

Special Districts Appendix

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COMMUNITY PROFILE

CITY OF ASHLAND

Lower Platte South Natural Resources District
Multi-Jurisdictional Hazard Mitigation Plan Update

2020

Local Planning Team

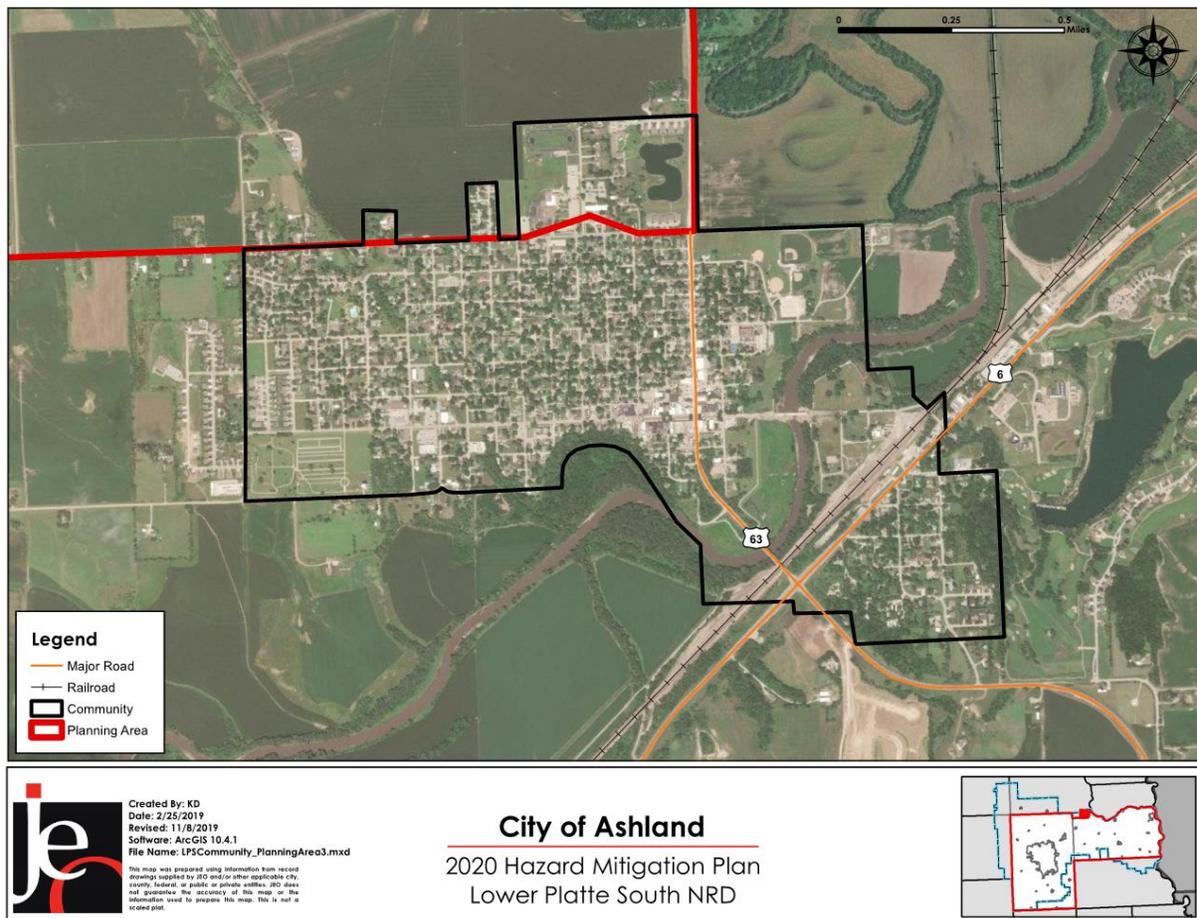
Table ASH.1: Ashland Local Planning Team

Name	Title	Jurisdiction
Jessica Quady	City Administrator	City of Ashland
Rick Grauerholz	Mayor	City of Ashland

Location and Geography

The City of Ashland is in the southeast corner of Saunders County, approximately 1.6 miles west of Lancaster County line and 2.5 miles southwest of the Platte River. The City covers an area of 1.13 square miles. There are three creeks near the town that form a confluence less than a mile northeast of town that flows into the Platte River. The largest, and main stem, waterway is the Salt Creek, which flows west-to-east. The largest tributary branch is the Wahoo Creek, which flows north of the town to the east. The smallest tributary and northernmost branch of the Clear Creek.

Figure ASH.1: City of Ashland



Transportation

The City of Ashland has three major transportation corridors. The first is Interstate 80, which runs east-and-west 3.25 miles southeast of town. This corridor averages 42,040 vehicles per day. The

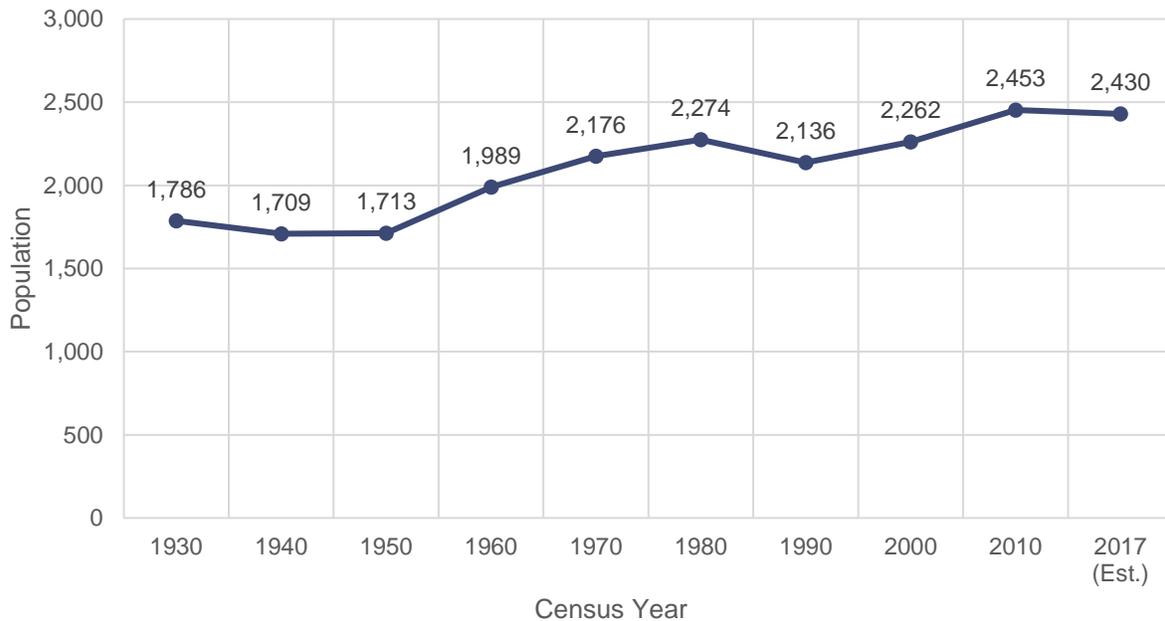
second is US Highway 6, which runs east-and-west on the southeast side of town. This corridor averages 5,895 vehicles per day. The third is Nebraska Highway 66, which runs north-and-south through the center of town. This corridor intersects with US Highway 6 and averages 1,240 vehicles per day.¹ There is one rail line running through the town owned by Burlington-Northern-Santa Fe (BNSF). The tracks run east-and-west and the line mainly hauls agricultural and energy commodities.² 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.

There are two main transportation routes of main concern to local mitigation planners – US Highway 6 and Interstate 80. The rail lines running through town is also of concern due to the large volume of hazardous materials including petroleum products, fertilizer, propane, and coal that are transported through the City. There have not been any recent transportation incidents lately.

Demographics

Ashland’s population grew from about 2,262 people in 2000 to 2,430 people in 2017, an increase of 168 people and total gain of 7.4%. This is important because a growing population is associated with increased hazard mitigation and emergency planning requirements. Ashland’s population accounted for 11.6% of Saunders County’s population of 20,953 in 2017.³

Figure ASH.2: Population 1930 - 2017



Source: U.S. Census Bureau

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

¹ Nebraska Department of Transportation. "Statewide Traffic Flow Map." Accessed December 2018. <https://dot.nebraska.gov/media/2510/2014-statewide-traffic-flow-map.pdf>.
² Nebraska Department of Roads. "Nebraska Railroads." Accessed December 2018. <http://opportunity.nebraska.gov/files/businessdevelopment/wineqy/NebraskaRailMap.pdf>.
³ United States Census Bureau. "American Fact Finder: S0101: Age and Sex." [database file]. <https://factfinder.census.gov/>.

Section Seven: City of Ashland Community Profile

- **Similarly aged.** The median age of Ashland was 41.1 years old in 2017, compared with the County average of 41 years. Ashland's population grew older since 2009, when the median age was 33 years old. Ashland had a similar proportion of people under 20 years old (28.4%) than Saunders County (27.2%).⁴
- **More ethnically diverse.** Since 2010, Ashland grew more ethnically diverse. In 2010, Ashland's population was 1.2% Hispanic or Latino. By 2017, Ashland's population was 2.5% Hispanic or Latino. During that time, the Hispanic or Latino population in Saunders County grew from 1.9% in 2010 to 2.1% in 2017.⁵
- **More likely to be below the federal poverty line.** The poverty rate in Ashland (8.1% of families living below the federal poverty line) was higher than Saunders County's poverty rate (5.1%) in 2017.⁶

Employment and Economics

The major economic base of Saunders County is a mixture of educational services/health care/social assistance (22.7%), retail (10.5%), and manufacturing (10.5%) In comparison to the County, The City of Ashland economy had:

- **Similar mix of industries.** Ashland major employment sectors, accounting for 10% or more of employment each, were: educational services/health care/social assistance (20.3%), retail (20.3%), and arts/entertainment/recreation/accommodation/food services (11.8%).⁷
- **Lower household income.** Ashland median household income in 2017 (\$57,000) was \$9,015 lower than the County (\$66,015).⁸
- **Similar long-distance commuters.** A total of 36.1% percent of workers in Ashland commuted for fewer than 15 minutes, compared with 31.4% of workers in Saunders County. An additional 45.1% of workers in Ashland commute 30 minutes or more to work, compared to 43.2% of the County workers.⁹

Major Employers

Major employers within Ashland include the school district, the care center, and the assisted living facility. A large percentage of residents commute to Omaha and Lincoln for employment.

Housing

In comparison to Saunders County, Ashland's housing stock was:

- **More renter occupied.** Of occupied housing units in Ashland, 35.1% are renter-occupied compared with 20.9% of renter housing in Saunders County.¹⁰
- **Similar Aged.** Ashland had a similar share of housing built prior to 1970 than Saunders County (48.3% compared to 51.8%).¹¹
- **More multifamily dwellings.** The predominant housing type in Ashland is single family detached (67.9%), which is less Saunders County (86.8%). Ashland contains more multifamily housing with five or more units per structure compared to Saunders County (12.9% compared to 4.8%). Ashland has a larger share of mobile housing (3.6%)

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

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

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

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

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

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

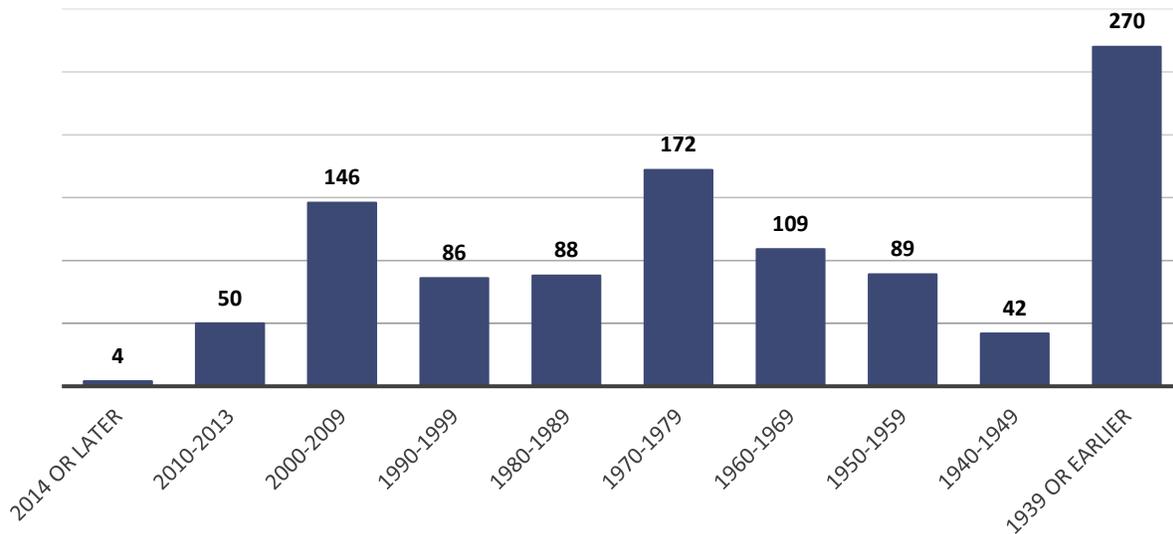
¹⁰ United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov/>.

¹¹ United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov/>.

compared to the County (2.5%).¹² Mobile homes are located along the north edge of the city.

The City has annexed several areas around town to the north, south, and eastern sides of town. Additional areas are expected to be annexed to the west of town in late 2019. These additions have increased the total housing stock in the City which may not be reflected in the U.S. Census Bureau information here. This housing information is relevant to hazard mitigation 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.

Figure ASH.3: Housing Units by Year Built



Source: U.S. Census Bureau¹³

Future Development Trends

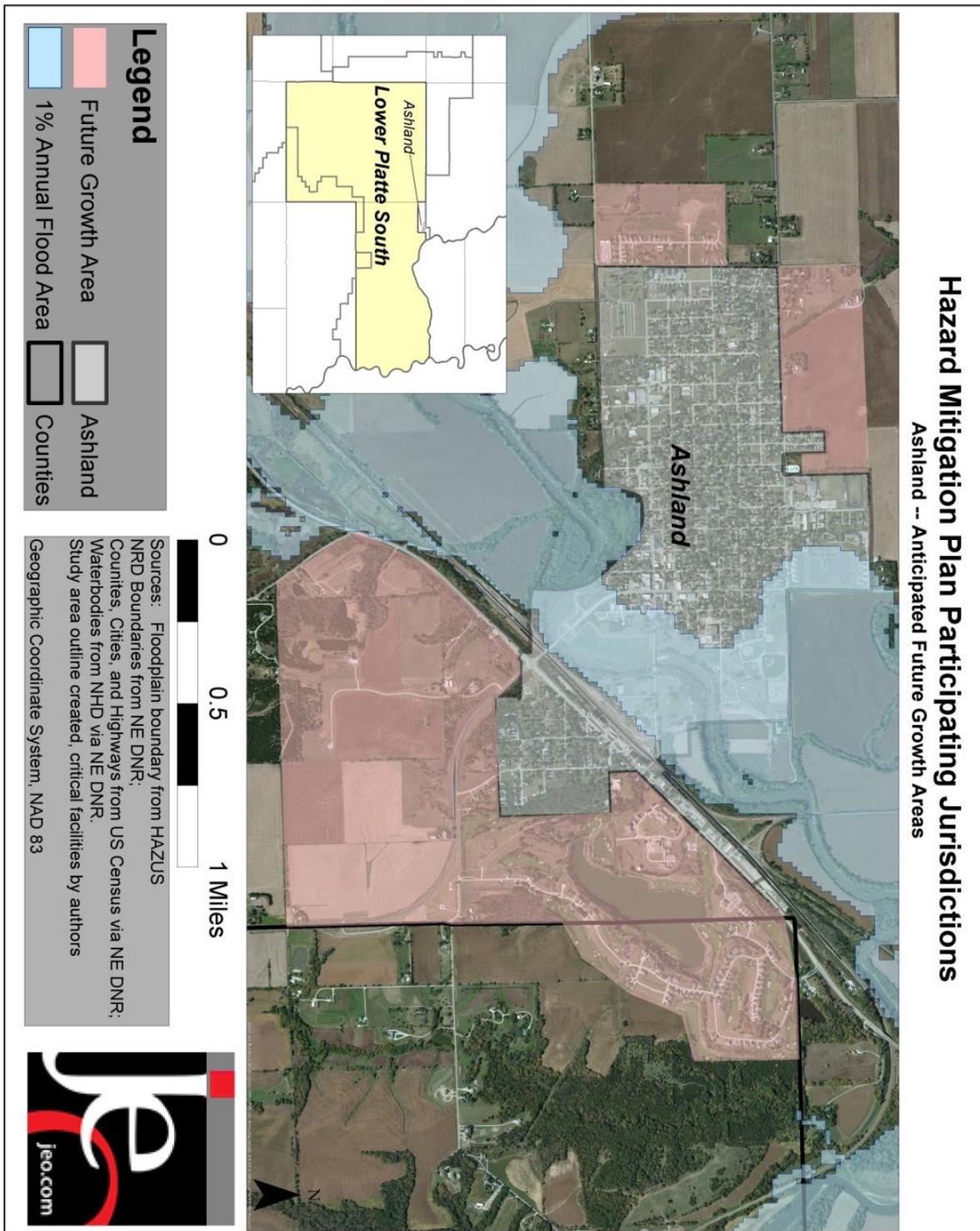
Over the past five years the City of Ashland has seen several changes, including the development of three new subdivisions and additional residential homes. The Silver Street bridge was redesigned and replaced in 2018. The new bridge is designed to help prevent debris accumulation during heavy flow periods. During the 2019 flood event the bridge performed as designed and reduced damage risks for the City. Commercially there are new businesses downtown including a new restaurant and an ongoing effort to develop an older restaurant on the edge of town. The population of Ashland has grown over the past five years. Local mitigation planners attribute this to Ashland’s convenient location between Omaha and Lincoln and the small-town environment.

Within the next five years additional housing divisions on both the north edge and southern end of the City are expected. These potential new developments would be outside of the floodplain. Although there are no specific businesses or industries currently planned, city officials have designated certain areas for commercial redevelopment and several key buildings and businesses are transitioning management.

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

¹³ United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov/>.

Figure ASH.4: Future Land Use Map



Structural Inventory and Valuation

The planning team requested GIS parcel data from the County Assessor as of December 2018. 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.

Table ASH.2: Structural Inventory/Parcel Improvements

Number of Improvements	Total Improvement Value	Mean Value of Improvements per Parcel	Number of Improvements in Floodplain	Value of Improvements in Floodplain
1,052	\$96,437,497	\$91,671	125	\$12,230,932

Source: Nebraska Department of Revenue, Property Assessment Division¹⁴

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 four chemical storage sites in Ashland.

Table ASH.3: Chemical Storage Fixed Sites

Facility Name	Address	In Floodplain (Y/N)
Great Plains Service Inc	642 Highway 6	N
City of Lincoln Water Treatment Plant	401 Highway 6	N
OPPD Substation No 914	Highway 6	N
OPPD Substation No 1214	480 County Road C	N

Source: Nebraska Department of Environment and Energy, 2017¹⁵

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.

The City has two portable generators located at the wastewater treatment facility which can be used to provide power to critical facilities in the case of power failure.

Table ASH.4: Critical Facilities

CF Number	Name	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	American Lutheran Church	Y	N	N
2	Ashland Care Center	N	N	N
3	Ashland Community Resource Center	N	N	N
4	Ashland Middle School	Y	N	N
5	Ashland Police Department	N	N	N

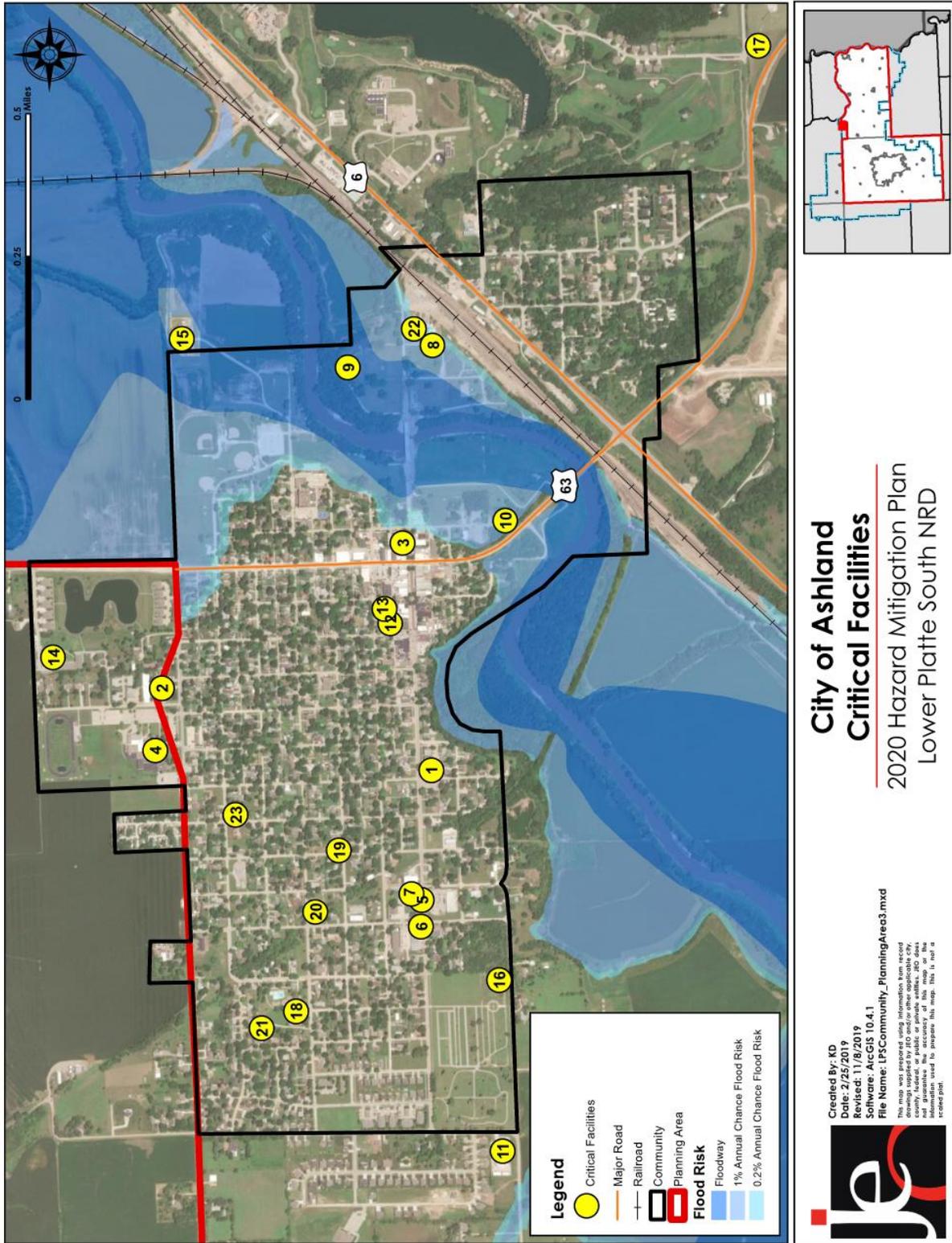
¹⁴ County Assessor. Personal correspondence, [DATE].

¹⁵ Nebraska Department of Environmental Quality. "Search Tier II Data." Accessed December 2018. <https://deq-iis.ne.gov/tier2/search.faces>.

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CF Number	Name	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
6	Ashland Rescue Squad & Fire Department	N	Y	N
7	City Clerk Office	N	N	N
8	City Storage and Dog Kennel	N	N	Y (1%)
9	Lift Station #1	N	N	Y (Floodway)
10	Lift Station #2 (south of town)	N	N	Y (1%)
11	OPPD	N	N	N
12	OPPD	N	N	N
13	OPPD	N	N	N
14	Oxbow Assisted Living Facility	N	Unknown	N
15	Wastewater Treatment Facility	N	Y	Y (1%)
16	Water Tower	N	N	N
17	Water Tower #2	N	N	N
18	Well House	N	N	N
19	Well House	N	N	N
20	Well House	N	N	N
21	Well House (Clay and 25 th)	N	N	N
22	Well Pumping Station	N	N	Y (1%)
23	Well Pumping Station	N	N	N

Figure ASH.5: Critical Facilities



Historical Occurrences

See the Lower Platte South NRD 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.

Drought

Drought is a major concern to the City of Ashland, particularly in regards to water quantity for residents and infrastructure. While Ashland did not implement water restrictions, the 2012 drought depleted local water supplies. Locally drought is defined as a lack of normal water supplies and is defined by the City Administrator, City Council, and Utilities Superintendent. Currently the City does not have any drought triggers to activate drought response procedures outlined. City residents have water meters installed and the City monitors overall water consumption and supply levels. Areas surrounding Ashland have experienced high nitrate levels, but the City has not. However, in times of drought nitrates may pose a larger risk to the City. The City is in the process of planning a new well field to the north and west scheduled to start in 5+ years.

Flooding

Flooding is a primary concern for the City, particularly riverine flooding. The areas around the Salt Creek and Wahoo Creek are the most prone to flooding. The majority of these areas are owned by either the City or LPSNRD and house the wastewater treatment facility, ball fields, and concession stands. The ball field concessions and water treatment facility have been elevated to above base flood elevation. During the 1980's the City performed an extensive buy-out and relocation project on Silver Street from 7th to 9th Streets. In total, 28 homes and five businesses were either demolished or relocated. Two trailer parks were also removed from the area and distributed to other areas in the City.

There have been three significant flooding events locally that impacted the City of Ashland. In 2011 riverine flooding resulted in expensive debris removal that was contracted out. The Silver Street bridge caused a debris clog and was replaced in 2017/2018. In 2015 riverine flooding wiped out a limestone trail and caused damage to the ball field and wastewater treatment facility. There was also a required debris removal process which was costly to the local tax base. Finally, during the March 2019 flood event water approached the city limits but did not catastrophically impact the city. There were some damages to the trail, ballfields, and the wastewater treatment facility. The Lincoln wellfield located outside of Ashland was severely inundated during the March event; however, the damages in 2015 were much more extensive than during the March 2019 flood event.

Levee Failure

The City of Ashland does not have a Corps-certified levee and relies on a berm on the west side of the Salt Creek along the Main Street bridge which overtopped in 2015. The berm is mowed regularly by the City and there are three drains underneath it which are regularly cleared out. The 2015 flood event washed away the limestone trail on top of the berm but did not cause significant structural damage to the berm itself. The trail was replaced after the event but was damaged again during the 2019 flood event. If the berm were to fail it would impact downtown, houses near the berm, an empty lot owned by the city, and a private campground located in the floodplain. The

City has several concerns regarding flooding, notably the lack of certification for the berm. City officials only discovered the uncertified levee due to repairs on the Silver Street bridge.

Tornadoes

While no recent tornado events have impacted the City, concerns exist for tornadoes due to the potential for catastrophic damage. Local municipal records for accounting and billings are backed up on a cloud system in the case of power failure or equipment damage, while other city records are kept on a separate hardware backup. The alert sirens in Ashland are operated by Saunders County dispatch but can also be operated by the local fire department in emergencies. While the newest developments in Ashland do not have outdoor warning sirens, the City is currently working to require future developments to require sirens. A new alert siren has been installed for the Iron Horse development and a siren is currently in development for the White Tail development on the south side of town. There are no FEMA certified safe rooms in Ashland, but the American Legion Hall and residential basements are used as shelter locations. Saunders County Emergency Management offers text alerts for severe weather. The City has mutual aid agreements in place with local fire departments and Saunders County.

Governance

A community’s governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Ashland has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. Ashland has four city council members and the following offices that may help implement mitigation actions.

- Mayor
- City Council
- City Administrator
- Clerk
- Public Works Director
- Police Chief
- Fire Chief
- Rescue Chief
- Sewer/water Superintendents
- Street Superintendent
- Engineer
- Building Inspector
- Zoning Administrator

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 ASH.5: Capability Assessment

Survey Components/Subcomponents		Yes/No
<i>Planning</i>	Comprehensive Plan	Yes

Section Seven: City of Ashland Community Profile

Survey Components/Subcomponents		Yes/No
<i>& Regulatory Capability</i>	Capital Improvements Plan	Yes
	Economic Development Plan	No
	Emergency Operational Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
	Building Codes	Yes
	National Flood Insurance Program	Yes
	Community Rating System	No
Other (if any)	Municipal Codes	
<i>Administrative & Technical Capability</i>	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	Yes
	Chief Building Official	Yes
	Civil Engineering	Yes – contracted
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	Yes
	Mutual Aid Agreement	Yes (Fire & Rescue, Police)
	Other (if any)	
<i>Fiscal Capability</i>	Capital Improvement Plan/ 1 & 6 Year plan	Yes
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	
<i>Education & Outreach Capability</i>	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

Survey Components/Subcomponents		Yes/No
	Tree City USA	Yes
	Other (if any)	

Overall Capability	Limited/Moderate/High
Does your community have the financial resources needed to implement mitigation projects?	Moderate
Does your community have the staff/expertise to implement projects?	Moderate
Does your community have the community support to implement projects?	High
Does your community staff have the time to devote to hazard mitigation?	Moderate

Plan Integration

The City last updated their Comprehensive Plan in 2014 and the plan includes a floodplain ordinance which limits development in the floodplain and requires strict adherence to current development requirements including elevation. The Comprehensive Plan also directs development away from primary transportation routes or hazardous areas. Open parks and green space are encouraged in flood hazard areas which has been a major emphasis for the City.

The Zoning and Subdivision Ordinances were last significantly updated in 2015 but will undergo revisions on an as-needed basis. The ordinances include strict permitting requirements for development in the floodplain and limit population density in the floodplain. The City only has one identified wetland area which is located in the floodway and is protected from being filled.

Ashland has an annex as part of the Cass County Local Emergency Operations Plan which was last updated in 2014 and is currently undergoing revision. The LEOP outlines hazards of top concern, assigns specific responsibilities to communities, identifies shelter locations, and identifies evacuation protocols.

Ashland has adopted the 2012 International Building Codes and follows the City of Omaha’s code updates. The City will make small adjustments on a as needed basis. All new developments require buried power lines according to the updated codes. The City is planning to adopt the 2018 IBC codes by the end of 2020.

The City’s Capital Improvements Plan is updated annually with the annual municipal budget. Most projects identified in the CIP revolve around water, sewer, and street improvements. The City has discussed possible options to upsize or replace culverts in town. Two large projects were recently completed – the replacement of the Silver Street bridge in winter 2018/2019 and a new library was constructed in town. The City is currently in the process of developing both a Wellhead Protection Plan and a Water Source Study to evaluate current drinking water supply. Regular maintenance and improvements to the City’s water pipe systems is included in the CIP and annual budget. Future updates to the plan will emphasize updates to the public work facilities. While the City’s overall budget has increased slightly over the past decade, the local planning team indicated the majority of funds are earmarked for ongoing projects. New projects would require reallocation of the annual budget based on priorities.

Mitigation Strategy

Ongoing and New Mitigation Actions

Mitigation Action	Alert Sirens
Description	Evaluate and improve current warning systems. Obtain/Upgrade warning system equipment and methods. Conduct evaluation of existing alert sirens for replacement or placement of new sirens
Hazard(s) Addressed	All hazards
Estimated Cost	\$25,000
Potential Funding	General Funds, PDM, HMGP
Timeline	2-5 years
Priority	Medium
Lead Agency	City Administration
Status	A siren is needed at a new development west of town, Sabre Heights.

Mitigation Action	Backup Generators
Description	Provide portable and stationary source of backup power for critical facilities.
Hazard(s) Addressed	All hazards
Estimated Cost	\$15,000+
Potential Funding	General Funds, PDM, HMGP
Timeline	2-5 years
Priority	Medium
Lead Agency	Public Works, Utilities Superintendent
Status	This is a new mitigation action. A stationary backup generator is needed at the City Hall Office and additional portable generators are needed for wells and pump stations.

Mitigation Action	City Wide Master Plan
Description	Complete a City Wide Master Plan to prioritize all flood related projects. Stormwater master plans can be conducted to perform a community-wise stormwater evaluation, identify multiple problem areas, and potentially multiple drainage improvements for each area.
Hazard(s) Addressed	Flooding
Estimated Cost	\$10,000+
Potential Funding	General Funds
Timeline	5+ years
Priority	Medium
Lead Agency	Public Works Department
Status	This project is currently in the planning stage. The City is working with consultants to determine project specifics.

Mitigation Action	Evacuation Planning
Description	Develop an evacuation plan to be prepared for any disaster.
Hazard(s) Addressed	All hazards
Estimated Cost	Staff Time
Potential Funding	General Funds, Saunders County Funds
Timeline	2-5 years
Priority	Medium
Lead Agency	City Administrator, Saunders County
Status	An evacuation plan is under development with Saunders County Emergency Management assistance.

Mitigation Action	Preserve Natural and Beneficial Functions
Description	Utilize low impact development practices and green infrastructure to reduce flood risk
Hazard(s) Addressed	Flooding
Estimated Cost	\$5,000+
Potential Funding	General Fund, Private Donations
Timeline	Ongoing
Priority	Medium
Lead Agency	Building and Zoning
Status	This is an ongoing action tied to improving Salt Creek in particular. Areas along the creek are built to reduce risk of property damage in the case of flood events.

Mitigation Action	Promote Use of Higher Codes and Standards
Description	Promote the use of higher codes and standards, such as the Fortified for Safer Living Standard, in order to provide greater protection for any new construction or building retrofits.
Hazard(s) Addressed	All hazards
Estimated Cost	\$5,000+
Potential Funding	City Levy, General Funds
Timeline	Ongoing
Priority	Low
Lead Agency	Building and Zoning
Status	This is an ongoing action as the City adopts new building codes as a general improvement process.

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Mitigation Action	Shelter-in-Place Training
Description	Ensure that all critical facilities, businesses, and residents located near major transportation corridors are aware of how to safely shelter in place in the event of a chemical incident.
Hazard(s) Addressed	Chemical Spills (Transportation)
Estimated Cost	\$1,000+
Potential Funding	General Funds, Saunders County Funds
Timeline	5+ years
Priority	Medium
Lead Agency	Public Safety Department
Status	Planning has started to develop training which would be focused along Highway 6, Highway 66, and rail line transportation corridors.

Mitigation Action	Stormwater System and Drainage Improvements
Description	Undersized systems can contribute to localized flooding. Stormwater system improvements may include pipe upsizing and additional inlets. These improvements can serve to more effectively convey runoff, preventing interior localized flooding. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other stormwater system improvements.
Hazard(s) Addressed	Flooding
Estimated Cost	\$100,000+
Potential Funding	General Levy
Timeline	Ongoing
Priority	Low
Lead Agency	City Administrator
Status	There is ongoing work to improve drainage and retention of Salt Creek to reduce flood risk for the City.

Mitigation Action	Utilize Low-Impact Development and Green Infrastructure
Description	Low impact development practices and green infrastructure can reduce runoff and result in a reduction in stormwater related flooding.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies by need
Potential Funding	General Funds, PDM, HMGP
Timeline	Ongoing
Priority	Medium
Lead Agency	Building and Zoning
Status	This is an ongoing action tied to improving Salt Creek and Wahoo Creek as the City grows to the north. A manufacturing facility located in the floodplain has been removed and has been repurposed as a RV park near 13 th and Ash.

Mitigation Action	Water Conservation Awareness
Description	Improve and/or develop a program to conserve water use by the citizens during elongated periods of drought. Potential restrictions on water could include limitations on lawn watering, car washing, or water sold to outside sources. Work with DNR on farm irrigation restrictions.
Hazard(s) Addressed	Drought
Estimated Cost	\$1,000+
Potential Funding	General Funds, PDM, HMGP
Timeline	5+ years
Priority	Low
Lead Agency	Water and Sewer Department
Status	The City has used flyers on water bills and social media posts in the past to improve awareness of water conservation. Additional efforts for outreach and education are still needed.

Removed Mitigation Actions

Mitigation Action	Maintain Good Standing with the NFIP
Description	Maintain good standing with National Flood Insurance Program (NFIP).
Hazard(s) Addressed	Flooding
Reason for Removal	While the City of Ashland will continue to participate in the NFIP, continued enrollment is no longer considered a mitigation action.

Mitigation Action	Weather Radios
Description	Conduct an inventory of weather radios at schools and other critical facilities and provide new radios as needed.
Hazard(s) Addressed	All Hazards
Reason for Removal	Widespread internet access and cell phone communications are sufficient to inform residents of hazard events. Saunders County also has emergency alert text alerts available.

Mitigation Action	Vehicular Barriers
Description	Install vehicular barriers to protect critical facilities and key infrastructure.
Hazard(s) Addressed	Terrorism
Reason for Removal	This project is no longer considered needed by the local planning team.

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COMMUNITY PROFILE

VILLAGE OF BRAINARD

Lower Platte South Natural Resources District
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Local Planning Team

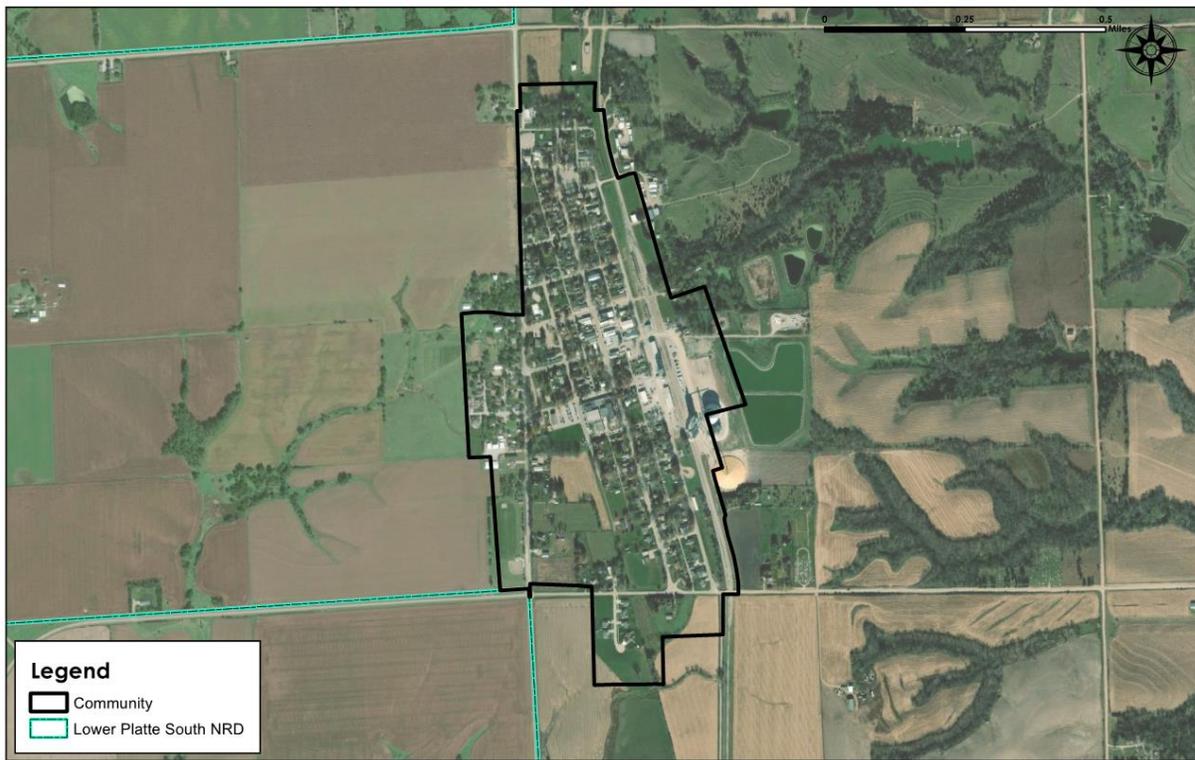
Table BRN.1: Brainard Local Planning Team

Name	Title	Jurisdiction
Josh Bruner	Board Chairman	Village of Brainard
Carla Sander	Clerk & Treasurer	Village of Brainard

Location and Geography

The Village of Brainard is in the central portion of Butler County and the northernmost community in the Lower Platte South NRD. Brainard is approximately 10 miles north of the Lancaster County line and 15 miles south of the Platte River. The Village covers an area of 0.33 square miles. There are two bodies of water near the town. The biggest is the North Oak Creek Reservoir 6B, 1.45 miles east of town. The other is the Middle Oak Creek, which flows west-to-east about two miles east of town.

