DISTRICT PROFILE

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table LPN.1: Lower Platte North NRD Local Planning Team

NAME	TITLE	JURISDICTION
Sean Elliot	Projects/Rural Water Manager	Lower Platte North NRD
Tom Mountford	Assistant General Manager	Lower Platte North NRD

LOCATION AND GEOGRAPHY

The Lower Platte North Natural Resources District (NRD) is located in eastern Nebraska and is comprised of portions of Boone, Butler, Colfax, Dodge, Madison, Platte and Saunders Counties. The Platte River runs west to east through the center of the NRD. Other important waterways include Wahoo Creek, Skull Creek, Shell Creek, Rawhide Creek, Sand Creek, and Duck Creek. Approximately 70 miles of river flow through the district. The NRD spans 1,031,000 acres and 29 communities.

TRANSPORTATION

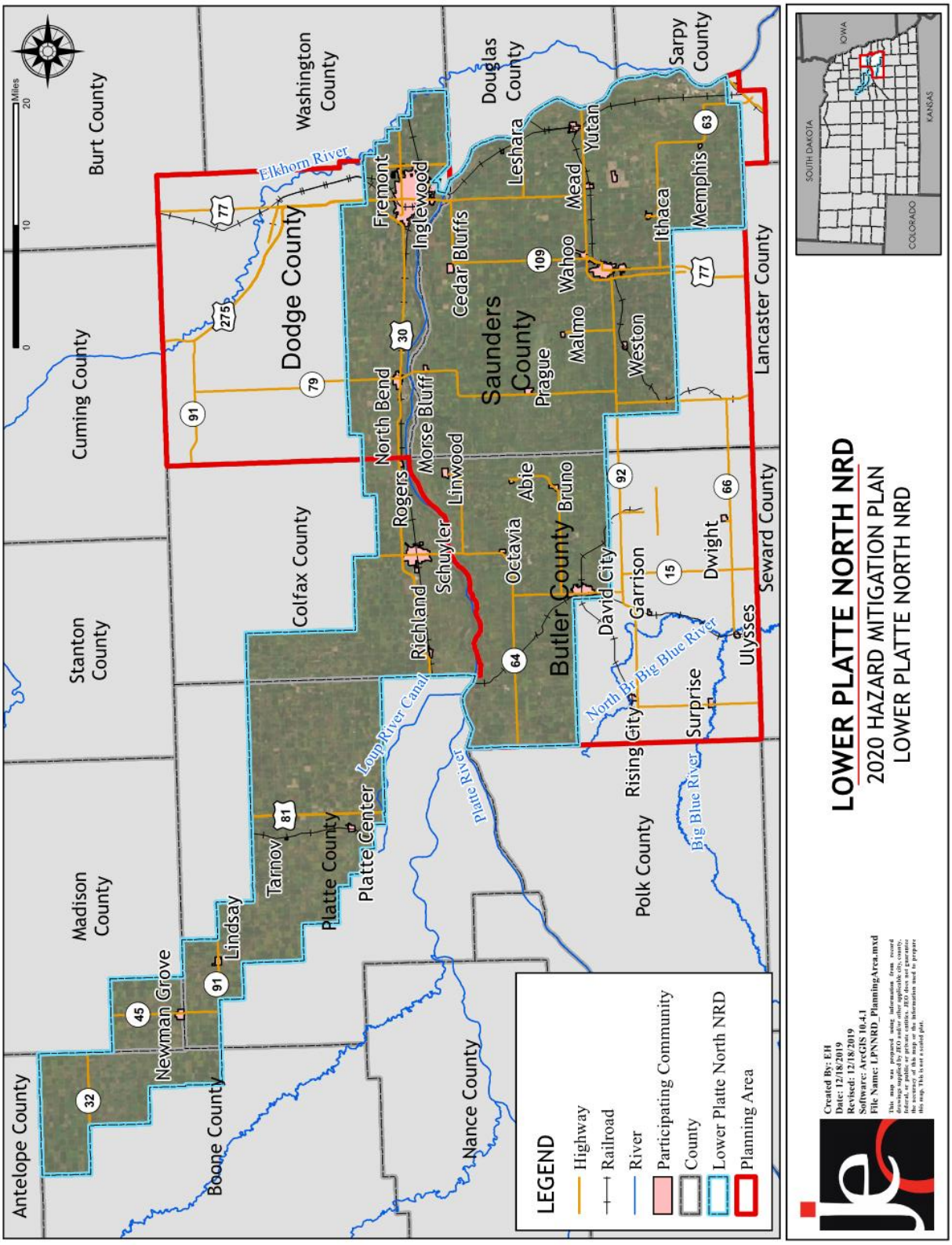
Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community and areas more at risk of transportation incidents. The NRD's major transportation corridors include US Highways 30, 77, 81, 275 and Nebraska State Highways 15, 32, 45, 64, 63, 66, 92, 79, 91. Union Pacific, Burlington Northern Santa Fe, and the Nebraska Central Railroad Company all own rail lines that travel through the NRD. There are three municipal airports located in the NRD at the Cities of David City, Fremont, and Wahoo. Fuel, agricultural chemicals like fertilizer and anhydrous ammonia, animal waste, and other chemicals are frequently transported along all highways and railroads, particularly US Highway 77. US Highways 77, 81, and State Highway 92 are the most critical transportation routes in the region, while US Highway 30 is highly vulnerable because of its proximity to the Platte River.

DEMOGRAPHICS

It is estimated that the NRD serves a population of about 54,000 people over seven counties.[1] However, the NRD does not collect the demographic information of their population, nor does the U.S. Census Bureau recognize the NRD as a statistical geographic area. As a result, there is no population data generated specifically for the NRD. For demographic information, please refer to specific jurisdictional profiles or to *Section Three: Planning Area Profile.*

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

Figure LPN.1: Lower Platte North NRD



FUTURE DEVELOPMENT TRENDS

In the last five years, the NRD has taken jurisdiction over Lake Wanahoo, including future maintenance of all 11 proposed flood reduction dams in the Wahoo Creek Watershed. They have also completed several major grade control structures totaling $250,000 involving bank stabilization in the Shell Creek Watershed near the City of Schuyler in partnership with NDEE. The NRD is continuing to plan grade stabilization projects in Shell Creek and its tributaries. Agricultural practice and other improvements lead to the Shell Creek's delisting for atrazine contamination, the first nationally. In 2019, construction was completed on a new education building at the Lake Wanahoo Recreation Area.

There are many water control projects planned for the next five years. The railroad bridge on County Road D near Schuyler will be replaced in partnership with the railroad, Colfax County, and NDEE, including an expansion to allow more stream flow and channelization improvements of the Shell Creek on both sides of the bridge. A proposed $25,000 as an example dam improvement project in the Wahoo Creek Watershed to improve grade stability and water retention will be complete in 2020. The NRD is also involved in the Joint Water Management Advisory Board. The board is planning a flood reduction study on the lower third of Dodge County; other flood reduction projects are expected to come from the plan.

The NRD is performing extensive repairs to flood prevention structures across the region after the March 2019 floods. The Clear Creek Levee, comprised of an eight-mile system of levees, within five years was added to and renovated. The levee system suffered two major breeches during the floods, including at the fuse plug near the Army National Guard camp. In total, 31 areas need to be repaired from minor to major damage. The fuse plug will be repaired in 2020 while the other repairs will take two to three years to complete. USACE is the lead agency for this project and the NRD is the sponsor.

Repairs on Ditch 8, part of the Merlyn England Flood Control Project will be completed in 2020. The ditch, which protects the City of Fremont from flooding in the Rawhide Creek, was damaged in several places in the March 2019 floods. Damages to Lake Wanahoo's stilling basin will likely be completed in 2020. The NRD is also sponsoring a parcel-level flood mitigation study in the Cities of Schuyler and Fremont in response to the 2019 floods.

The NRD participated in a regional drought study sponsored by the Bureau of Reclamation to convey water down the Platte River to the City of Lincoln and City of Omaha well fields during periods of drought. Several new projects involving the construction of water retention dams were identified from this drought study.

PARCEL IMPROVEMENTS AND VALUATION

Please refer to specific county and community profiles for information regarding parcel improvements and valuations across the planning area.

CRITICAL INFRASTRUCTURE/KEY RESOURCES

CHEMICAL STORAGE FIXED SITES

Chemical sites are located throughout the NRD. Chemical storage sites in each county and community may be found in their profile.

CRITICAL FACILITIES

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

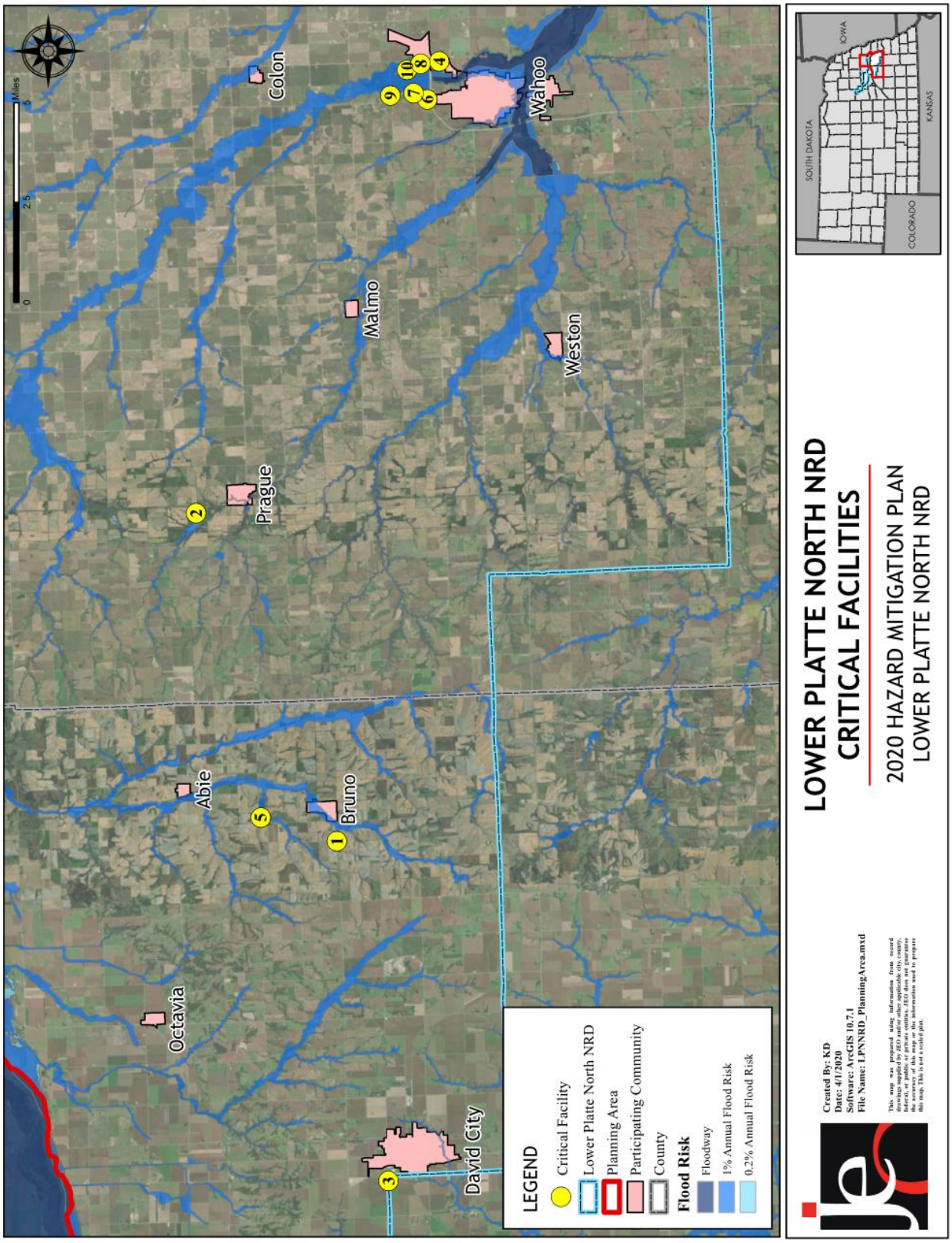
Table LPN.2: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Bruno RWD Meter Pits	No	No	No
2	Czechland Storage Shed, Restrooms, and Picnic Shelters	No	No	No
3	David City Master Meter Pit	No	Yes - portable	No
4	Headquarters and Storage Shop	No	No	No
5	Homestead Bathroom Shelters and Well	No	No	No
6	Lake Wanahoo Chlorination System and Meter House	No	Yes - portable	No
7	Lake Wanahoo Lift Station	No	No	No
8	Lake Wanahoo Park Shelters, Restrooms, and Shower House	No*	No	No
9	Lake Wanahoo Storage Shed	No	No	No
10	Wanahoo Education Building and Fire Department Shed	No	No**	No

***Restroom can be used as a tornado shelter**

** Education building has solar power capabilities

Figure LPN.2: Critical Facilities



HISTORICAL OCCURRENCES

For a complete discussion on historical occurrences, please refer to *Section 4: Risk Assessment*. Note that all 15 hazards profiled in this plan have the potential to impact the NRD in some part of the district. Therefore, a hazard matrix will not be provided here as all are possible in the NRD.

