

COUNTY PROFILE

DODGE COUNTY

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

Section Seven: Dodge County Profile

LOCAL PLANNING TEAM

Table DGE.1: Dodge County Local Planning Team

NAME	TITLE	JURISDICTION
Bob Missel	Board of Supervisors Chairperson	Dodge County
Jean Andrews	Zoning & Floodplain Administrator	Dodge County
Scott Huppert	Highway Superintendent	Dodge County
Tom Smith	Emergency Manager	Dodge County

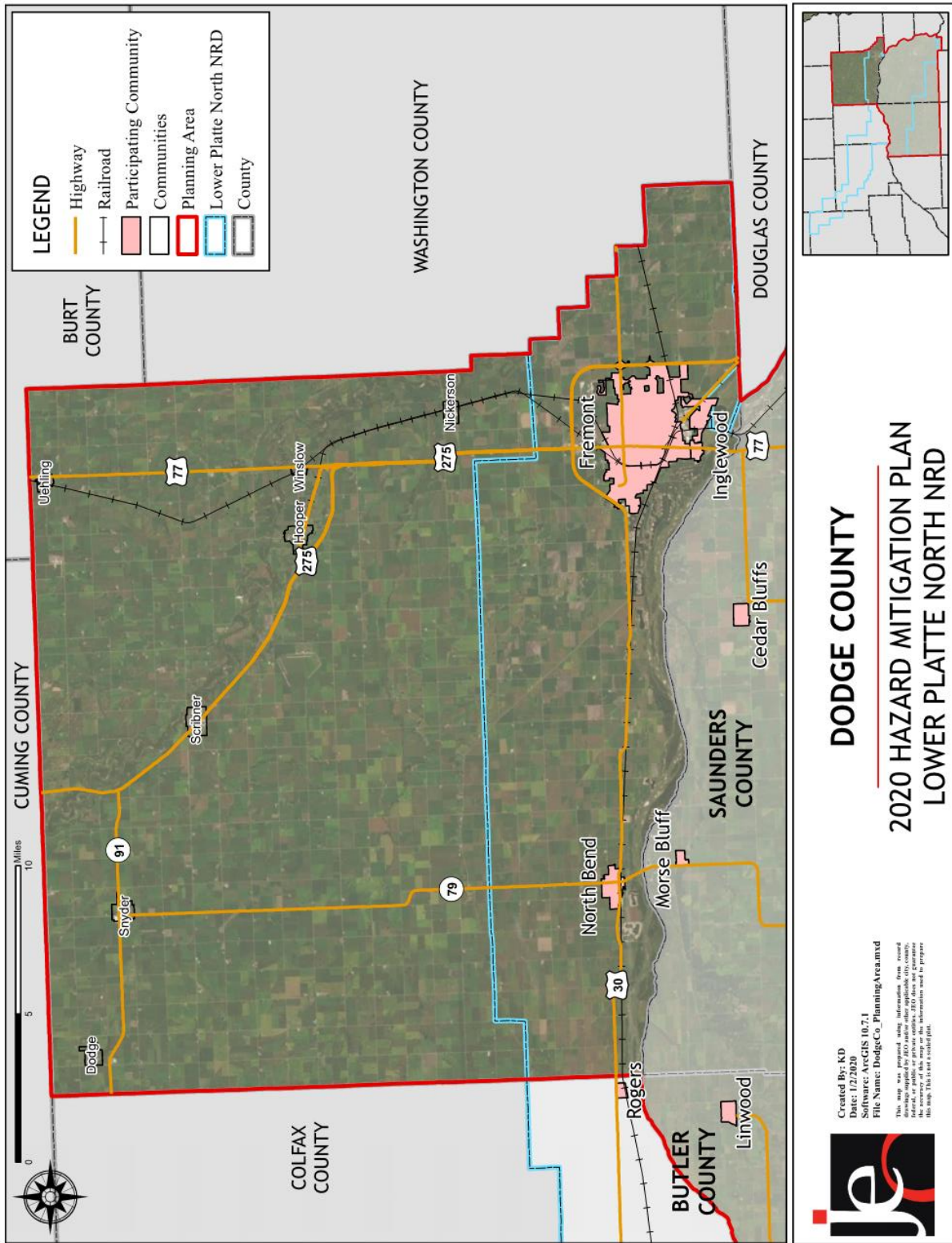
LOCATION AND GEOGRAPHY

Dodge County is located in eastern Nebraska and is bordered by Burt, Washington, Douglas, Saunders, Colfax, and Cuming Counties. The total area of Dodge County is 543 square miles. The Platte River forms the southern border of the county. The northern portion of the county is in the rolling hills topographic region of Nebraska, while the southern portion of the county is the valleys topographic region. The vast majority of the 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. Dodge County's major transportation corridors include Nebraska State Highway 91 and US Highways 30, 77, and 275. The Union Pacific Railroad rail line passes through the southern part of the county and a Burlington Northern Santa Fe rail line passes through the eastern part of the county. The county also hosts several air landing strips at Fremont Municipal Airport. US Highways 30 and the Union Pacific rail line are the transportation routes of most concern in the county because of their heavy traffic and proximity to the Platte River. Refer to the county's hazard prioritization for more information on chemical transportation.

Figure DGE.1: Dodge County

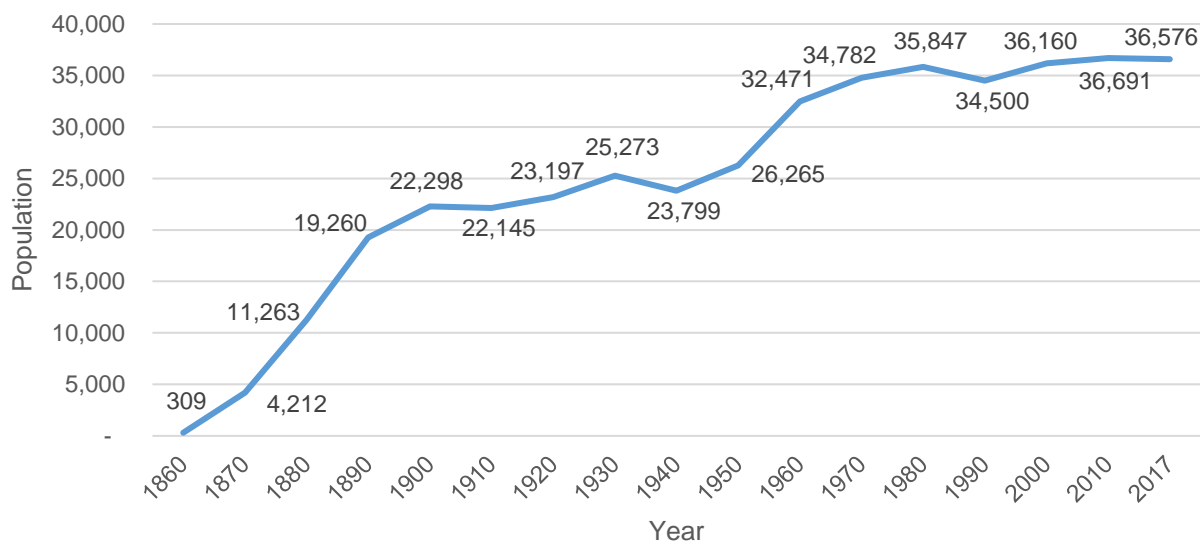


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DEMOGRAPHICS, EMPLOYMENT, AND ECONOMICS

The following figure displays the historical population trend from 1860 to 2017. This figure indicates that the population of Dodge County has been stable since 1980. A stable population will provide a reliable tax base to fund mitigation projects.

Figure DGE.2: Population



Source: U.S. Census Bureau, 1860 - 2017¹

The very young and elderly populations may be at greater risk from certain hazards than others. The following table indicates that the county is similarly aged to the state, similarly diverse, and with a similar proportion of residents below the federal poverty line. The per capita income in Dodge County is also on par with 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 DGE.2: Demographics

	DODGE COUNTY	STATE OF NEBRASKA
Median age	39.1 years old	36.3 years old
Hispanic	11.8%	10.5%
Below the federal poverty line	13.2%	12.0%
Per capita income	\$27,162	\$29,866

Source: U.S. Census Bureau²

MAJOR EMPLOYERS

Communities with a diversified economy are more resilient to hazardous events, especially if certain industries are more impacted than others. Dodge County hosts 1,027 business establishments. The following table presents the number of businesses, number of paid employees, and the annual payroll. Major employers in the county include Valmont Irrigation and

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

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Fremont Health Industries. Many 81,978,465 residents also commute to communities outside of Dodge County for work.

Table DGE.3: Business in Dodge County

	TOTAL BUSINESSES	NUMBER OF PAID EMPLOYEES	ANNUAL PAYROLL (IN THOUSANDS)
Total for all sectors	1,027	15,878	\$559,389

Source: U.S Census Bureau²

Agriculture is important to the economic fabric of the State of Nebraska. Dodge County's 585 farms cover 132,558 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 DGE.4: Agricultural Inventory

AGRICULTURAL INVENTORY	
Number of farms with harvested cropland	585
Acres of harvested cropland	132,558

Source: USDA Census of Agriculture, 2019³

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 Dodge County was built prior to 1970 (58.5 percent). The current Flood Insurance Rate Map (FIRM) was developed in March 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 5.0% 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. There are no mobile homes in the unincorporated areas of the county. Dodge County has similar proportions of renter-occupied and vacant housing compared to 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/>.

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Table DGE.5: Housing

	DODGE COUNTY	STATE OF NEBRASKA
Housing built before 1970	58.5%	47.2%
Mobile and manufactured	5.0%	3.4%
Renter-occupied	36.1%	34.0%
Vacant	9.6%	9.2%

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

FUTURE DEVELOPMENT TRENDS

Future developments in Dodge County center on the City of Fremont. Housing developments are planned for northeast Fremont, and businesses for north Fremont where the city has installed fiber lines in preparation for a data park. Population growth is anticipated in the county, with the establishment of these new industries.

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 DGE.6: 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
14,187	\$1,781,978,465	3,631	25.6%	\$472,942,983

Source: GIS Workshop/Dodge County Assessor, 2019⁶

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 site in the unincorporated areas of Dodge County. It is not located in the floodplain. Chemical fixed site spills are not a priority hazard for the county. For chemical sites located within two miles of incorporated areas, please see each community's participant section. Some of these communities are profiled in the Lower Elkhorn NRD Hazard Mitigation Plan.

Table DGE.7: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	IN FLOODPLAIN (YES/NO)
NDOT Fremont 275-91 Yard	Jct Highways 275 & 91, Scribner	No

Source: Nebraska Department of Environment and Energy, 2019⁷

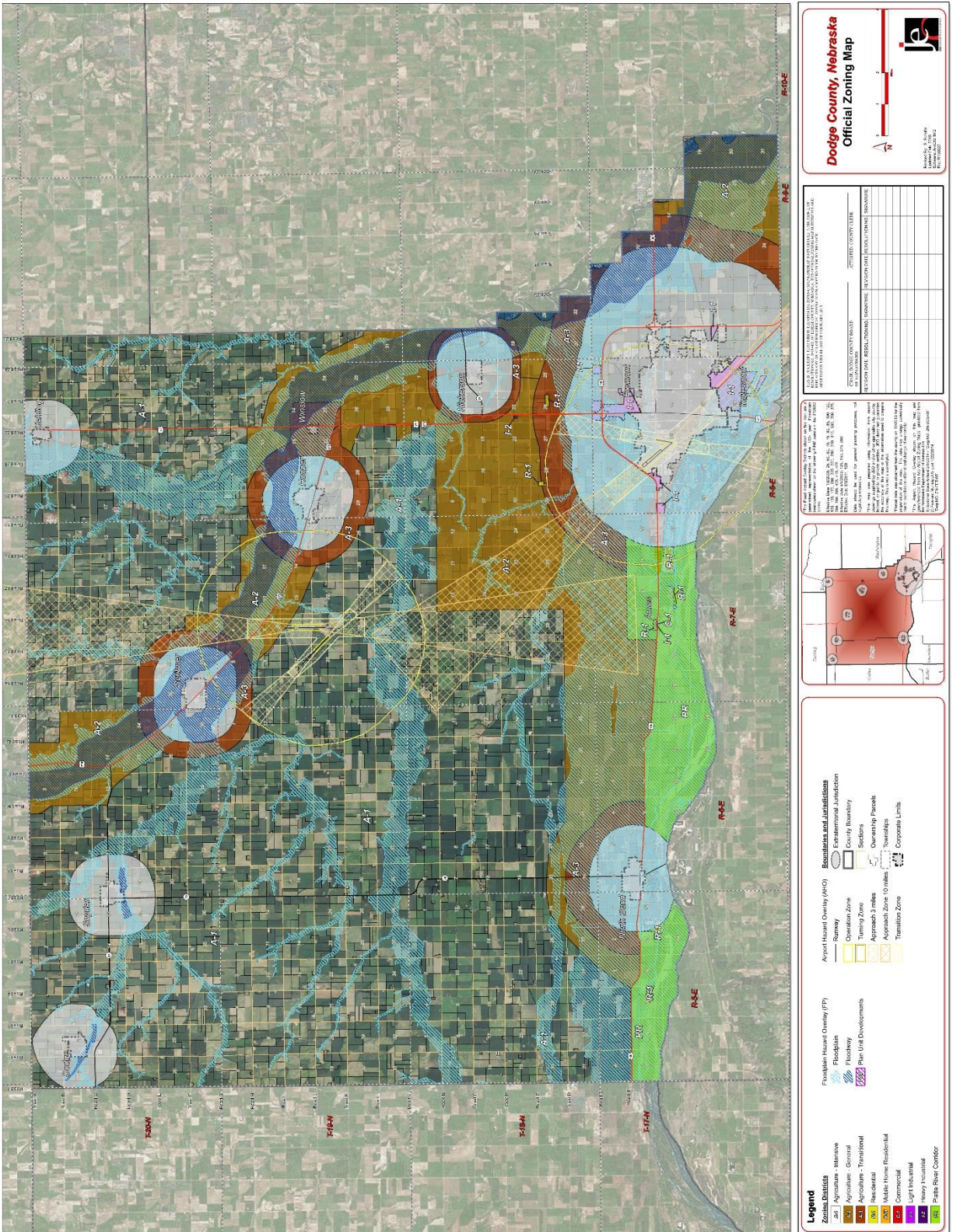
4 United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov>.

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

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

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

Figure DGE.3: Official Zoning Map



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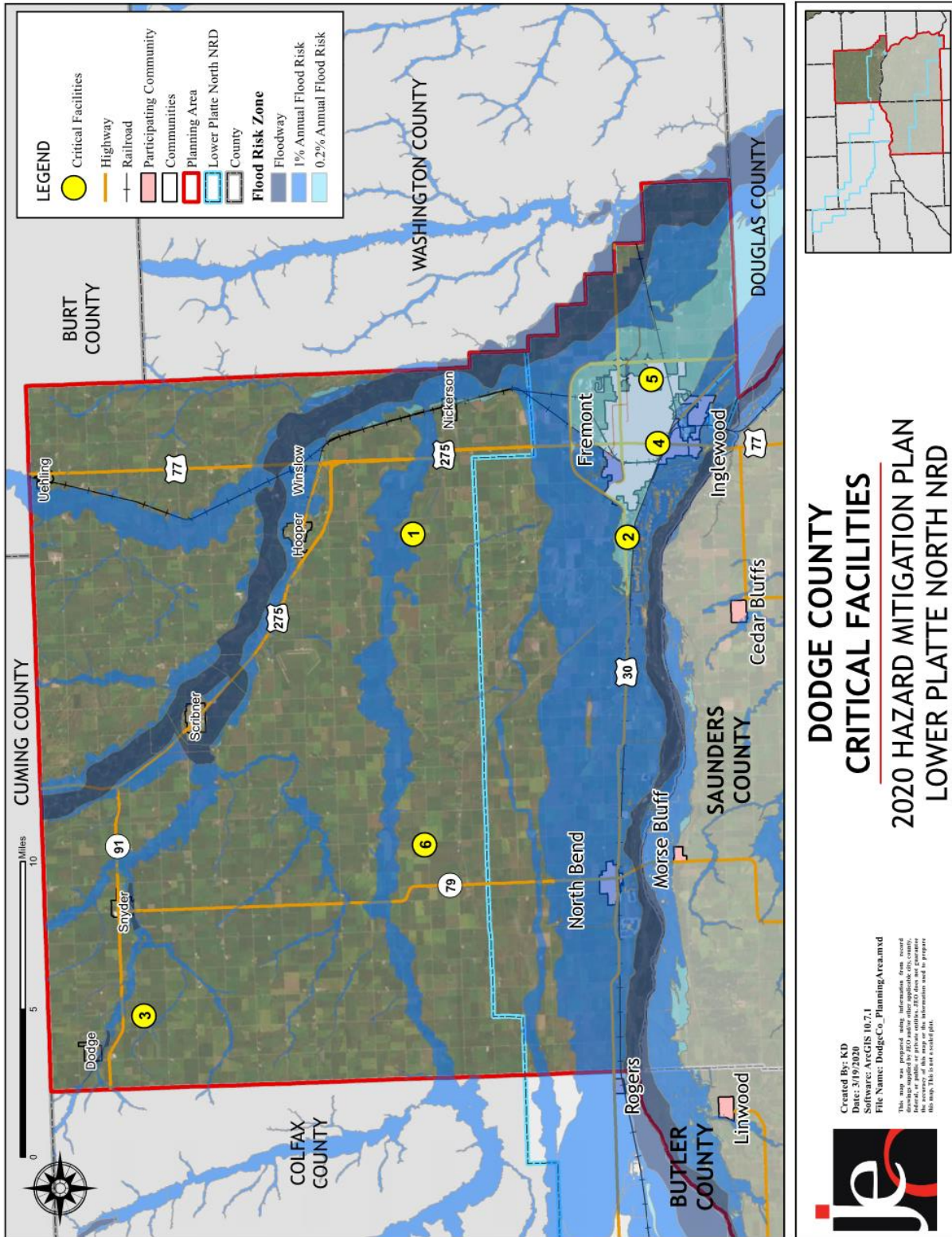
CRITICAL FACILITIES

The planning team identified critical facilities necessary for Dodge County'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 county.