Figure BRN.1: Village of Brainard



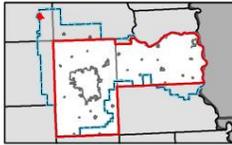


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 Date: 2/25/2019
 Revised: 7/25/2019
 Software: ArcGIS 10.4.1
 File Name: LPSCommunity_PlanningArea2.mxd

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**Village of Brainard
 Planning Area**

2020 Hazard Mitigation Plan
 Lower Platte South NRD



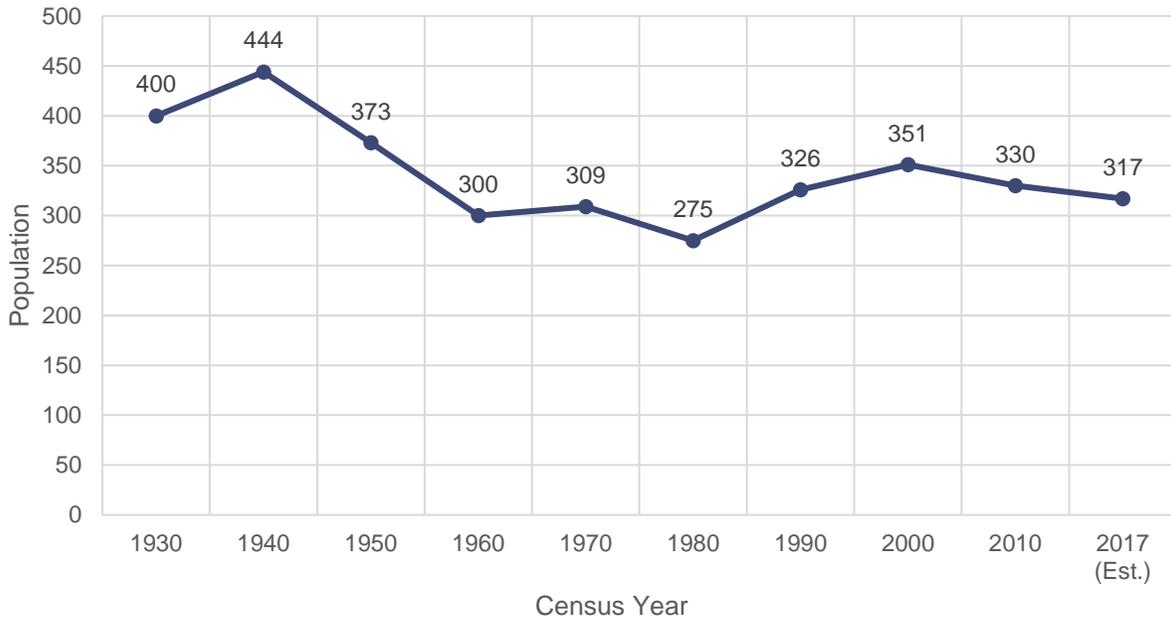
Transportation

The Village of Brainard has one major transportation corridor, Nebraska Highway 92, which runs east-and-west one mile north of town. Brainard utilizes a north-and-south running spur road, Nebraska Highway 12F for access. The corridor averages 2,955 vehicles per day and the spur road averages 760 vehicles per day.¹⁶ There is one rail line running through the town owned by the Nebraska Central Railroad (NCR). The tracks run north-and-south through the town and the line mainly transports grain.¹⁷ The privately owned Stava Airfield is located approximately two miles southwest from Brainard.¹⁸ 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.

Demographics

Brainard’s population declined from about 351 people in 2000 to 317 people in 2017, a decrease of 34 people and total loss of 9.7%. This is important because shifting internal demographics in a relatively stable population may impact hazard mitigation priorities. Brainard’s population accounted for 4% of Butler County’s population of 8,053 in 2017.¹⁹

Figure BRN.2: Population 1930 - 2017



Source: U.S. Census Bureau

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

- Similarly aged.** The median age of Brainard was 44.5 years old in 2017, compared with the County average of 43.5 years. Brainard’s population grew older since 2009, when the median age was 40.6 years old. Brainard had a smaller proportion of people under 20 years old (21.5%) than Butler County (25.9%).²⁰

¹⁶ Nebraska Department of Transportation. "Statewide Traffic Flow Map." Accessed December 2018. <https://dot.nebraska.gov/media/2510/2014-statewide-traffic-flow-map.pdf>.
¹⁷ Nebraska Department of Roads. "Nebraska Railroads." Accessed December 2018. <http://opportunity.nebraska.gov/files/businessdevelopment/winerqy/NebraskaRailMap.pdf>.
¹⁸ Airnav.com. "Stava Airport." Accessed December 2018. <https://www.airnav.com/airport/78NE>.
¹⁹ United States Census Bureau. "American Fact Finder: S0101: Age and Sex." [database file]. <https://factfinder.census.gov/>.
²⁰ United States Census Bureau. "American Fact Finder: S0101: Age and Sex." [database file]. <https://factfinder.census.gov/>.

Section Seven: Village of Brainard Community Profile

- **Not ethnically diverse.** Since 2010, Brainard's population was 0% Hispanic or Latino and remained so through 2017. During that time, the Hispanic or Latino population in Butler County grew from 2.2% in 2010 to 3% in 2017.²¹
- **More likely to be below the federal poverty line.** The poverty rate in Brainard (7.6% of families living below the federal poverty line) was higher than Butler County's poverty rate (5.6%) in 2017.²²

Employment and Economics

The major economic base of Butler County is a mixture of educational services/health care/social assistance (26.1%), manufacturing (20%) and agriculture (10.5%) In comparison to the County, The Village of Brainard economy had:

- **Similar mix of industries.** Brainard major employment sectors, accounting for 10% or more of employment each, were: educational services/health care/social assistance (29.8%), manufacturing (17.8%) and agriculture (8.2%).²³
- **Similar household income.** Brainard median household income in 2017 (\$52,292) was \$156 lower than the County (\$52,448).²⁴
- **More long-distance commuters.** A total of 39.2% percent of workers in Brainard commuted for fewer than 15 minutes, compared with 41.9% of workers in Butler County. An additional 42.9% of workers in Brainard commute 30 minutes or more to work, compared to 31.4% of the County workers.²⁵

Major Employers

The major employers in Brainard include the Frontier Co-op, the East Butler Public Schools, several local businesses, and a First Nebraska Bank branch. Many community members commute to the nearby communities of Lincoln, Wahoo, and David City for work.

Housing

In comparison to Butler County, Brainard's housing stock was:

- **Similar renter-occupied.** Of occupied housing units in Brainard, 23.4% are renter-occupied compared with 20.1% of renter housing in Butler County.²⁶
- **Similar.** Brainard had a similar share of housing built prior to 1970 as Butler County (59.2% compared to 56.4%).²⁷
- **Comparable multifamily dwellings.** The predominant housing type in Brainard is single family detached (93%), which is more than Butler County (84.6%). Brainard contains a similar amount of multifamily housing with five or more units per structure compared to Butler County (3% compared to 2.7%). Brainard has a smaller share of mobile housing (0.5%) compared to the County (6.3%).²⁸ Mobile homes are located throughout the village.

This housing information is relevant to hazard mitigation 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.

²¹ United States Census Bureau. "American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]. <https://factfinder.census.gov/>.

²² United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. <https://factfinder.census.gov/>.

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

²⁴ United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. <https://factfinder.census.gov/>.

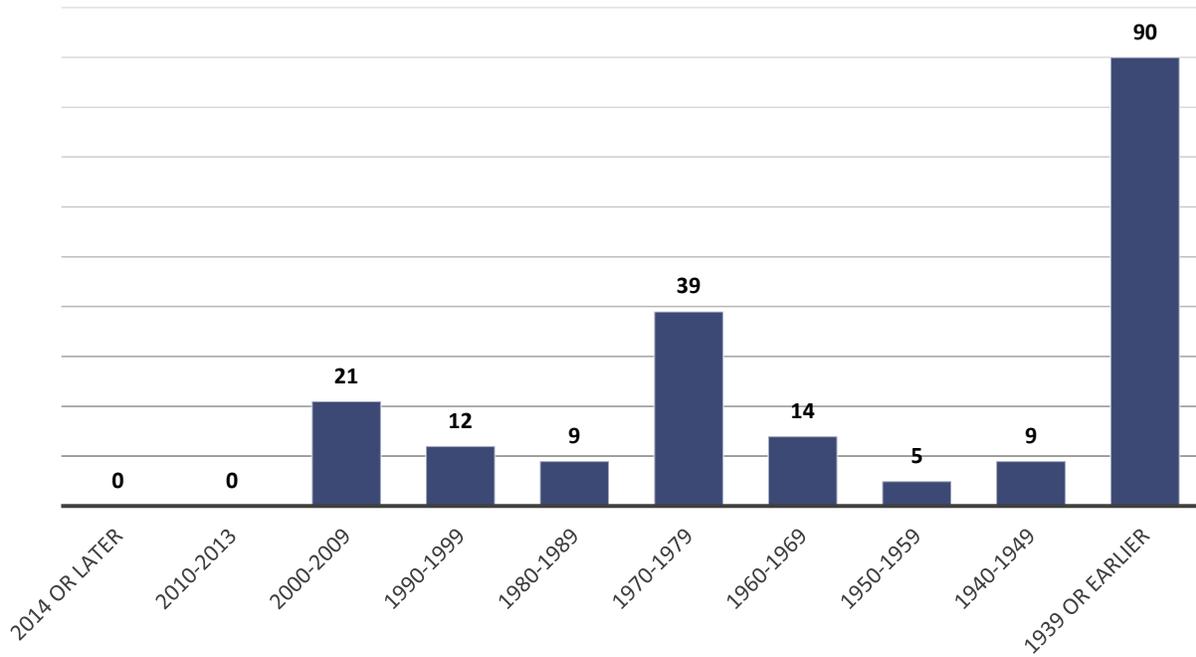
²⁵ United States Census Bureau. "American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. <https://factfinder.census.gov/>.

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

²⁷ United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov/>.

²⁸ United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov/>.

Figure BRN.3: Housing Units by Year Built



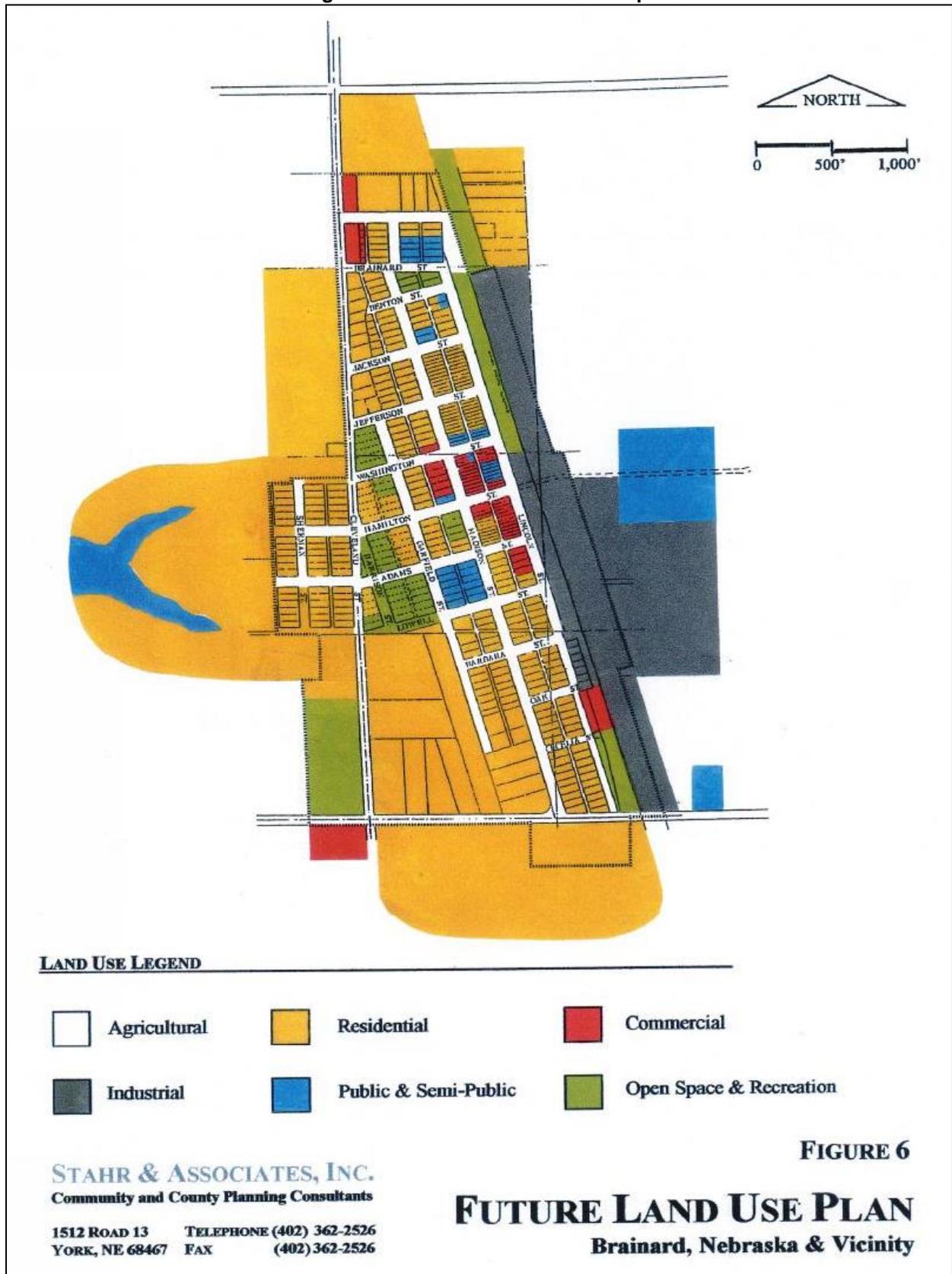
Source: U.S. Census Bureau²⁹

Future Development Trends

Over the past five years, Frontier Co-op has expanded their capacity with more storage space. The village has added 13 new homes in a new development on the west sides of town. More new housing is planned for a development along the southern boundary of the village. Brainard’s population has remained stable, with families drawn to the area by the school and swimming pool.

²⁹ United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov>.

Figure BRN.4: Future Land Use Map



Structural Inventory and Valuation

The planning team requested GIS parcel data from the County Assessor as of December 2018. 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.

Table BRN.2: Structural Inventory/Parcel Improvements

Number of Improvements	Total Improvement Value	Mean Value of Improvements per Parcel	Number of Improvements in Floodplain	Value of Improvements in Floodplain
265	\$15,430,865	\$58,230	0	\$0

Source: Nebraska Department of Revenue, Property Assessment Division³⁰

Critical Infrastructure/Key Resources

Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environmental Quality, there are two chemical storage sites in Brainard.

Table BRN.3: Chemical Storage Fixed Sites

Facility Name	Address	In Floodplain (Y/N)
Frontier Co-op Company	211 S Lincoln St	N
Bob Stava Flying Service	1850 29 Rd	N

Source: Nebraska Department of Environmental Quality 2017³¹

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.

Table BRN.4: Critical Facilities

CF Number	Name	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	City Hall	N	N	N
2	East Butler Schools and Siren	Y	Y	N
3	Fire Department	N	N	N
4	Lagoons	N	N	N
5	Lift Station #1	N	N	N
6	Lift Station #2	N	N	N
7	Lift Station #3	N	N	N
8	Lift Station #4	N	N	N
9	Parish Hall	Y	N	N
10	Siren (North)	N	N	N
11	Storage	N	N	N
12	Village Office/Maintenance	N	N	N
13	Water Tower, Well #1, & Siren (City Hall)	N	N Well - Portable	N

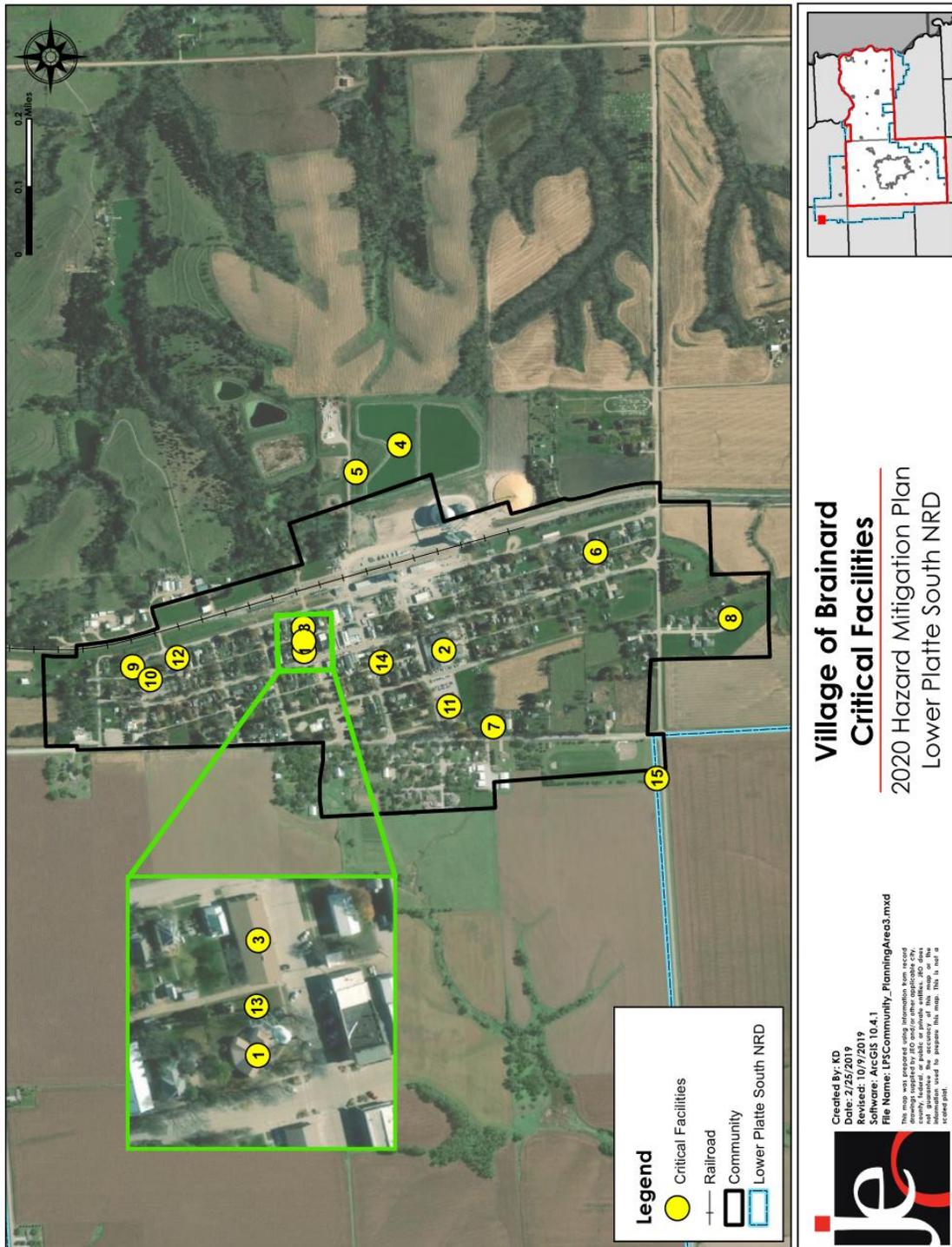
³⁰ County Assessor. Personal correspondence, [DATE].

³¹ Nebraska Department of Environmental Quality. "Search Tier II Data." Accessed December 2018. <https://deq-iis.ne.gov/tier2/search.faces>.

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CF Number	Name	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
14	Well #2	N	Portable	N
15	Well #4	N	Portable	N

Figure BRN.5: Critical Facilities



Historical Occurrences

See the Lower Platte South NRD 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.

Drought

Drought is a pressing issue in the village because of the limited water supply. All the water is supplied by wells, but the geology of the area makes water extraction difficult. The 50,000 gallon water tower holds approximately one day's water supply. During the 2012 drought the water was low enough that mandatory water restrictions were placed on non-critical uses like lawn care. The village has negotiated for the use of irrigation wells since then for future droughts. Drilling a new well is cost prohibitive – the nearest location without high nitrate levels is nearly two miles outside of town, requiring \$5-6 million in piping to transport the water to residents.

Hail

Brainard's Fire Hall replaced its roof in the spring of 2019 after it was substantially damaged by quarter-sized hail. The new roof is made of hail resistant materials. This same storm damaged private property throughout the village. This magnitude of event has happened several times in the last 10 years. All critical facilities are insured against hail damage, and the American Legion Hall has a metal roof that is hail resistant.

Thunderstorms

The village is not prone to straight line winds, but high winds during storms sometimes cause damage. There was some localized flooding during a spring storm, but the water drained within two hours. Power outages during storms are a concern, so that a full-sized generator is needed for the Fire Hall. Approximately 50% of the village's power lines are buried and will continue to be buried on new construction and as lines are repaired. Power surge arrestors are being installed as power lines are buried.

Severe Winter Storms

Loss of power is the most pressing impact of severe winter storms in Brainard. The longest outage lasted about a day and was caused by ice buildup on lines. There is about one major power outage every year and a few minor outages lasting only a few hours. The village's snow removal equipment (a plow and skid loader) are adequate. Contractors and the township help clear roads during particularly heavy snow events.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Brainard has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. Brainard has five village board members and the following offices that may help implement mitigation actions.

- Board Chair
- Clerk/Treasurer
- Utility Superintendent
- Fire Chief

Section Seven: Village of Brainard Community Profile

- Planning Commission
- Health 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 BRN.5: Capability Assessment

Survey Components/Subcomponents		Yes/No
<i>Planning & Regulatory Capability</i>	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Emergency Operational Plan	Yes, County
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	No
	Building Codes	Yes
	National Flood Insurance Program	No
	Community Rating System	No
Other (if any)		
<i>Administrative & Technical Capability</i>	Planning Commission	Yes
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	Yes
	Local Staff Who Can Assess Community's Vulnerability to Hazards	No
	Grant Manager	No
	Mutual Aid Agreement	Yes
Other (if any)		
<i>Fiscal Capability</i>	Capital Improvement Plan/ 1 & 6 Year plan	No
	Applied for grants in the past	No
	Awarded a grant in the past	No
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	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	No
Other (if any)		

Survey Components/Subcomponents		Yes/No
<i>Education & Outreach Capability</i>	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	Yes
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	No
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	Yes
	Other (if any)	

Overall Capability	Limited/Moderate/High
Does your community have the financial resources needed to implement mitigation projects?	Moderate
Does your community have the staff/expertise to implement projects?	High
Does your community have the community support to implement projects?	High
Does your community staff have the time to devote to hazard mitigation?	High

Plan Integration

The Village of Brainard has a Comprehensive Plan that was last updated in 2018. The plan does not discuss natural hazards but does include future land use maps, goals and objectives aimed at safe growth and encourages infill development. Brainard has an annex to the Saunders County Local Emergency Operations Plan which is currently under revision with an expected completion of 2020.

Brainard’s Zoning Ordinance and Building Codes are updated annually and discourage development in industrial areas, outline proper sump pump installation, require insurance on community owned facilities, and will have all new powerlines buried. The Village’s Capital Improvements Plan is updated annually, but local funds maintain current maintenance and operations costs. The CIP includes projects such as ditch and culvert clean out, stormwater system maintenance and improvements, and street projects. The Village’s annual budget has increased in recent years from a growing population and can be put towards mitigation action items.

Mitigation Strategy

Completed Mitigation Actions

Mitigation Action	Obtain Tree City USA Designation
Description	Work to become a Tree City USA through the National Arbor Day Foundation in order to receive direction, technical assistance, and public education on how to establish a tree maintenance program to maintain trees in a community so that potential damages are limited when a storm event occurs.
Hazard(s) Addressed	All hazards
Status	Completed in 2009

Ongoing and New Mitigation Actions

Mitigation Action	Alert Sirens
Description	Replace emergency alert sirens
Hazard(s) Addressed	All hazards
Estimated Cost	\$75,000
Potential Funding	General fund
Timeline	2-5 years
Priority	High
Lead Agency	Utility Superintendent
Status	The current need for new sirens is currently being evaluated.

Mitigation Action	Backup Power
Description	Provide backup power systems to provide redundant power supply
Hazard(s) Addressed	All hazards
Estimated Cost	Varies
Potential Funding	General fund
Timeline	1 year
Priority	High
Lead Agency	Utility Superintendent
Status	Backup generators are needed at the Fire Hall and primary well.

Mitigation Action	Bury Main Power Lines
Description	Bury electric, power, and service lines
Hazard(s) Addressed	All hazards
Estimated Cost	\$0-\$1,000
Potential Funding	General/electric fund
Timeline	5+ years
Priority	Low
Lead Agency	Utility Superintendent
Status	All new development is required to be buried and old equipment will be buried on an as needed basis.

Mitigation Action	Drought Education
Description	Increase public awareness of vulnerability and risk reduction measures through drought education
Hazard(s) Addressed	Drought
Estimated Cost	\$0-1,000
Potential Funding	General funds
Timeline	As needed
Priority	Medium
Lead Agency	Village Board
Status	This project has not yet been started.

Mitigation Action	Storm Shelters
Description	Identify, design, and develop storm shelters to protect communities and critical facilities.
Hazard(s) Addressed	All hazards
Estimated Cost	\$200-300/sf stand alone; \$150-200/sf addition/retrofit
Potential Funding	General fund, grants
Timeline	2-5 years
Priority	Medium
Lead Agency	Village Board
Status	Could be included in new maintenance building, to be constructed across from the swimming pool in an empty lot.

Removed Mitigation Action

Mitigation Action	Maintain Good Standing with the NFIP
Description	Maintain good standing with National Flood Insurance Program (NFIP).
Hazard(s) Addressed	Flooding
Reason for Removal	This action is no longer considered a mitigation action by FEMA

Mitigation Action	Develop an Evacuation Plan for All CFs, and For the Village as a Whole
Description	Develop an evacuation plan for all CFs, and for the village as a whole
Hazard(s) Addressed	All
Reason for Removal	Brainard is small enough that no evacuation plan is needed

Mitigation Action	Improve Drainage in and Around the Village
Description	Brainard can utilize stormwater systems comprising of ditches and culverts to convey runoff. Undersized systems can contribute to localized flooding. Drainage improvements may include ditch upsizing, ditch cleanout, and culvert improvements. These improvements can serve to more effectively convey runoff within villages, preventing interior localized flooding.
Hazard(s) Addressed	Flooding
Reason for Removal	Culverts occasionally are blocked by debris, but the village has sufficient resources to clear them.

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COMMUNITY PROFILE

CASS COUNTY RURAL WATER DISTRICT #1

Lower Platte South Natural Resources District
Multi-Jurisdictional Hazard Mitigation Plan Update

2020

Local Planning Team

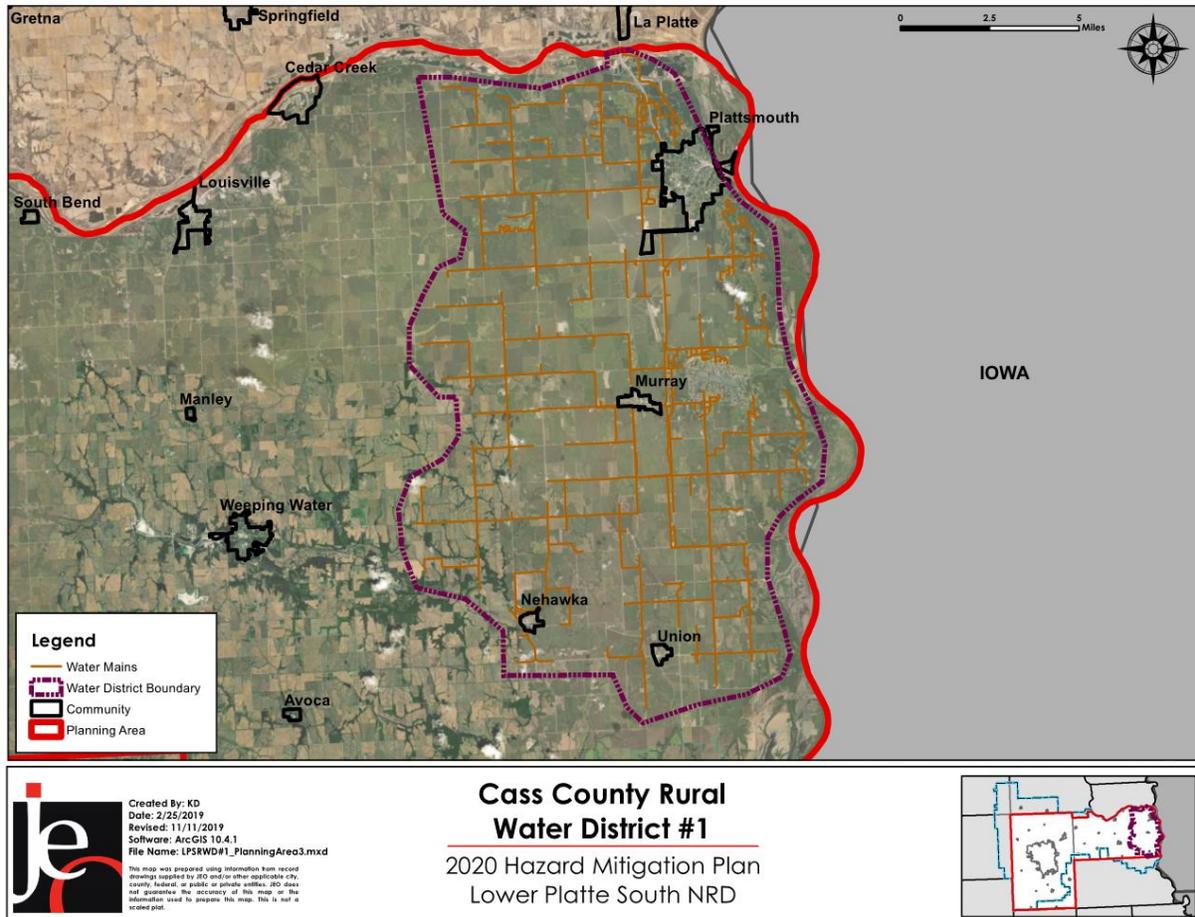
Table RWD1.1: Cass County Rural Water District #1 Local Planning Team

Name	Title	Jurisdiction
Gary Hellwig	General Manager	Cass County Rural Water District #1
Justin Stine	Engineer	JEO Consulting Group

Location and Geography

Rural Water Districts (RWDs) are special districts primarily in rural areas that own, operate, and maintain complex 'long pipe' distribution systems. The Cass County RWD #1 office is located in Murray NE in Cass County, but the district services approximately roughly one-third of eastern Cass County. The district borders extend to Iowa on the east, Sarpy County to the north, Otoe County to the south, and Lancaster County to the west. Cass County RWD #1's service area includes the Villages of Nehawka and Murray as well as to rural agricultural users in the surrounding area.

Figure RWD1.1: Cass County RWD #1



Transportation

Many of the water lines the RWD owns and operates run alongside or under major transportation routes throughout Cass County. Primarily Nebraska State Highways 75 and 34 experience the greatest volume of traffic. Major transportation incidents run the risk of damaging RWD infrastructure. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the district, as well as areas more at risk to transportation incidents.

Demographics

The RWD does not collect the demographic information of the district’s population, nor does the U.S. Census Bureau recognize the RWD as a distinct unit. As a result, there is no population data generated specifically for the RWD, however Cass County’s total estimated population in 2017 was 25,767. The following table shows the percent change in the districts measured by number of meters located in the district. Meter number is the most appropriate method per management at the RWD level. For information regarding population data, please refer to a specific jurisdiction’s community profile or to *Section Three: Demographics and Asset Inventory*.

Table RWD1.2: Growth Trends for Cass County RWD #1

2008 Population by Meter	2013 Population by Meter	2019 Population by Meter	Annual % Change
1,200	1,228	1,216	-1%

Source: Rural Water District

Future Development Trends

The Cass County RWD #1 is actively and consistently making improvements to the water system. In the past five years they have put in a new well on Bay Road just east of Buccaneer Bay and have begun construction to expand and relocate lines along Highway 75 from Plattsmouth to Murray. Over the next five years the RWD will be updating their 2 & 10 Year Plan to identify future projects. Some future projects may include putting in another drinking water well, a second water tower in the north part of the system and expanding current sources of their water supply.

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.

Backup generators at the south booster stations only has the capacity to run lights and secondary systems, but not the pumps themselves. Additionally, there are two water towers at the south water tower location – one which holds 500,000 gallons and one which holds 100,000 gallons.

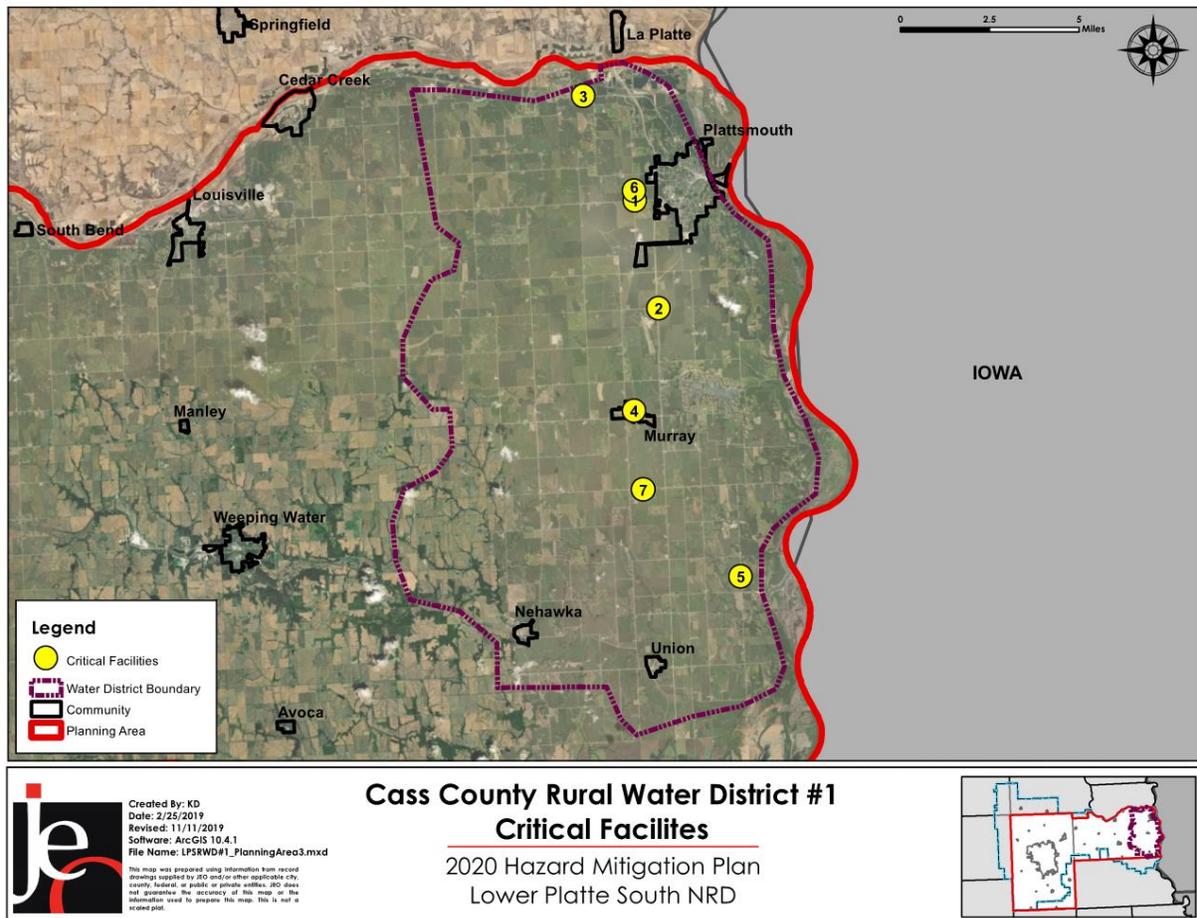
Table RWD1.3: Critical Facilities

CF Number	Name	Red Cross Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Booster Station North	N	Y	N
2	Booster Station South	N	Y	N
3	North Well House	N	Y	?
4	RWD Office & Shop	N	Y	N
5	South Well House	N	Y	N

Section Seven: Cass County RWD #1 Community Profile

6	Water Tower North	N	N	N
7	Water Tower South (have two 500k and 100k towers)	N	N	N

Figure RWD1.2: Critical Facilities



Historical Occurrences

Because RWD #1 is not a traditionally incorporated jurisdiction, the NCEI does not record events specific to this location. Hazard occurrence for Cass County can be viewed in their community profile.

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.

Chemical Spills (Transportation)

Chemical transportation spills can occur along any major transportation route. Primary transportation routes of concern in the district include Interstate 80, US Highways 6,34, and 75; and Nebraska Highways 1, 43, 50, 63, 66, and 67. There are also two railroads operating in Cass

County, Burlington-Northern-Santa Fe (BNSF) to the north, and Union Pacific (UP) in the east and center which transport hazardous chemicals throughout the district. Concerns about chemical transportation spills include potential damages to or around the district's wells.

Drought

The local planning team defines drought at the local level as an extended period of time with no rain or precipitation. All residential water usage is metered within the district, but the primary concern for the local planning team is the inability to maintain an adequate water supply during periods of drought. During such periods, consumers may have a higher water usage than during non-drought conditions. The RWD does have a drought management and response plan which does identify both mandatory and voluntary water restrictions for users during periods of drought. There have been no problems with high nitrates in the area which can be exacerbated by drought conditions.

Flooding

Flooding has been a major concern for the Cass County RWD. The district is bordered by the Platte River to the north and the Missouri River to the east. The flood event in 2019 threatened wells on Bay Rd south of the Platte River. Both flash and riverine flooding are a concern for the local planning team with areas along the river and creek crossings throughout the district most prone to flooding.

High Winds

Concerns regarding high winds are primarily related to power loss and potential damages to property. According to the National Centers for Environmental Information, 16 high wind events have occurred in Cass County between 1996 and 2019 and while the local planning team damages did occur to well houses and telemetry control towers, no specific property damage estimates are available. Municipal records are backed up in case of power failure. There are no safe rooms available for district employees.

Levee Failure

There are several levees located throughout the district including YMCA Camp Kitaki, Cedar Creek, and Lake WaConDa federal USACE levees. The local planning team indicated primary concerns about levee failure are centered on the Platte River which borders the district on the north. If levees along the river were to fail, drinking water wells may be at risk to damage, loss, or contamination.

Tornadoes

Tornadoes are a hazard of top concern due to their potential to cause catastrophic damage. There have been no tornadic events which have impacted the district thus far. In the case of damage or power outages, municipal records are backed up on the server and on external drives. High wind events have caused damages to wells houses and telemetry control towers, which are vulnerable to the effects of tornadoes as well. In the case of a disaster, the district has mutual aid agreements in place with the City of Plattsmouth and Beaver Lake.

Governance

Local governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Cass County RWD #1 has a number of offices that may be involved in implementing hazard mitigation initiatives. The Cass County RWD #1 has nine board members and has the ability to charge hook-up fees and water service fees.

- Field Service Technicians/Operators
- Office Administrator
- General Manager

Capability Assessment

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

Table RWD1.4: Capability Assessment

Overall Capability	Limited/Moderate/High
Does your jurisdiction have the financial resources needed to implement mitigation projects?	High
Does your jurisdiction have the staff/expertise to implement projects?	Moderate
Does your jurisdiction have the community support to implement projects?	High
Does your jurisdiction staff have the time to devote to hazard mitigation?	Moderate

Plan Integration

The Cass County Rural Water District has a set of by-laws which will be updated next in 2020. The by-laws do not discuss hazard mitigation projects or actions but do assign responsibilities to specific staff. The district does have agreements in place with Beaver Lake and the City of Plattsmouth to provide or receive water in the case of shortage. The district also has a Drought Management and Response Plan which identifies specific triggers for restricted water use, including both voluntary and mandatory water restrictions.

Mitigation Strategy

Ongoing and New Mitigation Actions

Mitigation Action	Elevate Infrastructure
Description	Elevate infrastructure to above the 100- or 500-year base flood elevation to prevent future flood damage.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies by scope
Potential Funding	General Fund, State Revolving Fund, HMGP, PDM
Timeline	1 year
Priority	High
Lead Agency	RWD #1
Status	This is a new mitigation action. The generators and wellheads need to be elevated.

Mitigation Action	Green Mitigation
Description	Educate the public and business owners regarding rain gardens, green roofs, and other minor mitigation measures
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by project
Potential Funding	General Fund
Timeline	Ongoing
Priority	Low
Lead Agency	RWD #1
Status	Education efforts are an ongoing effort for the district.

Mitigation Action	Hazard Education
Description	Increase public awareness of vulnerability and risk reduction measures through hazard education.
Hazard(s) Addressed	All hazards
Estimated Cost	\$1,000+
Potential Funding	General Fund
Timeline	Ongoing
Priority	Medium
Lead Agency	RWD #1
Status	Education efforts are an ongoing effort for the district.

Mitigation Action	Water Conservation Awareness
Description	Implement a Water Conservation Awareness Program to conserve water use by the citizens during elongated periods of drought. Potential restrictions on water could include limitations on lawn watering, car washing, or water sold to outside sources.
Hazard(s) Addressed	Drought
Estimated Cost	\$1,000+
Potential Funding	General Fund, PDM, HMGP
Timeline	2-5 years
Priority	Medium
Lead Agency	RWD #1
Status	Water restrictions for even/odd days and voluntary/mandatory restrictions are defined in the drought management plan; however, additional efforts should be taken to educate residents outside of periods of drought.