HAZARD PRIORITIZATION

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

DROUGHT

The NRD has just completed a drought plan in partnership with the Nebraska Bureau of Reclamation to aid in keeping the City of Omaha, City of Lincoln, and local regional wells from decreased water quantity during droughts. The NRD helps monitor flows in the Platte River, which supplies the City of Lincoln well fields; in addition to this 26 of the City of Omaha wells are located in the NRD's jurisdiction. In the LPNNRD, rural domestic wells are more susceptible during droughts as irrigation wells pull more water than usual while the water table is not replenished with rain. The drought plan considers building a dam near the Village of Abie, reservoirs near the Papio-Missouri NRD, and other alternatives that could store water. The chosen alternative would likely provide 15 days of water to Lincoln.

In the last 50 years, the 2012 drought was by far the worst though there have been a few smaller droughts. Most recently, increased groundwater demands were drawing water unsustainably from the aquifer under Butler County. From 2000 to 2006 several regional aquifers dropped to their drought response trigger levels because of increased irrigation, though drought response measures were not activated after well levels were determined to be adequate. Swedeburg, an unincorporated community south of the City of Wahoo, had the most noted water quantity issues in the region during the 2012 drought while most incorporated communities had no water quantity issues. Current drought trigger levels are based on the decline of an aquifer's saturated thickness over a two-year period. Trigger level response measures can be lifted after a three-year increase in saturated thickness.

The balance between agricultural and residential water use during drought events will continue to be addressed individually for each drought event. In areas with known water quantity issues (Special Quantity Area), recently adopted regulations restrict the amount of water that can be pumped from new irrigation wells during drought. The NRD also plans to further the limit the area where new wells can be drilled. Current restrictions require a 600-foot space between high capacity wells. There are few other plans in place to address future, more severe droughts.

DAM FAILURE

There were no dam failures or impending dam failures in the region during the March 2019 flood event. Though the issue had been mitigated to the best of the NRD's ability, there were concerns that flooding at Lake Wanahoo would stress the piping under the dam and draw soil from beneath the embankment. The Lake Wanahoo dam piping has been addressed in the past and could

potentially become stressed in the future despite the structural reinforcements that have been added. The significant hazard level dam on Trouble Creek, just north of the City of Fremont, has a wide breach path and is the secondary dam of concern in the NRD, followed by the dam near the Village of Bellwood. There are approximately 45 to 50 flood reduction dams in the NRD. Some of these are higher risk than others, either because they were built in the 1950s and are aging, because they are high hazard (there are three high hazard dams in the region), or because they are private and not maintained to any standards. The LPNNRD Flood Reduction project includes three of these high hazard dams at Wanahoo, the Village of Malmo (21-A), and the City of Prague (Czechland). The effect of a dam failure from private dams would likely have a small impact and be limited to county roads. The NRD has about 25 joint easement areas shared with Butler and Saunders Counties along county roads, making them jointly responsible for road repairs. No dams have used their emergency spillway though some may have come close through the years. Most dams are built to endure 25 to 100-year storm frequency. Since 2014, the LPNNRD and JEO Consulting Group have partnered to conduct breach analyses for significant hazard dams across the NRD. So far, they have analyzed close to 50 dams

FLOODING

Many private levees failed in the March 2019 flood event, flooding farmland along the Platte River and its tributaries. The flood damage in the NRD from this event was greatest along the Platte River from Platte County to the City of Ashland in Saunders County. The Wahoo Creek and Shell Creek are also prone to flooding. The Shell Creek Watershed is of particular concern because it has no flood reduction structures though it comprises about 1/3 of the district. The creek itself is deep after decades of imprudent channelization and erosion. The NRD is currently working to stabilize the banks of Shell Creek to prevent further erosion. There are also 11 dams to be built on Wahoo Creek, primarily from south of Prague to west of Weston, addressing flooding where the Sand Creek and Wahoo Creek intersect. Most riverine flood impacts in the district are confined to farmland; however, it can impact the communities of Schuyler and Fremont and county road infrastructure.

LEVEE FAILURE

Many levee failures occurred in the NRD in 2019 because of the March floods. There are 31 areas on clear creek levee that need repairs or improvements – 25 are under USACE jurisdiction but require the NRD to provide construction materials. The fuse plug in the Clear Creek Levee, located at the Army National Guard Camp near the City of Ashland, and cost $130,000 to repair using FEMA funds with local funding matches from LPNNRD and Lower Platte South NRD. The other levees in the district with flood damage are under the responsibility of local dike and drainage districts, such as Ames Dike, or are private. The private dike on Shell Creek near the Village of Platte Center has breached on occasion, impacting Highway 81, but is private. The sandpit soil piles owned by the Fremont Rod and Gun Club and the Lake Ventura communities, consisting of gravel piled near the Platte River, were breached in 2019. These last two breaches impacted their communities and the City of Fremont.

The NRD is currently moving to mitigate future flooding in Ditch 8. Ditch 8 is an eight-mile drainage system located north of the City of Fremont. It was built in the early 1900s but was not maintained until the early 1990s when it was put under the jurisdiction of the NRD and built up to provide 100-year flood protection to the city. The Rawhide and Trouble Creek Dam are part of the Ditch 8 system, together named the Merlyn England Flood Control Project. NDNR has been asked to submit any knowledge of private levees and berms in the system that may interfere with its

drainage capabilities. Levee systems are one of the most vulnerable assets in the district because they are not always built to standard and are more prone to failure than a dam.