Table DGE.8: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Central Communications Tower	No	Yes	No
2	County Highway Department/ Main Shop	No	Yes	Yes (0.2%)
3	Dodge Communications Tower	No	Yes	No
4	Dodge County Sheriff's Department/Jail	No	Yes	Yes (0.2%)
5	First Lutheran Church	Yes	Yes	Yes (0.2%)
6	North Bend Communications Tower	No	Yes	Yes (1%)

Figure DGE.4: Critical Facilities



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HISTORICAL OCCURRENCES

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

Table DGE.9: County Hazard Loss History

HAZARD TYPE		COUNT	PROPERTY DAMAGE	CROP DAMAGE ²
Agricultural disease	Animal disease ¹	17	1,687 animals	N/A
	Plant disease ²	13	N/A	\$27,975
Chemical spills (fixed site) ³ 2 injuries		28	\$0	N/A
Chemical spills (transportation) ⁴		22	\$22,367	N/A
Dam failure ⁵		0	\$0	N/A
Drought ⁶		412/1,492 months	N/A	\$21,646,741
Extreme heat ⁷ 1 fatality		Avg. 5 days/year	N/A	\$3,129,225
Flooding ⁸	Flash flood	17	\$115,000	\$3,696,179
	Flood	41	\$2,260,000	
Grass/wildfires ⁹		191	383 acres	\$4,473
Hail ⁸ Range 0.75 – 4.0 in Average 1.2 in		170	\$10,001,000	\$10,130,931
High winds ⁸ Range 35 – 58 EG Average 49 EG		19	\$0	\$1,212,126
Levee failure ^{10, 11}		4	N/A	N/A
Severe thunderstorms ⁸ 5 injuries	Thunderstorm wind Range 50 – 96 EG Average 55 EG	117	\$31,000	N/A
	Heavy rain	3	\$0	\$15,880,438
	Lightning	3	\$200,000	N/A
Severe winter storms ⁸ 3 fatalities	Blizzard	9	\$0	\$445,572
	Extreme cold/Wind chill	4	\$0	
	Heavy snow	4	\$0	
	Ice storm	3	\$0	
	Winter storm	46	\$0	
	Winter weather	11	\$0	
Terrorism & civil disorder ^{12, 13}		0	\$0	N/A
Tornadoes ⁸ Range EF0 – EF1 Average EF1		13	\$1,555,000	\$1,236

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 Dodge 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 DGE.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 DGE.10: Dodge 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	LEEVE FAILURE	SEVERE T-STORMS	SEVERE WINTER STORMS	TERRORISM/CIVIL DISORDER	TORANDOOES
Dodge County	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ames Dike and Drainage District					X		X				X			X	X
Cotterell Diking and Drainage District					X		X				X			X	X
City of Fremont	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Village of Inglewood	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Lake Ventura SID #3	X	X	X		X	X	X	X	X	X	X	X	X	X	X
City of North Bend	X	X	X		X	X	X	X	X	X	X	X	X	X	X
North Bend Drainage District					X		X				X			X	X
North Bend Fire Department		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

Dodge County is a primarily agricultural county. With the construction of the Lincoln Premium Poultry Plant in the City of Fremont, the number of poultry barns in the county is expected to increase. In addition to the large amount of agricultural and plants, there are concern that there are not enough livestock holding areas in the county. If a disease were to impede normal agricultural product production, there would be large economic impacts. The 2017 market value of products sold was \$270,502,000. Cattle is the largest population of livestock in the county. There are no local plans in place in case of a disease outbreak, though the local Nebraska Extension Office is available to assist producers and first responders. A Livestock Emergency Response Plan is provided statewide through the Extension Office. The largest concentration of livestock near Dodge County is taken to the sale barn is in the Village of West Point, just north of Dodge County. There are also smaller sale barns in the Cities of Wahoo and Columbus, and the Villages of Creighton, Elgin, and Pender. Several outreach opportunities on agricultural disease are available in the county. Beef Quality Assurance, Pork Quality Assurance, and other species-specific programs discuss biosecurity and disease concerns. The Extension Office provides further education and information on disease in the BeefWatch Newsletter, BeefWatch podcast, NEBGUIDES, beef.unl.edu website, and meetings hosted by Extension personnel as needed. Extension educators can meet with producers, relay questions to veterinarians and horticulturalists, and provide other additional support. School-aged children in the local 4-H chapter can take a Youth for the Quality Care of Animals course which includes some programming on animal disease.

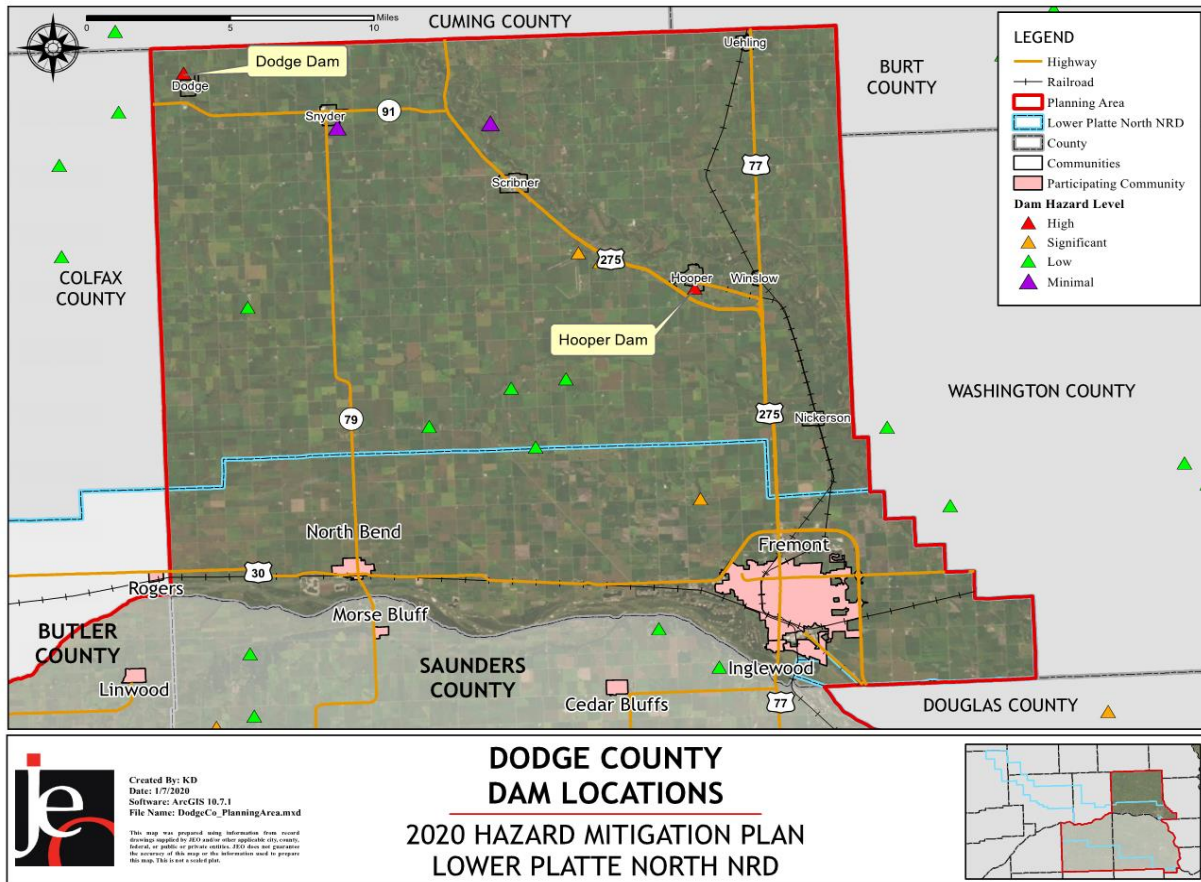
CHEMICAL SPILLS (TRANSPORTATION)

Throughout Dodge County there are sixty-eight SARA Title III reporting facilities, twenty-nine of which house extremely hazardous materials. While nearly every facility is located within a community's jurisdiction, the large number of facilities increases the likelihood of a transportation incident. Dodge County also has 127 miles of natural gas pipeline and 20 miles of crude oil pipelines. Highways 30 and 275 have particularly high traffic. There are also two rail lines in Dodge County, the Union Pacific Railroad and the Burlington Northern Santa Fe Railroad. Trains have derailed seven times since 2010. In August of 2018 175, lbs of anhydrous ammonia was released. This large chemical spill was followed by another spill in June 2019. There were no injuries or property damage. Both spills occurred during the unloading of the tanker. Highway 30 and the Union Pacific Railroad are the transportation routes of most concern because of their heavy traffic and proximity to the Platte River. The County Courthouse and Sheriff's Department are vulnerable to chemical transportation spills because they are located next to Highway 77 and within a mile of the Union Pacific Railroad rail line.

DAM FAILURE

There are two high hazard dams in Dodge County: the Dodge Dam owned by the Village of Dodge and the Hooper Dam owned by the Village of Hooper. If these dams were to fail, they would cause a considerable amount of damage in their neighboring village. There are also two significant hazard dams and several low and minimal hazard dams in the county. One dam of particular concern is Trouble Creek. If it were to fail it would significantly impact areas north of the City of Fremont. There is no history of any of these dams failing.

Figure DGE.5: Dam Locations

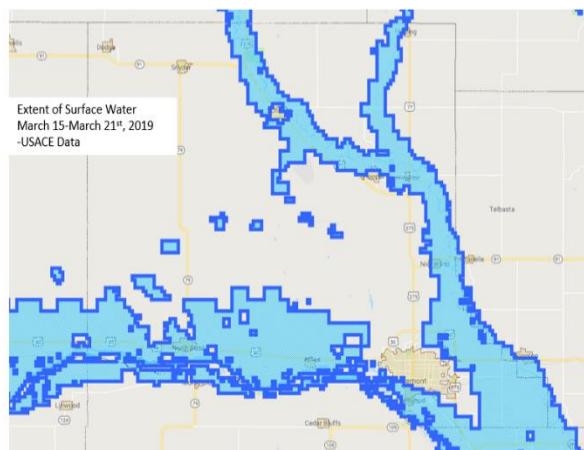


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FLOODING

The March 2019 flooding event was an estimated 500-year flood. Beginning Wednesday, March 13, 2019, a change in the weather temperature, a rainstorm, frozen ground, thick river ice, and high river levels lead to widespread flooding across Dodge County. For five days, multiple roadways and bridges (State and County) were inundated, with many washed out completely. Multiple reports of levees being overtopped and breached were reported. The Platte River, Logan Creek, Maple Creek, Elkhorn River, and Pebble Creek all reached flood stage. The Elkhorn River was forecasted to stay above flood stage until Saturday, March 16 and the Platte River was forecasted to stay above flood stage until Tuesday,

Figure DGE.6: 2019 Flooding, Extent



Source: Dodge County Emergency Management

March 19. During this time first responders and volunteers assisted in evacuating residents while communities sandbagged areas of concern. 20,770 total calls from 23 emergency evacuation notifications were sent out to residents and businesses using the Dodge County Emergency Notification System. By late Wednesday evening residents along Ridge Road and Emerson Estates were evacuated. The Village of Winslow was completely flooded by the Elkhorn River and evacuated the morning of March 14. On Friday, March 15 at 10:15 am water began overtopping the cutoff ditch near Highway 30, threatening northwest Fremont. Flood inundation model maps showed that this water had the potential to damage critical infrastructure including the county's only hospital, the Fremont Airport, and four assisted living facilities. The County Roads department conducted 24-hour flood fighting operations along Highway 30 to slow the flow of water into the area. By 11:15 am on March 15th, all state highways into Fremont were closed. Flood waters damaged agricultural land, unincorporated areas, SIDs, county roads and bridges. The total estimate for damage just to county roads and bridges is over \$19,000,000.

In June of 2016 a flash flood from heavy rains caused low land flooding. Around seven inches fell in the City of Fremont, threatening the county hospital, airport, and severe assisted living facilities as the 2019 flood did. The Cities of Fremont and Scribner were most impacted. Scribner was forced to close its levee gates, shutting off US Highway 275. Fremont saw widespread urban flooding, especially in eastern Fremont. Basements in nearly 1,000 homes flooded in Fremont.

Figure DGE.7: 2016 Flooding, City of Fremont



Source: National Weather Service

Both flash and riverine flooding are a hazard in the county. The Elkhorn, Hooper, Cotterell, Union, Platte, Pebble, and Nickerson Townships are all prone flooding. The Elkhorn Township was once a wet land area.

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The area north of the Platte River and Elkhorn River convergence is also part of the storm water drainage system for the City of Fremont. During the March 2019 flooding, water from the Platte River crossed over old Highway 275, while the Elkhorn River reached Highway 275 east of Fremont. The Hooper Township is located where the bend of Elkhorn River and where the river turns south. This is the location where the Logan Creek Converges with the Elkhorn River including the Village of Winslow that flooded in 2019. The Cotterell Township contains the majority of the North Bend Drainage District ditches and extends to the Platte River. The Union Township is in the southwest portion of the county along Platte River. The Platte Township is just west of Fremont and includes multiple Sanitary Improvement Districts and the low-lying area between the Fremont Cutoff Ditch and West Fremont. The Pebble Township is prone to flooding at the Highway 275 and Highway 91 intersection near the Elkhorn River. This area is a significant stretch (4.5 miles) of bends in the Elkhorn River where ice jams are more likely to occur. The Nickerson Township includes the Village of Nickerson and is located along the Elkhorn river. The Elkhorn River, Platte River, Maple Creek, Pebble Creek, and Logan Creek are most likely to flood. Areas around the Elkhorn River also have poor stormwater drainage.

In response to the March 2019 flood, communities and diking and drainage districts in southern Dodge County along the Platte River formed the Dodge County Joint Water Management Advisory Board. They've partnered together to develop a comprehensive flood risk reduction and mitigation strategy along the Platte River. The Board is currently looking for funding alternatives to develop a Flood Mitigation and Flood Resiliency Plan to identify, evaluate, and prioritize flood mitigation alternatives to improve flood resiliency along the Platte River.

LEVEE FAILURE

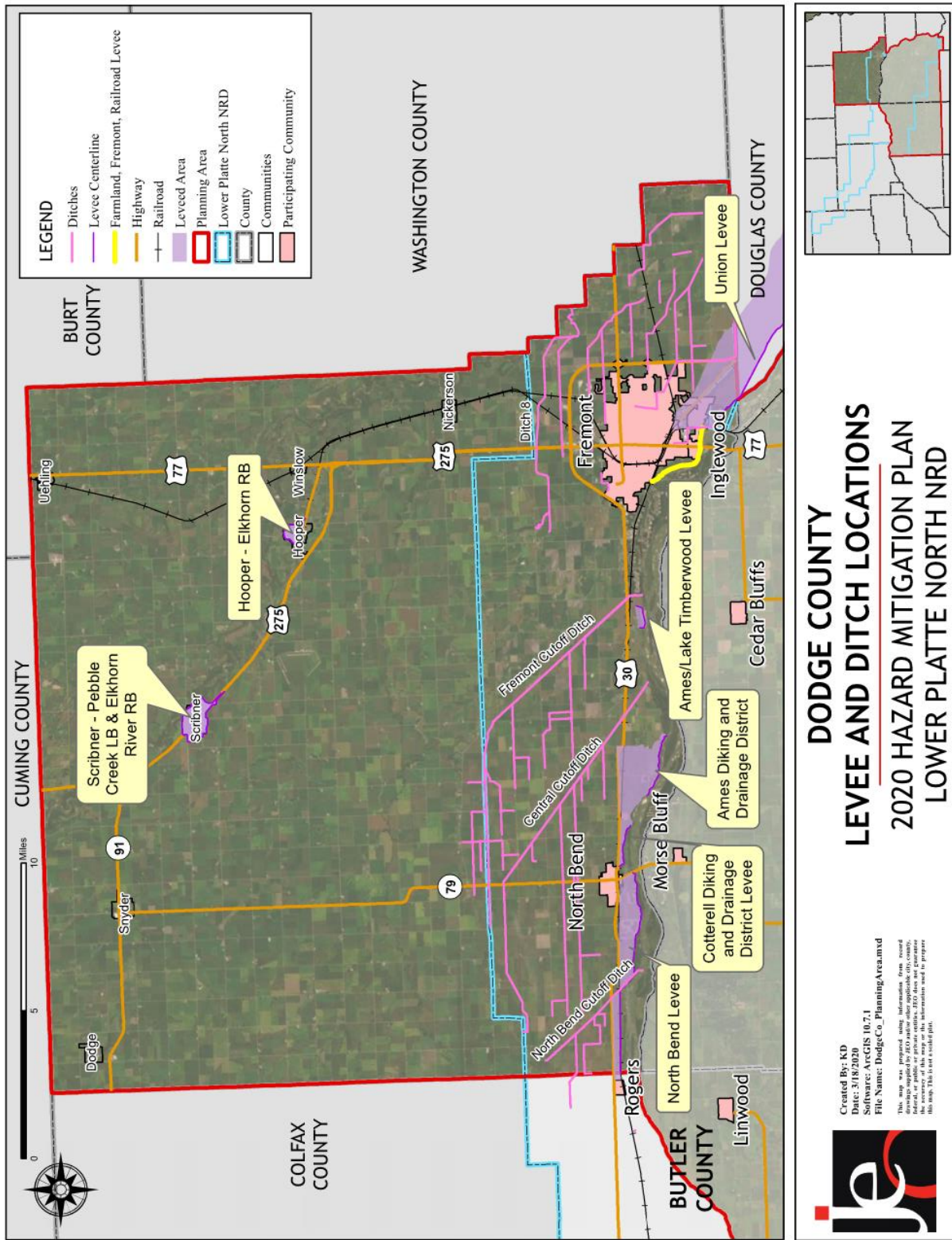
The Ames, Cotterell, and levees around Fremont are of most concern in Dodge County, though there are five other levees and dikes along the Platte River in the county. The Cotterell and Fremont Dikes are not part of the Army Corps of Engineer's PL 84 program. Property and crop damage are the most likely impacts of a failure. Dikes and levees breached in six places in Dodge County during the March 2019 flooding event.

TORNADOES

The most recent significant tornadoes in Dodge County occurred in 2011 and in 2007. Both were EF1 tornadoes. In 2011 nearly \$280,000 property damage occurred in the City of Fremont as the tornado passed through the eastern and northern sections of town. Numerous trees were uprooted or damaged, homes were damaged, power poles were snapped, and a vehicle was flipped. The path was determined to be about six miles long. The 2007 tornado affected Uehling, causing \$300,000 in property damage to homes, the ballpark, trees, and some crop damage. The most significant recorded damage from a tornado (\$500,000) occurred in 1998, when an EF1 tornado destroyed several outbuildings, grain bins, a house, a machine shed, and a hay barn.

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Figure DGE.8: Levee Locations



GOVERNANCE

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

- Clerk
- Assessor
- Treasurer
- Attorney
- Emergency Manager
- Highway Superintendent
- Planning & Zoning
- Sheriff
- County Court
- Surveyor
- Veterans Affairs
- Building Inspector
- Weed Superintendent
- Child Support
- Three Rivers Public Health 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 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 DGE.11: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Planning & Regulatory Capability	Comprehensive Plan	Yes
	Capital Improvements Plan	Yes
	Economic Development Plan	Yes
	Emergency Operational Plan	Yes
	Floodplain Management Plan	Yes
	Storm Water Management Plan	No
	Zoning 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	Yes
	Grant Manager	Yes
	Mutual Aid Agreement	Yes
Other (if any)	Joint Water Management Advisory Board - Member	

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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
	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 (Ex. responsible water use, fire safety, household preparedness, environmental education, etc.)	Yes
	StormReady Certification	No
	Other (if any)	

Table DGE.12: Overall Capability Assessment

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

PLAN INTEGRATION

Dodge County has a comprehensive plan (1998), emergency operations plan (2017), zoning ordinance (1999), building code (2012), capital improvements plan (2020), floodplain regulations (2020), and subdivision regulations (1999). The comprehensive plan, zoning ordinance, floodplain regulations, and subdivision regulations direct development away from the floodplain, limited density in hazardous areas, direct development away from dam inundation areas, direct development away from chemical storage facilities, encourage elevation of structures located in the floodplain, direct development away from major transportation routes, encourage the preservation of open space, identify parks in the floodplain, and prohibit the filling of wetlands. If funds are available, the comprehensive plan, subdivision regulations, and zoning ordinance will be updated in the next one or two years. Dodge County's building code requires structures and mechanical systems in the floodplain to be elevated, encourages the use of fire-resistant building materials, requires sewer backflow valves for structures in the floodplain, encourages the use of hail resistant building materials, and requires onsite water detention for commercial structures. Several communities in Dodge County also participate in the Lower Elkhorn NRD Multi-Jurisdictional Hazard Mitigation Plan which was approved in 2020.