Removed Mitigation Actions

Mitigation Action	Higher Codes and Standards
Description	Promote the use of higher codes and standards, such as the Fortified for Safer Living Standard, in order to provide greater protection for any new construction or building retrofits.
Hazard(s) Addressed	All hazards
Reason for Removal	The RWD does not have the jurisdictional authority to regulate building and code standards. All infrastructure developed by the RWD is built to the most current engineering standards.

COMMUNITY PROFILE

CASS COUNTY SANITARY IMPROVEMENT DISTRICT #1 (LAKE WACONDA)

Lower Platte South Natural Resources District
Multi-Jurisdictional Hazard Mitigation Plan Update

2020

Local Planning Team

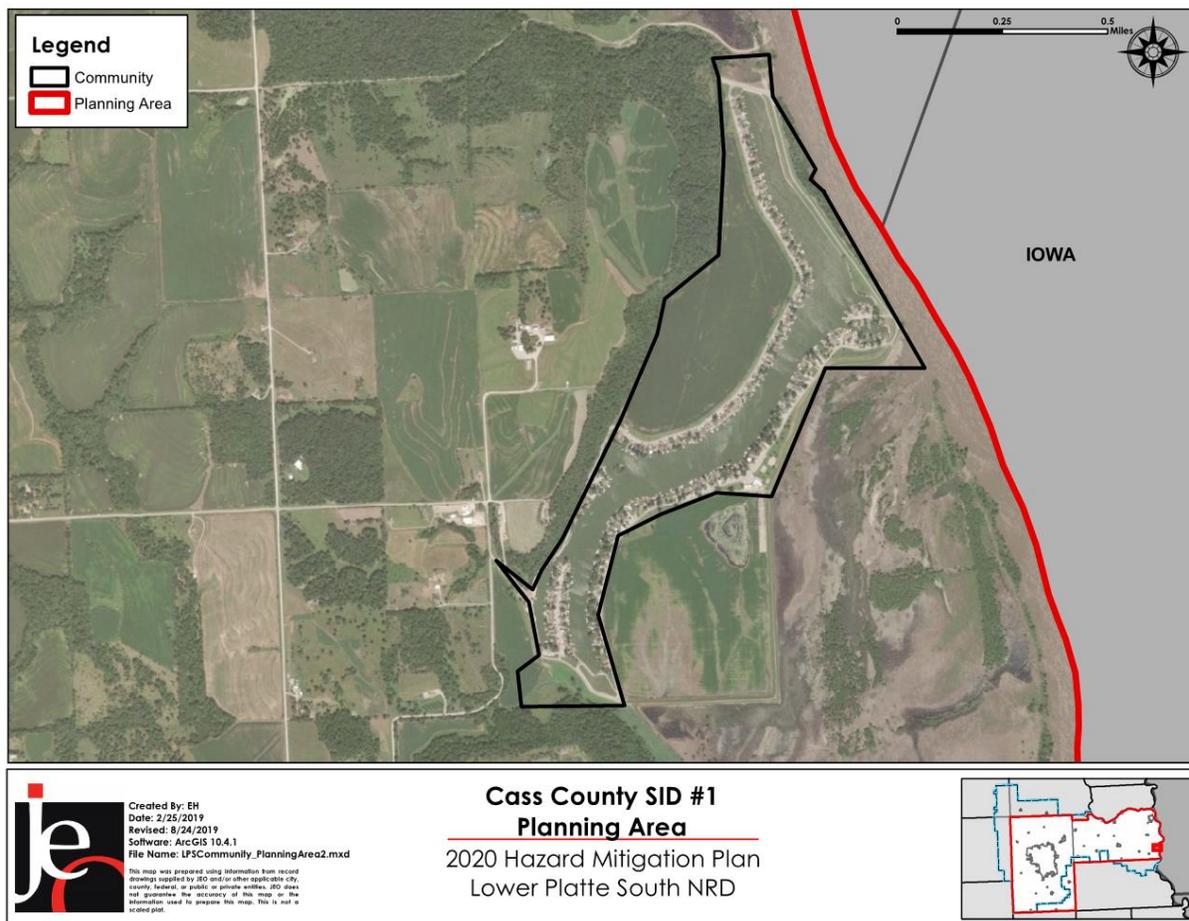
Table SID1.1: Cass County Sanitary Improvement District (SID) #1 Local Planning Team

Name	Title	Jurisdiction
Gary Bruechert	County Chair	Cass County SID #1

Location and Geography

Cass County SID #1 is in the southeast corner of Cass County, located almost directly on the Missouri River. This body of water feeds WaConDa Lake, which all the residences are built on.

Figure SID1.1: Cass County SID #1



Transportation

The SID has one major transportation corridor, US Highway 75 which runs north and south about three miles west of the SID and is accessed via WaConDa Road. Both the Highway and WaConDa Road are critical for access to the community. 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.

Demographics

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

Future Development Trends

There are no major changes to Lake WaConDa or Cass County SID#1. The population and housing stock in the area has remained stable over the past five years and there are no new developments planned in the next five years.

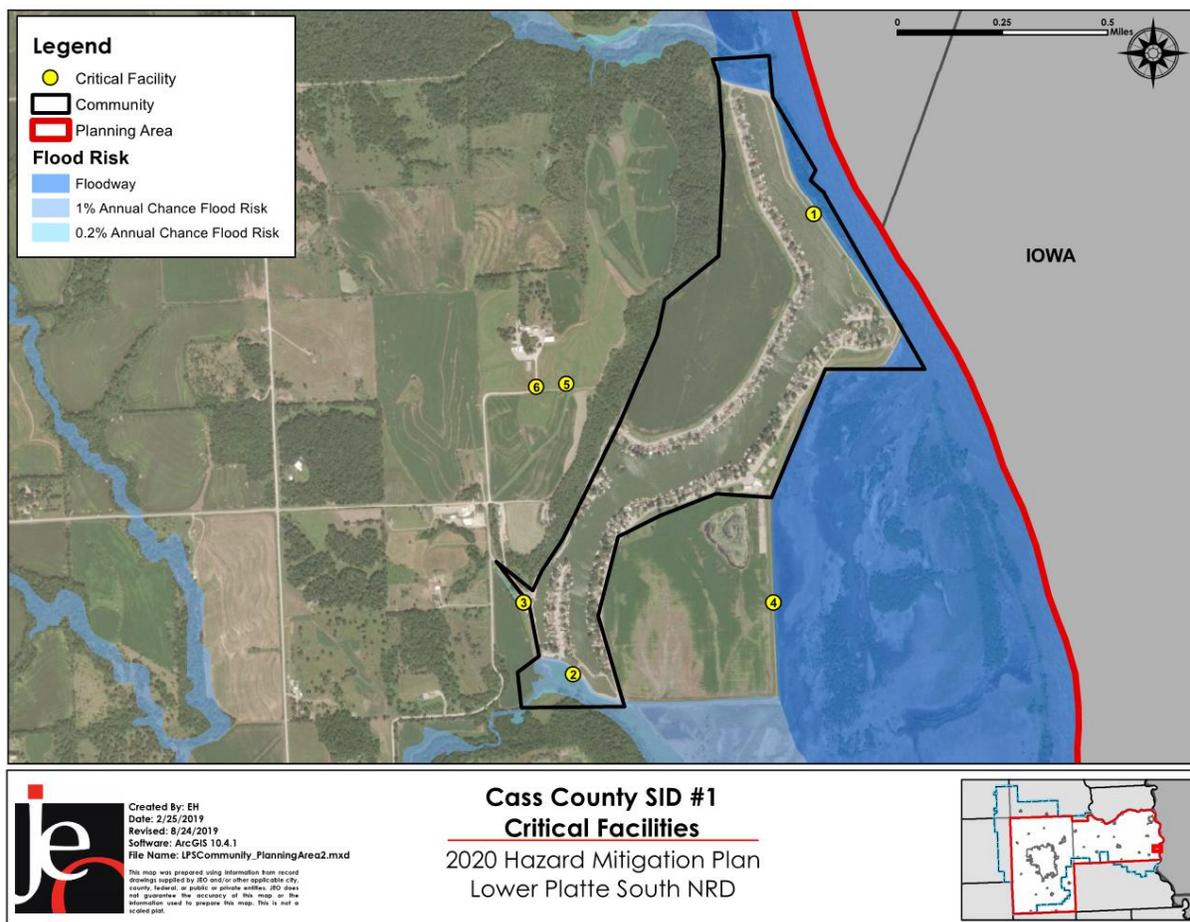
Critical Facilities

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.

Table SID1.2: Critical Facilities

CF Number	Name	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Northern Levee	N	N	N
2	Southern Levee	N	N	N
3	WaConDa Levee	N	N	N
4	Wellhead #1	N	N	N
5	Wellhead #2	N	N	N

Figure SID1.2: Critical Facilities



Historical Occurrences

Because SID #1 is not a traditionally incorporated jurisdiction, the NCEI does not record events specific to this location. Hazard Occurrence for Cass County can be viewed in their community profile.

Hazard Prioritization

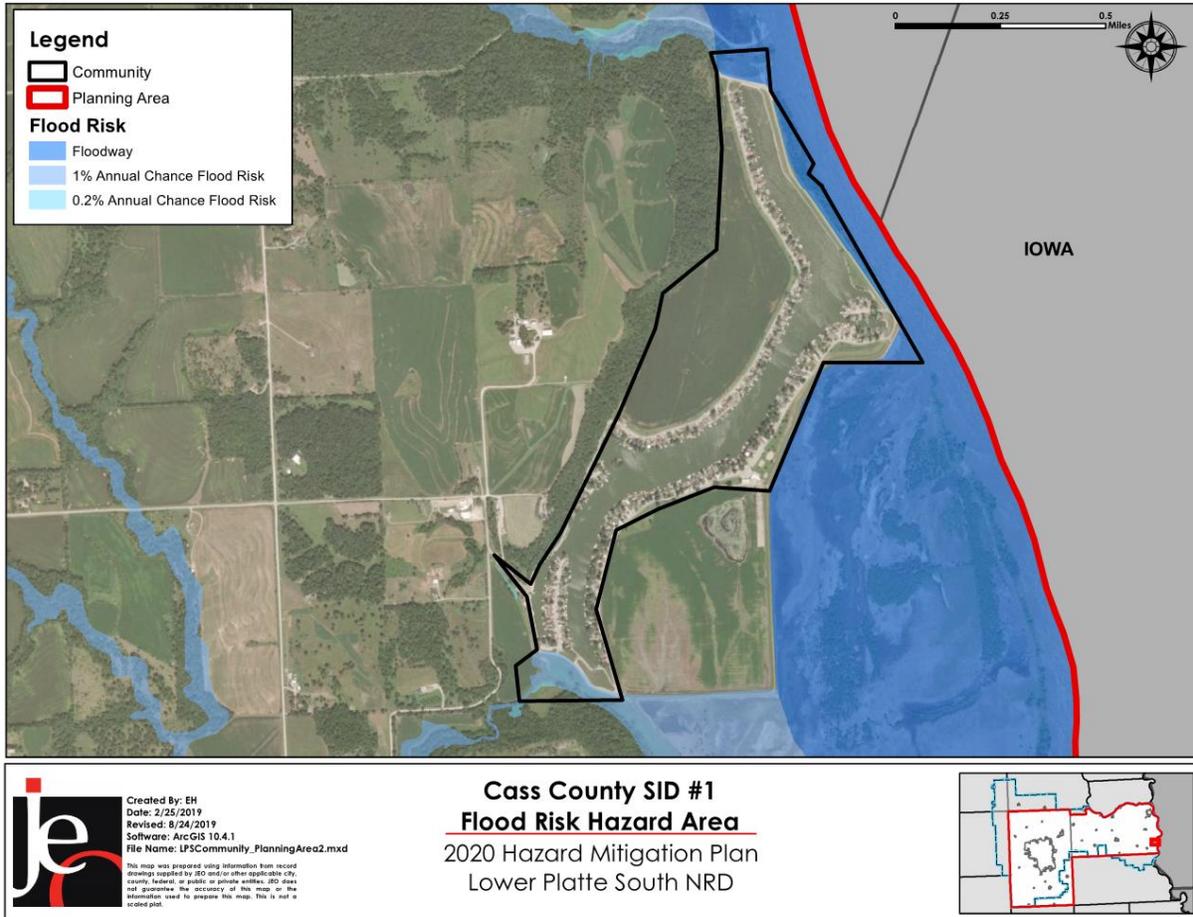
For an in-depth discussion regarding area wide hazards, please see *Section Four: Risk Assessment*. The hazards discussed in detail below were prioritized by the local planning team based on the identification of hazards of greatest concern, hazard history, and the jurisdiction’s capabilities.

Flooding

Flooding events have occurred in the SID since the late 1970s. In the spring of 1982, an ice jam by the old bridges in Nebraska City caused the river to rise rapidly. In 2010 a seven-inch rainfall caused residents to evacuate before transportation routes were overtopped. In particular, the Ervine Creek behind the caretaker’s residence nearly overflowed its banks. Flooding in 2011 caused the SID to evacuate and produced significant damage to the levee near Bull Frog Bay. The Presidentially Declared Disaster (DR-4420) flood in March 2019 caused evacuation and damage. At the time of this plan update the impacts from DR-4420 were still being determined for the SID. Many homeowners have private flood insurance. The local planning team indicated up

to 40% of the SID’s population is located within a floodplain. Home along East Shore Drive, Bull Frog Bay, Toad Bay, and Mid-Lake Drive are the closest to the levee, river, and creek and are most prone to flooding. Homes along West Shore Drive are prone to seepage. The SID actively works to upgrade stormwater drainage, however there is an ongoing need to improve and repair drainage structures. There is an additional need for a permanent sewer system in the community. Flood and high-water events cause damage to existing residential septic systems and local concerns exist for possible contamination of the system and flood waters.

Figure SID1.3: Floodplain



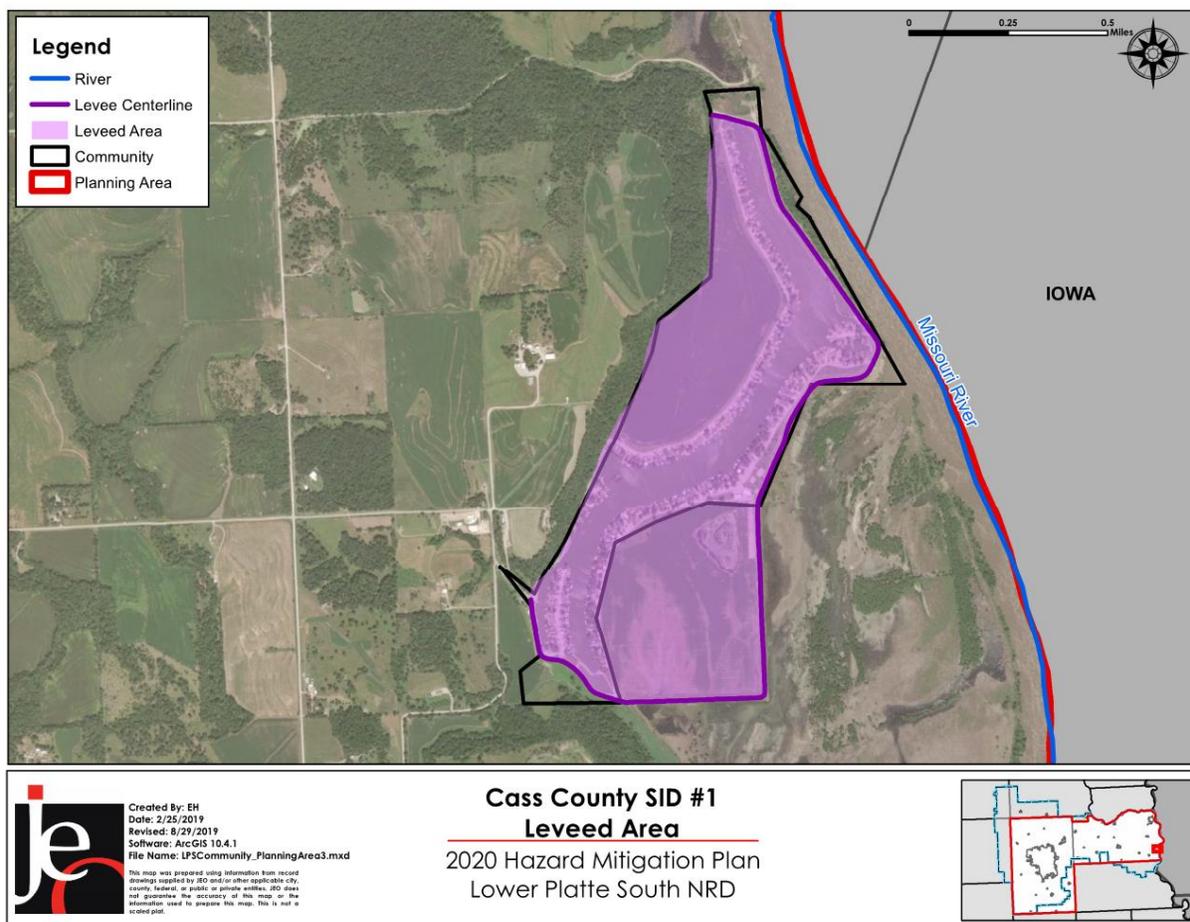
Levee Failure

Levee failure is a primary concern for the SID. The Lake WaConDa – Missouri River RB segment is a single segment levee system which the SID is the non-federal levee sponsor. The levee is approximately 2.46 miles in length and provides protection to approximately 540 people, 206 structures, and property valued at nearly \$50 million. There is one drainage structure located on the riverside of the levee, however it does not collect interior water. Instead all interior water drains into Lake WaConDa directly. The levee was raised by the SID to provide a levee height equal to a 100-yr flood event plus three feet of freeboard. In 2003, high water flows nearly crested the levee and the community used dewatering pumps to keep the water from cresting the levee. Flooding caused damage to six homes in the SID. The 2011 Missouri River Flood produced numerous seepage issues which have been corrected with seepage berms. If the levee were to fail it would directly impact all residents living within the SID. Many full-time community members

Section Seven: Cass County SID #1 Community Profile

are retired and/or elderly residents, while the remainder are seasonal/part-time/weekend residents. Peak lake usage by the community is between April and October annually. The levee was last assessed in 2016 which identified a need for an Emergency Action Plan. Plan development is currently underway and will include evacuation routes and a flood warning notification system. According to the USACE National Levee Database the levee system is classified as moderate risk for prior to overtopping and low risk for overtopping. If significant loading were to occur, it is likely flood fighting would be required.

Figure SID1.4: SID Levee



Tornadoes

Tornado events have occurred near the SID in 1993 and more recently in 2004 which uprooted trees, caused extensive damage to personal property, and damaged or destroyed 40 homes. The community reported 200 downed trees and FEMA assistance of \$1.3 million. There are no public tornado shelters within the community and all homes are on slab foundations, limited the ability of residents to seek shelter during tornadic events. The local planning team has indicated community storm shelters are needed in the SID. Shelter locations could potentially be located at a frequently used community park and an additional location more centrally located that should be equipped to be an emergency operations center during hazard events. There are two warning sirens in the community, but they are not sufficient to reach all residents across the district, particularly on the far northern end and east and west sides of the lake. Many residents rely solely

on cellular communication. The SID has mutual aid agreements in place with the Villages of Murray, Union, and Nehawka.

Governance

A community’s governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Cass County SID #1 has a number of offices that may be involved in implementing hazard mitigation initiatives. The Cass County SID #1 has five board members and the following offices that may help implement mitigation actions.

- Board Chair
- Clerk

Additionally, Cass County SID #5 has the ability to issue bonds and development impact fees with board and community approval.

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 SID1.3: Capability Assessment

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

Section Seven: Cass County SID #1 Community Profile

Survey Components/Subcomponents		Yes/No
	Other (if any)	
<i>Fiscal Capability</i>	Capital Improvement Plan/ 1 & 6 Year plan	No
	Applied for grants in the past	No
	Awarded a grant in the past	No
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	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)	
<i>Education & Outreach Capability</i>	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	No
	Other (if any)	The SID works work the Lake WaConDa Homeowners Association to provide public education materials.

Overall Capability	Limited/Moderate/High
Does your community have the financial resources needed to implement mitigation projects?	Limited
Does your community have the staff/expertise to implement projects?	Limited
Does your community have the community support to implement projects?	Limited
Does your community staff have the time to devote to hazard mitigation?	Limited

Mitigation Strategy

Ongoing and New Mitigation Actions

Mitigation Action	Alert Sirens
Description	Perform an evaluation of existing alert sirens in order to determine sirens which should be replaced or upgraded. Install new sirens where lacking.
Hazard(s) Addressed	All hazards
Estimated Cost	\$15,000+
Potential Funding	Lake WaConDa Homeowners Association, HMGP, PDM
Timeline	1 year
Priority	High
Lead Agency	Cass County Emergency 911, Lake WaConDa Homeowners Association, Cass County EMA
Status	While new sirens had been installed in the community prior to 2015, the development has grown and not all residents are able to hear current sirens. New sirens are needed on the far northern, west, and east sides of the district.

Mitigation Action	Comprehensive City Disaster/Emergency Response Plan
Description	Update Comprehensive City/Village Disaster and Emergency Response Plan.
Hazard(s) Addressed	All hazards
Estimated Cost	\$6,000+
Potential Funding	Lake WaConDa Homeowners Association, Emergency Management Performance Grant, Homeland Security, LPSNRD, Cass County EMA
Timeline	1 year
Priority	High
Lead Agency	Lake WaConDa Homeowners Association
Status	This action has not yet been started.

Mitigation Action	Develop Levee Failure Evacuation Plans
Description	Work with community officials to develop evacuation plans if a levee were to fail.
Hazard(s) Addressed	Levee Failure
Estimated Cost	\$10,000+
Potential Funding	Lake WaConDa Homeowners Association, Cass County Emergency Management
Timeline	1 year
Priority	High
Lead Agency	Lake WaConDa Homeowners Association
Status	This is a new mitigation action.

Section Seven: Cass County SID #1 Community Profile

Mitigation Action	Electric Pump
Description	Replace current electric pump
Hazard(s) Addressed	Flooding
Estimated Cost	\$100,000
Potential Funding	Lake WaConDa Homeowners Association, OPPD
Timeline	1 year
Priority	High
Lead Agency	Lake WaConDa Homeowners Association
Status	This is a new mitigation action that is a high priority for the SID.

Mitigation Action	Public Education
Description	Through activities such as outreach projects, distribution of maps and environmental education increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards. Also, educate citizens on water conservation methods. In addition, purchasing equipment such as overhead projectors and laptops.
Hazard(s) Addressed	All hazards
Estimated Cost	\$0-\$5,000+
Potential Funding	Lake WaConDa Homeowners Association
Timeline	Ongoing
Priority	High
Lead Agency	Lake WaConDa Homeowners Association
Status	This action has not yet been started.

Mitigation Action	Storm Shelters
Description	Design and construct safe rooms/storm shelters in vulnerable areas.
Hazard(s) Addressed	Tornadoes, Severe Thunderstorms, Severe Winter Storms, High Winds
Estimated Cost	\$200-350 per sq. ft
Potential Funding	Lake WaConDa Homeowners Association, HMGP, PDM
Timeline	2-5 years
Priority	High
Lead Agency	Lake WaConDa Homeowners Association
Status	This is a new mitigation action. Community safe rooms are needed at a public park on the south end of the district and a centralized location which can be used as a disaster response center (EOC).

Mitigation Action	Stormwater System and Drainage Improvements
Description	Smaller communities may utilize stormwater systems comprising of ditches and culverts to convey runoff. Undersized systems can contribute to localized flooding. Drainage improvements may include ditch upsizing, ditch cleanout and culvert improvements. These improvements can serve to more effectively convey runoff within villages, preventing interior localized flooding.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies by project
Potential Funding	PDM, HMGP, CDBG, LPSNRD, Cass County EMA, Lake WaConDa Homeowners Association
Timeline	2-5 years
Priority	Medium
Lead Agency	Lake WaConDa Homeowners Association
Status	Interior drainage improvements are an ongoing project for the SID. The district has considered installing a permanent storm sewer system to mitigate flooding impacts and potential contamination to residential water supplies.

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COMMUNITY PROFILE

CASS COUNTY SANITARY IMPROVEMENT DISTRICT #5 (BUCCANEER BAY)

Lower Platte South Natural Resources District
Multi-Jurisdictional Hazard Mitigation Plan Update

2020

Local Planning Team

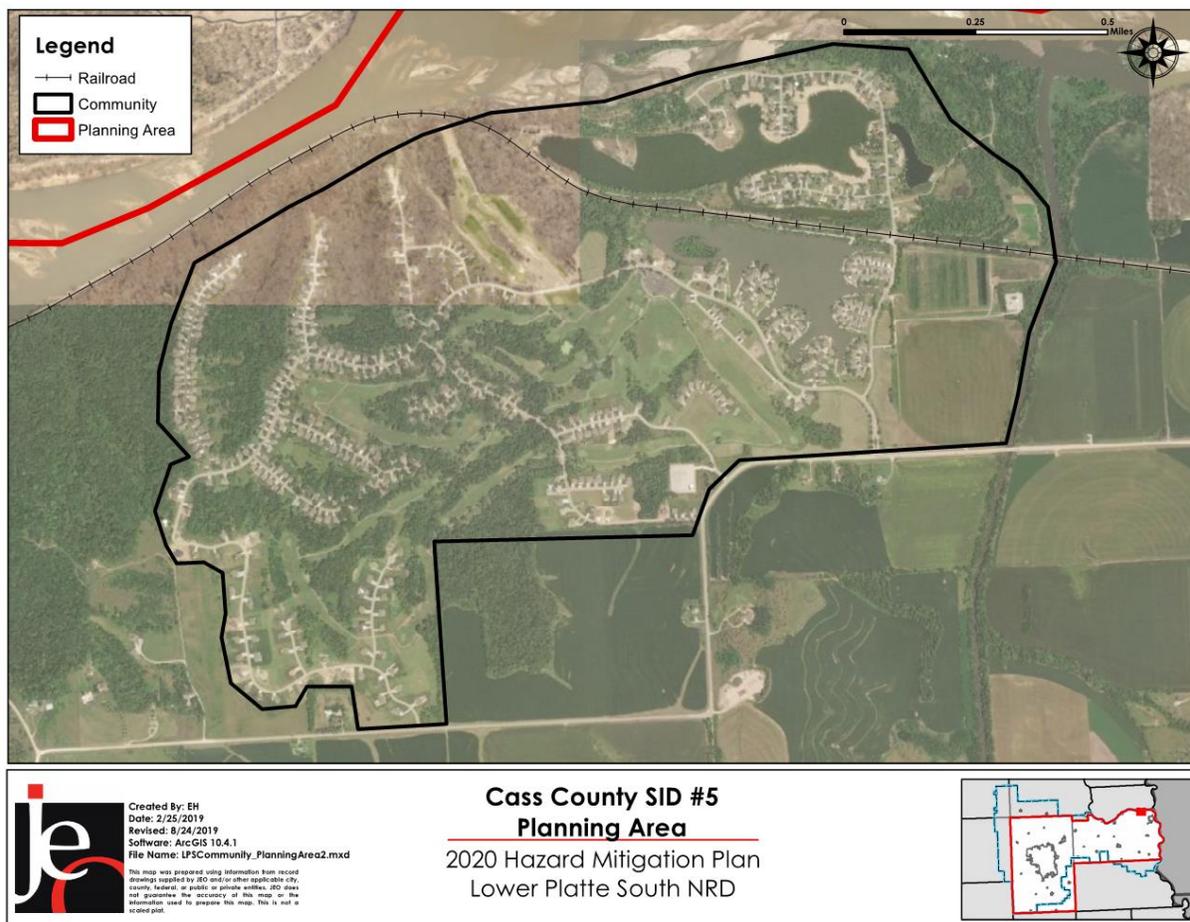
Table SID5.1: Cass County Sanitary Improvement District (SID) #5 Local Planning Team

Name	Title	Jurisdiction
Jim Grotrian	Board Secretary	SID #5
Kurt Mesinger	Board Chair	SID #5

Location and Geography

Cass County SID #5 is in the northeast corner of Cass County, located along the Platte River and seven miles west of the Missouri River. These bodies of water are also the main sources of water with three man-made lakes located on the northern border of the SID.

Figure SID5.1: Cass County SID #5



Transportation

The SID has one major transportation corridor, US Highway 75 which runs north and south about two miles east of the SID and is accessed via Bay Road. There is one rail line running through the SID owned by Burlington-Northern-Santa Fe (BNSF). The tracks run east and west on the north end of the community. 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.

There are three main transportation corridors near the jurisdiction that concern local mitigation planners. Highway 75, Highway 66 and Buccaneer Bay Road are all major transportation corridors that pose some level of risk to the local population. Emergency access is available on rocky county roads out of the southwest corner of the SID. These routes also regularly transport chemicals of an agricultural or industrial nature and the BNSF rail line hauls additional hazardous materials to the north. A significant windstorm in June 2017 caused downed powerlines and closed the main road. Significant flooding in March 2019 also closed the main road. Closures on this main road prevent emergency services from accessing the areas across the district.

Demographics

The SID does not collect demographic information on the district’s population, nor does the U.S. Census Bureau recognize the SID as a distinct unit. As a result, there is no population data generated specifically for the SID. Current estimates for residential homes within the SID is approximately 565 homes with a population of 1,500. For information regarding population data, please refer to a specific jurisdiction’s community profile or to *Section Three: Demographics and Asset Inventory*.

Employment

There are no major employers in the SID. All employment is adjacent to the SID in either Plattsmouth, Bellevue, and the Omaha Metropolitan Area.

Future Development Trends

The SID has experienced significant growth over the past five years. Over one hundred new homes have been constructed and currently there are less than 20 buildable lots still available. The population has grown extensively with local mitigation planners estimating a population of 1,500. The availability of homes and completed road construction and overpass with the highway have drawn people into the SID. However, the growth is expected to slow down as most of the available homes are now occupied. There are no new housing developments nor businesses planned in the next five years.

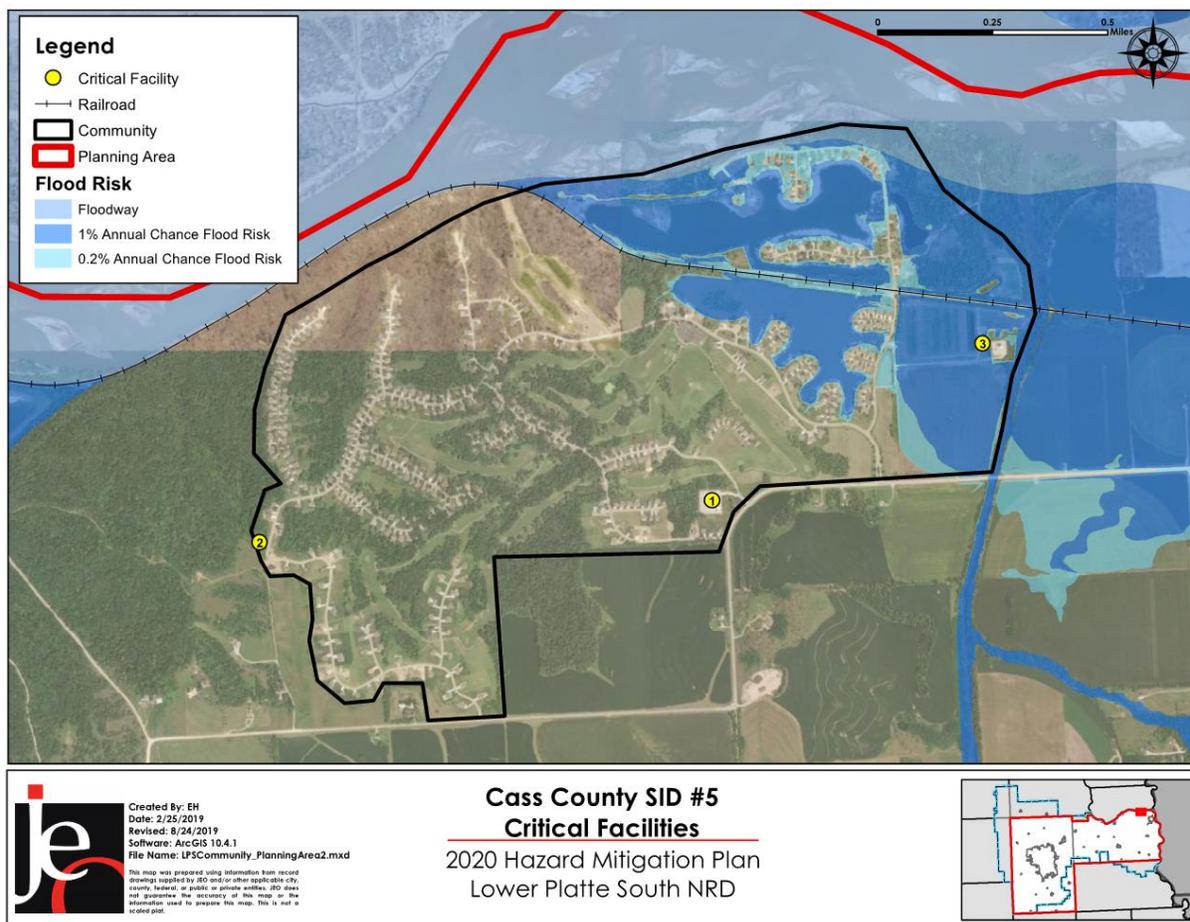
Critical Facilities

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.

Table SID5.2: Critical Facilities

CF Number	Name	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Power Substation	N	N	N
2	Water Tower	N	N	N
3	Wastewater Treatment Facility	N	Y	Y – access road but not the facility

Figure SID5.2: Critical Facilities



Historical Occurrences

As the SID #5 is not a traditionally incorporated jurisdiction, the NCEI does not record events specific to this location. Hazard occurrence for Cass County can be viewed in their community profile.

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.

Flooding

Flooding is a major concern for the district, especially on the north eastern quadrant of the area. During the March 2019 floods the entire SID area was significantly impacted. The sewer system was impaired due to the Platte River flooding and the waste treatment plant was not accessible for several days because of high water. The lower lake, which is not owned by the SID, was pumped down at the expense of the district to excavate the sewer system. The SID is concerned with both flash and riverine flooding. The areas adjacent to the Platte River are the most prone to flooding. The Platte and Missouri Rivers and Four Mile Creek are the nearest, adjacent bodies of water.

High Winds

High winds have the ability to damage property, down power lines, and topple trees. The local planning team is most concerned with loss of road access and power outages. High winds in June 2017 caused damages to property and blocked road access in and out of the SID. There are no automated data systems, but important records are duplicated and stored with key personnel. The SID does not have safe rooms and there are no alternate options available for community members.

Severe Thunderstorms

Severe thunderstorms are a common occurrence across the state and planning area. Severe thunderstorms are commonly associated with heavy rain, lightning strikes, strong wind, and in some cases hail. A severe thunderstorm in June 2017 caused over \$80,000 in damages to the local streets, outlets, and the pump well house. Local mitigation planners are concerned with the potential impacts to public streets and infrastructure. All powerlines are buried and there are few hazardous trees that need to be removed. There are no weather radios in critical facilities.

Severe Winter Storms

A series of significant snowfall events in the winter 2018-2019 put pressure on snow removal services and was a financial burden for the SID. The local planning team is concerned about broken water pipes and street degradation; however, minimal damage has been recorded to critical facilities or infrastructure. There are no designated snow routes in the district and the community does not utilize snow fences. A contractor is responsible for snow removal in the community and the SID has limited snow removal capability.

Tornadoes

While no tornadic events have directly impacted SID #5, a significant windstorm on June 16, 2017 has prompted concerns for residents. Damages from the event included impaired traffic flow, significant tree damage, and \$80,000 in repairs to roads and pump houses. There are no automatic data backup systems in place, but duplicate records are kept with the clerk and legal counsel. The SID does not have warning sirens or community safe rooms and there are no alternate options for seeking shelter. Local mitigation planners noted they do not receive county EM text messages or formal educational outreach activities. However, within the community there is localized informal outreach about disaster preparedness. There are no mutual aid agreements with neighboring communities.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Cass County SID #5 has a number of offices that may be involved in implementing hazard mitigation initiatives. The Cass County SID #5 has five board members and the following offices that may help implement mitigation actions.

- Board Chair
- Clerk
- People Service

Due to the SID's unique category of jurisdiction there are several key capabilities identified by local mitigation planners. The SID has the authority to levy taxes and impose service fees for water and wastewater. The SID also charges development impact fees. The SID can also issue general obligation and special tax bonds.

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 SID5.3: Overall Capability Assessment

Survey Components/Subcomponents		Yes/No
<i>Planning & Regulatory Capability</i>	Comprehensive Plan	No
	Capital Improvements Plan	Yes
	Economic Development Plan	No
	Emergency Operational Plan	No
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	No
	Subdivision Regulation/Ordinance	No
	Floodplain Ordinance	No
	Building Codes	Yes - County
	National Flood Insurance Program	No
	Community Rating System	No
Other (if any)	Yes - Flood Impact and Flood Risk Assessment Report	
<i>Administrative & Technical Capability</i>	Planning Commission	Yes
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	Yes
	Local Staff Who Can Assess Community’s Vulnerability to Hazards	No
	Grant Manager	No
	Mutual Aid Agreement	No
	Other (if any)	
<i>Fiscal Capability</i>	Capital Improvement Plan/ 1 & 6 Year plan	Yes - informal
	Applied for grants in the past	No
	Awarded a grant in the past	No
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	No
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	Yes
	General Obligation Revenue or Special Tax Bonds	Yes
Other (if any)		
<i>Education &</i>	Local citizen groups or non-profit organizations focused on environmental protection, emergency	Yes

Survey Components/Subcomponents		Yes/No
<i>Outreach Capability</i>	preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	No
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	

Overall Capability	Limited/Moderate/High
Does your community have the financial resources needed to implement mitigation projects?	High
Does your community have the staff/expertise to implement projects?	Limited
Does your community have the community support to implement projects?	High
Does your community staff have the time to devote to hazard mitigation?	Limited

Plan Integration

Cass County Sanitary Improvement District #5 does not have any formal plans in place at this time. When needed, the Board conducts informal capital improvement plans (CIP), which was done in 2015. This CIP identified roads and culverts that needed improvements over an 18-month period. The SID contracts with a civil engineer to assess flood risk, provide recommendations, and other engineering needs.

Post-flood March 2019, the SID hired an engineer to evaluate the damages from the flooding for potential actions that could be taken by the SID and residents to reduce the potential that these damages will recur. This evaluation concluded in a Flood Impact and Flood Risk Assessment report. In total, five projects were identified and recommended through the assessment process. As of the completion of this HMP, the SID Board was determining which project(s) to pursue based on the recommendations provided and looking to pursue funding support.

Mitigation Strategy

Ongoing and New Mitigation Actions

Mitigation Action	Emergency Preparedness Plan
Description	The EPP establishes protocols that clearly define actions to take in the event of a pending flood event in the community. These protocols aim to reduce the risk to human life, loss, or injury and minimize property damage during a flood event.
Hazard(s)	Flooding
Estimated Cost	\$25,000
Funding	General Fund, CDBG
Timeline	2-5 years
Priority	Medium
Lead Agency	SID
Status	This is a new mitigation action. It was identified in the Flood Impact and Flood Risk Assessment report.

Mitigation Action	Flood Impact and Flood Risk Assessment
Description	Develop a post March 2019 Flood Impact and Flood Risk Assessment plan to prioritize all flood mitigation alternatives and related projects. Identify potential flooding sources and flood-vulnerable areas. Explore solutions and prioritize.
Hazard(s)	Flooding
Estimated Cost	\$17,500
Funding	General Fund
Timeline	1 year
Priority	High
Lead Agency	SID
Status	SID has contracted with an engineer to assess flood impacts and identify solutions. A report draft will be completed Fall 2019 with recommendations for reduce flood risk. Projects identified in the report are included in this plan.

Mitigation Action	Infrastructure Protection
Description	Develop flood control devices to protect critical infrastructure during flood events.
Hazard(s)	Flooding
Estimated Cost	Unknown
Funding	General Fund, HMGP, PDM
Timeline	2-5 years
Priority	High
Lead Agency	SID
Status	This is a new mitigation action. Additional protection needed for the treatment plant by elevating the access road and fortifying the plant.

Removed Mitigation Actions

Mitigation Action	Public Education
Description	Increase public awareness of vulnerability and risk reduction measures through hazard education.
Hazard(s) Addressed	All
Reason for Removal	This project was identified to no longer be a priority for the SID.

Mitigation Action	Educate the public on tree planting and establish and annual tree trimming program
Description	Educate the public on tree planting and establish and annual tree trimming program to assist those with low income and the elderly.
Hazard(s) Addressed	Severe Thunderstorms, Tornadoes, High Winds, Severe Winter Storms
Reason for Removal	This project was identified to no longer be a priority for the SID.

