwood



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

- **Similarly aged.** The median age of Bellwood was 41.6 years old in 2017, compared with Butler County's median of 43.5 years. Bellwood's population grew older since 2010, when the median age was 36.6 years old.[2]
- **Equally ethnically diverse**. Since 2010, Bellwood grew more ethnically diverse. In 2010, 2.0% of Bellwood's population was Hispanic or Latino. By 2017, about 2.9% was Hispanic or Latino. During that time, the Hispanic population in the county grew from 2.3% in 2010 to 3.0% in 2017.[2]
- **Slightly more likely to be below the federal poverty line.** The poverty rate in the Village of Bellwood (9.0% of people living below the federal poverty line) was slightly higher than the county's poverty rate (7.8%) in 2017.[17]

EMPLOYMENT AND ECONOMICS

The Village of Bellwood's economic base is a mixture of industries. In comparison to Butler County, Bellwood's economy had:

- **Similar mix of industries.** Bellwood's major employment sectors, accounting for 10% or more of employment each, were: manufacturing; retail trade; and educational services, and health care and social assistance.[3]
- **Lower per capita income.** Bellwood's per capita income in 2017 ($23,140) was about $4,076 lower than the county ($27,216).[3]
- **More commuters, but fewer long-distance commuters.** About 20% of workers in Bellwood commuted for fewer than 15 minutes, compared with about 41.9% of workers in Butler County. About 23.9% of workers in Bellwood commuted 30 minutes or more to work, compared to about 31.4% of county workers.[18]

MAJOR EMPLOYERS

The major employers in Bellwood are the Frontier Cooperative Company (grain elevator) and the Bellwood Ampride Gas Station. Employment opportunities are limited so most residents commute to the City of Schuyler and City of Columbus for work.

HOUSING

In comparison to Butler County, the Village of Bellwood's housing stock was:[19]

- **Newer.** Bellwood had a smaller share of housing built prior to 1970 than the county (50.8% compared to 56.4%).
- **Similar amounts of mobile and manufactured housing.** The Village of Bellwood had only a slightly larger share of mobile and manufactured housing (9.2%) compared to the

17 United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. https://factfinder.census.gov/.
18 United States Census Bureau. "American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. https://factfinder.census.gov/.
19 United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. https://factfinder.census.gov/.

county (6.3%). Mobile homes are scattered throughout Bellwood and there is a mobile home park on the south side of the village.

- **Less renter-occupied**. About 10.7% of occupied housing units in Bellwood were renter-occupied compared with 20.1% of occupied housing in Butler County.
- **Similarly occupied.** Approximately 14.8% of Bellwood's housing units were vacant compared to 16.5% of units in Butler County.

The age of housing may indicate which housing units were built prior to the development of state building codes. Homes built within a flood hazard area before the adoption of their community's Flood Rate Insurance Map (FIRM) are not likely to be built above the 1% annual chance floodplain. Older and vacant housing stock may also be more vulnerable to hazard events if it is poorly maintained. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if those homes are not anchored correctly. Renter occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have renter's insurance or flood insurance, or to know their risks to flooding and other hazards. A significant number of unoccupied housing suggests that future development may be unlikely to occur in the area.

FUTURE DEVELOPMENT TRENDS

Four new duplexes have been constructed in the Village of Bellwood in the past ten years. Romshek Seeds expanded their downtown store front in 2018. No new construction has been identified but there will likely be additional business expansions and more duplexes constructed in the future. Bellwood's population is stable, (all of the housing is currently occupied or selling quickly) but is not growing because new businesses are not moving to the village.

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, paved lots, roads, etc.) at the parcel level. The data did not contain the number of structures on each parcel. The parcel data was analyzed to determine the number and valuation of property improvements located in the 1% annual chance floodplain. A summary of the results of this analysis is provided in the following table.

Table BEL.2: Parcel Improvements and Value in the Floodplain

NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	PERENTAGE OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN
199	$11,990,845	2	1.0%	$405,335

Source: GIS Workshop/Butler County Assessor, 2019[20]

20 GIS Workshop/Butler County Assessor. 2019. [Personal correspondence].

CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are a total of two fixed hazardous chemical storage sites within two miles of Bellwood, (though the village has no concerns regarding fixed site chemical spills). The following table lists these sites. Bellwood's fire department is trained to respond to spills.

Table BEL.3: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	IN FLOODPLAIN (YES/NO)
Central Sand & Gravel Co 73	4260 F Rd	No
Frontier Co-op Company	508 Maple St	No

Source: Nebraska Department of Environment and Energy, 2019[21]

CRITICAL FACILITIES

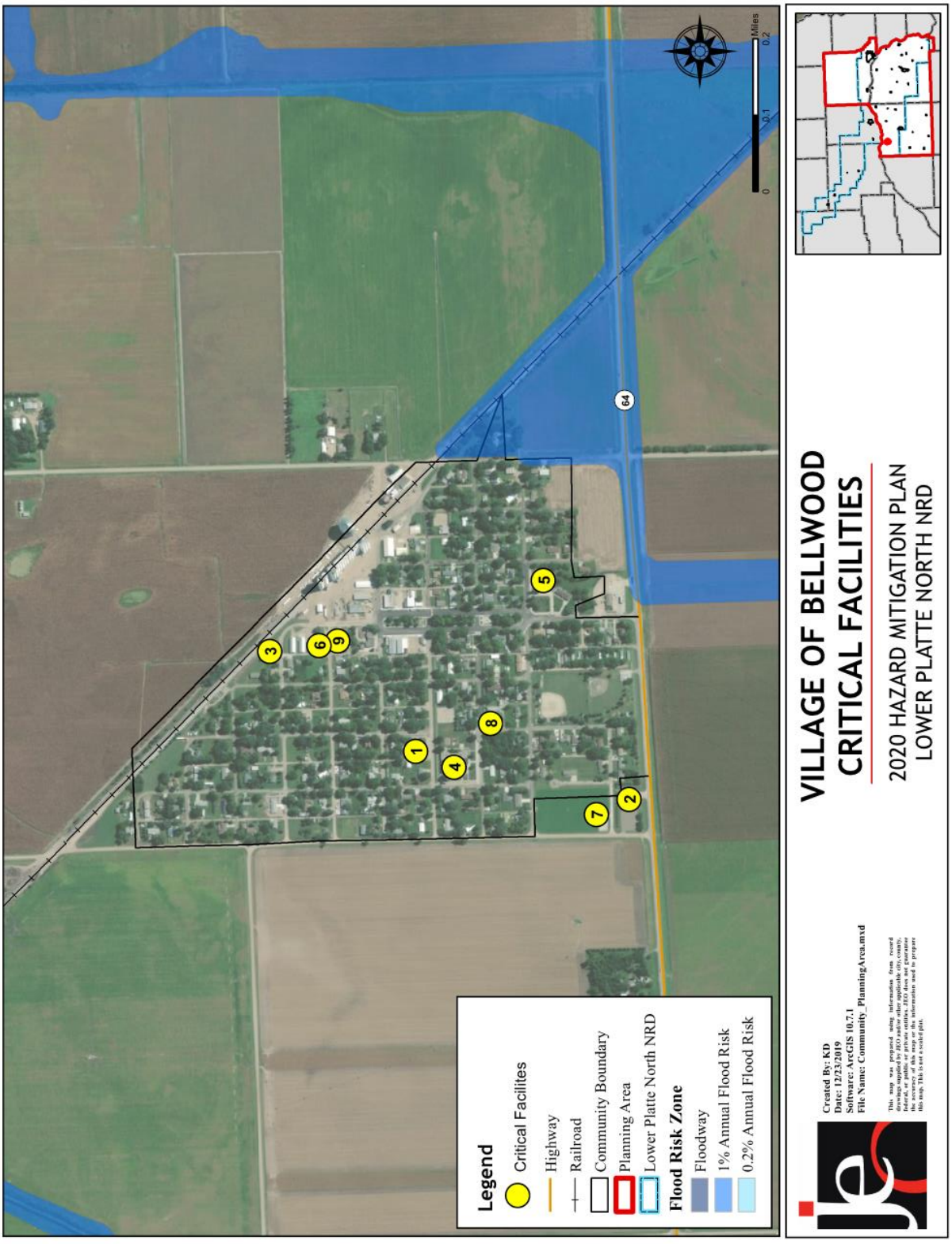
The planning team identified critical facilities necessary for the Village of Bellwood's disaster response and continuity of operations per the FEMA Community Lifelines guidance. Critical facilities were identified during the 2015 planning process and revised for this plan update. The following table and figure provide a summary of the critical facilities for the community.

Table BEL.4: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Bellwood United Methodist Church	Yes	No	No
2	Fire Station	No	Yes	No
3	Lift Station	No	Yes	No
4	School House	No	No	No
5	St Peters Church	Yes	No	No
6	Village Office/Shop	No	Yes	No
7	Water Treatment Plant	No	Yes	No
8	Well House	No	Yes	No
9	Well/Water Tower	No	No	No

21 Nebraska Department of Environmental Quality. 2019. "Nebraska DEQ Tier 2 Data Download: 2018." https://deq-iis.ne.gov/tier2/.

Figure BEL.3: Critical Facility



HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

DROUGHT

Drought in Bellwood has a large economic impact because of the community's ties to agricultural producers. Water quantity is another significant concern. The regional 2012 drought, the most severe in recent history did not impact the village's water quantity but did create irrigation difficulties. Flow meters are checked daily to monitor well levels. Nitrate contaminations has not been a concern for the village's groundwater so quality will likely not be a concern during drought events. No water conservation programs are in place, but residential water use has decreased since the installation of residential water meters in the last ten years.

FLOODING

In May of 2019, persistent regional flooding caused groundwater issues so that basements across the village were flooded. This has been the only flooding to affect Bellwood in the last decade. Most flooding issues stem from a high-water table. Heavy rains can overwhelm the village's culverts.

HAIL

Crop and roof damage are the most concerning impacts of hailstorms. A 2018 hailstorm damaged the well house roof so that it needed to be replaced. All critical facilities are insured against hail damage. In case of a power outage, there is a data backup system in place for municipal records.

HIGH WINDS

High winds in Bellwood are a concern because they can cause crop and property damage, downed trees, and power outages. In one high wind event, straight line winds on the east side of town damaged trees, and disrupted power service for nearly a full day. There are no FEMA certified safe rooms in the community. Residents can seek shelter in their own basements but those in mobile homes and duplexes have no shelter available. The school and County Emergency Manager offer education on response and hazard mitigation for high wind events.

SEVERE THUNDERSTORMS

Severe thunderstorms are an annual event in Bellwood, usually accompanied by heavy rain, high winds, lightning, power outages, and tree damage. Damage to critical facilities from these storms is a concern. Straight line winds caused some damage to trees on the east side of town. A water treatment plant computer was damaged because of a power surge caused by lightning in 2018. Critical municipal records are protected with surge protectors on electronic devices. Nearly all of

the power lines in Bellwood are above ground. Any hazardous trees are scattered throughout the community. Critical facilities do not have weather radios.

SEVERE WINTER STORMS

A severe winter storm in 2012 shutdown the roads in and around Bellwood, severely impacting travel. Power outages are another concern regarding winter storm because none of the power lines in the village buried though there have been no prolonged power outages in recent years. Snow removal is done by the utility superintendent using a Ford F350 pickup with a blade, a John Deere 324 wheel loader with a snow bower attachment, and an MTX 590 tractor with a blade; this snow removal equipment is sufficient at this time. Roads can be opened in two hours, though fully clearing village streets can take up to two days. The truck route on Prospect Road is cleared first.

GOVERNANCE

The Village of Bellwood is governed by a five-member village board; other governmental offices and departments are listed below. The community government will oversee the implementation of hazard mitigation projects.

- Clerk/Treasurer
- Attorney
- Utility Superintendent (including Sewage Plant Operator and Sewer/Street/Water Commissioner)
- Engineer
- Volunteer Fire Department
- Building and Zoning Administrator

CAPABILITY ASSESSMENT

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

Table BEL.5: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Planning & Regulatory Capability	Comprehensive Plan	No
	Capital Improvements Plan	No
	Economic Development Plan	No
	Emergency Operational Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	No
	Floodplain Ordinance	Yes
	Building Codes	Yes
	National Flood Insurance Program	Yes
	Community Rating System	No

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
	Other (if any)	
Administrative & Technical Capability	Planning Commission	No
	Floodplain Administration	Yes
	GIS Capabilities	Yes (contractor)
	Chief Building Official	Yes
	Civil Engineering	Yes (contractor)
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	Yes (contractor)
	Mutual Aid Agreement	Yes (Fire)
	Other (if any)	
Fiscal Capability	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes – backflow required by the state
	Natural Disaster or Safety related school programs	Yes
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	Yes
	Other (if any)	

Table BEL.6: Overall Capability Assessment

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	Moderate

PLAN INTEGRATION

Bellwood has an emergency operations plan, zoning ordinance, building code, floodplain ordinance, and a wellhead protection plan. The village is an annex to Butler County's 2015 emergency operations plan. It contains information on communication, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelters, and resource management. Bellwood's zoning and floodplain ordinances discourage development in the floodplain, discourage development near chemical storage sites, encourage open space within the floodplain, and limit population density in the floodplain. Plans are in place to update the zoning ordinance by the end of 2020. The building code for the village is based on the 2018 International Building Code. No other examples of plan integration were identified. However, the community will seek out and evaluate any opportunities to integrate the results of the current HMP into other planning mechanisms and updates.

MITIGATION STRATEGY

ONGOING AND NEW MITIGATION ACTIONS

MITIGATION ACTION	COMMUNITY EDUCATION AND AWARENESS
Description	Through activities such as outreach projects, distribution of maps and environmental education increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards. Also, educate citizens on water conservation methods, evacuation plans, etc.
Hazard(s) Addressed	All hazards
Estimated Cost	$1,000
Funding	General fund
Timeline	Ongoing
Priority	Medium
Lead Agency	Village Clerk
Status	Educational mailers on backflow valves are distributed yearly

MITIGATION ACTION	SAFE ROOMS AND STORM SHELTERS
Description	Design and construct storm shelters and safe rooms in highly vulnerable areas such as churches, schools and other areas.
Hazard(s) Addressed	High wind, tornadoes
Estimated Cost	Varies
Funding	Other funding like private donations
Timeline	5+ years
Priority	Low
Lead Agency	Contracted engineer (JEO Consulting Group)
Status	Not started

MITIGATION ACTION	STORMWATER SYSTEM IMPROVEMENTS
Description	Upsize culvert to manage stormwater during heavy rain events
Hazard(s) Addressed	Flooding
Estimated Cost	To be determined
Funding	General fund
Timeline	2-5 years
Priority	Medium
Lead Agency	Contracted engineer (JEO Consulting Group)
Status	Not started

MITIGATION ACTION	UPDATE ZONING REGULATIONS
Description	Update zoning regulations to encourage growth away from natural hazard areas. Zoning regulations can ensure a safe growth rate for a jurisdiction.
Hazard(s) Addressed	Flooding
Estimated Cost	$0
Funding	General funds
Timeline	2-5 years
Priority	Medium
Lead Agency	Zoning Administrator
Status	The Zoning Administrator, appointed in 2019, is interested in pursuing this project

REMOVED MITIGATION ACTIONS

MITIGATION ACTION	MAINTAIN GOOD STADING WITH THE NATIONAL FLOOD INSURANCE PROGRAM
Hazard(s) Addressed	Flooding
Reason for Removal	While the community will continue to participate and maintain compliance in the NFIP, this is no longer considered a mitigation project by FEMA

COMMUNITY PROFILE

DAVID CITY

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table DVD.1: David City Local Planning Team

NAME	TITLE	JURISDICTION
Tami Comte	Deputy City Clerk	David City
Clayton Keller	City Administrator	David City

LOCATION AND GEOGRAPHY

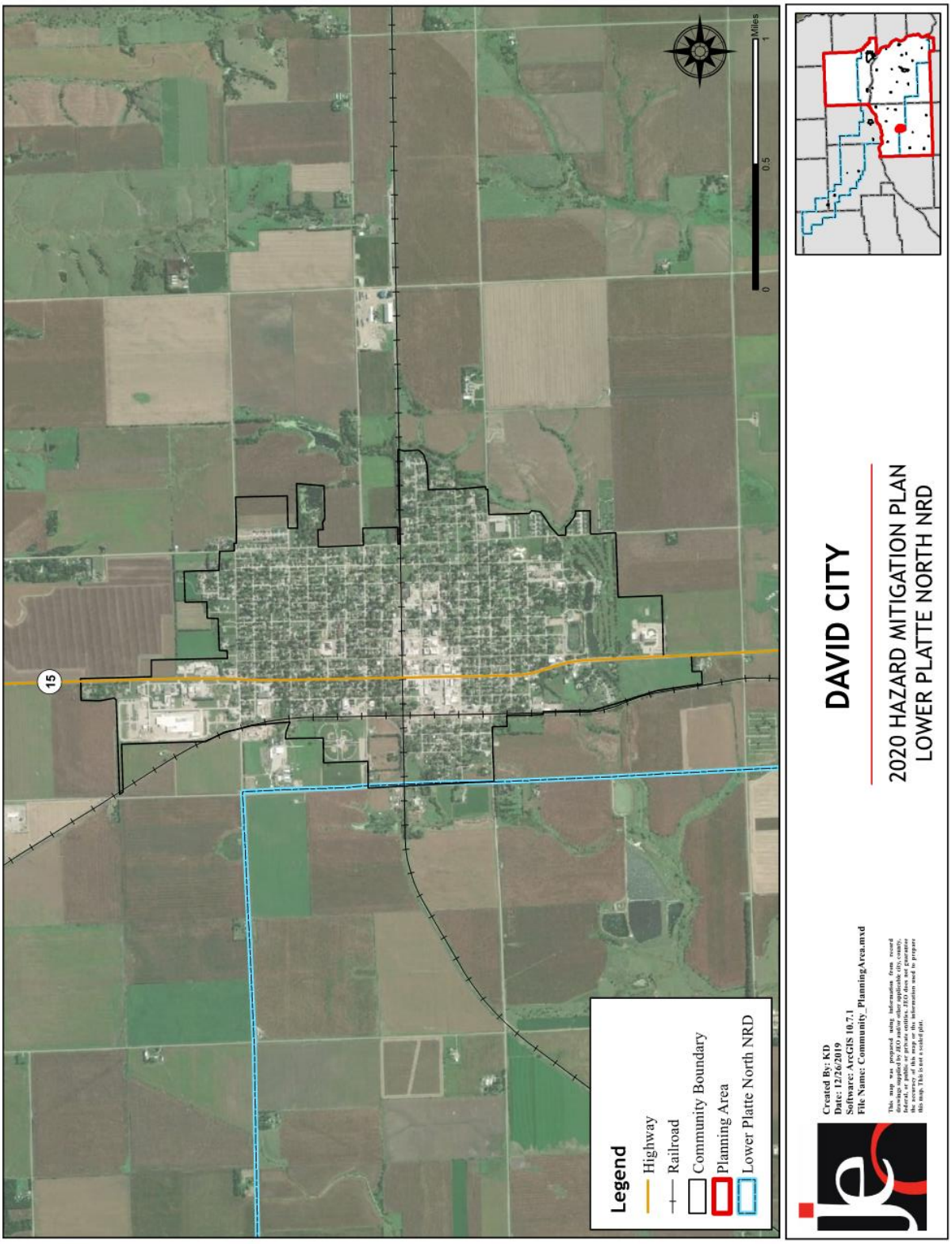
David City is a city in central Butler County and covers an area of 1.74 square miles. It is in the plains region of Nebraska, surrounded by agricultural land used for row-crop production and some pasturing. Major waterways in the area include the north branch of the Big Blue River and the Platte River.

TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community and areas more at risk of transportation incidents. David City is intersected by a major transportation corridor, State Highway 15, which connects to State Highways 64 to the north and 92 to the south. Where it passes through David City, State Highway 15 is traveled by a total annual average of 6,005 vehicles daily, 475 of which are trucks.[22] David City has two rail lines; Nebraska Central Railroad Company owns a line that travels east and west through town, and Burlington Northern Santa Fe Railway owns a line that travels north and south through town. David City Municipal Airport is located south of the city, with ten hangers and two runways. State Highways 15 and 92 are the transportation routes of most concern because they are the most heavily traveled. Anhydrous ammonia is regularly transported along all local routes.

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

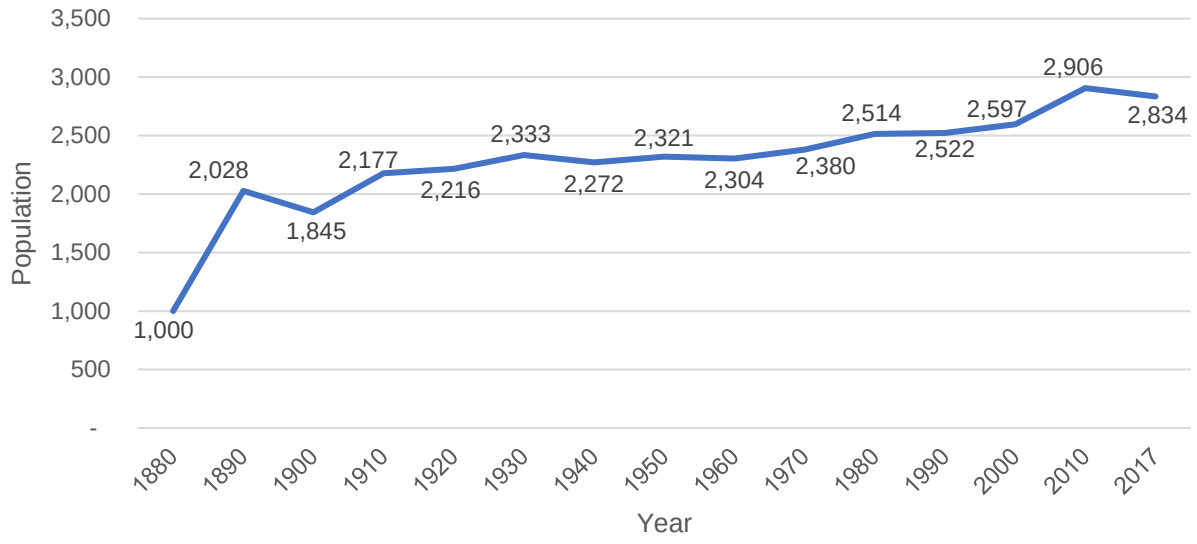
Figure DVD.1: David City



DEMOGRAPHICS

Though David City's population declined slightly from 2,906 people in 2010 to about 2,834 people in 2017, its population is generally increasing. An increasing population will provide a sufficient tax base to fund mitigation projects. David City's population accounted for 35.0% of Butler County's population in 2017.[23]

Figure DVD.2: Population



Source: U.S. Census Bureau, 1880 - 2017

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

- **Slightly younger.** The median age of David City was 41.8 years old in 2017, compared with Butler County's median of 43.5 years. David City's population grew younger since 2010, when the median age was 44.1 years old. David City had a higher proportion of people under 18 years old (24.3%) than the county (19.9%).[2]
- **More ethnically diverse**. Since 2010, David City grew slightly more ethnically diverse. In 2010, 4.0% of David City's population was Hispanic or Latino. By 2017, about 4.8% was Hispanic or Latino. During that time, the Hispanic population in the county grew from 2.3% in 2010 to 3.0% in 2017.[2]
- **More likely to be below the federal poverty line.** The poverty rate in David City (9.7% of people living below the federal poverty line) was higher than the county's poverty rate (7.8%) in 2017.[24]

23 United States Census Bureau. "American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]. https://factfinder.census.gov/.
24 United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. https://factfinder.census.gov/.

EMPLOYMENT AND ECONOMICS

David City's economic base is a mixture of industries. In comparison to Butler County, David City's economy had:

- **Similar mix of industries.** Three major employment sectors, accounting for 10% or more of employment each, were: manufacturing; retail trade; and educational services, and health care and social assistance.[3]
- **Lower per capita income.** David City's per capita income in 2017 ($24,883) was about $2,333 lower than the county ($27,216).[3]
- **Fewer long-distance commuters.** About 60.2% of workers in David City commuted for fewer than 15 minutes, compared with about 41.9% of workers in Butler County. About 27.0% of workers in David City commuted 30 minutes or more to work, compared to about 31.4% of county workers.[25]

MAJOR EMPLOYERS

Major employers in David City include Timpte Manufacturing, David City Public Schools, the Butler County Health Care Center, Henningsen Foods, and Fargo Assembly. Many residents commute to work to the nearby communities of Schuyler, Columbus, Seward and Lincoln.

HOUSING

In comparison to Butler County, David City's housing stock was:[26]

- **Newer.** David City had a smaller share of housing built prior to 1970 than the county (51.8% compared to 56.4%).
- **Less mobile and manufactured housing.** David City had a smaller share of mobile and manufactured housing (4.5%) compared to the county (6.3%). Mobile homes are located along the highway on the south end of David City, across from the park.
- **More renter-occupied**. About 36.2% of occupied housing units in David City were renter-occupied compared with 20.1% of occupied housing in Butler County.
- **Occupied.** Approximately 11.1% of David City housing units were vacant compared to 16.5% of units in Butler County.

The age of housing may indicate which housing units were built prior to the development of state building codes. Homes built within a flood hazard area before the adoption of their community's Flood Rate Insurance Map (FIRM) are not likely to be built above the 1% annual chance floodplain. Older and vacant housing stock may also be more vulnerable to hazard events if it is poorly maintained. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if those homes are not anchored correctly. Renter occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have renter's insurance or flood insurance, or to know their risks to flooding and other hazards. A

25 United States Census Bureau. "American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. https://factfinder.census.gov/.

26 United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. https://factfinder.census.gov/.

significant number of unoccupied housing suggests that future development may be unlikely to occur in the area.

FUTURE DEVELOPMENT TRENDS

In the last ten years, new housing has been built throughout David City. The city recently annexed a small portion of land on the northeast side of the city to accommodate a new housing development. Fargo Assembly will be closing in 2020, while Timpte Manufacturing will move its headquarters to the city. Employment opportunities with local manufacturing business like Timpte Manufacturing have led to the increasing population trend in the city.

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, paved lots, roads, etc.) at the parcel level. The data did not contain the number of structures on each parcel. The parcel data was analyzed to determine the number and valuation of property improvements located in the 1% annual chance floodplain. A summary of the results of this analysis is provided in the following table.

Table DVD.2: Parcel Improvements and Value in the Floodplain

NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	PERCENTAGE OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN
1,334	$113,949,840	27	2.0%	$3,171,015

Source: GIS Workshop/Butler County Assessor, 2019[27]

CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are a total of nine fixed hazardous chemical storage sites within two miles of David City and none are located in the floodplain. The following table lists these sites. The city is not concerned about chemical spills in the community. One well house is located near the Yanka Frontier Co-op. The local volunteer fire department has the appropriate hazmat equipment and training to respond to a spill.

27 GIS Workshop/Butler County Assessor. 2019. [Personal correspondence].

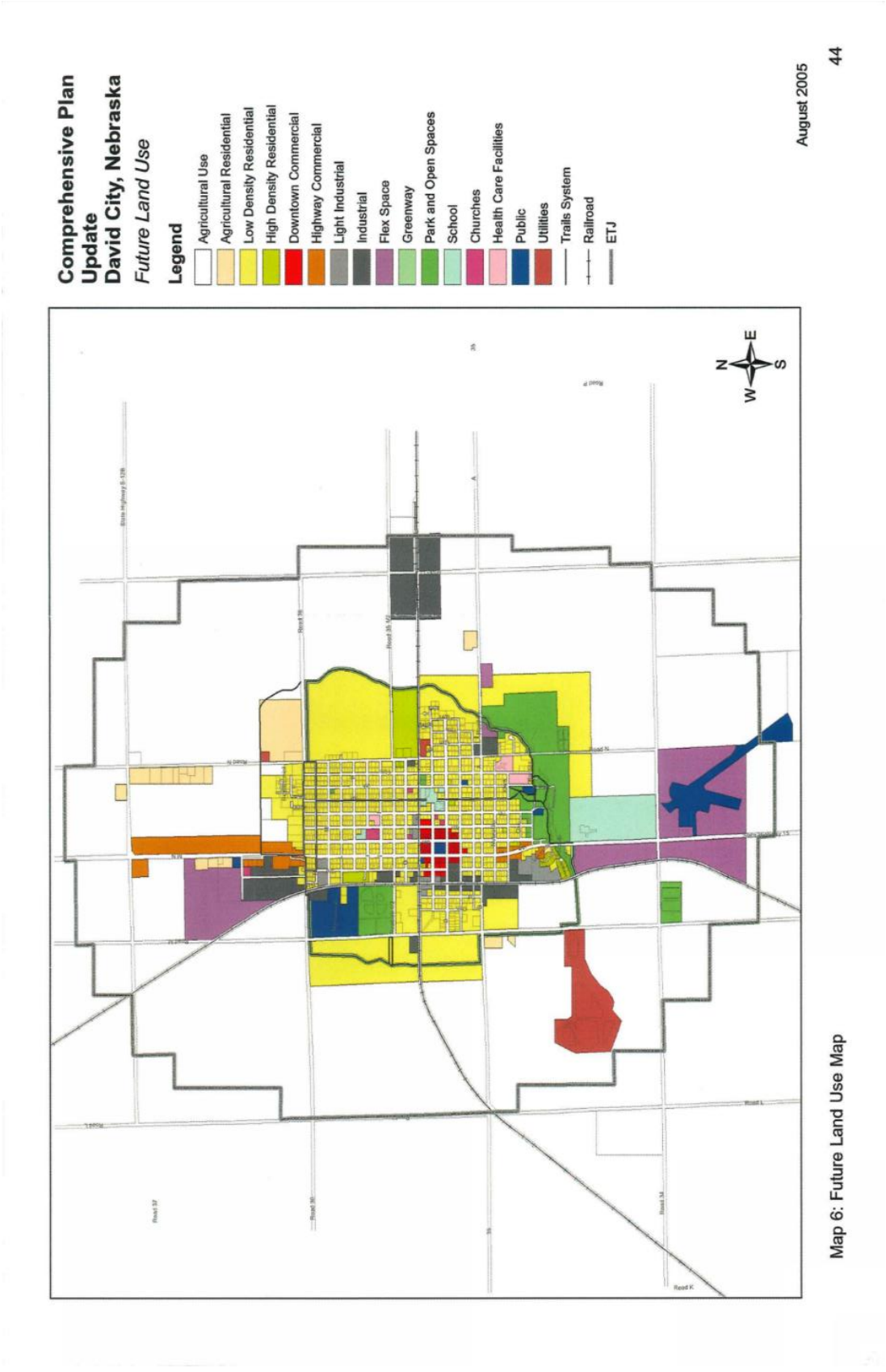
Table DVD.3: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	IN FLOODPLAIN (YES/NO)
Aurora Agronomy	1295 37 Rd	No
Yanka Frontier Co-op Company	3541 O Rd	No
Henningsen Foods Inc	Henningsen Foods Inc	No
NDOT David City Yard	235 Iowa St	No
Northside Inc	1652 N 4th St	No
Plains Equipment Group	1707 N 4th St	No
Roth Aerial Spraying Inc	3380 Mn Rd	No
Timpte Inc	1827 Industrial Dr	No
Windstream Communications	591 D St	No

Source: Nebraska Department of Environment and Energy, 2019[28]

28 Nebraska Department of Environmental Quality. 2019. "Nebraska DEQ Tier 2 Data Download: 2018." https://deq-iis.ne.gov/tier2/.

Figure DVD.3: Future Land Use Map



CRITICAL FACILITIES

The planning team identified critical facilities necessary for David City's disaster response and continuity of operations per the FEMA Community Lifelines guidance. Critical facilities were identified during the 2015 planning process and revised for this plan update. The following table and figure provide a summary of the critical facilities for the community.

Table DVD.4: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Auditorium	Yes	No	No
2	Butler County Event Center	No	No	No
3	Butler County Hospital	No	Yes	No
4	Butler Public Power District	No	Yes	No
5	David City – City Hall	No	No	No
6	David City Elementary School	No	No	No
7	David City Fire Department	No	Yes	No
8	David City High School	No	No	No
9	David's Place Nursing Home	No	Yes	No
10	Electric Substation	No	No	No
11	Electric Substation 1	No	No	No
12	Electric System Department/Street Department	No	No	No
13	Power Plant	No	Yes	No
14	St. Joseph's Villa Nursing Home	No	Yes	No
15	Wastewater Treatment Facility	No	Yes	No
16	Water Tower	No	No	No
17	Water Treatment Plant	No	No	No
18	Well No. 10	No	No	No
19	Well No. 11	No	No	No
20	Well No. 12	No	No	No
21	Well No. 14	No	No	No
22	Well No. 8	No	No	No
23	Well No. 9	No	No	No

Figure DVD.4: Critical Facilities

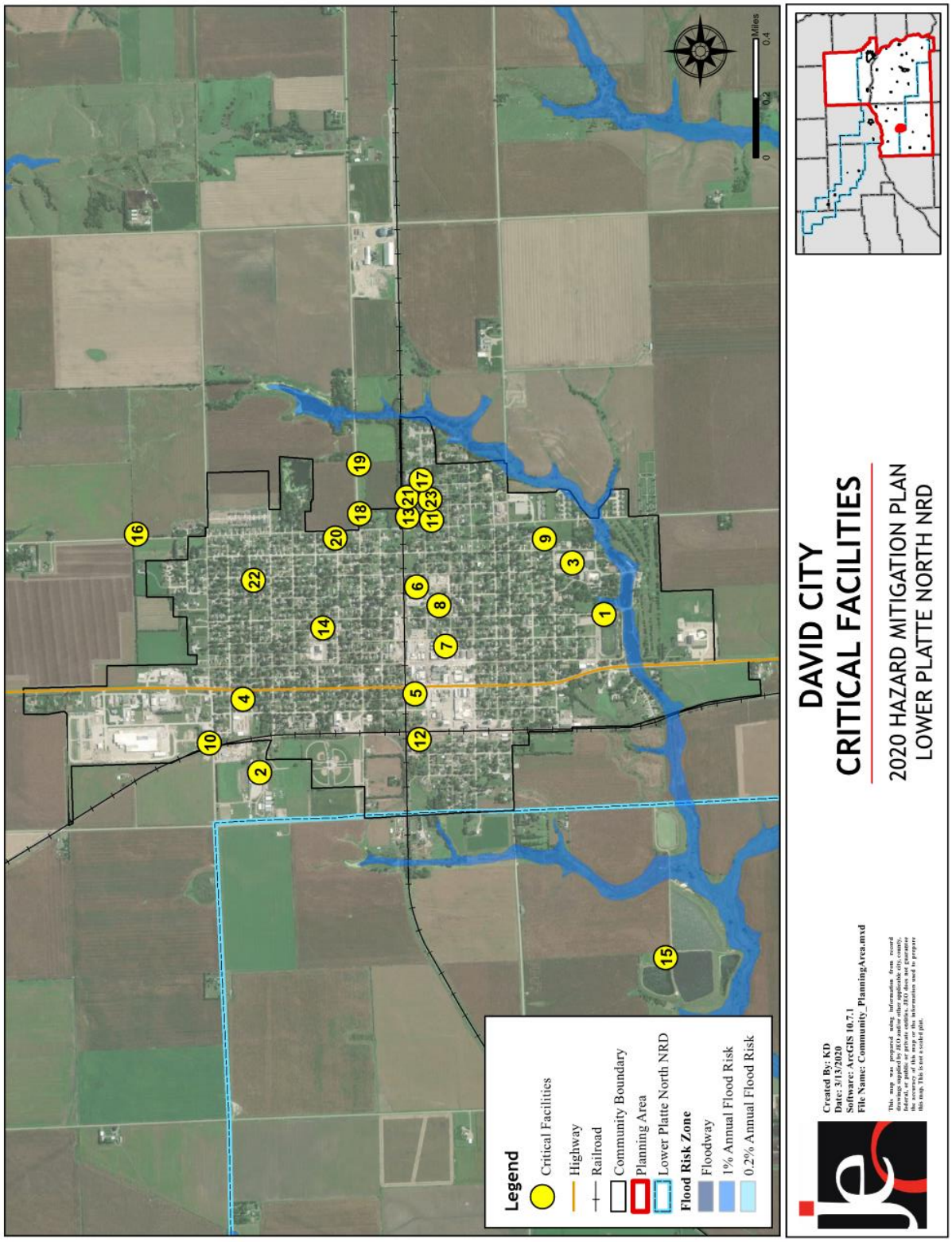
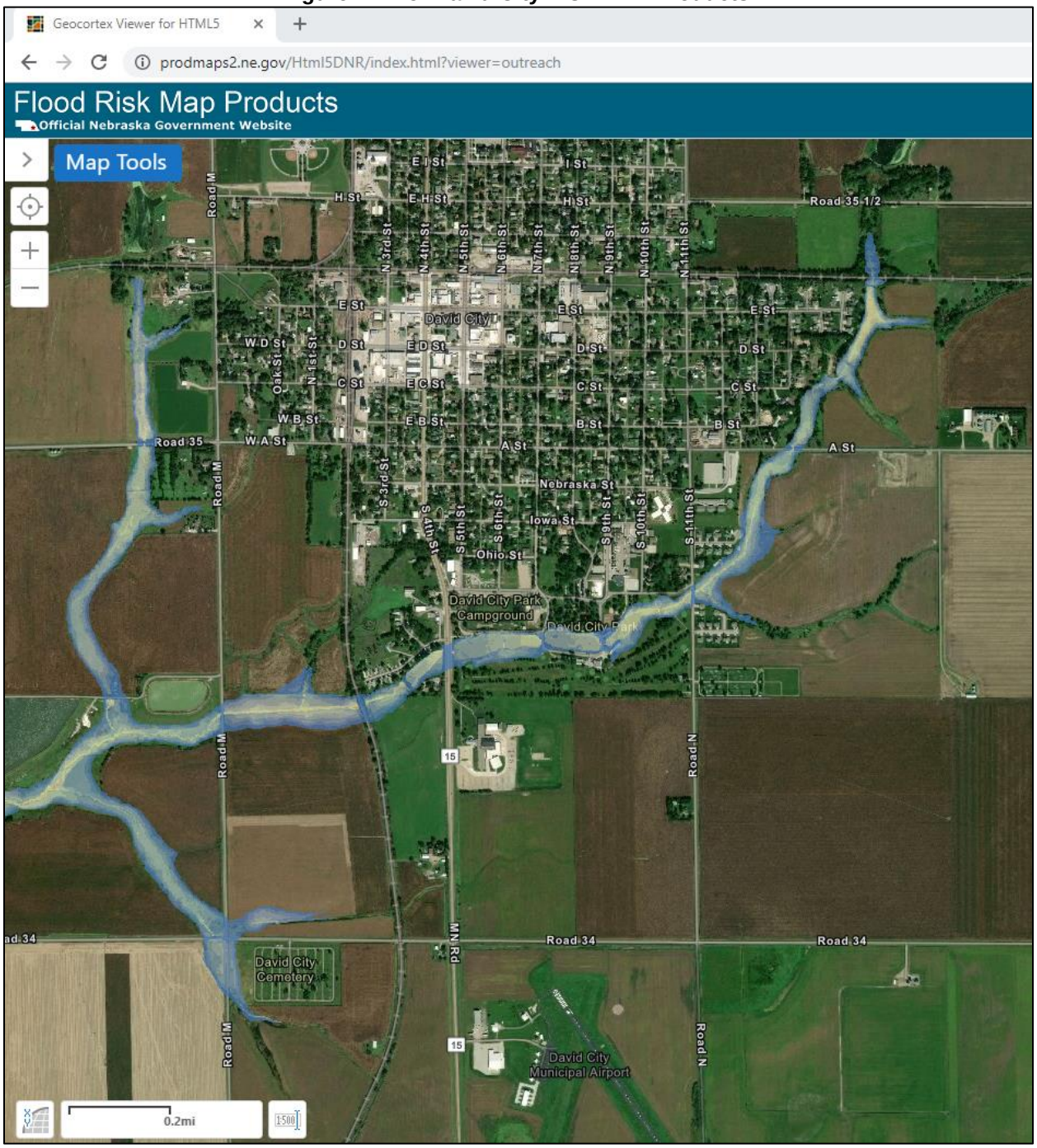