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Projects outlined in the capital improvement plan include; upsizing culverts and drainage structures, upgrading storm sewer systems, improving transportation routes for drainage, replacing bridges with box culverts, burying power lines, constructing a new police headquarters, and improving the existing water treatment facility. County funds to do these projects have decreased over time and are currently very limited. No other examples of plan integration were identified. However, the County 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	ACQUIRE HIGH RISK FLOODING PROPERTY
Description	Voluntary acquisition and demolition of properties prone to flooding will reduce the general threat of flooding for communities. Additionally, this can provide flood insurance benefits to those communities within the NFIP. Repetitive loss structures are typically highest priority
Hazard(s) Addressed	Flooding, levee failure, dam failure
Estimated Cost	Varies by number of properties
Funding	County funds
Timeline	2-5 years
Priority	High
Lead Agency	County Emergency Management, Local Jurisdictions
Status	New action. In process following the March 2019 floods

MITIGATION ACTION	BACKUP RECORDS
Description	Develop protocol for backing up critical records onto a portable storage device or service. Maintain routine backup of records
Hazard(s) Addressed	All hazards
Estimated Cost	Staff Time
Funding	County funds
Timeline	5+ years
Priority	Low
Lead Agency	County Emergency Management
Status	New action. Not started

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	County funds
Timeline	5+ years
Priority	High
Lead Agency	Mutual Aid Association
Status	New action. Not started

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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 in public and private property owners, renters, businesses, and local officials. Educate citizens on water conservation methods, evacuation plans, etc. Develop education program to inform residents of risks related to chemical releases (including direct outreach to residents living in the immediate vicinity of chemical storage sites)
Hazard(s) Addressed	All hazards
Estimated Cost	\$5,000
Funding	Citizen Corp funds, local jurisdiction funds
Timeline	5+ years
Priority	Medium
Lead Agency	County Emergency Management
Status	Education is an ongoing project for county emergency management

MITIGATION ACTION	COMPREHENSIVE DISASTER / EMERGENCY RESPONSE PLAN
Description	Develop and/or update a Comprehensive Disaster and Emergency Response Plan
Hazard(s) Addressed	All hazards
Estimated Cost	\$15,000
Funding	County funds
Timeline	Ongoing
Priority	High
Lead Agency	County Emergency Manager
Status	New action. Ongoing, the local emergency operations plan is updated every five years

MITIGATION ACTION	CONTINUITY PLANNING
Description	Develop continuity plans for critical community services. Develop continuity plans for critical services in order to increase resiliency after a hazardous event. Encourage businesses to develop continuity plans
Hazard(s) Addressed	All hazards
Estimated Cost	\$10,000+
Funding	Homeland Security Grant
Timeline	5+ years
Priority	Medium
Lead Agency	County Emergency Management
Status	New action. Not started

Section Seven: Dodge County Profile

MITIGATION ACTION	DODGE COUNTY PLATTE RIVER COMMUNITIES FLOOD MITIGATION AND RESILIENCY PLAN
Description	Develop a flood mitigation and resiliency plan to holistically look at local flood risks and measures to reduce them from North Bend to Fremont along the Platte River. The plan will include hydrologic and hydraulic analyses to assess the nature of the flood risks and evaluate flood risk reduction improvement projects. Structural and non-structural mitigation may be considered and prioritized. The conceptual flood risk reduction recommendations will serve to provide a path forward towards implementation and a reduction of further damage to structures and critical facilities.
Hazard(s) Addressed	Flooding
Estimated Cost	\$1,000,000
Funding	Water Sustainability Fund, Community Block Grant, HMPG, local budget
Timeline	2-3 years
Priority	High
Lead Agency	Joint Water Advisory Board (Dodge County is a partner on the Board); County Board Chair
Status	Initial planning stage; looking for funding alternatives

MITIGATION ACTION	DRAINAGE STUDY/STORMWATER MASTER PLAN
Description	Preliminary drainage studies and assessments can be conducted to identify and prioritize design improvements to address site specific localized flooding/drainage issues to reduce and/or alleviate flooding. Stormwater master plans can be developed to help identify stormwater problem areas and potential drainage improvements
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	County funds
Timeline	2-5 years
Priority	High
Lead Agency	Joint Water Advisory Board (Dodge County is a partner on the Board); County Board Chair
Status	New action. Initial planning stage; looking for funding alternatives.

MITIGATION ACTION	EMERGENCY EXERCISE: AGRICULTURAL DISEASE OUTBREAK
Description	Conduct an outbreak exercise with producers, emergency managers, veterinarians, extension agents, etc. Identify areas for improvement and become familiar with procedures.
Hazard(s) Addressed	Agricultural animal and plant disease
Estimated Cost	\$5,000+
Funding	Homeland Security Grant
Timeline	1 year
Priority	High
Lead Agency	County Emergency Management
Status	New action. Planning stage.

Section Seven: Dodge County Profile

MITIGATION ACTION		EMERGENCY EXERCISE: FLOODING	
Description		Develop and facilitate an exercise to identify gaps in planning and to ensure that community response plans are sufficient to meet the needs of the jurisdiction	
Hazard(s) Addressed		Flooding	
Estimated Cost		\$5,000+	
Funding		County funds	
Timeline		2-5 years	
Priority		Medium	
Lead Agency		County Emergency Management	
Status		New action. Not started	

MITIGATION ACTION		EMERGENCY EXERCISE: HAZARDOUS SPILL	
Description		Utilize exercise to prepare for potential explosions or hazardous spills. Ensure that nearby businesses and residents have appropriate plans in place	
Hazard(s) Addressed		Chemical spills (transportation), chemical spills (fixed site)	
Estimated Cost		\$5,000+	
Funding		County funds	
Timeline		2-5 years	
Priority		Medium	
Lead Agency		Local Emergency Planning Committee	
Status		New action. Not started	

MITIGATION ACTION		EMERGENCY EXERCISE: LEVEE FAILURE	
Description		Conduct tabletop exercises to determine the response scenarios in the event of levee failure	
Hazard(s) Addressed		Levee failure	
Estimated Cost		\$5,000+	
Funding		County funds	
Timeline		2-5 years	
Priority		Medium	
Lead Agency		County Emergency Management	
Status		New action. Not started	

MITIGATION ACTION		FIRST AID TRAINING	
Description		Promote first aid training for all residents and staff	
Hazard(s) Addressed		All hazards	
Estimated Cost		\$100 per person	
Funding		County funds	
Timeline		Ongoing	
Priority		High	
Lead Agency		County Emergency Management	
Status		New action. Ongoing, training is available to residents and staff	

Section Seven: Dodge County Profile

MITIGATION ACTION		FLOODPLAIN MANAGEMENT	
Description		Develop and pass more restrictive floodplain regulations. Enhancements may include: limiting types of development within the floodplain, redefining substantial loss for impacted homes, and increasing the free-board requirement to more than one foot above base flood elevation. Strict enforcement of the type of development and elevations of structures should be considered through issuance of building permits by any community or county	
Hazard(s) Addressed		Flooding	
Estimated Cost		Staff Time	
Funding		County funds	
Timeline		1 year	
Priority		High	
Lead Agency		Floodplain Administrator, Planning Commission	
Status		New action. In process, a new floodplain ordinance will be completed by the end of 2020	

MITIGATION ACTION		FLOODPRONE PROPERTY MITIGATION	
Description		Decrease the number of structures in the floodplain or at risk to flooding by raising structures or filling in basements.	
Hazard(s) Addressed		Flooding, levee failure, dam failure	
Estimated Cost		Varies by number of properties	
Funding		County funds	
Timeline		2-5 years	
Priority		High	
Lead Agency		County Emergency Management, Local Jurisdictions	
Status		Grant application under development for elevation or basement fill for properties flooded in 2019.	

MITIGATION ACTION		IMPROVE FLOOD AND DAM FAILURE WARNING SYSTEM	
Description		Evaluate current flood/water level alert and dam failure warning alert system. Update equipment and ensure it is in a secure location and install additional gages as needed. Increase inspection frequency and rigor of dams. The county would like a river gauge to monitor water flow.	
Hazard(s) Addressed		Flooding, dam failure	
Estimated Cost		Varies	
Funding		County funds	
Timeline		2-5 years	
Priority		High	
Lead Agency		County Emergency Management	
Status		New action. In process, currently looking for funding.	

Section Seven: Dodge County Profile

MITIGATION ACTION		LEEVE FAILURE EVACUATION PLAN
Description	Work with community officials to develop and/or update evacuation plans if a levee were to fail	
Hazard(s) Addressed	Levee failure	
Estimated Cost	\$10,000+	
Funding	County funds	
Timeline	2-5 years	
Priority	High	
Lead Agency	County Emergency Management	
Status	New action. Not started	

MITIGATION ACTION		LEEVE/FLOODWALL CONSTRUCTION AND/OR IMPROVEMENTS
Description	Levees and floodwalls serve to provide flood protection to businesses and residents during large storm events. Improvements to existing levees and floodwalls will increase flood protection. If possible, the structure should be designed to FEMA standards to provide 1-percent flood protection providing additional flood insurance benefits	
Hazard(s) Addressed	Levee failure, flooding	
Estimated Cost	Varies	
Funding	County funds	
Timeline	5+ years	
Priority	High	
Lead Agency	Joint Water Agency Board	
Status	New action. Not started	

MITIGATION ACTION		MUTUAL AID
Description	Establish mutual aid agreements with neighboring jurisdictions or through the Waster/Wastewater Agency Response Network (WARN) Program	
Hazard(s) Addressed	All hazards	
Estimated Cost	Staff Time	
Funding	County funds	
Timeline	2-5 years	
Priority	High	
Lead Agency	County Emergency Management	
Status	New action. In process, mutual aid agreements established during 2019 flood event	

Section Seven: Dodge County Profile

MITIGATION ACTION		PROVIDE SHORT TERM RESIDENCY SHELTERS
Description	Identify and designate short term shelters for rural residents (These structures do not serve as FEMA approved safe rooms and is not intended for long-term recovery, such as displacement from floods, fires, etc.)	
Hazard(s) Addressed	All hazards	
Estimated Cost	Varies	
Funding	County funds	
Timeline	2-5 years	
Priority	Medium	
Lead Agency	County Emergency Management	
Status	New action. In process, shelters are currently being identified	

MITIGATION ACTION		SAFE ROOMS AND STORM SHELTERS
Description	Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, school, and other areas	
Hazard(s) Addressed	Tornadoes, high winds, severe thunderstorms	
Estimated Cost	\$350+ per square foot	
Funding	County funds	
Timeline	5+ years	
Priority	Low	
Lead Agency	County Emergency Management	
Status	New action. Not started	

MITIGATION ACTION		SHELTER IN PLACE
Description	Provide shelter in place training to facilities housing vulnerable populations (nursing homes, childcare facilities, schools, etc.)	
Hazard(s) Addressed	Chemical spills (transportation), chemical spills (fixed site)	
Estimated Cost	\$100 per person	
Funding	County funds	
Timeline	2-5 years	
Priority	High	
Lead Agency	Local Emergency Planning Committee	
Status	New action. Not started	

Section Seven: Dodge County Profile

MITIGATION ACTION	STORMWATER SYSTEM IMPROVEMENTS
Description	Make improvements to roadways and drainage ways to prevent damage to key transportation routes. Utilize geosynthetic products for repair and mitigation of damages. Consider covering of road washouts, culvert sizing headwalls, steep banks, slides, in-road springs, roadway edge armoring, low water crossings, pothole grading, weak foundations, gravel road maintenance, ditch linings, on steep grades, erosion protection, etc. Fix issues following the 2019 flooding
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	County funds
Timeline	5+ years
Priority	High
Lead Agency	Highway Department
Status	New action. In process, the county received funding from the FEMA 406 program

MITIGATION ACTION	STREAM BANK STABILIZATION/GRADE CONTROL STRUCTURES/CHANNEL IMPROVEMENTS
Description	Stabilization improvements including rip rap, vegetative cover, j-hooks, and boulder vanes can be implemented to reestablish channel banks. Channel stabilization can protect structures, increase conveyance, and provide flooding benefits
Hazard(s) Addressed	Flooding
Estimated Cost	\$2,000,000
Funding	Various
Timeline	5+ years
Priority	High
Lead Agency	Join Water Management Advisory Board
Status	Bank stabilization projects will focus on the Platte River and the southern Elkhorn River near the Elkhorn Township. The Joint Water Management Advisory Board is currently seeking funds to develop a flood mitigation and resiliency plan that will include and prioritize projects like this

MITIGATION ACTION	TORNADO SAFETY
Description	Implement a tornado safety program
Hazard(s) Addressed	Tornadoes
Estimated Cost	\$3,000+
Funding	County funds
Timeline	2-5 years
Priority	High
Lead Agency	County Emergency Management
Status	New action. Not started

Section Seven: Dodge County Profile

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		County funds	
Timeline		2-5 years	
Priority		High	
Lead Agency		Planning and Zoning	
Status		New action. Not started	

MITIGATION ACTION		UPDATE ZONING REGULATIONS	
Description		Update zoning regulations to include new amendments and rezoning and to incorporate new airport regulations	
Hazard(s) Addressed		Flooding	
Estimated Cost		\$500	
Funding		County funds	
Timeline		5+ years	
Priority		High	
Lead Agency		County Planning and Zoning Department	
Status		Zoning regulations need to be reviewed as they have not been updated since 2000	

COMMUNITY PROFILE

CITY OF FREMONT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table FMT.1: City of Fremont Local Planning Team

NAME	TITLE	JURISDICTION
Brian Newton	City Administrator	City of Fremont
Dave Goedeken	City Engineer	City of Fremont
Don Simon	Chief Building Inspector/Floodplain Administration	City of Fremont
Jennifer Dam	Director of Planning	City of Fremont
Lottie Mitchell	Executive Assistant	City of Fremont
Veronica Trujillo	Engineer	City of Fremont

LOCATION AND GEOGRAPHY

The City of Fremont is in the southeastern portion of Dodge County (on the border with Saunders County) and covers an area of 10.48 square miles. Fremont is located in the Platte River Valley. The rural areas surrounding the city are used primarily for row crop production and pasturing. The Elkhorn River travels north to south about three miles from the eastern edge of the city. Fremont lies immediately adjacent to the Platte River Valley, which flows generally from northwest to the southeast to form the community’s southwestern border.

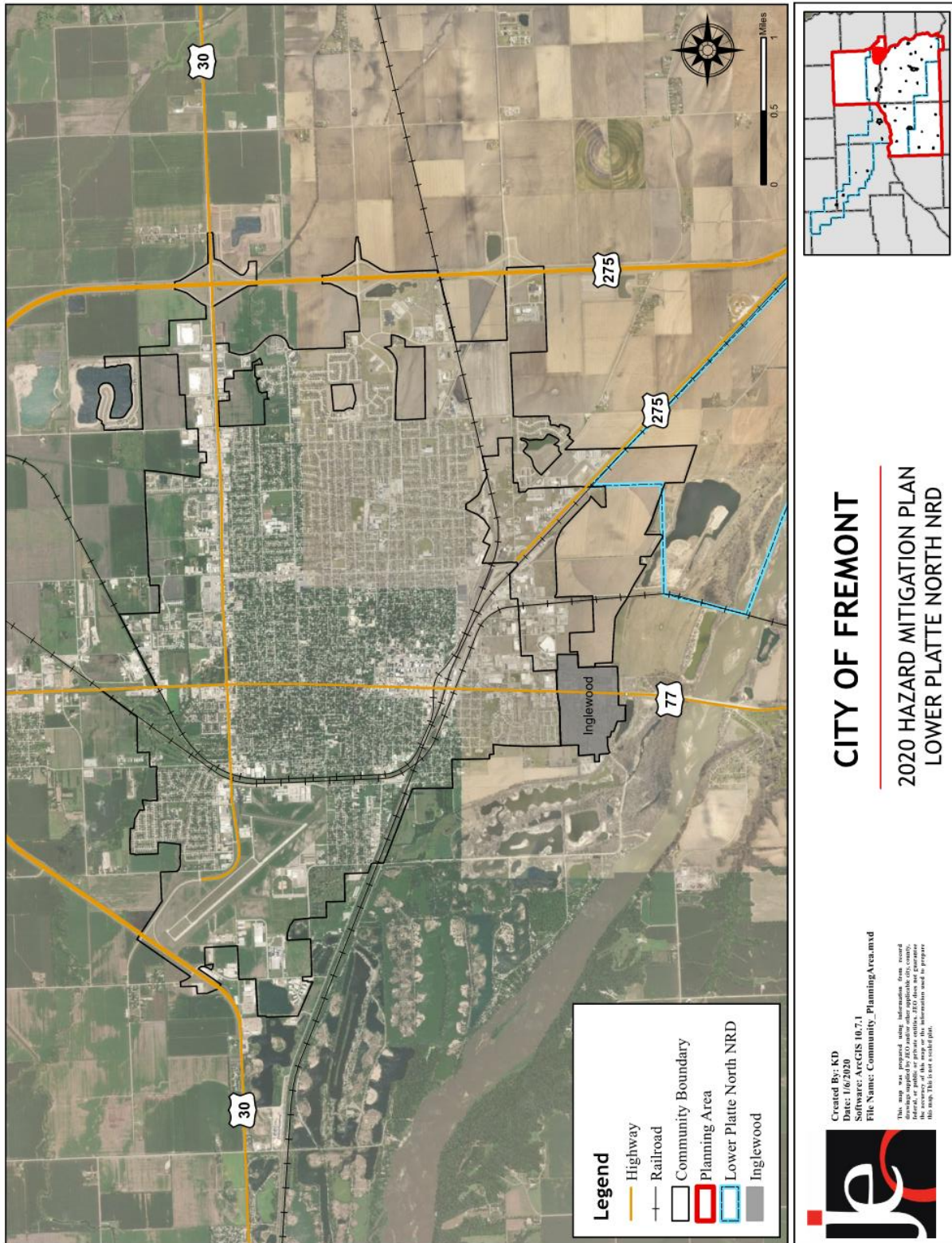
TRANSPORTATION

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. Fremont’s major transportation corridors include US Highways 30, 77 and 275. US Highway 30 transports a total annual average of 10,370 vehicles daily from east to west on its busiest segment, 1,375 of which are trucks. US Highway 77 runs north to south through the center of Fremont and is traveled by a total annual average of 12,880 vehicles daily at its highest traffic segment, 785 of which are trucks. US Highway 275 runs north to south on the eastern side of Fremont; it is traveled by a total annual average of 16,380 vehicles daily, 1,605 of which are trucks.⁸ A number of railroads wind through Fremont, owned by Union Pacific Railroad, Burlington Northern Santa Fe Railway, and Fremont & Elkhorn Valley Railroad. The Fremont Municipal Airport is home to 50 aircraft and a local chapter of the Civil Air Patrol. The airport is located on the northwestern edge of the city. It can accommodate aircraft up to the size of corporate jets.

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

Section Seven: City of Fremont Community Profile

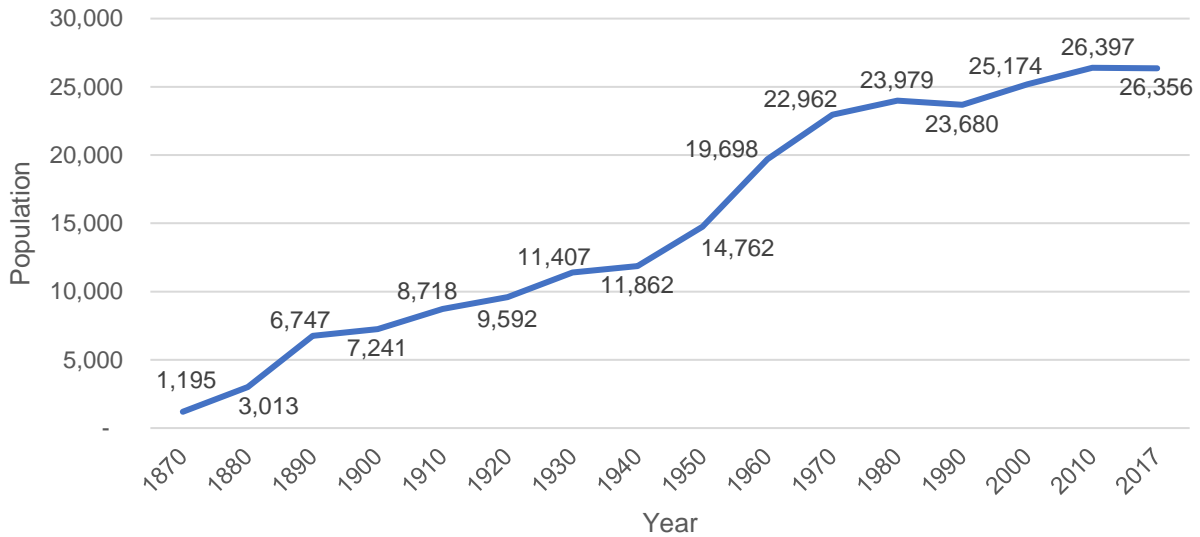
Figure FMT.1: City of Fremont



DEMOGRAPHICS

Fremont’s population slightly declined from 26,397 people in 2010 to about 26,356 people in 2017, though the population is generally increasing. An increasing population will provide a steady tax base to fund mitigation projects. The city’s population accounted for 71.7% of Dodge County’s population in 2017.⁹

Figure FMT.2: Population



Source: U.S. Census Bureau, 1870 - 2017

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

- **Similarly aged.** The median age of Fremont was 37 years old in 2017, compared with Dodge County’s median of 39.1 years. The population has been consistent since 2010, when the median age was 37.1 years old.²
- **More ethnically diverse.** Since 2010, Fremont grew more ethnically diverse. In 2010, 10.6% of Fremont’s population was Hispanic or Latino. By 2017, about 14.6% was Hispanic or Latino. During that time, the Hispanic population in the county grew from 8.7% in 2010 to 11.8% in 2017.²
- **More likely to be below the federal poverty line.** The poverty rate in Fremont (14.5% of people living below the federal poverty line) was higher than the county’s poverty rate (13.2%) in 2017.¹⁰

9 United States Census Bureau. “2017 American Fact Finder: DP05: ACS Demographic and Housing Estimates.” [database file]. <https://factfinder.census.gov/>.