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COMMUNITY PROFILE

VILLAGE OF CERESCO

Lower Platte South Natural Resources District
Multi-Jurisdictional Hazard Mitigation Plan Update

2020

Local Planning Team

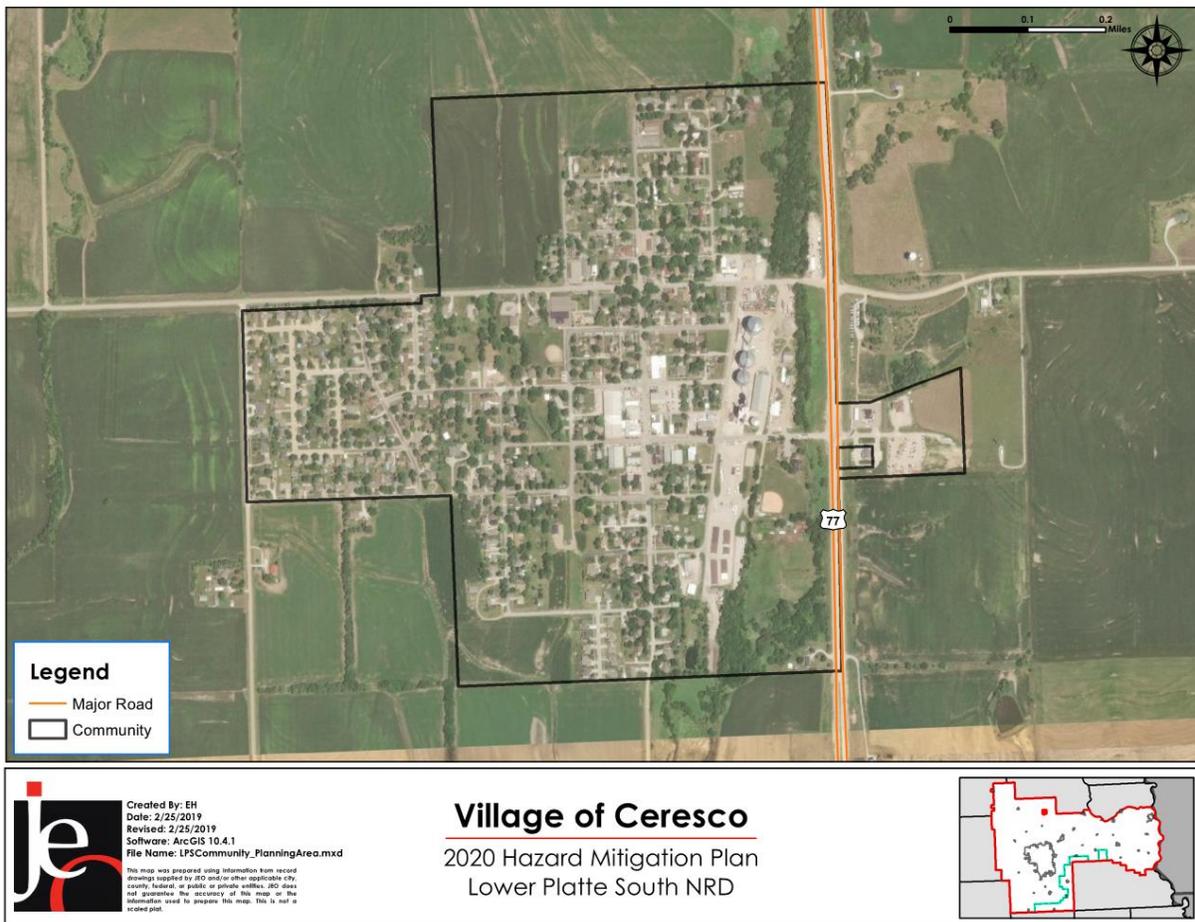
Table CRC.1: Ceresco Local Planning Team

Name	Title	Jurisdiction
Joan Lindgren	Village Clerk	Village of Ceresco
Doug Wilson	Board Member	Village of Ceresco
Chilton Leedom	Police Officer	Village of Ceresco

Location and Geography

The Village of Ceresco is in the south of Saunders County, approximately one mile north of the Lancaster County line and 3.5 miles west of the Jack Sinn Memorial State Wildlife Management Area. The Village covers an area of 0.42 square miles. There is one major waterway near the town, the Rock Creek, which flows west-to-east one mile south of town.

Figure CRC.1: Village of Ceresco



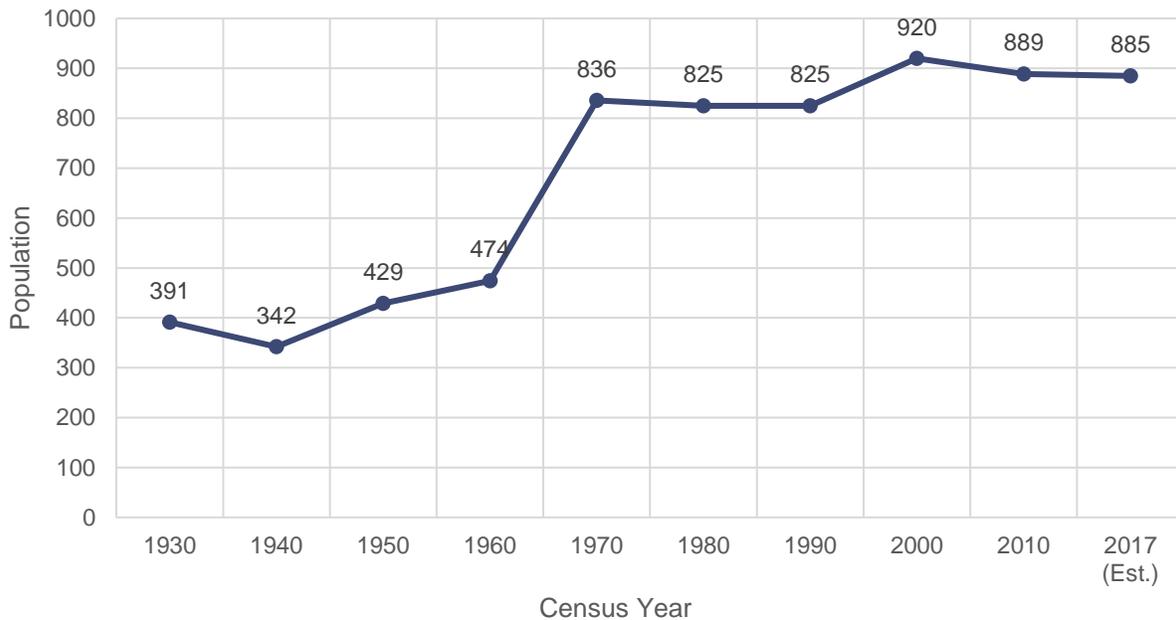
Transportation

The Village of Ceresco has one major transportation corridor, US Highway 77 which runs north-and-south on the east end of town. This corridor averages 7,680 vehicles per day.³² Primary transportation routes of concern for the local planning team include Highway 77 and County Rd A which is the primary route in and out of the Village. Hazardous chemicals are commonly transported along these transportation corridors, prompting concerns from the local planning team. 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.

Demographics

Ceresco's population decline from about 920 people in 2000 to 885 people in 2017, a decrease of 35 people and total loss of 3.8%. This is important because shifting internal demographics in a relatively stable population may impact hazard mitigation priorities. Ceresco's population accounted for 4.2% of Saunders County's population of 20,953 in 2017.³³

Figure CRC.2: Population 1930 - 2017



Source: U.S. Census Bureau

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

- **Younger.** The median age of Ceresco was 36.5 years old in 2017, compared with the County average of 41 years. Ceresco's population grew older since 2009, when the median age was 31.3 years old. Ceresco had a similar proportion of people under 20 years old (30.6%) than Saunders County (27.2%).³⁴
- **More ethnically diverse.** Since 2010, Ceresco grew more/less ethnically diverse. In 2010, Ceresco's population was 0.9% Hispanic or Latino. By 2017, Ceresco's population

³² Nebraska Department of Transportation. "Statewide Traffic Flow Map." Accessed December 2018. <https://dot.nebraska.gov/media/2510/2014-statewide-traffic-flow-map.pdf>.

³³ United States Census Bureau. "American Fact Finder: S0101: Age and Sex." [database file]. <https://factfinder.census.gov/>.

³⁴ United States Census Bureau. "American Fact Finder: S0101: Age and Sex." [database file]. <https://factfinder.census.gov/>.

Section Seven: Village of Ceresco Community Profile

was 1.8% Hispanic or Latino. During that time, the Hispanic or Latino population in Saunders County grew from 1.9% in 2010 to 2.1% in 2017.³⁵

- **More likely to be below the federal poverty line.** The poverty rate in Ceresco (7.3% of families living below the federal poverty line) was higher than Saunders County's poverty rate (5.1%) in 2017.³⁶

Employment and Economics

The major economic base of Saunders County is a mixture of Educational services/health care/social assistance (22.7%), retail (10.5%), and manufacturing (10.5%) In comparison to the County, The Village of Ceresco economy had:

- **Diverse mix of industries.** Ceresco major employment sectors, accounting for 10% or more of employment each, were: Educational services/health care/social assistance (23%), retail (13.4%), construction (10.9%), and transportation/warehousing/utilities (10.1%).³⁷
- **Higher household income.** Ceresco median household income in 2017 (\$70,313) was \$4,298 higher than the County (\$66,015).³⁸
- **Fewer long-distance commuters.** A total of 20.7% percent of workers in Ceresco commuted for fewer than 15 minutes, compared with 31.4% of workers in Saunders County. An additional 35.8% of workers in Ceresco commute 30 minutes or more to work, compared to 43.2% of the County workers.³⁹

Major Employers

Major employers within Ceresco include Ernie's Furniture Store, Frontier Co-Op, and the local school district. Many residents commute to Lincoln, Omaha, or Wahoo for employment.

Housing

In comparison to Saunders County, Ceresco's housing stock was:

- **Similar renter-occupied.** Of occupied housing units in Ceresco, 21.2% are renter-occupied compared with 20.9% of renter housing in Saunders County.⁴⁰
- **Newer.** Ceresco had a smaller share of housing built prior to 1970 than Saunders County (45.4% compared to 51.8%).⁴¹
- **More/Less/No multifamily dwellings.** The predominant housing type in Ceresco is single family detached (85.7%), which is comparable to Saunders County (86.8%). Ceresco contains less multifamily housing with five or more units per structure compared to Saunders County (2% compared to 4.8%). Ceresco has a similar share of mobile housing (2.8%) compared to the County (2.5%).⁴² Mobile homes are located throughout the Village.

This housing information is relevant to hazard mitigation 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.

³⁵ United States Census Bureau. "American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]. <https://factfinder.census.gov/>.

³⁶ United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. <https://factfinder.census.gov/>.

³⁷ United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. <https://factfinder.census.gov/>.

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

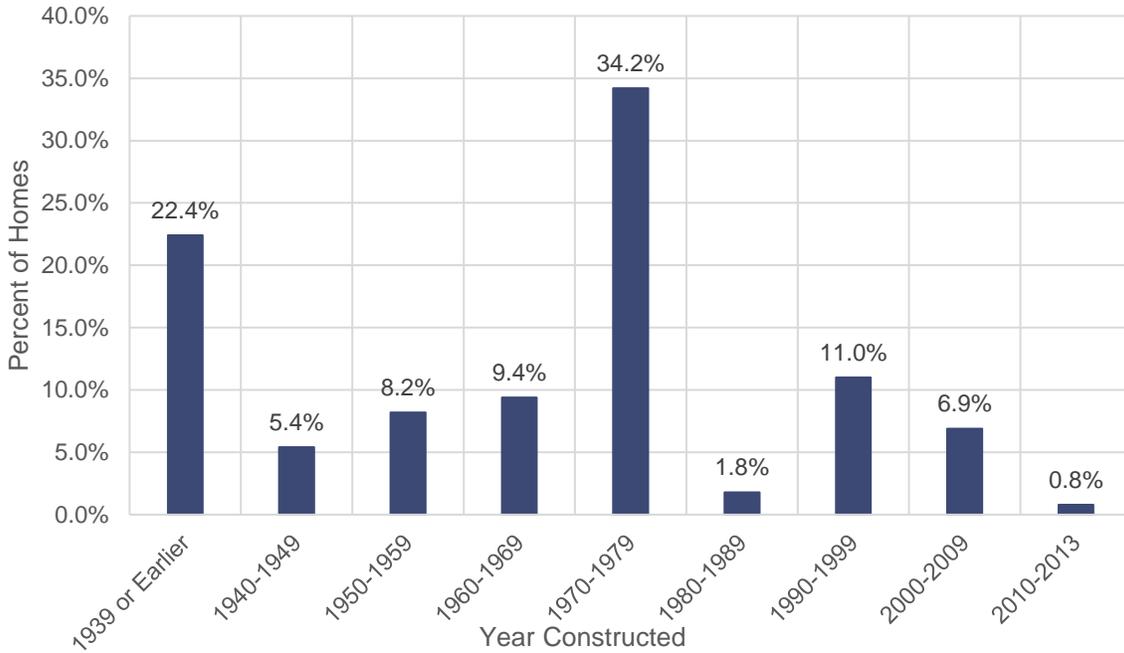
³⁹ United States Census Bureau. "American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. <https://factfinder.census.gov/>.

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

⁴¹ United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov/>.

⁴² United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov/>.

Figure CRC.3: Housing Units by Year Built



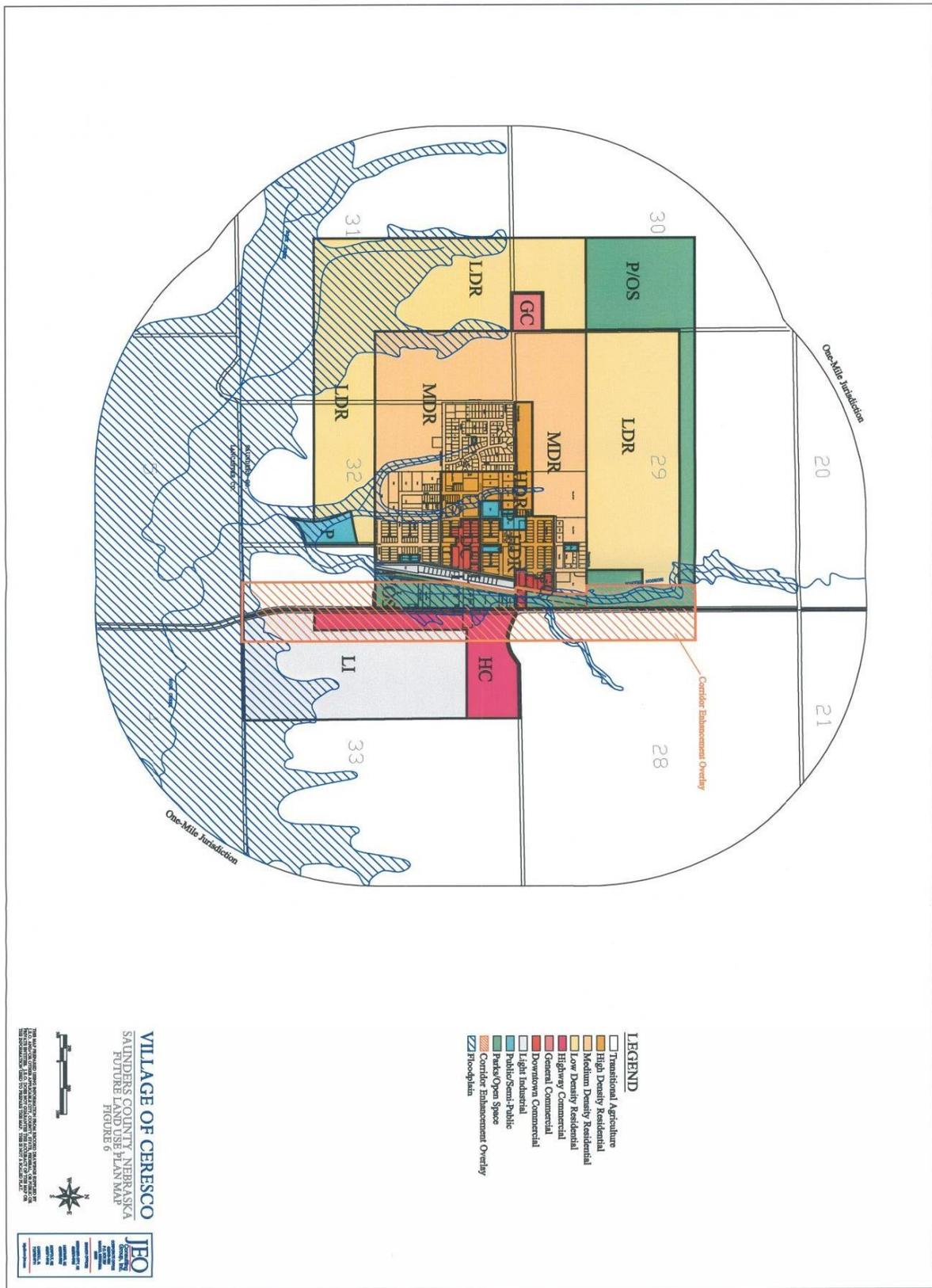
Source: U.S. Census Bureau⁴³

Future Development Trends

The Village of Ceresco has had several changes over the past five years. Four new homes and one new duplex have been constructed in town and a previously commercial building and three residential homes have been demolished. Ceresco’s population is relatively stable which the local planning team attributes to its close proximity to both Lincoln and Omaha for employment, but residents prefer to live in a smaller community. There is a need for additional housing in town and an additional development is planned for north of the elementary school. Additionally, a restaurant, bar, and possibly a bakery are expected within the next five years.

⁴³ United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov>.

Figure CRC.4: Future Land Use Map



Structural Inventory and Valuation

The planning team requested GIS parcel data from the County Assessor as of December 2018. 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.

Table CRC.2: Structural Inventory/Parcel Improvements

Number of Improvements	Total Improvement Value	Mean Value of Improvements per Parcel	Number of Improvements in Floodplain	Value of Improvements in Floodplain
368	\$43,588,105	\$118,446	5	\$616,880

Source: Nebraska Department of Revenue, Property Assessment Division⁴⁴

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 two chemical storage sites in Ceresco.

Table CRC.3: Chemical Storage Fixed Sites

Facility Name	Address	In Floodplain (Y/N)
Frontier Co-op Company	321 S 1st St	N
OPPD Substation No 988	County Road 17	N

Source: Nebraska Department of Environment and Energy, 2017⁴⁵

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.

In the case of a hazard event, the primary shelter location in the Village would be housed at the elementary school, with secondary sheltering accommodations at the Masonic Temple and the Legion Hall.

Table CRC.4: Critical Facilities

CF Number	Name	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	American Legion	N	N	N
2	City Maintenance Yard Building	N	N	N
3	Comet Lodge/Masonic Temple	N	N	N
4	Community Center / Village Office/Fire & Rescue	Y	Y	N
5	Evangelical Covenant Church and Daycare	N	N	N
6	Immanuel Lutheran Church	N	N	N

⁴⁴ County Assessor. Personal correspondence, December 2018.

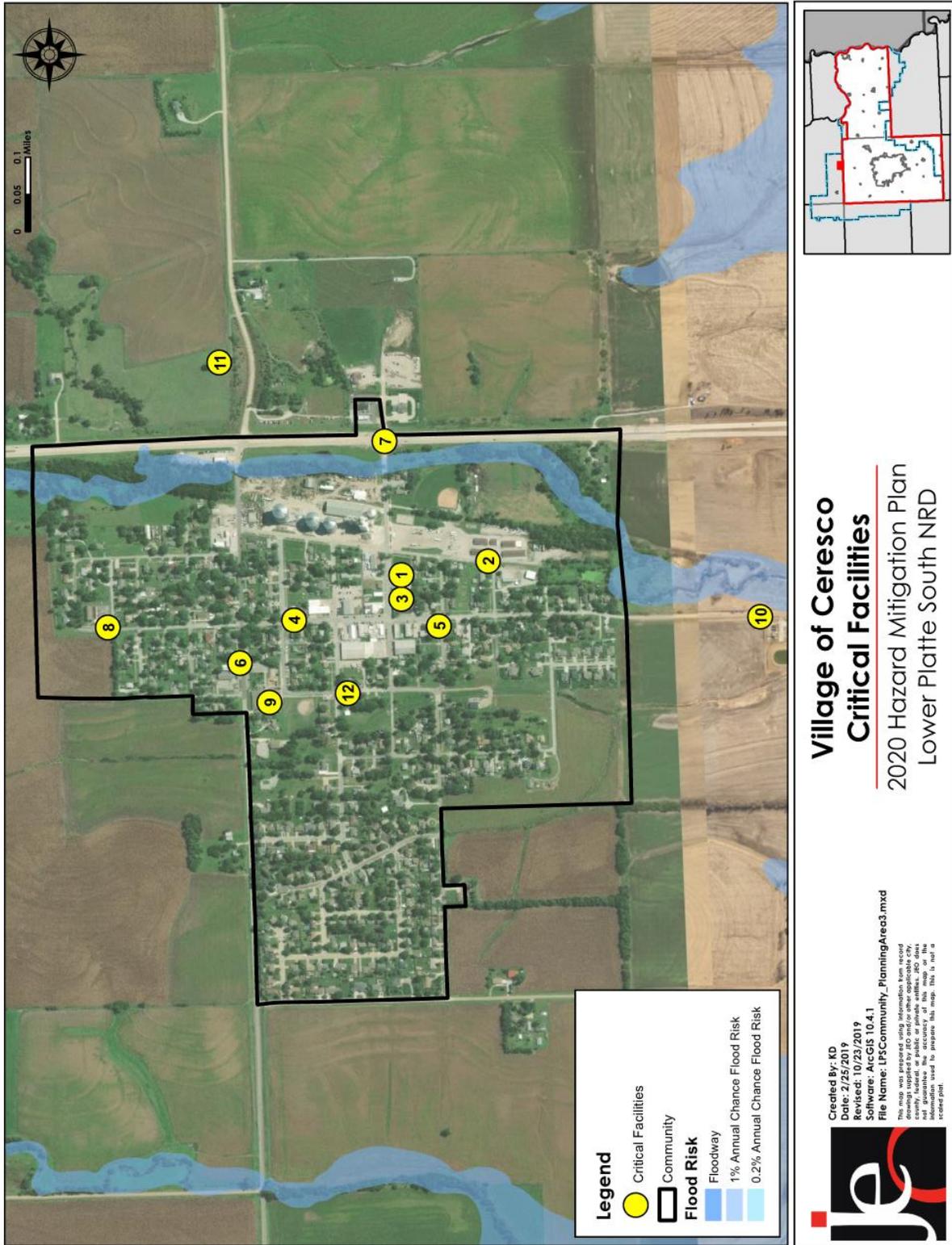
⁴⁵ Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed December 2018. <https://deq-iis.ne.gov/tier2/search.faces>.

Section Seven: Village of Ceresco Community Profile

<i>CF Number</i>	<i>Name</i>	<i>Red Cross Shelter (Y/N)</i>	<i>Generator (Y/N)</i>	<i>Located in Floodplain (Y/N)</i>
7	Lift Station	N	N	N
8	Methodist Church	N	N	N
9	Raymond Central Elementary School at Ceresco	N	N	N
10	Wastewater Treatment Facility	N	Y	N
11	Water Tower, Well House, & Wells #5 & #6*	N	N	N
12	Windstream Telephone / Maintenance Building	N	N	N

**A generator is located at the well house.*

Figure CRC.5: Critical Facilities



Historical Occurrences

See the Lower Platte South NRD 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.

Chemical Spills (Fixed Site)

The Village of Ceresco has several fixed site chemical storage facilities storing hazardous materials including anhydrous ammonia, propane, diesel fuel, and gasoline. Chemical spills are a concern due to the proximity to the Co-Op, local park, lift station, emergency well, American Legion Hall, Masonic Lodge, Village Office, Community Center, Fire Department, and ballfields. The Ceresco Fire Department averages five to six calls per year related to hazardous materials. In 2018, an anhydrous ammonia tank was tampered with during a community event and in 2019 a baseball game was cancelled due to a leak. Local response resources include the Fire Department and Lincoln Fire Department. Local emergency planners noted a need for enhanced site security at the sites such as fencing and more accurate emergency contact information.

Hail

Hail is a common occurrence for local mitigation planners due to the potential for damage to property, roofs, vehicles, windows, siding, trees, and landscaping. In 2014 there was damage to a local shop, the library lost its roof, and the community building's roof was damaged. The community does not use hail resistant building materials on critical facilities, but they are insured.

Severe Thunderstorms

Thunderstorms are an annual occurrence to the area. The Village of Ceresco experienced significant storms in 2014 that damaged the library roof and a lightning strike that started a house fire. In 2015 the community well was also hit by lightning. Critical records are not protected by surge protectors and such protections are needed for the village office, shop, or other village facilities. There are three facilities with backup generators: the community center, the fire department, and one well. There is a need for generators at the sewer/lagoons and lift stations. Very few power lines in town are buried and concerns exist of dying or damaged trees causing downed power lines.

Severe Winter Storms

Severe winter storms are commonly associated with heavy snow, ice accumulation, and/or blizzards that can result in power outages, car wrecks, and road closures. Although there has been no specific damage to critical facilities, water pipes routinely freeze and cause damage to residential homes. Very few power lines in town are buried and concerns exist of dying or damaged trees causing downed power lines. There are no designated snow routes, but the Village can call snow emergencies to get vehicles off the road. The community does not use snow fences. Maintenance staff are in charge of removing snow from the streets, but residents are responsible for their sidewalks. Snow removal resources are considered sufficient and includes shovels, snowblowers, a pickup with a blade, two dump trucks, a skid loader, front end loader and have the option to contract removal.

Tornadoes

In 2008 a tornadic event impacted the Village. This caused damage to the community center, village hall, maintenance shops, library, as well as some form of damage to every building in town. There are three sirens in the area. One is activated at the county level and two are activated by the fire department. There is a pending project to replace these sirens with a larger system tied more directly to the county. There are no FEMA-certified safe rooms and private residences are the only alternative. Saunders County sends emails but there is no texting options. There are no educational outreach activities in the area. There is a mutual aid agreement signed with other local fire departments.

Governance

A community’s governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Ceresco has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. Ceresco has five village board members and the following offices that may help implement mitigation actions.

- Board Chair
- Clerk
- Police Chief
- Fire Chief
- Water Commissioner
- Sewer Commissioner
- Street Commissioner
- Planning Commissioner
- Village Engineer
- Maintenance Manager
- Park Commissioner

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 CRC.5: Capability Assessment

Survey Components/Subcomponents		Yes/No
<i>Planning & Regulatory Capability</i>	Comprehensive Plan	Yes
	Capital Improvements Plan	Yes
	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	

Section Seven: Village of Ceresco Community Profile

Survey Components/Subcomponents		Yes/No
	National Flood Insurance Program	Yes
	Community Rating System	No
	Other (if any)	
<i>Administrative & Technical Capability</i>	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	No
	Chief Building Official	Yes
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	
<i>Fiscal Capability</i>	Capital Improvement Plan/ 1 & 6 Year plan	Yes
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
Other (if any)		
<i>Education & Outreach Capability</i>	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	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	Yes
	Other (if any)	

Overall Capability	Limited/Moderate/High
Does your community have the financial resources needed to implement mitigation projects?	Limited
Does your community have the staff/expertise to implement projects?	High
Does your community have the community support to implement projects?	Moderate
Does your community staff have the time to devote to hazard mitigation?	Limited

Plan Integration

The Village of Ceresco is currently in the process of updating their Comprehensive Plan which was last updated in 2001. The new update will focus on making identified goals and actions consistent with hazard mitigation planning. The plan also directs development away from the floodplain, identifies areas in need of emergency shelters, and includes future land use maps. The plan update is expected to be completed in 2020.

The Village of Ceresco has an annex as part of the Saunders County Local Emergency Operations Plan (LEOP). The LEOP was last updated in 2009 and includes discussion on hazards of greatest concern, assigns specific responsibilities to communities and departments, identifies scenarios and routes for evacuation, and identifies sheltering locations. The local planning team indicated communication between departments is good, but additional improvement is always possible. Copies of the LEOP are available with the Village Clerk, Police and Fire departments, Village Board, and Maintenance Department.

The Village’s Zoning Ordinance and Building Codes are currently being updated and expect to be completed in 2020. The Village currently uses the 2009 International Building Code but will be updating to the 2012 IBC. The ordinance discourages development in the floodplain, requires a base flood elevation of one foot or greater in the floodplain, prohibits filling wetlands, and limits density in the floodplain. The updated ordinance and codes will also discourage development near chemical storage sites, discourage development along major transportation routes, limit development in the ETJ, and will consider the wildland-urban interface when developing.

The Capital Improvements Plan is updated annually and identifies numerous projects which are consistent with the goals and actions identified in this hazard mitigation plan. The CIP includes storm water projects, maintenance for the storm sewer system, bridge improvements, backup generators for critical facilities, critical facility improvements, and transportation corridor expansions.

The Village’s budget is currently limited to maintaining current facilities and municipal systems; however, additional funds for projects can be procured through bonding when necessary. A large amount of the annual budget has been earmarked for street and drainage improvements on Laura Lane.

Mitigation Strategy

Completed Mitigation Actions

Action	Preserve Natural and Beneficial Functions
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) Addressed	Flooding
Status	The Village has completed several stream improvements on land they own within community boundaries, including converting space alongside the stream into parks and greenspace.

Ongoing and New Mitigation Actions

Action	Backup Municipal Records
Description	Purchase an off-site data backup system for all Village documents and data
Hazard(s) Addressed	Severe Thunderstorms, Severe Winter Storms, Tornadoes
Estimated Cost	\$150+
Potential Funding	General Fund
Timeline	1 year
Priority	High
Lead Agency	Village Board
Status	This is a new mitigation action.

Action	Backup Generators
Description	Provide a portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations, and other CFs and shelters.
Hazard(s) Addressed	Tornados and high winds, severe winter storms, severe thunderstorms
Estimated Cost	\$15,000-\$30,000 per generator
Potential Funding	General Fund
Timeline	2-5 years
Priority	Medium
Lead Agency	Village Board
Status	A generator is already available at the fire hall and wastewater treatment facility, however additional generators are needed at the wells and lift station. A portable generator can be stored at the maintenance shed.

Section Seven: Village of Ceresco Community Profile

Action	Comprehensive Village Disaster/ Emergency Response Plan
Description	Update Comprehensive Village Disaster and Emergency Response Plan
Hazard(s) Addressed	Tornados and high winds, severe winter storms, severe thunderstorms
Estimated Cost	\$6,000 +
Potential Funding	Emergency Management Performance Grant, Homeland Security Funding, LPS NRD, Saunders County & Village of Ceresco
Timeline	Ongoing
Priority	Low
Lead Agency	Fire Department and Village Board
Status	This is an ongoing action to update and revise the emergency response plans for the Village. The plans were recently updated in 2018.

Action	Education Program for Chemical Releases
Description	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	Chemical Fixed Sites
Estimated Cost	\$3,000+
Potential Funding	General Fund
Timeline	2 – 5 years
Priority	Low
Lead Agency	Maintenance Department
Status	This is a new mitigation action.

Action	Emergency Exercise: Hazardous Spill
Description	Utilize an exercise to prepare for potential explosions or hazardous spills. Ensure that nearby businesses and residents have appropriate plans in place.
Hazard(s) Addressed	Chemical Fixed Sites
Estimated Cost	\$5,000+
Potential Funding	General Fund
Timeline	2 – 5 years
Priority	Medium
Lead Agency	Fire Department
Status	This is a new mitigation action.

Section Seven: Village of Ceresco Community Profile

Action	Hazardous Tree Removal
Description	Identify and remove hazardous limbs and/or trees. Added emphasis is needed on Village owned Ash trees which may be vulnerable to disease
Hazard(s) Addressed	Agricultural Plant and Animal Disease, High Winds, Severe Thunderstorms, Severe Winter Storms, Tornadoes
Estimated Cost	\$200+ per tree
Potential Funding	General Fund
Timeline	1 year
Priority	Medium
Lead Agency	Village Board, Tree Board
Status	This is a new mitigation action. Numerous Ash trees are located around town and by the Scout Hall which should be removed.

Action	Surge Protectors
Description	Purchase and install surge protectors on sensitive equipment in critical facilities.
Hazard(s) Addressed	Severe Thunderstorms, Severe Winter Storms, Tornadoes
Estimated Cost	\$25 per unit
Potential Funding	General Fund
Timeline	1 year
Priority	High
Lead Agency	Village Board
Status	This is a new mitigation action.

Action	Stormwater System and Drainage Improvements
Description	Ceresco can utilize stormwater systems comprising of ditches and culverts to convey runoff. Undersized systems can contribute to localized flooding. Drainage improvements may include ditch upsizing, ditch cleanout and culvert improvements. These improvements can serve to more effectively convey runoff within villages, preventing interior localized flooding.
Hazard(s) Addressed	Flooding
Estimated Cost	\$100,000 - \$125,000
Potential Funding	HMGP, PDM, CDBG LPSNRD, Saunders County & Village of Ceresco
Timeline	2 – 5 years
Priority	High
Lead Agency	Village Board
Status	Some street improvements are currently underway including Laura Lane and installing a new sewer drain. Clearing out and replacing culverts is an ongoing project.

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Action	Vehicular Barriers
Description	Install vehicular barriers to protect CFs and key infrastructure where possible
Hazard(s) Addressed	Terrorism
Estimated Cost	Varies
Potential Funding	Village of Ceresco, Saunders County Emergency Management
Timeline	2 – 5 years
Priority	High
Lead Agency	Village Board, Maintenance Department
Status	This project has not yet been started. These structures will be located around anhydrous ammonia and propane tanks.

Action	Water Conservation Awareness
Description	Improve a program to conserve water use by the citizens during elongated periods of drought. Potential restrictions on water could include limitations on lawn watering, car washing, or water sold to outside sources. Work with DNR on farm irrigation restrictions.
Hazard(s) Addressed	Drought
Estimated Cost	\$1,000 +
Potential Funding	General Fund
Timeline	1 year
Priority	Low
Lead Agency	Water Operator
Status	This project has not yet been started.

Removed Mitigation Actions

Action	Join the CRS
Description	Become a CRS community, to reduce flood insurance premiums
Hazard(s) Addressed	Flooding
Reason for Removal	The community identified this action as no longer a priority or need.

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COMMUNITY PROFILE

CONESTOGA PUBLIC SCHOOLS

Lower Platte South Natural Resources District
Multi-Jurisdictional Hazard Mitigation Plan Update

2020

Local Planning Team

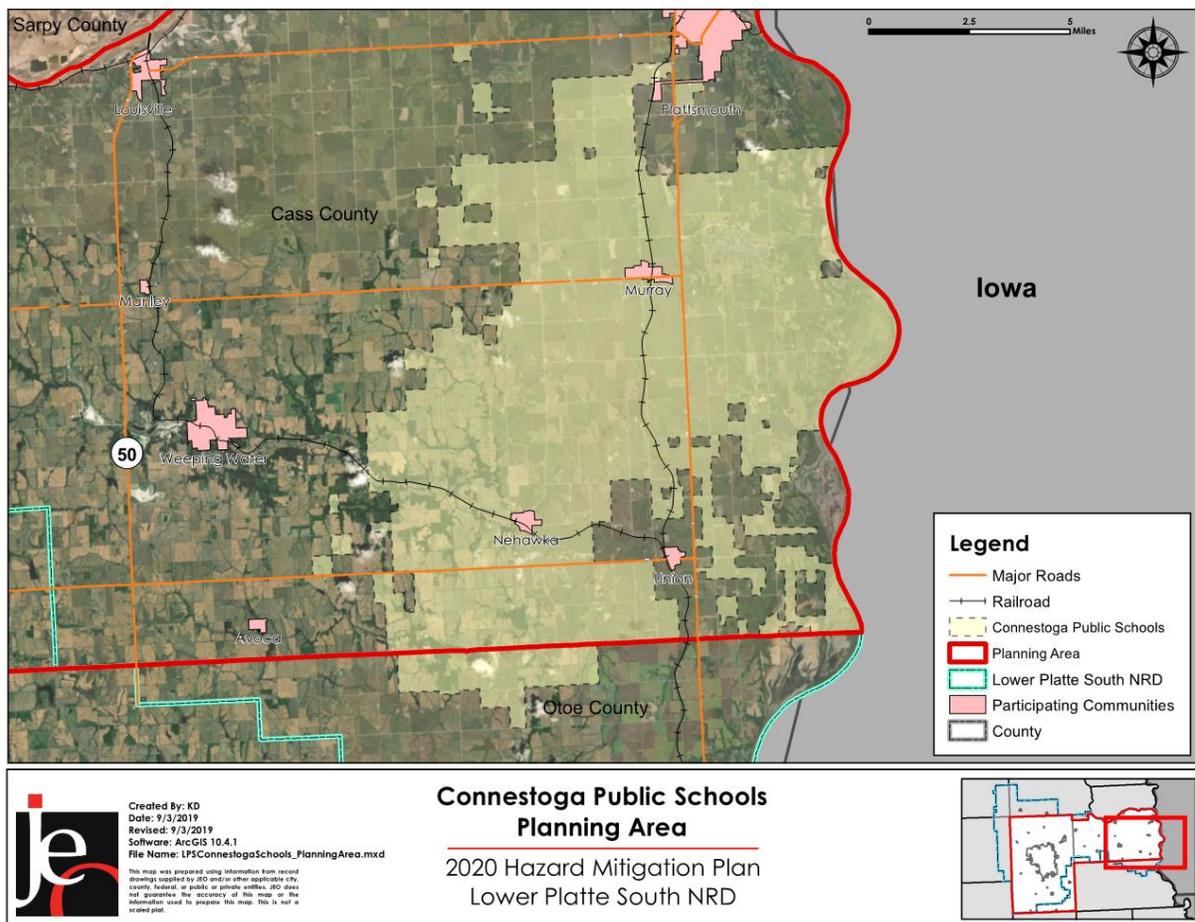
Table CPS.1: Conestoga Public Schools Local Planning Team

NAME	TITLE	JURISDICTION
BETH JOHNSON	Superintendent	Conestoga Public Schools

Location and Services

Conestoga Public Schools is in the Village of Murray in Cass County and serves two schools: Conestoga Elementary and Conestoga Junior Senior High School. The school district spans approximately 198 square miles across Cass and Otoe Counties and provides services to Nehawka, Murray, Beaver Lake, Lake WaConDa, Union, and the surrounding rural area. The schools district primarily serves English speaking students, with a very small percentage of Spanish speaking.

Figure CPS.1: Conestoga Public Schools District

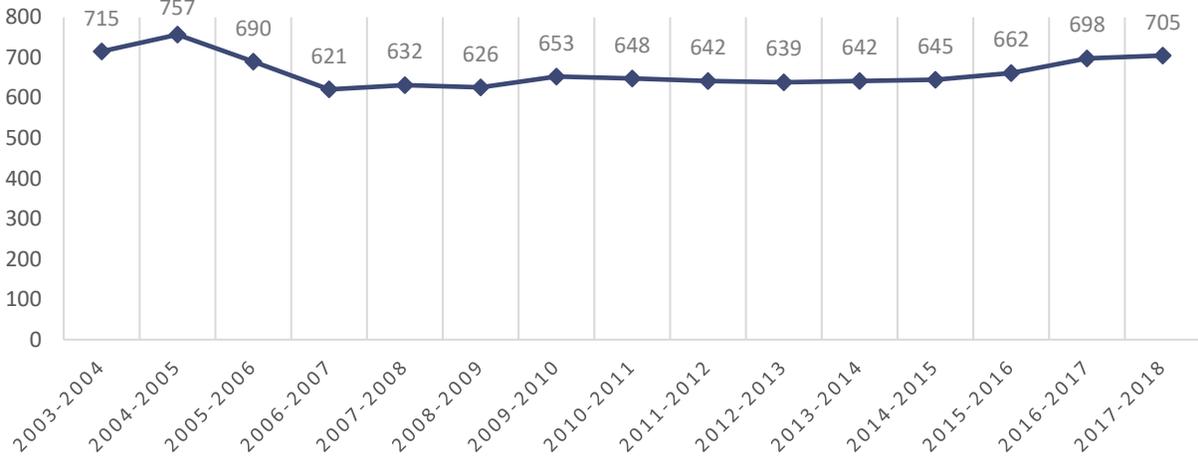


Demographics

The following figure displays the historical student population trend starting with the 2003-04 school year and ending with the 2017-18 year. It indicates that the student population has maintained a relatively steady rate since the mid-2000s. There are 705 students currently enrolled

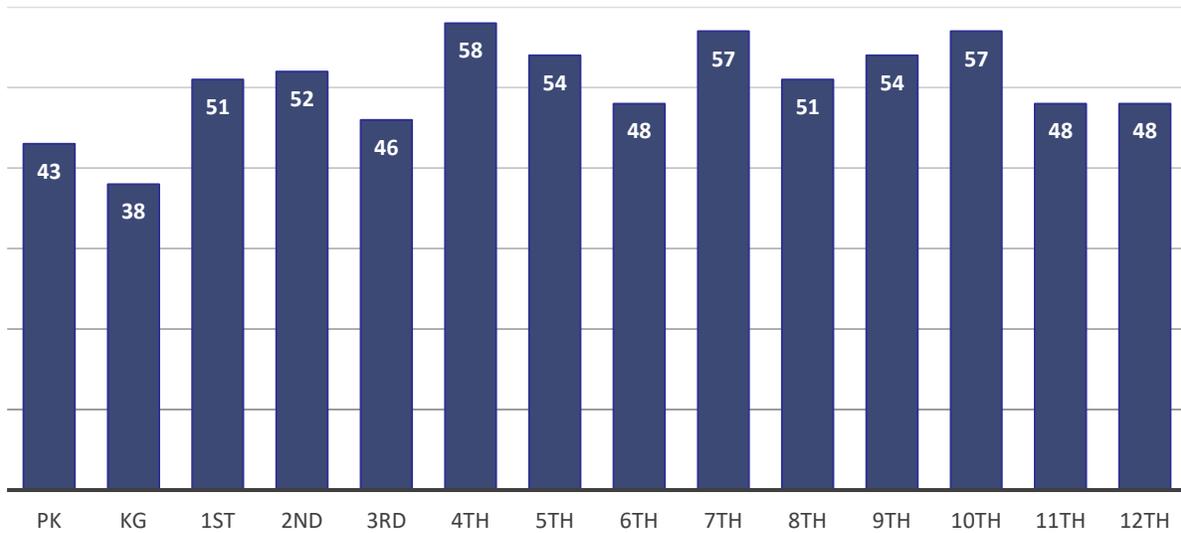
in Conestoga Public Schools.⁴⁶ The local planning team indicated the district is expecting the student population to increase in the coming years. Highway 75 is expecting expansion efforts in spring 2020 and the surrounding areas are adding both residential homes and infrastructure.