Figure DVD.5: David City Risk MAP Products



Source: NeDNR

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

FLOODING

During the March 2019 floods the wastewater plant sustained damage in the control room, losing the main pump after the room flooded. Two culverts, blocked with debris and ice, contributed to two sections of road washing out. The flood damage in David City as a flash flood event, with heavy rains falling on melting snow. The city otherwise has no issues with stormwater drainage. About ten years ago the city partnered with the Upper Big Blue NRD to create a water diversion plan. From this plan the city implemented the Northwest Drainage Project. The $2,000,000 project ended what had been recurrent flooding at the intersection of O Street and 4th Street and in the north side of town. The only other flooding event to occur since the completion of the Northwest Drainage Project was in August of 2017 when ten inches of rain fell in two hours. The wastewater system was overwhelmed then as well, damaging the wastewater plant. Future floods are a concern because of their potential to damage the wastewater plant and roads.

Risk Mapping, Assessment, and Planning (Risk MAP) was completed for southwestern portions of Butler County, include David City. As shown in Figure DVD.5, additional products, such as flood depths and percent annual or 30-year chance grids, are available to David City to make informed decisions about reducing and communicating flood risk. To view this interactive map, visit https://prodmaps2.ne.gov/Html5DNR/index.html?viewer=outreach.

HIGH WINDS

In June of 2017 a high wind event downed trees, tree limbs, and power lines throughout the city. An entire line of electrical infrastructure was damaged on Industrial Drive. The power was out for parts of the town for five hours until Nebraska Public Power rerouted the electricity. The electrical infrastructure was repaired in about a day. High wind events are a common experience in the city and often cause damage. Future high wind events are a concern for the community because of their potential to cause tree and power line damage. No hazardous trees are left in the community, and the city maintenance staff trim trees in the fall. All critical municipal records have a data backup system.

SEVERE THUNDERSTORMS

Severe thunderstorms cause concerns of property damage, tree damage, and power loss. Previous thunderstorms have been accompanied by wind and hail that caused property damage and power outages. A lightning strike during one of these storms damaged critical infrastructure at the wastewater plant. The swimming pool roof was replaced after being damaged by hail. The city has surge protectors to protect electrical equipment in critical facilities.

SEVERE WINTER STORMS

About 13 inches of snow fell over three days beginning on Christmas Eve and ending the day after Christmas in 2009. The blizzard conditions closed many rural roads and some highways for several days. The entire city was shut down for about a day. There are snow routes in town to aid snow removal. Snow removal is done by the Streets Department after three inches have accumulated. Their removal resources are sufficient.

TORNADOES

In 1985 an EF1 tornado lifted off the ground and moved over David City at tree top level. Some roofs were taken by that tornado. In 2000 an EF0 moved to the west of the city. There are four warning sirens in the community, activated by the county sheriff. There are no public safe rooms in the city. Most residents seek shelter in their own homes. In case of a disaster Mutual Aid Agreements are in place with the Villages of Bellwood, Brainard, and Rising City and the Cities of Schuyler and Wahoo.

GOVERNANCE

David City is governed by a mayor and a six-member City Council; other governmental offices and departments are listed below. The community government will oversee the implementation of hazard mitigation projects.

- City Clerk/Treasurer
- Deputy City Clerk
- Street Department
- Electric Department
- Water Department
- City Administrator
- Sewer Supervisor
- Electric Supervisor
- Park Superintendent
- Library Director
- Volunteer Fire Department
- Lines Foreman

CAPABILITY ASSESSMENT

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

Table DVD.5: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Planning & Regulatory Capability	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Emergency Operational Plan	Yes

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

Table DVD.6: Overall Capability Assessment

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

PLAN INTEGRATION

David City has a comprehensive plan (2005), emergency operations plan (2015), zoning ordinance (2007), building code (2007), capital improvements plan (2016), floodplain regulations (2007), wellhead protection plan (2003), and subdivision regulations (2019). The comprehensive plan, zoning ordinance, floodplain regulations, and subdivision regulations do not allow development in the floodplain, directs development away from chemical storage facilities, limits density in hazardous areas, prohibits filling of wetlands, encourages open space in the floodplain, and restricts subdivision of land within the floodplain. There are plans in place to update the zoning ordinance in 2020-2021. David City is an annex in the Butler County emergency operations plan. It contains information regarding communications, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelters, and resource management. The capital improvements plan is out of date and is not used at this point in time. Municipal funds for the city have decreased over recent years with a large portion dedicated to wastewater and water plant improvements. No other examples of plan integration were identified. However, the community will seek out and evaluate any opportunities to integrate the results of the current HMP into other planning mechanisms and updates.

MITIGATION STRATEGY

ONGOING AND NEW MITIGATION ACTIONS

MITIGATION ACTION	ABOVE GROUND STORMWATER SYSTEM AND DRAINAGE IMPROVEMENTS
Description	Stormwater systems comprising of ditches, culverts, or drainage ponds can be used to convey runoff. Undersized systems can contribute to localized flooding. Drainage improvements may include ditch upsizing, ditch cleanout and culvert improvements. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other stormwater system improvements. Bridges typically serve as flow restrictions along streams and rivers. Cleanout and reshaping of channel segments at bridge crossings can increase conveyance, reducing the potential for flooding
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	General budget
Timeline	5+ years
Priority	Medium
Lead Agency	Streets Department
Status	In process. The city is currently improving drainage across the community

MITIGATION ACTION	ALERT/WARNING SIRENS
Description	Perform an evaluation of existing alert sirens in order to determine sirens which should be replaced or upgraded. Install new sirens where lacking with remote activation options
Hazard(s) Addressed	Tornadoes, high winds, severe thunderstorms
Estimated Cost	$5,000+
Funding	Electric budget
Timeline	1 year
Priority	High
Lead Agency	Electric Department
Status	New action. Not started

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	Obtain a backup generator for the city hall and any other critical facilities as deemed necessary. The city office, auditorium, water plant, and street/light department all need backup generators
Hazard(s) Addressed	All hazards
Estimated Cost	$500,000
Funding	General budget
Timeline	2-5 years
Priority	High
Lead Agency	City Administrator
Status	This is a new project, so no progress has been made

MITIGATION ACTION	ELECTRICAL SYSTEM LOOPED DISTRIBUTION/REDUNDANCIES
Description	Provide looped distribution service and other redundancies in the electrical system as a backup power supply in the event the primary system is destroyed or fails
Hazard(s) Addressed	Tornadoes, high winds, severe thunderstorms, severe winter storms
Estimated Cost	$5,000+
Funding	Electric Department Budget
Timeline	2-5 years
Priority	Medium
Lead Agency	Electric Department
Status	New action. Not started

MITIGATION ACTION	HAZARDOUS TREE REMOVAL
Description	Conduct tree inventory. Develop and implement tree maintenance and trimming program to remove hazardous limbs and trees
Hazard(s) Addressed	Tornadoes, high winds, severe thunderstorms, severe winter storms
Estimated Cost	$200 per tree
Funding	Street Department Budget
Timeline	2-5 years
Priority	Medium
Lead Agency	Street Department
Status	New action. Not started

MITIGATION ACTION	IMPROVE CONSTRUCTION STANDARDS AND BUILDING SURVIVABILITY
Description	Prohibit the installation of flat roofs in new construction
Hazard(s) Addressed	Severe winter storms
Estimated Cost	Staff time
Funding	General budget
Timeline	1 year
Priority	High
Lead Agency	Building Department
Status	New action. Not started

MITIGATION ACTION	INFRASTRUCTURE HARDENING
Description	Locate critical mechanical systems above the base flood elevation. Consider moving electrical systems to higher floors or the roof rather than the basement
Hazard(s) Addressed	Flooding
Estimated Cost	$1,000,000+
Funding	General budget
Timeline	2-5 years
Priority	High
Lead Agency	Sewer Department
Status	New action. Not started

MITIGATION ACTION	POWER, SERVICE, AND ELECTRICAL LINES
Description	Communities can work with their local public power district or electricity department to identify vulnerable transmission and distribution lines and plan to bury lines underground or retrofit existing structures to be less vulnerable to storm events. Electrical utilities shall be required to use underground construction methods where possible for future installation of power lines. Communities should also work with their water providers to ensure that distribution strategies are protected against natural disasters.
Hazard(s) Addressed	Flooding, high winds, severe thunderstorms, tornadoes
Estimated Cost	Varies
Funding	Electric funds
Timeline	5+ years
Priority	Medium
Lead Agency	Electrical Department
Status	Lines are being replaced as possible and necessary throughout the city

MITIGATION ACTION	SAFE ROOMS AND STORM SHELTERS
Description	Design and construct storm shelters and safe rooms in highly vulnerable areas such as churches, schools and other areas
Hazard(s) Addressed	All hazards
Estimated Cost	$350+ per square foot
Funding	General budget
Timeline	5+ years
Priority	Medium
Lead Agency	City Administrator
Status	Safe rooms are needed in the city, but no plans have yet been made to install one

MITIGATION ACTION	STREAM BANK STABILIZATION / GRADE CONTOL STRUCTURES / CHANNEL IMPROVEMENTS
Description	Stabilize banks along streams and rivers. This may include, but is not limited to: reducing bank slope, addition of riprap, installation of erosion control materials/fabrics
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	Capital Improvement Project
Timeline	1-2 years
Priority	High
Lead Agency	Water Department, Wastewater Department, City Administration
Status	New action. Not started

MITIGATION ACTION	UPDATE COMPREHENSIVE PLAN
Description	Update comprehensive plan. Integrate plan with Hazard Mitigation Plan components
Hazard(s) Addressed	All hazards
Estimated Cost	$15,000+
Funding	General budget
Timeline	2-5 years
Priority	Medium
Lead Agency	City Administration
Status	New action. Not started

MITIGATION ACTION	WEATHER RADIOS
Description	Identify weather warning radio locations. Purchase or upgrade weather radios as needed. Radios will be located in department offices
Hazard(s) Addressed	All hazards
Estimated Cost	$50 per unit
Funding	General budget
Timeline	1-2 years
Priority	High
Lead Agency	All departments
Status	Not started. New action

REMOVED MITIGATION ACTIONS

MITIGATION ACTION	MAINTAIN GOOD STANDING WITH THE NATIONAL FLOOD INSURANCE PROGRAM
Hazard(s) Addressed	Maintain good standing with the National Flood Insurance Program
Reason for Removal	While the community will continue to participate and maintain compliance in the NFIP, this project is no longer considered a mitigation action by FEMA

COMMUNITY PROFILE

VILLAGE OF DWIGHT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table DWT.1: Village of Dwight Local Planning Team

NAME	TITLE	JURISDICTION
Jim Mastny	Village Board Member	Village of Dwight

LOCATION AND GEOGRAPHY

The Village of Dwight is in the southeastern portion of Butler County and covers an area of 0.24 square miles. It is in the plains region of Nebraska, surrounded by agricultural land used row crop production and pasturing. The Big Blue River is about nine miles to the east of the village.

TRANSPORTATION

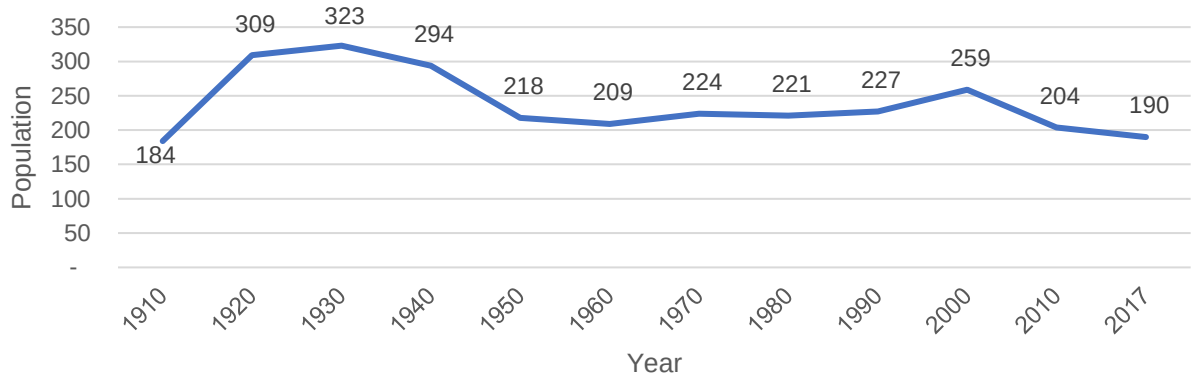
Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community and areas more at risk of transportation incidents. Dwight's major transportation corridor is State Highway Spur 12D, connecting it to State Highway 66. The State Highway Spur 12D is traveled by a total annual average of 690 vehicles daily, 35 of which are trucks; nearby State Highway 66 is traveled by a total annual average of 950 vehicles daily, 80 of which are trucks.[29]

State Highway Spur 12D and Maple Street are the transportation routes of most concern in Dwight because of their heavy traffic. Chemicals such as fuel, propane, and anhydrous ammonia are transported along these routes. No transportation incidents have occurred locally.

DEMOGRAPHICS

Dwight's population declined from 204 people in 2010 to about 190 people in 2017. A declining population will increase vacant housing and reduce the tax base, reducing funding for mitigation projects. The Village of Dwight's population accounted for 2.3% of Butler County's population in 2017.[30]

Figure DWT.1: Population



Source: U.S. Census Bureau, 1910 - 2017

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

30 United States Census Bureau. "American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]. https://factfinder.census.gov/.

Figure DWT.2: Village of Dwight

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

- **Older.** The median age of Dwight was 51.2 years old in 2017, compared with Butler County's median of 43.5 years. Dwight's population grew older since 2010, when the median age was 46.6 years old. The village had a larger proportion of people over 65 years old (25.3%) than the county (19.9%).[2]
- **Similarly ethnically diverse**. Since 2010, Dwight grew more ethnically diverse. In 2010, none of Dwight's population was Hispanic or Latino. By 2017, about 3.7% was Hispanic or Latino. During that time, the Hispanic population in the county grew from 2.3% in 2010 to 3.0% in 2017.[2]
- **More likely to be below the federal poverty line.** The poverty rate in the village (10.0% of people living below the federal poverty line) was higher than the county's poverty rate (7.8%) in 2017.[31]

EMPLOYMENT AND ECONOMICS

The Village of Dwight's economic base is a mixture of industries. In comparison to Butler County, Dwight's economy had:

- **Similar mix of industries.** Three major employment sectors, accounting for 10% or more of employment each, were: manufacturing; transportation and warehousing, and utilities; and educational services, and health care and social assistance.[3]
- **Higher per capita income.** Dwight's per capita income in 2017 ($28,830) was about $1,614 higher than the county ($27,216).[3]
- **More long-distance commuters.** About 13.4% of workers in Dwight commuted for fewer than 15 minutes, compared with about 41.9% of workers in Butler County. About 42.2% of workers in Dwight commuted 30 minutes or more to work, compared to about 31.4% of county workers.[32]

MAJOR EMPLOYERS

The largest employer in the Village of Dwight is the Frontier Co-op. Many residents commute for work to the nearby communities of David City, Seward, Wahoo, or Lincoln.

