

COMMUNITY PROFILE

CITY OF PAPILLION

Papio-Missouri River NRD
Multi-Jurisdictional Hazard Mitigation Plan Update

2021

Local Planning Team

Table PLN.1: Papillion Local Planning Team

NAME	TITLE	JURISDICTION
TRAVIS GIBBONS	Assistant Planning Director	City of Papillion
MARK STURMSMA	Planning Director, Floodplain Adminsitrator	City of Papillion
ALEX EVANS	Deputy City Engineer	City of Papillion
BILL BOWES	Fire Chief	City of Papillion and La Vista

The following table describes meeting dates and times for the City of Papillion throughout the HMP update.

Table PLN.2: Meeting Dates and Times

MEETING TYPE	DATE AND TIME
HMP Project Kick-off	January 31, 2020; 10:00am (in-person meeting)
Hazard Assessment Meeting	June 3, 2020; 2:00pm (virtual meeting)
Plan Integration and Capabilities Discussion	June 3, 2020; 3:00pm (virtual meeting)
Regional Planning Team Meeting	August 3, 2020; 9:30am (virtual meeting)
CRS/HMP Mitigation Strategy Meeting	August 5, 2020; 10:00am (virtual meeting)
Public Open House	January 21, 2021; 5:00pm-7:00pm (virtual meeting)

Location and Geography

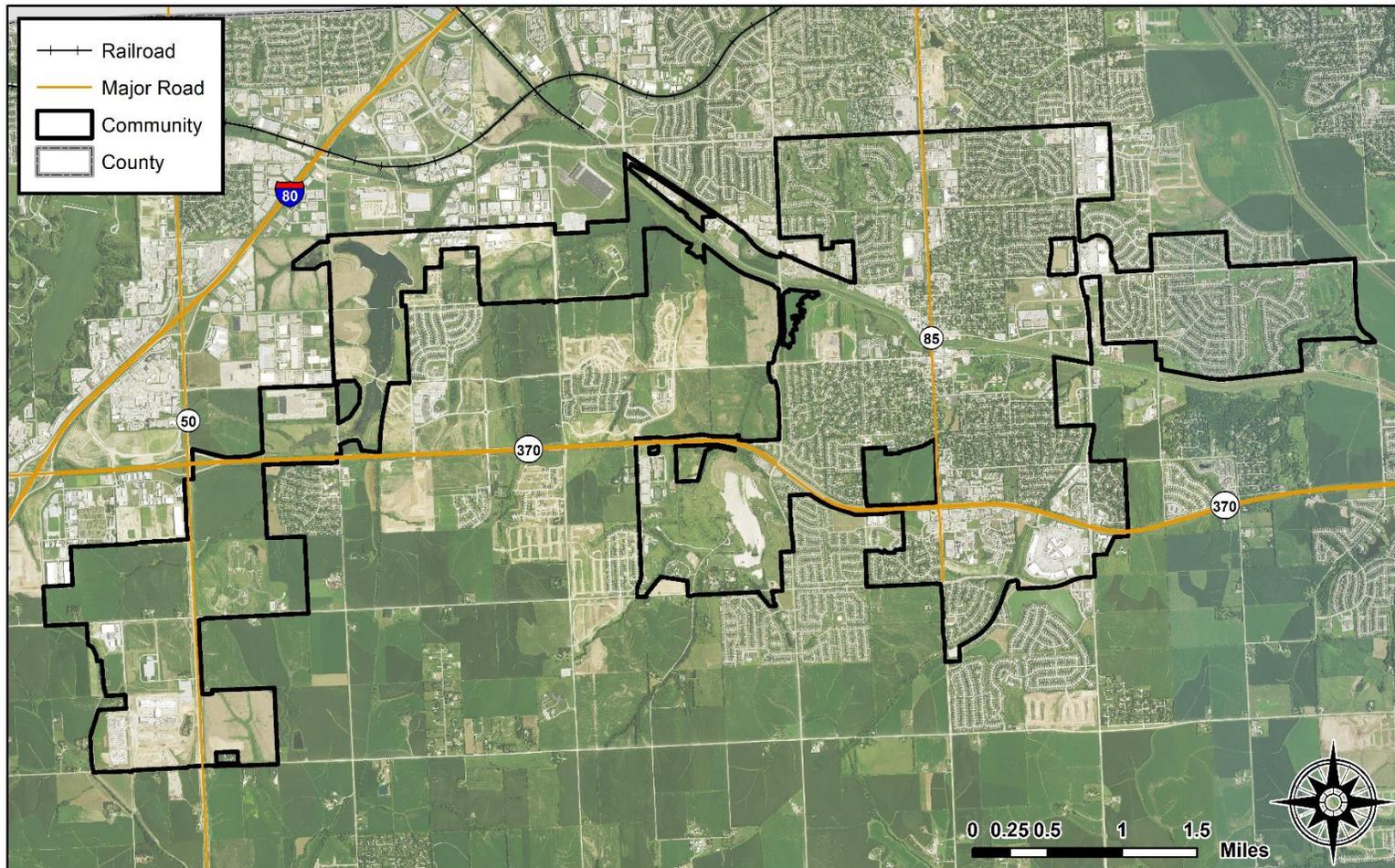
The City of Papillion is located in the north-central portion of Sarpy County and covers an area of 6.47 square miles. The major waterway in Papillion is its namesake, the West Papillion Creek, which flows through the center of the community before its confluence with the Big Papillion Creek. Papillion is the county seat of Sarpy County.

Transportation

Papillion's major transportation corridors include Nebraska Highway 370 (averaging 27,105 vehicles and 1,205 heavy vehicles per day), Highway 85 (averaging 12,720 vehicles and 505 heavy vehicles per day), and Highway 50 (averaging 13,900 vehicles and 1,475 heavy vehicles per day).¹ Other local roads of concern include 132nd street with large volumes of industrial traffic and Giles Road which has split maintenance requirements with La Vista. There are no rail lines in the City of Papillion, however it is assumed that hazardous chemicals are transported regularly through the city via semi-truck. The planning team noted chlorine is regularly transported to the water treatment plan; however, the city and NDOT have plans in place in case of spill or incident. In case of transportation incidents, resources from the local fire department is split between Papillion, La Vista, and the rural fire department. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

¹ Nebraska Department of Roads. "Traffic Flow Map of the State Highways: State of Nebraska." [map]. Scale 1"= 20 miles. State of Nebraska: Department of Roads, 2015. <http://www.roads.nebraska.gov/media/2510/2014-statewide-traffic-flow-map.pdf>

Figure PLN.1: City of Papillion



Created By: MH
Date: 2/20/2020
Revised: 10/30/2020
Revised By: MW
Software: ArcGIS 10.7.1
File Name: PapioNRD_Papillon.mxd

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2021 Papio-Missouri River NRD Hazard Mitigation Plan City of Papillion



Demographics

Papillion's population has increased steadily since the mid-1950s. The current estimated population in 2017 was 19,478. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Increasing populations can also contribute to increasing tax revenues, allowing communities to pursue additional mitigation projects. Papillion's population accounted for 11% percent of Sarpy County's population in 2017.²

Figure PLN.2: Estimated Population 1890 - 2017



Source: U.S. Census Bureau³

The young, elderly, minorities, and poor may be more vulnerable to certain hazards than other groups. In comparison to the County, Papillion's population was:

- **Older.** The median age of Papillion was 37.1 years old in 2017, compared with the County average of 34.2 years. Papillion's population has grown older since 2010, when the median age was 35.0 years old. Papillion had a smaller proportion of people under 20 years old (25.9%) than the County (30.2%).⁴
- **Less ethnically diverse.** Since 2010, Papillion grew more ethnically diverse. In 2010, 2.0% of Papillion's population was Black or African American, 2.0 % was Asian, and 3% were two or more races. By 2017, about 3% of Papillion's population was Black or African American, 1% was Asian, and 2% were two or more races. During that time, Sarpy County had: 4% (Black or African American), grew 2% to 3% (Asian), and 3% (two or more races) from 2010 to 2017 respectively.⁵
- **Less likely to be at the federal poverty line.** The poverty rate in Papillion (4.2% of all persons living below the federal poverty line) is lower than the County's poverty rate (5.3%) in 2017.⁶

² United States Census Bureau. "2017 American Fact Finder: S0101: Age and Sex." [database file]. <https://factfinder.census.gov/>.

³ United States Census Bureau. "2017 American Fact Finder: S0101: Age and Sex." [database file]. <https://factfinder.census.gov/>.

⁴ United States Census Bureau. "2017 American Fact Finder: S0101: Age and Sex." [database file]. <https://factfinder.census.gov/>.

⁵ United States Census Bureau. "2017 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]. <https://factfinder.census.gov/>.

⁶ United States Census Bureau. "2017 American Fact Finder: DP03: Selected Economic Characteristics." [database file]. <https://factfinder.census.gov/>.