Figure CPS.2: Student Population 2003-2018



Source: Nebraska Department of Education

Figure CPS.3: Number of Students by Grade, 2017-2018



Source: Nebraska Department of Education

The figure above indicates that the largest number of students are in 4th grade, followed closely by 7th, 10th, and 5th. The lowest population of students are in Kindergarten. According to the Nebraska Department of Education (NDE), 30% of students received either free or reduced priced meals at school in the 2017-18 year. This is lower than the state average of 46%. Additionally,

⁴⁶ Nebraska Department of Education. August 2019. "2017-2018 Education Profile for District: Conestoga Public Schools." <https://nep.education.ne.gov/Districts/Index/13-0022-000?DataYears=20172018>.

Section Seven: Conestoga Public Schools Community Profile

nearly 13% of students are in the Special Education Program. These students may be more vulnerable during a hazardous event than the rest of the student population.

Table CPS.2: Student Statistics, 2017-2018

	SCHOOL DISTRICT	STATE OF NEBRASKA
Free/Reduced Priced Meals	29.50%	45.83%
School Mobility Rate	2.83%	4.23%
English Language Learners	N/A	6.87%
Special Education Students	12.54%	15.12%

Source: Nebraska Department of Education⁴⁷

Future Development Trends

Over the past five years the school district has constructed new football concessions and restrooms which can be used as a shelter location during severe weather events. While these facilities are not rated for tornado safe rooms, they do help provide additional protection for parents, staff, and students at extracurricular events. In the next five years the school district will be focusing on expanding education services and capacity to accommodate for an increasing population. Both the Elementary school in Murray and the High School on Hwy 1 have the potential to expand.

Critical Infrastructure/Key Resources

Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environmental Quality, there are a total of 11 hazardous chemical storage sites located within the school district boundaries.

Table CPS.3: Chemical Storage Fixed Sites

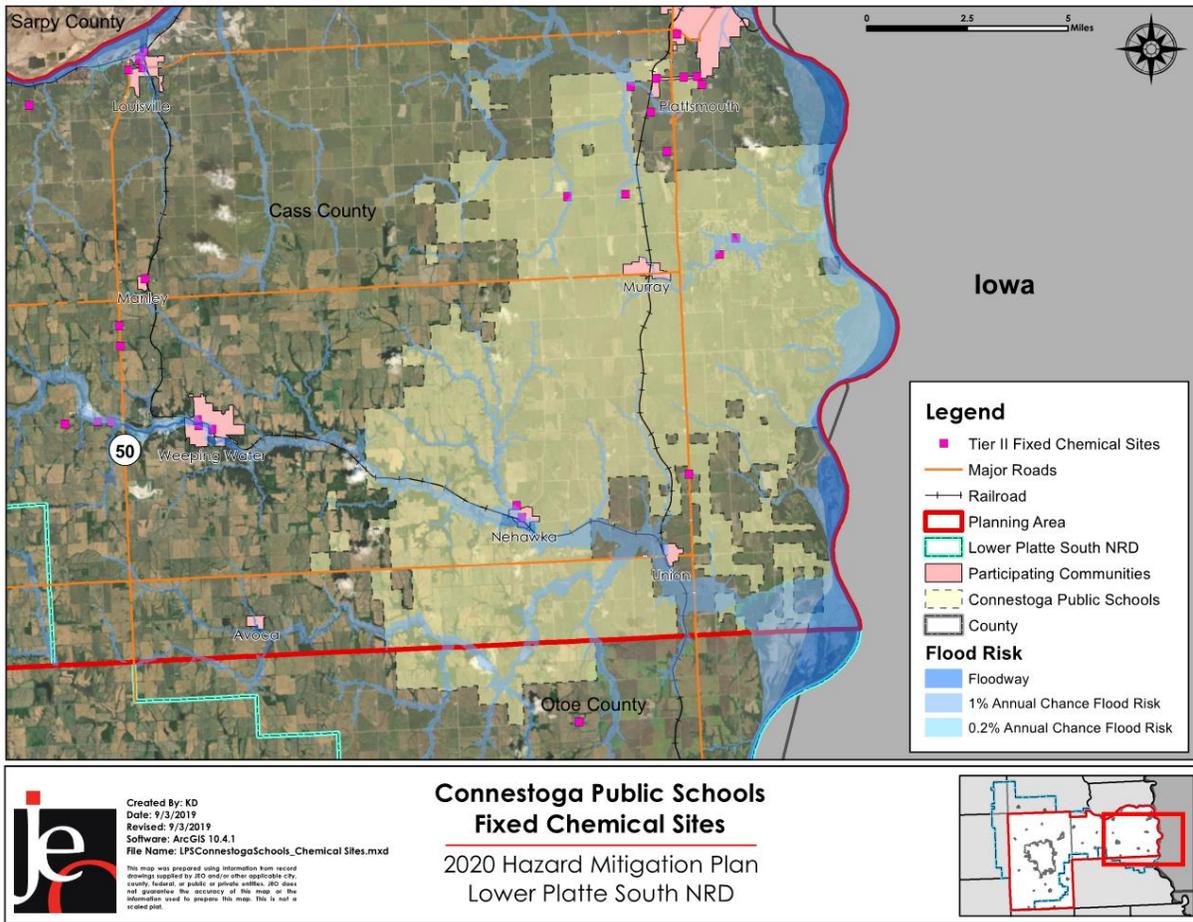
FACILITY NAME	ADDRESS	CITY	IN FLOODPLAIN (Y/N)
Beaver Lake	9410 Clubhouse Cir	Plattsmouth	N
Cass County Highway Dept	13780 12th St	Plattsmouth	N
Forterra Concrete Products	369 W Wiles Rd	Plattsmouth	N
Midwest Farmers Cooperative	300 Main St	Nehawka	N
Midwest Farmers Cooperative	5224 Andersen Dr	Plattsmouth	N
OPPD Cass County Station	3520 Mill Rd	Plattsmouth	N
OPPD Substation No 961	Mill Rd	Murray	N
Plattsmouth Terminal	13909 Chicago Ave	Plattsmouth	N
Wiles Bros Fertilizer Inc	606 Wiles Rd	Plattsmouth	N
Windstream Communications	Jct Murray Rd & Bellvue Dr	Murray	N
AT&T	907 Wiles Rd	Plattsmouth	

Source: Nebraska Department of Environment and Energy, 2017⁴⁸

⁴⁷ Nebraska Education Profile. "School Report Card." Accessed August 2019. <http://nep.education.ne.gov/Home/>.

⁴⁸ Nebraska Department of Environmental Quality. "Search Tier II Data." Accessed December 2018. <https://deq-iis.ne.gov/tier2/search.faces>.

Figure CPS.4: Chemical Fixed Sites



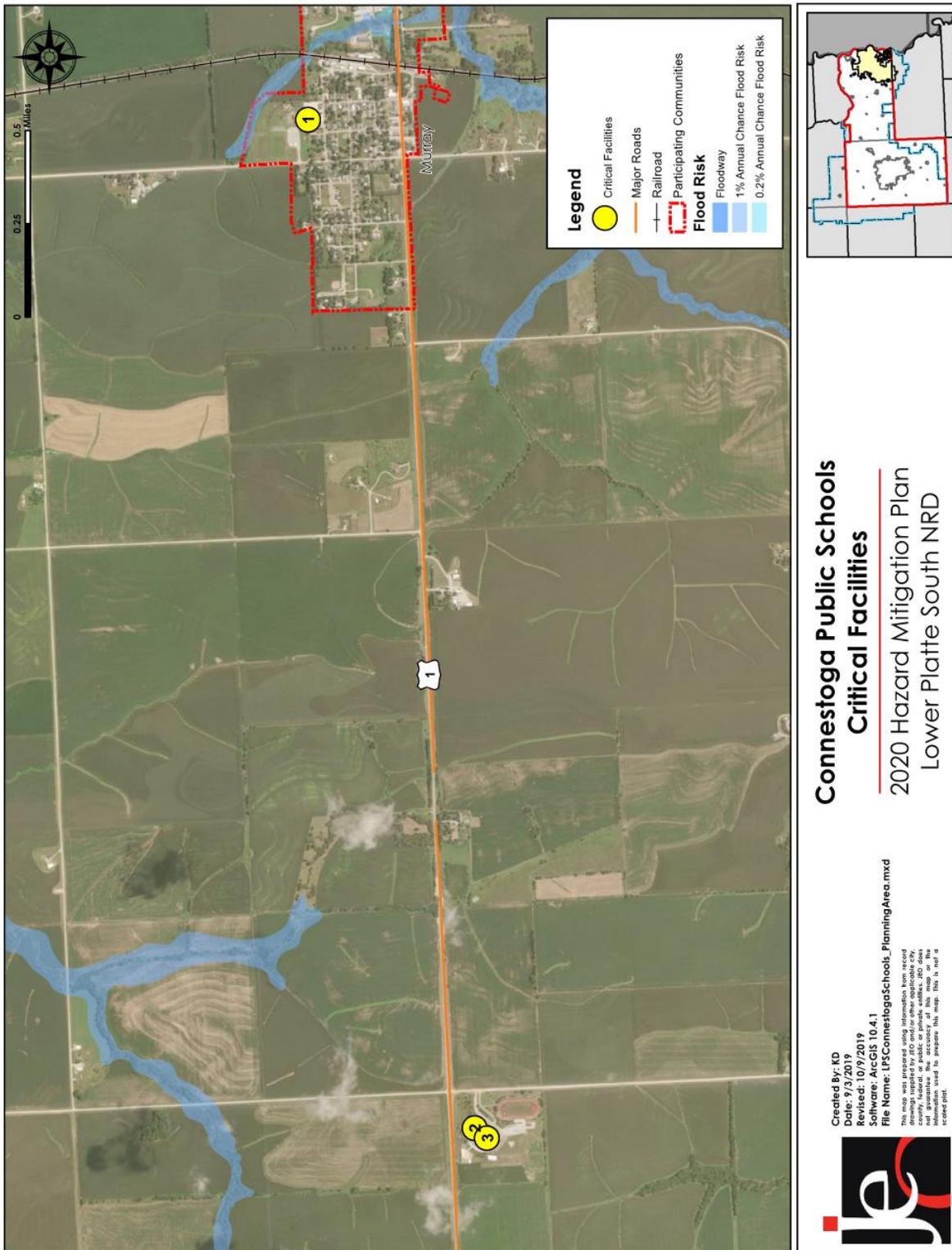
Critical Facilities

The school district operates three facilities. These facilities are listed below, along with information indicating the school’s address, number of students and staff, if the facility is used as a shelter during emergencies (i.e. Red Cross Shelter), if the facility is located in the floodplain, and the presence of a tornado safe room and backup power generator.

Table CPS.4: Critical Facilities

CF #	Name	Address	Number of Students	Number of Staff	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Conestoga Elementary	104 E High St, Murray	390	58	Y	N	N
2	Conestoga Middle/High School and Maintenance	8404 42 nd St, Murray	315	44	Y	N	N
3	District Office	8404 42 nd St, Murray	0	5	N	N	N

Figure CPS.5: Critical Facilities



School Drills and Staff Training

The school district conducts the following drills with their staff and students:

- Fire – monthly
- Bus Evacuation – annually
- Tornado – three to four times a year
- Shelter in Place – monthly
- Intruder – monthly

The school district conducts regular emergency procedure training for staff with a primary emphasis on intruder drills. The Crisis Go application is used to assist the district in hazard events and training. The application also allows concerns to be submitted anonymously and can notify all staff members immediately of an emergency. In the case of school closures or hazard events, parents and staff are notified via an automated call system, social media posts, and the school district website. The District has an application called Parent Square where parents can opt-in for specific alerts. Additional safety information is available via the school newsletter.

Historical Occurrences

See the Cass 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 following discussion provides specific information reported by the local planning team. Only hazards either identified as a concern to the school district by the local planning team, or based on the occurrence and risk of the hazard to the school district are discussed in detail below.

Chemical Spills (Transportation)

A BNSF railroad is located in close proximity to the Elementary School in the Village of Murray and the High School is situated alongside Highway 1 which sees a large volume of semi-trucks transporting hazardous chemicals. While no chemical transportation spills incidents have occurred or impacted the school, concerns exist for student and staff safety if such an event were to occur. In 2012 a buried propane tank leaked near the high school and prompted evacuations and required fire department and hazmat response. This event emphasized the concern for the district to identify appropriate chemical incident protocols. If an event were to occur students would shelter in place at the stadium, Cougar Den (weight room), and local churches in Murray.

High Winds

High wind events have caused significant roof damage for school facilities, especially as the High School is located on top of a hill. The facility has had to replace the roof due to severe wind damage. The new roof has wind vents to help reduce future damages. Powerlines are all overhead to the schools. OPPD provides power to the Elementary School, while NPPD provides power to the High School. There are several large trees located on each campus but the school maintenance department cares and maintains them to prevent hazardous limbs from endangering staff, students, or parents.

Severe Thunderstorms

Severe thunderstorms are a common occurrence for the planning area and across the State and are commonly accompanied by strong winds, hail, heavy rain, and lightning strikes. The school district's primary concern for severe thunderstorms is the potential for power loss. Most of the

Section Seven: Conestoga Public Schools Community Profile

electrical lines that serve the school campus are above ground. There are no generators located at any school facilities to aid in providing power. Past severe thunderstorm events have produced hail and wind which damaged roofs and property and lightning strikes which caused power surges and damaged school computers. The school district now has surge protectors in place. However, there are no lightning rods on the school facilities, prompting concerns for the local planning team. The bathrooms, locker rooms, and bottom floor areas with no windows are used as shelter locations. Trees receive annual maintenance to remove dead or dying limbs that could pose a hazard to property or people.

Severe Winter Storms

Severe winter storms can include blizzards, extreme cold, ice accumulation, and winter weather conditions. The school district is primarily concerned with loss of power to provide heat to the facilities and limited or blocked transportation routes from heavy snow for school buses. No school facilities have a backup generator. The District contracts with their bus provider and provides services to students in the surrounding rural area with unpaved roads. Ice accumulation and heavy snow can make accessing these areas hazardous. Roads around Beaver Lake can be particularly hazardous during icy conditions. Snow removal for the school is done by the maintenance department.

Terrorism

While no terrorism events have occurred which impacted the Conestoga Public School District, the safety of staff and students is a top priority. The elementary school has several access points which have been fitted with exit only doors and prevent entry. All entries are funneled through the main entrance to be screened by the main office. However, the high school has several doors that need to be reinforced or have secure access. The high school also has two main entrances which require guests to be buzzed in by a staff member. The District has identified improved school entry security measures in their Building Improvements Plan. Additionally, the district has upgraded security cameras on both campuses within the last few years.

Tornadoes

Tornadoes are a hazard of top concern due to their potential to cause catastrophic damage to property and significant injury to staff and students. The bathrooms, locker rooms, and bottom floors with no windows serve as shelter locations. School officials receive weather alerts via weather radios in the new buildings or via cell phone alerts. The alert siren located in the Village of Murray is not loud enough to reach the high school. An additional siren is needed on the high school campus.

Administration/Capability Assessment

The school district has a superintendent and two principals. The school board is made up of a six-member panel. Other departments or positions employed by the district which may assist with hazard mitigation projects include:

- Communications
- Finance Department
- Human Resources
- Library/Media Services
- Maintenance and Custodial
- PARA/Special Education
- IT Department
- Transportation

Overall Capability	Limited/Moderate/High
Does the school district have the financial resources need to implement mitigation projects?	Limited
Does the school district have the staff/expertise to implement projects?	Moderate
Does the school district have the community support to implement projects?	Moderate
Does the school district staff have the time to devote to hazard mitigation?	Moderate

Plan Integration

The Conestoga Public School District has an All-hazards Safety Plan which was last updated in 2016 in a joint effort between the District and the Nebraska Department of Education. In 2018 the plan was revisited and was merged with the District Master Plan. The plan discusses natural hazards and weather related plans including scenarios requiring evacuation, evacuation routes, action checklists, specific responsibilities per department, call trees, and contact lists for staff, utilities, contractors, law enforcement, fire departments, and local emergency management. The plan is now reviewed annually with the Safety Committee and copies are shared with the Cass County Emergency Management Agency, local Volunteer Fire Departments, and County Sheriff. A modified version is publicly available via the district website.

The district also has Strategic and Building Improvements plans which are updated annually with the school board. These plans emphasize projects to improve school resources and capabilities. The plans also discuss safety planning including upgrading security measures and facility expansions.

Mitigation Strategy

Completed Mitigation Actions

Mitigation Action	Evacuation Plan
Description	Develop an evacuation plan to be prepared for any disaster that would require evacuation.
Hazard(s) Addressed	All Hazards
Status	Evacuation plans for both school facilities were developed recently and are reviewed, updated, and practices annually.

Ongoing and New Mitigation Actions

Mitigation Action	Alert Siren
Description	Evaluate and improve current warning systems. Obtain/Upgrade warning system equipment and methods. Conduct evaluation of existing alert sirens for replacement or placement of new sirens
Hazard(s) Addressed	All hazards
Estimated Cost	\$15,000+
Potential Funding	General Fund, HMGP, PDM
Timeline	2-5 years
Priority	Medium
Lead Agency	Superintendent
Status	This is a new mitigation action. An alert siren is needed at the high school as the one located in the Village of Murray cannot be heard on campus.

Mitigation Action	Backup Generators
Description	Provide portable or stationary source of backup power to school facilities or other critical facilities. Additional generator is needed to provide heat during winter power loss events and assist in designating school as a community shelter location.
Hazard(s) Addressed	All hazards
Estimated Cost	\$250,000
Potential Funding	General Fund, HMGP, PDM
Timeline	2-5 years
Priority	Medium
Lead Agency	Superintendent
Status	This is a new mitigation action. Both school facilities need backup generators.

Mitigation Action	Continuity Planning
Description	Develop continuity plans for critical school services.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$0, Staff Time
Potential Funding	General Fund
Timeline	2-5 years
Priority	Medium
Lead Agency	Superintendent
Status	This project has not yet been started. The district has a reunification plan for students and parents. The neighboring Village of Murray has water supply shut off problems which can disrupt services at the school facilities.

Section Seven: Conestoga Public Schools Community Profile

Mitigation Action	Public Education
Description	Increase public awareness of vulnerability and risk reduction measures through hazard education.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$1,000+
Potential Funding	General Funds
Timeline	Ongoing
Priority	Medium
Lead Agency	Superintendent
Status	This is an ongoing action. The district regularly sends information through the newsletters to staff and parents about safety procedures.

Mitigation Action	Storm Shelters
Description	Identify, design, and develop storm shelters to protect community and critical facilities
Hazard(s) Addressed	All Hazards
Estimated Cost	\$200-250/sf
Potential Funding	General Fund, PDM, HMGP
Timeline	5+ years
Priority	Medium
Lead Agency	Superintendent
Status	Storm shelters are needed at both school facilities. A specific location at the high school has been identified which can house all students but additional funding is needed.

Mitigation Action	Vehicular Barriers
Description	Install vehicular barriers to protect critical facilities and key infrastructure where possible.
Hazard(s) Addressed	Terrorism
Estimated Cost	\$5,000+
Potential Funding	General Fund, HMGP, PDM
Timeline	2-5 years
Priority	Low
Lead Agency	Superintendent
Status	This project has not yet been started. Barriers are needed at both facilities. The elementary school has identified a need for barriers along High St. The high school is still in need of an evaluation for where to locate barriers.

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COMMUNITY PROFILE

NORRIS PUBLIC SCHOOLS

Lower Platte South Natural Resources District
Multi-Jurisdictional Hazard Mitigation Plan Update

2020

Local Planning Team

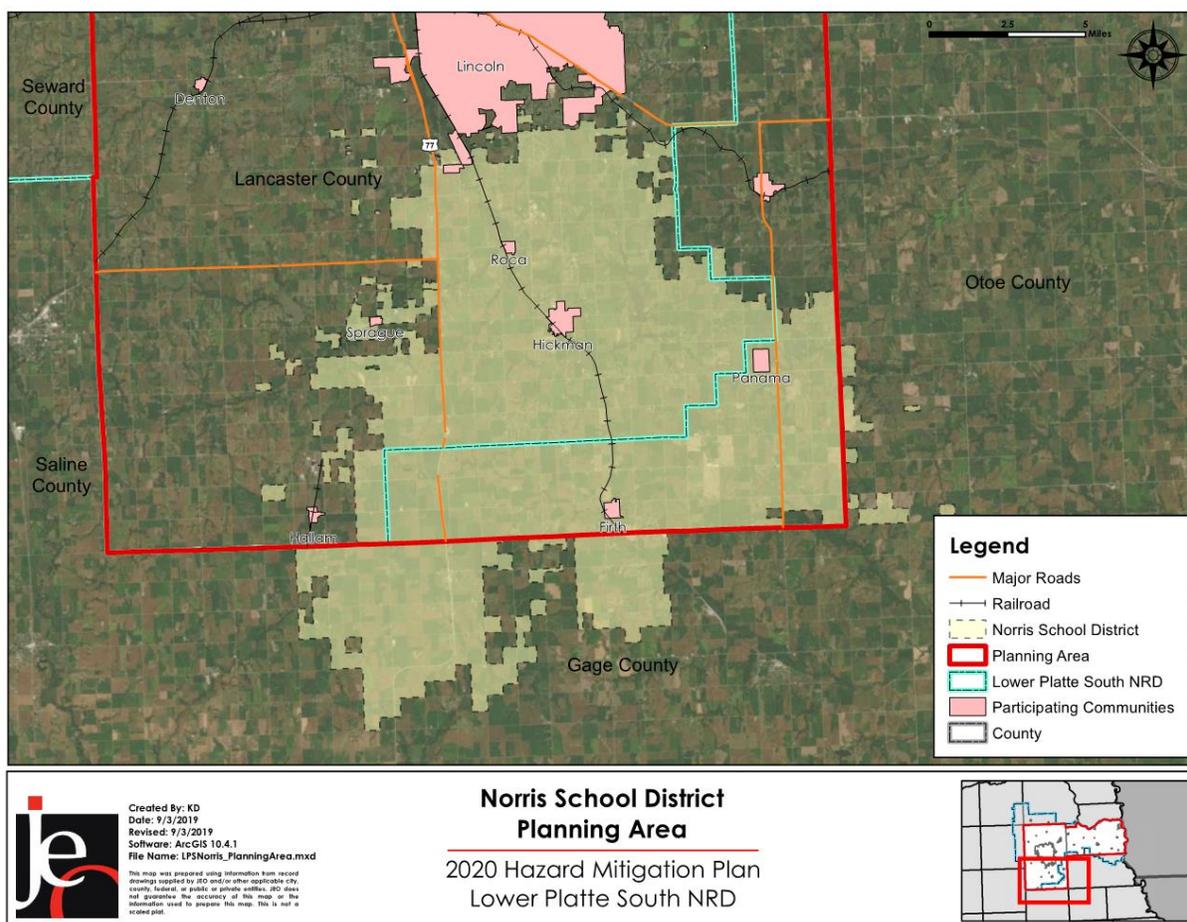
Table NPS.1: Norris Public Schools Local Planning Team

Name	Title	Jurisdiction
John Schwartz	Superintendent	Norris Public Schools
Brian Maschmann	Admin-Assistant Superintendent	Norris Public Schools

Location and Services

Norris Public Schools is based in the Village of Firth in Lancaster County and serves one elementary school, one intermediate school, one middle school, and one high school in Firth. The school district provides services to students in Hickman, Firth, Cortland, Panama, Roca, Princeton, and Holland and spans approximately 168 square miles in Lancaster, Otoe, and Gage Counties. While English is the predominant language spoken in the district, other languages represented include Spanish, Mandarin, Tagalong, and Haitian Creole.

Figure NPS.1: Norris Public Schools District

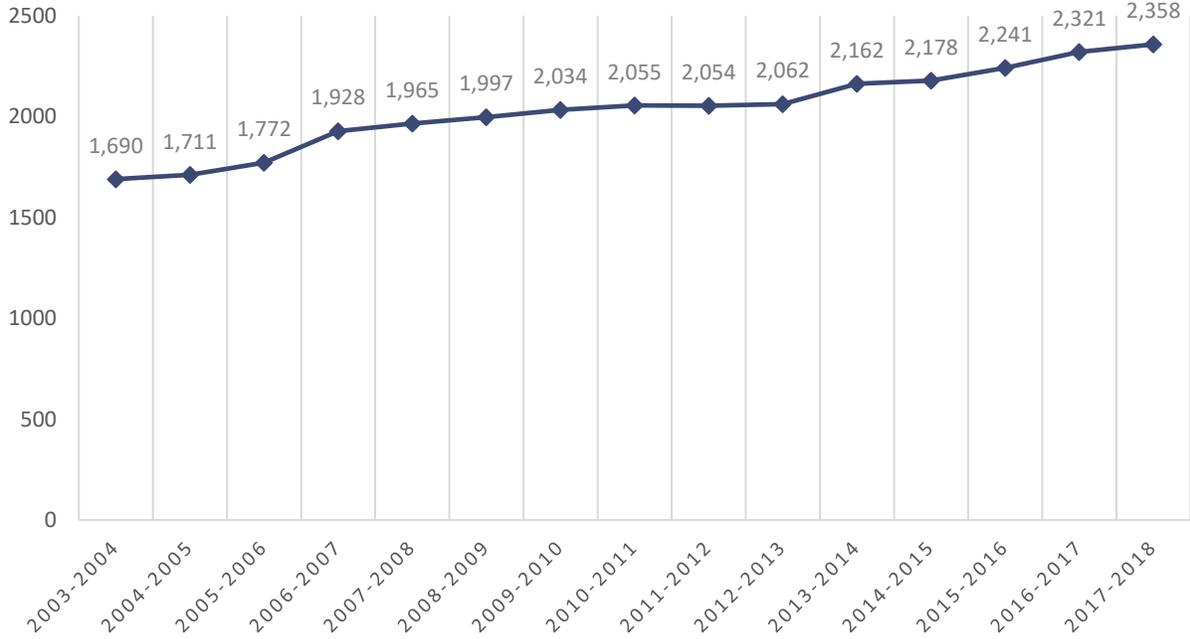


Demographics

The following figure displays the historical student population trend starting with the 2003-04 school year and ending with the 2017-18 year. It indicates that the student population has been increased gradually since the early 2000s. The local planning team expects the student body population to continue growing into the next decade. Average growth historically has averaged

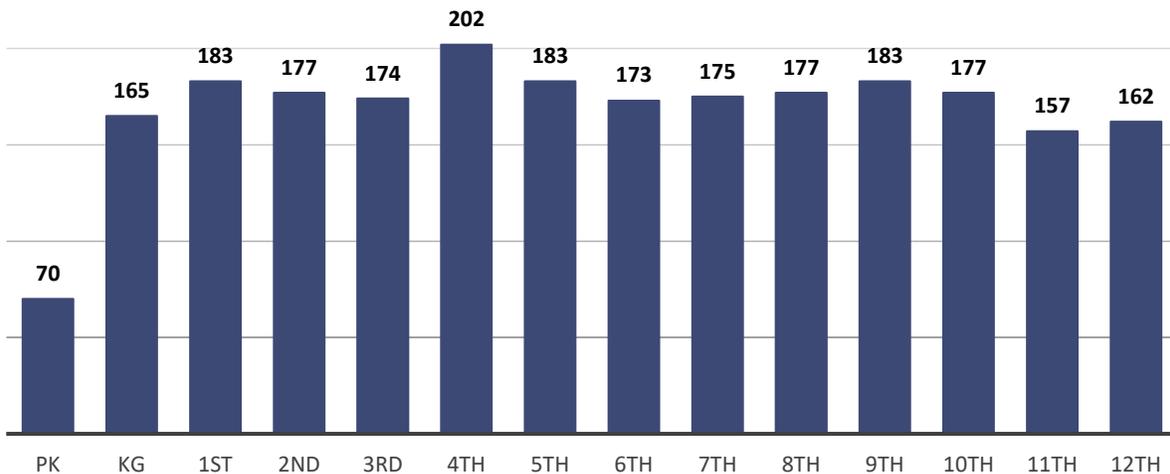
about 2% annually. Surrounding communities including Hickman, Firth, and surrounding acreages are contributing to the school growth. Currently, there are 2,358 students enrolled in Norris Public Schools.⁴⁹

Figure NPS.2: Student Population 2003-2018



Source: Nebraska Department of Education

Figure NPS.3: Number of Students by Grade, 2017-2018



Source: Nebraska Department of Education

The figure above indicates that the largest number of students are in 4th grade, followed by 1st and 9th. The lowest population of students are in Pre-Kindergarten. According to the Nebraska Department of Education (NDE), 13% of students received either free or reduced priced meals at

⁴⁹ Nebraska Department of Education. December 2018. "2017-2018 Education Profile for District: Waverly Public Schools." <https://nep.education.ne.gov/snapshot.html#55-0145-000>.

Section Seven: Norris Public Schools Community Profile

school in the 2017-18 year. This is lower than the state average of 46%. Additionally, about 9% of students are in the Special Education Program. These students may be more vulnerable during a hazardous event than the rest of the student population.

Table NPS.2: Student Statistics, 2017-2018

	School District	State of Nebraska
Free/Reduced Priced Meals	12.6%	45.83%
School Mobility Rate	2.82%	4.23%
English Language Learners	0.7%	6.87%
Special Education Students	9.22%	15.12%

Source: Nebraska Department of Education⁵⁰

Future Development Trends

There have been no new major developments for the school district in the past five years. The local planning team indicated some staffing changes have occurred due to retirement. The school body population has been increasing which is attributed to a rising residential population in and around Hickman, Firth, Roca, and surrounding rural acreages. The district is also anticipating additional growth to occur near these communities in the next five years. There are no plans to expand current facilities, but Norris Schools is currently updating their facility plan which may identify any additional building needs as the district continues to grow as current facilities will reach capacity if the growth trend continues.

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 a total of six hazardous chemical storage sites located within the school district boundaries. None of these facilities are located within one mile of the school campus.

Table NPS.3: Chemical Storage Fixed Sites

Facility Name	Address	In Floodplain (Y/N)
Farmers' Cooperative	208 W 3 rd St, Firth	N
Farmers' Cooperative	15505 A St, Roca	Y
Hallam Fertilizer Warehouse	820 W Hallam Rd, Martell	N
Magellan Pipeline Company LP	11200 S 14 th St, Roca	N
Magellan Pipeline Company LP	2000 Saltillo Rd, Roca	N
Phillips 66 Pipeline LLC	1345 Saltillo Rd, Roca	N

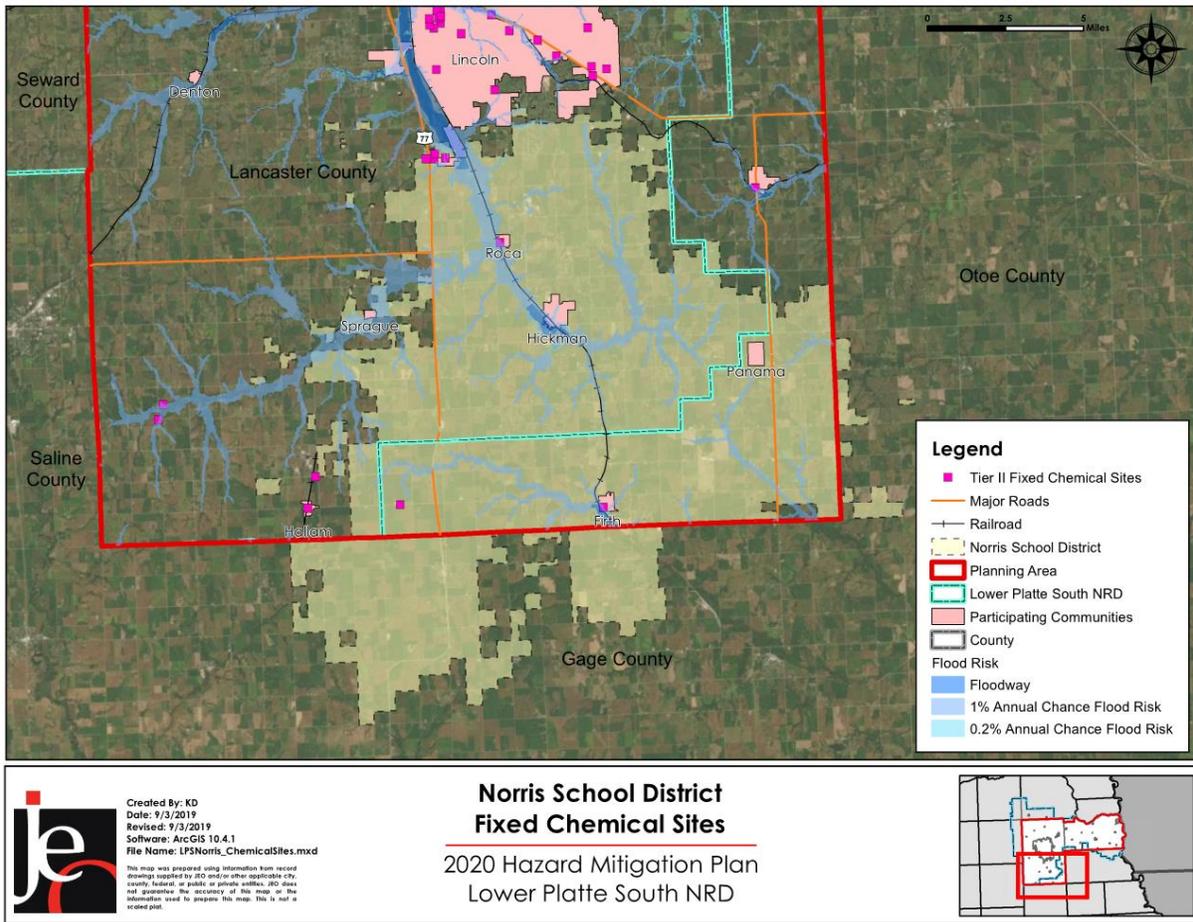
Source: Nebraska Department of Environment and Energy, 2017⁵¹

⁵⁰ Nebraska Education Profile. "School Report Card." Accessed August 2019. <http://nep.education.ne.gov/Home/>.

⁵¹ Nebraska Department of Environmental Quality. "Search Tier II Data." Accessed December 2018. <https://deq-lis.ne.gov/tier2/search.faces>.

⁵² Nebraska Department of Transportation. "Statewide Traffic Flow Map." Accessed December 2018. <https://dot.nebraska.gov/media/2510/2014-statewide-traffic-flow-map.pdf>.

Figure NPS.4: Chemical Fixed Sites



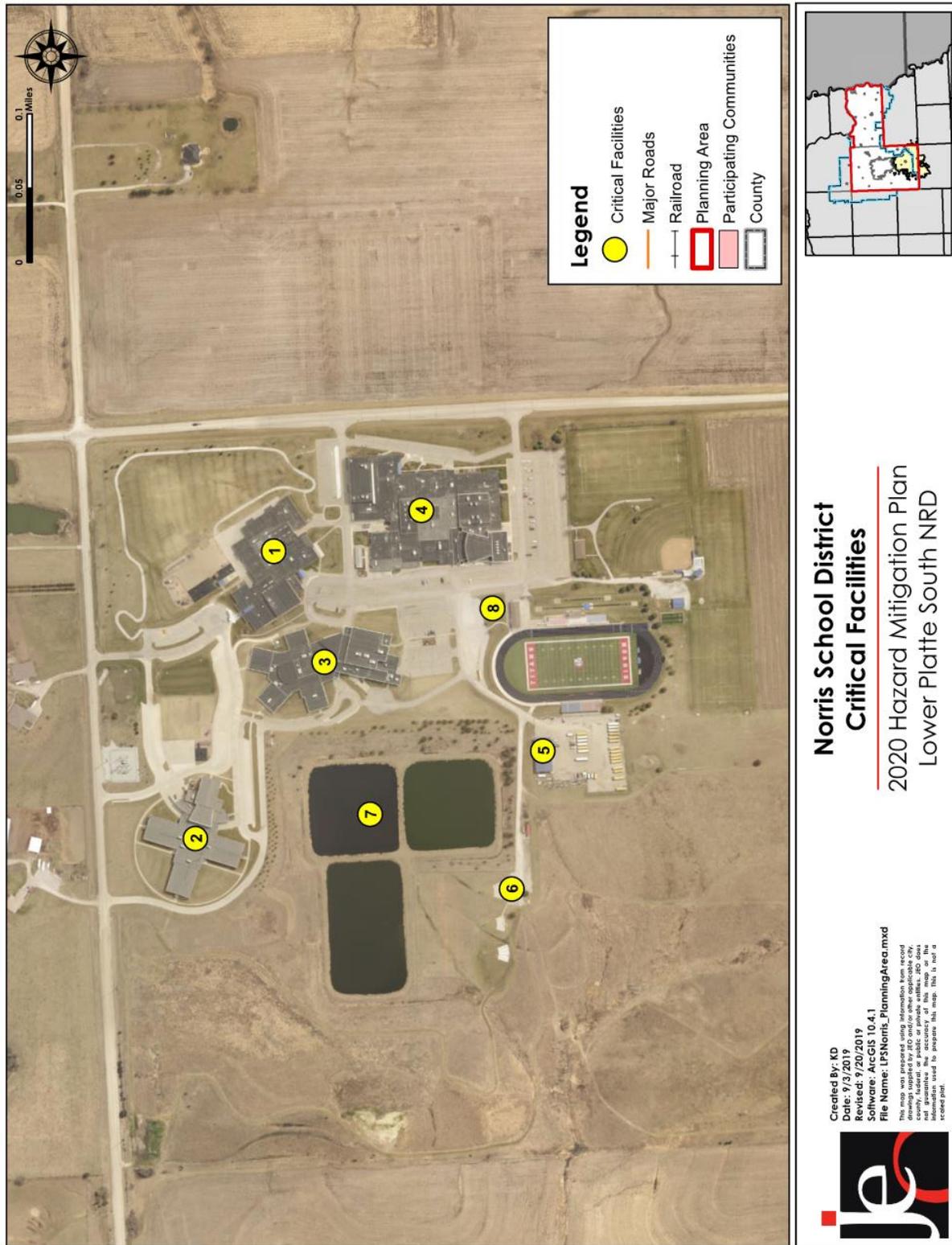
Critical Facilities

The school district operates four facilities located in one campus in the Village of Firth. These facilities are listed below, along with information indicating the school’s address, number of students and staff, if the facility is used as a shelter during emergencies (i.e. Red Cross Shelter), if the facility is located in the floodplain, and the presence of a tornado safe room and backup power generator.