10 United States Census Bureau. “2017 American Fact Finder: DP03: Selected Economic Characteristics.” [database file]. <https://factfinder.census.gov/>.

Section Seven: City of Fremont Community Profile

EMPLOYMENT AND ECONOMICS

The City of Fremont's economic base is a mixture of industries. In comparison to Dodge County, Fremont'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.** Fremont's per capita income in 2017 (\$24,743) was about \$2,419 lower than the county (\$27,162).³
- **Fewer long-distance commuters.** About 59.8% of workers in Fremont commuted for fewer than 15 minutes, compared with about 54.4% of workers in Dodge County. About 19.8% of workers in the city commuted 30 minutes or more to work, compared to about 22.9% of county workers.¹¹

MAJOR EMPLOYERS

Fremont's top three major employers include Wholstone Farms, Methodist Fremont Health, and Fremont Public Schools. About 3,000 residents commute to Omaha daily for work.

HOUSING

In comparison to Dodge County, Fremont's housing stock was:¹²

- **Similarly aged.** Fremont had a similar share of housing built prior to 1970 than the county (58.6% compared to 58.5%).
- **Less mobile and manufactured housing.** Fremont had a smaller share of mobile and manufactured housing (3.6%) compared to the county (5.0%). However, there are three mobile home parks located in the community, which are: Regency II Mobile Home Park, Meadowbrook Mobile Home Park, and Westlake Mobile Home Park.
- **More renter-occupied.** About 41.7% of occupied housing units in Fremont were renter-occupied compared with 36.1% of occupied housing in Dodge County.
- **Slightly more occupied.** Approximately 7.2% of Fremont's housing units were vacant compared to 9.6% of units in Dodge 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.

11 United States Census Bureau. "2017 American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. <https://factfinder.census.gov/>.

12 United States Census Bureau. "2017 American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov/>.

FUTURE DEVELOPMENT TRENDS

In the last five years, two new housing developments were completed. Developers are required to follow floodplain regulations when subdividing and getting a building permit. Lincoln Premium Poultry production plant opened in 2019, the RTG building is expanding, Hormel is constructing a stand-alone wastewater treatment plant, and the pork processing plant is expanding. The city is currently working on ADA compliance on all city owned buildings and the city auditorium is being remodeled. In the next five years, new housing developments are planned, the library will be remodeled, and a new law enforcement center will be built.

PARCEL IMPROVEMENTS AND VALUATION

The planning team acquired GIS parcel data from the County Assessor to analyze the location, number, and value of property improvements (e.g. buildings, 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 FMT.2: Parcel Improvements and Value in the Floodplain

NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	PERCENTAGE OF IMPROVEMENTS IN 1% FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN
9,470	\$1,249,897,513	1,423	15.0%	\$175,432,319

Source: GIS Workshop/Dodge County Assessor, 2019¹³

¹³ GIS Workshop/Dodge 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 48 fixed hazardous chemical storage sites within two miles of the city. The following table lists these sites. CF Industries in the north part of Fremont is the biggest site of concern for the city because they store large amounts of anhydrous ammonia. The Fremont Fire Department has the appropriate training and equipment to respond to chemical spills.

Table FMT.3: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	IN FLOODPLAIN (YES/NO)
3M Co	515 S Main St	Yes
Adams Oil Inc	1500 Front St	Yes
All Metals Market Inc	1225 County Road Y	No
Alliance Liquid Feeds LLC	350 E County Road T	Yes
AmeriCold Logistics LLC	950 Schneider St	Yes
Archer Daniels Midland Co	130 N Broad St	Yes
Ardent Mills LLC	125 S Broad St	Yes
Arps Red-E-Mix Inc	250 W Vine St	Yes
C F Industries Sales LLC	1949 County Rd S	Yes
CenturyLink	510 N D St	Yes
CRD Inc Transfer Station	1200 Hamilton St	Yes
Fremont Beef Company	960 Schneider St	Yes
Fremont Municipal Airport	1203 W 23rd St	Yes
Fremont Peak Shaving Plant	401 N Pierce	Yes
Fremont Potable Water Trtmnt	649 S Luther Rd	Yes
Fremont Warehouse & Garage	3000 E 1st St	Yes
Fremont Wastewater Treatment	6325 Morningside Rd	Yes
Fremont Water Pumping Station	1410 N Irving St	Yes
Fremont Water Pumping Station	837 N Clarkson St	Yes
Fremont Water Pumping Station	1818 N I St	Yes
Fremont Water Pumping Station	1129 E 8th St	Yes
Gerhold Concrete Co	3300 N Broad St	Yes
Helena Agri-Enterprises LLC	1880 Proctor Rd	Yes
Holcim US Inc	3350 N Broad St	Yes
Horizon Biofuels Inc Pellets	950 S Union St	Yes
Interstate Chemical Company	327 E County Road T	Yes
Jayhawk Boxes Inc	1150 S Union St	Yes
Lextron Animal Health	1577 N Airport Rd	Yes
Lon D Wright Power Plant	2701 E 1st St	Yes
Loveland Products Inc	325 S Union St	Yes
Lyman-Richey Sand & Gravel 45	4204 N Luther Rd	Yes
Magnus Division of LV Ventures	1300 Morningside Rd	Yes
Materials Packaging Corp	3300 N Broad St	Yes
Methodist Fremont Health	450 E 23rd St	Yes
NDOT Fremont Yard	2550 W 23rd Rd	Yes
Nutrien Ag Solutions	750 S Union St	Yes
OPPD Substation No 991	County Rd 26 & U Blvd	No

Section Seven: City of Fremont Community Profile

FACILITY NAME	ADDRESS	IN FLOODPLAIN (YES/NO)
Peets Feeds	787 County Road T	Yes
Provimi North America Inc	943 Schneider St	Yes
Rawhide Chemoil Inc	3630 N Ridge Rd Dr	Yes
Rawhide Chemoil Inc	1146 Proctor Rd	Yes
Rawhide Chemoil Inc North	2650 Rawhide Dr	Yes
Royal Canin USA Inc	2779 Rademakers Way	Yes
Sapp Bros	4260 N Broad St	Yes
Substation No 976	3741 N Somers Ave	Yes
The Oilgear Company	905 S Downing St	Yes
Titan Machinery Inc	3701 W Highway 30	Yes
WholeStone Farms Cooperative	900 S Platte Ave	Yes

Source: Nebraska Department of Environment and Energy, 2019¹⁴

CRITICAL FACILITIES

The planning team identified critical facilities necessary for the City of Fremont'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 FMT.4: Critical Facilities

CF NUMBER	NAME	RED CROSS SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Bell Field Elementary School	No	Yes	Yes (0.2%)
2	Bergan Catholic School	No	No	Yes (0.2%)
3	Bergan Elementary School	No	No	Yes (0.2%)
4	City Well #1	No	No*	Yes (0.2%)
5	City Well #2	No	No*	Yes (0.2%)
6	City Well #3	No	No*	Yes (0.2%)
7	City Well #4	No	No*	Yes (0.2%)
8	City Well #5	No	No*	Yes (Floodway)
9	City Well Field	No	No*	Yes (0.2%)
10	Clarmar Elementary School	No	Yes	Yes (0.2%)
11	Combustion Turbine	No	Yes	Yes (0.2%)
12	Fire Department	No	Yes	Yes (0.2%)
13	Fremont Area Medical Center	No	Yes	Yes (0.2%)
14	Fremont High School	No	No	Yes (0.2%)
15	Fremont Middle School	Yes	Yes	Yes (0.2%)
16	Fremont Municipal Auditorium	No	No	Yes (0.2%)
17	Fremont Public Schools - Administration	No	No	Yes (0.2%)
18	Grant Elementary School	No	Yes	Yes (0.2%)
19	Howard Elementary School	No	Yes	Yes (0.2%)

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

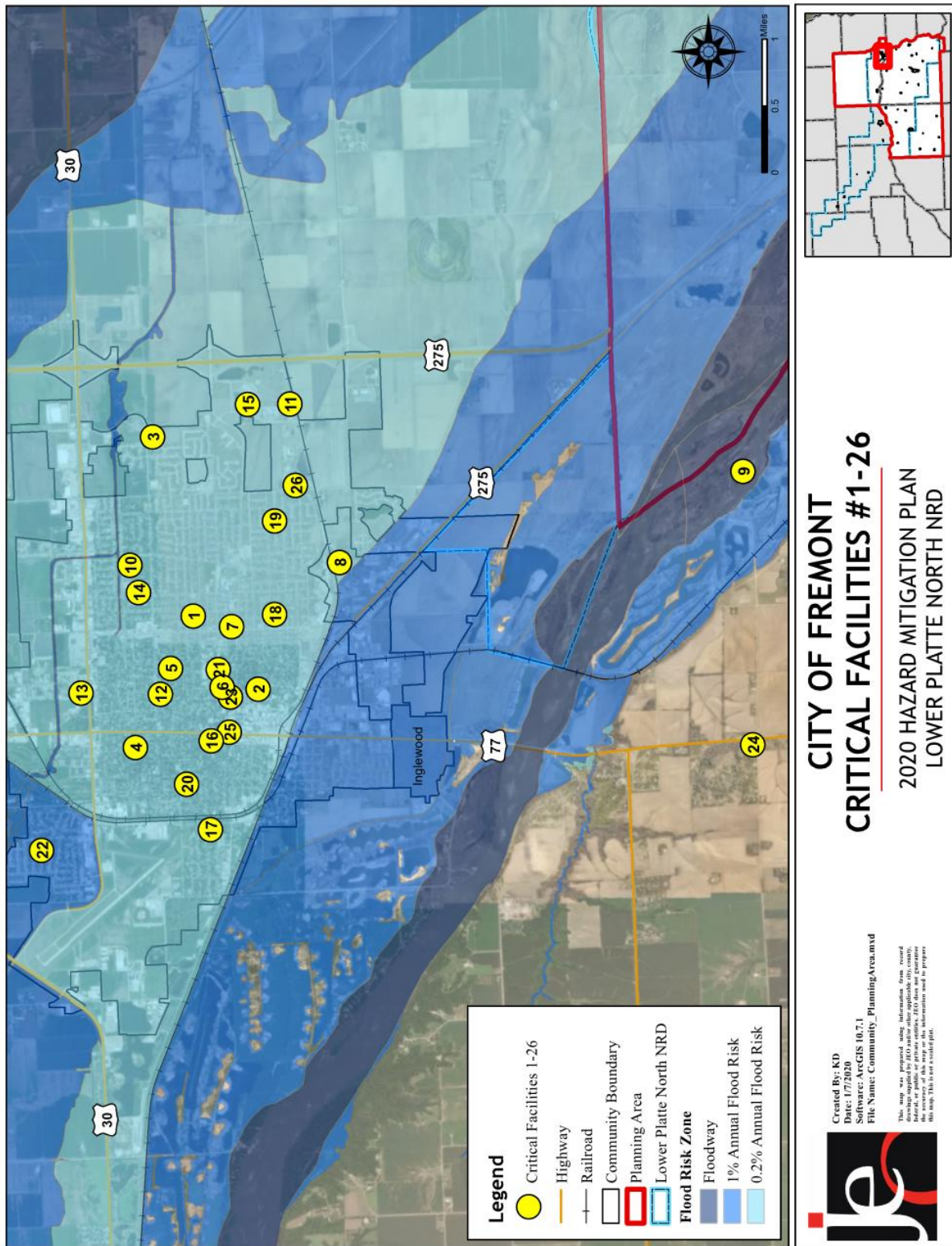
Section Seven: City of Fremont Community Profile

CF NUMBER	NAME	RED CROSS SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
20	Linden Elementary School	No	Yes	Yes (0.2%)
21	Midland Lutheran College	No	No	Yes (0.2%)
22	Miliken Elementary School	No	Yes	Yes (1%)
23	Municipal Building	No	Yes	Yes (0.2%)
24	Platteville Elementary School	No	No	No
25	Police Department	No	Yes	Yes (0.2%)
26	Power Plant	No	Yes	Yes (0.2%)
27	Sewer Lift Station #1	No	No*	Yes (0.2%)
28	Sewer Lift Station #2	No	No*	Yes (1%)
29	Sewer Lift Station #3	No	No*	Yes (1%)
30	Sewer Lift Station #4	No	No*	Yes (1%)
31	Sewer Lift Station #5	No	No*	Yes (1%)
32	Sewer Lift Station #6	No	No*	Yes (0.2%)
33	Sewer Lift Station #7	No	No*	Yes (0.2%)
34	Sewer Lift Station #8	No	No*	Yes (1%)
35	Sewer Lift Station #9	No	No*	Yes (1%)
36	Sewer Lift Station #10	No	No*	Yes (0.2%)
37	Sewer Lift Station #11	No	No*	Yes (0.2%)
38	Sewer Lift Station #13	No	No*	Yes (0.2%)
39	Sewer Lift Station #14	No	No*	Yes (0.2%)
40	Sewer Lift Station #15	No	No*	Yes (1%)
41	Sewer Lift Station #16	No	No*	Yes (0.2%)
42	Sewer Lift Station #17	No	No*	Yes (0.2%)
43	Sewer Lift Station #18	No	No*	Yes (1%)
44	Sewer Lift Station #19	No	No*	Yes (1%)
45	Sewer Lift Station #20	No	No*	Yes (0.2%)
46	Sewer Lift Station #21	No	No*	Yes (0.2%)
47	Sewer Lift Station #22	No	No*	Yes (1%)
48	Sewer Lift Station #24	No	No*	Yes (0.2%)
49	Trinity Lutheran Elementary School	Yes	No	Yes (0.2%)
50	Trinity Lutheran Elementary School West	Yes	No	Yes (0.2%)
51	Utility Service Center	No	Yes	Yes (0.2%)
52	Washington Elementary School	No	Yes	Yes (1%)
53	Wastewater Treatment Plant	No	Yes	Yes (0.2%)
54	Water Treatment Facility	No	Yes	Yes (0.2%)

*Indicates hookups to portable generator available

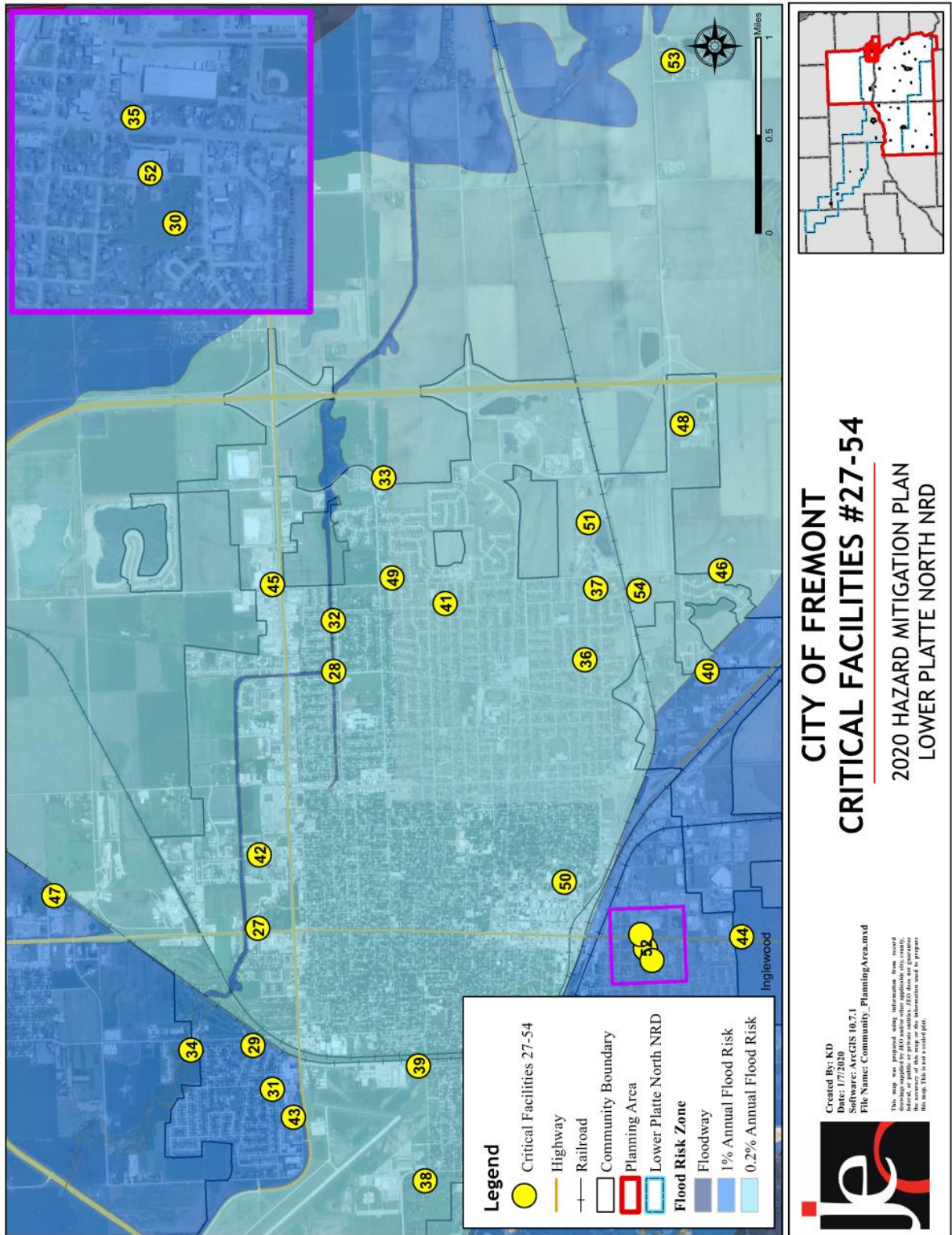
Section Seven: City of Fremont Community Profile

Figure FMT.4: Critical Facilities #1-26



Section Seven: City of Fremont Community Profile

Figure FMT.5: Critical Facilities #27-54



Section Seven: City of Fremont Community Profile

HISTORICAL OCCURRENCES

See the Dodge 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 TRANSPORTATION SPILLS

The rail line is the transportation route of most concern in the community because of the large volume of chemicals it transports, including fracking oil and coal. In 2019 a train derailment between the Village of Valley and Fremont left coal all along the train tracks. The rail line travels close to Highway 30, a main thoroughfare for the city, so a transportation incident on the rail line could interrupt vehicular traffic flow on this important highway. Anhydrous Ammonia pipelines running from Sioux City to the City of Blair to Fremont are also a concern. In 2016 a man died while driving through an anhydrous ammonia fume cloud that had escaped from an aging pipeline just north of the City of Blair. About 40 people were evacuated from their homes because of this spill and Highway 75 was closed for several days. Much of this pipeline was built in the 1960s.

FLOODING

The 2008 Flood Insurance Study (FIS) for Dodge County and Fremont states that most floods along the Platte River occur from March to June. They are usually the result of rapid snowmelt accompanied by rainfall, aggravated by ice jams. Historical incidents have demonstrated that when ice jams are present, river stages sufficiently high enough to overtop existing levees like the Fremont Levee can occur even with river flows of less than the 1% annual chance flood. Future flooding from the Platte River due to ice blockage is highly probably, but also highly unpredictable as to the precise location of ice blockage and the resulting severity of flooding. It should be assumed that ice jams may form anywhere along the Platte river and where ice jams do occur, stages may be sufficiently high enough to cause levee failure.

Fremont has longstanding drainage issues in the city because of its flat terrain. Especially south of the junction, near Rawhide Creek, in the Washington Heights housing subdivision, and on 19th Street near the high school. This issue was exacerbated during the March 2019 flood event when heavy rains combined with a frozen ground created excessive stormwater that funneled to the Platte River, Elkhorn River, and Rawhide Creek. These waterways were also logged with ice that the additional water turned to ice jams. Flash flooding from heavy rains combined with poor stormwater drainage, riverine flooding, and levee failures flooded all transportation routes in and out of the city. Flooding also threatened the hospital and YMCA, requiring massive amounts of pumping to hold back the water. Fremont was an island from March 16th to March 20th. The National Guard escorted semi-trucks of food into the city when supplies began to run low. Highway 77 was clear of water after a few days, but Highway 30 east of Fremont was closed for months, causing economic impacts as workers struggled to commute to work in and out of the city. The well fields were also flooded, though the wells were not affected because they had been elevated

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to mitigate flood damage. The power plant was also unharmed even though it is in the floodplain. Evacuations were called for in Davenport, Deerfield, and south of the railroad junction. The Platte River had previously flooded in June 2016. It rose six to seven inches, flooding basements across the city and inundating the sewer plant because the stormwater and sewer systems were overloaded with water.