Employment and Economics

The City's economic base is a mixture of industries. In comparison to Sarpy County, Papillion's economy had:

- **Similar mix of industries.** Both Sarpy County and Papillion's major employment sectors, accounting for 10% or more of employment each, were: Retail, Professional and Scientific jobs, and Educational Services in 2017.⁷
- **Greater household income.** Papillion's median household income in 2017 (\$76,259) was about \$500 greater than the County (\$75,752).⁸
- **Fewer long-distance commuters.** About 29.6% percent of workers in Papillion commuted for fewer than 15 minutes, compared with about 28.3% of workers in Sarpy County. About 17.7% of workers in Papillion commute 30 minutes or more to work, compared to about 21.8% of the County workers.⁹

Major Employers

The City of Papillion has a large and diverse economic landscape. Major employers as listed by the local planning team and the city's planning commission include: CHI Health, Cobalt Federal Credit Union, Papillion-La Vista School District, City of Papillion, Facebook (under construction), Google (under construction), Warner Enterprises, Hormel Foods, Hy-Vee, Walmart, Hillcrest, Oxbow Animal Health, Info Group, and Sarpy County government.

The local planning team noted that the Black Hills Energy facility has moved its main facility outside of Papillion and has decreased as an overall employer. Facebook and Google both have major data centers under construction with large construction workforces drawing from the community. Once completed each will employ several hundred employees. Google is expected to be completed by 2030 and Facebook is expected to be completed in 2024.

Housing

In comparison to Sarpy County, Papillion's housing stock was:

- **More owner occupied.** About 67.7% of occupied housing units in Papillion are owner occupied compared with 69.6% of occupied housing in Sarpy County in 2017.¹⁰
- **Greater share of aged housing stock.** Papillion has a greater share of housing built prior to 1970 than the county (21.1% compared to 19.8%).¹¹
- **More multifamily homes.** Although the predominant housing type in the City is single family detached, Papillion contains more multifamily housing with five or more units per structure compared to the County (21.8% compared to 17.9%). About 73.6% of housing in Papillion was single-family detached, compared with 74.2% of the County's housing. Papillion has a smaller share of mobile and manufactured housing (0.1%) compared to the County (0.8%).¹² There are approximately 40 mobile homes in the community, many of which are located at West 6th St and Schwer Lane.

The Sarpy County, NE Housing Study noted that 151 acres are needed in Papillion for new housing construction. Due to the close proximity of communities across Sarpy County, Papillion has established inter-local agreements with Gretna regarding future growth surrounding a planned Interstate 80 interchange at 192nd Street.

⁷ United States Census Bureau. "2017 American Fact Finder: DP03: Selected Economic Characteristics." [database file]. <https://factfinder.census.gov/>.

⁸ United States Census Bureau. "2017 American Fact Finder: DP03: Selected Economic Characteristics." [database file]. <https://factfinder.census.gov/>.

⁹ United States Census Bureau. "2017 American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. <https://factfinder.census.gov/>.

¹⁰ United States Census Bureau. "2017 American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov/>.

¹¹ United States Census Bureau. "2017 American Fact Finder: DP04: Selected Housing 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/>.

This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

Future Development Trends

The City of Papillion has seen several changes over the past five years. New annexations have occurred in 2016, 2017, and 2019 which have changed the community boundary and extended it out to Highway 50. The city conducts an annexation analysis annually to determine future actions. Some new commercial developments have moved into the community, most notably construction has begun on both the Google and Facebook data centers. Hormel Food producers also bought the old ShopCo building and has expanded its business in the city.

The City is prioritizing redevelopment in the downtown areas and new housing developments in the area west of 90th St. The majority of new development is taking place through the Highway 50 and Highway 370 corridors. A highway exchange is planned along Interstate 80 and 192nd Street. Additionally, the Papillion Fire Department has taken over services for La Vista and expanded into the surrounding area. While this increases the departments total staff and resources, during large scale events this may strain local resources.

In the next five years additional development is anticipated throughout the city and primarily in redevelopment areas. The city has approved several hundred additional lots for residential construction and available housing stock continues to increase. SIDs are used to build out and annex into the community. Several new apartment buildings are in progress or have been approved for construction and will likely be completed in the next five years. These include Midland Heights Apartments, LUX 96, Venue at Werner Park, an unnamed subdivision at Granite Falls, Prairie Queen, and Axis Apartments. Together these apartments will add an additional 1,350 units in the city. Some industrial development is anticipated to the west of town. As a decent portion of the community is located within the floodplain, all new development must meet the local floodplain and building codes.

The city's population has increased in the past few decades, which the local planning team attributes to available employment opportunities, available housing stock, and the construction of several apartment complexes to increase residential density.

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Figure PLN.3: Future Land Use Map

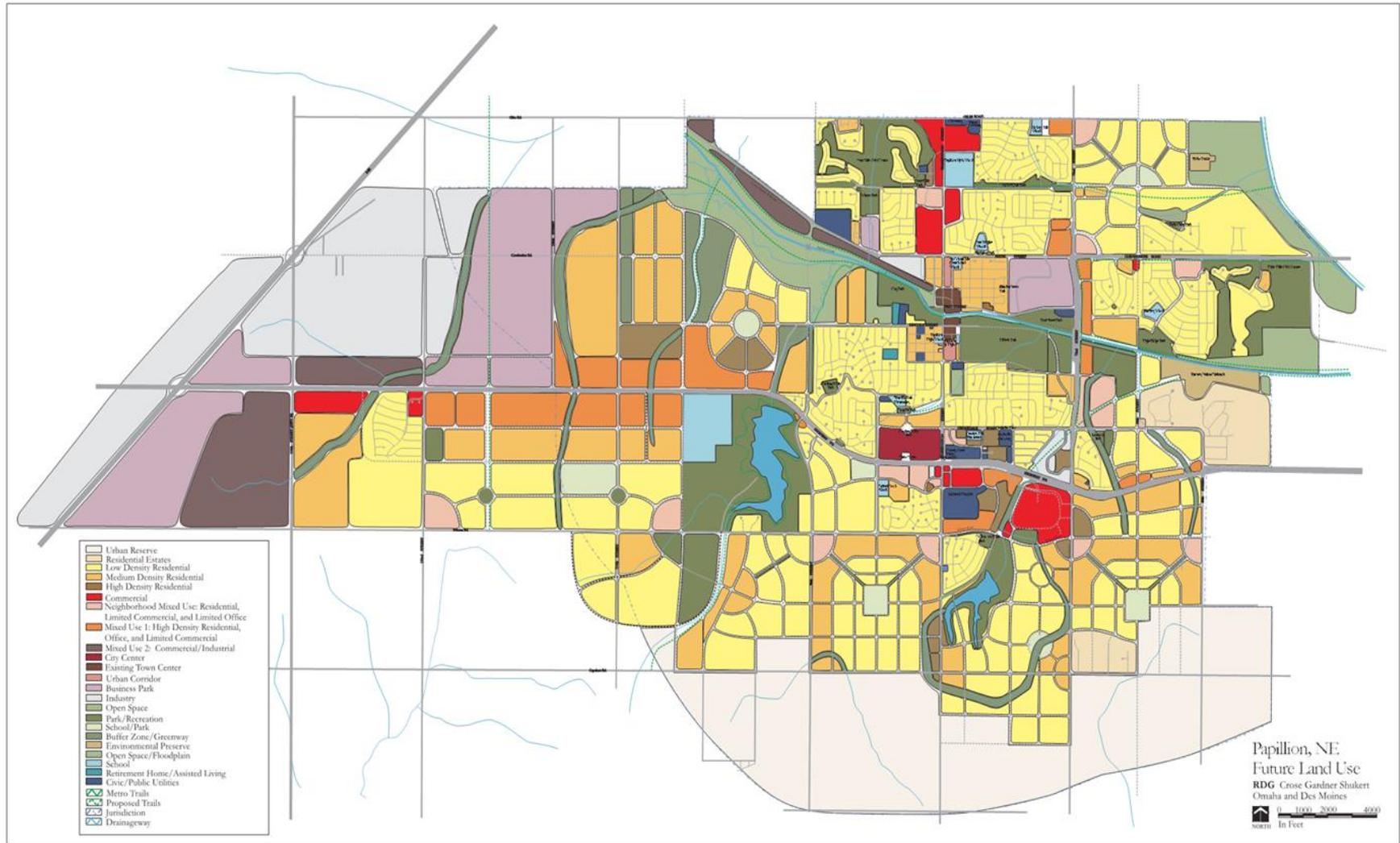
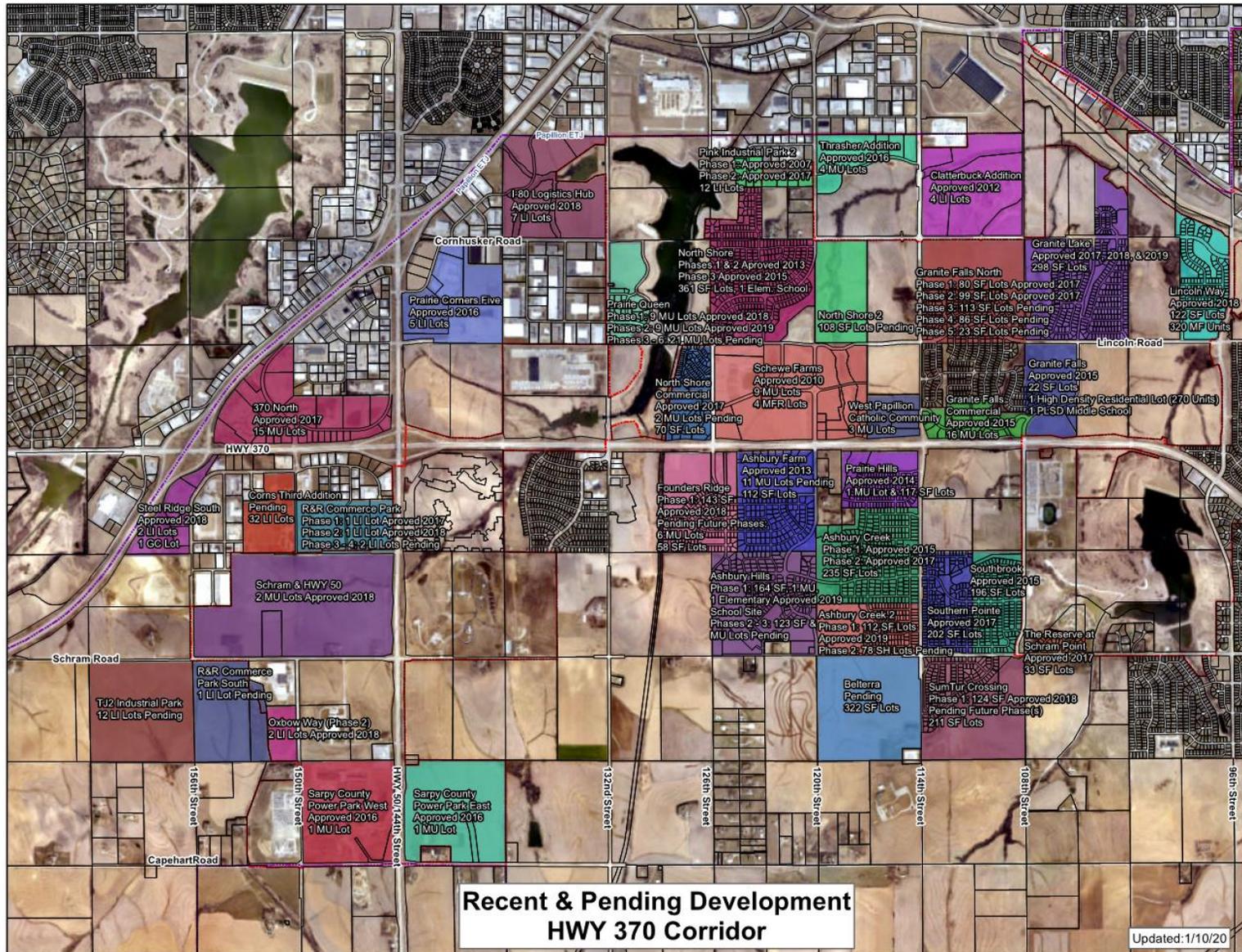