Table NPS.4: Critical Facilities

CF #	Name	Number of Students	Number of Staff	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Norris Elementary	588	62	N	N	N
2	Norris Intermediate	575	55	Y	Y	N
3	Norris Middle	530	54	Y	Y	N
4	Norris High	697	65	N	N	N
5	Bus Barn	0	0	N	N	N
6	Equipment Shed	0	0	N	N	N
7	Lagoons	0	0	N	N	N
8	Siren	0	0	N	N	N

Figure NPS.5: Critical Facilities



School Drills and Staff Training

The school district conducts the following drills with their staff and students:

- Fire – monthly
- Tornado – twice a year
- Bus Evacuation – twice a year
- Active Shooter/Crisis – quarterly

The school district conducts regular trainings for the Administration team through ALICE, safety workshops, and internal assessments. All teachers have received ALICE training, attend annual safety trainings, and are part of the Safe Schools program. Information about safety procedures are shared with students, parents, and staff through the school newsletter, district website, and regular drills. Parents are notified of emergency events via letters, emails, or text message alerts.

Historical Occurrences

See the Lancaster 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 following discussion provides specific information reported by the local planning team. Only hazards either identified as a concern to the school district by the local planning team, or based on the occurrence and risk of the hazard to the school district are discussed in detail below.

Flooding

While flooding is not a prominent concern on the school campus, surrounding roads are at risk to washouts or hazardous conditions during flood events. Approximately 20-25% of students who rely on bus services live in rural areas or along unpaved roads. Flooding has blocked transportation routes to pick up and drop off students. The school district utilizes upwards of 30 buses per day. Hazardous roads or blocked transportation routes can cause damage to the bus fleet. The surrounding areas are at risk of flash flooding, primarily from agricultural runoff. There is a retention pond on school grounds to help divert heavy rains away from campus. The lagoons are located approximately 20 feet below grade and have not experienced any flooding events.

High Winds

High winds have caused significant damage to the school district in the past, primarily to the roof and siding. A past tornado event with straight-line winds caused major damage. Power lines on campus are all buried to reduce the risk of power loss and a power substation is located on the school campus. The substation is owned and operated by Norris Public Power District. The Middle and Elementary schools have backup generators and the Middle School is identified as a primary Mass Care Facility for Lancaster County. Students and staff are all able to take shelter in school facilities from extreme high winds.

Severe Thunderstorms

Severe thunderstorms are a common occurrence for the school district and can include impacts from strong winds, heavy rain, hail, and lightning strikes. School facilities have experienced lightning strikes which have damaged electronics; however, surge protectors are installed on all facilities and all school records are backed up to geographically diverse locations. The high school has two safe rooms, the middle school has one safe room, and the intermediate school has a

Section Seven: Norris Public Schools Community Profile

reinforced auditorium and hallways. Students in the elementary school can see shelter from extreme weather events in restrooms and basement classrooms. A primary concern for severe thunderstorms is the potential to damage exposed HVAC units and other rooftop utilities.

Severe Winter Storms

Severe winter storms can include impacts from blizzards, extreme cold, ice accumulation, or other hazardous winter weather. The primary concern regarding severe winter storms for the school district is the ability to transport students via bus to and from school. Many students live in surrounding rural areas or in Beaver Lake where icy roads can become very hazardous for school buses. Snow removal on campus is the responsibility of the Maintenance Department which currently has sufficient resources. The majority of trees on campus are young and do not pose a risk of dropping hazardous limbs or causing property damage.

Tornadoes

On Saturday, May 22, 2004 a F4 tornado impacted southeast Nebraska, traveling over 52 miles in total and, at its peak, spanning 2.5 miles in width. The tornado is known as the Hallam tornado for the primary community impacted and hit the Norris Public Schools campus. The Middle School experienced significant damage with the auditorium destroyed and multiple walls caved in. The tornado hit the day after school had been released for the summer, thus no students or staff were harmed during the event. Property damages from the tornado surpassed \$35 million for the school, but reconstruction allowed classes to commence in the fall.

The reconstructed school facilities were built to withstand another significant tornado event which may impact the school district. The rebuilt high school and elementary school and newly constructed middle and intermediate schools were designed with additional safety measures. Two FEMA certified tornado safe rooms are located in the high school as the fitness center and instrumental music room and one FEMA certified safe room is in the middle school as the computer lab. The intermediate school's computer lab and primary hallway are also built to withstand heavy wind events. There is also a siren located on school grounds, as the campus is not located near an incorporated community. The continued safety of students and staff is a top priority for school administration.

Figure NPS.6: May 2004 Tornado Damage



Source: Lincoln Journal Star, 2013⁵²

⁵² Lincoln Journal Star, May 2013. "At Norris, record tornado led to safer schools." https://journalstar.com/news/local/at-norris-record-tornado-led-to-safer-schools/article_4dc8316f-d9da-5bbe-abfa-fbc1974f6716.html.

Administration/Capability Assessment

The school district has a superintendent and four principals. The school board is made up of a six-member panel. Other departments or positions employed by the district which may assist with hazard mitigation projects include:

- Administration
- Safety Director
- Communications
- Finance Department
- Human Resources
- Library/Media Services
- PARA Education
- IT Department
- Transportation
- Transportation Committee
- Finance Committee
- Policy Committee

Overall Capability	Limited/Moderate/High
Does the school district have the financial resources need to implement mitigation projects?	Moderate
Does the school district have the staff/expertise to implement projects?	Moderate
Does the school district have the community support to implement projects?	Moderate
Does the school district staff have the time to devote to hazard mitigation?	Moderate

Plan Integration

Norris Public Schools District has a Crisis Response Plan as well as a Safety Committee which reviews and updates the plan on an as-needed basis. The Crisis Response Plan assigns clear responsibility during an emergency, identifies sheltering locations, discusses scenarios that would require evacuation, identifies critical evacuation routes, and discusses types of safety protocols in depth. The Safety committee meets quarterly to discuss safety protocols and address any identified safety gaps.

The district also has a Strategic Plan which is currently under revision. This plan focuses on continuous growth for the schools under three main topics: Teaching and Learning, Operational Practices, and Growth in Facilities. There are no topics in the Strategic Plan which are relevant to hazard mitigation.

Mitigation Strategy

Ongoing and New Mitigation Actions

Mitigation Action	Hail Resistant Roofing
Description	Retrofit or ensure hail resistant roofing materials are utilized for all new construction to protect roofs and utilities.
Hazard(s) Addressed	Hail, Severe Thunderstorms
Estimated Cost	\$2.50+ per sq. ft.
Potential Funding	Building Fund
Timeline	2-5 years
Priority	Medium
Lead Agency	Maintenance Director
Status	This is a new mitigation action

Mitigation Action	Safety Action Plan
Description	Identify and evaluate current hazards, response plan and procedures. Review, update, and/or develop school safety plans. These plans may address all natural and man-made hazards, identify shelter locations, identify evacuation routes, and work alongside County Emergency Management to coordinate response actions.
Hazard(s) Addressed	All hazards
Estimated Cost	\$10,000
Potential Funding	General Fund
Timeline	2-5 years
Priority	High
Lead Agency	Safety Director
Status	This is a new mitigation action.

Mitigation Action	Staff Safety Training
Description	Ensure all staff are trained to respond to hazard events.
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by scope and training
Potential Funding	General Fund
Timeline	2-5 years
Priority	Medium
Lead Agency	Safety Director
Status	This is a new mitigation action. Additional training programs need to be evaluated.

COMMUNITY PROFILE

RAYMOND CENTRAL PUBLIC SCHOOLS

Lower Platte South Natural Resources District
Multi-Jurisdictional Hazard Mitigation Plan Update

2020

Local Planning Team

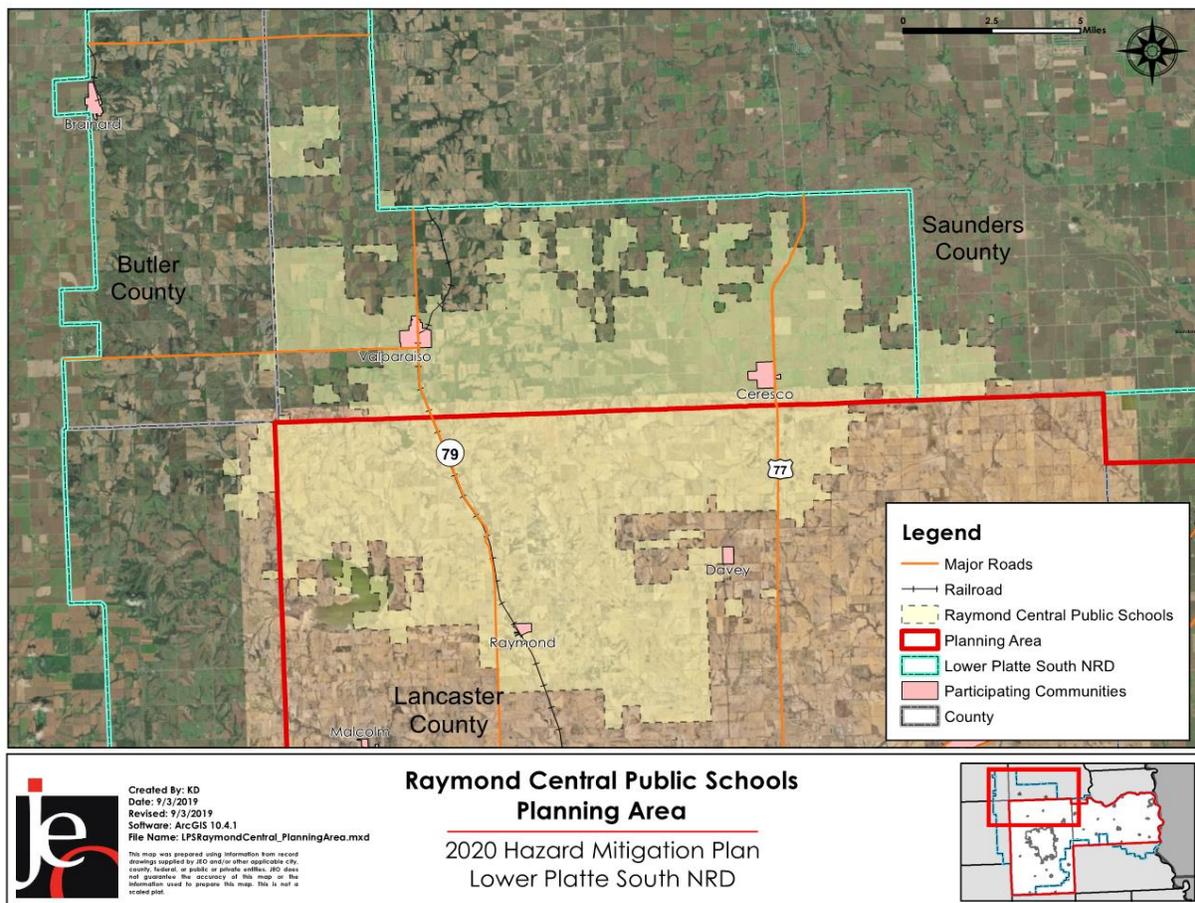
Table RCPS.1: Raymond Central Public Schools Local Planning Team

NAME	TITLE	JURISDICTION
Phil Carlson	Utilities and Maintenance	Raymond Central Public Schools
Jared Shanahan	Utilities and Maintenance	Raymond Central Public Schools

Location and Services

Raymond Central Public Schools operates three schools throughout the district: one school in Valparaiso (K-5), one school in Ceresco (K-5), and one secondary (6-12) school and one preschool at the Raymond Central main campus. The school district spans approximately 142 square miles across Lancaster, Butler, and Saunders Counties. The district provides services to residents in Davey, Raymond, Agnew, Ceresco, and Valparaiso. Raymond Central’s district boundaries overlap with several neighboring school districts including Malcolm, Ashland-Greenwood, Waverly, Wahoo, and East Butler. Raymond Central is the largest in the area. The primary language in the district is English, however with population changes in the surrounding areas the local planning team indicated that additional languages may become more common in the future.

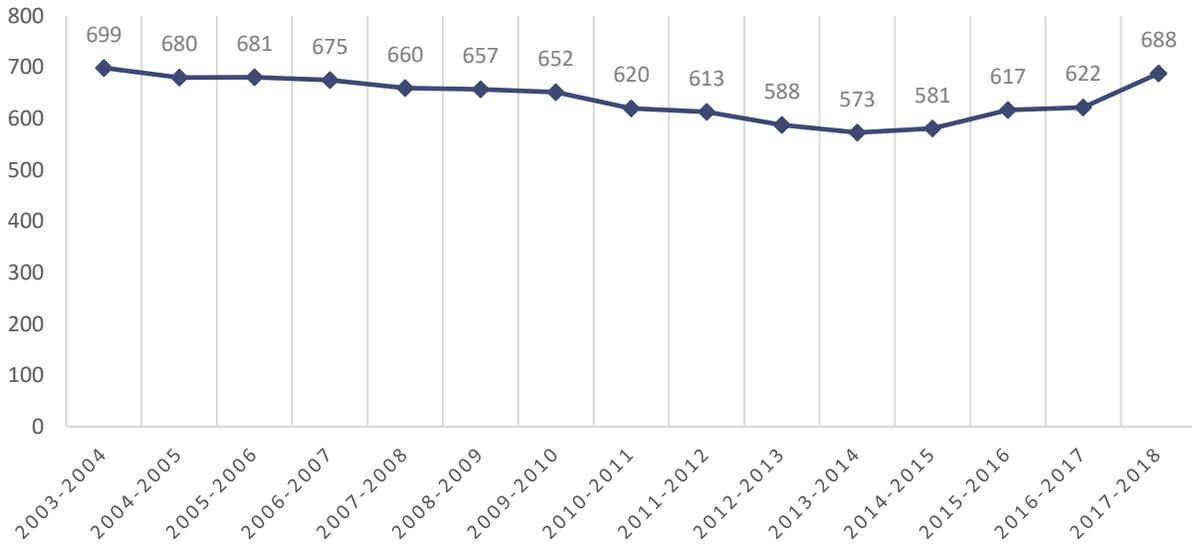
Figure RCPS.1: Raymond Central Public Schools District



Demographics

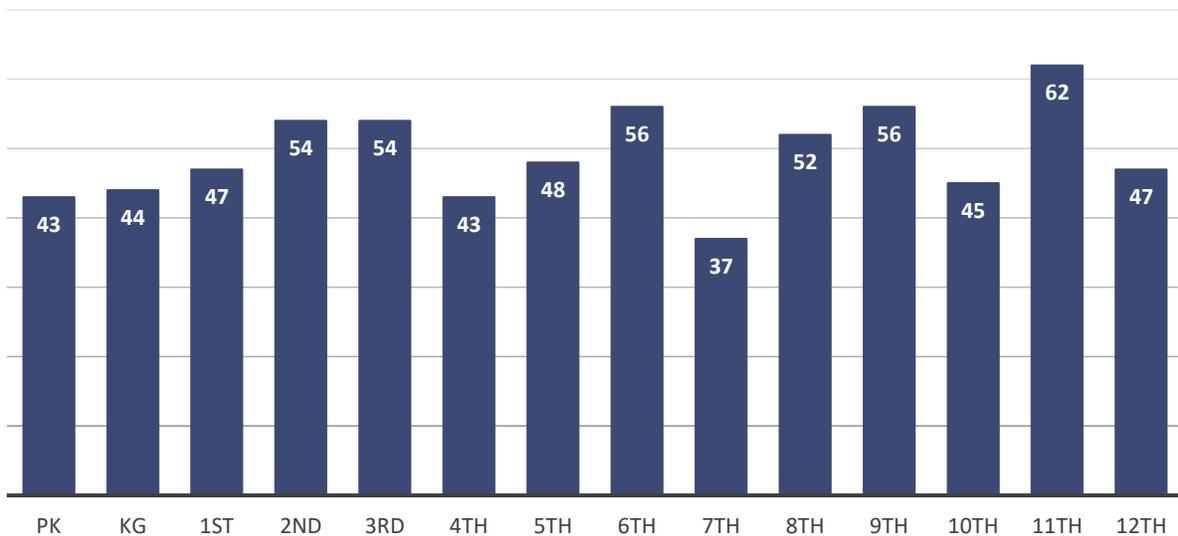
The following figure displays the historical student population trend starting with the 2003-04 school year and ending with the 2017-18 year. It indicates that the student population has maintained a relatively steady rate. There are 688 students currently enrolled in Raymond Central Public Schools.⁵³ The local planning team expects little significant change in student population with the expectation that the student population will continue to increase in the future.

Figure RCPS.2: Student Population 2003-2018



Source: Nebraska Department of Education

Figure RCPS.3: Number of Students by Grade, 2017-2018



Source: Nebraska Department of Education

⁵³ Nebraska Department of Education. August 2019. "2017-2018 Education Profile for District: Raymond Central Public Schools." <https://nep.education.ne.gov/Districts/Index/55-0161-000?DataYears=20172018>

Section Seven: Raymond Central Public Schools Community Profile

The figure above indicates that the largest number of students are in 11th grade, followed by 6th and 9th grade. The lowest population of students are in 7th grade. According to the Nebraska Department of Education (NDE), 20% of students received either free or reduced priced meals at school in the 2017-18 year. This is lower than the state average of 46%. Additionally, nearly 13% of students are in the Special Education Program. These students may be more vulnerable during a hazardous event than the rest of the student population.

Table RCPS.2: Student Statistics, 2017-2018

	SCHOOL DISTRICT	STATE OF NEBRASKA
Free/Reduced Priced Meals	20.20%	45.83%
School Mobility Rate	5.49%	4.23%
English Language Learners	N/A	6.87%
Special Education Students	12.71%	15.12%

Source: Nebraska Department of Education⁵⁴

Future Development Trends

Raymond Central Public Schools has expanded greatly over the last several years. A new addition has been added to the main Raymond Central campus which houses Pre-Kindergarten and 6th grade. The addition is attached to the main building and administration on the south side. A new playground and basketball court were also added during the expansion. In 2018 the school district purchased and installed security cameras which are updated or repaired annually. In 2011 fiberoptic was installed throughout the junior/senior high school. In the next five years the district expects to update several buses and perform regular facility maintenance. No further buildings, demolitions, or expansions are expected at any school campus.

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 a total of three hazardous chemical storage sites located within the school district boundaries.

Table RCPS.3: Chemical Storage Fixed Sites

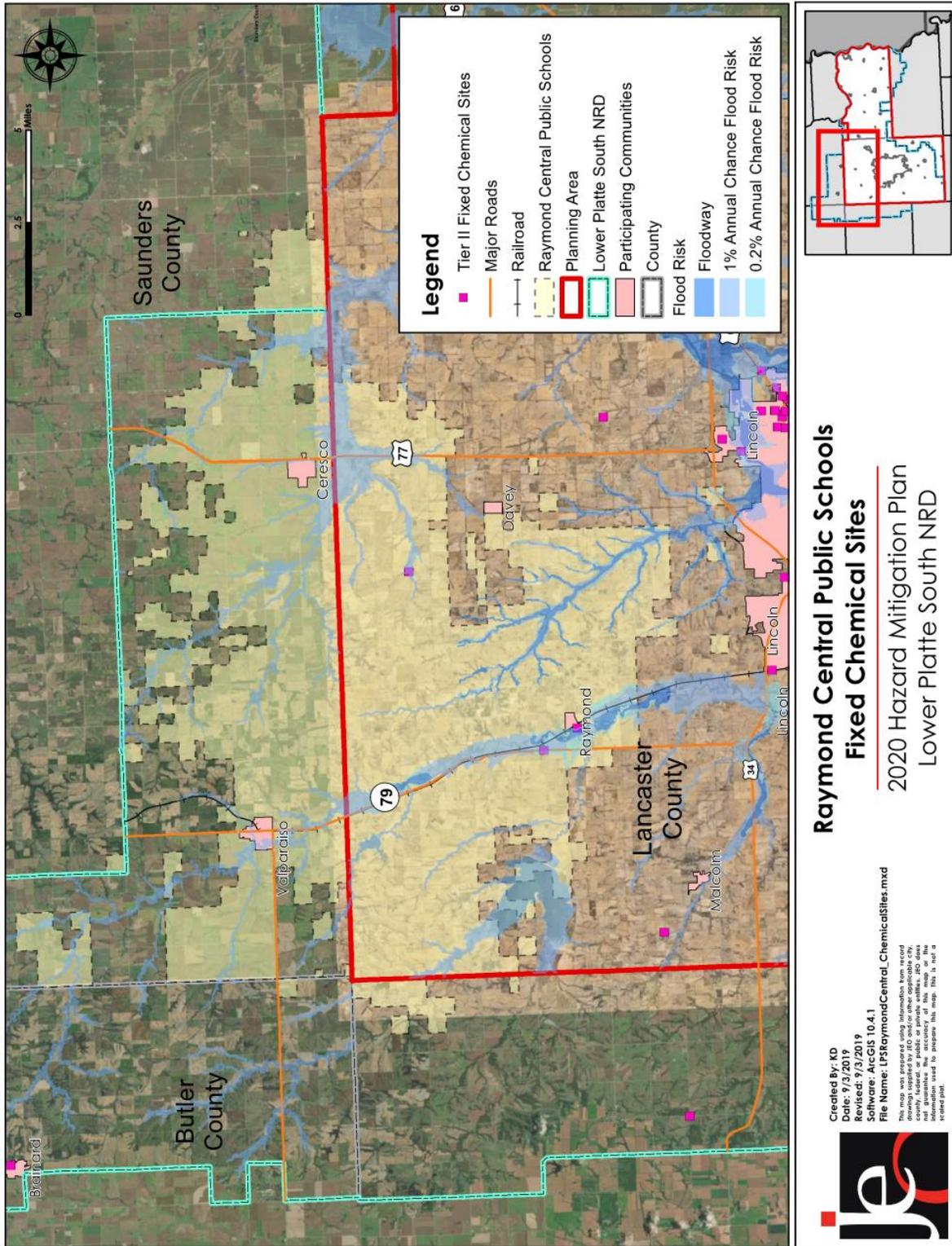
Facility Name	Address	In Floodplain (Y/N)
Farmers' Cooperative	14540 W Railroad, Raymond	N
Farmers' Cooperative North	15912 NW 56 th St, Raymond	Y
Otte Oil & Propane	21100 N 14 th St, Ceresco	Y

Source: Nebraska Department of Environment and Energy 2017⁵⁵

⁵⁴ Nebraska Education Profile. "School Report Card." Accessed August 2019. <http://nep.education.ne.gov/Home/>.

⁵⁵ Nebraska Department of Environmental Quality. "Search Tier II Data." Accessed December 2018. <https://deq-iis.ne.gov/tier2/search.faces>.

Figure RCPS.4: Chemical Fixed Sites



Section Seven: Raymond Central Public Schools Community Profile

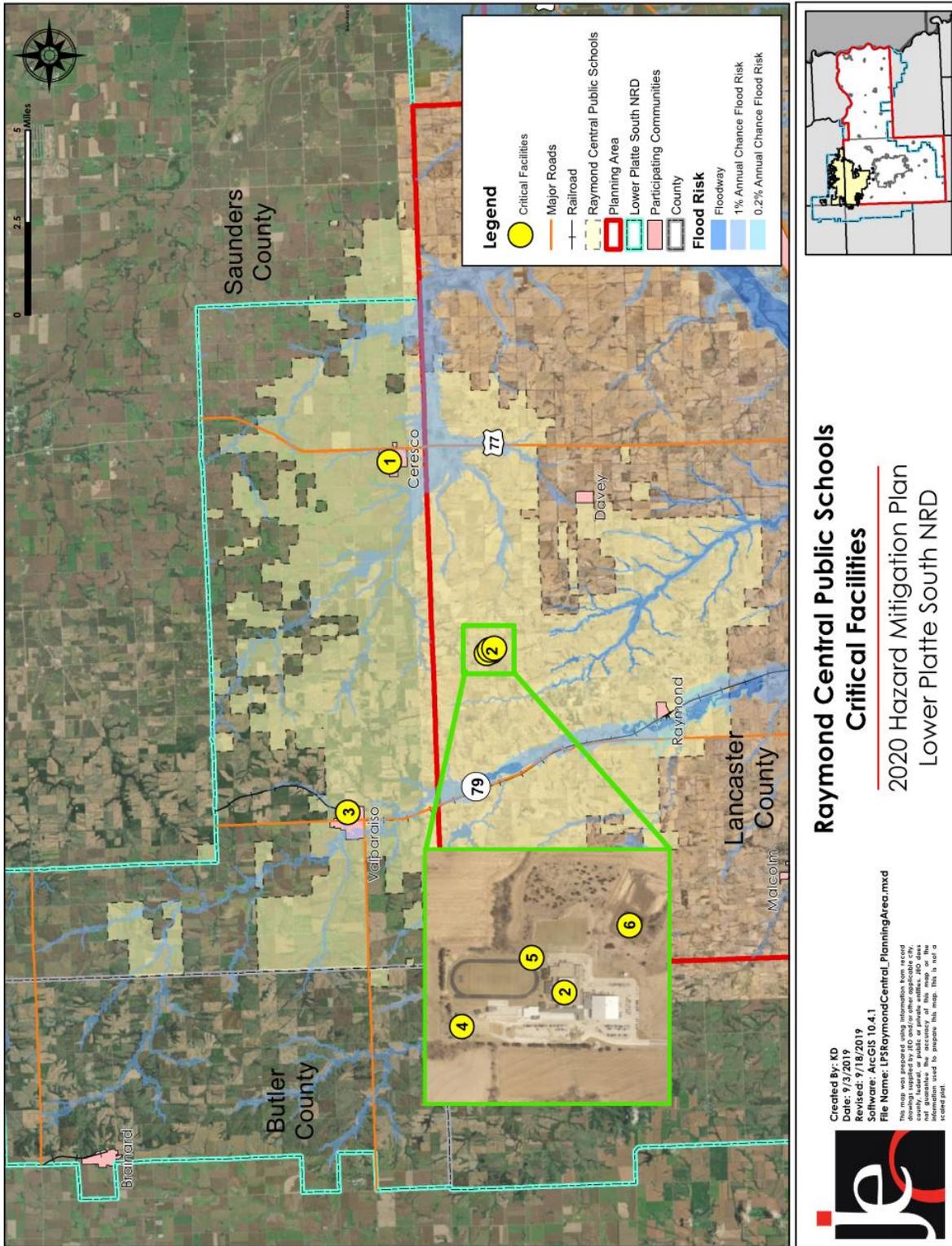
Critical Facilities

The school district operates three schools in three communities. These facilities are listed below, along with information indicating the school's address, number of students and staff, if the facility is used as a shelter during emergencies (i.e. Red Cross Shelter), if the facility is located in the floodplain, and the presence of a tornado safe room and backup power generator.

Table RCPS.4: Critical Facilities

CF #	Name	Address	Number of Students	Number of Staff	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Ceresco Elementary School	114 3 rd St, Ceresco	141	27	N	N	N
2	Raymond Central High / Pre-school	1800 W Agnew Rd, Raymond	340	45	N	Y – two	N
3	Valparaiso Elementary / Intermediate	406 E 3 rd St, Valparaiso	204	40	N	N	N
4	Bus Barn	1800 W Agnew Rd, Raymond	0	0	N	Y	N
5	Equipment Storage	1800 W Agnew Rd, Raymond	0	0	N	N	N
6	Lagoon	1800 W Agnew Rd, Raymond	0	0	N	N	N

Figure RCPS.5: Critical Facilities



School Drills and Staff Training

The school district conducts the following drills with their staff and students:

- Fire – monthly
- Bus Evacuation – twice a year
- Tornado – twice a year
- Lockdown – twice a year
- Lockout – twice a year

Figure RCPS.6: Raymond Central Emergency Protocols

**IN AN EMERGENCY
WHEN YOU HEAR IT, DO IT.**

LOCKOUT! Get inside. Lock outside doors.

STUDENTS Return inside Business as usual	TEACHER Bring everyone indoors Lock outside doors Increase situational awareness Business as usual Take attendance	
---	--	--

LOCKDOWN! Locks, lights, out of sight.

STUDENTS Move away from sight Maintain silence Do not open the door	TEACHER Lock interior doors Turn out the lights Move away from sight Do not open the door Maintain silence Take attendance	
---	---	--

EVACUATE! To the announced location.

STUDENTS Bring your phone Leave your stuff behind Follow instructions	TEACHER Lead evacuation to location Take attendance Notify if missing, extra or injured students	
---	--	--

SHELTER! Hazard and safety strategy.

STUDENTS	TEACHER	
Hazard	Safety Strategy	
Tornado	Evacuate to shelter area	Lead safety strategy
Hazmat	Seal the room	Take attendance
Earthquake	Drop, cover and hold	
Tsunami	Get to high ground	

HOLD! In your classroom. Clear the halls.

STUDENTS Remain in the classroom until the "All Clear" is announced	TEACHER Close and lock classroom door Business as usual Take attendance	
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SRP STANDARD RESPONSE PROTOCOL EXTENDED

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The school district conducts regular training for all staff on emergency procedures. During the summer all staff members have a full training with the safety committee. The Safety Committee meets regularly during the school year as well to address issues and update plans and procedures appropriately. The District additionally has a third-party consultant do regular safety walkthroughs for the school facilities to identify gaps or security concerns. There is a Safety Resource Office who rotates between school facilities throughout the week.

The Student Handbook outlines some safety procedures for parents and students. The District uses an automatic notification system to alert parents via text, call, email, or website of school closings or other pertinent information.

Historical Occurrences

See the Lancaster 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 following discussion provides specific information reported by the local planning team. Only hazards either identified as a concern to the school district by the local planning team, or based on the occurrence and risk of the hazard to the school district are discussed in detail below.

Grass/Wildfire

Grass/wildfire is a hazard of top concern for the Raymond Central junior and senior high due to its isolated location surrounded by agricultural fields. The campus is also placed on top of a hill, exacerbating wind impacts on fires. While the building itself is primarily constructed of brick, metal, and glass with some fire protection, the campus is served by the Valparaiso Volunteer Fire Department which may take 10-15 minutes to respond to a fire call. There is an interior sprinkler system, but there are no exterior sprinklers. The school does have its own water supply system which may be hooked up to exterior hoses to provide additional protection. The water system also has its own backup generator which will run the system in the case of power failure.

High Winds

High wind events have caused significant roof damage for school facilities, particularly the Raymond Central main campus which is located on top of a hill. The gymnasium is the tallest building and has a reinforced metal roof and rooftop utilities. Past significant events included a 1992 storm which prompted the District to slant some roofs to reduce potential damages and a 2008 storm with straight-line winds and heavy hail that damaged all facilities. Powerlines are all overhead from main power station to the schools. However, once on school grounds the powerlines are buried.

Severe Thunderstorms

Severe thunderstorms can be widespread and numerous, causing potential damages to all school facilities across the district. Thunderstorms are commonly associated with heavy rain, strong winds, and lightning strikes. All school facilities have surge protectors in case of lightning strikes and school records are backed up on a cloud system. Loss of power is a major concern for the school district as each school is serviced by a separate power utility: Raymond Central main campus is served by Norris Public Power District, Valparaiso Elementary is served by Butler Public Power District, and Ceresco Elementary is serviced by Omaha Public Power District.

Section Seven: Raymond Central Public Schools Community Profile

Another main concern affiliated with severe thunderstorms are heavy rains which can washout or flood local roads throughout the district. Many students which attend Raymond Central schools are located in the surrounding rural areas which may become inaccessible during heavy rain events. The March 2019 flooding event did not impact Raymond Central school facilities; however, classes were cancelled because muddy roads were too hazardous for buses to pick up students.

Severe Winter Storms

Severe winter storms are a common hazard which the school district faces annually. Severe winter storms include impacts from heavy snow, blizzards, ice accumulation, and extreme cold. The primary concern for the district is transportation access to pick up and drop off students, especially in the surrounding rural areas. The district overlaps the borders of five counties which each county prioritizing snow removal within their respective communities and central locations before rural county roads within the school district boundary. Past severe winter storms in the 2018-2019 winter caused significant wear and tear on school vehicles. Snow removal is contracted out at Ceresco Elementary and Valparaiso Elementary. Raymond Central Junior/Senior High School is responsible for clearing its own campus. Loss of power is another top concern for the district as the heater and furnace system at Raymond Central is not connected to the generator. An additional generator or larger capacity generator would be needed to power heat for the school.

Terrorism

While no past terrorism events have impacted the Raymond Central Public School District, school safety is a top concern for the local planning team. The school district practices extensive drills and training for staff and students. The Lancaster County Sheriff provides law enforcement for Raymond Central, while Ceresco and Valparaiso are serviced by Saunders County Sheriff. There are underground diesel and gas tanks and above ground propane tanks at the schools. All propane tanks are at least 50 feet from school facilities to reduce risk of exposure if damaged or tampered. The District adds cameras to school grounds annually, as well as repairs damaged pieces as appropriate.

Tornadoes

Tornadoes are a major hazard of concern due to their potential to cause catastrophic damage and significant threat to health and safety. There have been no historical tornadic events which have impacted Raymond Public School facilities, however a 1992 event with 100 mph straight-line winds caused over \$100,000 in roof damage. There are sirens located in Ceresco, Valparaiso, and on Raymond Central campus to warn of hazardous events. Students take shelter in locker rooms and restrooms. In the past, Raymond Central campus has been considered as a shelter location within the Lancaster County LEOP, however the designation was not completed. As the campus has a backup water supply system, full kitchen, restrooms, and large gymnasium, it should be considered in the future to be added to the county plan as a shelter location.

Administration/Capability Assessment

The school district has a superintendent and four principals. The school board is made up of a six-member panel. Other departments or positions employed by the district which may assist with hazard mitigation projects include:

- Communications
- Finance Department
- Human Resources

Section Seven: Raymond Central Public Schools Community Profile

- Library/Media Services
- PARA Education
- IT Department
- Transportation
- Transportation Committee
- Finance Committee
- Policy Committee
- Safety Committee
- Administration
- Operations/Maintenance

Overall Capability	Limited/Moderate/High
Does the school district have the financial resources need to implement mitigation projects?	Moderate
Does the school district have the staff/expertise to implement projects?	High
Does the school district have the community support to implement projects?	Moderate
Does the school district staff have the time to devote to hazard mitigation?	Summer – High; School year - Low

Plan Integration

The Raymond Central Public School District has an Emergency Operations Plan as well as a Safety Committee which manages the Crisis Response Plan. Each plan is updated annually. The Crisis Response Plan assigns specific responsibilities to specific individuals, identifies sheltering locations, identifies critical evacuation routes, and discusses types of safety protocols in depth.

Mitigation Strategy

Ongoing and New Mitigation Actions

Mitigation Action	Backup Generators
Description	Provide portable or stationary source of backup power to school facilities or other critical facilities. Additional generator is needed to provide heat during winter power loss events and assist in designating school as a community shelter location.
Hazard(s) Addressed	All hazards
Estimated Cost	\$250,000
Potential Funding	Bonds, General Fund, HMGP, PDM
Timeline	2-5 years
Priority	High
Lead Agency	Maintenance and Utilities
Status	An additional generator is needed at the Raymond Central campus to hook into the heater/furnace system. An additional generator on campus would also be beneficial to provide power as there are no other community shelters located within the district.

Section Seven: Raymond Central Public Schools Community Profile

Mitigation Action	Facility Security
Description	Install metal detectors on main entry doors to school facilities.
Hazard(s) Addressed	Terrorism
Estimated Cost	\$75,000
Potential Funding	General Fund, DHHS
Timeline	2-5 years
Priority	High
Lead Agency	Maintenance and Utilities
Status	Metal detectors are needed at each school facility at main entrance doors. Priority is given on placed detectors at Raymond Central junior/senior high.

COMMUNITY PROFILE

VILLAGE OF VALPARAISO

Lower Platte South Natural Resources District
Multi-Jurisdictional Hazard Mitigation Plan Update

2020

Local Planning Team

Table VAL.1: Valparaiso Local Planning Team

Name	Title	Jurisdiction
Greg Bouc	Utility Superintendent	Village of Valparaiso
Jim Rezac	Board Chairman/Fire Chief/Mayor	Village of Valparaiso

Location and Geography

The Village of Valparaiso is in the southwest corner of Saunders County, approximately 2.4 miles north of the Lancaster County line and three miles north of Wildwood Lake State Wildlife Management Area. The Village covers an area of 0.56 square miles. There are three major waterways that form a confluence just outside of town. The main stem is the North Oak Creek, which flows north-to-south through the west end of town. The largest tributary is the Bates Branch and the smallest is an unnamed stream. Both flow north-to-south before merging with the main stem on the northwest side of town.

Figure VAL.1: Village of Valparaiso



Transportation

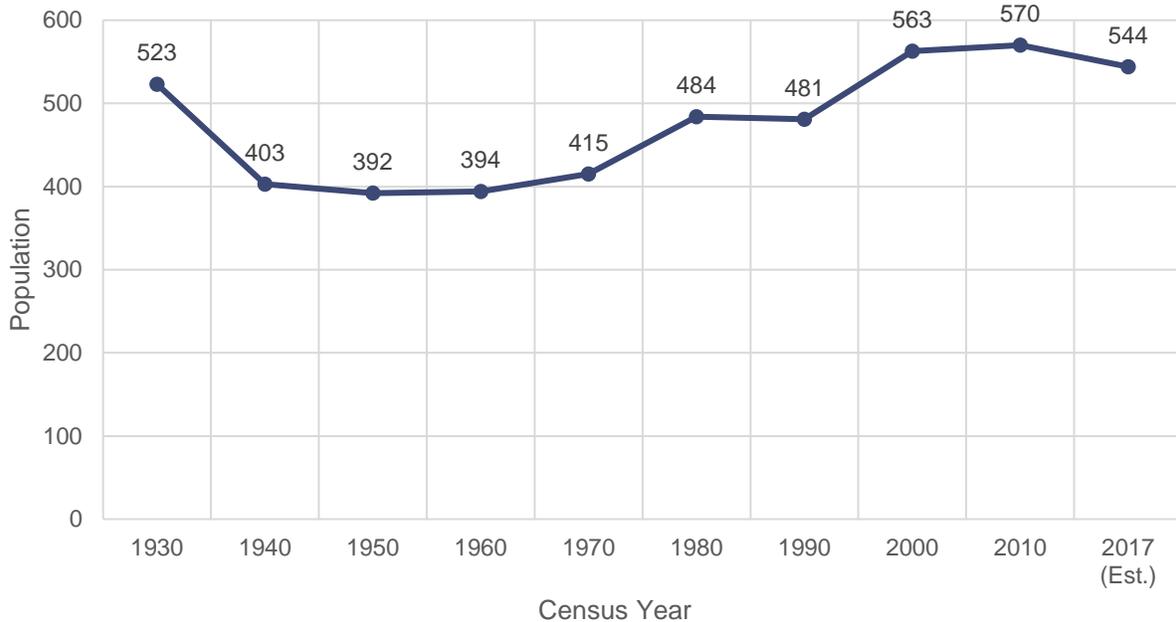
The Village of Valparaiso has two major transportation corridors. The first is Nebraska Highway 79, which runs north-and-south through the center of town. This corridor averages 1,560 vehicles per day. The second is Nebraska Highway 66, which runs east-and-west and intersects with the main thoroughfare. This corridor averages 1,060 vehicles per day.⁵⁶ There is one rail line running through the town owned by Union Pacific (UP). The tracks run north-and-south through the center of town and the line mainly hauls agricultural and energy products.⁵⁷ 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.

Transportation routes of top concern to local mitigation planners are Highways 79 and 66. Hazardous materials, particularly agricultural chemicals, are regularly transported along these routes. To date there have been no significant transportation events that occurred locally.

Demographics

Valparaiso's population declined from about 563 people in 2000 to 544 people in 2017, a decrease of 19 people and total loss of 3.4%. This is important because shifting internal demographics in a relatively stable population may impact hazard mitigation priorities. Valparaiso's population accounted for 2.6% of Saunders County's population of 20,953 in 2017.⁵⁸

Figure VAL.2: Population 1930 - 2017



Source: U.S. Census Bureau

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

⁵⁶ Nebraska Department of Transportation. "Statewide Traffic Flow Map." Accessed December 2018. <https://dot.nebraska.gov/media/2510/2014-statewide-traffic-flow-map.pdf>.
⁵⁷ Nebraska Department of Roads. "Nebraska Railroads." Accessed December 2018. <http://opportunity.nebraska.gov/files/businessdevelopment/winery/NebraskaRailMap.pdf>.
⁵⁸ United States Census Bureau. "American Fact Finder: S0101: Age and Sex." [database file]. <https://factfinder.census.gov/>.