Additional flood history was collected from the NCEI database:

- **July 5, 2000 – Flash Flood:** Heavy rainfall of 4 to 6 inches caused extensive flooding from North Bend to the Fremont area.
- **March 8-10, 2010 – Flood:** An ice jam around the North Bend area caused flooding of agricultural lowlands from North Bend to around Fremont. In addition, several homes were threatened by the flood waters, and a few county roads were flooded. Some water damage was likely noted due to rising groundwater or backing up of sewers. The ice jam broke loose on March 10th, which caused additional jamming and flooding around the Big Island area near Fremont. Six to ten people had to be evacuated by boat from the rising waters. Property damage was estimated at \$75,000.
- **February 18, 2011 – Flood:** An ice jam near the Highway 77 bridge caused flooding that closed Ridge Road for a while, just southwest of Fremont. Damage was minimal.
- **August 6, 2013 – Flood:** Rainfall from heavy thunderstorms created areas of street flooding across the city. A thunderstorm dropped about 1.80 inches in less than an hour followed by a second storm less than an hour later. This second storm dropped about 0.5 inch in less than an hour. Many intersections in town were under water.

In response to the March 2019 flood, the City initiated several actions to reduce flood risk to the community. First, they partnered with several communities and districts to form the Joint Water Management Advisory Board, which is a group of communities and drainage districts along the Platte River in Dodge County. They've partnered together to develop a comprehensive flood risk reduction and mitigation strategy along the Platte River. The Board is currently looking for funding alternatives to develop a Flood Mitigation and Flood Resiliency Plan to identify, evaluate, and prioritize flood mitigation alternatives to improve flood resiliency along the Platte River.

Second, the City is submitting a HMGP grant to fund property elevation projects for homeowners impacted during the March floods. In coordination with this effort, a parcel-level flood risk assessment and flood risk reduction plan were completed as a part of this HMP update (*Appendix F*). The overall purpose of this assessment and resulting plan is to identify and prioritize flood risk reduction alternatives on a property by property basis for selected structures in the SFHA. The plan also identifies programmatic actions that can be taken by the community to reduce flood risks and insurance costs for all property owners with floodprone property.

As indicated in Table FMT.2, 15 percent of parcel improvements are located in the 1 percent annual chance floodplain; however, when including the 0.2% annual chance floodplain, all of Fremont is located in a flood hazard area. Fremont has 679 NFIP policies in-force for \$117,943,300. There are four single family repetitive loss and three single family severe repetitive loss properties in the community, according to NeDNR (November 2019).

LEVEE FAILURE

Ice jams that occurred during the March 2019 floods resulted in a series of levee failures along the Platte River. The location of these breaches, as outlined by the Joint Water Management

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Advisory Board, are shown in Figure 7. The shredded bark on trees near the river indicated that the water rose ten feet in places. The farm levee north of the city was overtopped and destroyed and the levee south of the city failed in three places. Emergency protection measures were coordinated on Highway 30, 275, 277, and on Rawhide Creek. Levee failures were a major contributing factor to catastrophic flooding in and around the city. The Hormel Park boat ramp was lost to the flooding and the northern bank of the Platte River along the city was sheared off by the flood waters. Additionally, the levee at the Rod and Gun Club lake community west of Fremont was breached and will be repaired by fall of 2020.

SEVERE THUNDERSTORMS

A hailstorm in 2008 caused extensive damage with hail 1.75 inches in diameter. So many properties were damaged that building materials and contractors were scarce leading to delayed repairs. No significant damage would occur should the power plant be hit by lightning. Brief power outages have occurred in the city but there is a good amount of power redundancies to protect the power infrastructure. Municipal records are protected with surge protectors on electronic devices.

SEVERE WINTER STORMS

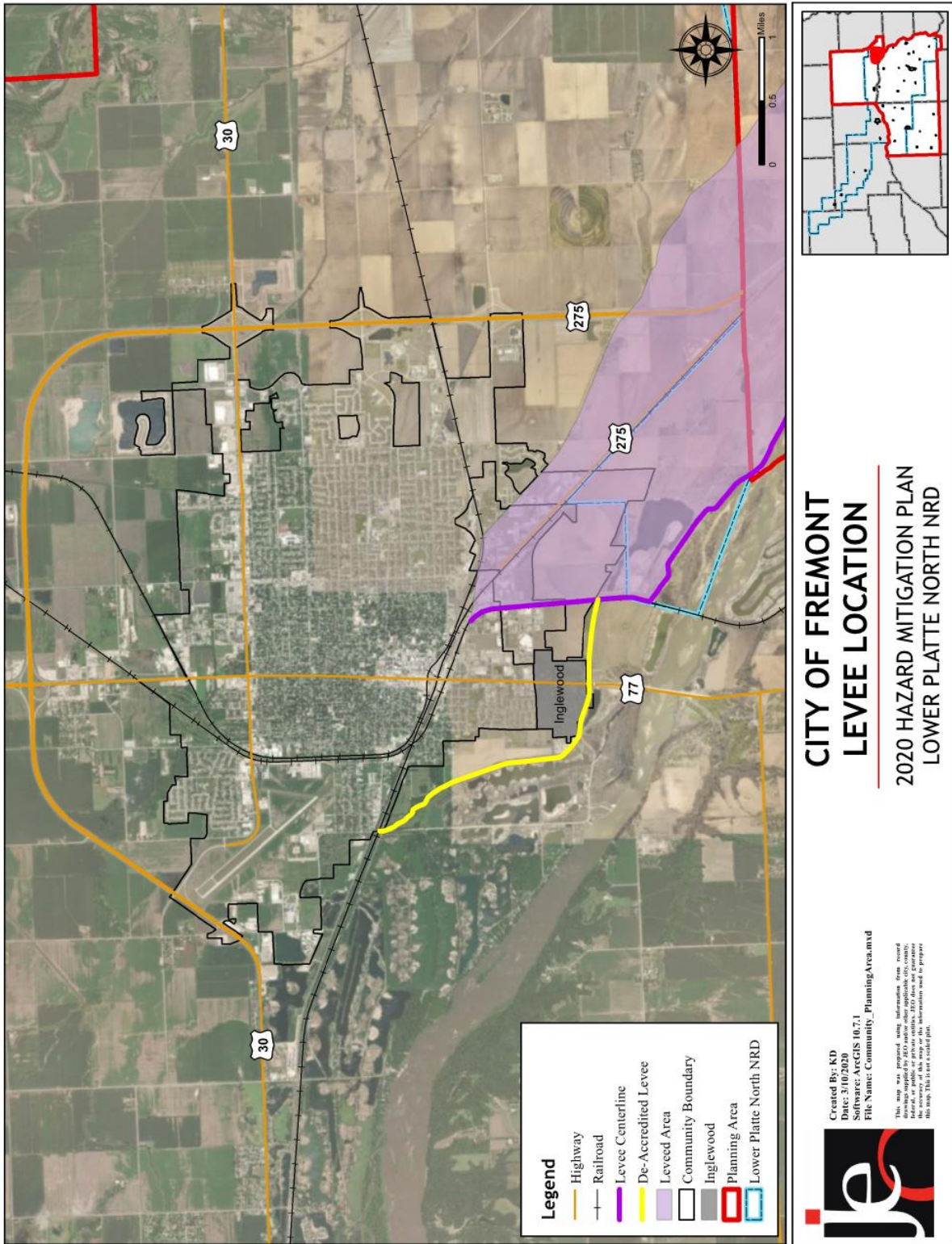
Fremont experiences annual severe snow and ice storms. Recently, a blizzard in 2016 left ten inches of snow on the ground. Severe winter storms are a concern because of power outages and road closures. Snow removal is done by the Street Department.

TORNADOES

A high wind event in June 2017 caused significant tree damage across a one-mile wide area. A tree dump was opened specifically to accommodate the large number of trees and limbs downed during this event. A tornado in 2014 passed from Midland University then the high school but caused little damage. In case of a disaster, Mutual Aid Agreements are in place with surrounding communities.

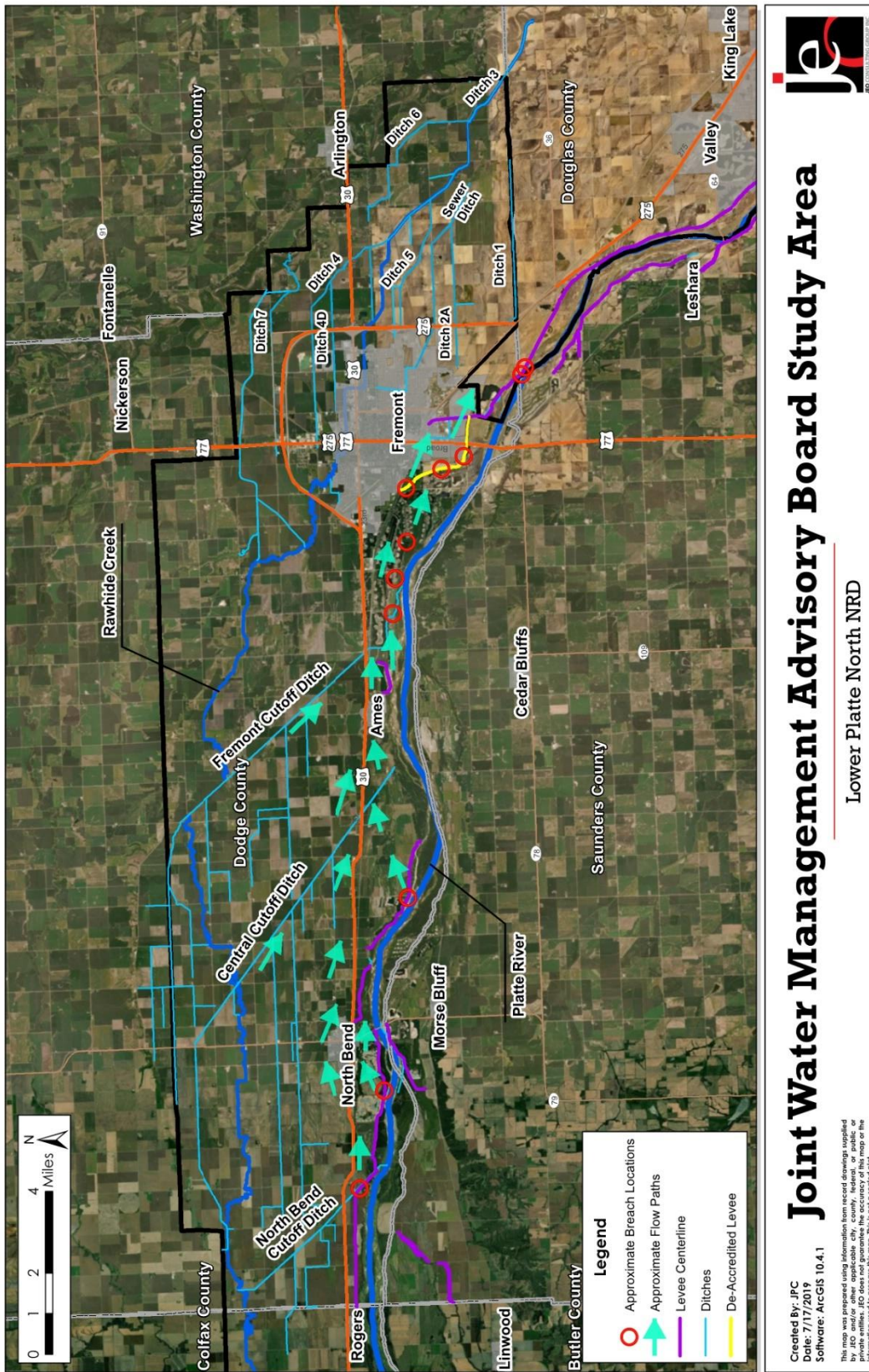
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Figure FMT.6: Levee Location



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Figure FMT.7: March 2019 Levee Failures



GOVERNANCE

The City of Fremont is governed by a mayor and an eight-member city council; other governmental offices and departments are listed below. The community government will oversee the implementation of hazard mitigation projects.

- City Administrator
- Clerk
- Attorney
- Director of Public Works/City Engineer
- Police Department
- Fire Department
- Wastewater Treatment Plant Supervisor
- Street Superintendent
- Water & Sewer Superintendent
- Power Plant Superintendent
- Chief Building Inspector
- Park & Recreation Director
- Planning Director
- Finance Director
- Human Resources Director
- Information Systems Director
- Library Director

CAPABILITY ASSESSMENT

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

Table FMT.5: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Planning & Regulatory Capability	Comprehensive Plan	Yes
	Capital Improvements Plan	Yes
	Economic Development Plan	Yes
	Emergency Operational Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
	Building Codes	Yes
	National Flood Insurance Program	Yes
	Community Rating System	Yes – Class 8
	Other (if any)	No

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SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Administrative & Technical Capability	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	Yes
	Chief Building Official	Yes
	Civil Engineering	Yes
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	Yes
	Mutual Aid Agreement	Yes
	Other (if any)	Joint Water Management Advisory Board - Member
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.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
	Natural Disaster or Safety related school programs	Yes
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	Yes
	Other (if any)	

Table FMT.6: Overall Capability Assessment

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

PLAN INTEGRATION

Fremont has a comprehensive plan (2012), emergency operations plan (2017), combined zoning ordinance, subdivision regulations, and floodplain regulations (2018), building code (2019), capital improvements plan (annual), and wellhead protection plan. The comprehensive plan contains goals aimed at safe growth, limits density in hazardous areas, encourages infill, preserves open space, and encourages clustering of development. Plans are in place to update the plan by 2022. Fremont is an annex to Dodge County’s 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 shelters, and resource management. The zoning ordinance, floodplain regulations, and subdivision regulations discourage development in the floodplain, discourage development near chemical storage sites, encourage open space within the floodplain, allow for clustering of subdivisions, and limit population density in the floodplain. Fremont’s building code is based on the 2015 International Building Code. The capital improvements program includes the following types of projects: stormwater, bridge improvements, new municipal wells, upsizing distribution pipes, constructing a new police headquarters, constructing a new public works facility, improving the community center, and improving the water treatment facility. Municipal funds have increased over recent years with a large portion already dedicated to the treatment plan upgrades, new horizontal well, and the beltway project.

Plans are in place to update the comprehensive plan, zoning ordinance and subdivision regulations by 2022. The city is currently working on creating a stormwater management 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

REVIEW POSSIBLE ACTIVITIES

The local planning team met to discuss a wide-range of possible mitigation activities that the city could include in the HMP to be more resilient to flooding. As required for Activity 510 *Floodplain Management Planning* for consideration of CRS points, the discussion included activities that are currently implemented or ongoing, activities that should be added to the 2020 HMP, and also activities that were not selected because they were either inappropriate for the community or not feasible. The following table provides a list of the discussed mitigation actions, whether the activity was selected or not selected, and reasons for the selection.

Flood Mitigation Action	Selected	Not Selected	Reason
Parcel Level Evaluation of Floodprone Properties		X	Action completed during HMP update
Open Space Preservation		X	Minimal political support
Emergency Management Exercise		X	Works with County Emergency Management to conduct exercises as needed
Stream Bank Stabilization	X		Not started
Channel/Ditch Improvements	X		Ongoing priority

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Flood Mitigation Action	Selected	Not Selected	Reason
Community Rating System Strategy for Class Change	X		
Create a Community-Wide Master Plan to Prioritize all Flood Related Projects (Flood Mitigation and Resiliency Plan)	X		City is member of Joint Water Management Advisory Board. First priority to complete a flood mitigation plan to prioritize projects
Detention Cells	X		New detention cells under construction
Comprehensive Backflow Prevention	X		Ongoing on all new construction
Drainage Study/Stormwater Master Plan	X		High priority to improve urban drainage and upsize pipes
Improve Highway Drainage	X		Working with County NDOT to improve drainage along Highway 30
Emergency Response and Preparedness Plan	X		Need identified following March 2019 flood
Update FIRM Maps for Regulatory Use		X	Future priority
Flood Prone Property Acquisition		X	Acquisition is not a priority. City needs to preserve housing stock
Flood Prone Property Elevation	X		
Flood Warning System	X		New stream gauge needed to improve flood warnings for Fremont
Floodplain Regulation Enforcement and Updates	X		Ongoing and high priority
Improvements to Flood Warning System	X		
Levee/Floodwall Construction	X		City evaluating levee and making repairs and improvements

An action plan for each of the selected mitigation actions can be found under the “New Mitigation Actions” or “Ongoing Mitigation Actions” below. The ongoing mitigation actions are updates to mitigation actions that were included in the 2015 HMP.

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COMPLETED MITIGATION ACTIONS

MITIGATION ACTION	PARCEL LEVEL EVALUATION OF FLOODPRONE PROPERTIES
Hazard(s) Addressed	Flooding
Status	Parcel level assessment conducted during this planning process, which prioritizes mitigation alternatives on a property by property basis. City submitted grant to fund the property elevation projects.

ONGOING MITIGATION ACTIONS FROM 2015 HMP

MITIGATION ACTION	ALERT/WARNING SIRENS
Description	Perform an evaluation of existing alert sirens to determine which should be replaced or upgraded, then replace or upgrade them
Hazard(s) Addressed	All hazards
Estimated Cost	\$30,000
Funding	Local budget
Timeline	5+ years
Priority	Low
Lead Agency	Executive Assistant, County Emergency Management
Status	Sirens are repaired, replaced, or added as needs are identified.
Meets Expectations	Yes

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	Provide a portable or stationary backup generator to municipal wells, lift stations, shelters, and other critical facilities
Hazard(s) Addressed	All hazards
Estimated Cost	\$20,000+
Funding	Local budget
Timeline	Ongoing
Priority	Low
Lead Agency	City Administrator
Status	The city has several portable generators but would like to add more portable and permanent generators
Meets Expectations	Yes

MITIGATION ACTION	DRAINAGE STUDY/STORMWATER MASTER PLAN
Description	Stabilization improvements, including rock rip rap, vegetative cover, j-hooks, boulder vanes, etc. to reestablish channel banks. Channel stabilization can protect structures, increase conveyance, and provide flooding benefits.
Hazard(s) Addressed	Flooding
Estimated Cost	\$30,000
Funding	Local budget
Timeline	2-5 years
Priority	High
Lead Agency	Public Works
Status	The city has identified the need for improved urban drainage and upsized pipes. Funding for this project has been included in the 2020-2022 public works budget
Meets Expectations	Yes

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MITIGATION ACTION	FLOODPLAIN MANAGEMENT
Description	Decrease the number of structures in the floodplain by raising structures or purchasing repetitive loss structures to use as recreation fields, picnic areas, etc.
Hazard(s) Addressed	Flooding
Estimated Cost	\$5,000,000+
Funding	Local budget, foundations, HMGP
Timeline	1-2 years
Priority	High
Lead Agency	Executive Assistant, Chief Building Inspector/Floodplain Administration
Status	The city is actively assisting interested property owners with elevation projects in flood prone areas. An HMGP application for funding is underway.
Meets Expectations	Yes

MITIGATION ACTION	FLOODPLAIN REGULATION ENFORCEMENTS AND UPDATES
Description	Continue to enforce local floodplain regulations for old and new structures. Update regulations as appropriate. Educate building inspectors and floodplain managers on regulations
Hazard(s) Addressed	Flooding
Estimated Cost	\$0
Funding	Local budget
Timeline	Ongoing
Priority	High
Lead Agency	Chief Building Inspector, Floodplain Administration
Status	The city continues to enforce floodplain regulations and updates as needed.
Meets Expectations	Yes

MITIGATION ACTION	LEVEE/FLOODWALL CONSTRUCTION AND/OR IMPROVEMENTS
Description	Construct and maintain a levee to protect critical facilities and residences. Repair existing levees to meet PL84-99 standards
Hazard(s) Addressed	Levee failure
Estimated Cost	\$500,000+
Funding	Local budget
Timeline	2-5 years
Priority	High
Lead Agency	City Engineer, City Administrator
Status	The city is in the evaluation stage to repair and to bring up to Corps standards the levee on the southwest side of the community.
Meets Expectations	Yes

MITIGATION ACTION	STREAM BANK STABILIZATION / GRADE CONTROL STRUCTURES / CHANNEL IMPROVEMENTS
Description	Stabilization improvements, including rock rip rap, vegetative cover, j-hooks, boulder vanes, etc. to reestablish channel banks. Channel stabilization can protect structures, increase conveyance, and provide flooding benefits.