Figure LPN.3: Dam Locations

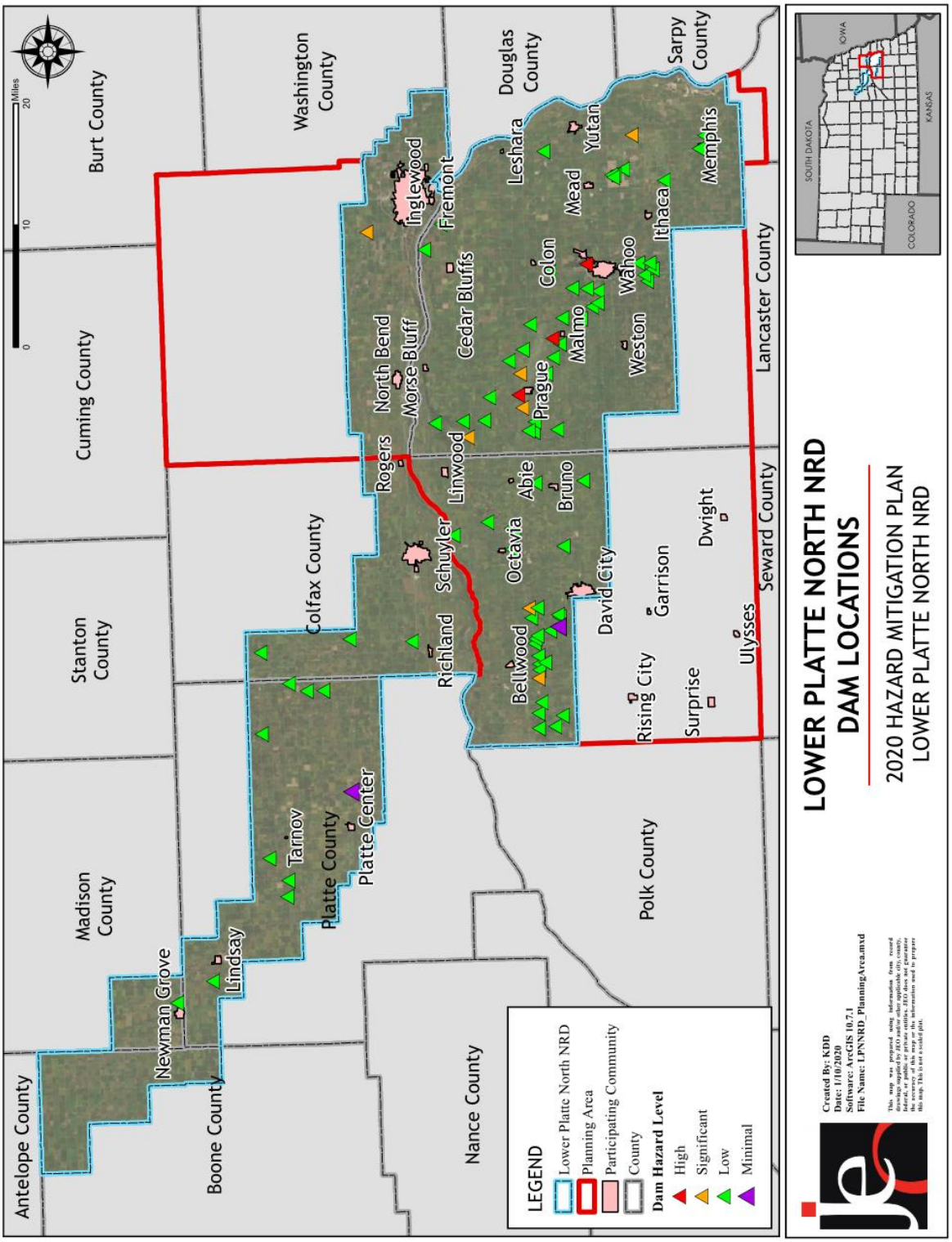


Figure LPN.4: Flood Risk Hazard Area

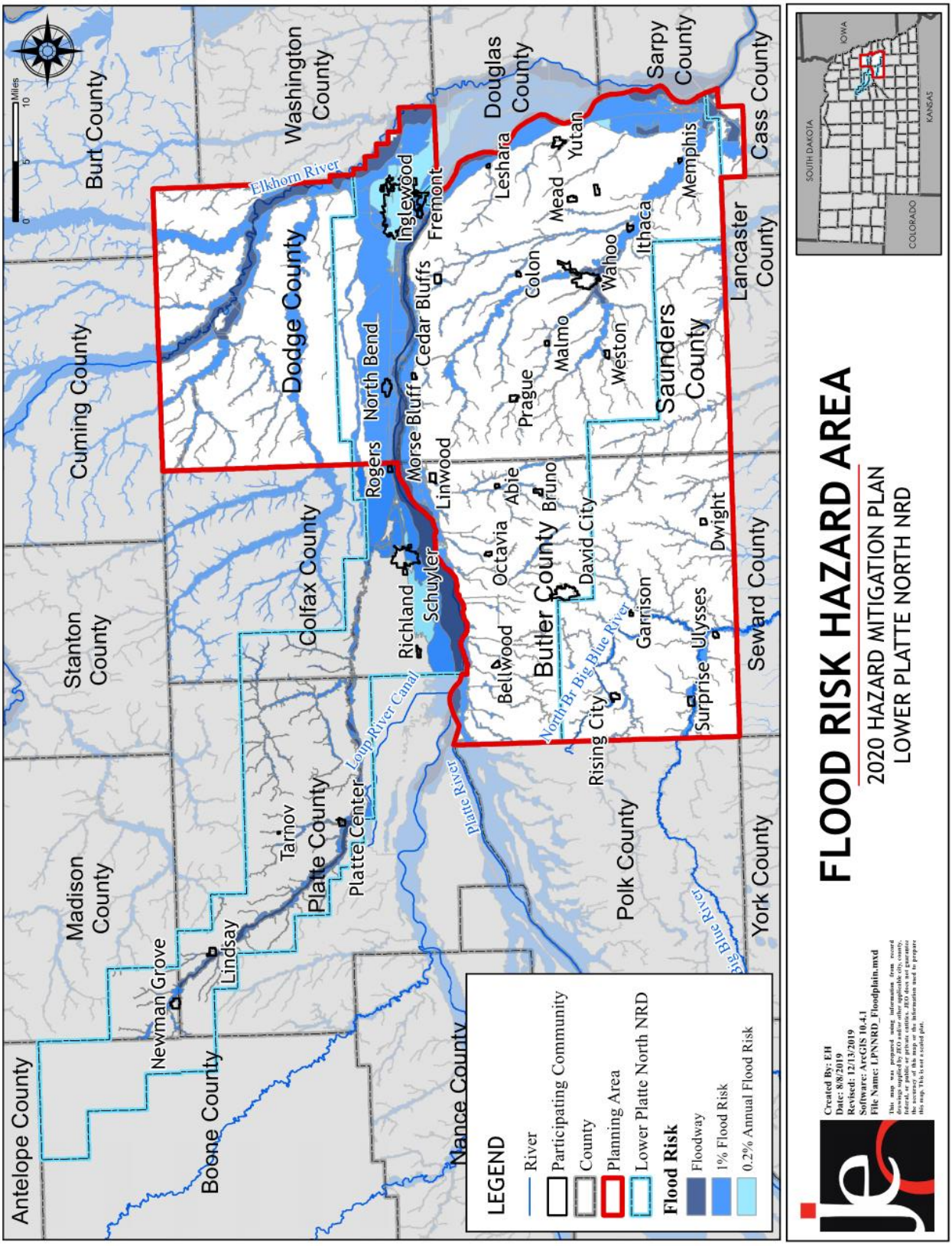


Figure LPN.5: Drainage Ditches

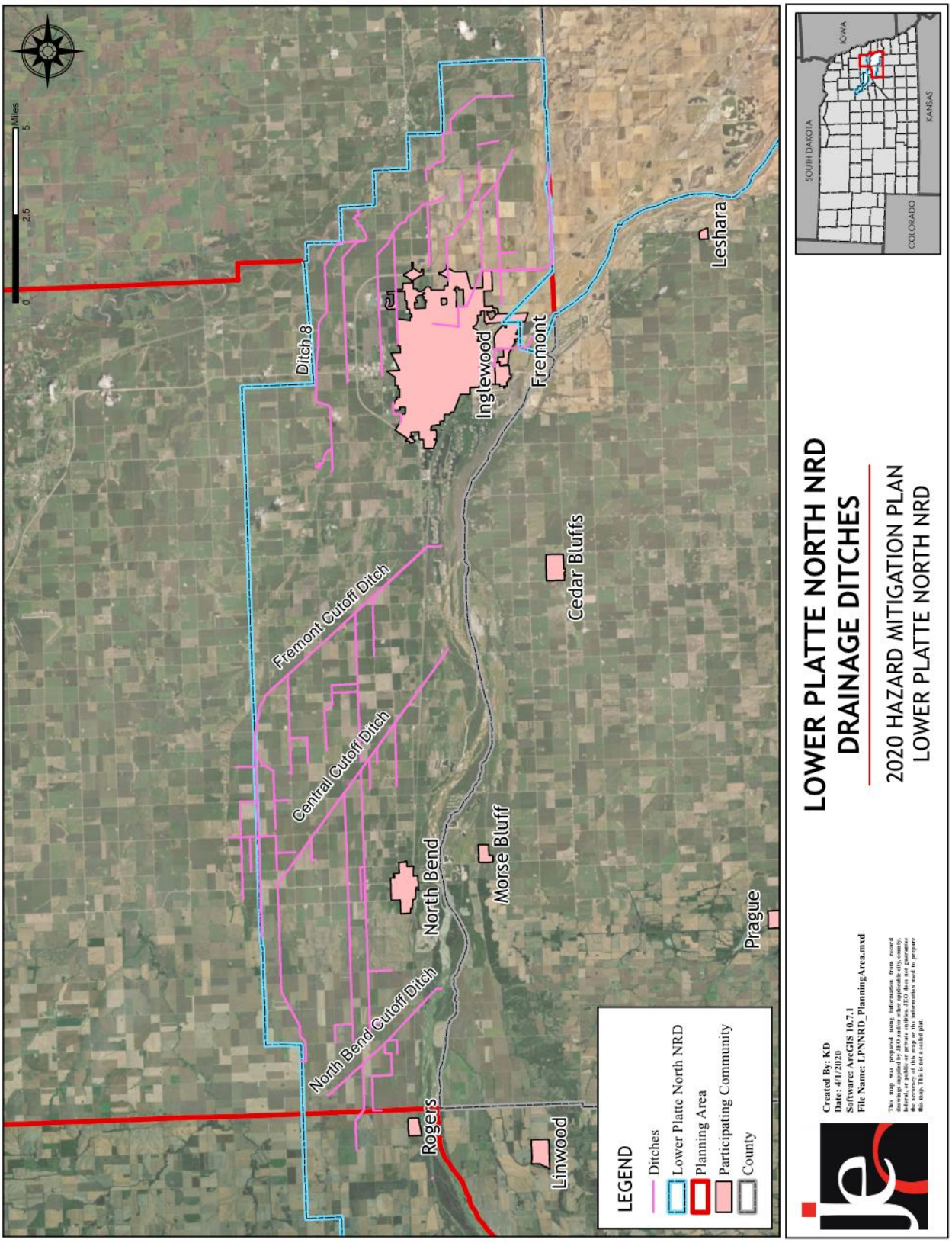
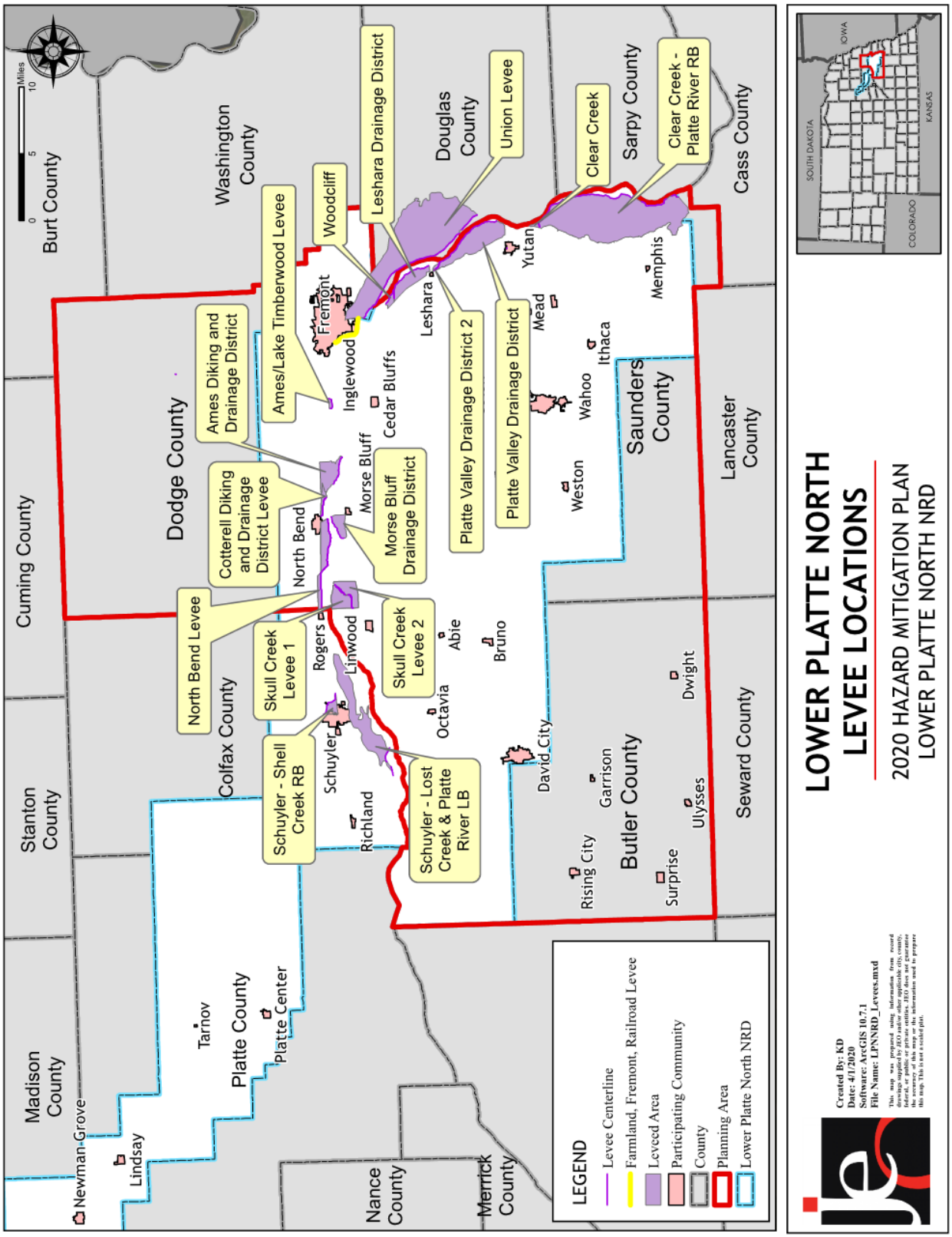


Figure LPN.6: Levee Locations



GOVERNANCE

The Lower Platte North NRD is governed by a 19-member board of directors, elected every four years, and entrusted with a broad range of responsibilities to protect and enhance Nebraska's many natural resources. It has the capability to financially and administratively assist villages, cities, counties, drainage and levee districts, and other special districts with mitigation actions, most commonly water quality management, forestry and range management, flood control, and drainage improvements. The NRD employs personnel in the following offices and roles.

- General Manager
- Assistant General Manager
- Bookkeeping Department
- Water Resources Department
- Operations & Maintenance Department
- Information & Education Department
- Projects/Rural Water Manager
- GIS Department/Grants
- Lake Wanahoo Supervisor
- NRD/NRCS Conservation Technician
- NRD/NRCS Field Office Assistants
- Shell Creek Watershed Technician

CAPABILITY ASSESSMENT

The NRD has the authority to levy taxes for specific purposes and to issue general obligation bonds to finance certain projects. The NRD also regularly engages in public education programs related to hazard mitigation. The following table summarizes the NRD's overall capability to implement mitigation projects.

Table LPN.3: Overall Capability Assessment

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

PLAN INTEGRATION

The Lower Platte North Natural Resources District has several plans which integrate the goals, objectives, and projects identified in this HMP.

LOWER PLATTE NORTH NRD MASTER PLAN - 2019

This plan includes the overall goals and objectives for the LPNNRD, which are consistent with the goals of this HMP. The LPNNRD updates the Master plan every ten years. The next Master Plan update is scheduled for 2029 and the NRD will evaluate projects in the HMP for inclusion in the Master Plan.

LONG-RANGE IMPLEMENTATION PLAN - 2020-2024

The purpose of this plan is to summarize accomplishments during fiscal year 2019 and planned District activities for fiscal year 2020. There are also objectives for a five-year period from fiscal years 2021-2025. The plan serves as an implementation tool of the District's Master Plan. Many of the program areas, such as Flood Control and Damage Reduction Activities, Ground and

Surface Water, and Drainage Improvement and Channel Rectification, identified in the plan are consistent with the goals and objectives of the HMP and the identified mitigation strategies.

GROUNDWATER MANAGEMENT PLAN – 2018

This plan, first approved in 1997, serves as a foundation for decision making while managing groundwater resources within the district. The plan outlines the regulatory actions the district will take when groundwater quantity or quality problems arise. The plan was last updated in 2018 and is reviewed annually to assess the district's actions, activities, and effectiveness under the Ground Water Rules and Regulations for implementation of the plan.

DROUGHT CONTINGENCY PLAN - 2020

The NRD is a key stakeholder in the Lower Platte River Consortium, which is made up of the Lower Platte North NRD, Lower Platte South NRD, Papio-Missouri River NRD, Omaha Metropolitan Utilities District, City of Lincoln Water System, and NeDNR. The Consortium worked together to develop the Drought Contingency Plan, approved by the NRD board in early 2020, with the overall goal of sustaining public water supplies in the basin. The plan lists potential drought mitigation measures and drought monitoring techniques for the Consortium to evaluate and, potentially, adopt and implement.

INTEGRATED MANAGEMENT PLAN - 2018

The NRD's voluntary Integrated Management Plan (IMP) took effect in 2018 and is reviewed annually in collaboration with the Nebraska Department of Natural Resources. The plan provides the framework for wise, long-term management of water resources. The purpose of the plan is to achieve and sustain a long-term balance between District water uses and water supplies. This is achieved through coordinated management of hydrologically connected groundwater and surface water. Projects identified in this HMP will be evaluated for inclusion in the future updates to the IMP.

The NRD has other planning mechanisms in place that are regularly reviewed and updated, such as watershed management plans and water quality. These plans are consistent with the goals of the HMP. No other examples of plan integration were identified. Other than specified, there are currently no plans to further integrate existing or future planning mechanisms.