Section Seven: Village of Valparaiso Community Profile

- **Older.** The median age of Valparaiso was 45.3 years old in 2017, compared with the County average of 41 years. Valparaiso's population grew remained the same since 2009, when the median age was 43.9 years old. Valparaiso had a similar proportion of people under 20 years old (26.7%) than Saunders County (27.2%).⁵⁹
- **Less ethnically diverse.** Since 2010, Valparaiso grew more/less ethnically diverse. In 2010, Valparaiso's population was 1.7% Hispanic or Latino. By 2017, Valparaiso's population was 0.8% Hispanic or Latino. During that time, the Hispanic or Latino population in Saunders County grew from 1.9% in 2010 to 2.1% in 2017.⁶⁰
- **More likely to be below the federal poverty line.** The poverty rate in Valparaiso (9.7% of families living below the federal poverty line) was similar higher than Saunders County's poverty rate (5.1%) in 2017.⁶¹

Employment and Economics

The major economic base of Saunders County is a mixture of Educational services/health care/social assistance (22.7%), retail (10.5%), and manufacturing (10.5%) In comparison to the County, The Village of Valparaiso economy had:

- **Diverse mix of industries.** Valparaiso major employment sectors, accounting for 10% or more of employment each, were: Educational services/health care/social assistance (20.7%), manufacturing (19.8%), retail (15.6%), and construction (11.4%).⁶²
- **Lower household income.** Valparaiso median household income in 2017 (\$54,688) was \$11,327 lower than the County (\$66,015).⁶³
- **More long-distance commuters.** A total of 26.3% percent of workers in Valparaiso commuted for fewer than 15 minutes, compared with 31.4% of workers in Saunders County. An additional 52.9% of workers in Valparaiso commute 30 minutes or more to work, compared to 43.2% of the County workers.⁶⁴

Major Employers

Major employers within Valparaiso include Oak Creek Valley Bank, Raymond Central, IES Mechanical, Oak Valley LBR., Turdy's One Stop, and Nelson Oil. A large percentage of residents commute to Lincoln for employment.

Housing

In comparison to Saunders County, Valparaiso's housing stock was:

- **More renter-occupied.** Of occupied housing units in Valparaiso, 24.6% are renter-occupied compared with 20.9% of renter housing in Saunders County.⁶⁵
- **Newer.** Valparaiso had a smaller share of housing built prior to 1970 than Saunders County (45.2% compared to 51.8%).⁶⁶
- **Fewer multifamily dwellings.** The predominant housing type in Valparaiso is single family detached (81.8%), which is comparable to Saunders County (86.8%). Valparaiso contains less multifamily housing with five or more units per structure compared to Saunders County (1.4% compared to 4.8%). Valparaiso has a larger share of mobile

⁵⁹ United States Census Bureau. "American Fact Finder: S0101: Age and Sex." [database file]. <https://factfinder.census.gov/>.

⁶⁰ United States Census Bureau. "American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]. <https://factfinder.census.gov/>.

⁶¹ United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. <https://factfinder.census.gov/>.

⁶² United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. <https://factfinder.census.gov/>.

⁶³ United States Census Bureau. "American Fact Finder: DP03: Selected Economic Characteristics." [database file]. <https://factfinder.census.gov/>.

⁶⁴ United States Census Bureau. "American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]. <https://factfinder.census.gov/>.

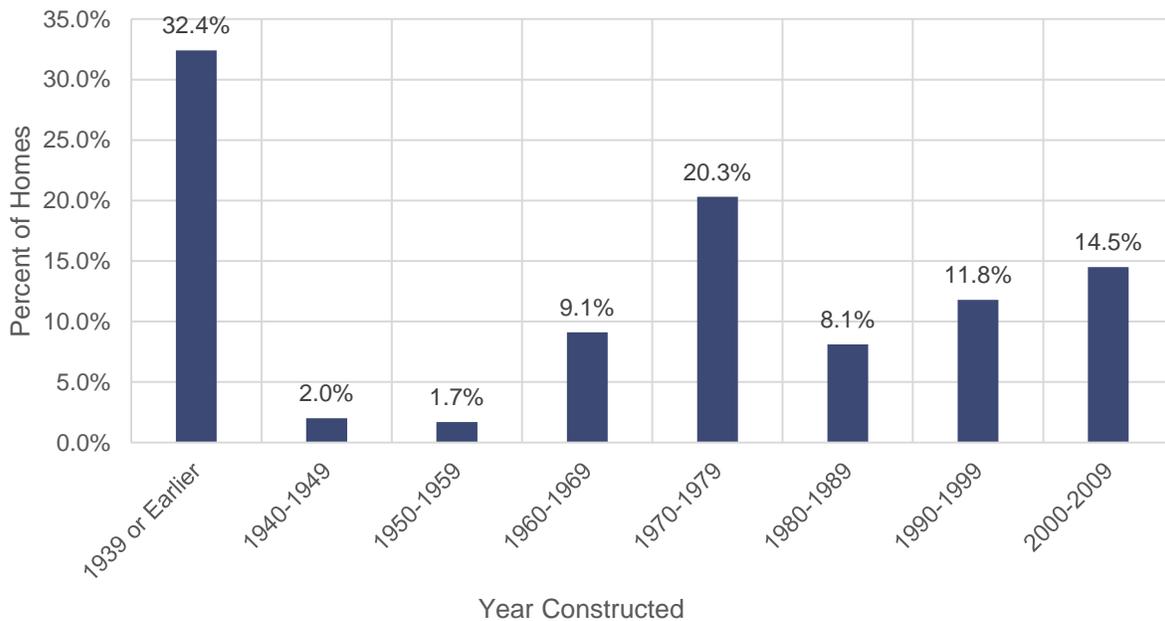
⁶⁵ United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov/>.

⁶⁶ United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov/>.

housing (5.1%) compared to the County (2.5%).⁶⁷ Mobile homes are located along the north edge of the Village.

The local planning team indicated the current housing stock is not sufficient to meet the needs of the community and that additional homes are needed. On average one to two homes are built each year in the Village, but additional multi-dwelling units or rentals and low income housing is needed in Valparaiso. This housing information is relevant to hazard mitigation 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.

Figure VAL.3: Housing Units by Year Built



Source: U.S. Census Bureau⁶⁸

Future Development Trends

In the last five years several changes have occurred in Valparaiso including the loss of the grocery store, the sale of Shanaban Mechanical to IES Mechanical, and the construction of a new fire station. Additionally, a new large operation chicken farm which houses approximately 240,000 birds has been built outside the extra-territorial jurisdiction of the Village. The local planning team indicated buildings are only demolished on an as-needed basis, with no activity in the last several years. Valparaiso's population has remained relatively stable, which is attributed to proximity to Lincoln for both work and groceries, the presence of the elementary school, and many retired farmers choosing to live in town. While no new housing developments are planned at this time, there is a commercial wine tasting operation slated to be developed in the next five years.

Structural Inventory and Valuation

The planning team requested GIS parcel data from the County Assessor as of December 2018. This data allowed the planning team to analyze the location, number, and value of property

⁶⁷ United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov/>.

⁶⁸ United States Census Bureau. "American Fact Finder: DP04: Selected Housing Characteristics." [database file]. <https://factfinder.census.gov/>.

Section Seven: Village of Valparaiso Community Profile

improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

Table VAL.2: Structural Inventory/Parcel Improvements

Number of Improvements	Total Improvement Value	Mean Value of Improvements per Parcel	Number of Improvements in Floodplain	Value of Improvements in Floodplain
370	\$27,378,030	\$73,995	47	\$2,100,870

Source: Nebraska Department of Revenue, Property Assessment Division⁶⁹

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 is one chemical storage site in Valparaiso. While not listed by NDEE, the local planning team also indicated the following facilities may store hazardous chemicals in the Village: Benes Service (located four miles west on Hwy 66), Sinclair One Stop Shop (Hwy 79 and E 2nd St.) and propane storage east of town.

Table VAL.3: Chemical Storage Fixed Sites

Facility Name	Address	In Floodplain (Y/N)
Nelson Gas & Oil Co	101 N Cedar St	N

Source: Nebraska Department of Environmental Quality 2017⁷⁰

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.

The local planning team also identified the Elementary School and Library as shelter location in the case of a natural disaster event.

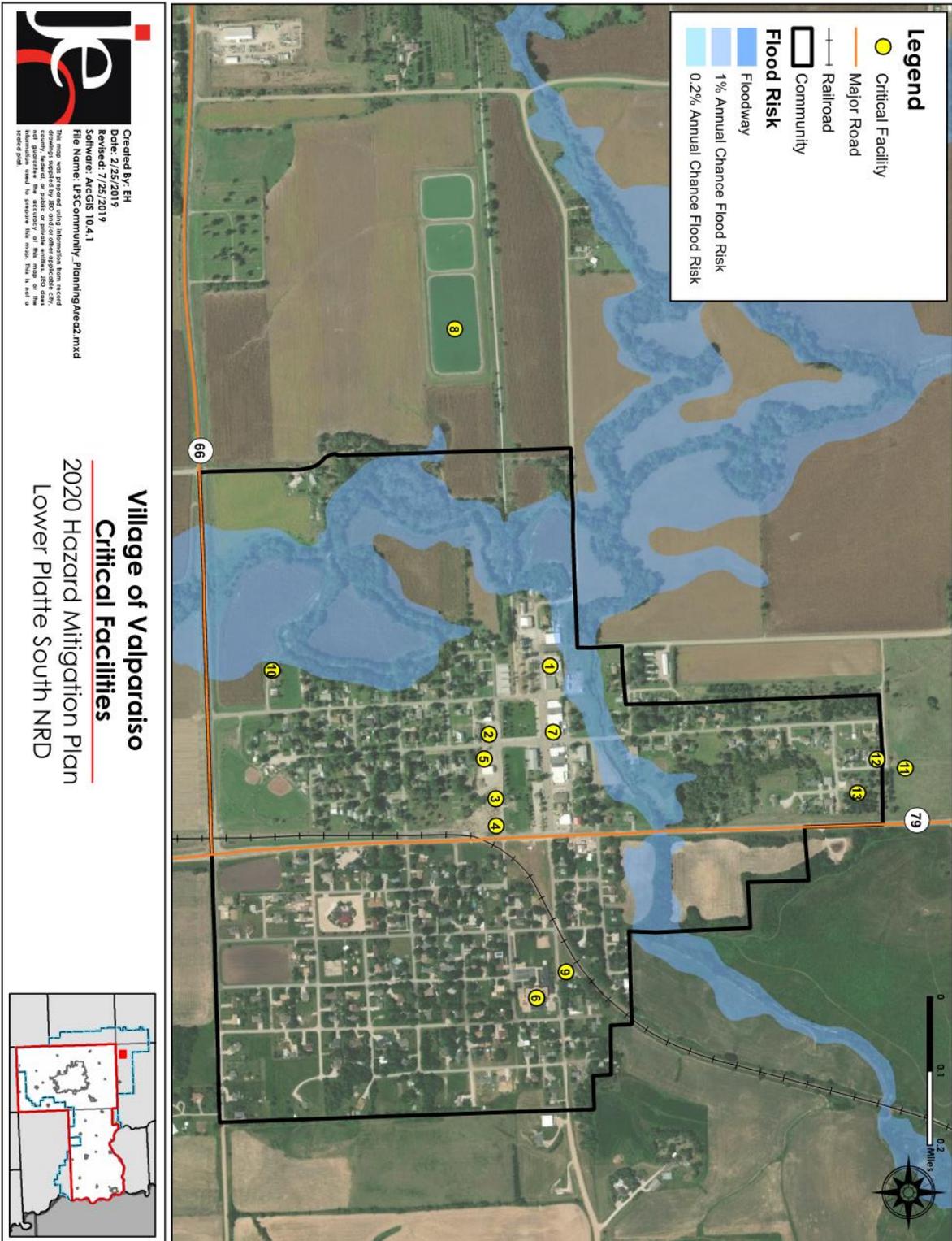
Table VAL.4: Critical Facilities

CF Number	Name	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Community Hall and Village Maintenance Hall	N	N	N
2	County Maintenance Shed	N	N	N
3	New Fire Station/Siren	Y	Y	N
4	Old Fire & Rescue Station – Equipment Storage	Y	N	N
5	Village Lagoon	N	N	Y
6	Wastewater Treatment Facility	N	Y	N
7	Well 1	N	N	N
8	Well 2	N	N	N
9	Well House / Water Tower	N	Y	N

⁶⁹ County Assessor. Personal correspondence, [DATE].

⁷⁰ Nebraska Department of Environmental Quality. "Search Tier II Data." Accessed December 2018. <https://deg-iis.ne.gov/tier2/search.faces>.

Figure VAL.4: Critical Facilities



Historical Occurrences

See the Lower Platte South NRD 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.

Chemical Spills (Transportation)

Chemical transportation spills are a major concern for the local planning team due to the prominent location of the Union Pacific rail line through the center of town and the high volume of semi-trucks traveling through town which can carry various forms of hazardous materials. If a train derailment were to occur, access to each side of town could be disrupted. In particular, the local elementary school and fire station are on opposite sides of the train tracks. If a train were approaching town from the south and derailed, the local planning team indicated the detour to reach the other side of the tracks would take an additional 25 to 30 minutes. While no derailment events have occurred recently, an incident in the 1970s caused damage to a fire hydrant and the local depot.

The Village has an evacuation plan that had been developed in the last ten years, however the contact list and calling trees are out of date rendering it non-functional. There is an ongoing effort to update the local contact list for vulnerable areas and work with the local resources for shelter-in-place training.

Flooding

A major flood in 1963 is the most significant event on record for the Village of Valparaiso. Heavy rains caused water to overtop the local roads and highways. Several families were evacuated, and three fatalities occurred in association with this flood event. The village wells are at risk to contamination or damage as they are all located within 1,000 feet of each other. The local planning team indicated agriculture irrigation is the major use for water in the area. The Village has experienced issues with high nitrates in available water resources in the past. With the assistance of the Lower Platte South NRD the Village has added terraces to reduce infiltration, capped and decommissioned abandoned wells, provide cost-share vadose zone testing around wells, and developed a Wellhead Protection Plan. Through the range of best management practices, the Village has seen a decline in nitrates from approximately 10 mg/L (the maximum contaminant level as regulated by the Nebraska Department of Environment and Energy) to approximately 2 mg/L. The terraces located upstream of the Village have significantly improved the flood risk for the Village of Valparaiso as they slow the water flow as it travels through or around the Village.

The March 2019 flooding event did not cause significant damage to critical facilities, but several homes in town experienced basement flooding. The Village is responsible for clearing culverts and ditches of debris, which are done on an as-needed basis. Culverts are required by the local code to be a minimum of 12 inches. In 2005-06 a new storm drain system was installed through the downtown area which has also reduced flood risk for the Village. A similar storm drain system is needed for the rest of the community.

Severe Winter Storms

Concerns about severe winter storms pertain to damage to trees, downed power lines, ice accumulation, and power loss. Approximately half of the power lines in town are buried and the

local power utility has begun burying all new utility lines for new construction. The Village owns the electrical grid which serves the Village but leases it to Butler County Power Utility who maintains and operates the system. The power utility has also begun placing power poles further away from homes to reduce risk of electrical fire if lines are damaged.

The local planning team indicated they have sufficient snow removal resources, especially as the Nebraska Department of Transportation clears the main highway through town of snow. Emergency snow route signs need to be posted through town. In the case of power loss there is a portable backup generator which can run the lift station or wastewater plant; however, an additional stationary generator is needed for the wastewater plant due to the difficulty accessing the facility with a portable generator during periods of heavy snow. Municipal records are backed up on an external device and stored in two locations in case of power loss. A new warning siren was installed in the last several years which is loud enough to reach all residents and can warn them of impending inclement weather. The local planning team also uses social media to share information but recognizes that it does not reach all residents. The American Legion Hall, Elementary School, Library, and fire station are used as sheltering locations.

Governance

A community’s governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Valparaiso has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. Valparaiso has a mayor (village chairman) and a five member village board and the following offices that may help implement mitigation actions.

- Village Board
- Clerk
- Utility/Street Superintendent
- Fire Chief

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 VAL.5: Capability Assessment

Survey Components/Subcomponents		Yes/No
<i>Planning & Regulatory Capability</i>	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Emergency Operational Plan	Yes, County
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
Building Codes	No	

Section Seven: Village of Valparaiso Community Profile

Survey Components/Subcomponents		Yes/No
	National Flood Insurance Program	No
	Community Rating System	No
	Other (if any)	
<i>Administrative & Technical Capability</i>	Planning Commission	Yes
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	Yes
	Local Staff Who Can Assess Community's Vulnerability to Hazards	No
	Grant Manager	No
	Mutual Aid Agreement	No
	Other (if any)	
<i>Fiscal Capability</i>	Capital Improvement Plan/ 1 & 6 Year plan	No
	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	Yes
	General Obligation Revenue or Special Tax Bonds	Yes
Other (if any)		
<i>Education & Outreach Capability</i>	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	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	

Overall Capability	Limited/Moderate/High
Does your community have the financial resources needed to implement mitigation projects?	Limited
Does your community have the staff/expertise to implement projects?	Limited
Does your community have the community support to implement projects?	Limited
Does your community staff have the time to devote to hazard mitigation?	Limited

Plan Integration

The Village of Valparaiso has a Comprehensive Plan that was last developed and updated in the early 2000's. The local planning team identified updating the comprehensive plan is needed, however local resources are limited in this capacity. The Comprehensive Plan includes future land use maps, identifies areas that have or are lacking emergency shelters, and encourages preservation of open space in hazard prone areas. There are currently limits on the amount of homes which can be built per block, minimizing the potential for development clustering.

The Village's Zoning Ordinance was last updated in 2000. The zoning ordinance should be updated to prohibit development in the floodplain or high hazard areas. The Village's Building Code also needs to be updated to meet International Building Code (IBC) standards.

Valparaiso has an annex to the Saunders County Local Emergency Operations Plan (LEOP), last updated in 2019. The LEOP incorporates hazard mitigation through the following: addresses hazards of top concern; assigns specific responsibilities to individual communities; identifies scenarios that would require evacuation; identifies sheltering locations; and provides clear assignment of responsibility during an emergency.

Valparaiso's Wellhead Protection Plan was developed with the assistance of the Lower Platte South NRD and approved in the 1990's. There are signs in the community to alert community members of the area, a zoning ordinance is in place for a wellhead protection district, and Valparaiso has a Water Drought Emergency Ordinance in place for both voluntary and mandatory water restrictions and drought triggers based on the water table level.

Overall the Village's budget is limited to maintain current operations and any new projects will need to be accounted for in prior years in order to allocate funding. Due to changes in local taxes and a reduced water consumption rate, the amount of municipal funds has decreased in recent years.

Mitigation Strategy

Ongoing and New Mitigation Actions

Mitigation Action	Hazardous Tree Inventory
Description	Conduct tree inventory Develop tree maintenance/trimming program Implement tree maintenance/trimming program Remove hazardous limbs and/or trees
Hazard(s) Addressed	Grass/Wildfire, High Winds, Severe Thunderstorms, Severe Winter Storms, Tornadoes
Estimated Cost	\$50-\$5,000
Potential Funding	General Fund
Timeline	5+ years
Priority	Low
Lead Agency	Utility Superintendent
Status	This is a new mitigation action. The local planning team indicated Great Plains Nursery may be able to provide assistance identifying species and trees of hazardous potential.

Mitigation Action	Vulnerable Population Assistance Database
Description	Develop a database of vulnerable populations and supporting organizations. Work with stakeholders to develop a database of vulnerable populations and organizations which support them
Hazard(s) Addressed	All Hazards
Estimated Cost	Staff Time
Potential Funding	General Fund
Timeline	1 year
Priority	High
Lead Agency	Utility Superintendent, Village Board
Status	The local planning team has identified the local school, daycare, and trailer park as vulnerable areas but local calling trees for emergency response need to be updated.

Mitigation Action	Improve Construction Standards and Building Survivability
Description	Ensure that all facilities which will house vulnerable populations are placed in the least vulnerable areas of the community. Evaluate building standards/codes/requirements; Implement new or improved building standards/codes/requirements; Promote use of higher codes and standards, such as fortified for Safer Living Standard, in order to provide greater protection for any new construction or building retrofits
Hazard(s) Addressed	All Hazards
Estimated Cost	\$0
Potential Funding	General Fund, Saunders County
Timeline	1 year
Priority	High
Lead Agency	Village Board
Status	Updates to the local building code and ordinance are needed to prohibit development in the floodplain and other hazardous areas.

Mitigation Action	Shelter-In-Place Training
Description	Provide shelter in place training to facilities housing vulnerable populations (nursing homes, childcare facilities, schools, etc.)
Hazard(s) Addressed	Chemical Spills (Transportation)
Estimated Cost	\$1,000 +
Potential Funding	General Funds, School funds, Saunders County
Timeline	2-5 years
Priority	Medium
Lead Agency	Utility Superintendent, Fire Department, School
Status	The local Fire Department and school should work together to develop a shelter-in-place exercise in the case of a chemical spill. Additional plans may be developed as part of this exercise including school evacuation and reunification plans.

Removed Mitigation Actions

Action	Join the CRS
Description	Participation in the CRS, part of the NFIP, can provide a movement for the community to undertake a number of projects and activities designed to increase the flooding mitigation efforts. Participation in CRS can help reduce flood insurance premiums.
Hazard(s) Addressed	Flooding
Reason for Removal	This action was identified as no longer a priority for the community.

Section Seven: Village of Valparaiso Community Profile

Mitigation Action		Maintain Good Standing with the NFIP	
Description	Maintain good standing with National Flood Insurance Program (NFIP).		
Hazard(s) Addressed	Flooding		
Reason for Removal	FEMA no longer considers continued participation In NFIP as a mitigation action and it has been removed.		

Mitigation Action		Obtain Tree City Designation	
Description	Work to become a Tree City USA through the National Arbor Day Foundation in order to receive direction, technical assistance, and public education on how to establish a tree maintenance program in order to maintain trees in a community to limited potential damages when a storm event occurs. The four main requirements include: 1) Establish a tree board; 2) Enact a tree care ordinance; 3) Establish a forestry care program; 4) Enact an Arbor Day observance and proclamation.		
Hazard(s) Addressed	Severe thunderstorms, tornados and high winds, severe winter storms		
Reason for Removal	This action was identified as not a need for the community. Rather a hazardous tree inventory was added as a mitigation action for the Village.		

COMMUNITY PROFILE

WAVERLY PUBLIC SCHOOLS

Lower Platte South Natural Resources District
Multi-Jurisdictional Hazard Mitigation Plan Update

2020

Local Planning Team

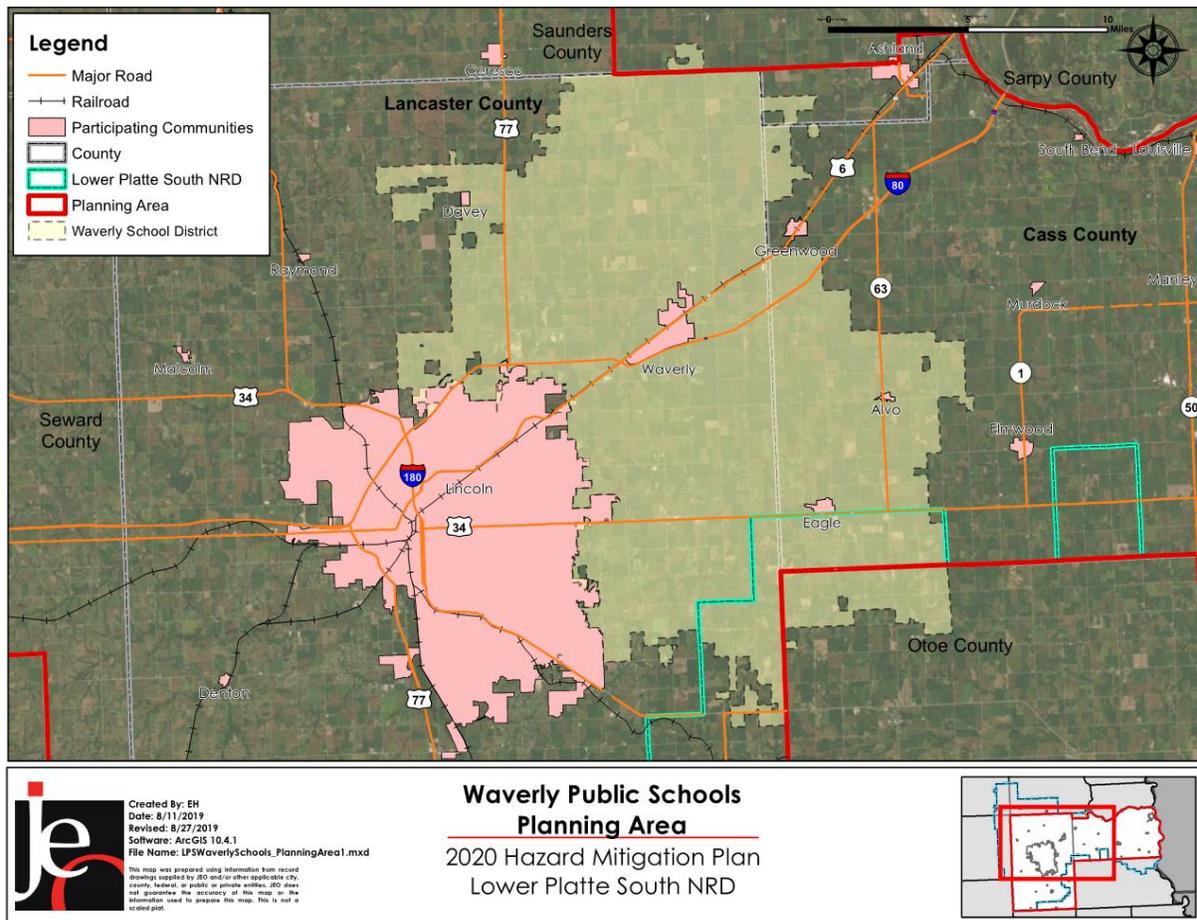
Table WPS.1: Waverly Public Schools Local Planning Team

NAME	TITLE	JURISDICTION
ROBIN HOFFMAN	Business Manager	Waverly Public Schools

Location and Services

Waverly Public Schools is located in the City of Waverly in Lancaster County and serves three elementary schools (Eagle Elementary, Hamlow Elementary, Waverly Intermediate School), one middle school in Waverly, and one high school in Waverly. The school district provides services to students in Alvo, Eagle, Prairie Home, Walton, and Waverly and spans approximately 300 square miles in Lancaster, Cass, Otoe, and Saunders Counties. English is the predominant language in the district, with some Spanish speaking students as well.

Figure WPS.1: Waverly Public Schools District



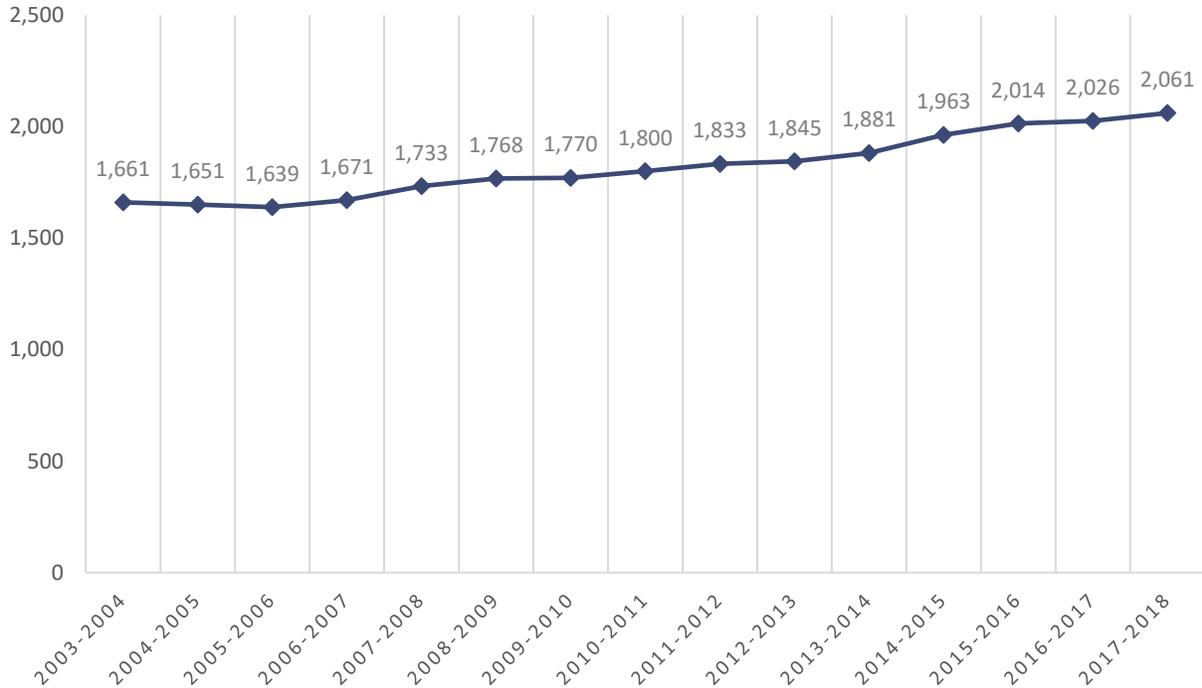
Demographics

The following figure displays the historical student population trend starting with the 2003-04 school year and ending with the 2017-18 year. It indicates that the student population has been

Section Seven: Waverly Public Schools Community Profile

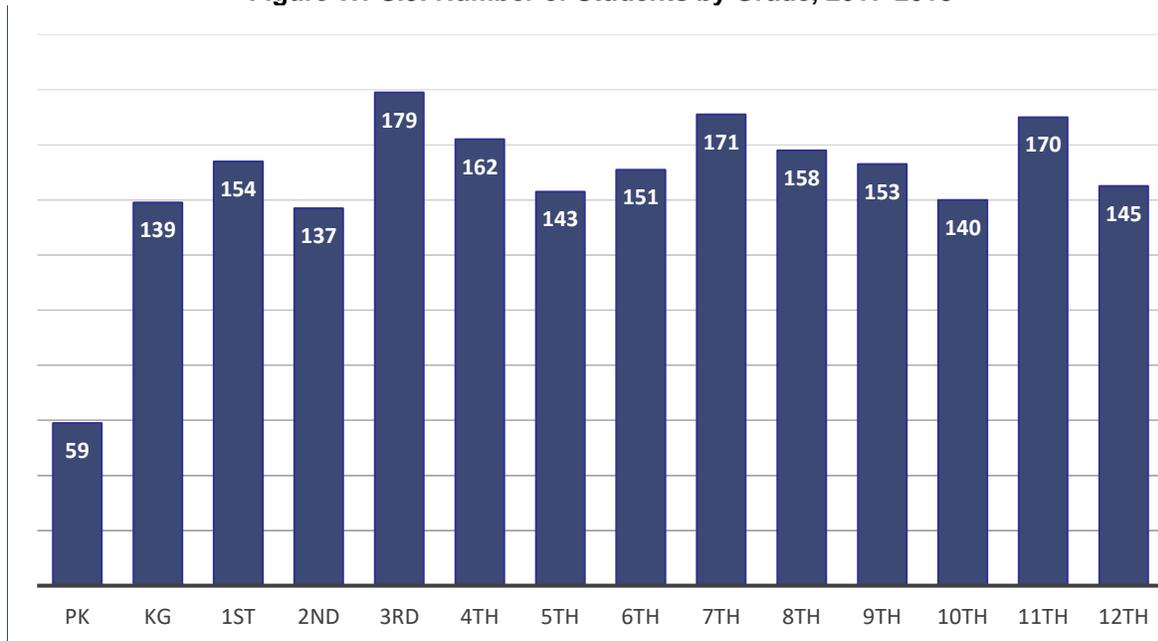
relatively stable since the early 2000s. There are 2,061 students enrolled in Waverly Public Schools.⁷¹ The local planning team indicated they expect little change in student population.

Figure WPS.2: Student Population 2003-2018



Source: Nebraska Department of Education

Figure WPS.3: Number of Students by Grade, 2017-2018



Source: Nebraska Department of Education

⁷¹ Nebraska Department of Education. December 2018. "2017-2018 Education Profile for District: Waverly Public Schools." <https://nep.education.ne.gov/snapshot.html#55-0145-000>.

Section Seven: Waverly Public Schools Community Profile

The figure above indicates that the largest number of students are in 3rd grade, followed closely by 7th, 11th, and 4th. The lowest population of students are Pre-Kindergarten. According to the Nebraska Department of Education (NDE), 18% of students received either free or reduced priced meals at school in the 2017-18 year. This is lower than the state average of 46%. Additionally, nearly 14% of students are in the Special Education Program. These students may be more vulnerable during a hazardous event than the rest of the student population.

Table WPS.2: Student Statistics, 2017-2018

	SCHOOL DISTRICT	STATE OF NEBRASKA
Free/Reduced Priced Meals	18.15%	45.83%
School Mobility Rate	3.08%	4.23%
English Language Learners	N/A	6.87%
Special Education Students	13.94%	15.12%

Source: Nebraska Department of Education⁷²

Future Development Trends

In the last five years the district completed an update/remodel from a bond issue passed in 2015. The student population for the district has been increasing since 2005. The local planning team indicated that the growth is likely to continue as new developments within Waverly are planned. Over the next five years, no new facilities are planned but updates to the football stadium and track are possible.

Critical Infrastructure/Key Resources

Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environmental Quality, there are a total of 19 hazardous chemical storage sites located within the school district boundaries. Ten of these facilities are located within one mile of any schools.

Table WPS.3: Chemical Storage Fixed Sites

Facility Name	Address	In Floodplain (Y/N)
AT&T	13101 N 70th St, Lincoln	N
AT&T Microwave Tower 5030	Davey Rd, Waverly	N
Bosch Security Systems Inc	8601 Cornhusker Hwy, Lincoln	N
EPOLP Greenwood Terminal	18805 Highway 6, Waverly	N
Koch Fertilizer LLC	18805 Highway 6, Waverly	N
Midwest Farmers Cooperative	219 Highway 6, Greenwood	N
Midwest Farmers Cooperative	1621 S 118th St, Walton	N
NDOT Salt Brine Storage Yard	NE-43, Eagle	N
Novartis Consumer Health Inc	10401 Hwy 6, Lincoln	N
Mammoth Fuels	14341 Highway 6, Waverly	N
Buel Trucking Inc	300 S 214th St, Eagle	N
Midwest Farmers Cooperative	400 Railway St, Eagle	N
Midwest Farmers Cooperative	10741 N 142nd St, Waverly	N
OPPD Substation No 990	Hwy 34, Eagle	N
Tecumseh Poultry LLC	13151 Dovers St, Waverly	N
Tractor Supply Co 0399	12851 Dovers St, Waverly	N

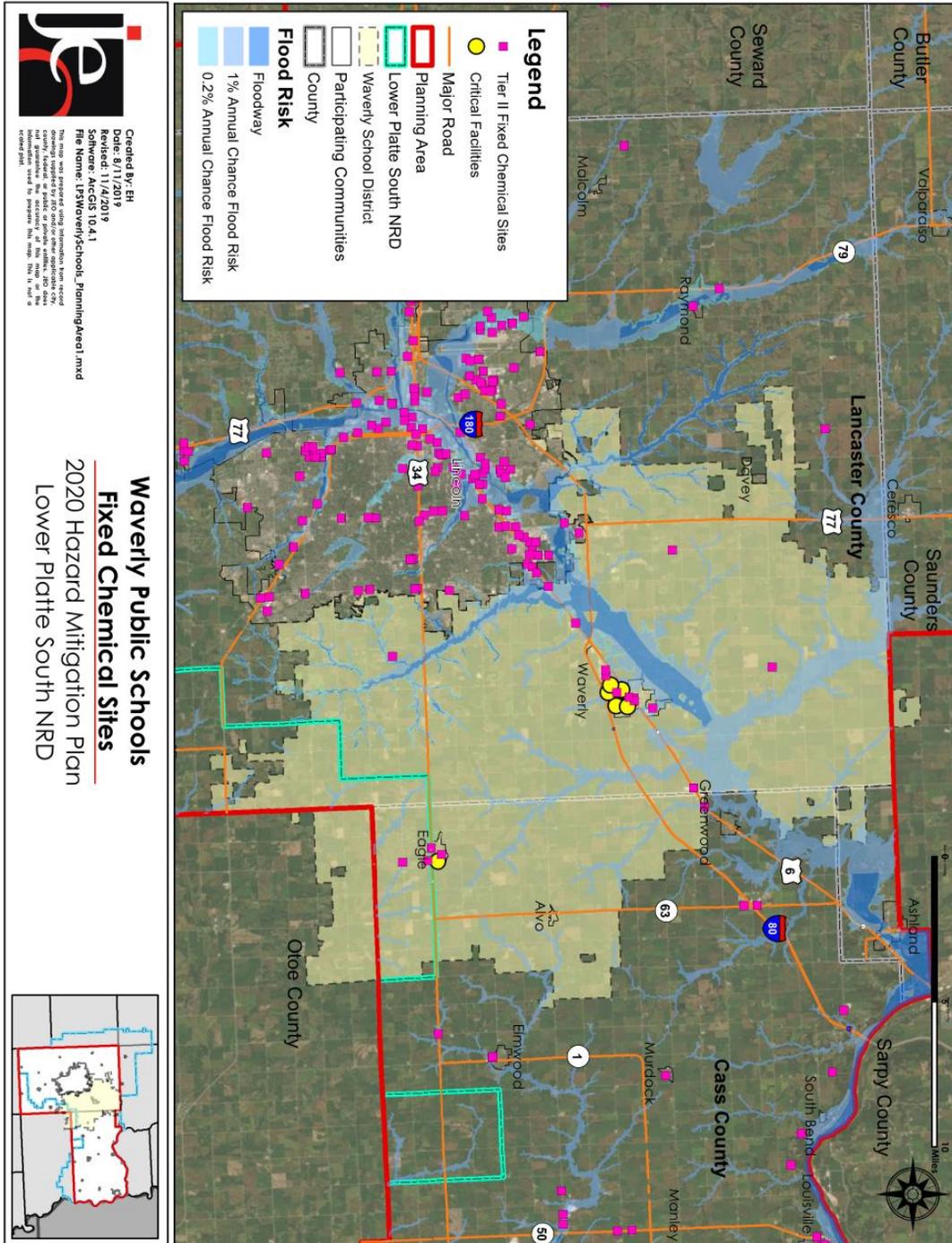
⁷² Nebraska Education Profile. "School Report Card." Accessed August 2019. <http://nep.education.ne.gov/Home/>.

Section Seven: Waverly Public Schools Community Profile

Windstream Communications	14131 Heywood St, Waverly	N
Matheson Tri-Gas Inc	9911 Deer Park Rd, Waverly	Y
Midwest Farmers Cooperative	11730 N 148th St, Waverly	Y

Source: Nebraska Department of Environmental Quality 2017⁷³

Figure WPS.4: Chemical Fixed Sites



⁷³ Nebraska Department of Environmental Quality. "Search Tier II Data." Accessed December 2018. <https://deq-iis.ne.gov/tier2/search.faces>.

^{xiv} Nebraska Department of Transportation. "Statewide Traffic Flow Map." Accessed December 2018. <https://dot.nebraska.gov/media/2510/2014-statewide-traffic-flow-map.pdf>.

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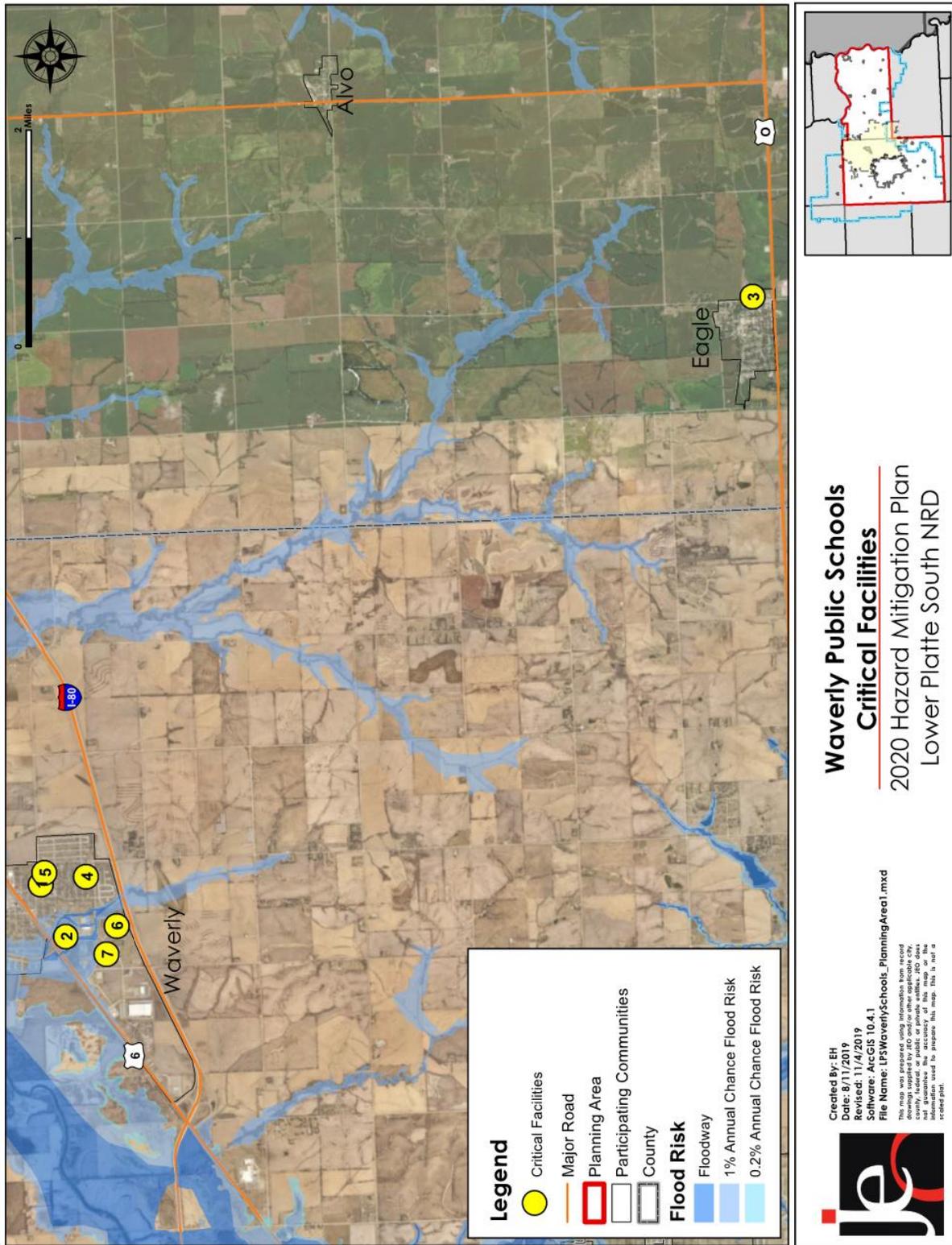
Critical Facilities

The school district operates seven facilities. These facilities are listed below, along with information indicating the school's address, number of students and staff, if the facility is used as a shelter during emergencies (i.e. Red Cross Shelter), if the facility is located in the floodplain, and the presence of a tornado safe room and backup power generator.