Figure PLN.3: Papillion Redevelopment Map



Structural Inventory and Valuation

The planning team requested GIS parcel data from the County Assessor as of December 2019. This data allowed the planning team to analyze the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table. Numerous structures have been removed from the floodplain via LOMAs. The City of Papillion has 52 filed LOMAs with FEMA. For brevity, a full list of LOMAs is not provided here. A comprehensive list of available reports for the city are available online through FEMA's Flood Map Service Center (<https://msc.fema.gov/portal/advanceSearch>).

Table PLN.2: Papillion Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN
7,832	7,503	\$2,117,697,892	225	\$176,737,040	3%

Source: County Assessor

Critical Infrastructure/Key Resources

Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are 13 chemical storage sites in Papillion that contain hazardous chemicals. The local planning team noted an additional OPPD station is located by Highway 50 and Schramm which also houses chemicals and may have previously been outside the jurisdictional boundary. This center will serve both the new Facebook and Google data centers.

Table PLN.3: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
PAPILLION POTABLE WATER TRTMNT	15406 S 87th St	N
JIFFY LUBE 3406	925 N Adams St	N
CHI HEALTH MIDLANDS	11111 S 84th St	N
OPPD PAPIILLION SERVICE CENTER	1210 W 6th St	N
OPPD SUBSTATION NO 1232	602 E 1st St	Y
OPPD SUBSTATION NO 1259	12210 S 114th St	N
OPPD SUBSTATION NO 1278	12211 S 84th St	N
PAPIO BAY AQUATIC CENTER	815 E Halleck St	Y
THE HOME DEPOT STORE 3206	712 N Washington St	N
TARGET STORE 0532	718 N Washington St	N
LOWE'S OF PAPIILLION 2611	8707 S 71st Plz	N
FIDELITY INVESTMENTS DATA CTR	11050 Cornhusker Rd	N
SAM'S CLUB 6181-00	9851 S 71st Plz	N

Source: Nebraska Department of Environment and Energy¹³

Critical Facilities

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

¹³ Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed November 2018. <https://deq-iis.ne.gov/tier2/search.faces>.

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The primary EOC for the City is Fire Station #3 and the Police Department serves as a secondary EOC location if needed. The Sarpy County LEOP identifies St. Paul’s United Methodist Church and Papillion Junior High School as short-term shelters during hazard events, and the City has identified numerous other facilities that may serve as shelters if needed. The local planning team also noted two Papillion Fire Department facilities are located in neighboring La Vista. All fire stations are serviced by the same department and respond to emergency calls in both communities.

Table PLN.4: Critical Facilities

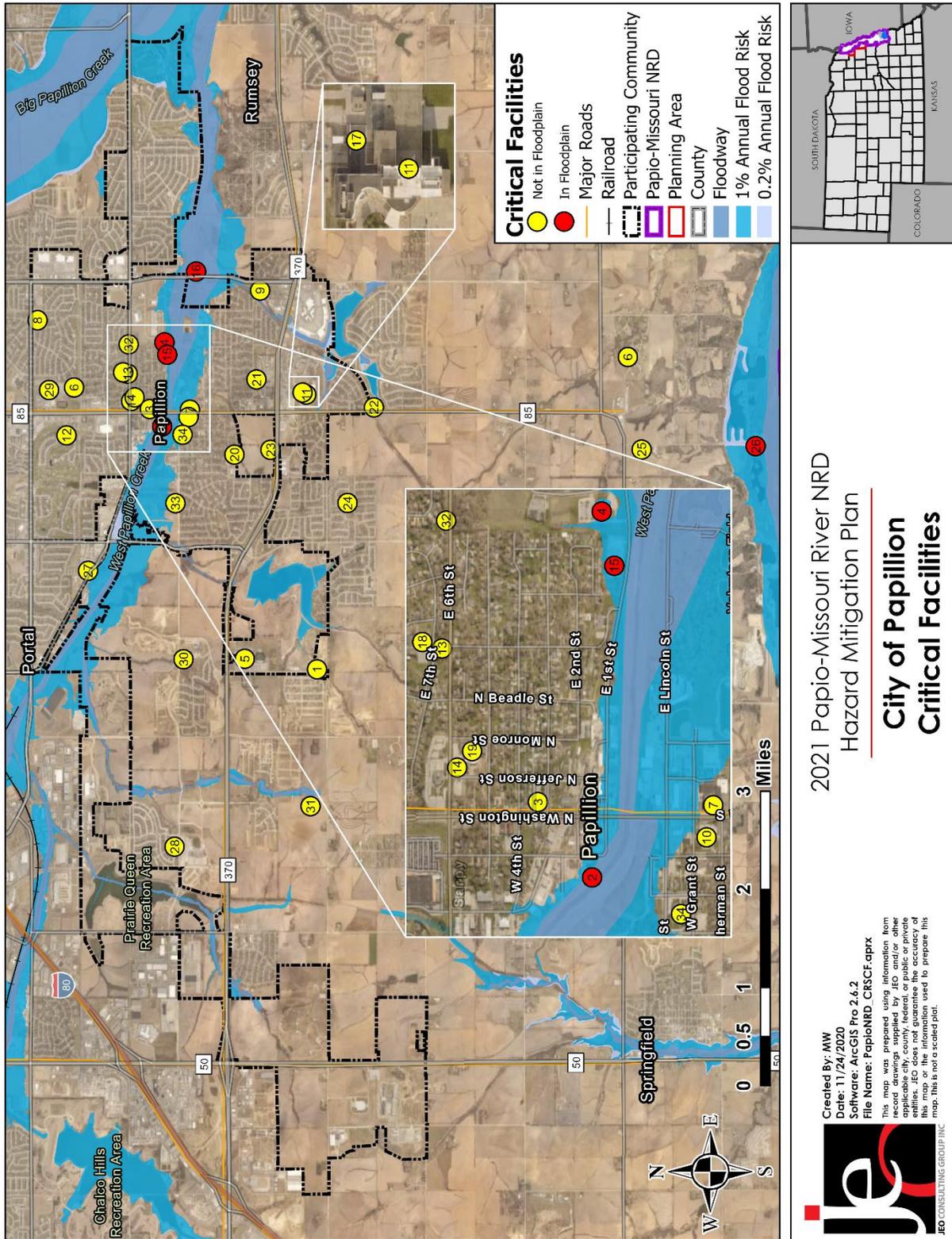
CF NUMBER	TYPE	NAME	SHORT-TERM SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Safety and Security	Papillion Fire 2	N	Y	N
2	Safety and Security	Papillion Fire 3	N	Y	Y
3	Safety and Security	Papillion City Hall	Y	Y	N
4	Safety and Security	Papillion Police Department	N	Y	Y
5	Food, Water, and Shelter	Papillion-La Vista South High	N	N	N
6	Food, Water, and Shelter	Papillion-La Vista High	Y	Y	N
7	Food, Water, and Shelter	Papillion Junior High	Y	Y	Y
8	Food, Water, and Shelter	Hickory Hill Elementary	N	N	N
9	Food, Water, and Shelter	Papillion Ideal School	N	N	N
10	Food, Water, and Shelter	Papillion-La Vista School District Administration Building	N	N	N
11	Health and Medical	Midlands Hospital	N	Y	N
12	Health and Medical	Papillion Senior Center	N	N	N
13	Food, Water, and Shelter	Water Tower - North	N	Y	N
14	Food, Water, and Shelter	Steinhausen Center	N	N	N
15	Energy	OPPD Substation 1232	N	N	Y
16	Food, Water, and Shelter	Papillion Sewer Plant	N	N	N
17	Health and Medical	Midlands ER	N	Y	N
18	Food, Water, and Shelter	Tara Heights Elementary	Y	Y	N
19	Food, Water, and Shelter	St Columbkille Elementary	Y	N	N
20	Food, Water, and Shelter	Trumble Park Elementary	Y	Y	N