HOUSING

In comparison to Butler County, Dwight's housing stock was:[33]

- **Older.** Dwight had a larger share of housing built prior to 1970 than the county (72.7% compared to 56.4%).

31 United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. https://factfinder.census.gov/.

32 United States Census Bureau. "American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. https://factfinder.census.gov/.

33 United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. https://factfinder.census.gov/.

- **Less mobile and manufactured housing.** Dwight had a smaller share of mobile and manufactured housing (2.9%) compared to the county (6.3%). No mobile homes are located within the village boundary.
- **More homeowners**. About 11.4% of occupied housing units in Dwight were renter-occupied compared with 20.1% of occupied housing in Butler County.
- **Occupied.** Approximately 14.6% of Dwight housing units were vacant compared to 16.5% of units in Butler County.

The age of housing may indicate which housing units were built prior to the development of state building codes. Homes built within a flood hazard area before the adoption of their community's Flood Rate Insurance Map (FIRM) are not likely to be built above the 1% annual chance floodplain. Older and vacant housing stock may also be more vulnerable to hazard events if it is poorly maintained. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if those homes are not anchored correctly. Renter occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have renter's insurance or flood insurance, or to know their risks to flooding and other hazards. A significant number of unoccupied housing suggests that future development may be unlikely to occur in the area.

FUTURE DEVELOPMENT TRENDS

The Village of Dwight built a new elementary school building with a tornado shelter in the last ten years. There are new housing developments planned for the northeast part of the village. Jim's Service opened in 2011, and more businesses are expected to open in Dwight. The population has been decreasing, largely due to an aging population and job transfers away from the village.

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, paved lots, roads, etc.) at the parcel level. The data did not contain the number of structures on each parcel. The parcel data was analyzed to determine the number and valuation of property improvements located in the 1% annual chance floodplain. A summary of the results of this analysis is provided in the following table.

Table DWT.2: Parcel Improvements and Value in the Floodplain

NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	PERCENTAGE OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN
133	$8,356,730	0	0%	$0

Source: GIS Workshop/Butler County Assessor, 2019[34]

34 GIS Workshop/Butler County Assessor. 2019. [Personal correspondence].

CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one hazardous chemical storage sites within two miles of the Village of Dwight. The following table lists this site.

Table DWT.3: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	IN FLOODPLAIN (YES/NO)
Frontier Co-op Company	141 E Maple St	No

Source: Nebraska Department of Environment and Energy, 2019[35]

While anhydrous ammonia leaks at the Frontier Co-op have been a concern in the past, the anhydrous tanks are being removed from that facility in 2020. There have been no spills to date. In case of a spill the event, the local fire department is equipped with the appropriate response gear and training.

CRITICAL FACILITIES

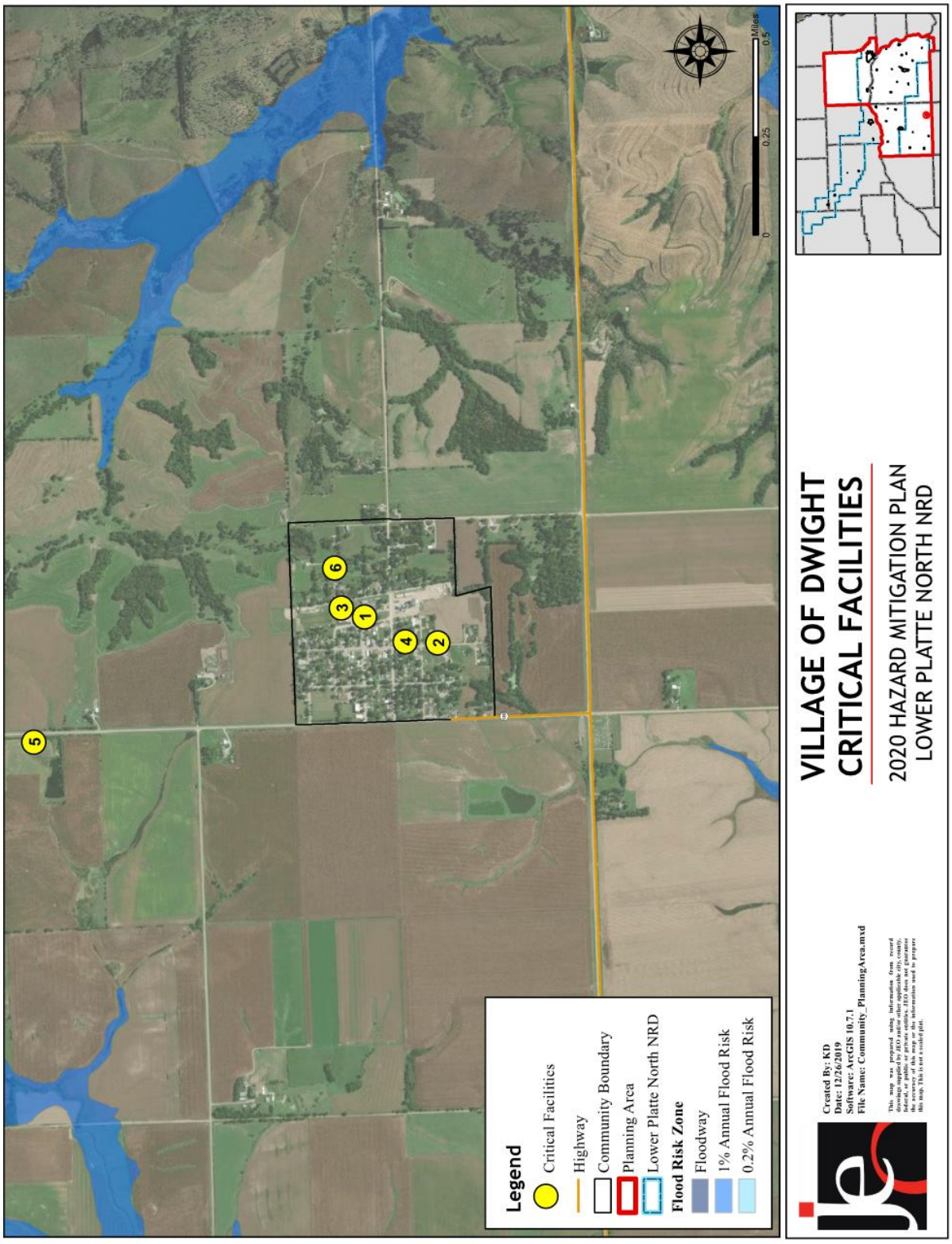
The planning team identified critical facilities necessary for the Village of Dwight's disaster response and continuity of operations per the FEMA Community Lifelines guidance. Critical facilities were identified during the 2015 planning process and revised for this plan update. The following table and figure provide a summary of the critical facilities for the community.

Table DWT.4: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Fire Hall	No	Yes	No
2	Sanitary Lift Station	No	No	No
3	School	No	Yes	No
4	Water Tower	No	No	No
5	Well House	No	Yes	No
6	Well House	No	No	No

35 Nebraska Department of Environmental Quality. 2019. "Nebraska DEQ Tier 2 Data Download: 2018." https://deq-iis.ne.gov/tier2/.

Figure DWT.4: Critical Facilities



HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

DROUGHT

Drought is a concern for the community because they have only two wells, so during droughts were the water table is also being taxed by the surrounding farmers the water levels drop precipitously. No significant drought events have occurred in Dwight in recent history. Drought is currently defined qualitatively by local officials and varies by event. There is no drought monitoring board in the county. If a drought were to occur, there is no formal response plan in place, though village officials will encourage residents to conserve water when the well levels drop. The water supply is currently sufficient with no nitrate issues. The village is planning to install a third well once funding is secured. All residents and both wells have water meters to monitor the amount of water used.

HAIL

Damage to buildings and trees is the biggest concern of Dwight regarding hail. In 2006 a storm caused severe hail damage throughout the village. Critical facilities are not fitted with hail resistant materials, but they are insured. There is no tree board that monitors the upkeep of trees to mitigate damage during storms.

HIGH WINDS

Trees throughout Dwight were severely damaged by high winds in 2018. This tree damage is the most pressing concern for the village regarding high winds. Critical facilities have not been damaged in the past. In case of a power outage from a damaged power line, municipal records are backed up on CDs and paper copies. There are no safe rooms in the community, though community members can seek shelter in the fire hall and library basement. County emergency management does not off text alerts for severe weather and Dwight does not provide educational outreach.

SEVERE WINTER STORMS

Significant severe winter storms occurred in 2009. Six inches of snow blocked all travel out of town and damaged the awning of the fire station. It is important to maintain transportation routes, especially in case fire and rescue teams are called. Approximately 15% of power lines are buried. There are no snow routes in town, but snow fences are located along the north side of town. Snow removal is done by a local farmer and residents of Dwight using a truck with a blade, a tractor with a bucket and blade, and the local township's maintainer. These snow removal resources are currently sufficient.

TORNADOES

In 2008 an EF1 tornado passed through the west end of Dwight, uprooting trees and damaging homes. Future events have the potential to be catastrophic. Warning sirens are activated by the local fire department or Butler County dispatch. In case of a disaster, all municipal records are backed up on CDs and paper copies. There are no FEMA certified safe rooms, but residents can seek shelter at the village hall, fire hall, and in the basement of the library. The elementary school also has a tornado shelter, though it is not open to the public. Emergency text alerts are not offered by the county and the village does not provide any education outreach on tornado response. Mutual Aid Agreements are in place with the neighboring villages of Brainard, Ulysses, and Valparaiso.

GOVERNANCE

The Village of Dwight is governed by a five-member village board; other governmental offices and departments are listed below. The community government will oversee the implementation of hazard mitigation projects.

- Clerk
- Treasurer
- Attorney
- Sewer/Water Commissioner
- Library Director
- Engineer
- Volunteer Fire Department

CAPABILITY ASSESSMENT

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

Table DWT.5: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Planning & Regulatory Capability	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Emergency Operational Plan	No
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	No
	Building Codes	Yes
	National Flood Insurance Program	No
	Community Rating System	No
	Other (if any)	

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

Table DWT.6: Overall Capability Assessment

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

PLAN INTEGRATION

Dwight has a comprehensive plan, zoning ordinance (2008), building codes (2008), emergency operations plan (2015), wellhead protection plan (2005), and subdivision regulations (2008). Due to the age of the comprehensive plan, natural hazards are not discussed. It does contain goals aimed at safe growth, directs development away from chemical storage facilities and major transportation routes, and limits density in hazardous areas. There is no timeline in place to update the comprehensive plan. The village is an annex in Butler County's Emergency Operations Plan. It discusses communications, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelters, and resource management. The fire department and village board are both familiar with the plan. The zoning ordinance discourages development in the floodplain, identifies floodplain areas as open space, and discourages development near chemical storage sites. Dwight's building code require sewer backflow valves for structures in the floodplain and outlines proper sump pump installation. The village budget has increased slowly over recent years with a large portion of the funds are dedicated to water tower repairs. No other examples of plan integration were identified. However, the community will seek out and evaluate any opportunities to integrate the results of the current HMP into other planning mechanisms and updates.

MITIGATION STRATEGY

ONGOING AND NEW MITIGATION ACTIONS

MITIGATION ACTION	2ND STREET STORMWATER SYSTEM IMPROVEMENT
Description	Storm sewer improvements along 2nd street, running from maple to pine street, which may include pipe upsizing and additional inlets. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other stormwater system improvements
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	Village funds
Timeline	2-5 years
Priority	Low
Lead Agency	Village Board
Status	This project is needed but no progress has been made on planning or construction

MITIGATION ACTION	ALERT/WARNING SIRENS
Description	Perform an evaluation of existing alert sirens in order to determine sirens which should be replaced or upgraded. Install new sirens where lacking with remote activation options
Hazard(s) Addressed	All hazards
Estimated Cost	$5,000+
Funding	Village funds
Timeline	5+ years
Priority	Low
Lead Agency	Village Board
Status	New action. Not started

MITIGATION ACTION	ASSES VULNERABILITY TO DROUGHT RISK
Description	The jurisdiction will review relevant plans and systems to identify factors which may increase drought impacts or gaps in planning and service delivery. This may include but is not limited to: assessing water distribution system(s), reviewing well levels and identifying alternative water sources (if needed), examining water intensive consumers, review of water pricing structures, considering the need for municipal water meters, and other locally appropriate actions
Hazard(s) Addressed	Drought
Estimated Cost	$10,000+
Funding	Village funds
Timeline	2-5 years
Priority	Low
Lead Agency	Village Board
Status	New action. Not started

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	Identify and evaluate current backup and emergency generators. Obtain additional generators based on identification and evaluation. Provide a portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by size
Funding	Village funds
Timeline	5+ years
Priority	Low
Lead Agency	Village Board
Status	Ongoing. A backup generator was added to the maintenance building in 2014. The generator cost $16,000 of which $11,000 was funded by a state grant

MITIGATION ACTION	CIVIL SERVICE IMPROVEMENTS
Description	Improve emergency rescue and response equipment and facilities by providing additional or updating existing equipment. For example: backup systems for emergency vehicles, training additional personnel, upgrading radio systems, etc.
Hazard(s) Addressed	All hazards
Estimated Cost	Varies
Funding	Rural Board Funds
Timeline	2-5 years
Priority	Medium
Lead Agency	Rural Board
Status	New action. Not started

MITIGATION ACTION	DRAINAGE STUDY/STORMWATER MASTER PLAN
Description	Drainage studies identify and prioritize improvements for specific localized flooding/drainage problems. Stormwater master plans perform a community-wide evaluation to identify poor drainage areas and potential improvements.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	Village funds
Timeline	2-5 years
Priority	Medium
Lead Agency	Village Board
Status	Plans are in place to conduct a study

MITIGATION ACTION	DROUGHT MANAGEMENT PLAN
Description	Work with relevant stakeholders to develop or update a drought management plan. Includes: identify water monitoring protocols, outline drought responses (watering restrictions), identify opportunities to reduce water consumption (swimming pools, fountains), and establish the jurisdictional management procedures
Hazard(s) Addressed	Drought
Estimated Cost	$25,000+
Funding	Village funds
Timeline	5+ years
Priority	Medium
Lead Agency	Village Board
Status	New action. Not started

MITIGATION ACTION	EXPAND WATER STORAGE CAPACITY
Description	Evaluate the need to expand current water storage capacity (via new water tower, additional wells, etc.). Establish emergency water supplies such as dry hydrants and individual or community cisterns for defending structures from wildland fires
Hazard(s) Addressed	Drought, grass/wildfires
Estimated Cost	Varies
Funding	Village funds
Timeline	2-5 years
Priority	Low
Lead Agency	Village Board
Status	New action. Not started

MITIGATION ACTION	HAZARDOUS TREE REMOVAL
Description	Identify and remove hazardous trees and limbs
Hazard(s) Addressed	High wind, severe thunderstorms, severe winter storms
Estimated Cost	$5,000 - $10,000
Funding	Village funds
Timeline	2-5 years
Priority	Low
Lead Agency	Village Board
Status	Hazardous trees and limbs are removed as required

MITIGATION ACTION	MONITOR WATER SUPPLY
Description	Establish a system/process for monitoring water supplies (establishing timeframes for measuring well depths, increasing stream flow, etc.)
Hazard(s) Addressed	Drought, grass/wildfire
Estimated Cost	Staff time
Funding	Village funds
Timeline	5+ years
Priority	Low
Lead Agency	Village Board
Status	New action. Not started

MITIGATION ACTION	NEW MUNICIPAL WELL
Description	Evaluate the need to install a new well to provide a safe backup water supply for the community, replace existing wells affected by drought, and/or add addition water for fire protection
Hazard(s) Addressed	Drought
Estimated Cost	$250,000 - $300,000
Funding	Grants
Timeline	2-5 year
Priority	Medium
Lead Agency	Village board
Status	This project is ongoing as water needs are determined

MITIGATION ACTION	WATER AVAILABILITY STUDY
Description	Develop and/or update a water availability study to evaluate the need for additional water supplies; identify alternative solutions or locate new water sources; and implement measures to increase/improve supply of drinking water and water for fire protection
Hazard(s) Addressed	Drought
Estimated Cost	$25,000+
Funding	Village funds
Timeline	5+ years
Priority	Low
Lead Agency	Village Board
Status	New action. Not started

COMMUNITY PROFILE

VILLAGE OF GARRISON

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table GSN.1: Village of Garrison Local Planning Team

NAME	TITLE	JURISDICTION
Jim Daro	Village Clerk	Village of Garrison
Marianne Zillhen	Board Member	Village of Garrison

LOCATION AND GEOGRAPHY

The Village of Garrison is in the southern portion of Butler County and covers an area of 0.12 square miles. Garrison is located in the plains region of Nebraska and is surrounded by agricultural land primarily used for row crop production and some pasturing. Major waterways in the area include the north branch of the Big Blue River about one mile to the east of the village, and the Kezan Creek just south of the village.

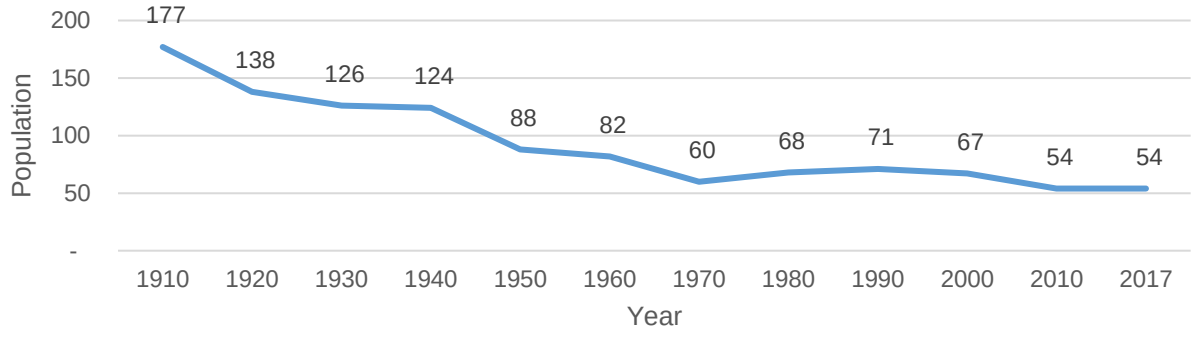
TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community and areas more at risk of transportation incidents. State Highway 92 is Garrison's nearest major transportation corridor. It runs east to west and is located about one mile north of the village. State Highway 92 is traveled by a total annual average of 3,345 vehicles daily, 400 of which are trucks.[36] The Burlington Northern Santa Fe Railway travels north to south along the western edge of the village. The railroad and gravel roads around the village are the transportation routes of most concern. Anhydrous ammonia is regularly transported along local routes.