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MITIGATION ACTION		STREAM BANK SABILIZATION / GRADE CONTROL STRUCTURES / CHANNEL IMPROVEMENTS
Hazard(s) Addressed		Flooding
Estimated Cost		\$100,000+
Funding		Local budget
Timeline		5 years
Priority		Low
Lead Agency		City Engineer, City Administrator
Status		Not started
Meets Expectations		N/A

NEW MITIGATION ACTIONS

MITIGATION ACTION		CHANNEL/DITCH IMPROVEMENTS
Description		In coordination with the county, deepen and clean out channels and ditches to aid in stormwater management
Hazard(s) Addressed		Flooding
Estimated Cost		\$50,000+
Funding		Local and county budgets
Timeline		Ongoing
Priority		Medium
Lead Agency		Streets Department
Status		Ditches are maintained annually.

MITIGATION ACTION		COMMUNITY EDUCATION AND AWARENESS
Description		Continue community education program to increase awareness related to household level mitigation actions, especially focused on flooding.
Hazard(s) Addressed		All hazards
Estimated Cost		Staff time
Funding		Local budget
Timeline		Ongoing
Priority		Medium
Lead Agency		Floodplain Administrator, Emergency Management
Status		Flood map information is available and provided as requested. Utility bills are used to insert educational flyers. Staff attend home shows and other outreach opportunities to provide flood information.

MITIGATION ACTION		COMMUNITY RATING SYSTEM
Description		Develop a strategy to lower Fremont's CRS Class from a 8 to a 6.
Hazard(s) Addressed		Flooding
Estimated Cost		Staff time
Funding		Local budget
Timeline		Ongoing
Priority		Medium
Lead Agency		Floodplain Administrator
Status		Early planning stage

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MITIGATION ACTION		COMPREHENSIVE BACKFLOW PREVENTION FOR HOMEOWNERS
Description	Provide comprehensive backflow prevention for homeowners to prevent excess stormwater from backing up into home basements	
Hazard(s) Addressed	Flooding	
Estimated Cost	\$30,000	
Funding	Local budget	
Timeline	Ongoing	
Priority	High	
Lead Agency	Floodplain Administrator	
Status	Ongoing	

MITIGATION ACTION		COMPREHENSIVE DISASTER / EMERGENCY RESPONSE PLAN
Description	Create an EPP to organize the city's response to disasters	
Hazard(s) Addressed	All hazards	
Estimated Cost	\$50,000	
Funding	Local budget	
Timeline	5 years	
Priority	Medium	
Lead Agency	City Administrator	
Status	Not started	

MITIGATION ACTION		DODGE COUNTY PLATTE RIVER COMMUNITIES FLOOD MITIGATION AND RESILIENCY PLAN
Description	Develop a flood mitigation and resiliency plan to holistically look at local flood risks and measures to reduce them from North Bend to Fremont along the Platte River. The plan will include hydrologic and hydraulic analyses to assess the nature of the flood risks and evaluate flood risk reduction improvement projects. Structural and non-structural mitigation may be considered and prioritized. The conceptual flood risk reduction recommendations will serve to provide a path forward towards implementation and a reduction of further damage to structures and critical facilities.	
Hazard(s) Addressed	Flooding	
Estimated Cost	\$1,000,000	
Funding	Water Sustainability Fund, Community Block Grant, HMPG, local budget	
Timeline	2-3 years	
Priority	High	
Lead Agency	Joint Water Advisory Board (Fremont is a partner on the Board); Fremont City Administrator	
Status	Initial planning stage; looking for funding alternatives	

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MITIGATION ACTION	EMERGENCY OPERATIONS CENTER
Description	Set up a permanent Emergency Operations Center
Hazard(s) Addressed	All hazards
Estimated Cost	\$15,000+
Funding	Local budget
Timeline	5+ years
Priority	Low
Lead Agency	City Administrator, Fire & Police
Status	Not started

MITIGATION ACTION	IMPROVE FLOOD AND DAM FAILURE WARNING SYSTEM
Description	Evaluate current flood level alert warning system. Install and/or improvement warning system. Install additional gauges as needed.
Hazard(s) Addressed	Flooding
Estimated Cost	\$50,000
Funding	Local budget
Timeline	5+ years
Priority	High
Lead Agency	Floodplain Administrator, Emergency Management
Status	Identifying funding alternatives for new stream gauge on Highway 77 bridge south of Fremont on Platte River.

MITIGATION ACTION	IMPROVE HIGHWAY DRAINAGE
Description	Construct culverts and improve the drainage system on the Highway 30 bypass
Hazard(s) Addressed	Flooding
Estimated Cost	\$25,000
Funding	Local budget
Timeline	2-5 years
Priority	Medium
Lead Agency	Public Works, County Highway Supervisor, NDOT
Status	Not started

MITIGATION ACTION	NEW DETENTION CELLS
Description	Construct new stormwater detention cells to aid in stormwater management
Hazard(s) Addressed	Flooding
Estimated Cost	\$50,000+
Funding	Local budget
Timeline	5+ years
Priority	High
Lead Agency	Public Works
Status	There's a need for detention cells west of town to provide protection to hospital. Johnson Road Cell to be completed by end 2020.

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MITIGATION ACTION		NIMS TRAINING	
Description		Provide incident management system or emergency response training such as NIMS to city officials	
Hazard(s) Addressed		All hazards	
Estimated Cost		\$10,000	
Funding		Local budget	
Timeline		Ongoing	
Priority		Low	
Lead Agency		All departments	
Status		Ongoing	

REMOVED MITIGATION ACTIONS

MITIGATION ACTION		MAINTAIN PARTICIPATION IN THE NATIONAL FLOOD INSURANCE PROGRAM	
Hazard(s) Addressed		Flooding	
Reason for Removal		This project is no longer considered a mitigation action by FEMA	

MITIGATION ACTION		STORMWATER SYSTEM IMPROVEMENTS	
Hazard(s) Addressed		Flooding	
Reason for Removal		Expanded into four new, focused projects	

COMMUNITY PROFILE

VILLAGE OF INGLEWOOD

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

Section Seven: Village of Inglewood Community Profile

LOCAL PLANNING TEAM

Table IWD.1: Village of Inglewood Local Planning Team

NAME	TITLE	JURISDICTION
Albert Nielsen	Board of Trustees Chairperson	Village of Inglewood
Jerry Abrahamson	Board of Trustees Vice Chairperson	Village of Inglewood
John Nielsen	Board of Trustees	Village of Inglewood
Barbara Shelton	Village Clerk	Village of Inglewood

LOCATION AND GEOGRAPHY

The Village of Inglewood is in the southeastern portion of Dodge County and covers an area of 0.24 square miles. The village is in the Platte River Valley. It is bordered to the north by the City of Fremont and to the south and west by the Platte River.

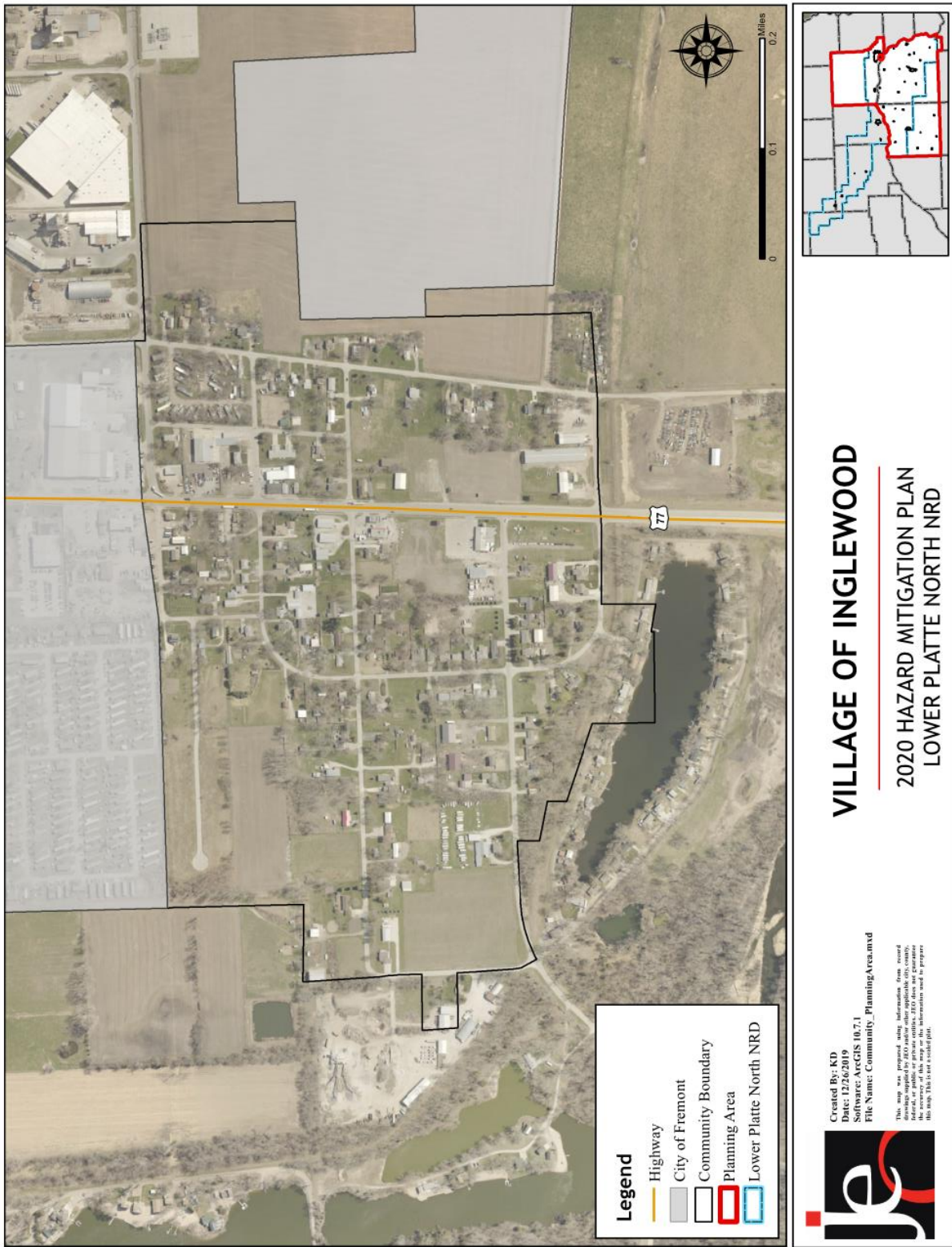
TRANSPORTATION

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. Inglewood's major transportation corridor is Nebraska State Highway 77. It is traveled by a total annual average 9,775 vehicles daily, 855 of which are trucks.¹⁵ The nearby Fremont Municipal airport is home to 50 aircraft and a local chapter of the Civil Air Patrol. The airport is located on the western edge of the neighboring City of Fremont and can accommodate aircraft up to the size of corporate jets. Highway 77, Ridgeland Avenue, Ridge Road, and Cloverly Avenue are the transportation routes of most concern in Inglewood because of their heavy traffic. Chemicals are sometimes transported on these routes.

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

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Figure IWD.1: Village of Inglewood

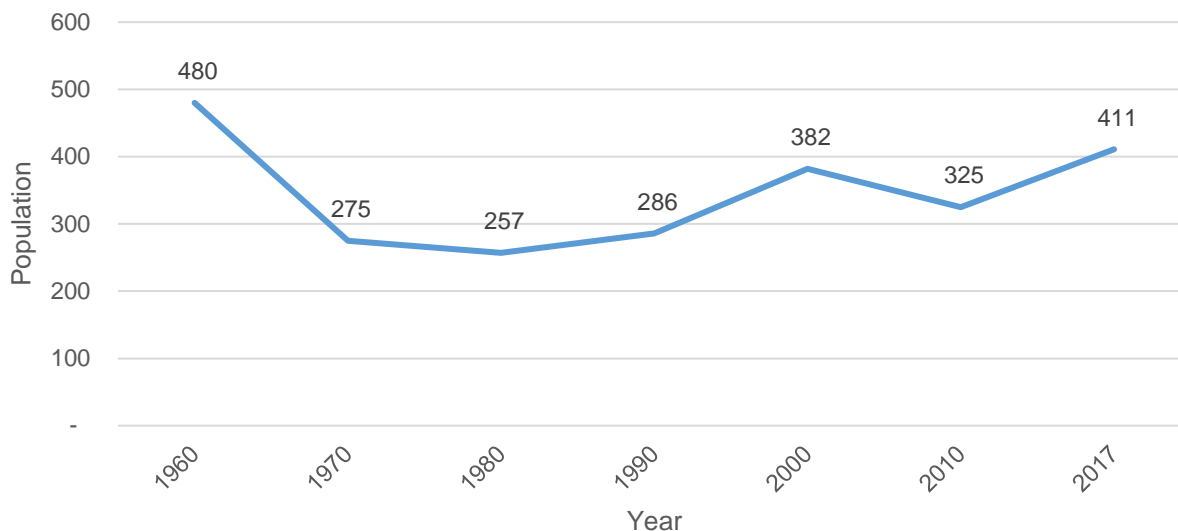


Section Seven: Village of Inglewood Community Profile

DEMOGRAPHICS

Inglewood's population grew from 325 people in 2010 to about 411 people in 2017. A growing population will provide a stable tax base to fund mitigation projects. The population accounted for 1.1% of Dodge County's population in 2017.¹⁶

Figure IWD.2: Population



Source: U.S. Census Bureau, 1960 - 2017

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

- **Slightly younger.** The median age of Inglewood was 34.9 years old in 2017, compared with Dodge County's median of 39.1 years. Inglewood's population grew younger since 2010, when the median age was 37.9 years old. Inglewood had a larger proportion of people under 18 years old (31.6%) than the county (23.6%) and a smaller proportion of people over the age of 65 (9.0%) than the county (18.6%).²
- **More ethnically diverse.** Since 2010, Inglewood grew more ethnically diverse. In 2010, 21.9% of Inglewood's population was Hispanic or Latino. By 2017, about 8.4% was Hispanic or Latino. During that time, the Hispanic population in the county grew from 8.7% in 2010 to 11.8% in 2017.²
- **As likely to be below the federal poverty line.** The poverty rate in Inglewood (14.6% of people living below the federal poverty line) was similar to the county's poverty rate (13.2%) in 2017.¹⁷

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

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

EMPLOYMENT AND ECONOMICS

The Village of Inglewood's economic base is mainly manufacturing. In comparison to Dodge County, Inglewood's economy had:

- **Larger mix of industries.** Five major employment sectors, accounting for 10% or more of employment each, were: manufacturing; retail trade; professional, scientific, and management, and administrative and waste management services; educational services, and health care and social assistance; and arts, entertainment, and recreation, and accommodation and food services.³
- **Lower per capita income.** Inglewood's per capita income in 2017 (\$19,912) was about \$7,250 lower than the county (\$27,162).³
- **Fewer commuters.** About 62.3% of workers in Inglewood commuted for fewer than 15 minutes, compared with about 54.4% of workers in Dodge County. About 14.1% of workers in the village commuted 30 minutes or more to work, compared to about 22.9% of county workers.¹⁸

MAJOR EMPLOYERS

The major employers in Inglewood are the restaurant/bar, gas station, construction company, law service companies, and an auction/real estate company. Most residents to commute to work at Valmont Industries in the Village of Valley or to Wholestone Foods Corporation in the City of Fremont.

HOUSING

In comparison to Dodge County, Inglewood's housing stock was:¹⁹

- **Similar age.** Inglewood had a similar share of housing built prior to 1970 than the county (52.6% compared to 58.5%).
- **More mobile and manufactured housing.** Inglewood had a larger share of mobile and manufactured housing (19.1%) compared to the county (5.0%). Mobile homes are located in the northeast corner of Inglewood, near Highway 77.
- **Similarly renter-occupied.** About 34.0% of occupied housing units in Inglewood were renter-occupied compared with 36.1% of occupied housing in Dodge County.
- **Occupied.** Approximately 5.3% of Inglewood's housing units were vacant compared to 9.6% of units in Dodge 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

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/>.

Section Seven: Village of Inglewood Community Profile

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

A few single family homes have been built in the past ten years. While there are no plans for new housing developments, several storage units will be installed in the next five years. BLT Plumbing and HVAC is renovating facility within corporate limits. Potential new construction consists of multi-family housing and a 19-unit subdivision that has been put on hold. These new businesses and the new Lincoln Poultry facility in Fremont, located just east of the Inglewood, are likely to draw more residents to Inglewood, continuing its increasing population trend.

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 IWD.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
120	\$10,727,160	120	100%	\$10,727,160

Source: GIS Workshop/Dodge County Assessor, 2019²⁰

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 Inglewood, but there are 29 located nearby in Fremont. The village has no concerns about fixed site chemical spills at this time. The following table lists these sites. Fremont Rural Fire Department has the appropriate response training and gear to respond to a spill.

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

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CRITICAL FACILITIES

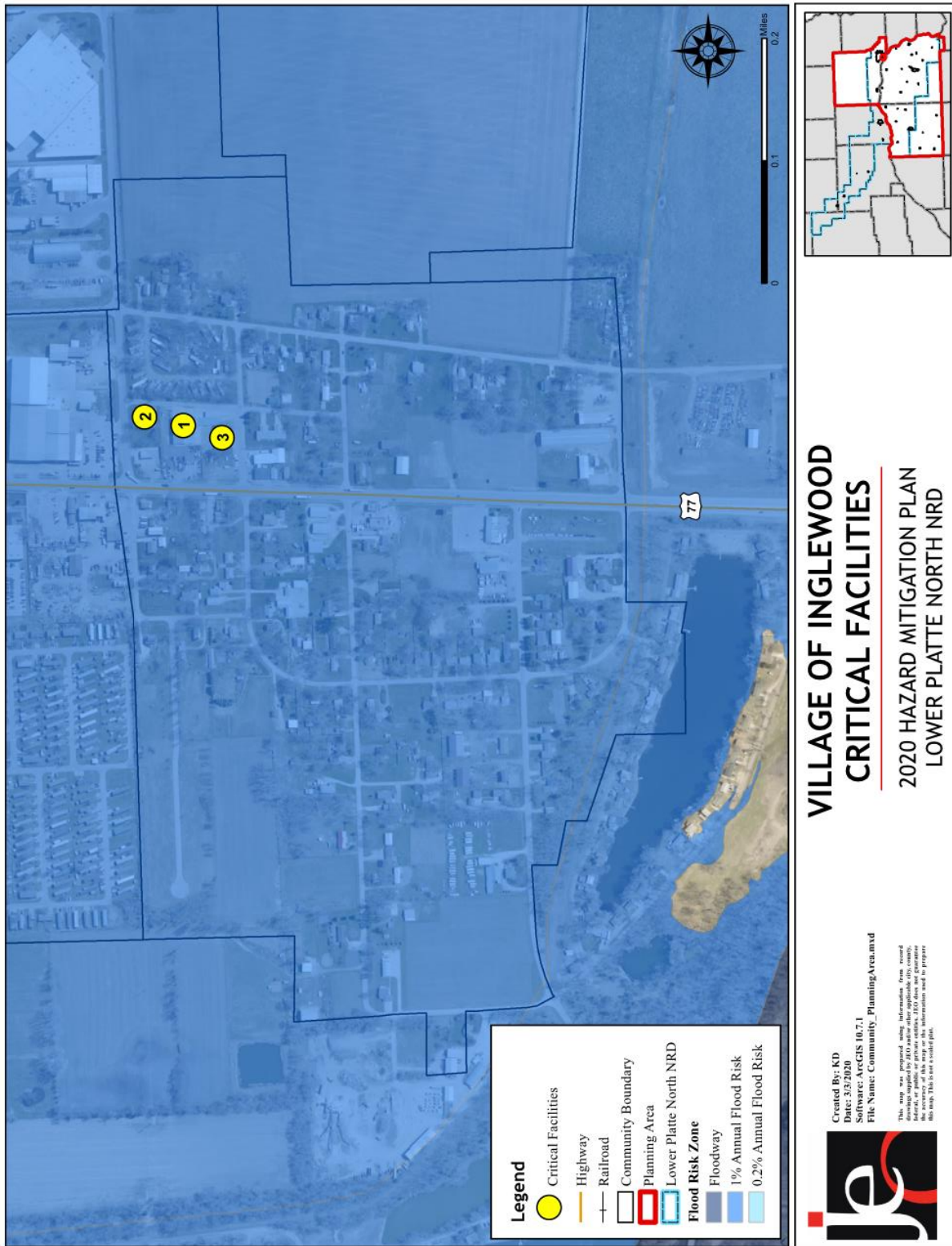
The planning team identified critical facilities necessary for the Village of Inglewood's disaster response and continuity of operations per the FEMA Community Lifelines guidance. Critical facilities were identified during the 2015 planning process and revised for this plan update. The following table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

Table IWD.3: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Rural Fire Department	No	No	Yes
2	Sanitary Sewer Lift Station	No	No	Yes
3	Village Hall	No	No	Yes

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Figure IWD.3: Critical Facilities



HISTORICAL OCCURRENCES

See the Dodge 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 March 2019 floods lead to a voluntary evacuation in Inglewood and road closures in and out of the village. The damage was extensive though the exact loss amounts are still to be determined, with the village hall among the facilities damaged. The entire village is prone to flooding because of its elevation and poor stormwater drainage. An agreement with Fremont is in place to repair or replace the dikes damaged in the flood event. In response to the March 2019 flood, the Village of Inglewood along with other communities and diking and drainage districts in southern Dodge County along the Platte River formed the Dodge County Joint Water Management Advisory Board. They've partnered together to develop a comprehensive flood risk reduction and mitigation strategy along the Platte River. The Board is currently looking for funding alternatives to develop a Flood Mitigation and Flood Resiliency Plan to identify, evaluate, and prioritize flood mitigation alternatives to improve flood resiliency along the Platte River. As indicated in Table IWD.2 and Figure IWD.3, the entire community of Inglewood is located within the 1 percent annual chance flood risk area.