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CF NUMBER	TYPE	NAME	SHORT-TERM SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
21	Food, Water, and Shelter	Carriage Hill Elementary	Y	Y	N
22	Energy	OPPD Substation 1278	N	N	N
23	Food, Water, and Shelter	South Booster Station, Southwest Booster Station, South Water Tower, and above ground storage tank	N	Y	N
24	Food, Water, and Shelter	Booster station and Water Tank at Summit Ridge North Booster Station	N	Y	N
25	Food, Water, and Shelter	Water Treatment Plant	N	Y	N
26	Food, Water, and Shelter	Well Field	N	Y	Y
27	Food, Water, and Shelter	Public Works Office and Shops	N	Y	N
28	Food, Water, and Shelter	Prairie Queen Elementary	N	N	N
29	Food, Water, and Shelter	Papillion-La Vista Early Childhood Center (PLECC)	N	Y	N
30	Food, Water, and Shelter	Liberty Middle School	N	N	N
31	Food, Water, and Shelter	Elementary School*	N	N	N
32	Food, Water, and Shelter	North Booster Station	N	N	N
33	Food, Water, and Shelter	Community Aquatic Center	N	N	N
34	Food, Water, and Shelter	St. Paul's United Methodist Church	Y	N	N

**The new elementary school (#31) is currently under construction and has not yet been named*

Figure PLN.4: Critical Facilities



Historical Occurrences

See the Sarpy County community profile for historical hazard events.

Hazard Prioritization

For an in-depth discussion regarding area wide hazards, please see *Section Four: Risk Assessment*. The hazards discussed in detail below were prioritized by the local planning team based on the identification of hazards of greatest concern, hazard history, and the jurisdiction's capabilities.

Dam Failure

Due to the presence of several dams in and around the City of Papillion, dam failure is a hazard of top concern. The majority of dams are owned and maintained by the Papio-Missouri River NRD. While there is little concern for the overall integrity of these dams, the local planning team is concerned about subsequent impacts to life, safety, and property if a failure were to occur. If a high hazard dam were to fail, loss of human life is probable and would cause significant economic impacts. A significant hazard dam would not likely cause loss of life, but could result in major economic loss, environmental damage, or disruption of lifeline facilities. The following table lists currently constructed high hazard dams the local planning team identified as a concern.

Table PLN.5: High Hazard Dams in Papillion

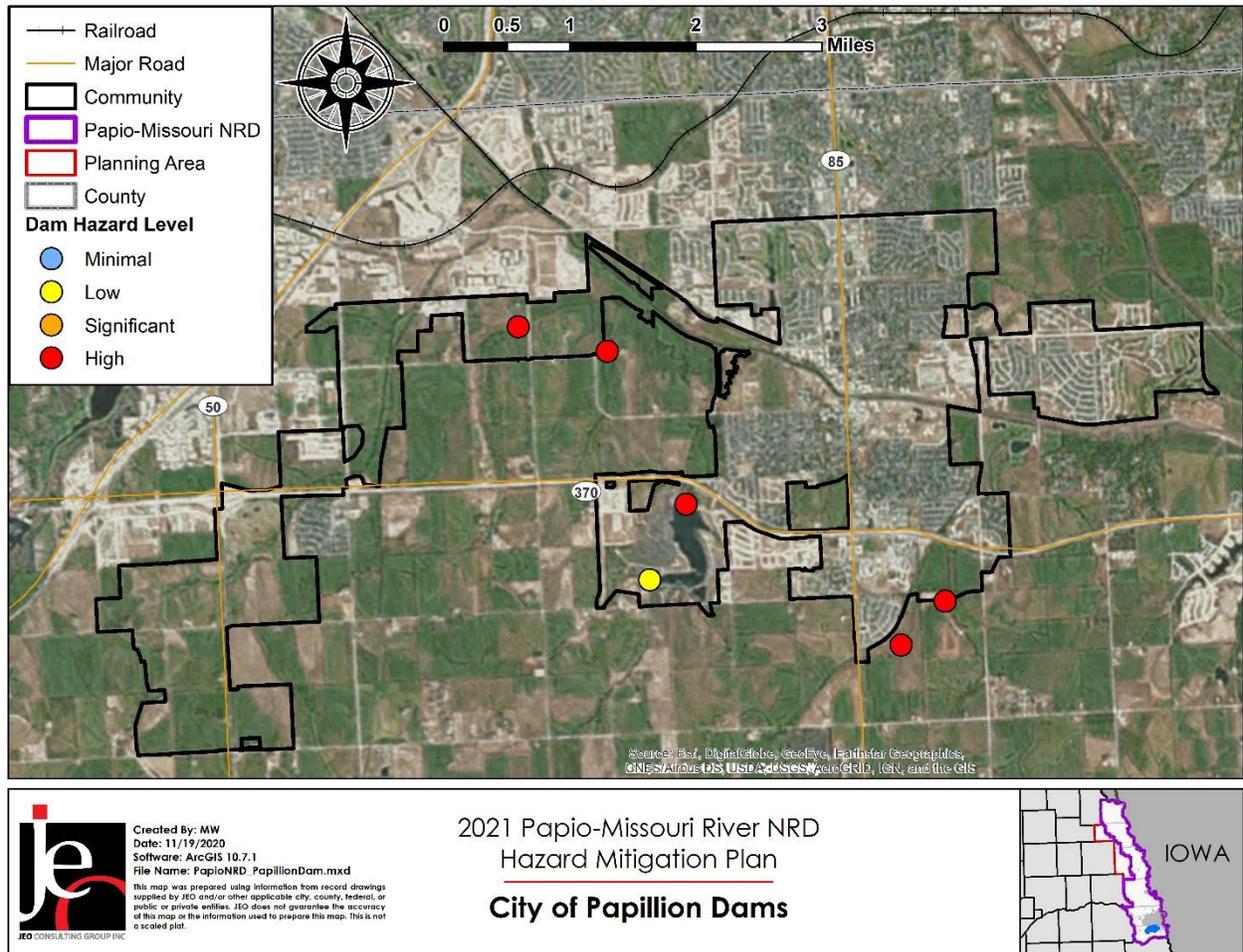
NIDID	DAM NAME	STREAM NAME	OWNER
NE02831	Midland Lake Dam	Midland Creek	P-MRNRD
NE02430	Papio Dam Site 21	Walnut Creek	P-MRNRD
NE02830	Shadow Lake Dam	Midland Creek	P-MRNRD
NE02513	Lakewood Villages Lower Dam	Papio Creek	Lakewood Villages Owners Association
NE02512	Lakewood Villages Upper Dam	Papio Creek	Lakewood Villages Owners Association
NE00092	Papio Creek S-32	Big Papio Creek	P-MRNRD
NE01751	Papio Creek S-31	South Papio Creek	P-MRNRD
NE01818	Papio Creek S-27	Papio Creek	P-MRNRD
NE05082	Prairie Queen Main Dam	South Papillion Creek	P-MRNRD

Source: National Inventory of Dams, 2020

Below is a map showing dam locations in or near Papillion. Several new dams have been or are in the process of being constructed and are not available for mapping. These include a new dam at Schwer Park near the golf course and two NRD owned dams (WP6 and WP7) which are anticipated to be constructed in fall 2020. Dams in and around Papillion, as well as their hazard level, can be viewed on the Nebraska Department of Natural Resource's Dam Inventory map (<https://dnr.nebraska.gov/dam-safety>). As dams are constructed and certified, changes will be reflected on the NeDNR map. The local planning team noted that if Papio Dam Site 21 failed it would likely impact Hwy 370, affecting transportation routes.