Table WPS.4: Critical Facilities

CF #	Name	Address	Number of Students	Number of Staff	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	District Office	14511 Heywood St, Waverly	0	7	N	N	N
2	Transportation Office	10211 Dear Park Rd, Waverly	0	16	N	N	Y
3	Eagle Elementary School	600 S 1 st St, Eagle NE	301	50	Y	N	N
4	Evelyn Hamlow Elementary	14541 Castlewood St, Waverly NE	356	48	N	N	N
5	Waverly Intermediate School	14621 Heywood St, Waverly NE	349	42	N	N	N
6	Waverly Middle School	13801 Amberly Rd, Waverly NE	484	57	N	N	N
7	Waverly High School	13401 Amberly Rd, Waverly NE	632	69	Y	Y	N

Figure WPS.5: Critical Facilities



School Drills and Staff Training

The school district conducts the following drills with their staff and students:

- Fire – monthly
- Shelter-in-Place – once per quarter
- Bus Evacuation – twice annually
- Tornado – annually
- Active Shooter – annually

The school district shares information with students, staff, and parents for the “I Love You Guys” foundation and Weather Awareness Week. Students actively participate in drills for fire, tornado, and lockdown. The District has contracts in place for a full time school resource officer. Waverly Fire and Rescue meets once a year with the administration to review the facilities and emergency procedures.

The district has added secured card access and security cameras to all school facilities to reduce risk. All exterior doors have been coded according to the FEMA National Incident Management System (NIMS) guidance. The district prioritizes practicing drills for staff and student safety, particularly intruder scenarios.

Historical Occurrences

See the Lancaster 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 following discussion provides specific information reported by the local planning team. Only hazards either identified as a concern to the school district by the local planning team, or based on the occurrence and risk of the hazard to the school district are discussed in detail below.

Chemical Spills (Fixed Site)

Ten chemical fixed sites are located within one mile of school facilities. The local planning team is particularly concerned with possible health impacts on students and staff in the case of chemical spills at Matheson Linweld, Midwest Farmer’s Co-Op, and Koch Nitrogen. If Matheson Linweld or Midwest Farmer’s Co-Op were to experience a major chemical spill it would likely impact Waverly High School, Waverly Middle School, Hamlow Elementary School, and Waverly Intermediate School. Local responders for chemical spills include Waverly Fire and Rescue, several members of which are HazMat certified.

Chemical Spills (Transportation)

Chemical transportation spills are a concern due to the large amount of hazardous chemicals transported by Burlington Northern Railroad through the City of Waverly and by semi’s along Highway 6 and Interstate 80 in and around Waverly. While no significant transportation events have directly impacted the school, the Pipeline and Hazardous Materials Safety Administration reports five chemical transportation events have occurred in Waverly between 1981 and 2016 which caused \$21,085 in damages. The school district is concerned for air quality impacts from chemical spills and practices shelter-in-place drills quarterly.

Hail

The primary concern regarding hail is the potential for damage to school facilities. Hail can damage roofs, vehicles, and rooftop utilities. Some school facilities were constructed with block and brick and are more resilient against hail damage, however rooftops are not outfitted with hail resistant materials. The school district provides services to students from other communities, increasing the potential exposure to damage from hail with long commutes.

High Winds

High winds can cause widespread damages to trees and property and are a common occurrence across the school district and planning area. Concerns about high winds include damage to roofs and trees. In March 2019 high winds caused a light pole at the Eagle Elementary baseball field to fall and caused damage to the pole, fixture, and fencing. Other damages from high winds included rubber membrane roof damage at Eagle Elementary and an HVAC cooling unit was shifted on its pedestal at Waverly High School. The school has shelter locations at Waverly Intermediate School and Waverly Middle School and backs up school records in the case of a power failure. The local planning team receives emergency weather alerts from the Omaha Valley National Weather Service and the Lincoln 911 Communications Center.

Severe Thunderstorms

Severe thunderstorms are a common occurrence across the state and for the school district. Heavy rain, lightning, and strong winds are commonly associated with severe thunderstorms and can cause significant damage to facilities or threaten bodily injury for students and staff. Severe weather warnings and procedures can disrupt instructional time or delay sporting activities. Severe thunderstorms can also disrupt bus routes and delay pickup/drop off times. Many roads buses may travel can become unsafe due to muddy conditions, especially in rural areas outside of town. Safety concerns also exist for students in outdoor sport practices accessing shelter locations. Critical electronic devices are protected by surge protectors in each building and Eagle Elementary has a full building surge protector. Waverly High School is the only facility with a backup generator, but all schools have weather radios. The current District Business Manager is a member of the Waverly Fire and Rescue volunteer force and receives up to date weather alerts.

Severe Winter Storms

Severe winter storms can cause power outages from downed power lines, damage to buildings or school vehicles, and hinder transportation for students and staff. Severe winter storms in the 2018-2019 season caused school closures. Heavy snow during winter storms cause roads in rural areas to become impassable and pose a major risk to student and staff safety. The City of Waverly has designated snow routes to assist the school in transporting students. Lancaster County, Cass County, Otoe County, and Saunders County Roads Departments are responsible for clearing roads of snow, but the school does not have sufficient snow removal resources for their own properties. All school facilities have weather radios and staff are able to check weather updates regularly with smart phones.

Tornadoes

Tornadoes are a concern due to their potential to cause catastrophic damage to school facilities, student and staff homes, and utilities. Thus far, no tornado events have occurred locally or significantly impacted school facilities; however tornadic events have impacted the neighboring Norris Public Schools district. All critical school records are backed up electronically. There are warning sirens in the City of Waverly which are controlled by Lincoln-Lancaster County Emergency Management. Waverly Middle School and Waverly Intermediate Schools have storm shelter safe rooms, however neither are FEMA certified. Waverly High School is the only school facility with a backup generator. The National Weather Service and the school district distribute

Section Seven: Waverly Public Schools Community Profile

educational materials about severe weather, particularly during Severe Weather Awareness Week.

Administration/Capability Assessment

The school district has a superintendent and five principals. The school board is made up of a six-member panel. Other departments or positions employed by the district which may assist with hazard mitigation projects include:

- Business Manager
- IT Department
- Electrician
- Facilities
- Transportation

Overall Capability	Limited/Moderate/High
Does the school district have the financial resources need to implement mitigation projects?	Limited
Does the school district have the staff/expertise to implement projects?	Limited
Does the school district have the community support to implement projects?	Moderate
Does the school district staff have the time to devote to hazard mitigation?	Limited

Plan Integration

Waverly Public Schools' Crisis Response Plan was last updated in 2019. The plan assigns specific responsibilities to individuals, addresses shelter in place protocols, locates critical evacuation routes, identifies sheltering locations, and identifies scenarios that would require evacuation. All of the schools' administration is familiar with the response plan. The District also has a Facility Master Plan which was last updated in 2004.

Mitigation Strategy

Ongoing and New Mitigation Actions

Mitigation Action	Continuity Planning
Description	Develop continuity plans for critical services in order to increase resiliency after a hazardous event.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$5,000+
Potential Funding	General Fund, Tax Dollars
Timeline	5+ Years
Priority	Medium
Lead Agency	Central Office, Administration
Status	This is a new mitigation action.

Section Seven: Waverly Public Schools Community Profile

Mitigation Action	Improve Emergency Communication
Description	Develop/Improve Emergency Communication Action Plan Implement Emergency Communication Action Plan Establish inner-operable communications Obtain/Upgrade Emergency Communication Facilities/Equipment Obtain/Upgrade/Distribute Weather Warning Radios
Hazard(s) Addressed	All Hazards
Estimated Cost	\$1,000+
Potential Funding	General Fund, Tax Dollars
Timeline	2-5 Years
Priority	High
Lead Agency	Central Office, Administration
Status	This is a new action that will be implemented district wide.

Mitigation Action	Shelter in Place Training
Description	Provide shelter in place training to students and staff in the event of a chemical spill.
Hazard(s) Addressed	Chemical Spills (Fixed Site), Chemical Spills (Transportation)
Estimated Cost	\$100 per person
Potential Funding	General Fund, Tax Dollars
Timeline	5+ Years
Priority	Low
Lead Agency	Central Office, Administration
Status	This is a new mitigation action. The school district performs a shelter in place drill once per quarter.

Mitigation Action	Storm Shelters
Description	Design and construct fully supplied safe rooms in school facilities.
Hazard(s) Addressed	Tornadoes, High Winds, Severe Thunderstorms
Estimated Cost	\$200-\$250 per square foot
Potential Funding	Bond Issue, Special Building Fund, Tax Dollars
Timeline	5+ Years
Priority	Medium
Lead Agency	Central Office, Administration
Status	This is a new mitigation action.

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COMMUNITY PROFILE

WEEPING WATER PUBLIC SCHOOLS

Lower Platte South Natural Resources District
Multi-Jurisdictional Hazard Mitigation Plan Update

2020

Local Planning Team

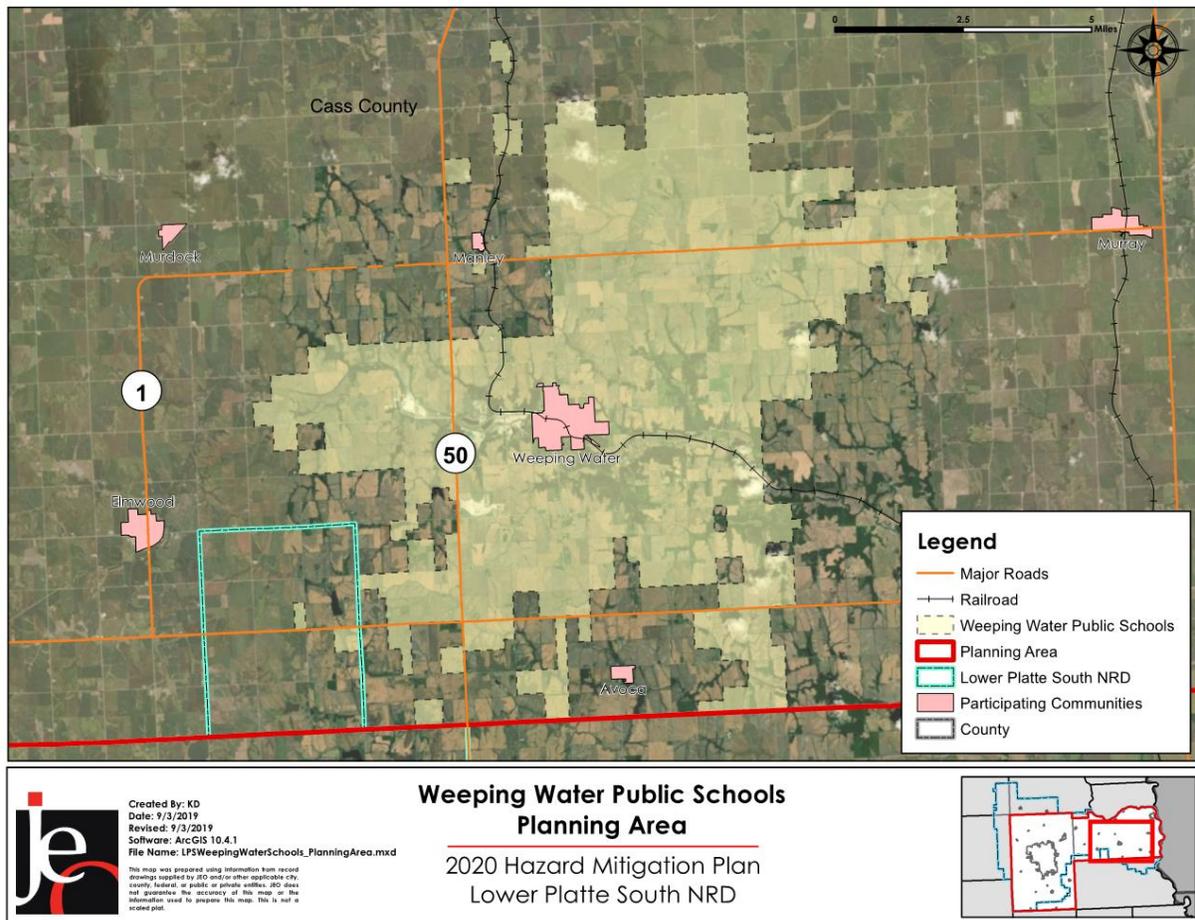
Table WWPS.1: Weeping Water Public Schools Local Planning Team

NAME	TITLE	JURISDICTION
KEVIN REIMAN	Superintendent	Weeping Water Public Schools

Location and Services

Weeping Water Public Schools is in the City of Weeping Water in Cass County and serves three schools: Weeping Water Elementary, Weeping Water Middle, and Weeping Water High School. The school district spans approximately 225 square miles entirely within Cass County and services students in Weeping Water, Avoca, and Manley. The primary language in the district is English, with approximately 1% of the student population as English as a Second Language (ESL).

Figure WWPS.1: Weeping Water Public Schools District



Section Seven: Weeping Water Public Schools Community Profile

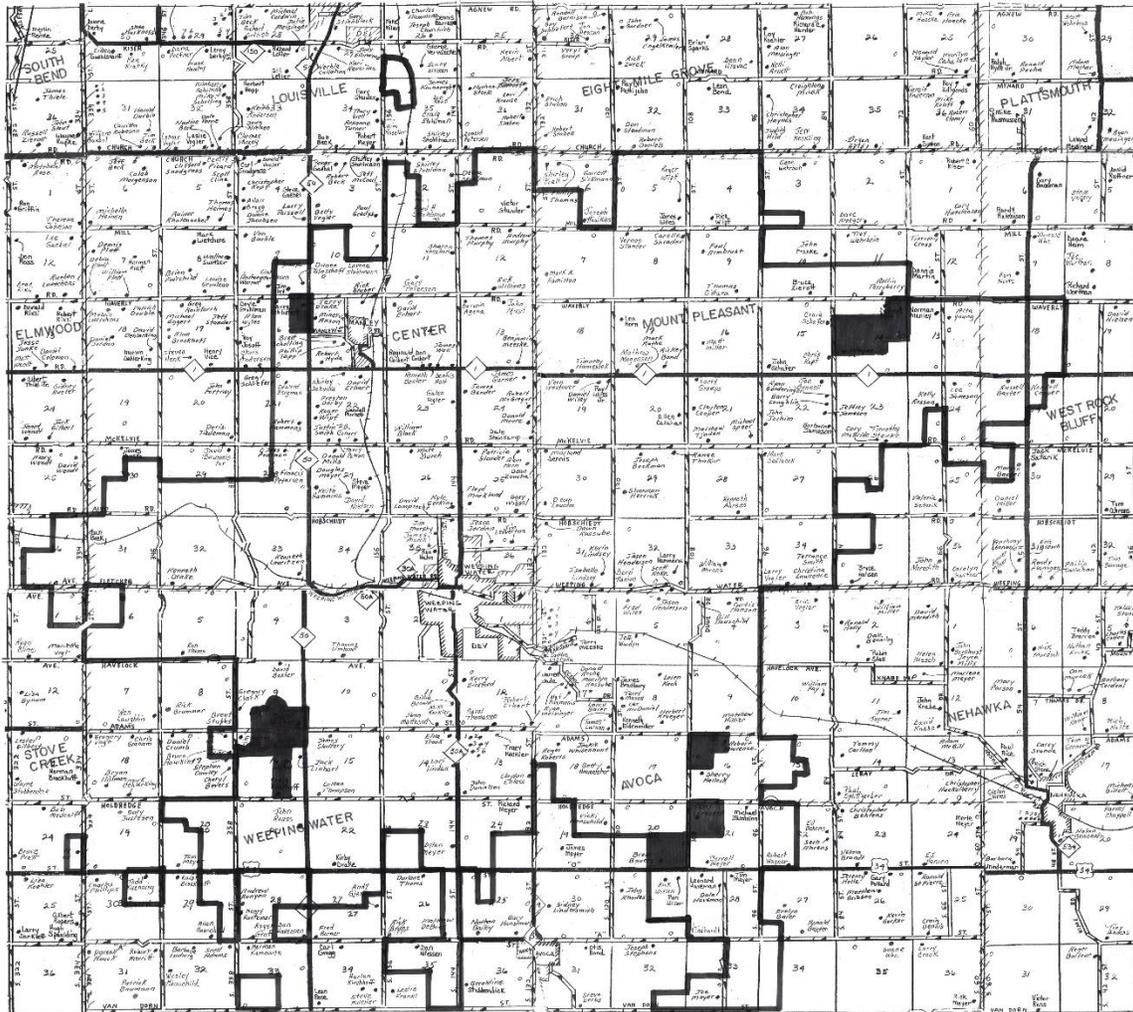
Figure WWPS.2: School District Boundary by School



AVOCA	WEEPING WATER
No. 1	No. 13
1 School Center	13 North Road
2 East School	2 East School
3 West School	3 West School
4 North School	4 North School
5 South School	5 South School



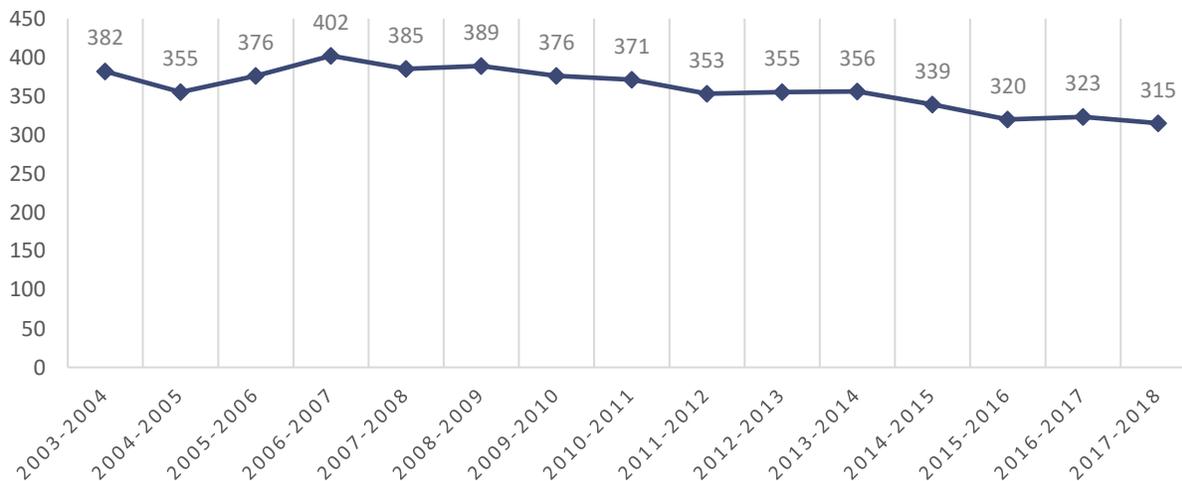
Produced By:
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Demographics

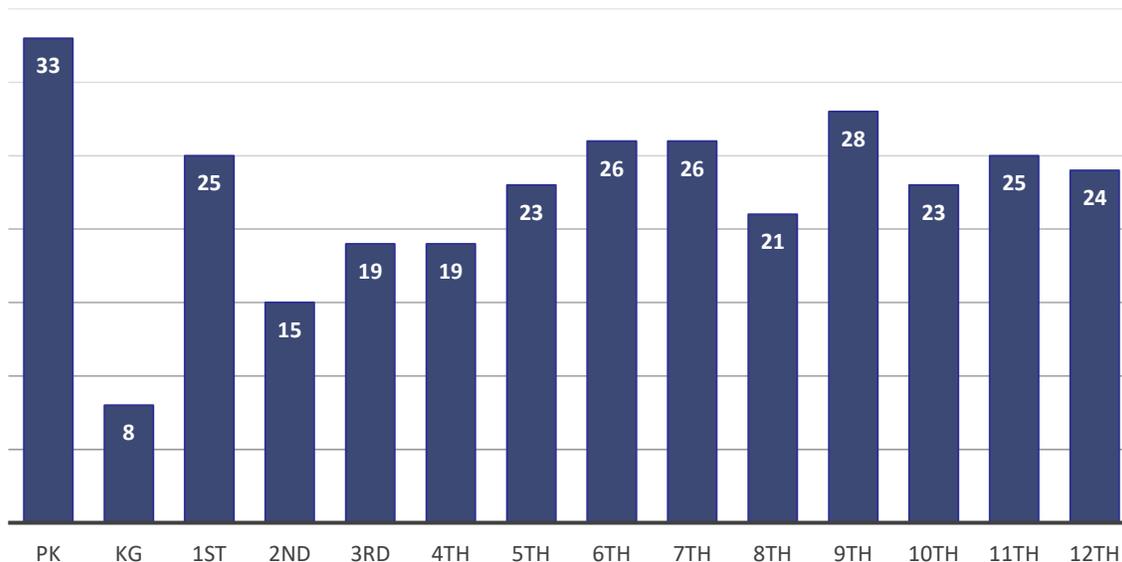
The following figure displays the historical student population trend starting with the 2003-04 school year and ending with the 2017-18 year. It indicates that the student population has maintained a relatively steady rate, with a slight declining trend. The local planning team indicated students have opted out of the district in the past, contributing to the declining student body population. However, numerous changes to the facility and academic programs for the district lead the planning team to anticipate an increase in students in the coming years. There are 315 students currently enrolled in Weeping Water Public Schools.⁷⁴

Figure WWPS.3: Student Population 2003-2018



Source: Nebraska Department of Education

Figure WWPS.4: Number of Students by Grade, 2017-2018



Source: Nebraska Department of Education

⁷⁴ Nebraska Department of Education. August 2019. "2017-2018 Education Profile for District: Weeping Water Public Schools." <https://nep.education.ne.gov/Districts/Index/13-0022-000?DataYears=20172018>.

The figure above indicates that the largest number of students are in Pre-Kindergarten, followed by 9th, 7th, and 6th. The lowest population of students are in Kindergarten. According to the Nebraska Department of Education (NDE), 38% of students received either free or reduced priced meals at school in the 2017-18 year. This is lower than the state average of 46%. Additionally, nearly 11% of students are in the Special Education Program. These students may be more vulnerable during a hazardous event than the rest of the student population.

Table WWPS.2: Student Statistics, 2017-2018

	SCHOOL DISTRICT	STATE OF NEBRASKA
Free/Reduced Priced Meals	37.83%	45.83%
School Mobility Rate	5.83%	4.23%
English Language Learners	NA	6.87%
Special Education Students	10.99%	15.12%

Source: Nebraska Department of Education⁷⁵

Future Development Trends

In the past five years the Weeping Water School District has added an entire new facility to campus which included a new gymnasium, weight room, locker rooms, and several classrooms. The expansion replaced numerous modular classrooms, improving safety and security access for school rooms. The new gymnasium is used as a shelter location, as well as the locker rooms for storm shelters. The expansion also included updated and reinforced rooftop utilities. Additionally, the school district has updated their district wide webpage and purchased some weather radios for the new buildings. In the next five years the district intends to focus on updating and improving academic and athletic programs.

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 a total of six hazardous chemical storage sites located within the school district boundaries.

Table WWPS.3: Chemical Storage Fixed Sites

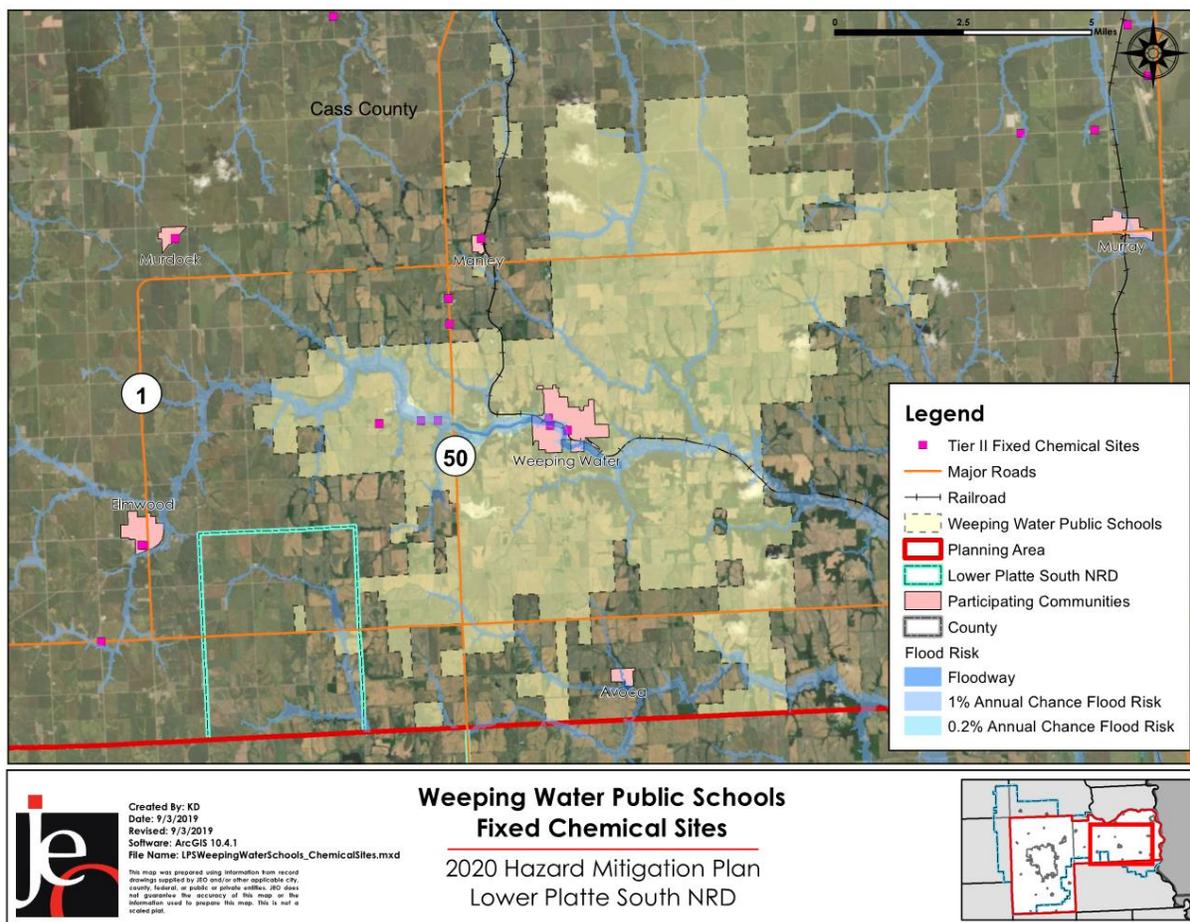
Facility Name	Address	In Floodplain (Y/N)
PCS Phosphate Company Inc	701 S Garfield St, Weeping Water	N
Keckler Oil Company Inc	310 W Eldora Ave, Weeping Water	Y
Weeping Water Swimming Pool	311 W River St, Weeping Water	Y
Kerford Limestone Company	36110 Fletcher Ave, Weeping Water	N
Iowa Limestone Company	36360 Fletcher Ave, Weeping Water	Y
Jerico Services Inc.	36712 Fletcher Ave, Weeping Water	Y

Source: Nebraska Department of Environment and Energy 2017⁷⁶

⁷⁵ Nebraska Education Profile. "School Report Card." Accessed August 2019. <http://nep.education.ne.gov/Home/>.

⁷⁶ Nebraska Department of Environmental Quality. "Search Tier II Data." Accessed December 2018. <https://deq-iis.ne.gov/tier2/search.faces>.

Figure WWPS.5: Chemical Fixed Sites



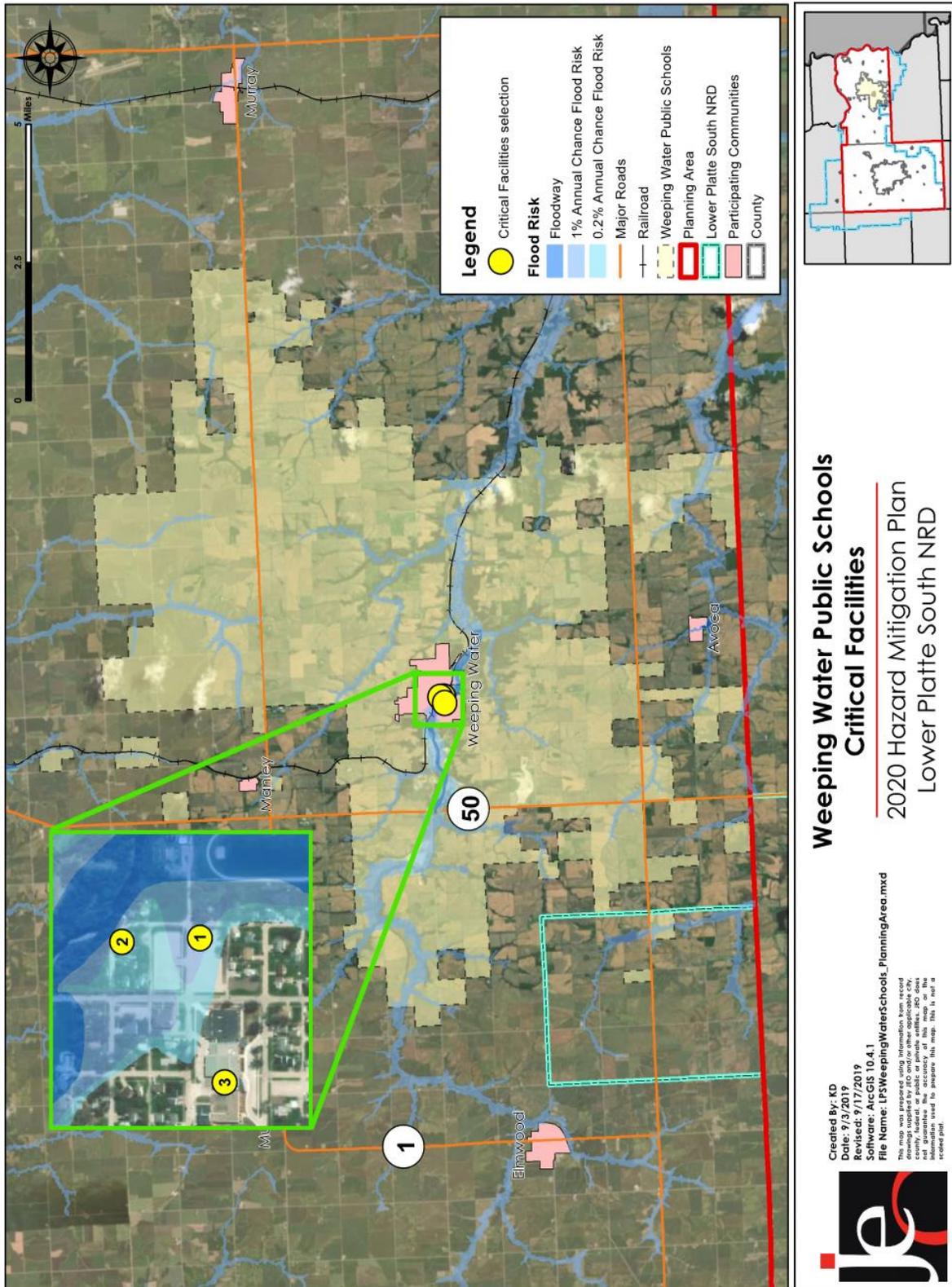
Critical Facilities

The school district operates three schools in one facility. These facilities are listed below, along with information indicating the school’s address, number of students and staff, if the facility is used as a shelter during emergencies (i.e. Red Cross Shelter), if the facility is located in the floodplain, and the presence of a tornado safe room and backup power generator.

Table WWPS.4: Critical Facilities

CF #	Name	Address	Number of Students	Number of Staff	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Equipment Shed	199 E N St	0	0	N	N	Y
2	Maintenance Garage	199 E M St	0	0	N	N	Y
3	Weeping Water Schools	204 W O St	315	58	Y	N	N

Figure WWPS.6: Critical Facilities



School Drills and Staff Training

The school district conducts the following drills with their staff and students:

- Fire – monthly
- Bus Evacuation – twice a year
- Tornado – twice a year
- Safety Drills (including lockdown and evacuation) – twice a year
- Sniffer Dogs (drugs, alcohol, munitions) – four random times a year

The school district conducts regular professional development sessions for emergency procedures. Teachers and staff have emergency preparedness training modules that are completed monthly. Monthly walkthroughs of the building are conducted with administration and a revolving group of staff who may identify any new safety concerns. Outdoor areas and playgrounds have weekly walkthroughs for safety issues; however, staff may submit concerns to administration at any time. The school district also has an outside security consultant who comes through and provides guidance and recommendations for security measures. In the case of school closures or hazard events, parents and staff are notified via an automated call system, social media posts, and the school district website. The district is currently expanding its social media presence and utilizes the district website, Twitter, Facebook, Instagram, and a mobile app to share information.

Historical Occurrences

See the Cass 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 following discussion provides specific information reported by the local planning team. Only hazards either identified as a concern to the school district by the local planning team, or based on the occurrence and risk of the hazard to the school district are discussed in detail below.

Severe Thunderstorms

Severe thunderstorms are a common occurrence for the planning area and across the State and are commonly accompanied by strong winds, hail, heavy rain, and lightning strikes. The school district's primary concern for severe thunderstorms is the potential for power loss. Most of the electrical lines that serve the school campus are buried, however there is still the risk for power loss in the surrounding area. OPPD is the power supplier for the district and surrounding communities. There are no generators located at any school facilities to aid in providing power. During a recent renovation and expansion of school facilities the rooftop utilities were upgraded and are protected for hail or strong winds. Past severe thunderstorm events have produced hail which damaged roofs and property. However, there are no lightning rods on the school facilities, prompting concerns for the local planning team. Additionally, the school campus is surrounded by trees which were trimmed in August 2019 to remove hazardous limbs. Trees receive annual maintenance to remove dead or dying limbs that could pose a hazard to property or people.

Severe Winter Storms

Severe winter storms can include blizzards, extreme cold, ice accumulation, and winter weather conditions. The school district is primarily concerned with limited or blocked transportation routes from heavy snow during severe winter storms. The school district provides services to students

in the surrounding rural area with unpaved roads. Ice accumulation and heavy snow can make accessing these areas hazardous. The local planning team also identified blocked transportation routes as a concern due to the high number of staff members who live in surrounding communities. Snow removal for the school is done by a local contractor. Loss of power is an additional concern during severe winter storm events and no school facilities have a backup generator.

Terrorism

While no terrorism events have occurred which impacted the Weeping Water Public School District, the safety of staff and students is a top priority. There is controlled access to the building during school hours. Open doors during the morning to allow students into the buildings are always monitored by a staff member. The school district performs lockdown or active shooter drills twice a year and has open communication lines with the County Sheriff and local volunteer fire department. Safety procedures and protocol signs are posted in each classroom and all staff members have monthly training modules to review safety procedures. Before drills the school district provides educational handouts to parents. While some doors have automatic locks during the school day, most require a staff member to manually lock them. Additionally, the local planning team identified an additional need for security cameras around the perimeter of the school campus.

Tornadoes

Tornadoes are a hazard of top concern due to their potential to cause catastrophic damage to property and significant injury to staff and students. The school gymnasium serves as a shelter location for students Kindergarten through 12th grade and would also be open to nearby residents if needed during a tornado event. The pre-school and daycare on-site use a basement shelter under the west side of the building as a shelter location during tornado events. School officials receive weather alerts via weather radios in the new buildings or via cell phone alerts. New weather radios are needed in the older sections of campus which lack radios.

Administration/Capability Assessment

The school district has a superintendent and two principals. The school board is made up of a six-member panel. Other departments or staff employed by the district which may assist with hazard mitigation projects include:

- Communications
- Finance Department
- Human Resources
- Library/Media Services
- PARA Education
- IT Department
- Transportation
- Activities Coordinator
- Maintenance/Custodial Services

Section Seven: Weeping Water Public Schools Community Profile

Overall Capability	Limited/Moderate/High
Does the school district have the financial resources need to implement mitigation projects?	Limited-Moderate
Does the school district have the staff/expertise to implement projects?	High
Does the school district have the community support to implement projects?	High
Does the school district staff have the time to devote to hazard mitigation?	Limited

Plan Integration

The school district has a Safety and Crisis Plan that is reviewed and updated annually. This plan outlines safety, security protocols, and courses of action taken during drills or hazardous events. The plan also identifies shelter locations and alternate sites for students and staff, as well as evacuation routes. There is an ongoing effort to train staff about the Safety and Crisis Plan and other safety measures put in place by the district.

The school district identifies continued education and training for drills and safety as a top priority. Fire, tornado, and lock out drills are conducted periodically. Weeping Water Schools also updates its strategic plan annually. This plan discusses overall academics and programs to grow the district. In the future this plan may also integrate safety and hazard mitigation goals or discussions.

Mitigation Strategy

Ongoing and New Mitigation Actions

Mitigation Action	Backup Generators
Description	Provide portable or stationary source of backup power to school facilities or other critical facilities.
Hazard(s) Addressed	All hazards
Estimated Cost	\$15,000-\$30,000+
Potential Funding	General Fund, HMGP, PDM
Timeline	5+ years
Priority	Low
Lead Agency	Administration
Status	While backup generators are needed for school facilities, the district is currently financially obligated to repay for school expansion.

Section Seven: Weeping Water Public Schools Community Profile

Mitigation Action	Facility Security
Description	Install automatic locks on entry doors to school facilities.
Hazard(s) Addressed	Terrorism
Estimated Cost	\$500-\$1,000 per door
Potential Funding	General Fund
Timeline	5+ years
Priority	Low
Lead Agency	Administration
Status	There are 15 total doors as part of the school campus, two of which are already on an automatic locking mechanism. Remaining doors should be converted to be on same locking system to improve school security.

Mitigation Action	Facility Monitoring
Description	Install security cameras in/around school facilities.
Hazard(s) Addressed	Terrorism
Estimated Cost	\$1,000 per camera
Potential Funding	General Fund
Timeline	2-5 years
Priority	Low
Lead Agency	Administration and Maintenance
Status	Cameras are already located at main access points; however additional security needs have been identified and cameras are needed. District regularly replaces current cameras as needed.

Mitigation Action	Lightning Rods
Description	Install lightning rods in strategic locations at high points.
Hazard(s) Addressed	Severe Thunderstorms
Estimated Cost	\$2,500+
Potential Funding	General Fund
Timeline	2-5 years
Priority	Medium
Lead Agency	Administration, Maintenance
Status	There are currently no lightning rods on school facilities. The school is taller than surrounding residential areas.

Section Seven: Weeping Water Public Schools Community Profile

Mitigation Action	Upgrade Security Software
Description	Install/upgrade security software programs to manage resources and protocols during evacuation or emergency events.
Hazard(s) Addressed	Terrorism
Estimated Cost	\$5,000+
Potential Funding	General Fund
Timeline	2-5 years
Priority	Medium
Lead Agency	Administration
Status	The school administration is familiar with some software options (such as Raptor) which may fulfill the needs of the district, however additional research on options is needed.

Mitigation Action	Weather Radio
Description	Conduct an inventory of weather radios at schools and school facilities and provide new radios as needed.
Hazard(s) Addressed	Severe Thunderstorms, Severe Winter Storms, Tornadoes
Estimated Cost	\$50 per radio
Potential Funding	General Fund
Timeline	1 year
Priority	High
Lead Agency	Administration
Status	This is a new mitigation action.