DEMOGRAPHICS

The Village of Garrison's population is generally declining, though it has remained stable at 54 people from 2010 to 2017. A declining population will reduce the tax base available to fund mitigation projects. The population accounted for 0.7% of Butler County's population in 2017.[37]

Figure GSN.1: Population



Source: U.S. Census Bureau, 1910 - 2017

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

37 United States Census Bureau. "American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]. https://factfinder.census.gov/.

Figure GSN.2: Village of Garrison

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

- **Younger.** The median age of Garrison was 25.6 years old in 2017, compared with Butler County's median of 43.5 years. Garrison's population grew younger since 2010, when the median age was 57.3 years old. The village had a much larger proportion of people under 18 years old (37.0%) than the county (23.9%).[2]
- **Less ethnically diverse**. Since 2010, Garrison grew more ethnically diverse. In 2010, none of Garrison's population was Hispanic or Latino. By 2017, about 1.9% was Hispanic or Latino. During that time, the Hispanic population in the county grew from 2.3% in 2010 to 3.0% in 2017.[2]
- **More likely to be below the federal poverty line.** The poverty rate in Garrison (42.6% of people living below the federal poverty line) was much higher than the county's poverty rate (7.8%) in 2017.[38]

EMPLOYMENT AND ECONOMICS

The Village of Garrison's economic base is comprised mostly of professional, scientific, and management, and administrative and waste management services. In comparison to Butler County, Garrison's economy had:

- **Smaller mix of industries.** Two major employment sectors, accounting for 10% or more of employment each, were: professional, scientific, and management, and administrative and waste management services; and transportation and warehousing, and utilities.[3]
- **Lower per capita income.** Garrison's per capita income in 2017 ($14,880) was about $12,336 lower than the county ($27,216).[3]
- **More long-distance commuters.** About 36.4% of workers in Garrison commuted for fewer than 15 minutes, compared with about 41.9% of workers in Butler County. About 45.4% of workers in the village commuted 30 minutes or more to work, compared to about 31.4% of county workers.[39]

MAJOR EMPLOYERS

Due to limited employment opportunities in the community, the majority of Garrison's residents commute to nearby communities for work. The only employer within the community is the Frontier Co-op. Residents commute to David City, and the Cities of Columbus, Lincoln, and Seward for work.

HOUSING

In comparison to Butler County, Garrison's housing stock was:[40]

- **Older.** Garrison had a larger share of housing built prior to 1970 than the county (76.5% compared to 56.4%).

38 United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. https://factfinder.census.gov/.

39 United States Census Bureau. "American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. https://factfinder.census.gov/.

40 United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. https://factfinder.census.gov/.

- **Less mobile and manufactured housing.** The American Community Survey indicated that Garrison had a larger share of mobile and manufactured housing (11.8%) compared to the county (6.3%), however the local planning team indicates that there are no mobile homes in the community.
- **More renter-occupied**. About 35.3% of occupied housing units in Garrison were renter-occupied compared with 20.1% of occupied housing in Butler County.
- **Unoccupied.** Approximately 35.3% of the village's housing units were vacant compared to 16.5% of units in Butler County.

The age of housing may indicate which housing units were built prior to the development of state building codes. Homes built within a flood hazard area before the adoption of their community's Flood Rate Insurance Map (FIRM) are not likely to be built above the 1% annual chance floodplain. Older and vacant housing stock may also be more vulnerable to hazard events if it is poorly maintained. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if those homes are not anchored correctly. Renter occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have renter's insurance or flood insurance, or to know their risks to flooding and other hazards. A significant number of unoccupied housing suggests that future development may be unlikely to occur in the area.

FUTURE DEVELOPMENT TRENDS

There have been few changes in the community in the past ten years and no plans for new housing or businesses. Garrison's population is generally declining because of a lack of employment opportunities in the village.

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, paved lots, roads, etc.) at the parcel level. The data did not contain the number of structures on each parcel. The parcel data was analyzed to determine the number and valuation of property improvements located in the 1% annual chance floodplain. A summary of the results of this analysis is provided in the following table.

Table GSN.2: Parcel Improvements and Value in the Floodplain

NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	PERCENTAGE OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN
39	$3,274,695	0	05	$0

Source: GIS Workshop/Butler County Assessor, 2019[41]

41 GIS Workshop/Butler County Assessor. 2019. [Personal correspondence].

CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one fixed hazardous chemical storage sites within two miles of the Village of Garrison. Several anhydrous ammonia mobile tanks and two stationary tanks are kept there. The following table lists this site. Residents are not informed of the threat and appropriate response to spills, and there are no response resources in the community.

Table GSN.3: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	IN FLOODPLAIN (YES/NO)
Frontier Co-op Company	1161 30 Rd	No

Source: Nebraska Department of Environment and Energy, 2019[42]

CRITICAL FACILITIES

The planning team identified critical facilities necessary for the Village of Garrison's disaster response and continuity of operations per the FEMA Community Lifelines guidance. Critical facilities were identified during the 2015 planning process and revised for this plan update. The following table and figure provide a summary of the critical facilities for the community.

Table GSN.4: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Anhydrous Tanks	No	No	No
2	Railroad Track	No	No	No

42 Nebraska Department of Environmental Quality. 2019. "Nebraska DEQ Tier 2 Data Download: 2018." https://deq-iis.ne.gov/tier2/.

Figure GSN.4: Critical Facilities

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

CHEMICAL FIXED SITES

There are two large, fixed anhydrous storage tanks and ten to 20 mobile transportation trailers on the west side of the Garrison. Three families live within a block of this facility. These families are aware of the threat of a chemical spill and know the appropriate response measures. If a spill were to occur, the local volunteer fire department would be the first to respond, though they do not have the appropriate training or equipment. The fire department in Garrison is a division of the David City Volunteer Fire Department. They do have the proper training and equipment to respond to a chemical spill and could arrive on the scene within 15 minutes.

CHEMICAL TRANSPORTATION

Anhydrous ammonia is frequently moved through town, from the co-op to the storage facility in town and from there to the surrounding agricultural fields. There is also a railroad track on the west side of town. About five to seven cars move through town daily, transporting corn to the ethanol plant in Columbus and ethanol from the plant. A recent transportation incident occurred when a semi-truck carrying corn was struck on the rear axle by a train as a result of the truck driver's negligent driving, spilling corn on the road and tracks. Chemical spills are most likely to occur on the gravel roads in and out of the village. Most chemicals are transported on these routes, including a 100,000-gallon tanker that passes through town on its way to stationary anhydrous ammonia storage tanks on the west side of town. There are about six houses on the main road into town – they would likely be impacted by a chemical transportation spill.

SEVERE THUNDERSTORMS

There have been no significantly severe thunderstorms in Garrison, but storms occur frequently and bring with them the potential for damage. To date, thunderstorms have mostly caused broken tree limbs and shingle damage. Two storms involving hail damage were particularly severe. A 2014 summer storm combined hail with strong winds to damage siding on homes throughout the village. A summer hailstorm in 2012 damaged roofs. About 80% of the homes in Garrison have replaced their roof from hail damage in the last 10 years. Only about 10% of the power lines in the village are buried, making them vulnerable to storms. No critical facilities have generators. A village board member who is also an arborist helps with regular tree maintenance.

SEVERE WINTER STORMS

The largest concern regarding severe winter storms is heavy snow blocking transportation routes during emergencies. In March 2013, two days of snow and wind caused drifts up to two feed tall on the roads in and around the village. Snow fences were installed in the village in 2019 on the

north side of town. Snow removal is done by a village board member with their truck with a blade. The township road grader is stored in Garrison, so it is also used for snow removal. The village has a tractor with a scoop and blade clears driveways once roads are free of snow. Snow removal takes about six hours after a typical snowstorm.

TORNADOES

There has been no damage to the village from tornadoes though an EF0 tornado formed west of the village and traveled a mile north of the village in 2013. The village has one siren. It is activated remotely by the David City Volunteer Fire Department. The community hall has a basement that could be used for a storm shelter. The local restaurant is a bale and steal building that is resistant to strong winds and tornadoes and could also be used as a storm shelter. More residents of the village seek shelter in their own homes. The village has no Mutual Aid Agreements in place in case of a disaster.

GOVERNANCE

The Village of Garrison is governed by a three-member board of supervisors; other governmental offices and departments are listed below. The community government will oversee the implementation of hazard mitigation projects.

- Clerk
- Treasurer
- Board Chair

CAPABILITY ASSESSMENT

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

Table GSN.5: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Planning & Regulatory Capability	Comprehensive Plan	No
	Capital Improvements Plan	No
	Economic Development Plan	No
	Emergency Operational Plan	No
	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)	
	Planning Commission	No

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

Table GSN.6: Overall Capability Assessment

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

PLAN INTEGRATION

The Village of Garrison does not have any formal planning documents. There are no plans to add any over the next five years.

MITIGATION STRATEGY

ONGOING AND NEW MITIGATION ACTIONS

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	Provide backup generators to critical facilities, especially the Garrison Community Hall
Hazard(s) Addressed	All hazards
Estimated Cost	$2,000
Funding	Village funds
Timeline	1 year
Priority	Low
Lead Agency	Village Board
Status	The need for a backup generator has been identified but funds have yet to be officially designated to the project

MITIGATION ACTION	HAZARDOUS TREE REMOVAL
Description	Identify and remove hazardous limbs and trees, particularly at Lincoln Park
Hazard(s) Addressed	All hazards
Estimated Cost	$500/year
Funding	Village funds
Timeline	1 year
Priority	Low
Lead Agency	Village Board
Status	As hazardous trees are identified in the park they are removed and disposed of

REMOVED MITIGATION ACTIONS

MITIGATION ACTION	STORMWATER SYSTEM IMPROVEMETNS
Hazard(s) Addressed	Flooding
Reason for Removal	The village has no stormwater handling system

COMMUNITY PROFILE

VILLAGE OF LINWOOD

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table LIN.1: Village of Linwood Local Planning Team

NAME	TITLE	JURISDICTION
Kathy Eaten	Village Clerk & Floodplain Administrator	Village of Linwood
Josh Stonecker	Board Chairperson	Village of Linwood

LOCATION AND GEOGRAPHY

The Village of Linwood is in the northeast portion of Butler County and covers an area of 0.37 square miles. Linwood is surrounded by agricultural land used mainly for row crop production and some pasturing. The Platte River runs west to east about three miles north of the village.

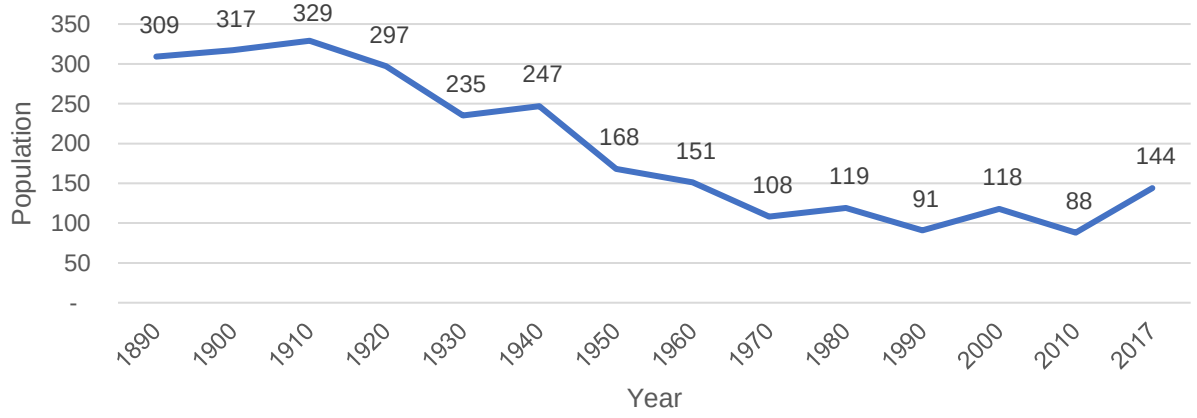
TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community and areas more at risk of transportation incidents. Nebraska State Highway Spur 12A runs north to south out of the southern border of the village, connecting it to Nebraska State Highway 15. State Highway Spur 12A is traveled by a total annual average of 510 vehicles daily, 55 of which are trucks.[43] State Spur 12A is a transportation route of concern because of its heavy traffic. The local village streets are also vulnerable because they are gravel. Agricultural chemicals are regularly transported along these routes.

DEMOGRAPHICS

Linwood's population has been generally declining, though the population increased from 88 people in 2010 to about 144 people in 2017. A small population indicates a small tax base to fund mitigation projects. The population accounted for 1.8% of Butler County's population in 2017.[44]

Figure LIN.1: Population



Source: U.S. Census Bureau, 1890 - 2017

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

44 United States Census Bureau. "American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]. https://factfinder.census.gov/.

Figure LIN.2: Village of Linwood

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

- **Younger.** The median age of Linwood was 28.6 years old in 2017, compared with Butler County's median of 43.5 years. The village's population grew older since 2010, when the median age was 25.2 years old. Linwood had a much lower proportion of people over 65 years old (2.8%) than the county (19.9%).[2]
- **Equally ethnically diverse**. Since 2010, Linwood grew slightly less ethnically diverse. In 2010, 2.7% of Linwood population was Hispanic or Latino. By 2017, about 2.1% was Hispanic or Latino. During that time, the Hispanic population in the county grew from 2.3% in 2010 to 3.0% in 2017.[2]
- **More likely to be below the federal poverty line.** The poverty rate in the village (41% of people living below the federal poverty line) was much higher than the county's poverty rate (7.8%) in 2017.[45]

EMPLOYMENT AND ECONOMICS

The Village of Linwood's economic base is a mixture of industries. In comparison to Butler County, Linwood's economy had:

- **Smaller mix of industries.** Two major employment sectors, accounting for 10% or more of employment each, were: manufacturing; and educational services, and health care and social assistance.[3]
- **Lower per capita income.** Linwood's per capita income in 2017 ($14,153) was about $13,063 lower than the county ($27,216).[3]
- **More long-distance commuters.** About 8.6% of workers in the Linwood commuted for fewer than 15 minutes, compared with about 41.9% of workers in Butler County. About 76.6% of workers in the village commuted 30 minutes or more to work, compared to about 31.4% of county workers.[46]

MAJOR EMPLOYERS

The local steakhouse is the most prominent employer in Linwood. Most residents commute to the nearby communities of Columbus, David City, and Schuyler for work.

HOUSING

In comparison to Butler County, the Village of Linwood's housing stock was:[47]

- **Older.** Linwood had a larger share of housing built prior to 1970 than the county (86.4% compared to 56.4%).
- **More mobile and manufactured housing.** Linwood had a larger share of mobile and manufactured housing (15.3%) compared to the county (6.3%). Mobiles homes are

45 United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. https://factfinder.census.gov/.
46 United States Census Bureau. "American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. https://factfinder.census.gov/.
47 United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. https://factfinder.census.gov/.

located on the 400 and 500 block of Ash, the 400 and 200 blocks of Beech Street, the 400 block of Elm Street, and the 500 and 300 block of Pine Street.

- **More renter-occupied**. About 48.9% of occupied housing units in Linwood were renter-occupied compared with 20.1% of occupied housing in Butler County.
- **Unoccupied.** Approximately 23.7% of the village's housing units were vacant compared to 16.5% of units in Butler County.

The age of housing may indicate which housing units were built prior to the development of state building codes. Homes built within a flood hazard area before the adoption of their community's Flood Rate Insurance Map (FIRM) are not likely to be built above the 1% annual chance floodplain. Older and vacant housing stock may also be more vulnerable to hazard events if it is poorly maintained. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if those homes are not anchored correctly. Renter occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have renter's insurance or flood insurance, or to know their risks to flooding and other hazards. A significant number of unoccupied housing suggests that future development may be unlikely to occur in the area.

FUTURE DEVELOPMENT TRENDS

In the past five years one house has been demolished and one mobile home added to the community. The population of Linwood is generally declining as residents move to larger towns.

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, paved lots, roads, etc.) at the parcel level. The data did not contain the number of structures on each parcel. The parcel data was analyzed to determine the number and valuation of property improvements located in the 1% annual chance floodplain. A summary of the results of this analysis is provided in the following table.

Table LIN.2: Parcel Improvements and Value in the Floodplain

NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	PERCENTAGE OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN
50	$1,177,830	0	0%	$0

Source: GIS Workshop/Butler County Assessor, 2019[48]

48 GIS Workshop/Butler County Assessor. 2019. [Personal correspondence].

CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are no fixed hazardous chemical storage sites within two miles of the village.[49]

CRITICAL FACILITIES

The planning team identified critical facilities necessary for the Village of Linwood's disaster response and continuity of operations per the FEMA Community Lifelines guidance. The following table and figure provide a summary of the critical facilities for the community.

Table LIN.4: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Community Hall	No	No	No
2	Village Maintenance Shop	No	No	No

49 Nebraska Department of Environmental Quality. 2019. "Nebraska DEQ Tier 2 Data Download: 2018." https://deq-iis.ne.gov/tier2/.

Figure LIN.3: Critical Facilities

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

FLOODING

Linwood has experienced several significant flooding events. In 1963 Skull Creek flooded the whole village. Flooding of Skull Creek occurred again in 1987, 2009-2010, August 2018, and 2017. Flash flooding is more of a concern than riverine flooding with water coming 600 acres from the southern farm grounds into the village. Much of the town is prone to flooding, with a need for county ditches to be cleared of debris and sediment to improve stormwater drainage. There has been difficulty arranging an agreement with the county to have these ditches cleared. Many homes in the community have had flood water in their basements in the last ten years because of the high-water table.

GRASS/WILDFIRES

The village is surrounded by trees, farmland, grass, and weeds, making it vulnerable to grass and wildfires. In the last 20 years a fire in a wooded area two miles from Linwood burned for a week before it was controlled. The Linwood Volunteer Fire Department is small but has Mutual Aid Agreements in place in case of a large fire. The village does not have a Wildland-Urban Interface Code, but property owners are encouraged to have defensible space around their structures.

HAIL

Hail is a concern for Linwood because of the potential for damage to property, people, and critical facilities. In May of 2018 golf ball sized hail damaged roofs and vehicles across the village. The community's critical facilities are not fitted with hail resistant building materials though they are insured for hail damage.