During the March 2019 flood event, all dams performed as expected and did not experience significant damages. Additionally, due to the riverine flooding experienced during the March 2019 flood event, dams would likely not have been significantly impacted. However, a detailed assessment of dam failure risk has not been completed specifically for this plan. No major dam failure events have occurred in the past which impacted the City of Papillion. All high hazard dams have Emergency Action Plans, which are reviewed and updated as required by state regulations.

Figure PLN.6: Dams in Papillion



Flooding

Papillion lies partially within the floodplains of the Big Papillion Creek, West Papillion Creek, Walnut Creek, South Midland Creek, West Midland Creek, and Midland Creek, as well as their tributaries. Papillion has substantial recreational facilities, as well as commercial and agricultural activities located in the floodplain. As of fall 2020, new floodplain maps were underway for the Papio Creek System with technical studies completed. Preliminary floodplain maps are anticipated to be completed by summer 2021 and, thus, are not included in this planning process. Future updates and reviews to this HMP should include information from these updated maps.

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100-year) discharge of 31,500 cfs at the mouth and 40,800 cfs at Giles Road. Mobile homes were swept away by this flood in the Millard area.

Hell Creek

Hell Creek flows from Boys Town to its confluence with West Papillion Creek. The flood of June 16-17, 1964 was caused by eight inches of rain falling in three hours. The 500-year flood discharge was exceeded, and reports noted that Hell Creek was fifty feet wide and had five-foot waves. Houses were moved from their foundations and garages were destroyed by these floodwaters. After some channel improvements earlier in 1965, the September 7, 1965, flood event on Hell Creek nearly equaled the severity of the 1964 event.

The March 2019 flood event was a significant flood event for much of the state and for the City of Papillion. The West Papillion Creek experienced significant high-water levels and subsequent flooding. Additionally, while the city's wellfield is not located within the floodplain, the access roads are at a lower elevation and fall within flood risk hazard areas. Access roads to the wellfield were washed out and inaccessible. Portions of the city, including the well field, lost power and city officials were in contact with OPPD to address the loss. A joint effort by the City and OPPD relocated the power supply switch for the city's wells and was completed in June 2020. No evacuations, injuries, or fatalities occurred in Papillion during this flood event.

The local planning team identified several areas of concern as it relates to flooding. Midland Creek between Highway 370 and South 72nd Street has a box culvert that is eating away at a resident's private backyard. Unfortunately, the backyard, which is falling in, and this section of Midland Creek are private property and the city does not have jurisdiction over the area to address the erosion. A bridge on 66th Street has been identified as a bottleneck; however, it is the responsibility of Sarpy County to maintain rather than the city.

The second area stems from a complaint from a landowner with flooding from a privately owned, uncertified levee that's degrading. This area is located south of the city outside of the city limits but within the extraterritorial jurisdiction boundary of Papillion. Resizing culverts and stream restoration may alleviate some of the flooding concerns from the landowner; however due to the private ownership, maintenance on the structure may be the primary concern. Additionally, Lincoln and Monroe Streets tend to flood during significant rain events. This is a low-lying area that tends to flood during heavy rain events, likely attributed to poor urban drainage patterns or levee interior drainage flooding.

Flooding is and will continue to be a hazard of top concern for the city with widespread impacts. Local vulnerabilities and potential impacts have been summarized below.

Life

Persons in the city who work, live, or play in flood risk hazard areas are at risk during flood events. Employees of businesses located within the floodplain are at risk if proper notification systems are not in place or evacuation routes are blocked. Residential areas in flood risk hazard areas put residents and their families at risk. If a one percent annual chance flood event were to take place, it is estimated 104 people would be displaced and seven would need short term sheltering according to a Level 1 HAZUS analysis. No fatalities have been reported in the City of Papillion from past flood events.

Health and Safety

Contact with flood waters can pose health and safety concerns as flood water is commonly contaminated by bacteria and/or viruses. This is of particular concern when floodwaters travel

from heavily agricultural areas such as upstream of the city. Additionally during flood events, injuries or threats to resident health and safety can occur when people attempt to drive through floodwaters (hidden debris or washouts). The City does not have publicly available evacuation plan; however, the city and county emergency management release information for flood specific evacuation orders via social media, the city website, and local news media.

Buildings and Building Damage

Infrastructure and property damages are top concerns for the city during flood events. According to the Sarpy County assessor, approximately 2.9% of all Papillion improvements (structures located on parcels) are located within the floodplain. A HAZUS analysis of the city for building counts and types of buildings damaged noted that approximately 39 buildings would sustain up to significant damage (four commercial and 35 residential) with total damage estimates ranging past \$7 million.

Note that the 2020 analysis included both the 1% annual flood chance and the 0.2% annual flood chance hazard area while the 2016 plan only identified improvements within the 1% annual flood chance. Due to the increasing prevalence of severe events, both floodplain hazard layers were identified as a concern.

Table PLN.15: Improvements in the Floodplain

YEAR	VALUE OF IMPROVEMENTS IN FLOODPLAIN	NUMBER OF IMPROVEMENTS AFFECTED	NUMBER OF IMPROVEMENTS IN COMMUNITY	PERCENTAGE OF AFFECTED IMPROVEMENTS
2016	\$151,278,833	198	5,984	3.3%
2020	\$176,737,040	225	7,503	2.9%

Source: Sarpy County Assessor

Repetitive Losses

According to FEMA as of March 2020, Papillion has 110 NFIP policies in-force for \$33,493,400. The city has also reported one total loss claim with a payout of \$5,408.57. According to the City and NeDNR as of February 2020, there are no repetitive flood loss properties in the City of Papillion.

Economic Impact

A HAZUS analysis of the city for anticipated economic losses from business interruptions indicated the city would experience more than \$60.5 million in revenue during a 1% annual flood event.

The Future

Flood events are likely to continue into the future and impacts will be exacerbated by climate change. Worsening climate change conditions may cause more frequent and more severe hazard type events and/or cause undue stress and pressure on flood management resources. The city has identified the need to limit development in the floodplain and all future developments must go through a permitting process.

Local concerns regarding this hazard include the health and safety of residents, property damages, impacts to critical facilities, and the resources to clean up. The local planning team indicated the majority of damages and issues from flooding come from basement intrusion rather than overland flooding. The well field that serves the city has not experienced flooding issues; however, the access roads are lower and have washed out during past events including during the March 2019 flood event. The City is prioritizing elevating access roads to the well field and

has submitted a Notice of Intent to NEMA for this project. Additionally, the levee around the wellfield on the left bank of the Platte River is not currently accredited for FEMA mapping purposes or accepted into the PL 84-99 program by USACE. The City is currently evaluating accreditation needs.

Sarpy County has a Flood Insurance Study dated May 3, 2010 which includes Bellevue, Gretna, La Vista, Papillion, and Springfield. The study notes principal flood problems include heavy rainfall, snowmelt, or combinations on the Missouri River, Platte River, and the Elkhorn River. Flooding along Big Papillion Creek, Buffalo Creek, Papillion Creek, South Branch Papillion Creek, Springfield Creek, and West Papillion Creek normally occurs from heavy rainfall. The Missouri River historically was a major flood problem for Sarpy County. This, however, has changed considerably since the construction of six dams and reservoirs on the Missouri River in the Dakotas and Montana. The completion of Missouri River Levee Unit R-616 in May 1979 (Reference 13) protects from flooding that part of Sarpy County located downstream from the City of Bellevue extraterritorial zoning limits to Papillion Creek. Missouri River Levee Unit R-613 is located between Papillion Creek and the Platte River. These flood control structures eliminated the threat of a 0.2-percent-annual-chance flood from the Missouri River for those areas of Sarpy County and the City of Bellevue landward of these levee systems. However, due mainly to tributary inflow downstream from the main stem dams and ice conditions, those areas of Sarpy County and Bellevue riverward of the levee system are subject to flooding. These areas include agricultural areas, recreational areas, residential areas, and barge terminals. The Platte River has also historically been a major flood problem for Sarpy County. Unfortunately, unlike the Missouri River, few flood control measures exist along the Platte River that reduce flood damages. Ice conditions on the Missouri River, Platte River, and Elkhorn River can also have a significant effect on both the degree of flooding and frequency of flooding in Sarpy County. Flood protection measures primarily include dams, reservoirs, and levees along major waterways. The Papio-Missouri River NRD has had a continuing program since 1968 to construct channel and levee improvements along Papillion Creek and Big Papillion Creek. These improvements are complete from Capehart Road in Bellevue, Nebraska, upstream through Sarpy County except for tie-back levees along Mud Creek, and a short portion on the right bank upstream from the West Papillion Creek confluence. Channel straightening by local interests has occurred on Papillion Creek, Big Papillion Creek, and West Papillion Creek, and on portions of Buffalo Creek, Springfield Creek, Mud Creek, Betz Road Ditch, and Squaw Creek. Tieback levees have been constructed along the downstream portions of Mud Creek, Betz Road Ditch, and Squaw Creek, also by local interests. Additionally, Papillion is included in the Big Papillion-Mosquito Watershed Flood Risk Report (9/12/2016). The report utilized HAZUS to estimate potential losses for flood event scenarios. For the City of Papillion the inventory estimated value was \$5,364,400,000.