MITIGATION STRATEGY

COMPLETED MITIGATION ACTIONS

MITIGATION ACTION	DAM ENGINEERING AND ANALYSIS
Hazard(s) Addressed	Dam failure
Status	The Lake Wanahoo dam has been acquired by the NRD and is now monitored yearly

MITIGATION ACTION	DRAINAGE STUDY/STORMWATER MASTER PLAN
Hazard(s) Addressed	Flooding
Status	Federal and local funding was used to create a plan for the Wahoo Creek Watershed, to be approved in early 2020

MITIGATION ACTION	GROUNDWATER/IRRIGATION/WATER CONSERVATION MANAGEMENT PLAN AND PRACTICES
Hazard(s) Addressed	Flooding
Status	A drought management plan was completed in 2019 for the Lower Platte River. The project cost $550,000 and was funded by NDOR, NDNR, PMRNRD, LPNNRD, LPSNRD, MUD, Bureau of Reclamation and the City of Lincoln

MITIGATION ACTION	CIVIL SERVICE IMPROVEMENTS
Hazard(s) Addressed	All hazards
Status	The Lake Wanahoo fire shed was recently outfitted to improve the region's firefighting capacity.

ONGOING AND NEW MITIGATION ACTIONS

MITIGATION ACTION	ALERT/WARNING SIRENS
Description	Install an emergency siren at Lake Wanahoo to alert nearby visitors to severe weather.
Hazard(s) Addressed	All hazards
Estimated Cost	$20,000
Funding	NRD funds, FEMA grants
Timeline	2 years
Priority	Medium
Lead Agency	NRD Projects/Operations Department
Status	The site has been identified, but the cost effectiveness of this project is still being debated

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	Provide a portable or stationary source of backup or redundant power to municipal wells, lift stations, and other critical facilities and shelters
Hazard(s) Addressed	All hazards
Estimated Cost	$50,000
Funding	Rural Water and NRD funds
Timeline	5+ years
Priority	Low
Lead Agency	Rural Water Districts
Status	Priority sites and a funding source for backup generators have not been identified

MITIGATION ACTION	COMMUNITY EDUCATION AND AWARENESS
Description	Through activities such as outreach projects, distribution of maps and environmental education, increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards. Also educate citizens on water conservation methods, evacuation plans, etc.
Hazard(s) Addressed	All hazards
Estimated Cost	$25,000
Funding	NRD funds
Timeline	Ongoing
Priority	Medium
Lead Agency	NRD Information and Education Department
Status	The NRD provides education district wide at area schools and on the NRD website

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

MITIGATION ACTION	EXPAND WATER STORAGE CAPACITY
Description	Build new or expand current water reservoirs in the Village of Colon and the City of Wahoo (water towers, etc.)
Hazard(s) Addressed	Drought, grass/wildfire
Estimated Cost	Varies
Funding	Rural Water District funds
Timeline	5+ years
Priority	Low
Lead Agency	Rural Water Districts
Status	The need for expanded water storage has been identified but no further progress has been made on this project

MITIGATION ACTION	FLOOD CONTROL PROJECTS
Description	Conduct flood control projects as necessary, particularly in the Wahoo Creek Watershed, the Shell Creek Watershed and as determined by the joint water management advisory board
Hazard(s) Addressed	Flooding
Estimated Cost	$25,000,000+
Funding	NRD, NDEE, NRCS, NDNR, Saunders County, Platte County, and Colfax County funds
Timeline	5+ years
Priority	High
Lead Agency	NRD Projects Department
Status	The locations of several flood projects have been determined and the projects are in progress

MITIGATION ACTION	IMPROVE FLOOD AND DAM FAILURE WARNING SYSTEM
Description	Install a flood warning system throughout the district including flow gages and meters, cameras, and any other flood warning system technologies on major rivers and tributaries to warn the public of impending flooding due to ice jams or rain events
Hazard(s) Addressed	Flooding
Estimated Cost	$250,000
Funding	Community Block Grant, NRD, County, and local funds
Timeline	1-5 years
Priority	High
Lead Agency	Joint Water Management Advisory Board, Counties, LPNNRD
Status	Funding sources and sites are currently being identified and installation efforts are beginning

MITIGATION ACTION	LEVEE/FLOODWALL CONSTRUCTION AND/OR IMPROVEMENTS
Description	Create a levee, floodwall, or dam to protect critical facilities and residences, such as the Schuyler Levee, or dams on Skull Creek and Bone Creek. Repair the Morse Bluff Levee, Clear Creek Dike, and other levees district-wide.
Hazard(s) Addressed	Flooding
Estimated Cost	$100,000,000+
Funding	NRD funds and landowner contributions, USACE funds, FEMA grants, NEMA grants
Timeline	Ongoing
Priority	Medium/High
Lead Agency	NRD Projects/Operations Department
Status	Several levees have been identified for repairs after the March 2019 flooding event. North Bend and Ames have been repaired

MITIGATION ACTION	SAFE ROOMS AND STORM SHELTERS
Description	Design and construct storm shelters and safe rooms in highly vulnerable areas such as churches, schools, and other areas such as Lake Wanahoo, and the Wahoo Airport.
Hazard(s) Addressed	All hazards
Estimated Cost	$400,000
Funding	NRD funds
Timeline	5 years
Priority	Medium
Lead Agency	NRD Projects/Operations Department
Status	Sites have been identified

MITIGATION ACTION	SOURCE WATER CONTINGENCY PLAN AND IMPROVEMENTS
Description	Villages and cities can evaluate and locate new sources of groundwater to ensure adequate supplies to support the existing community and any additional growth that may occur. This includes projects stemming from the Bureau of Reclamation's Drought Plan.
Hazard(s) Addressed	Drought
Estimated Cost	$500,000
Funding	Bureau of Reclamation, NDNR, Papio-Missouri NRD, LPNNRD, LPSNRD
Timeline	Ongoing
Priority	High
Lead Agency	NRD Projects Committee
Status	A rural fire plan was completed in 2019, creating a water use agreement with the Wahoo wellhead protection area and the rural fire department. Other plans are needed for other wellhead protection areas.

MITIGATION ACTION	STORMWATER SYSTEM IMPROVEMENTS
Description	Stormwater system improvements may include pipe upsizing and additional inlets. Retention and detention facilities may also be implemented to decrease runoff rates while decreasing the need for other stormwater system improvements.
Hazard(s) Addressed	Flooding
Estimated Cost	Bonds, CDBG, FEMA grants
Funding	Unknown
Timeline	5+ years
Priority	Low
Lead Agency	NRD Projects Committee
Status	Stormwater system improvements are being planned for communities district-wide

MITIGATION ACTION	WATER SYSTEM IMPROVEMENTS
Description	Rural water districts should work with their water providers to replace aging infrastructure and ensure that they are protected against natural disasters.
Hazard(s) Addressed	All hazards
Estimated Cost	$5,000,000
Funding	Local community and Rural Water District funds
Timeline	5+ years
Priority	Medium
Lead Agency	NRD Rural Water Department
Status	Funding sources are currently being identified

MITIGATION ACTION	WINDBREAKS/LIVING SNOW FENCE
Description	Installation of windbreaks and/or living snow fences to increase water storage capacity in soil and reduce blowing snow
Hazard(s) Addressed	Severe winter storms
Estimated Cost	$50,000
Funding	NRD funds, state NSWCP
Timeline	Ongoing
Priority	Medium
Lead Agency	NRD Operations Committee
Status	Windbreaks are being implemented district-wide

MITIGATION ACTION	LAKE DRAINAGE DEVICE
Description	Design or purchase a new pump to allow the NRD to lower and raise lake levels more efficiently
Hazard(s) Addressed	Flooding
Estimated Cost	$20,000 - $50,000
Funding	NRD funds, HMGP
Timeline	2-5 years
Priority	Medium
Lead Agency	NRD Operations Committee
Status	NRD has a pump however it is slow and would not provide enough pumping capacity if a lake needs to be lowered more quickly

REMOVED MITIGATION ACTIONS

MITIGATION ACTION	HAZARDOUS TREE REMOVAL PROGRAM
Hazard(s) Addressed	Identify and remove hazardous limbs and/or trees
Reason for Removal	There are no hazardous trees in the areas that the NRD has jurisdiction over

MITIGATION ACTION	ELECTRIC SYSTEM LOOPED DISTRIBUTION
Hazard(s) Addressed	All hazards
Reason for Removal	This project is not under the NRD's jurisdiction

MITIGATION ACTION	FLOOD-PRONE PROPERTY ACQUISITION
Hazard(s) Addressed	Flooding
Reason for Removal	The NRD isn't interested in leading this project. However, the NRD may collaborate, provide funding assistance, and expertise, if needed, in partnership with other public entities or local jurisdictions.

DISTRICT PROFILE

AMES DIKING & DRAINAGE DISTRICT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

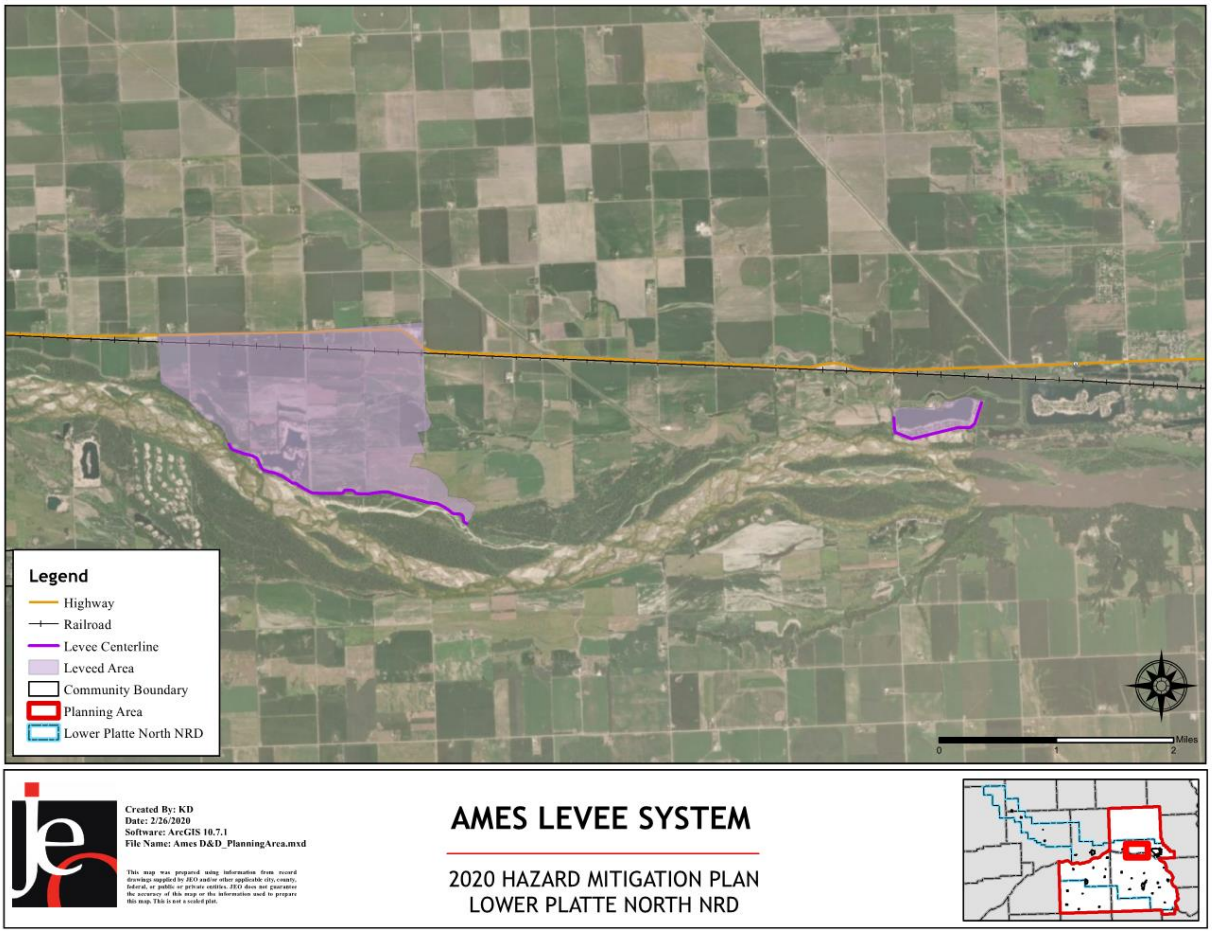
Table ADD.1: Ames Diking and Drainage District Local Planning Team

NAME	TITLE	JURISDICTION
Grant Hansen	President	Ames Diking & Drainage District

LOCATION AND GEOGRAPHY

The Ames Diking & Drainage District is organized levee authority that owns and maintains the Ames Diking & Drainage District Levee System located in southern Dodge County. The dike stretches three miles along the Platte River between the City of North Bend and the Village of Ames. It protects a Union Pacific Railroad rail line, 900 acres of farmland, a portion of US Highway 30, and a few residential structures and outhouses. Figure DGE.1 shows the location of the levee system.