SEVERE THUNDERSTORMS

Severe thunderstorms are common in Linwood from spring to fall. They are a concern because of their potential to cause flash flooding and power outages. Critical municipal records are protected with surge protectors in case of a lightning storm. No critical facilities have backup generators, though generators could be used in maintenance building and village hall. None of the power lines are buried, making them vulnerable to storms. Hazardous trees are located along the east side of Maple Street north of 2nd Street, and on the west side of the 200 block of Beech Street. There are no weather radios in the village critical facilities. The community relies on the county and local fire department to alert it to severe weather.

SEVERE WINTER STORMS

Several severe winter storms have occurred in Linwood, but the most significant was in March 2000 when power was lost for 16 hours. These storms are a concern because transportation becomes difficult, especially during emergencies, and resulting power outages could leave residents without heat. Power lines are vulnerable to heavy snow and ice storms because they are not buried. The utility superintendent is responsible for snow removal using the village's road grader/snowplow and dump truck. These snow removal resources are sufficient otherwise.

GOVERNANCE

The Village of Linwood is governed by a five-member village board; other governmental offices and departments are listed below. The community government will oversee the implementation of hazard mitigation projects.

- Clerk/Treasurer
- Attorney
- Utility Superintendent
- Engineer/Street Superintendent
- Volunteer Fire Department

CAPABILITY ASSESSMENT

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

Table LIN.5: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Planning & Regulatory Capability	Comprehensive Plan	No
	Capital Improvements Plan	No
	Economic Development Plan	No
	Emergency Operational Plan	No
	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)	
Administrative & Technical Capability	Planning Commission	No
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No

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

Table LIN.6: Overall Capability Assessment

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

PLAN INTEGRATION

The Village of Linwood does not have any local planning documents. However, the community will seek out and evaluate any opportunities to integrate the results of the current HMP into other planning mechanisms.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	ABOVE GROUND STORMWATER SYSTEM AND DRAINAGE IMPROVEMENTS
Description	Stormwater systems comprising of ditches, culverts, or drainage ponds can be used to convey runoff. Undersized systems can contribute to localized flooding. Drainage improvements may include ditch upsizing, ditch cleanout and culvert improvements. The village would like to clean debris out of ditches in the village.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	General budget
Timeline	Ongoing
Priority	High
Lead Agency	Village employees
Status	New Action. Ongoing, the village cleans out ditches when issues are identified, and funding is available.

COMMUNITY PROFILE

VILLAGE OF OCTAVIA

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table OCT.1: Village of Octavia Local Planning Team

NAME	TITLE	JURISDICTION
Jennie Zegers	Treasurer	Village of Octavia
Butch Beringe	Village Board Member	Village of Octavia
Richard Kopecky	Village Board Chairperson	Village of Octavia

LOCATION AND GEOGRAPHY

The Village of Octavia is in the northern portion of Butler County and covers an area of 0.16 square miles. It is in the Platte River Valley, about 3.5 miles south of the Platte River.

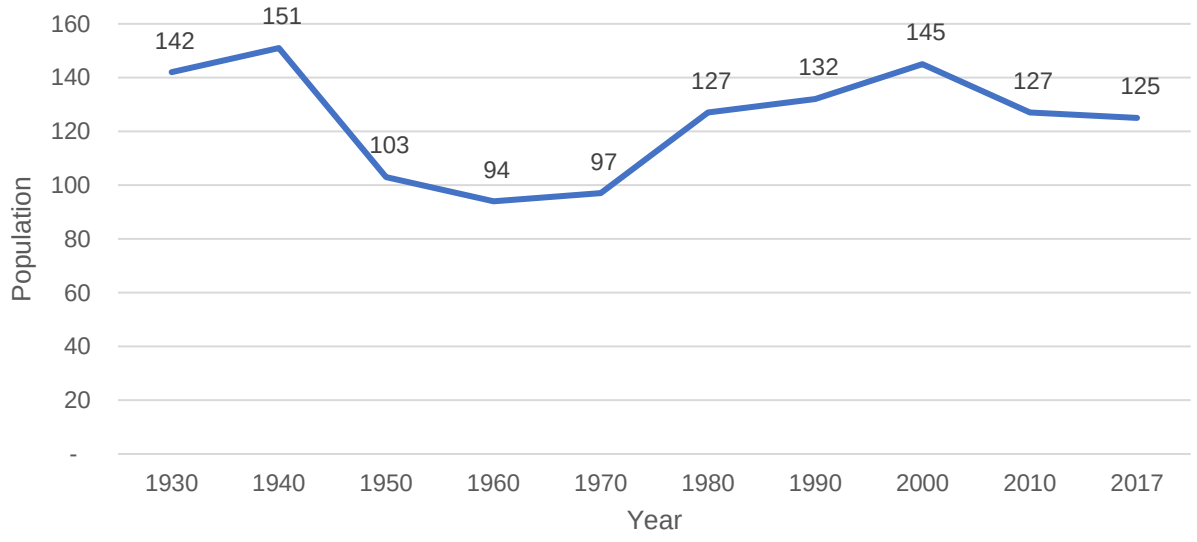
TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community and areas more at risk of transportation incidents. Octavia's major transportation corridor is State Highway 15; it runs north to south along the western edge of the village. It is traveled by a total annual average of 2,405 vehicles daily, 410 of which are trucks.[50] Country Road Q is the transportation routes of most concern.

DEMOGRAPHICS

Octavia's population declined from 127 people in 2010 to about 125 people in 2017. A declining population may not provide a stable tax base to fund mitigation projects. The population accounted for 1.5% of Butler County's population in 2017.[51]

Figure OCT.1: Population



Source: U.S. Census Bureau, 1930 - 2017

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

51 United States Census Bureau. "American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]. https://factfinder.census.gov/.

Figure OCT.2: Village of Octavia

The young, elderly, minority populations and poor may be more vulnerable to certain hazards than other groups. In comparison to the county, the Village of Octavia's population was:

- **Similarly aged.** The median age of Octavia was 43.4 years old in 2017, compared with Butler County's median of 43.5 years. Octavia's population grew older since 2010, when the median age was 37 years old. The village had a smaller proportion of people over 65 years old (14.4%) than the county (19.9%) and a smaller proportion of people under 18 years old (18.4% compared to 23.9%).[2]
- **More ethnically diverse**. Since 2010, Octavia grew more ethnically diverse. In 2010, 14.8% of Octavia population was Hispanic or Latino. By 2017, about 40% was Hispanic or Latino. During that time, the Hispanic population in the county grew from 2.3% in 2010 to 3.0% in 2017.[2]
- **Less likely to be below the federal poverty line.** The poverty rate in Octavia (4.8% of people living below the federal poverty line) was lower than the county's poverty rate (7.8%) in 2017.[52]

EMPLOYMENT AND ECONOMICS

The Village of Octavia's economic base is most manufacturing. In comparison to Butler County, Octavia's economy had:

- **Similar mix of industries.** Three major employment sectors, accounting for 10% or more of employment each, were: manufacturing; retail trade; and professional, scientific, and management, and administrative and waste management services.[3]
- **Lower per capita income.** The per capita income in 2017 ($24,750) was about $2,466 lower than the county ($27,216).[3]
- **More long-distance commuters.** About 36.4% of workers in Octavia commuted for fewer than 15 minutes, compared with about 41.9% of workers in Butler County. About 37.7% of workers in the village commuted 30 minutes or more to work, compared to about 31.4% of county workers.[53]

MAJOR EMPLOYERS

There are three businesses in Octavia. As a result, there are only a small number of employment opportunities within the community. Most residents travel commute to other communities to work in manufacturing. Cargill, Inc in the City of Schuyler and Timpte, Inc in David City employ many residents.

HOUSING

In comparison to Butler County, Octavia's housing stock was:[54]

- **Older.** Octavia had a larger share of housing built prior to 1970 than the county (80.7% compared to 56.4%).

52 United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. https://factfinder.census.gov/.
53 United States Census Bureau. "American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. https://factfinder.census.gov/.
54 United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. https://factfinder.census.gov/.

- **Similar amounts of mobile and manufactured housing.** Octavia had a similar share of mobile and manufactured housing (6.5%) compared to the county (6.3%). Mobile homes are located on the northeast edge of the community.
- **Less renter-occupied**. About 14% of occupied housing units in Octavia are renter-occupied compared with 20.1% of occupied housing in Butler County.
- **Unoccupied.** Approximately 19.4% of Octavia's housing units were vacant compared to 16.5% of units in Butler County.

The age of housing may indicate which housing units were built prior to the development of state building codes. Homes built within a flood hazard area before the adoption of their community's Flood Rate Insurance Map (FIRM) are not likely to be built above the 1% annual chance floodplain. Older and vacant housing stock may also be more vulnerable to hazard events if it is poorly maintained. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if those homes are not anchored correctly. Renter occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have renter's insurance or flood insurance, or to know their risks to flooding and other hazards. A significant number of unoccupied housing suggests that future development may be unlikely to occur in the area.

FUTURE DEVELOPMENT TRENDS

There has been little change in structural inventory in the last ten years. There are no plans for new housing or business developments. Octavia's population is generally declining, likely because of limited job opportunities and an aging population.

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, paved lots, roads, etc.) at the parcel level. The data did not contain the number of structures on each parcel. The parcel data was analyzed to determine the number and valuation of property improvements located in the 1% annual chance floodplain. A summary of the results of this analysis is provided in the following table.

Table OCT.2: Parcel Improvements and Value in the Floodplain

NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	PERCENTAGE OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN
56	$1,910,085	0	0%	$0

Source: GIS Workshop/Butler County Assessor, 2019[55]

55 GIS Workshop/Butler County Assessor. 2019. [Personal correspondence].

CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are no fixed hazardous chemical storage sites within two miles of the Village of Octavia.[56]

CRITICAL FACILITIES

The planning team identified critical facilities necessary for the Village of Octavia's disaster response and continuity of operations per the FEMA Community Lifelines guidance. The following table and figure provide a summary of the critical facilities for the community.

Table OCT.4: Critical Facilities

CF NUMBER	NAME	RED CROSS SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Octavia Community Church	No	No	No

56 Nebraska Department of Environmental Quality. 2019. "Nebraska DEQ Tier 2 Data Download: 2018." https://deq-iis.ne.gov/tier2/.

Figure OCT.4: Critical Facilities

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

EXTREME HEAT

Extreme heat events are a concern when they cause power outages. Bellwood has a large elderly population who are particularly sensitive to extreme heat. The village has no backup generators to maintain air conditioning for a public cooling station in case of a power outage.

HAIL

On May 1st of 2018 and severe hailstorms caused property damage across town to roofing, siding, windows, and vehicles. The village hall sustained $40,000 in damage to the roof, siding, and window wraps. The roof of the park's covered shelter had to be replaced after the storm. The hail was nearly three inches in diameter. All village critical facilities are insured for hail damage but are not constructed with hail resistant materials.

HIGH WINDS

Straight line winds caused a large amount of damage to trees and downed power lines, so that power was lost overnight. Critical facilities were not damaged. Octavia does not have FEMA certified safe rooms, but residents can seek shelter in the basement of the Village Hall.

SEVERE THUNDERSTORMS

Loss of power, heavy rain, and basement flooding are the most concerning impacts of severe thunderstorms., along with tree damage from high wind, lightning, and heavy rains. After a large storm in 2017 trees near the streets were trimmed, reducing the village's vulnerability to tree damage. In case of a disaster, municipal records are stored at the County Courthouse.

SEVERE WINTER STORMS

Severe winter storms are a concern because of power outages and snow removal. A snowstorm caused a prolonged power outage in 2013. Most power lines in Octavia are not buried, making them vulnerable during severe storms. Snow removal is done by the township with a grader and usually takes a few hours.

TORNADOES

There have been no tornadoes in Octavia, but a future occurrence could be catastrophic. The County Emergency Manager maintains a warning siren in the center of the village, activated by County Dispatch. The siren covers all of the village. The village does not offer education on tornado preparedness and response. In case of a severe weather event community members can

seek shelter in the basement of the hall. The Butler County rural fire districts have Mutual Aid Agreements in place for disaster response.

GOVERNANCE

The Village of Octavia is governed by a five-member village board; other governmental offices and departments are listed below. The community government will oversee the implementation of hazard mitigation projects.

- Clerk
- Treasurer
- Street Commissioner
- New Building Director

CAPABILITY ASSESSMENT

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

Table OCT.5: Capability Assessment

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

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

Table OCT.6: Overall Capability Assessment

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

PLAN INTEGRATION

Octavia has a comprehensive plan (2010), zoning ordinance (2010), emergency operations plan (2015), building code (2010), and capital improvements plan (2019). Due to the age of the comprehensive plan and zoning ordinance they do not contain discussion related to hazard mitigation. The village is an annex to the Butler County emergency operations plan. It discusses communications and warning, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelter, and resource management. Octavia's building code encourages the use of hail resistant building materials. Projects identified in the capital improvement plan include upsizing drainage structures, install street aprons, improving transportation routes, installing emergency generators, and

improving the existing community center. No other examples of plan integration were identified. However, the community will seek out and evaluate any opportunities to integrate the results of the current HMP into other planning mechanisms and updates.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	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
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by size
Funding	Tax dollars
Timeline	2-5 years
Priority	Medium
Lead Agency	Village Board
Status	New action. Not started

REMOVED MITIGATION ACTIONS

MITIGATION ACTION	INSTALL SPEED CONTROL DEVISES
Hazard(s) Addressed	Transportation Incident
Reason for Removal	This project is under the county sheriff's jurisdiction

MITIGATION ACTION	CHEMICAL WASTE RESPONSE TRAINING
Hazard(s) Addressed	Fixed Site and Transportation Chemical Spills
Reason for Removal	This project is under the rural fire district's jurisdiction

COMMUNITY PROFILE

VILLAGE OF SURPRISE

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table SUR.1: Village of Surprise Local Planning Team

NAME	TITLE	JURISDICTION
Susan Doehling	Treasurer	Village of Surprise

LOCATION AND GEOGRAPHY

The Village of Surprise is in the southwestern portion of Butler County and covers an area of 0.40 square miles. It is in the plains regions of Nebraska, surrounded by agricultural land used mainly for row crop production and grazing. The Big Blue River intersects the southern edge of the village, flowing west to east.

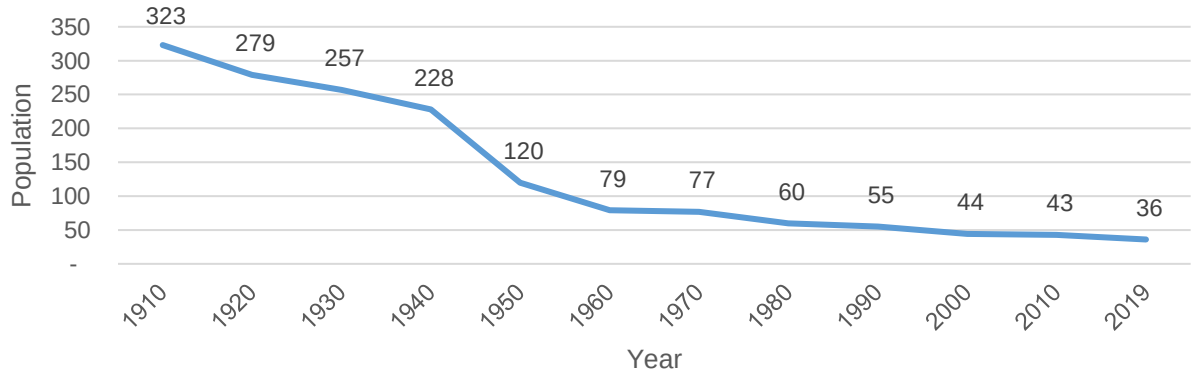
TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community and areas more at risk of transportation incidents. Surprise's major transportation corridor is Nebraska State Spur 12E. It is traveled by a total annual average of 560 vehicles daily, 45 of which are trucks.[57] This route, (which transitions to Miller Street once past the village boundary,) is of most concern for the community. It is not known if chemicals are transported along the route, but sprayers do travel through the village with some regularity. There have been no significant transportation incidents to date.

DEMOGRAPHICS

The general population trend is decreasing – the Village of Surprise's population declined from 43 people in 2010 to about 36 people in 2019. Declining populations make communities more vulnerable to hazards because it creates more unoccupied or vacant housing units and decreases tax revenues to pursue mitigation projects. The population accounted for 1.0% of Butler County's population in 2017.[58]

Figure SUR.1: Population



Source: U.S. Census Bureau, 1910 - 2017

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

58 United States Census Bureau. "American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]. https://factfinder.census.gov/.

Figure SUR.2: Village of Surprise

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

- **Younger.** The median age of Surprise was 29.9 years old in 2017, compared with Butler County's median of 43.5 years. Surprise's population grew younger since 2010, when the median age was 39.8 years old. The village had a significantly smaller proportion of people under 18 years old (6.5%) than the county (23.9%).[2]
- **More ethnically diverse**. Since 2010, Surprise grew more ethnically diverse. In 2010, none of the population was Hispanic or Latino. By 2017, about 5.6% was Hispanic or Latino. During that time, the Hispanic population in the county grew from 2.3% in 2010 to 3.0% in 2017.[2]
- **Less likely to be below the federal poverty line.** The poverty rate in Surprise (no people living below the federal poverty line) was lower than the county's poverty rate (7.8%) in 2017.[59]

EMPLOYMENT AND ECONOMICS

The Village of Surprise's economic base is a mixture of industries. In comparison to Butler County, the village's economy had:

- **Similar mix of industries.** Three major employment sectors, accounting for 10% or more of employment each, were: finance and insurance, and real estate and rental and leasing; professional, scientific, and management, and administrative and waste management services; and educational services, and health care and social assistance.[3]
- **Higher per capita income.** Surprise's per capita income in 2017 ($45,848) was about $18,632 higher than the county ($27,216).[3]
- **Fewer commuters.** About 50% of workers in Surprise commuted for fewer than 15 minutes, compared with about 41.9% of workers in Butler County. About 17.6% of workers in the village commuted 30 minutes or more to work, compared to about 31.4% of county workers.[60]

MAJOR EMPLOYERS

The local bar and vehicle repair shop employ the most residents in the village. Because there are few employment opportunities within Surprise, most residents commute to the nearby communities of Columbus, Shelby, and Rising city.

HOUSING

In comparison to Butler County, Surprise's housing stock was:[61]

- **Newer.** Surprise had a smaller share of housing built prior to 1970 than the county (35.3% compared to 56.4%).

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59 United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. https://factfinder.census.gov/.

60 United States Census Bureau. "American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. https://factfinder.census.gov/.