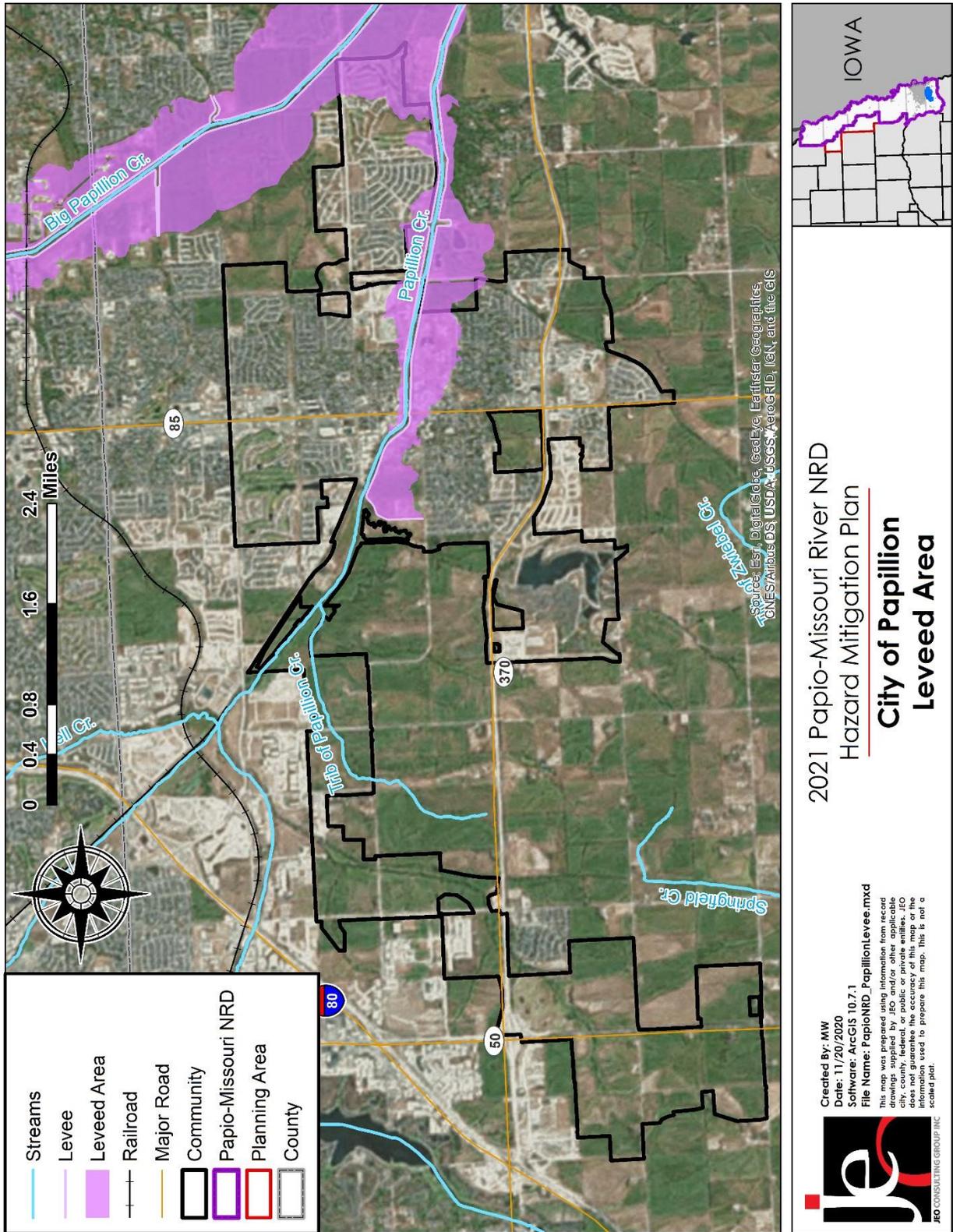
Levee Failure

Levee failure is the top hazard of concern for the City and a high priority. The March 2019 flood event significantly impacted levee systems across the state. The levees in or near Papillion include the West Papio Left Bank and Big Papio Right Bank levees. The Papio-Missouri River NRD is the sponsor for these levees. Improvements or changes to the levee systems would require coordination efforts between the city, the NRD, and the Army Corps of Engineers. An accreditation process is needed for both the left and right bank levees systems on West Papio Creek. The City is currently pursuing funding opportunities for this process. While the City of Papillion's surrounding levees performed as expected and no major breaches occurred in March 2019, if a levee were to fail the impacts would be significant. A significant section through the center of the city is located in a levee failure inundation risk area, including several critical facilities such as the EOC. Any failure to the surrounding levees would cause significant loss to property,

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residential homes, and endanger the safety of residents. Additional levee related data developed by USACE can be viewed through the NLD (<https://levees.sec.usace.army.mil/#/>).

Figure PLN.5: Leveed Areas in Papillion



High Winds and Tornadoes

High winds and tornadoes have the potential for significant damages and loss of life and therefore, pose a high concern for the community. The NCEI reported a 2006 tornado in Papillion. The tornado had a magnitude of F0 and did not have any reported damages. Additionally a tornado in 2017 occurred near Bellevue during Papillion Days. High winds and severe thunderstorm impacts were felt in Papillion including hail and tree damage. The library roof and water treatment plant sustained hail and tree damage. Residents attending Papillion Days were sheltered at the Middle School. Although Papillion has not experienced significant damages due to tornadoes in the past, these storms have the potential to cause loss of life, property damages, and power outages. Papillion does not have any certified safe rooms but several community shelters have been identified. Hardened shelters are available at the community center and local schools. The city is currently evaluating the need for additional parking garages in the downtown area which may include sheltering locations. These would be especially useful during sporting events or other outdoor events. There are outdoor warning sirens located throughout the city which are managed by Sarpy County Emergency Management.

Severe Thunderstorms

Severe thunderstorms are a part of the local climate and occur frequently in Papillion. Severe thunderstorms include heavy rain, hail, lightning, and thunderstorm winds. Fifty severe thunderstorm events have been reported in Papillion since 1996 with \$255,500 in reported damages. Critical municipal records are protected with surge protectors on electronic devices. Many critical facilities have backup power generators; however the Papillion Senior Center has been identified as needing a generator. The 2017 Bellevue tornado also brought severe thunderstorm impacts to Papillion. The local planning team noted older portions of town have above ground powerlines which have sustained damages in the past and have been at risk. All new construction is required to have buried power lines and older lines are repaired as needed. City buildings, water treatment plant, and radio towers have lightning rods, but many have rooftop utilities at risk during storm events

Severe Winter Storms

Severe winter storms happen annually in Papillion. The NCEI reports events at the county level with Sarpy County reporting 85 severe winter storm events and over \$8 million in property damages. Local concerns include loss of life, keeping roads usable, and power outages. The City has grown over the past five years with additional snow removal requirements. Snow removal on streets are cleared by: Papillion Public Works in city limits and the surrounding areas and Nebraska Department of Transportation on state highways. Currently snow removal resources are sufficient for the city; however, any future development may require additional resources and equipment. The city grows primarily through annexation of Sanitary Improvement Districts, and the City is required to provide full services to the area. Older powerlines throughout town are at risk of damage or being downed due to ice accumulation or blizzard events. New construction requires buried powerlines and old lines are repaired and replaced as needed.

Social Media Engagement

The Papio-Missouri River NRD launched a “Would You Rather” themed social media campaign during the 2021 HMP update to garner local input on hazard priorities, residential capabilities, and action items residents would like to see the community take in the future to reduce potential impacts from hazard events.

The City of Papillion had 86 reported respondents in the campaign (based upon general zip code analysis). According to those respondents, the top hazards of concern for them (from most concerning to least concerning) were: High Winds and Tornadoes, Severe Thunderstorms,

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Drought and Extreme Heat, Flooding, Severe Winter Storms, Agricultural Plant and Animal Disease, Wildfire, and Earthquakes.

Some ways residents have indicated they had reduced their personal risk to hazard events included: identifying safe places at home for hazard events (82 respondents), attended safety related trainings or certifications (64 respondents), signed up for emergency alerts (64 respondents), developed a Home Emergency Action Plan (44 respondents), and used fire resistant building materials on their homes (35 respondents).

The local respondents noted text alerts, social media posts, and updates to the community website or Papio-Missouri River NRD website are the preferred methods of notification for major events. Top priorities for identify hazard mitigation actions (from most important to least important) were: protecting critical facilities, protecting people, increasing cooperation between emergency response agencies, improving emergency response capabilities, improving community notification and weather alert systems, preventing development in hazardous areas, protecting natural environments, protecting private property, protecting historical/cultural sites, and protecting community assets.