Figure ADD.1: Ames Levee System



FUTURE DEVELOPMENT TRENDS

In the past five years, US Highway 30 has expanded from a two-lane highway to four lanes, increasing traffic on this route. The railroad also plans to increase their traffic flow through the leveed area to three rail lines.

CRITICAL FACILITIES

The Ames Diking and Drainage District does not have critical facilities.

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

DAM FAILURE

There has been no history of dam failures impacting the district but if the large dams upstream of the diking district like the Kingsley Dam or dams in Wyoming and Colorado were to fail there would be massive flooding. Such flooding would likely overwhelm the dike, either overtopping it or causing a breach.

FLOODING

The March 2019 flood caused a 1,000-foot breach in the Ames Dike, resulting in massive destruction of farms, homes, land, livestock, and crops from the dike down the river to the City of Fremont. Riverine flooding from ice jams in the spring is the biggest threat to the integrity of the dike. The Union Pacific Railroad rail lines, Highway 30, farmland, and residential structures from County Road 11 to the City of Fremont experience the largest impacts of flooding. Much of this area also has poor stormwater drainage.

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

LEVEE FAILURE

If the Ames Dike were to fail, most of the flooding would impact the Union Pacific Railroad, Highway 30, Timberwood SID #5 and the other small housing developments east along the Platte River, the Village of Ames, many local farmsteads, and potentially the City of Fremont. The Army

Corps of Engineers has certified the Ames Dike to meet its specification. The dike provides 100-year flood protection.

SEVERE THUNDERSTORMS

Severe thunderstorms can impact the dike when they cause heavy rain events that flood the Platte River, such as the bomb cyclone that caused the March 2019 flooding disaster. Critical infrastructure like Highway 30 and the Union Pacific Railroad, along with private property and farmland are vulnerable during flash flooding events should the dike overtop or breach.

SEVERE WINTER STORMS

Severe winter storms are a concern for the diking district when rapid snow melt after heavy snow causes flooding and ice jams on the Platte River. Such a severe winter storm event caused the March 2019 flooding disaster that lead to a breach in the dike. Severe snows impeding transportation are also an issue, should personnel need to respond to an issue with the dike. The local township is responsible for snow removal on county roads in the area.

GOVERNANCE

A three-member board of directors govern the drainage district with a president, secretary, and treasurer. They do not employ any staff.

CAPABILITY ASSESSMENT

The drainage district's board of directors is responsible for implementing any mitigation projects.

Table ADD.2: Capability Assessment

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

PLAN INTEGRATION

Ames Diking and Drainage District has a master plan that addresses lines of communicate in case of an event. The plan primarily discusses flooding as it is the top hazard of concern. There are no plans to update the plan at this time.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	LEVEE/FLOODWALL CONSTRUCTION AND/OR IMPROVEMENTS
Description	Levees and floodwalls serve to provide flood protection to businesses and residents during large storm events. Improvements to existing levees and floodwalls will increase flood protection. The district would like to raise and lengthen the dike.
Hazard(s) Addressed	Levee failure, Flooding
Estimated Cost	Varies
Funding	General funds, CDBG

Timeline	2-5 years
Priority	High
Lead Agency	Board of directors
Status	New Action. Not Started.

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

DISTRICT PROFILE

CEDAR BLUFFS SUBURBAN FIRE PROTECTION DISTRICT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table CBF.1: Cedar Bluffs Suburban Fire Protection District Local Planning Team

NAME	TITLE	JURISDICTION
Rob Benke	Fire Chief	Cedar Bluffs Suburban Fire Protection District

LOCATION AND GEOGRAPHY

The Cedar Bluffs Suburban Fire Protection District covers approximately 54,000 acres of land in the northeast portion of Saunders County, surrounding the Village of Cedar Bluffs. The fire district mainly addresses grass and wildfire in the region's rural area.

TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors and areas more at risk of transportation incidents. US Highway 77 and Nebraska State Highway 109 both travel through the Cedar Bluffs fire district. US Highway 77 is traveled by a total annual average of 5,605 vehicles daily, 880 of which are trucks. Nebraska State Highway 109 is traveled by a total annual average of 3,095 vehicles daily, 225 of which are trucks.[2] A Burlington Northern Santa Fe rail line runs through the eastern part of the district. Of these routes, Highway 77 is of most concern because of its heavy traffic.

DEMOGRAPHICS

See the Village of Cedar Bluffs and the Saunders County profiles for regional demographic information. The district serves approximately 3,500 people.

FUTURE DEVELOPMENT TRENDS

There have been no changes to the district in the past five years and there are no developments planed for the next five years.

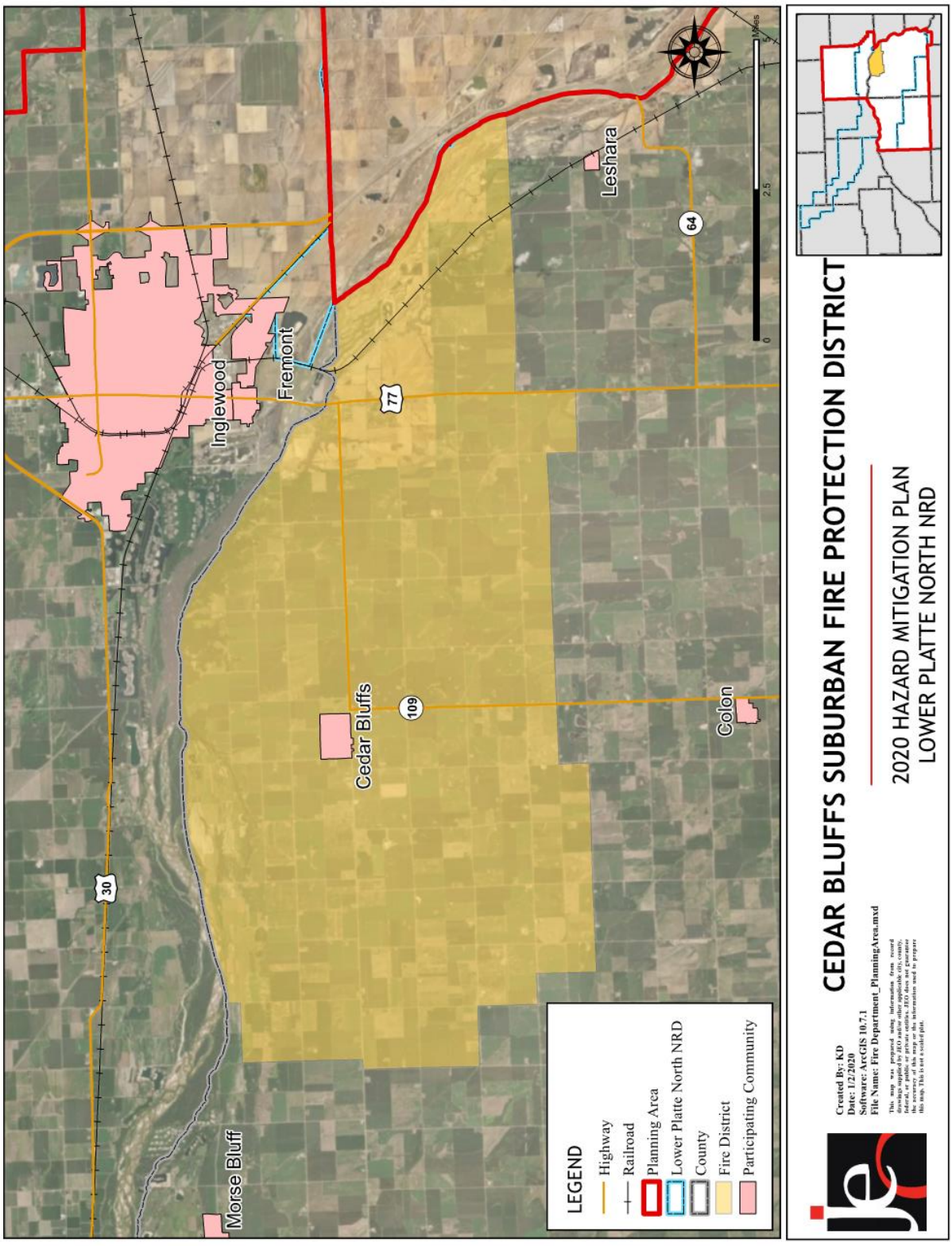
CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

Information on chemical storage sites can be found in the Village of Cedar Bluffs and Saunders County profiles. Chemical spills are not a large concern for the fire district because their transportation and storage are heavily regulated.

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

Figure CBF.1: Cedar Bluffs Suburban Fire Protection District



CRITICAL FACILITIES

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

Table CBF.2: Critical Facilities

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

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

DROUGHT

Drought is a concern for the district when a lack of rain leads to grass and wildfire. The district draws water from the Village of Cedar Bluff's two wells. Alternative water sources are needed for firefighting during future drought events.

HIGH WINDS

High winds can lead to power outages and quickly spreading grass fires. The fire hall has a 100-kw backup generator in case of power outages. They also offer fire prevention outreach to the community to mitigate some grass fires.

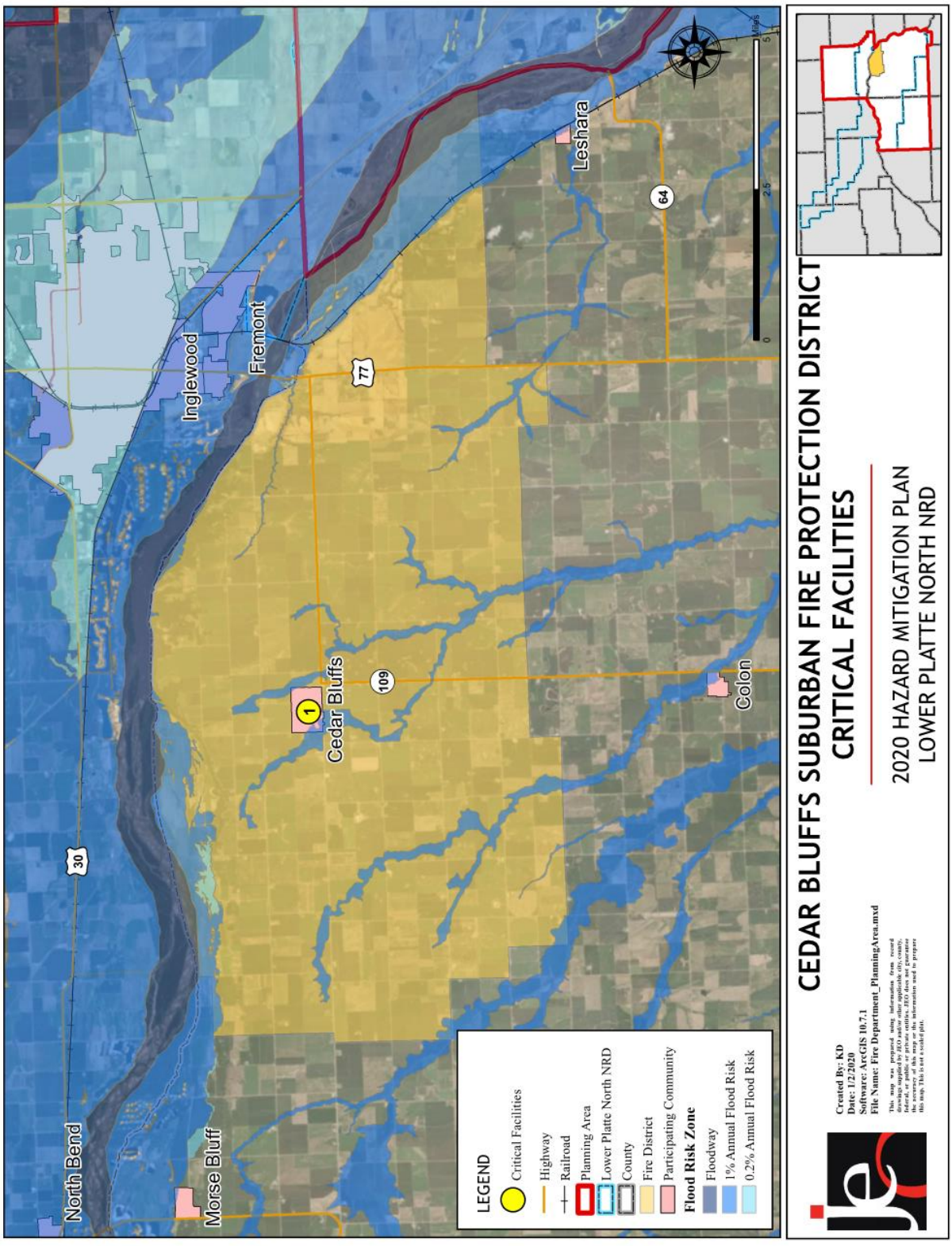
SEVERE THUNDERSTORMS

The lightning that occurs during severe thunderstorms can ignite grass fires. Thunderstorm wind can further exacerbate a grass fire by spreading it quickly. Downed trees from lightning and wind can provide more fuel for wildfires and hinder transportation throughout the district. Severe thunderstorms can also cause power outages. The fire hall is equipped with a backup generator in case of prolonged power outages.