61 United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. https://factfinder.census.gov/.

- **Less mobile and manufactured housing.** Surprise had no mobile and manufactured housing while 6.3% of housing units in the county were mobile or manufactured.
- **Less renter-occupied**. About 12.5% of occupied housing units in Surprise were renter-occupied compared with 20.1% of occupied housing in Butler County.
- **Unoccupied.** Approximately 21.6% of Surprise's housing units were vacant compared to 16.5% of units in Butler County.

The age of housing may indicate which housing units were built prior to the development of state building codes. Homes built within a flood hazard area before the adoption of their community's Flood Rate Insurance Map (FIRM) are not likely to be built above the 1% annual chance floodplain. Older and vacant housing stock may also be more vulnerable to hazard events if it is poorly maintained. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if those homes are not anchored correctly. Renter occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have renter's insurance or flood insurance, or to know their risks to flooding and other hazards. A significant number of unoccupied housing suggests that future development may be unlikely to occur in the area.

FUTURE DEVELOPMENT TRENDS

No housing or businesses were added to the community in the last ten years, and no plans are currently in place for new ones. The population of the village is generally declining due to a lack of housing and an aging population.

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, paved lots, roads, etc.) at the parcel level. The data did not contain the number of structures on each parcel. The parcel data was analyzed to determine the number and valuation of property improvements located in the 1% annual chance floodplain. A summary of the results of this analysis is provided in the following table.

Table SUR.2: Parcel Improvements and Value in the Floodplain

NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	PERCENTAGE OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN
32	$864,975	0	0%	$0

Source: GIS Workshop/Butler County Assessor, 2019[62]

62 GIS Workshop/Butler County Assessor. 2019. [Personal correspondence].

CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are no fixed hazardous chemical storage sites within two miles of Surprise.[63]

CRITICAL FACILITIES

The planning team identified critical facilities necessary for the Village of Surprise's disaster response and continuity of operations per the FEMA Community Lifelines guidance. Critical facilities were identified during the 2015 planning process and revised for this plan update. The following table and figure provide a summary of the critical facilities for the community.

Table SUR.3: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	LOCATED IN FLOODPLAIN (YES/NO)
1	Community Hall	No	No	Yes
2	Fire Hall	No	No	Yes

63 Nebraska Department of Environmental Quality. 2019. "Nebraska DEQ Tier 2 Data Download: 2018." https://deq-iis.ne.gov/tier2/.

Figure SUR.3: Critical Facilities

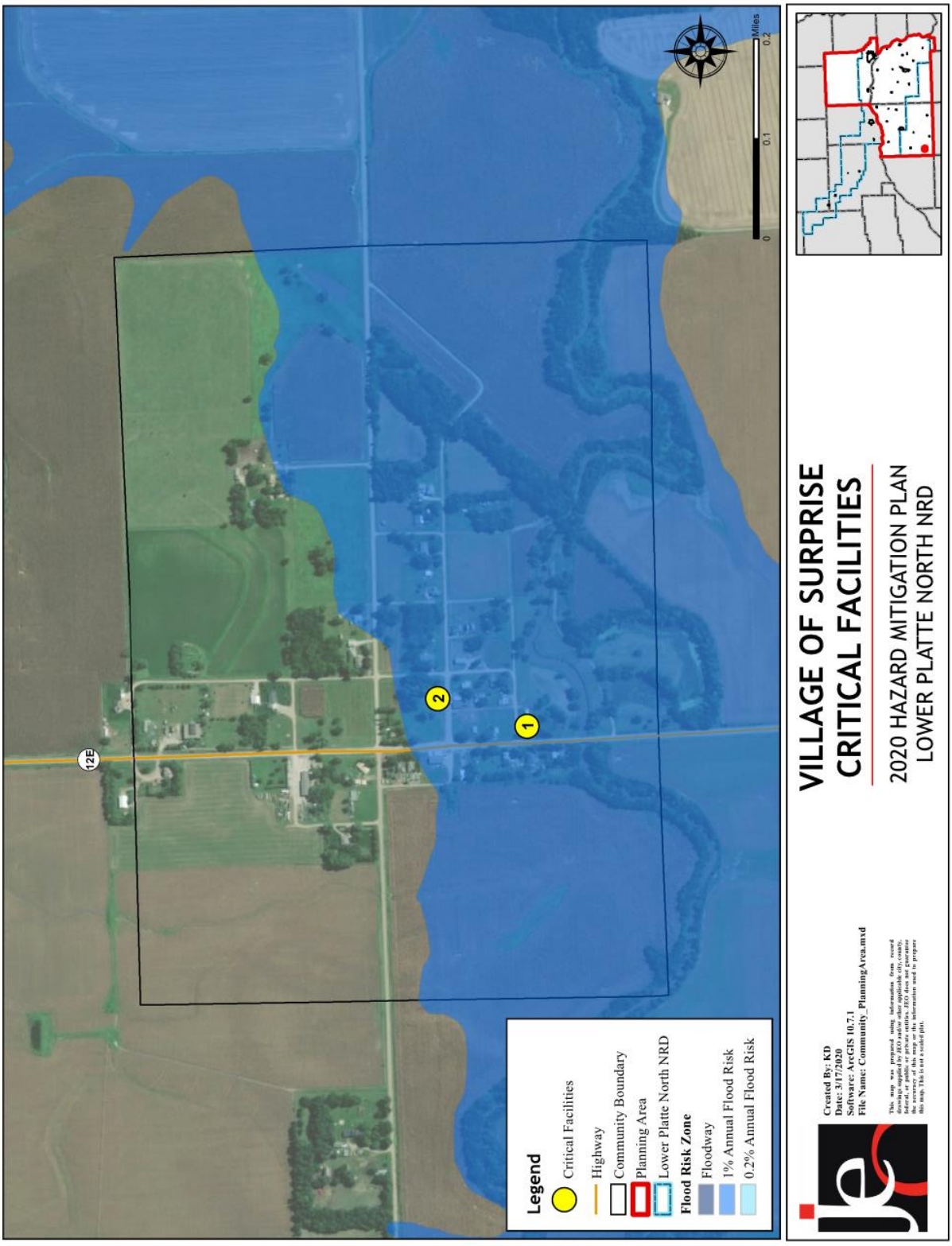
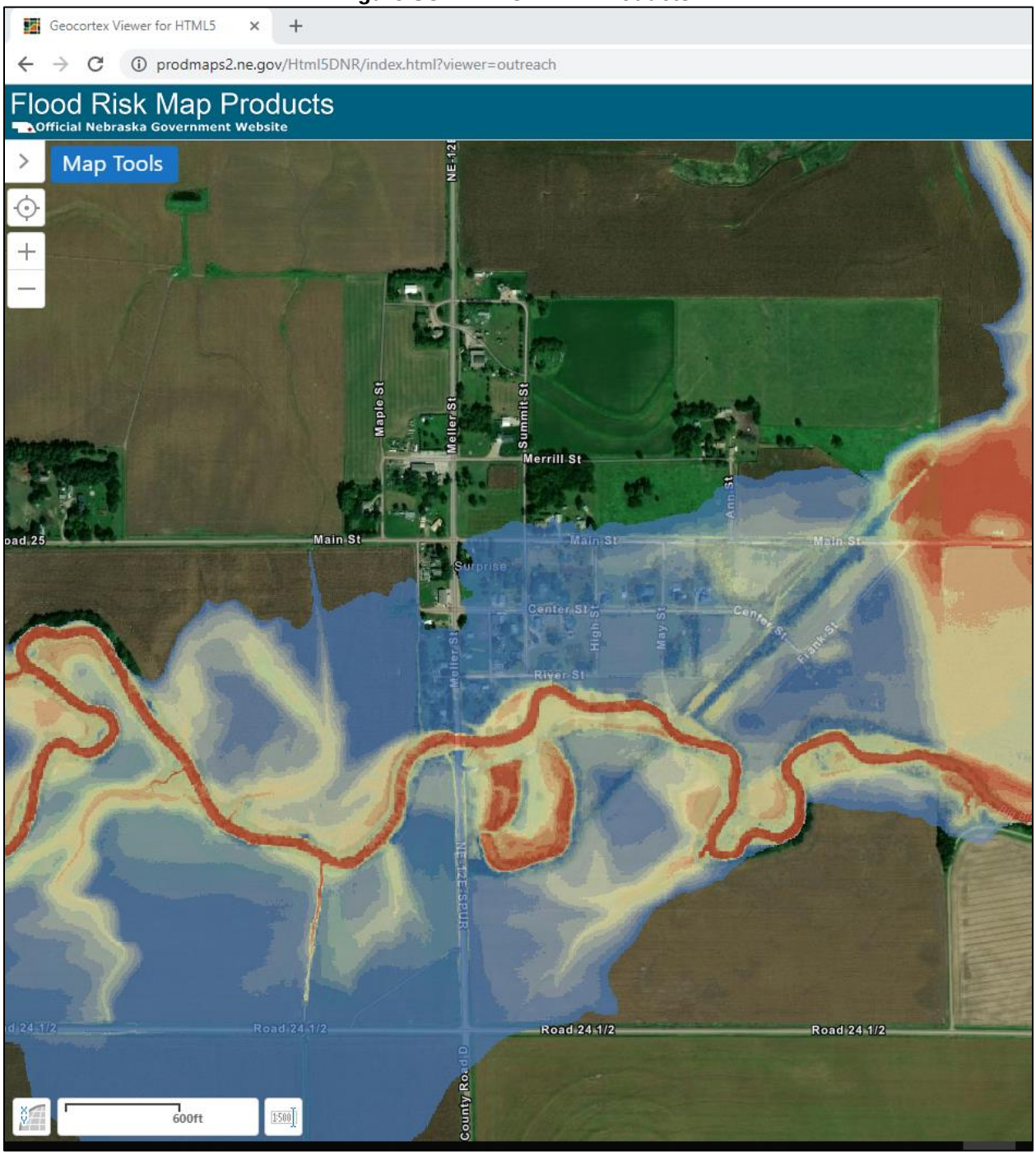


Figure SUR.4: Risk MAP Products



Source: NeDNR

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

FLOODING

The most recent significant flooding events occurred in 2004 and 2008, flooding basements so that furnaces, water heaters, carpet, walls, and sump pumps were damaged. Riverine flooding from the Big Blue River (to the south of the village) and flash flooding are both a concern for the community. Highway 12E, just south of Main Street, is particularly prone to flooding though many areas of the community have poor stormwater drainage. No important public infrastructure has been damaged by flooding to date.

Risk Mapping, Assessment, and Planning (Risk MAP) was completed for southwestern portions of Butler County, including Surprise. As shown in Figure SUR.4, additional products, such as flood depths and percent annual or 30-year chance grids, are available to these communities to make informed decisions about reducing and communicating flood risk. To view this interactive map, visit https://prodmaps2.ne.gov/Html5DNR/index.html?viewer=outreach.

HIGH WINDS

The largest impact of this hazard is power outages cause by trees falling on power lines. The most significant high wind event was in conjunction with a 2006 tornado that snapped power lines, damaged tress, flattened crops, and flipped severe center pivots. Another event in 2014 blew trees onto the highway, blocking traffic flow in and out of the town. Critical facilities have not been damaged by high winds to date. The community does not have a safe room or other shelter option for community members. The County Emergency Manager does not offer text alerts for hazard events. No educational outreach activities on high winds are done in the community. Surprise does not have a backup system for municipal records.

SEVERE THUNDERSTORMS

The Village of Surprise has had five severe thunderstorm events since 1996, resulting in $103,000 property damage from high winds with speeds ranging from 50 – 85 EG. The wind during these events flipped center pivots, downed trees, and snapped power poles. The wind during a 1997 thunderstorm fell trees into two homes in Surprise. Only about 15% of the power lines in the community are buried. There are no backup municipal records and no specific precautions are taken to protect them.

SEVERE WINTER STORMS

Heavy snow and ice impede travel in and out of the village. Recovery from a severe winter storm in 2011 was especially difficult, with residents grounded for three to four days before the snow

was cleared. The community has only one small JD tractor with a plow to move snow on the village streets. The tractor is often not enough for the town's snow removal needs. The village's maintenance staff member is currently working with the local township to help plow snow within the village; they are completely dependent on the state to clear Highway 12E into town. The village does not use snow routes or snow fences. No critical facilities have been damaged by snowstorms in the past.

TORNADOES

A tornado in September of 2006 destroyed a local business, two homes, the telephone office, and numerous trees and electrical infrastructure. The fire hall, Butler County Rural Public Power District infrastructure, the community hall, and the village's tractor shed have all been damaged by tornadoes in the past. The local severe weather warning siren is activated by David City's police department and reaches all areas of the community. There are no safe rooms in Surprise, and no other options for community members seeking safe shelter. The Fire Department has Mutual Aid Agreements for disaster assistance.

GOVERNANCE

The Village of Surprise is governed by a five-member village board; other governmental offices and departments are listed below. The community government will oversee the implementation of hazard mitigation projects.

- Clerk
- Treasurer
- Board Chairperson
- Street Superintendent (Contracted)

CAPABILITY ASSESSMENT

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

Table SUR.5: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Planning & Regulatory Capability	Comprehensive Plan	No
	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	Yes
	Building Codes	No
	National Flood Insurance Program	Yes

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
	Community Rating System	No
	Other (if any)	
Administrative & Technical Capability	Planning Commission	No
	Floodplain Administration	Yes
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	
Fiscal Capability	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	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	Yes
	Other (if any)	
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	No
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	

Table SUR.6: Overall Capability Assessment

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

PLAN INTEGRATION

Surprise has an emergency operations plan and floodplain regulations. The village is an annex to the 2020 Butler County emergency operations plan. It discuses communications, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelters, and resource management. The floodplain regulations limit density in the floodplain and require new structures built in the floodplain be at least one foot above base flood elevation. No other examples of plan integration were identified. However, the community will seek out and evaluate any opportunities to integrate the results of the current HMP into other planning mechanisms and updates

MITIGATION STRATEGY

ONGOING AND NEW MITIGATION ACTIONS

MITIGATION ACTION	ABOVE GROUND STORMWATER SYSTEM AND DRAINAGE IMPROVEMENTS
Description	Stormwater systems comprising of ditches, culverts, or drainage ponds can be used to convey runoff. Undersized systems can contribute to localized flooding. Drainage improvements may include ditch upsizing, ditch cleanout and culvert improvements. Along Main Street and May Street culverts were damaged and need to be repaired.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	Road fund
Timeline	Ongoing
Priority	High
Lead Agency	Village Chairperson
Status	New Action. Ongoing, issues are repaired once identified and funding is available.

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	Provide a portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations, and other critical facilities and shelters
Hazard(s) Addressed	Extreme heat, flooding, high winds, severe thunderstorms, severe winter storms, tornadoes
Estimated Cost	Varies by size
Funding	Annual budget
Timeline	2-5 years
Priority	High
Lead Agency	Village Board
Status	This project has not been started, but the village board plans to acquire a portable generator.

MITIGATION ACTION	STREAM BANK STABILIZATION/GRADE CONTROL STRUCTURES/CHANNEL IMPROVEMENTS
Description	Stabilization improvements including rock rip rap, vegetative cover, j-hooks, boulder vanes, etc. can be implemented to reestablish the channel banks. Channel stabilization can protect structures, increase conveyance, and provide flood mitigation benefits
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	Annual budget
Timeline	1 year
Priority	High
Lead Agency	Village board
Status	This project will target banks along the Big Blue River. It has not been started.

REMOVED MITIGATION ACTIONS

MITIGATION ACTION	MAINTAIN PARTICIPATION IN THE NATIONAL FLOOD INSURANCE PROGRAM
Hazard(s) Addressed	Flooding
Reason for Removal	While the community will continue to participate and maintain compliance in the NFIP, this is no longer considered a mitigation action by FEMA.

COMMUNITY PROFILE

VILLAGE OF ULYSSES

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table ULY.1: Village of Ulysses Local Planning Team

NAME	TITLE	JURISDICTION
Donald Hayor	Village Board Member	Village of Ulysses
David Schauer	Utility Superintendent	Village of Ulysses
Jeanine Wasser	Village Clerk/Floodplain Administrator	Village of Ulysses

LOCATION AND GEOGRAPHY

The Village of Ulysses is in the southern portion of Butler County and covers an area of 0.20 square miles. It is in the plains region of Nebraska and is surrounded by agricultural land used for row crop production and pasturing. The Big Blue River runs north to south past the eastern edge of the village.

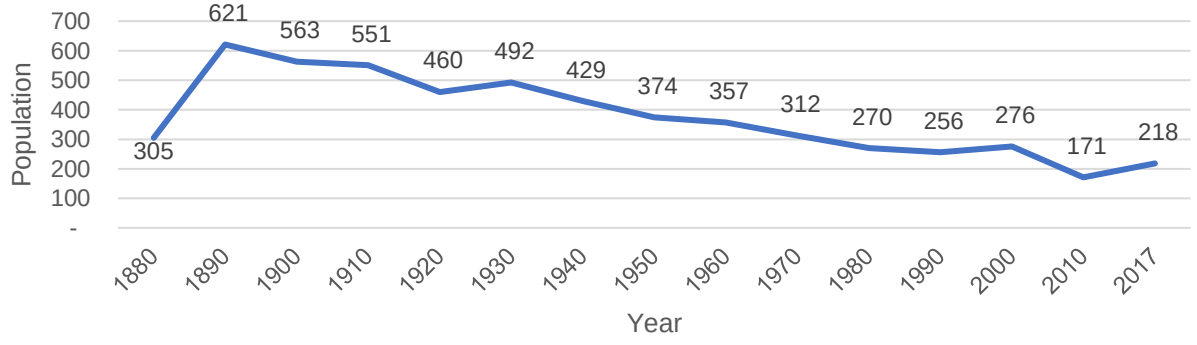
TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community and areas more at risk of transportation incidents. Ulysses' major transportation corridor is Nebraska State Highway Spur 12C, connecting it to Nebraska State Highways 15 and 66. State Spur 12C is traveled by a total annual average of 590 vehicles daily, 60 of which are trucks.[64] A Burlington Northern Santa Fe rail line bisects the village, running north to south. State Spur 12C is the transportation route of most concern in the community because it is the most heavily traveled and is essential for travel in and out of the village.

DEMOGRAPHICS

While its population is generally declining, Ulysses' population grew from 171 people in 2010 to about 218 people in 2017. A growing population will ensure a stable tax base to fund mitigation projects. The population accounted for 2.7% of Butler County's population in 2017.[65]

Figure ULY.1: Population



Source: U.S. Census Bureau, 1880 - 2017

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

65 United States Census Bureau. "American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]. https://factfinder.census.gov/.