HAIL

Hail is a concern in the community because of its propensity to damage village and residential property. There has been no hail damage to critical facilities. They are insured in case of future damage. Residents of the village do not receive information regarding hail resistant building materials with building permits. A local tree board monitors hazardous trees.

HIGH WINDS

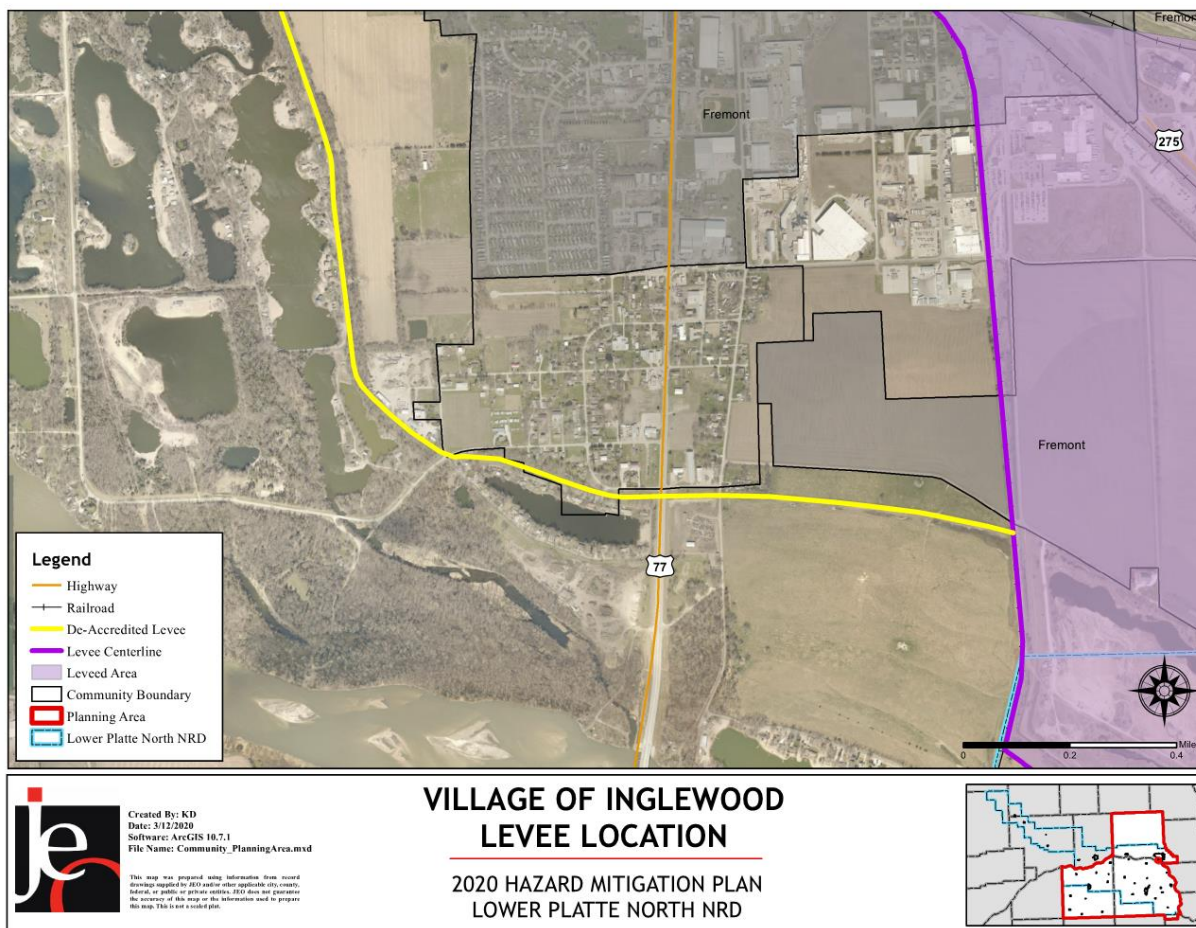
Though no significant high wind events have occurred locally, they are a concern for the village because of their potential to cause damage to village and residential property. Municipal records are protected from power outages with a data backup system. In case of severe weather village residents can seek shelter at the village hall, though this is not a FEMA certified safe room. Dodge County Emergency Management offers text alerts for severe weather. Educational outreach on high wind and other hazards is provided on the village website and Facebook page.

LEVEE FAILURE

The Fremont Diking and Drainage District, owned by the City of Fremont, runs along the south edge of the village. Only some of the levees in the district are FEMA certified, but they all provide 100-year flood protection. Three of these dikes were breached in the March 2019 floods. The entire village is impacted by levee failures. Levee failures are mitigated with agreements with Fremont to repair and upgrade the levees in the Fremont Diking and Drainage District.

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Figure IWD.3: Levee locations



SEVERE THUNDERSTORMS

The village is concerned about the possible impacts of severe thunderstorms, particularly damage to village and residential properties. Critical facilities have not been damaged in the past. No critical facilities except for the Fremont Rural Fire Station, but generators are not necessary for these facilities. Power is provided through the City of Fremont, so it is not considered vulnerable to severe storms though most power lines are not buried.

SEVERE WINTER STORMS

Severe winter storms are a normal occurrence in the village but there have been no particularly significant events recently. These storms are a concern because they could cause village and residential property damage. Most power lines are also overhead and vulnerable to outages from damage during severe storms, but power outages are not a concern because the City of Fremont provides power to the village. Snow removal is contracted to a private company, but the village also have loaders, graders, a sander, and de-icers to aid snow removal. Streets are cleared after two inches or greater snow fall.

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TORNADOES

No tornadoes have occurred in Inglewood, but a future occurrence could be catastrophic. Municipal records are protected with a data backup system in case of a disaster. Dodge County and the City of Fremont activates the village’s warning siren. Dodge County Emergency Management also offers emergency text alerts. There are no FEMA certified safe rooms in Inglewood, but community members can seek shelter in the village hall if necessary. The village website and Facebook page provide outreach to the community on the appropriate response to a tornado. Inglewood hold a mutual aid agreement with the City of Fremont in the event of a disaster.

GOVERNANCE

The Village of Inglewood 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
- Engineer
- Planning Commission
- Street Superintendent

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 IWD.5: Capability Assessment

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

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SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Technical Capability	GIS Capabilities	Yes
	Chief Building Official	Yes
	Civil Engineering	Yes
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	Yes
	Mutual Aid Agreement	Yes
	Other (if any)	Joint Water Management Advisory Board - Member
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)	Yes
	Natural Disaster or Safety related school programs	Yes
	StormReady Certification	Yes
	Firewise Communities Certification	No
	Tree City USA	Yes
	Other (if any)	

Table IWD.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

Inglewood has comprehensive plan, emergency operations plan, zoning ordinance, a streets capital improvements plan, floodplain ordinance, wellhead protection plan, and subdivision regulations. Many of the plans were lost in the during the 2019 floods. The comprehensive plan was last updated in 2015 and directs development away from major transportation routes, encourages elevation of structures in the floodplain, and identifies areas that need emergency shelters. Inglewood is an annex to the Dodge County 2017 emergency operations plan. It covers communications, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelters, and resource management. The zoning ordinance, floodplain ordinance, and subdivision regulations discourage development in the floodplain and identify open space in the floodplain. Inglewood uses its budget to identify new projects, a large portion of funds is dedicated to Broad Street widening and resurfacing. 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 generator. 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. Purchase and install a 16k watt emergency backup generator to the village hall.
Hazard(s) Addressed		All hazards
Estimated Cost		\$20,000+
Funding		General fund
Timeline		1 year
Priority		High
Lead Agency		Village Maintenance
Status		New action. Planning stage, currently seeking funding

MITIGATION ACTION		CULVERT UPSIZING AND CLEANING
Description		Deepen drainage ditches and clean out culverts that were damaged and silted in from the 2019 flood. Clean out ditches and culverts along Ridgeland Avenue, Prospect Avenue, Main Street, Boulevard Street, Park Street, and Cloverly Street
Hazard(s) Addressed		Flooding
Estimated Cost		Varies
Funding		Loans, bonds
Timeline		1 year
Priority		High
Lead Agency		Village Maintenance
Status		New action. Planning stage, currently seeking funding

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DODGE COUNTY PLATTE RIVER COMMUNITIES FLOOD MITIGATION AND RESILIENCY PLAN	
MITIGATION ACTION	
Description	Develop a flood mitigation and resiliency plan to holistically look at local flood risks and measures to reduce them from North Bend to Fremont along the Platte River. The plan will include hydrologic and hydraulic analyses to assess the nature of the flood risks and evaluate flood risk reduction improvement projects. Structural and non-structural mitigation may be considered and prioritized. The conceptual flood risk reduction recommendations will serve to provide a path forward towards implementation and a reduction of further damage to structures and critical facilities.
Hazard(s) Addressed	Flooding
Estimated Cost	\$1,000,000
Funding	Water Sustainability Fund, Community Block Grant, HMPG, local budget
Timeline	2-3 years
Priority	High
Lead Agency	Joint Water Advisory Board (Inglewood is a partner on the Board), Village Board
Status	Initial planning stage; looking for funding alternatives

STORMWATER SYSTEM IMPROVEMENTS	
MITIGATION ACTION	
Description	Stormwater system improvements may include pipe upsizing and additional inlets. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other stormwater system improvements. Install storm sewer lines on Boulevard Street from Prospect street to just south of Ridgeland intersection and on Main Street from Cloverly Street to just south of the Sherman property on Main Street.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	Loans, bonds
Timeline	1 year
Priority	Medium
Lead Agency	Village Engineer
Status	Planning stage, currently seeking funding

REMOVED MITIGATION ACTIONS

MAINTAIN GOOD STANDING WITH THE NATIONAL FLOOD INSURANCE PROGRAM	
MITIGATION ACTION	
Hazard(s) Addressed	Flooding
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

PUBLIC AWARENESS/EDUCATION	
MITIGATION ACTION	
Hazard(s) Addressed	All hazards
Reason for Removal	The village would like to prioritize other mitigation actions at this time

COMMUNITY PROFILE

CITY OF NORTH BEND

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

Section Seven: City of North Bend Community Profile

LOCAL PLANNING TEAM

Table NBD.1: City of North Bend Local Planning Team

NAME	TITLE	JURISDICTION
Theresa Busse	Clerk & Floodplain Administrator	City of North Bend

LOCATION AND GEOGRAPHY

The City of North Bend is in the southern portion of Dodge County and covers an area of 0.79 square miles. North Bend is just north of the Platte River. The surrounding land is used for row crop production and some pasturing.

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. North Bend's major transportation corridors include US Highway 30 and Nebraska State Highway 79. US Highway 30 runs east and west and is traveled by a total annual average of 8,730 vehicles daily, 875 of which are trucks. Nebraska State Highway 79 runs north and south and is traveled by a total annual average of 2,345 vehicles daily, 280 of which are trucks²¹ A Union Pacific Railroad runs along the southern edge of the city, along US Highway 30. The railroad is the transportation route of most concern for the community because of the large volume of chemicals it carries. Highway 30 has also been a concern because of its condition as it ages but an expressway is being completed to relieve the traffic on this route.

²¹ Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." [map]. <https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.

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Figure NBD.1: City of North Bend

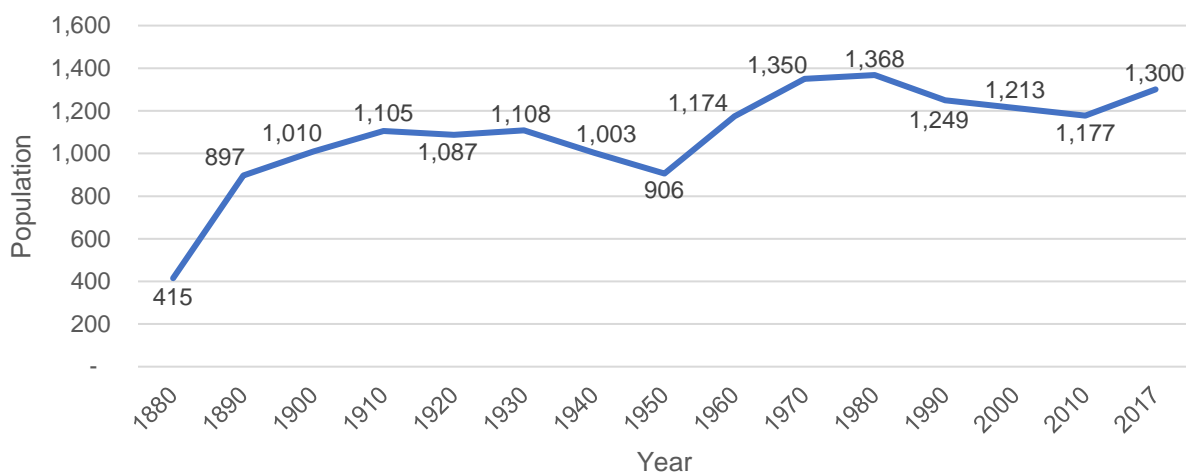


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DEMOGRAPHICS

Though the general population trend of the city was generally static between 1990 and 2010, North Bend's population grew from 1,177 people in 2010 to about 1,300 people in 2017. A growing population will provide a sustainable tax base to fund mitigation projects. The city's population accounted for 3.5% of Dodge County's population in 2017.²²

Figure NBD.1: 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, North Bend's population was:

- **Slightly younger.** The median age of North Bend was 35 years old in 2017, compared with Dodge County's median of 39.1 years. North Bend's population grew younger since 2010, when the median age was 36.3 years old.²
- **More ethnically diverse.** Since 2010, North Bend grew more ethnically diverse. In 2010, 8.4% of North Bend's population was Hispanic or Latino. By 2017, about 12.7% was Hispanic or Latino. During that time, the Hispanic population in the county grew from 8.7% in 2010 to 11.8% in 2017.²
- **Less likely to be below the federal poverty line.** The poverty rate in North Bend (12.7% of people living below the federal poverty line) was slightly lower than the county's poverty rate (13.2%) in 2017.²³

EMPLOYMENT AND ECONOMICS

The City of North Bend's economic base is primarily educational services, and health care and social assistance. In comparison to Dodge County, North Bend's economy had:

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

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

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- **Smaller mix of industries.** Two major employment sectors, accounting for 10% or more of employment each, were: educational services, and health care and social assistance; and retail trade.³
- **Similar per capita income.** North Bend's per capita income in 2017 (\$26,748) was about \$414 lower than the county (\$27,162).³
- **More long-distance commuters.** About 34.8% of workers in North Bend commuted for fewer than 15 minutes, compared with about 54.4% of workers in Dodge County. About 30.3% of workers in North Bend commuted 30 minutes or more to work, compared to about 22.9% of county workers.²⁴

MAJOR EMPLOYERS

There are nearly 100 small businesses in North Bend. The majority of the city's residents are retired. Of those who still work, about 80% commute to the nearby communities of Fremont, Schuyler or Valley for work. Most of those employed in North Bend work at the Frontier Co-op or North Bend Central Public Schools.

HOUSING

In comparison to Dodge County, North Bend's housing stock was:²⁵

- **Older.** North Bend had a larger share of housing built prior to 1970 than the county (67.4% compared to 58.5%).
- **Less mobile and manufactured housing.** North Bend had a smaller share of mobile and manufactured housing (2.4%) compared to the county (5.0%). Four mobile homes are located in the West Wood Trailer Park and three throughout the city.
- **Less renter-occupied.** About 22.8% of occupied housing units in North Bend were renter-occupied compared with 36.1% of occupied housing in Dodge County.
- **Occupied.** Approximately 6.6% of North Bend's housing units were vacant compared to 9.6% of units in Dodge 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.

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

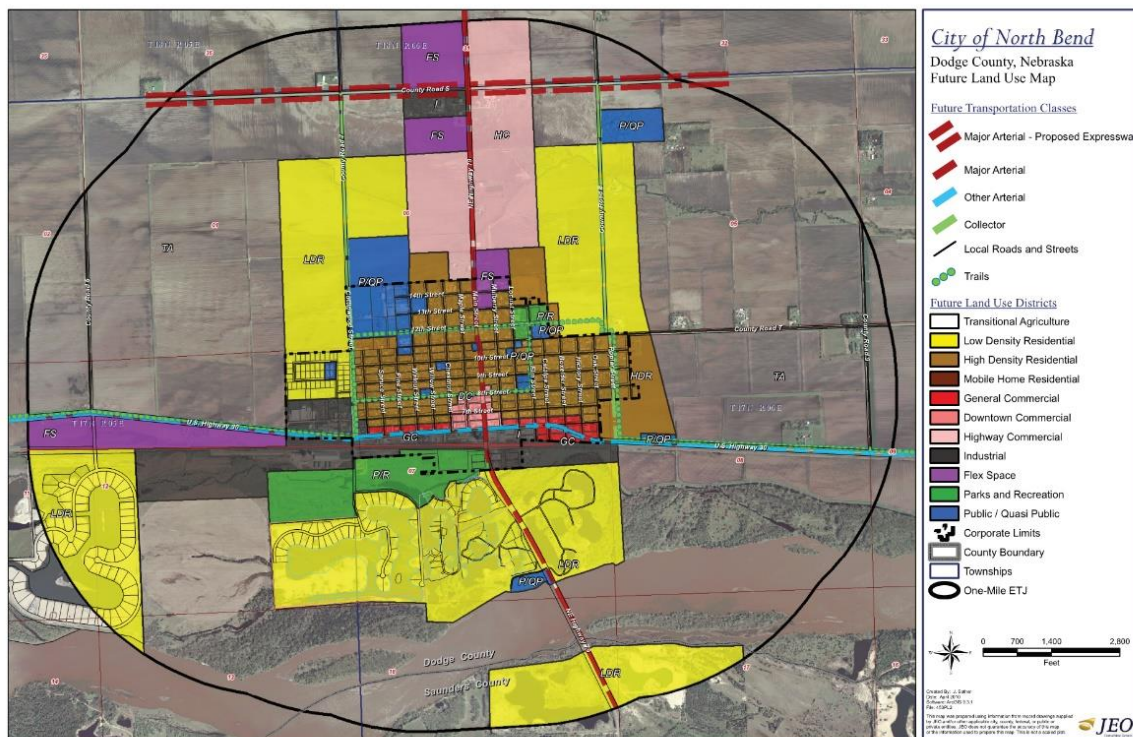
25 United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov/>.