SEVERE WINTER STORMS

A severe winter storm in 2008 blocked travel on highways and county roads throughout the district with heavy snow. Snow events like this impede the district's emergency response. Local communities and townships are responsible for snow removal in the area.

Figure CBF.2: Critical Facilities



TORNADOES

No tornadoes have occurred in the district, but a future event could be catastrophic. A warning sire is located at the fire station, activated by County Dispatch. There are no FEMA certified safe rooms in the district. In case of a disaster, Mutual Aid Agreements are in place with Saunders and Dodge Counties.

STAFFING

Cedar Bluff's fire district is supervised by a fire chief and a five-member board of directors who will oversee the implementation of hazard mitigation projects. 30 volunteers are registered to help with emergency response. Other offices are listed below.

- Assistant Fire Chief
- Rescue Captain
- Rescue Training Lieutenant
- Fire Training Lieutenant
- President/Assistant Rescue Chief
- Fire Captain

CAPABILITY ASSESSMENT

Due to the unique structure of fire districts, the typical capability assessment table was not used. The following table summarizes the district's overall capabilities. The Cedar Bluffs Suburban Fire Protection District will continue to utilize existing relationships with local, county, state, and federal agencies in the implementation of mitigation projects. The district has applied for grants in the past and won funding for a 100-kw generator.

The district owns one aerial, three engines, three tankers, two squad cards, two grass fire rigs, one pickup with a cascade system, one excursion on tracks and one snow cat. They offer public outreach on fire prevention.

Table CBF.3: Overall Capability Assessment

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

PLAN INTEGRATION

The Cedar Bluff Suburban Fire Protection District does not have any formal planning documents. What they do have is standard operating procedures (SOPs). These SOPs outline what type of response is needed for any type of call the fire district is likely to receive.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	Identify and evaluate current backup and emergency generators. Obtain additional generators based on identification and evaluation. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by size
Funding	General Fund
Timeline	5+ years
Priority	Low
Lead Agency	Fire Chief
Status	New action. Not started

MITIGATION ACTION	CIVIL SERVICE IMPROVEMENTS
Description	Improve emergency rescue and response equipment and facilities by providing additional or updating existing equipment. For example: backup systems for emergency vehicles, training additional personnel, upgrading radio systems, etc.
Hazard(s) Addressed	All hazards
Estimated Cost	Varies
Funding	General Fund
Timeline	Ongoing
Priority	Medium
Lead Agency	Fire Chief
Status	New action. Ongoing, equipment is purchased as needed

MITIGATION ACTION	COMMUNITY EDUCATION AND AWARENESS
Description	Establish a community education program to increase awareness related to household level mitigation actions. Utilize outreach projects and the distribution of maps. Purchasing equipment such as projectors and laptops to facilitate presentation of information
Hazard(s) Addressed	All hazards
Estimated Cost	$500+
Funding	General Fund
Timeline	Ongoing
Priority	Medium
Lead Agency	Fire Chief
Status	New action. Ongoing, the district regularly promotes public education

DISTRICT PROFILE

CEDAR BLUFFS PUBLIC SCHOOLS

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table CPS.1: Cedar Bluffs Public Schools Local Planning Team

NAME	TITLE	JURISDICTION
Harlan Ptomey	Superintendent	Cedar Bluffs Public Schools

LOCATION

The Cedar Bluffs Public School District is in northern Saunders County and consists of one school building and a separate auditorium. The school district provides services to students in the communities of Cedar Bluffs, Colon, Fremont, Mead, Prague, Wahoo, and Woodcliff Lakes SID #8.

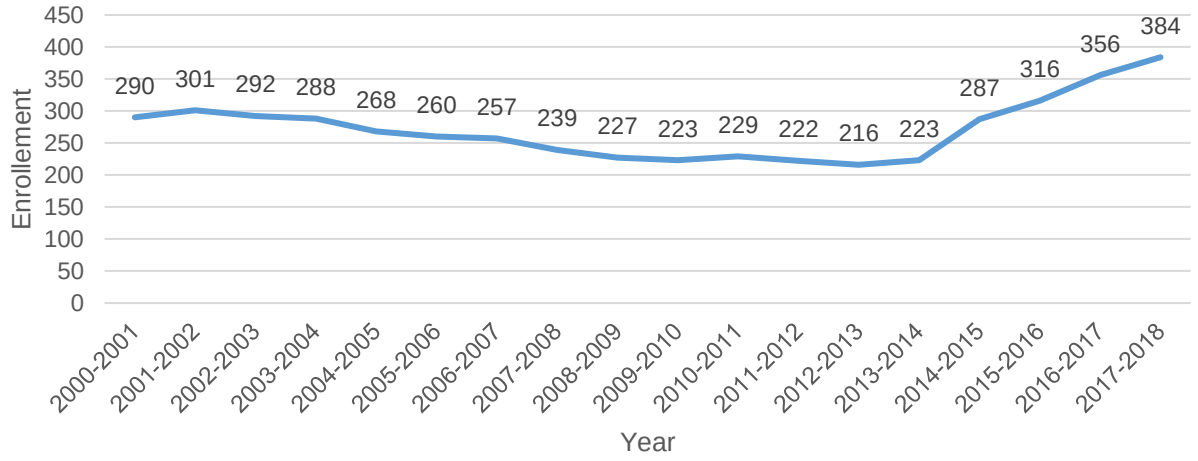
TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests areas more at risk of transportation incidents. Nebraska State Highway 109 intersects the school district. It is traveled by a total annual average of 2,295vehicles daily, 103 of which are trucks.[3] The North Cedar dirt roads are the transportation routes of most concern because they are often damaged or impassible after severe storms. The district owns ten buses and transports approximately 240 children to and from school. Buses are particularly at risk from transportation incidents; in 2016 a bus was rear ended on Highway 109 between Cedar Bluffs and the City of Fremont.

DEMOGRAPHICS

The following figure displays the student population trend. It indicates that the student population has been increasing since 2013 because of a large influx of students from the City of Fremont. In the 2018-2019 school year there were 428 students enrolled at Cedar Bluffs Public Schools.[4]

Figure CPS.1: Student Population

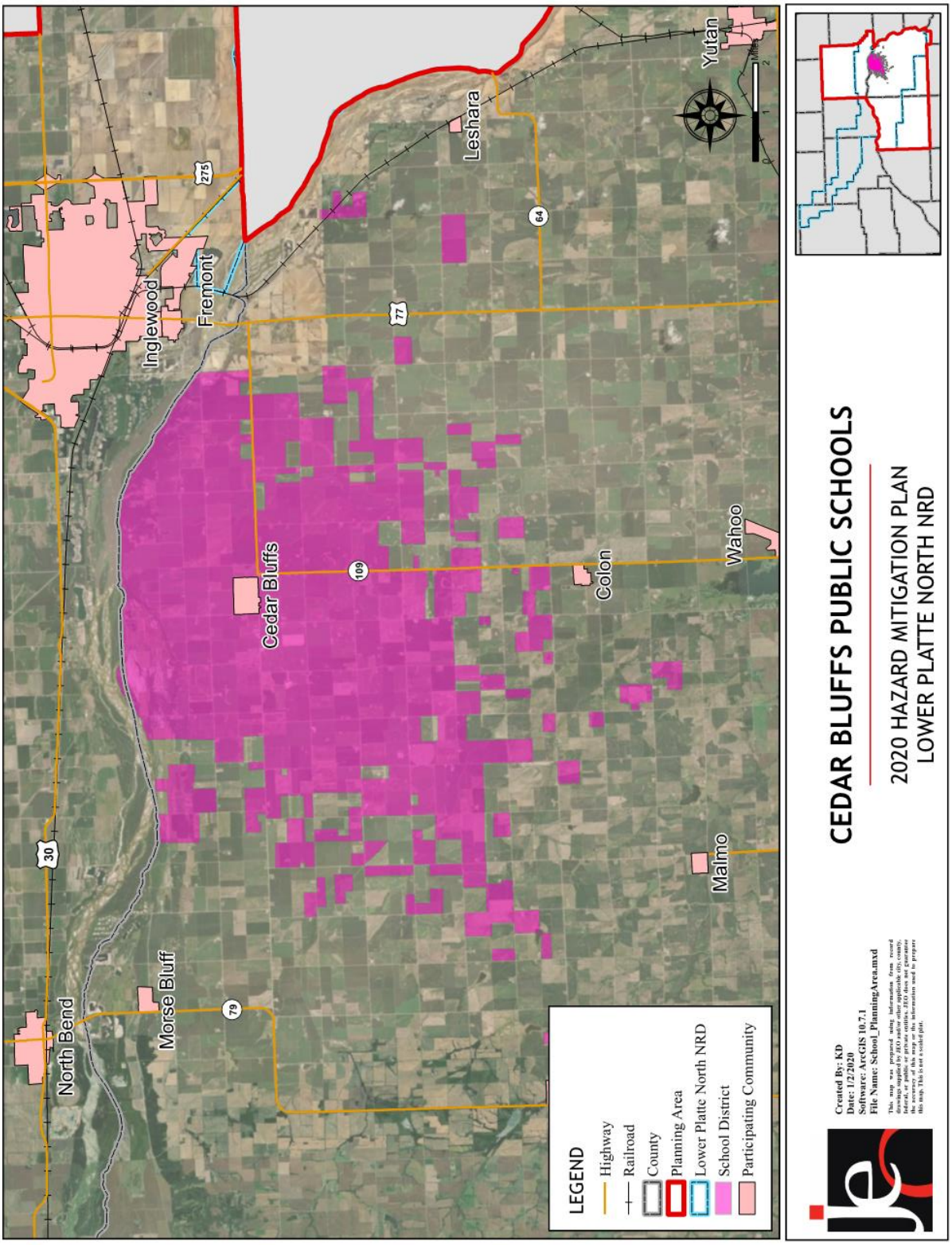


Source: Nebraska Department of Education, 2019

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

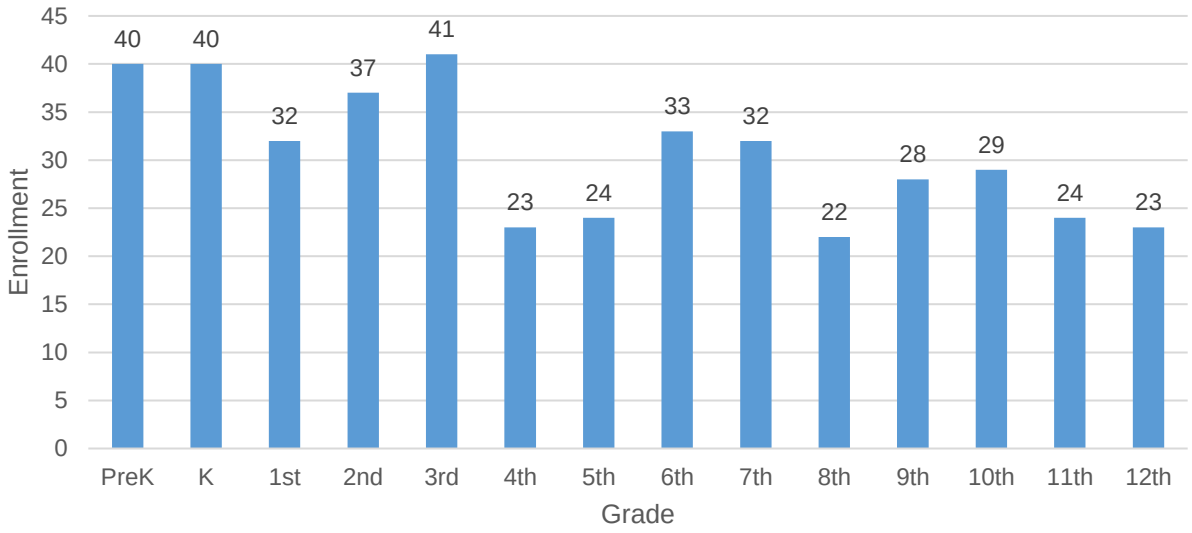
4 Nebraska Department of Education. 2019. "Nebraska Education Profile." /

Figure CPS.2: Cedar Bluffs Public Schools



During the 2018-2019 school year, grades pre-kindergarten through third grade had the highest enrollment. The lowest population of students was in 8th grade. Children under 16 are especially vulnerable to hazard events because they are dependent on parents and guardians for transportation and financial support.