Figure ULY.2: Village of Ulysses

The young, elderly, minority populations and poor may be more vulnerable to certain hazards than other groups. In comparison to the county, the Village of Ulysses population was:

- **Similarly aged.** The median age of Ulysses was 46.3 years old in 2017, compared with Butler County's median of 43.5 years. Ulysses' population grew younger since 2010, when the median age was 51.1 years old. Ulysses had a smaller proportion of people under 18 years old (15.6%) and over 65 years (14.7%) than the county (23.9% and 19.9%).[2]
- **Less ethnically diverse**. Since 2010, Ulysses grew more ethnically diverse. In 2010, none of Ulysses' population was Hispanic or Latino. By 2017, about 0.9% was Hispanic or Latino. During that time, the Hispanic population in the county grew from 2.3% in 2010 to 3.0% in 2017.[2]
- **More likely to be below the federal poverty line.** The poverty rate in Ulysses (12.4% of people living below the federal poverty line) was higher than the county's poverty rate (7.8%) in 2017.[66]

EMPLOYMENT AND ECONOMICS

The Village of Ulysses' economic base is a mixture of industries. In comparison to Butler County, Ulysses' economy had:

- **Larger mix of industries.** Four major employment sectors, accounting for 10% or more of employment each, were: manufacturing; retail trade; educational services, and health care and social assistance; and other services, except public administration.[3]
- **Lower per capita income.** Ulysses' per capita income in 2017 ($21,637) was about $5,579 lower than the county ($27,216).[3]
- **More commuters.** About 15.4% of workers in Ulysses commuted for fewer than 15 minutes, compared with about 41.9% of workers in Butler County. About 41.3% of workers in Ulysses commuted 30 minutes or more to work, compared to about 31.4% of county workers.[67]

MAJOR EMPLOYERS

The major employers within Ulysses are the Central Valley Co-op and Wish Nebraska Irrigation. Because of limited employment opportunities within the community, most residents commute to the neighboring communities of Seward and David City for work.

HOUSING

In comparison to Butler County, the Village of Ulysses' housing stock was:[68]

- **Older.** Ulysses had a larger share of housing built prior to 1970 than the county (73.9% compared to 56.4%).

66 United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. https://factfinder.census.gov/.
67 United States Census Bureau. "American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. https://factfinder.census.gov/.
68 United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. https://factfinder.census.gov/.

- **More mobile and manufactured housing.** Ulysses had a larger share of mobile and manufactured housing (9.0%) compared to the county (6.3%). Mobile homes are located throughout the community.
- **Less renter-occupied**. About 16.5% of occupied housing units in Ulysses were renter-occupied compared with 20.1% of occupied housing in Butler County.
- **Occupied.** Approximately 12.6% of Ulysses' housing units were vacant compared to 16.5% of units in Butler County.

The age of housing may indicate which housing units were built prior to the development of state building codes. Homes built within a flood hazard area before the adoption of their community's Flood Rate Insurance Map (FIRM) are not likely to be built above the 1% annual chance floodplain. Older and vacant housing stock may also be more vulnerable to hazard events if it is poorly maintained. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if those homes are not anchored correctly. Renter occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have renter's insurance or flood insurance, or to know their risks to flooding and other hazards. A significant number of unoccupied housing suggests that future development may be unlikely to occur in the area.

FUTURE DEVELOPMENT TRENDS

In the last ten years, Ulysses built a new lift station with water meters. There are no plans in place for future housing or business developments.

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, paved lots, roads, etc.) at the parcel level. The data did not contain the number of structures on each parcel. The parcel data was analyzed to determine the number and valuation of property improvements located in the 1% annual chance floodplain. A summary of the results of this analysis is provided in the following table.

Table ULY.2: Parcel Improvements and Value in the Floodplain

NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	PERCENTAGE OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN
133	$2,669,710	0	0%	$0

Source: GIS Workshop/Butler County Assessor, 2019[69]

CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one fixed hazardous chemical storage site within two miles of the village.

69 GIS Workshop/Butler County Assessor. 2019. [Personal correspondence].

The following table lists this site. There are no concerns locally about fixed site chemical spills. The local fire department has the appropriate gear and training to respond to a spill.

Table ULY.3: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	IN FLOODPLAIN (YES/NO)
Central Valley Ag	157 S 4th St	No

Source: Nebraska Department of Environment and Energy, 2019[70]

CRITICAL FACILITIES

The planning team identified critical facilities necessary for the Village of Ulysses' disaster response and continuity of operations per the FEMA Community Lifelines guidance. Critical facilities were identified during the 2015 planning process and revised for this plan update. The following table and figure provide a summary of the critical facilities for the community.

Table ULY.4: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Immaculate Conception Catholic Church	Yes	No	No
2	Community Center	Yes	No	No
3	Fire Hall	Yes	No	No
4	Library	Yes	No	No
5	Water Tower & Well House #1	No	No	No
6	Well House #2	No	Yes	No
7	Village Hall	Yes	No	No

70 Nebraska Department of Environmental Quality. 2019. "Nebraska DEQ Tier 2 Data Download: 2018." https://deq-iis.ne.gov/tier2/.

Figure ULY.3: Critical Facilities

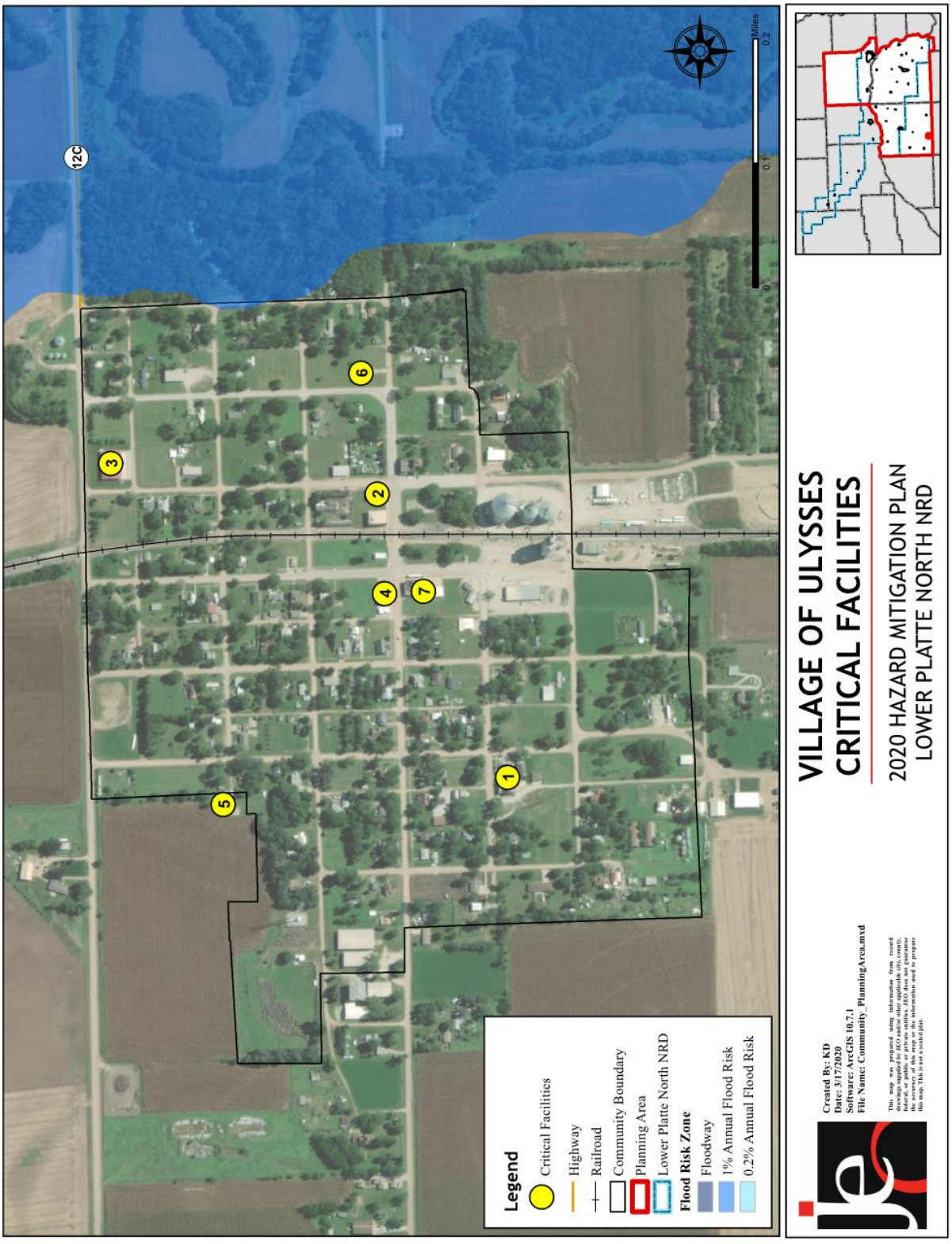
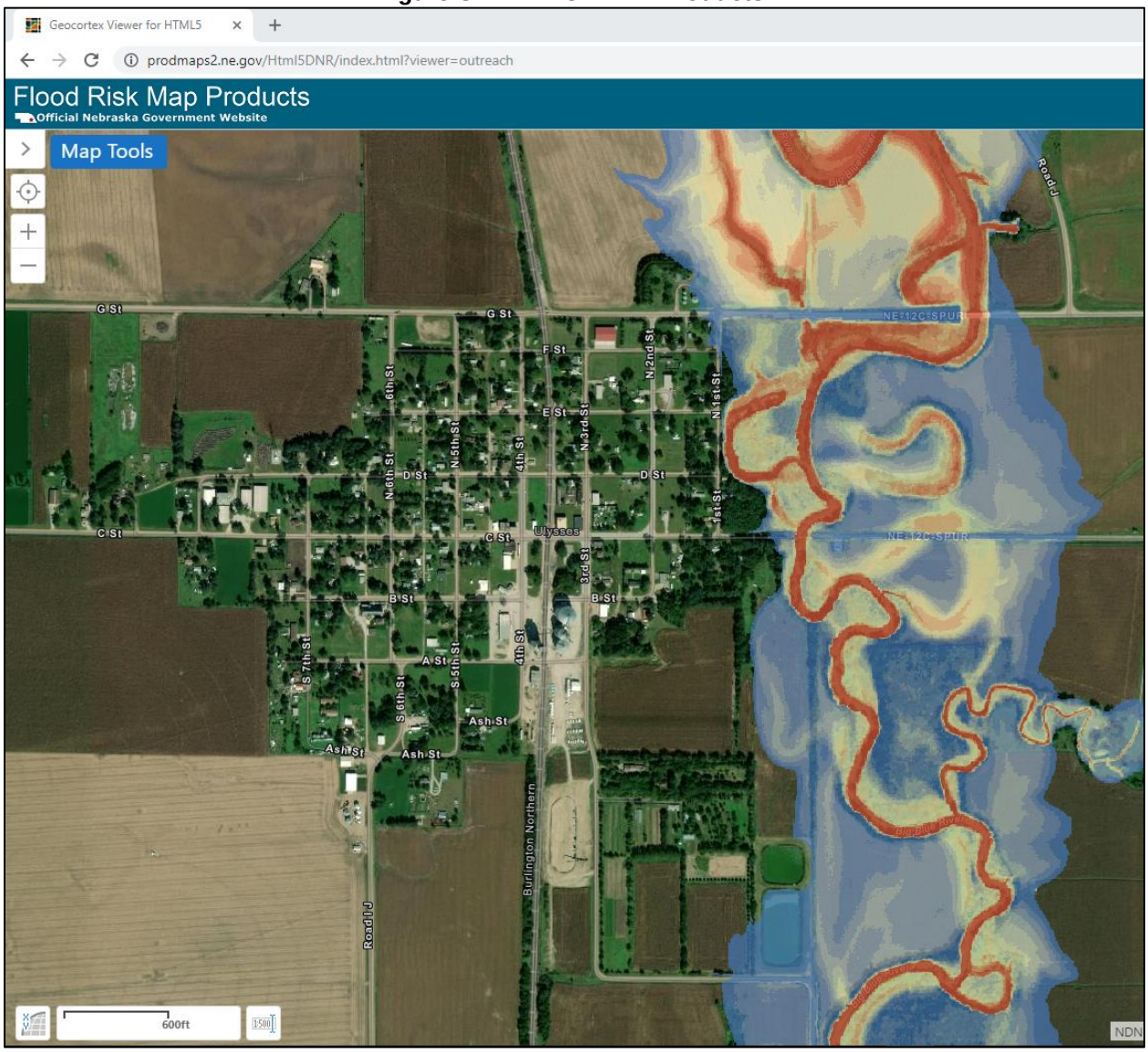


Figure ULY.4: Risk MAP Products



Source: NeDNR

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

FLOODING

The NCEI data indicated one flooding event, which result in $6,000 in damages to property in Ulysses. The local planning team indicated that most flooding was a result of poor storm water drainage, and the community continues to make improvements to its stormwater systems by installing curb and gutter. The majority of the flood risk indicated on the FIRM map lies just outside the community boundary east of town.

Risk Mapping, Assessment, and Planning (Risk MAP) was completed for southwestern portions of Butler County, including Ulysses. As shown in Figure ULY.4, additional products, such as flood depths and percent annual or 30-year chance grids, are available to these communities to make informed decisions about reducing and communicating flood risk. To view this interactive map, visit https://prodmaps2.ne.gov/Html5DNR/index.html?viewer=outreach.

HAIL

A significant severe storm in 2012 caused hail damage to well house roofs, siding, and windows. All critical facilities are insured against hail damage. The Village Board monitors the condition of trees in the community and removes those that are hazardous. Residents are not provided information on hail resistant building materials with building permits.

HIGH WINDS

High winds are a concern for Ulysses because they can damage roofs and trees. Significant tree damage occurred during high wind events in 2012, 2017, 2018, and 2019. Critical facilities have not been damaged by high winds. A public storm shelters are located at the fire hall, community center, auditorium, and Village Hall.

SEVERE THUNDERSTORMS

Wind and hail in a 2012 severe thunderstorm caused significant damage in the community. Downed trees and power outages are the biggest concerns over future storms. Critical municipal records on digital devices are protected with surge protectors. Most critical facilities do not have backup generators but the water tower and well house #1 are especially critical and need a backup generator. All occupied critical facilities have weather radios. Approximately ten percent of power lines are buried, making the rest vulnerable to storms.

TORNADOES

The population of Ulysses was not impacted but a tornado in 2008 did cause tree damage. Critical facilities have been lightly damaged by high winds in the past. In case of a disaster municipal records are backed up on the computer and on paper. The local fire department has Mutual Aid Agreements in place for response. All areas of the community are reached by the warning siren which is activated by County Dispatch or in the Fire Hall and Village Office. A safe room in the Fire Hall is open to the public, though it is not known if it is FEMA certified. The community center, auditorium, and Village Hall are also available as public storm shelters.

GOVERNANCE

The Village of Ulysses is governed by a five-member village board; other governmental offices and departments are listed below. The community government will oversee the implementation of hazard mitigation projects.

- Clerk/Treasurer
- Attorney
- Utility Superintendent
- Volunteer Fire Department
- Certified Water Operator
- Certified Wastewater Operator
- Street Superintendent
- Engineer

CAPABILITY ASSESSMENT

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

Table ULY.5: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Planning & Regulatory Capability	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Emergency Operational Plan	Yes
	Floodplain Management Plan	Yes
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	No
	Floodplain Ordinance	Yes
	Building Codes	Yes
	National Flood Insurance Program	Yes
	Community Rating System	No
	Other (if any)	

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Administrative & Technical Capability	Planning Commission	No
	Floodplain Administration	Yes
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	Yes
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	
Fiscal Capability	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	No
	Gas/Electric Service Fees	Yes
	Storm Water Service Fees	Yes
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	
Education & 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.	Yes
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	No
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	

Table ULY.6: Overall Capability Assessment

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

PLAN INTEGRATION

Ulysses has a comprehensive plan, emergency operations plan, zoning ordinance, streets capital improvement plan, a wellhead protection plan, and a water emergency response plan. The comprehensive plan directs development away from the floodplain and chemical storage facilities, encourages the preservation of open space in hazard-prone areas, and allows for emergency access to all areas of town. There is currently no discussion to update the comprehensive plan. The zoning ordinance is in place; however, the village has little power to enforce the ordinance. Ulysses is an annex to the 2015 Butler County Emergency Operations Plan. It discusses communications, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelters, and resource management. The village budget has stayed stead over recent years; however, most of the budget is going towards paying off the wastewater project from 2013. No other examples of plan integration were identified. However, the community will seek out and evaluate any opportunities to integrate the results of the current HMP into other planning mechanisms and updates.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	CULVERT UPSIZING AND CLEANING
Description	The village primarily uses culverts to convey stormwater runoff. Culverts can become clogged with debris causing water to stand or flood. Remove obstacles and upsize culverts where necessary, typically in the southern portion of the community.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	Village budget
Timeline	Ongoing
Priority	Low
Lead Agency	Village maintenance
Status	New Action. Ongoing. Issues are fixed as they are identified.

MITIGATION ACTION	CURB AND GUTTER
Description	Install curbs and gutters along streets that do not have any. Update and repair curbs and gutters where needed. The village is looking at installing curbs along D Street between 4th and 5th Streets.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	Village budget
Timeline	Ongoing
Priority	Medium
Lead Agency	Village maintenance
Status	New Action. Ongoing. Three years ago, curb and gutters were updated along E Street between 4th and 5th Streets.

MITIGATION ACTION	HAZARDOUS TREE REMOVAL
Description	Conduct tree inventory. Develop and implement tree maintenance and trimming program to remove hazardous limbs and trees.
Hazard(s) Addressed	All hazards
Estimated Cost	$200+ per tree
Funding	Village budget
Timeline	Ongoing
Priority	Medium
Lead Agency	Village maintenance
Status	New Action. Ongoing. Trees are removed as identified and funding is available.

MITIGATION ACTION	POWER, SERVICE, AND ELECTRICAL LINES
Description	Install and repair water and sewer lines across the entire community.
Hazard(s) Addressed	Drought
Estimated Cost	Varies
Funding	Village budget
Timeline	Ongoing
Priority	Medium
Lead Agency	Village maintenance
Status	New Action. Ongoing. When a line breaks the village fixes the issue.

REMOVED MITIGATION ACTIONS

MITIGATION ACTION	MAINTAIN PARTICIPATION IN THE NATIONAL FLOOD INSURANCE PROGRAM
Hazard(s) Addressed	Maintain participation in the National Flood Insurance Program
Reason for Removal	While the community will continue to participate and maintain compliance in the NFIP, this project is no longer considered a mitigation action by FEMA.