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FUTURE DEVELOPMENT TRENDS

In the last ten years North Bend has built a library and several new homes. Additions have been added to North Bend Central High School and North Bend Elementary School. Johnson Farm Equipment moved from North Bend to Fremont. In the past five years, the Frontier Co-op built a new facility, including offices and a liquid fertilizer plant. Hegemann Agri-Service built new offices and a seed corn storage facility. A new Dollar General was opened on the east side of North Bend. The school also bought the Birchwood Manor property for future construction after the business was closed and demolished. The city annexed the area of town south of the railroad tracks, containing the Pioneer Lake housing development, the North Bend Golf Course, and the Frontier Co-op. They installed a new well and added lights to Groff Field. The city's population is trending upward, likely due to the population annexed into the community from new housing in the Pioneer Lake housing development.

Figure NBD.3: Future Land Use Map



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.

Section Seven: City of North Bend Community Profile

Table NBD.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
558	\$ 37,622,846	558	100%	\$ 37,622,846

Source: GIS Workshop/Dodge County Assessor, 2019²⁶

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 four fixed hazardous chemical storage sites within two miles of the city. The following table lists these sites. Aside from these facilities, Hunke Propane at the intersection of Cottonwood Road and S Road is a concern because it will be close to the new expressway and is within a half mile of the new city well. The Schuyler Co-op chemical storage tanks along Highway 30 have frequent traffic and the Frontier Co-op is very near the Pioneer Lake housing development and the golf course. Chemical spills are a concern because the North Bend Volunteer Fire Department relies on volunteers for emergency response who may be unavailable to respond to a spill during the day.

Table NBD.3: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	IN FLOODPLAIN (YES/NO)
Frontier Co-op Company	351 Cottonwood St	Yes
Kruger Feed & Seed	131 E 7th St	Yes
Schuyler Co-op Assn	Highway 30	Yes

Source: Nebraska Department of Environment and Energy, 2019²⁷

26 GIS Workshop/Dodge County Assessor. 2019. [Personal correspondence].

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

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CRITICAL FACILITIES

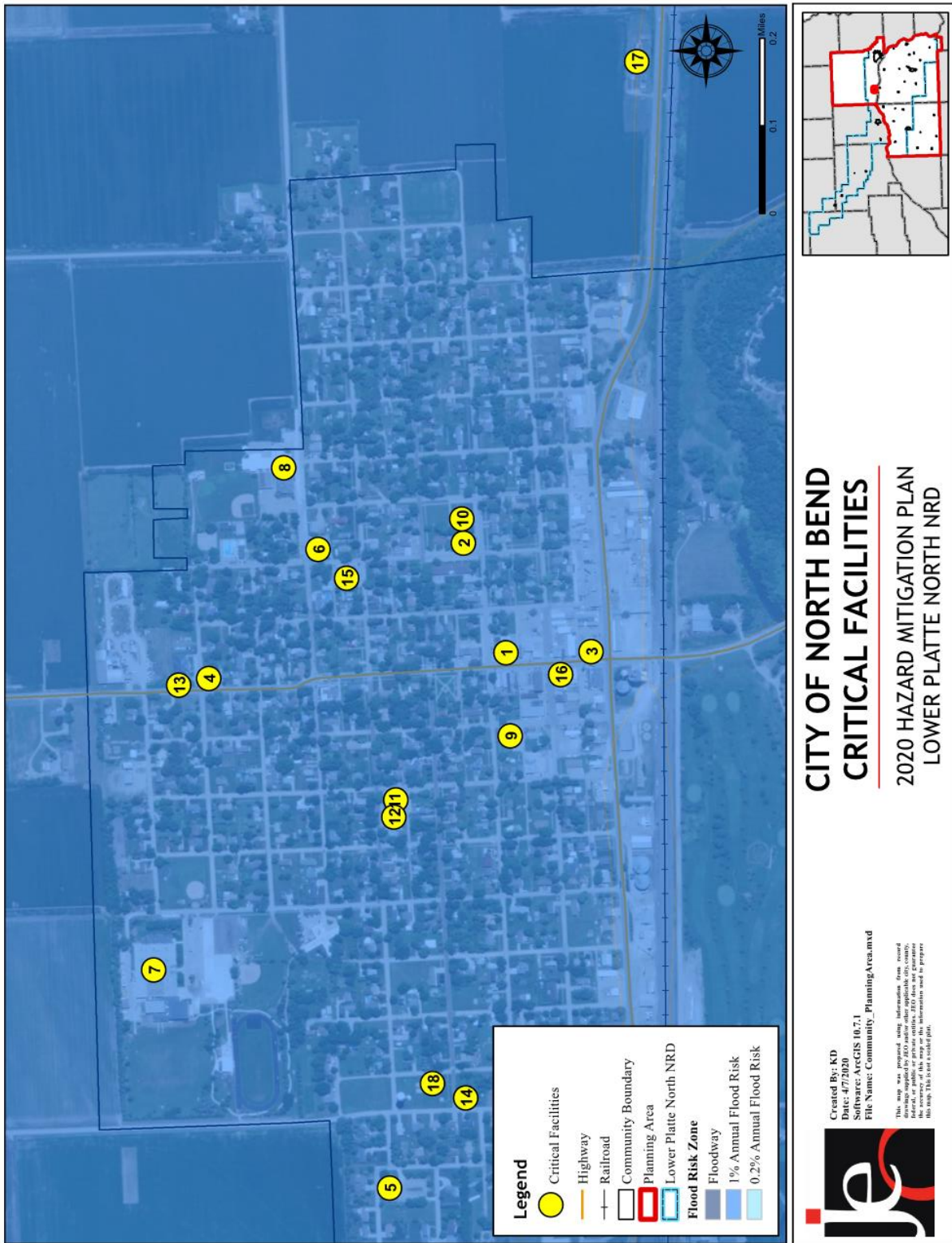
The planning team identified critical facilities necessary for the City of North Bend's disaster response and continuity of operations per the FEMA Community Lifelines guidance. Critical facilities were identified during the 2015 planning process and revised for this plan update. The following table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

Table NBD.4: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Auditorium	No	No	Yes
2	Catholic Church	No	No	Yes
3	City Hall	No	No	Yes
4	Library	No	No	Yes
5	Lutheran Church	No	No	Yes
6	Masonic Lodge	No	No	Yes
7	North Bend Central High School	No	No	Yes
8	North Bend Elementary School	No	No	Yes
9	OPPD	No	No	Yes
10	Parish Center	No	No	Yes
11	Presbyterian Church	No	No	Yes
12	Presbyterian Home	No	No	Yes
13	Sanitary Lift Station	No	No	Yes
14	Sanitary Lift Station	No	No	Yes
15	Senior Center	No	No	Yes
16	VFW	No	No	Yes
17	Wastewater Treatment Plant	No	Yes	Yes
18	Water Plant	No	Yes	Yes

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Figure NBD.4: Critical Facilities



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HISTORICAL OCCURRENCES

See the Dodge 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

North Bend experienced severe flooding in the March 2019 floods. After a levee three miles west of the city breached, every street in town flooded within two hours. Though most were elevated enough to avoid it, about a third of homes and business across the city were damaged because of flood, groundwater inundating basements, and sewer backups. The wastewater plant was also damaged, resulting in sewer restrictions. Area schools were closed for two weeks. The water was around 18 inches deep in the downtown region of the city during the peak flood. The Fire Station, Medical Clinic, Pharmacy, Post Office, newspaper office, and city auditorium have all been damaged in the flood. Since the flood the city replaced all the manhole lids in the city so that water will not be allowed to run in. Water meters were also replaced. The city is currently working with FEMA to add granite rock along the river to repair the dike. The city generally has poor stormwater drainage.

Additionally in response to the March 2019 flood, the City of North Bend along with other communities and diking and drainage districts in southern Dodge County along the Platte River formed the Dodge County Joint Water Management Advisory Board. They've partnered together to develop a comprehensive flood risk reduction and mitigation strategy along the Platte River. The Board is currently looking for funding alternatives to develop a Flood Mitigation and Flood Resiliency Plan to identify, evaluate, and prioritize flood mitigation alternatives to improve flood resiliency along the Platte River.

As indicated in Table NBD.2 and Figure NBD.4, the entire community of North Bend is located within the 1 percent annual chance flood risk area.

LEVEE FAILURE

North Bend is protected from the Platte River flooding by several levees: Shell Creek Dike, Cotterell Dike, and another with no name. Failed levees affect the entirety of the city and the surrounding lake communities. These levees provide 100-year flood protection but are not FEMA certified. The North Bend Cutoff Ditch bank to the west of the city was breached, leading to most of the flooding in the city. The breach was approximately 300 to 400 feet long. Flooding from the breach lead to property damage, roadway damage, and sewer system backups.

SEVERE THUNDERSTORMS

Loss of power and poor stormwater drainage during heavy rains are the most concerning impacts of severe thunderstorms. Several high wind and heavy rain events have occurred in the city. Municipal records are protected from lightning storms with surge protectors on electronic devices.

Section Seven: City of North Bend Community Profile

In case of a power outage, the water and sewer plant each have a generator. None of the power lines in the city are buried, making them vulnerable to a severe storm. North Bend is contentious about hazardous tree removal to mitigate tree and power line damage during storms.

SEVERE WINTER STORMS

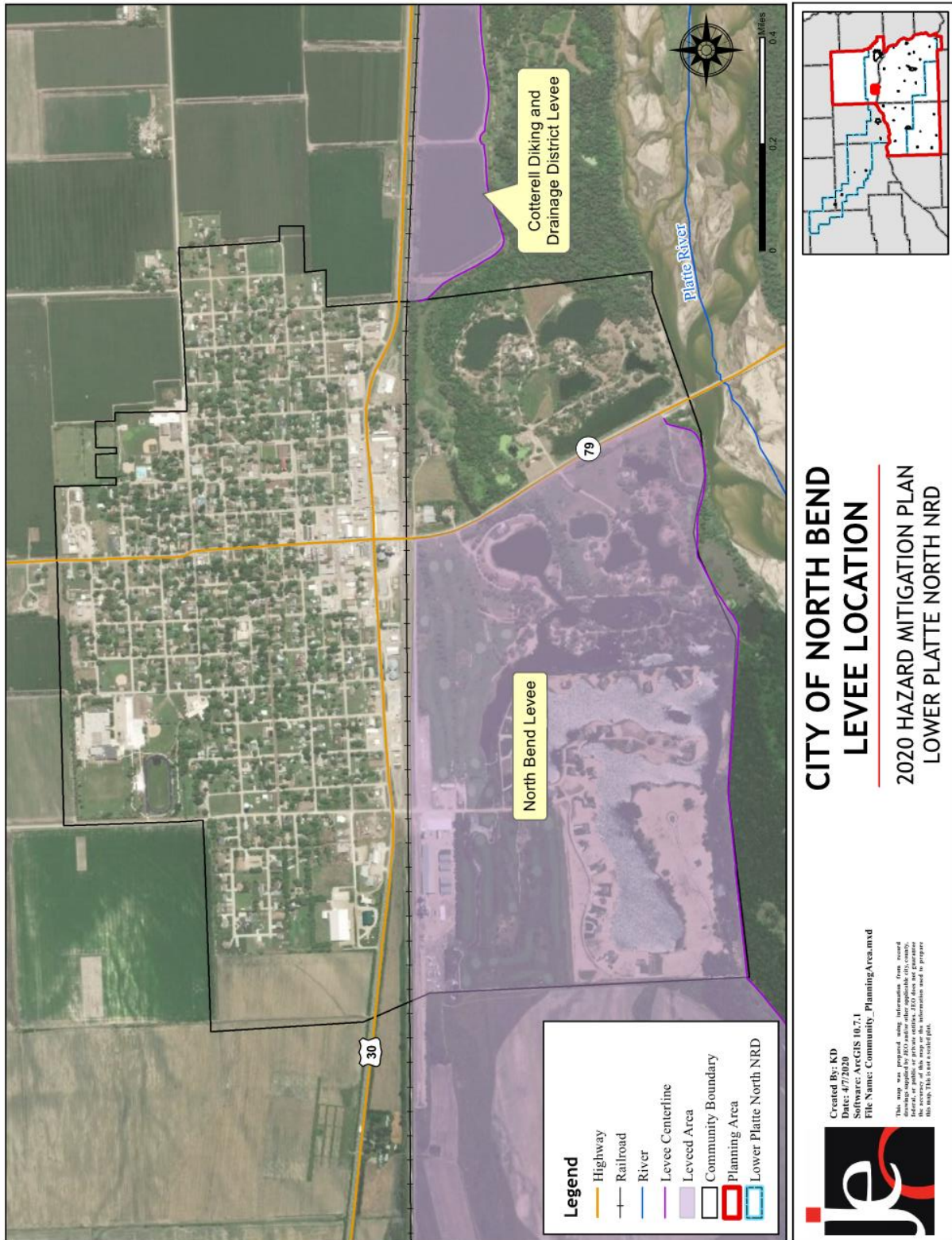
North Bend experiences annual severe snowstorms with high winds. Severe winter storms are a concern because of power outages, snow removal, and rapid snow melts that cause flooding. The sewer plant has been damaged in the past from ice buildup on equipment. Most power lines in North Bend are not buried, making them vulnerable during severe winter storms. Snow removal is done by a contracted company, the city does not own snow removal equipment except for a small tractor with a bucket and a skid loader. Snow routes are in place on Walnut Street, Maple Street, 11th Street, and throughout downtown to aid in snow removal. Hired contractors with two snowplows on pickup trucks, one skid loader, and one backhoe. These resources are sufficient for the city's snow removal needs.

TORNADOES

One EF1 tornado and two funnel clouds have occurred in North Bend, damaging homes, trees, and power lines. The 1999 tornado damaged 14 houses in North Bend, two heavily. Municipal records have a backup system to protect them in case of a disaster. The fire department and the Fremont dispatch can activate the city's warning siren. It does not cover the surrounding lake communities, including Pioneer Lake that has been annexed into the city. County Emergency Management does offer text alerts. The city does not offer education on tornado preparedness and response. There are no FEMA certified safe rooms in the community so in case of a severe weather event community members can seek shelter in their basements. In case of a disaster the fire department has Mutual Aid Agreements with each community in Dodge and Saunders Counties.

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Figure NBD.5: Levee Location



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GOVERNANCE

The City of North Bend is governed by a mayor and a four-member city council; other governmental offices and departments are listed below. The community government will oversee the implementation of hazard mitigation projects.

- Clerk/Treasurer
- Attorney
- Utility Superintendent
- Sewage Plant Operator
- Sewage/Water Commissioner
- Health & Safety Department
- Park & Pool Superintendent
- Library Director
- Engineer/Street Commissioner
- Volunteer Fire Department
- Auditorium

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 NBD.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	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	No
	Chief Building Official	Yes
	Civil Engineering	Yes

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SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	Joint Water Management Advisory Board - Member
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.	Yes
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
	Natural Disaster or Safety related school programs	Yes
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	Yes

Table NBD.6: Overall Capability Assessment

OVERALL CAPABILITY	LIMITED/MODERATE/HIGH
Financial resources needed to implement mitigation projects	Limited
Staff/expertise to implement projects	Moderate (rely on contracted engineer)
Community support to implement projects	Limited
Time to devote to hazard mitigation	Limited

PLAN INTEGRATION

North Bend has a comprehensive plan (2015), emergency operations plan (2017), zoning ordinance (2018), building code (2015), floodplain ordinance (2016), wellhead protection plan (2002), subdivision regulations (1999), Nebraska Basic Code (2019), and international property maintenance code (2019). The city is an annex to the Dodge County emergency operations plan. It discusses; communications, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass case, protective shelters, and resource management. North Bend’s comprehensive plan, zoning ordinance, floodplain ordinance, and subdivision regulations direct development away from the floodplain, contain goals aimed at safe growth, encourage elevation of structures in the floodplain, encourage infill development, discourage development near chemical storage sites, and allow for clustering of subdivision. The goal for the city is to update these documents every 10 years; however, that is funding dependent. The building code for the city is based off of the 2012 international building code. Municipal funds for the city have increased over recent years; however, funds are very restricted following the 2019 flood. The city borrowed bonds to cover levee and street 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

COMPLETED MITIGATION ACTIONS

MITIGATION ACTION		NEW WELL
Hazard(s) Addressed		Drought
Status		A new well was added in 2019 on Cottonwood Street a half mile north of the water tower. The \$95,800 in engineering fees and \$428,834 in contractor fees was paid for using a combination of sales tax and user fees.

ONGOING AND NEW MITIGATION ACTIONS

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 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		\$500+
Funding		General funds
Timeline		1 year
Priority		Medium
Lead Agency		Health and Safety Department, Fire department
Status		Not started

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MITIGATION ACTION		DODGE COUNTY PLATTE RIVER COMMUNITIES FLOOD MITIGATION AND RESILIENCY PLAN
Description	Develop a flood mitigation and resiliency plan to holistically look at local flood risks and measures to reduce them from North Bend to Fremont along the Platte River. The plan will include hydrologic and hydraulic analyses to assess the nature of the flood risks and evaluate flood risk reduction improvement projects. Structural and non-structural mitigation may be considered and prioritized. The conceptual flood risk reduction recommendations will serve to provide a path forward towards implementation and a reduction of further damage to structures and critical facilities.	
Hazard(s) Addressed	Flooding	
Estimated Cost	\$1,000,000	
Funding	Water Sustainability Fund, Community Block Grant, HMPG, local budget	
Timeline	2-3 years	
Priority	High	
Lead Agency	Joint Water Advisory Board (North Bend is a partner on the Board); City Administrator	
Status	Initial planning stage; looking for funding alternatives	

MITIGATION ACTION		DRAINAGE STUDY/STORMWATER MASTER PLAN
Description	Drainage studies can be conducted to identify and prioritize improvements to address site specific localized flooding/ drainage problems. Storm water master plans can be conducted to perform a community wide storm water evaluation, identifying multiple problem areas, and potentially multiple drainage improvements for each	
Hazard(s) Addressed	Flooding	
Estimated Cost	Varies	
Funding	Street funds	
Timeline	5+ years	
Priority	Low	
Lead Agency	Streets Department	
Status	While this project is needed, no progress has been made on it	

MITIGATION ACTION		FLOOD DAMAGE REPAIR
Description	Repair flood damage to the dike and streets from March 2019 floods	
Hazard(s) Addressed	Flooding	
Estimated Cost	\$2,500,000+	
Funding	Bonds, General funds	
Timeline	1 year	
Priority	High	
Lead Agency	Streets Department, City Administration	
Status	In process. The roads and streets were fixed in 2019. New sewer manhole lids were installed, and water meters were upgraded. The dike was repaired with help from FEMA.	

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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	Varies by location and size	
Funding	General fund	
Timeline	5+ years	
Priority	Low	
Lead Agency	Health and Safety Department	
Status	While this project is needed, no progress has been made on it	

MITIGATION ACTION		STORMWATER SYSTEM IMPROVEMENTS
Description	Storm water system improvements may include pipe upsizing and additional inlets. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other storm water system improvements	
Hazard(s) Addressed	Flooding	
Estimated Cost	Varies	
Funding	Street funds	
Timeline	5+ years	
Priority	Low	
Lead Agency	Streets Department	
Status	In process. The Nebraska Department of Transportation is adding storm drains on Main Street from 6 th to 7 th Street and from 10 th Street north out of the city. Highway 79 is going to be replaced in 2022	

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	Tax base, CDBG	
Timeline	2-5 years	
Priority	High	
Lead Agency	Planning Commission	
Status	New action. Not started	

MITIGATION ACTION		UPGRADE WATER METERS
Description	Replace water meters throughout the community that were damaged in the 2019 flood. New water meters are floodproof and have automatic readers.	
Hazard(s) Addressed	Flooding	
Estimated Cost	\$200,000	
Funding	Water fund	
Timeline	1 year	
Priority	High	
Lead Agency	Water Department	
Status	New Action. In progress, meters and upgrades are installed	

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REMOVED MITIGATION ACTIONS

MITIGATION ACTION		FLOODPLAIN REGULATION ENFORCEMENTS AND UPDATES
Hazard(s) Addressed		Flooding
Reason for Removal		This project is no longer considered a mitigation action by FEMA

MITIGATION ACTION		MAINTAIN GOOD STANDING 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 project is no longer considered a mitigation action by FEMA