Figure CPS.3: Number of Students by Grade



Source: Nebraska Department of Education, 2019

According to the Nebraska Department of Education, 56% of students receive either free or reduced priced meals at school. This is higher than the state average of 45%. About 16% of students are in a Special Education program. Less than 1% of students are English Language Learners; students fluent in a second language most commonly speak Spanish. These students may be more vulnerable during a hazardous event than the rest of the student population.

Table CPS.2: Student Demographics

	SCHOOL DISTRICT	STATE OF NEBRASKA
Free/reduced priced meals	56%	45%
English Language Learners	<1%	6%
Special Education students	16%	15%

Source: Nebraska Department of Education, 2019

FUTURE DEVELOPMENT TRENDS

In the past five years the student population of Cedar Bluffs Public School has increased exponentially as students commute from the City of Fremont. The school completed new additions in 2016 and in 2018. Future developments would include generators. Safe rooms were considered as a component of past additions but were cost prohibitive.

CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

According to the Tier II System reports submitted to the Nebraska Department of Environmental Quality, there are a total of nine chemical storage sites that house hazardous materials in the Cedar Bluffs Public Schools district. Refer to the Cedar Bluffs and Saunders County profiles for more information on these sites. There is a co-op filling station within a block of the school building, though no chemical spills have occurred to date.

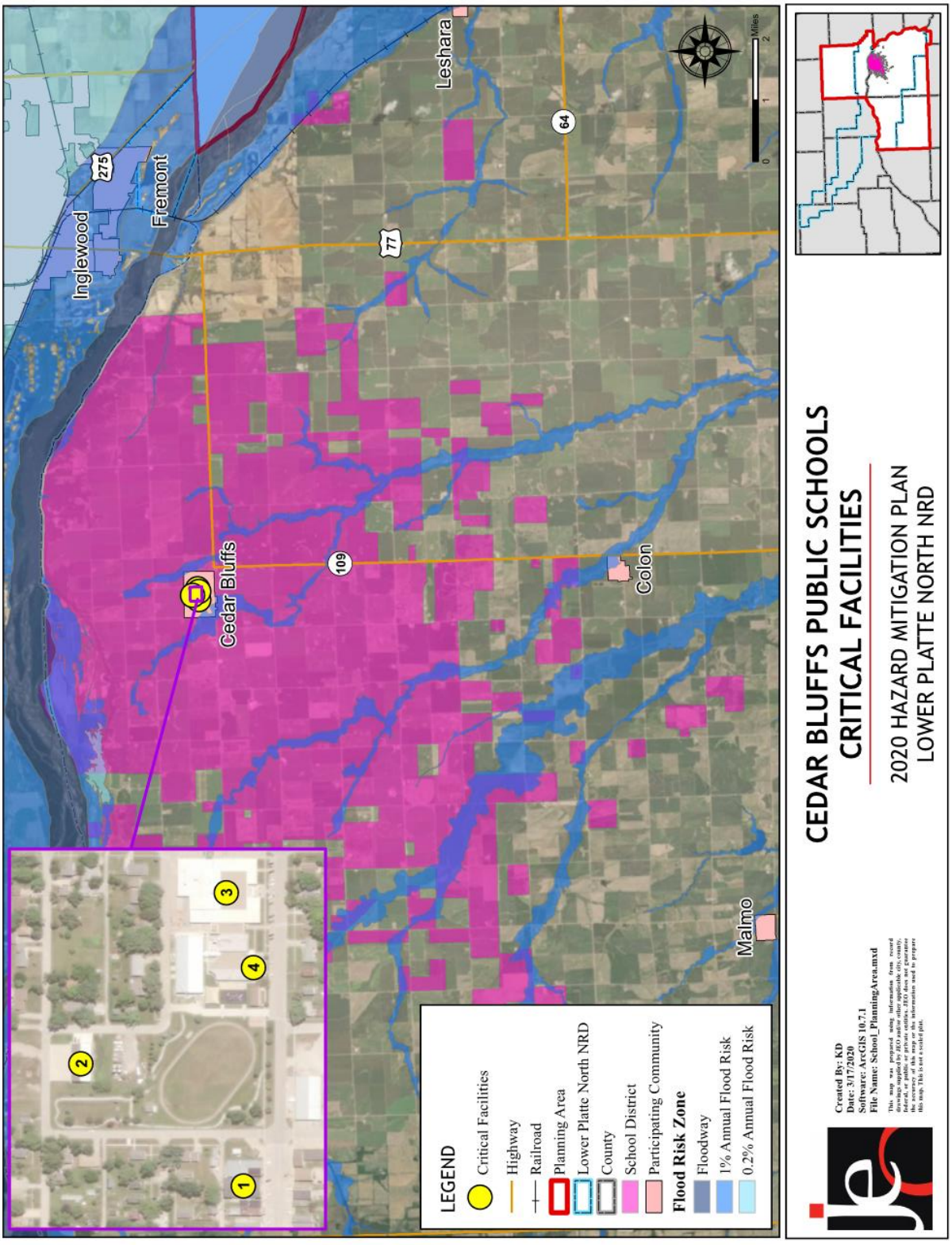
CRITICAL FACILITIES

Cedar Bluffs Public Schools identified the following critical facilities necessary to maintain the functions of the schools. The following table and figure provide a summary of the critical facilities for the community.

Table CPS.3: Critical Facilities

CF #	NAME	# OF STUDENTS	# OF STAFF	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Auditorium	Varies		Yes	No	No
2	Bus Barn	Varies		No	No	No
3	Cedar Bluffs Public School	425	80	No	No	No
4	County Preschool Building	41	4	No	No	No

Figure CPS.4: Critical Facilities



HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

HAIL

Hail events are likely to cause property damage to the school, especially the roofs and any vehicles left outside during a hailstorm. The main school's roof is constructed of rock but most of the outbuildings and the gym have metal roofs that may be vulnerable. All critical facilities are insured against hail damage.

SEVERE THUNDERSTORMS

Severe thunderstorms have downed power lines in the past, leaving the district without power because school buildings do not have backup generators. This lack of generators is especially pertinent because the school's auditorium is used as a Red Cross Shelter and the school serves a vulnerable population that could feasibly be expected to shelter in place. The bus barn, auditorium, and local American Legion could also use backup generators because they are used in the district's reunification plan after evacuation to house personnel. The bus barn has also shown to need improvements to the ventilation system during evacuation drills. In case of power surges, school records are backed up off site. There are no hazardous trees on school property that could threaten power lines after the district and Village of Cedar Bluffs collaborated to perform tree maintenance and re-grade the park to improve stormwater drainage in 2017.

SEVERE WINTER STORMS

The heavy snow followed by rapid snow melt that caused the 2019 March flood event resulted in the evacuation of Woodcliff Lakes SID #8, just five miles north of the Village of Cedar Bluffs. Several families from Woodcliff Lakes were housed in school's auditorium following the evacuation. For future severe winter storm events, a backup generator for the auditorium and school would be essential. The school has AED machines, but the auditorium still needs an AED machine because obtaining one has been cost prohibitive to this point. The district is responsible for snow removal on the school's sidewalks and parking lots. They own a 50-horsepower tractor with a bucket, blade, and attached snow blower; snow blower; and gator with a blade and brush for this purpose. For heavy snow events when these resources are not sufficient, a school board member assists with snow removal using their large tractor.

TERRORISM

There have been no previous terrorist attempts at the school, but the district prioritizes safeguarding students and staff from the national increase in active shooter events. The school is the most vulnerable facility to terrorism in the Village of Cedar Bluffs. According to research on active shooter events, they are most likely to be perpetrated by a lone person or a small group of

students. The district's facilities are vastly under prepared for an active shooter. The elementary building is open concept with large windows so there are few walls to protect students from an intruder. The school does maintain an active shooter plan that identifies safe versus easy access areas throughout the school. A safe room could be an effective solution to these vulnerabilities.

TORNADOES

No tornadoes have impacted with school district, but a future occurrence could be catastrophic especially if it occurred during a sporting event at the local park because there are no shelters there. All school records are backed up to an offsite server to protect them from a hazard event. The Cedar Bluffs Volunteer Fire Department maintains and activates the warning siren in the village. The district conducts tornado drills bi-annually to educate students and staff on tornado response. There are no FEMA certified safe rooms in the school buildings or community. The district does not have any formal Mutual Aid Agreements in place but have been able to rely on their Educational Service Unit for support during crises in the past.

ADMINISTRATION

The Cedar Bluffs Public Schools Board of Education, comprised of a locally elected six-member panel, establishes regulations and policies to govern the school district. They appoint a superintendent to implement these regulations. The superintendent in turn appoints principals who supervises the schools' operations. These administrators will manage the implementation of hazard mitigation projects. The district also has the following offices, departments, and committees.

- Principals (two)
- Facilities
- Finance Department
- Huma Resources
- Library/Media Services
- Para-Education
- Technology
- Transportation
- Student Counselor

CAPABILITY ASSESSMENT

The district trains staff on safety communications and conducts monthly fire drills and quarterly tornado, lock down, and evacuation drills. The district participates in the I Love U Guys Foundation to educate students and families about school shooting events. The school also participates in the Safety Incident Common with the Cedar Bluffs fire chief, police chief, and Saunders County Sherriff.

The Village of Cedar Bluffs and the school district partnered to create a Joint Public Agency that mitigated flooding hazards in City Park with elevation and ditch upkeep projects as outlined in the village's flood plan. The school would like to mitigate hazards further with backup generators for the auditorium and school building. The auditorium was used as a Red Cross Shelter in the 2019 flooding events for families evacuated from Woodcliff Lakes SID #8. The following table summarizes the district's overall capability to implement mitigation projects.

Table CPS.4: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Planning Capability	Capital Improvements Plan/Long-Term Budget	Yes
	Continuity of Operations Plan	No
	Disaster Response Plan	Yes
	Other (if any)	
Administration & Technical Capability	GIS Capabilities	No
	Civil Engineering	No
	Local staff who can assess community's vulnerability to hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	No
	Other (if any)	
Fiscal Capability	Applied for grants in the past	Yes
	Awarded grants in the past	Yes
	Authority to levy taxes for specific purposes such as mitigation projects	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Approved bonds in the past	Yes
	Flood Insurance	Yes
	Other (if any)	
Education & Outreach Capability	Local school groups or non-profit organizations focused on environmental protection, emergency preparedness, access, and functional needs populations, etc. (Ex. Parent groups, hazard mitigation boards, etc.)	Yes
	Ongoing public education or information program (Ex. Responsible water use, fire safety, household preparedness, environmental education, etc.)	Yes
	StormReady Certification	No
	Other (if any)	
Drills	Fire	12 / year
	Tornado	2 / year
	Intruder	1 / year
	Bus evacuation	2 / year
	Evacuation	1 / year
	Lockdown	1 / year

Table CPS.5: Overall Capability Assessment

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

PLAN INTEGRATION

Cedar Bluff Public Schools has an all-hazards safety and security plan (2019), high school emergency action plan, crisis management plan, and a pandemic plan. The all-hazards safety and security plan provides information about how to respond to emergency incidents by outlining pertinent responsibilities and procedures for the district. It includes information regarding; incident command structure, roles and responsibility, lockdown policy, lockout policy, evacuation policy, shelter policy, and family reunification. Cedar Bluffs High School emergency action plan that outlines the standard of care required during emergency situations. It focuses on athletic events. The crisis management plan outlines procedures and responses to man-made hazards such as abduction, bomb threat, death of an individual, domestic violence, drugs, etc. The purpose of the pandemic plan is to assist the district in managing the impact of an emerging infectious disease pandemic. No other examples of plan integration were identified. There are currently no plans to further integrate existing or future planning mechanisms.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	Identify and evaluate current backup and emergency generators. Obtain additional generators based on identification and evaluation. Provide portable or stationary source of backup power to the high school, elementary, district office, and Bellwood.
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by size
Funding	General fund
Timeline	1-2 years
Priority	High
Lead Agency	Superintendent, Maintenance
Status	New action. Not started