Noted actions to improve hazard mitigation in the community included: prevent development in flood prone areas (adjacent to Papio Creek and tributaries) and practice sustainable development; install other flood protection structures and maintain integrity of current flood protection structures; light up and ensure house numbers are large so people can locate homes quickly; improve and/or expand emergency alert and early warning systems including text alerts and social media alerts; provide additional education programs or training to residents for actions to take before, during, and after a major event; remove hazardous trees or assist homeowners in tree removal; designate and educate residents of established community shelters and supply depots (for example Papillion Lansing for south side of town, Cabella's for north side of town); develop a community plan to address climate change and sustainable development; and pre-treat and assist residents with snow or debris removal during or after severe storms.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Papillion has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The City has a mayor and an eight member council and the following offices.

- Arts Council
- Board of Adjustment
- Board of Equalization
- Board of Health
- Building Department
- City Administration
- Civil Service Commission
- Clerk
- Finance Department
- Fire Department
- Golf Department
- Human Resources
- Legal Department

- Library Board
- Parks Department
- Planning Commission
- Planning Department
- Police Department
- Public Works
 - Include divisions of water, streets, sewer, and engineering Recreation Department
- Tree Board

Capability Assessment

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

Table PLN.5: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
PLANNING & REGULATORY CAPABILITY	Comprehensive Plan	Yes
	Capital Improvements Plan	Yes
	Economic Development Plan	No
	Emergency Operational Plan	Yes
	Floodplain Management Plan	Yes
	Storm Water Management Plan	Yes
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
	Building Codes	Yes
	National Flood Insurance Program	Yes
	NFIP Community Rating System (CRS)	Yes (Class 7)
	Other (if any)	
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	No
	Mutual Aid Agreement	Yes
	Other (if any)	
	FISCAL CAPABILITY	Capital Improvement Plan/ 1 & 6 Year plan
Applied for grants in the past		Yes
Awarded a grant in the past		Yes

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

OVERALL CAPABILITY	LIMITED/MODERATE/HIGH
FINANCIAL RESOURCES NEED TO IMPLEMENT MITIGATION PROJECTS	Moderate
STAFF/EXPERTISE TO IMPLEMENT PROJECTS	High
COMMUNITY SUPPORT TO IMPLEMENT PROJECTS	High
TIME TO DEVOTE TO HAZARD MITIGATION	Limited

Plan Integration

The Local Emergency Operations Plan (LEOP) for Papillion, which was last updated in 2016, is an annex of Sarpy County's LEOP. The LEOP is anticipated to be updated in 2021. It is an all hazards plan that does not address specific natural and man-made disasters. It provides a clear assignment of responsibility in case of an emergency.

Papillion's Comprehensive Plan was last fully updated in 2002, but was under revision as of 2021. The plan encourages compact building design to make efficient use of land and resources, which in the process preserves more open space. It also makes for more efficient use of the infrastructure and is more economical for maintaining water, sewer, and other utilities. The plan goes further to incorporate smart growth principles which means the city incorporates the waterway, prairie and wetland preservation into the city's overall growth concept. Also, the city is encouraged to partner with organizations such as the P-MRNRD on projects. The plan also discusses storm drainage and flood prone areas. It mentions a few projects, including the West Branch Channel Project, which enlarged the channel to allow for additional flow capacity and reduced danger of flooding. One of the goals discussed in the plan emphasizes the importance of protecting housing areas from major intrusions and hazards.

Papillion's Floodplain Ordinance includes the flood fringe and floodway overlay districts that set conditions for land use within these districts. It requires that all new construction or substantial improvements of residential structures have the lowest floor elevated to or above one foot above the base flood elevation. Since the ordinance includes a one-foot freeboard, this along with other floodplain management activities should assist in reducing losses in current and possibly future flooding conditions. Development of residential structures in the floodway are prohibited. Materials that are buoyant, flammable, explosive, or could be injurious are prohibited from being stored in the floodplain. The storage of material is allowed if firmly anchored to prevent flotation during a flood.

The city updates its floodplain ordinances, zoning ordinances, and subdivision ordinances on an as needed basis. The city has adopted the International Building Code, 2012 edition, but intends to adopt the 2018 edition by the end of 2021. The city's annual municipal budget and Capital Improvements Plan are reviewed annually and provide an opportunity to identify potential funding for hazard mitigation projects.

Plan Maintenance

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

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the Floodplain Administrator, City Engineer, Fire Chief, Planning Commission, and County Emergency Manager. The local planning team will review the plan no less than annually and will include the public in the review and revision process by: updating the city website, social media posts, posting in the city newsletter and sharing information at city council meetings.

Mitigation Strategy

Completed Mitigation Actions

MITIGATION ACTION		COMMUNITY RATING SYSTEM CONTINUATION
DESCRIPTION	Maintain status as an NFIP Community Rating System (CRS) community to reduce flood insurance premiums.	
HAZARD(S)	Flooding	
CATEGORY OF FLOODPLAIN MANAGEMENT	Property Protection	
STATUS	The City is an active and ongoing community in the Community Rating System. The city will continue to participate in the program.	

MITIGATION ACTION		ELEVATE PAD MOUNTED TRANSFORMERS AND SWITCH GEAR
DESCRIPTION	Elevate pad mounted transformers and switch gear above base flood elevation to eliminate damages from flooding	
HAZARD(S)	Flooding	
CATEGORY OF FLOODPLAIN MANAGEMENT	Property Protection	
STATUS	This project was completed in June 2020 with partnerships with OPPD. Structures were relocated out of the floodplain.	

MITIGATION ACTION		FLOODPLAIN REGULATION ENFORCEMENT/UPDATES
DESCRIPTION	Continue to enforce local floodplain regulations for structures located in the 1 percent annual chance floodplain. Continue education of building inspectors or Certified Floodplain Managers.	
HAZARD(S)	Flooding	
CATEGORY OF FLOODPLAIN MANAGEMENT	Preventive	
STATUS	The city is currently a CRS community Class 7. The city has floodplain ordinances in place to comply with CRS requirements. Current regulations and codes are sufficient for the city and no additional freeboard requirements are needed at this time.	

MITIGATION ACTION		IMPROVEMENTS TO FLOOD WARNING SYSTEM
DESCRIPTION	Update equipment, ensure equipment is in a secure location, and install additional stream gages.	
HAZARD(S)	Flooding	
CATEGORY OF FLOODPLAIN MANAGEMENT	Emergency Services	
STATUS	Papio-Missouri River NRD has agreements in place with NWS and USGS for stream gage monitoring and maintains a flood warning system which notifies the city during flood hazard events. Gages and equipment have been updated within the last five to ten years. This system meets the needs of the city for notification.	

Continued Mitigation Actions

CRS Related Mitigation Actions

The local planning team met to discuss a wide range of possible mitigation activities that the city could include in the HMP to improve flood resiliency. As required for Activity 510 *Floodplain Management Planning* for consideration of CRS points, the discussion included activities that are currently implemented or ongoing that should be added to this HMP as well as activities that were not selected as they were either inappropriate for the community or not feasible. As part of the CRS process, the local planning team for the City of Papillion identified mitigation strategies to address the six categories of mitigation actions¹⁴. These actions and subsequent descriptions of each are listed below:

Categories of Floodplain Management

- Preventive Measures
 - Low Impact Development
- Property Protection
 - Facility Flood Proofing
 - Well Field Improvements
- Natural Resource Protection
 - Bank Stabilization for Erosion Control
 - Floodplain Management
- Emergency Services
 - Emergency Management Exercise
- Structural Flood Control Projects
 - Channel Stabilization
 - Levee Certification and Accreditation
- Public Information
 - Risk Communication

MITIGATION ACTION	BANK STABILIZATION FOR EROSION CONTROL
DESCRIPTION	Stabilize banks along streams and rivers. This may include, but is not limited to: reducing bank slope, addition of riprap, installation of erosion control materials/fabrics.
HAZARD(S)	Flooding
CATEGORY OF FLOODPLAIN MANAGEMENT	Natural Resource Protection
ESTIMATED COST FUNDING	\$200,000+ City budget, FMA, BRIC
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Public Works
STATUS	The Tara Hills drainage area and Midland Creek have been identified as areas of concern. Additional engineering analysis is needed to determine erosion control needs.
MEETS EXPECTATIONS	Yes

¹⁴ FEMA. October 2018. "Mitigation Planning and the Community Rating System Key Topics Bulletin." https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-planning-and-the-community-rating-system-key-topics-bulletin_10-1-2018.pdf.

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MITIGATION ACTION		CHANNEL STABILIZATION
DESCRIPTION	Channel stabilization at Midland Creek	
HAZARD(S)	Flooding	
CATEGORY OF FLOODPLAIN MANAGEMENT	Structural Projects	
ESTIMATED COST	\$2,500,000	
FUNDING	City Budget, P-MRNRD	
TIMELINE	5+ years	
PRIORITY	Low	
LEAD AGENCY	Joint project with Papio-Missouri River NRD	
STATUS	This project has not yet been started. The creek and areas adjacent to it are all private property and would require homeowner assistance/buy-in.	
MEETS EXPECTATIONS	Yes	

MITIGATION ACTION		EMERGENCY MANAGEMENT EXERCISE
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)	Flooding, Dam Failure, Levee Failure, High Winds and Tornadoes, Chemical Spills	
CATEGORY OF FLOODPLAIN MANAGEMENT	Emergency Services	
ESTIMATED COST	\$10,000	
FUNDING	City budget, BRIC, HMGP	
TIMELINE	5+ years	
PRIORITY	Low	
LEAD AGENCY	Planning Department, Emergency Management, Fire and Rescue	
STATUS	The city participates in the P-MRNRD sponsored dam failure exercises as required by the state. Additional emergency exercises have been conducted by Fire and Rescue and Police for active shooter scenarios. Additional flood hazard specific and evacuation exercises are needed in the future.	
MEETS EXPECTATIONS	Yes	

MITIGATION ACTION		FACILITY FLOOD PROOFING
DESCRIPTION	Explore the possibility of flood proofing for facilities which fall into the one percent annual chance floodplain.	
HAZARD(S)	Flooding	
CATEGORY OF FLOODPLAIN MANAGEMENT	Property Protection	
ESTIMATED COST	Varies	
FUNDING	City budget, BRIC, FMA	
TIMELINE	5+ year	
PRIORITY	High	
LEAD AGENCY	Public Works	
STATUS	Parks and Recreation Department moved into a building at 305 E Lincoln St which is within the floodplain. This structure should be evaluated for flood proofing needs. Additional structures in the floodplain include the police department and fire station #3. While these facilities were not impacted during the March 2019 flood event they may be at risk of flood damages from West Papillion Creek and should be evaluated for flood proofing needs.	
MEETS EXPECTATIONS	Yes	

MITIGATION ACTION		FLOODPLAIN MANAGEMENT
DESCRIPTION	Preserve natural and beneficial functions of floodplain land through measures such as retaining natural vegetation, restoring streambeds, and preserving open space in the floodplain.	
HAZARD(S)	Flooding	
CATEGORY OF FLOODPLAIN MANAGEMENT	Natural Resource Protection	
ESTIMATED COST	Varies	
FUNDING	City budget, Papio Partnership (P-MRNRD), FMA, BRIC	
TIMELINE	2-5 years	
PRIORITY	High	
LEAD AGENCY	Planning Department, P-MRNRD	
STATUS	Floodplain management is an ongoing action with guidance and data management reviewed regularly. The city has included subdivision regulations to protect wetlands (development north of Cornhusker Highway). Currently the NRD is working with other agencies to provide updated stream degradation and setback requirement guidance which will be used by the city to address future needs.	
MEETS EXPECTATIONS	Yes	

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LEVEE CERTIFICATION AND ACCREDITATION	
MITIGATION ACTION	
DESCRIPTION	Work with P-MRNRD and USACE to obtain certification and accreditation for the levee system protecting the City. Through this process evaluate bridges in the community for elevation or closure structure needs.
HAZARD(S)	Levee Failure, Flooding
CATEGORY OF FLOODPLAIN MANAGEMENT	Structural Flood Control Projects
ESTIMATED COST	Unknown
FUNDING	City Budget, P-MRNRD, USACE cost share
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	P-MRNRD, City of Papillion
STATUS	This is a new mitigation action. The City is currently working to identify funding resources for this project.

LOW IMPACT DEVELOPMENT	
MITIGATION ACTION	
DESCRIPTION	Utilize low impact development practices and green infrastructure to reduce flood risk.
HAZARD(S)	Flooding
CATEGORY OF FLOODPLAIN MANAGEMENT	Preventive
ESTIMATED COST	Variable
FUNDING	City budget, BRIC, FMA
TIMELINE	1-2 years
PRIORITY	Medium
LEAD AGENCY	Planning Department
STATUS	The city is currently making revisions to the subdivision ordinance for stormwater drainage needs. Additionally the city participates in the Papio Creek Partnership and South Sarpy Watershed Partnership which assist in guiding future development guidelines or needs. Future HMP updates will determine if additional requirements are needed.
MEETS EXPECTATIONS	Yes

MITIGATION ACTION		RISK COMMUNICATION
DESCRIPTION	Provide information on the floodplain to area residents. Outreach activities may include distributing maps, evacuation plans, environmental education, etc.	
HAZARD(S)	Flooding	
CATEGORY OF FLOODPLAIN MANAGEMENT	Public Information	
ESTIMATED COST	\$2,500	
FUNDING	City budget	
TIMELINE	5+ years	
PRIORITY	High	
LEAD AGENCY	Planning Department	
STATUS	The city conducts regular flood related education and outreach efforts including floodplain informational brochures to all residents every spring through utility bills through CRS Activity 310. The city also coordinates with the P-MRNRD to share other floodplain information, insurance information, and floodplain maps as appropriate on websites and social media. Continued public engagement and education is an ongoing action.	
MEETS EXPECTATIONS	Yes	

MITIGATION ACTION		WELL FIELD IMPROVEMENTS
DESCRIPTION	Install backup generators for wells for redundant power in case of hazard event.	
HAZARD(S)	Flooding, Severe Thunderstorm, Severe Winter Storms, Tornadoes and High Winds	
CATEGORY OF FLOODPLAIN MANAGEMENT	Property Protection	
ESTIMATED COST	\$35,000+	
FUNDING	City Budget, HMA	
TIMELINE	2-5 years	
PRIORITY	Medium	
LEAD AGENCY	Public Works Department	
STATUS	This is a new mitigation action.	

Continued non-CRS Mitigation Actions

MITIGATION ACTION		BACK-UP POWER GENERATOR
DESCRIPTION	Provide a portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations, and other critical facilities and shelters.	
HAZARD(S)	All hazards	
ESTIMATED COST	\$40,000+/generator	
FUNDING	City budget, HMGP, BRIC	
TIMELINE	2-5 years	
PRIORITY	Medium	
LEAD AGENCY	Public Works	
STATUS	Additional backup generators are needed for the wells and booster stations.	

MITIGATION ACTION		STORM SHELTERS/SAFE ROOMS
DESCRIPTION	Construct new or reinforce existing storm shelters at Halleck, City and Schwer Parks and the community center	
HAZARD(S)	Severe Thunderstorms, High Winds and Tornadoes	
ESTIMATED COST	\$300,000	
FUNDING	City Budget	
TIMELINE	5+ years	
PRIORITY	Medium	
LEAD AGENCY	Parks Department, Public Works Department	
STATUS	Current park structures at all three parks need to be reinforced to withstand severe weather events. The new community center has a designated shelter location which also needs to be reinforced.	

Removed Mitigation Actions

MITIGATION ACTION		BRIDGE ELEVATION
DESCRIPTION	Elevate the Washington Street and 66 th Street bridges to reduce flood risk.	
HAZARD(S)	Flooding	
CATEGORY OF FLOODPLAIN MANAGEMENT	Structural Projects	
REASON FOR REMOVAL	This project was removed and replaced by a levee accreditation project. Accrediting the levee will help determine downstream flood mitigation needs.	

COMMUNITY WIDE MASTER PLAN TO PRIORITIZE ALL FLOOD PROJECTS	
MITIGATION ACTION	
DESCRIPTION	Identify potential flooding sources and flood-vulnerable areas. Explore solutions and prioritize projects.
HAZARD(S)	Flooding
CATEGORY OF FLOODPLAIN MANAGEMENT	Preventive
REASON FOR REMOVAL	Flood problem areas and solutions are addressed by other planning avenues including the Papio watershed plan and the Papio Partnership stream degradation modeling effort on the Papio Creek.
DEVELOP FLOOD ASSISTANCE STRATEGIES	
MITIGATION ACTION	
DESCRIPTION	Develop strategies to provide necessary services in the event of flooding.
HAZARD(S)	Flooding
CATEGORY OF FLOODPLAIN MANAGEMENT	Emergency Services
REASON FOR REMOVAL	This action was identified as no longer a need for the city. Emergency services plans and actions are described in the county LEOP and through response agency plans.
MAINTAIN GOOD STANDING IN THE NFIP	
MITIGATION ACTION	
DESCRIPTION	Maintain good standing with National Flood Insurance Program (NFIP) including floodplain management practices/ requirements and regulation enforcements and updates.
HAZARD(S)	All
CATEGORY OF FLOODPLAIN MANAGEMENT	Property Protection
REASON FOR REMOVAL	While the community will continue to participate in the NFIP, this project can be removed as it is considered an ongoing effort.
SNOW BLOWER ATTACHMENT	
MITIGATION ACTION	
DESCRIPTION	Purchase snow blower attachment to aid in response efforts after a hazard event
HAZARD(S)	Severe Winter Storms
REASON FOR REMOVAL	This project was determined to no longer be a need for the community. Current snow removal resources are sufficient but may be reevaluated due to future growth.