MITIGATION ACTION	GENERATOR PUMP
Description	Provide a generator pump for the wrestling room to pump out water 24/7 due to a high water table.
Hazard(s) Addressed	Flooding
Estimated Cost	$600 - $1,000
Funding	General fund
Timeline	1 year
Priority	High
Lead Agency	Superintendent, Maintenance
Status	New action. Not started

MITIGATION ACTION	FIRST AID TRAINING
Description	Promote first aid training/certification for all 143 employees
Hazard(s) Addressed	All hazards
Estimated Cost	$100 per person
Funding	General fund
Timeline	Ongoing
Priority	High
Lead Agency	Superintendent, Maintenance
Status	New action. Ongoing, the district regularly offers training for staff

MITIGATION ACTION	HAZARDOUS TREE REMOVAL
Description	Conduct tree inventory. Develop and implement tree maintenance and trimming program to remove hazardous limbs and trees.
Hazard(s) Addressed	Severe thunderstorms, hail, high winds, severe winter storms, tornadoes
Estimated Cost	$200 per tree
Funding	General fund
Timeline	Ongoing
Priority	Medium
Lead Agency	Superintendent, Maintenance
Status	New action. Ongoing, hazardous trees/limbs are removed as they are identified

MITIGATION ACTION	INSTALL VEHICULAR BARRIERS
Description	Install vehicular barriers to protect critical facilities where possible. Location will be between the high school and elementary
Hazard(s) Addressed	Terrorism
Estimated Cost	$500 per concrete barrier, $20 per linear foot of chain linked fence
Funding	General fund
Timeline	1 year
Priority	High
Lead Agency	Superintendent, Maintenance
Status	New action. Not started

MITIGATION ACTION	SCHOOL EMERGENCY COMMUNICATIONS
Description	Establish an action plan to improve communication between schools and other government agencies to better assist students and staff during and following emergencies. Establish inner-operable communications
Hazard(s) Addressed	All hazards
Estimated Cost	$10,000+
Funding	General fund
Timeline	2-5 years
Priority	Medium
Lead Agency	Superintendent, Administration
Status	New action. Not started

MITIGATION ACTION	WARNING SYSTEMS
Description	Implement telephone or computerized/web-based interrupt system such as Reverse 911, emergency text messaging warning system, etc.
Hazard(s) Addressed	All hazards
Estimated Cost	$2,000 per year
Funding	General fund
Timeline	Ongoing
Priority	High
Lead Agency	Superintendent, Secretary
Status	New action. Ongoing, the school has a computerized/web-based system currently in place called infinite campus

MITIGATION ACTION	WEATHER RADIOS
Description	Add weather radios to school buildings.
Hazard(s) Addressed	Severe thunderstorms, hail, high winds, severe winter storms, tornadoes, flooding
Estimated Cost	$100 each
Funding	General fund
Timeline	1 year
Priority	High
Lead Agency	Superintendent, Maintenance
Status	New action. Not started

DISTRICT PROFILE

COLON VOLUNTEER FIRE DISTRICT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table CFD.1: Colon Volunteer Fire District Local Planning Team

NAME	TITLE	JURISDICTION
Jim Ondracek	Fire Chief	Colon Volunteer Fire District

LOCATION AND GEOGRAPHY

The Colon Volunteer Fire District has jurisdiction over the area surrounding the Village of Colon in central Saunders County, covering approximately 26,240 acres of land. The fire district mainly addresses grass and wildfire in the region's rural area.

TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors and areas more at risk of transportation incidents. Nebraska State Highway 109 travels through the Colon fire district. The highway is traveled by a total annual average of 2,295 vehicles daily, 130 of which are trucks.[5] This highway is a transportation route of concern for the district because agricultural chemicals are regularly transported along it. Motor vehicle accidents have cause chemical and fuel spills in the past.

DEMOGRAPHICS

See the Village of Colon and the Saunders County profiles for regional demographic information. The district serves approximately 528 people.

FUTURE DEVELOPMENT TRENDS

In the past five years a new fire station has been under construction and completed in 2019. The district plans on moving into the new station in 2020. After the move is complete, the fire district plans to sell the old station and meeting hall.

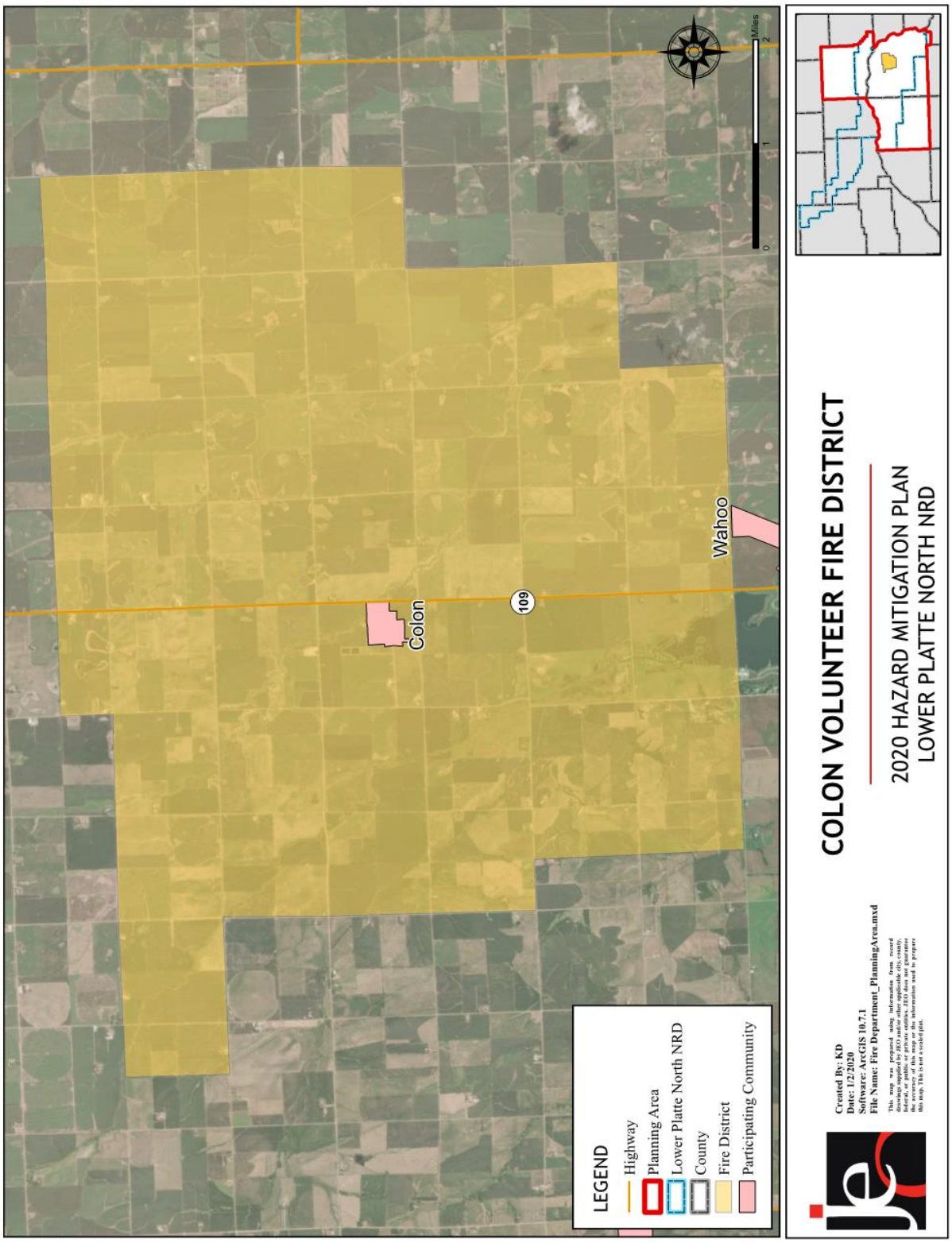
CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

Information on chemical storage sites can be found in the Village of Colon and Saunders County profiles. The fire department is most concerned about chemical spills and fires at these sites. The chemical spill response resources are limited.

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

Figure CFD.1: Colon Volunteer Fire District



CRITICAL FACILITIES

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

Table CFD.2: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Fire Hall (New) / Meeting Hall (New)	No	No	No
2	Fire Station	No	Yes (Portable)	No
3	Meeting Hall	No	No	No
4	Well Pump House	No	No	No

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

CHEMICAL FIXED SITES

There are commercial and farmer-owned agricultural chemical storage sites throughout the district. The fire district is not trained to respond to a chemical spill and does not have the appropriate gear, so a chemical spill would have a large impact on the district.

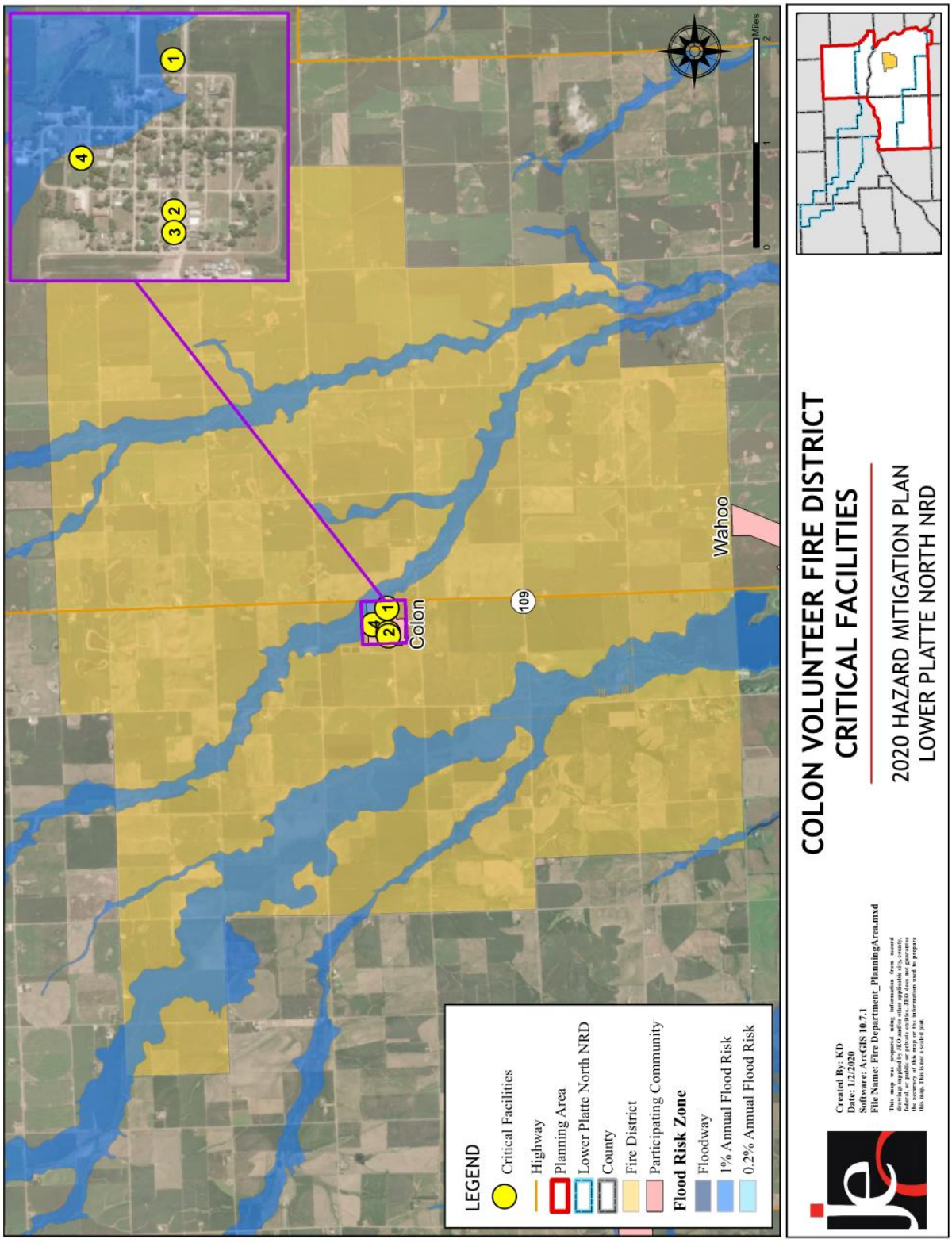
CHEMICAL TRANSPORTATION

Chemical and fuel spills, particularly from motor vehicle accidents, are a concern while chemicals are being transported to or from co-op facilities. The state highways, county roads, and township roads are of most concern for the fire district. A variety of unknown chemicals are transported along these routes. The fire department has no protective gear and limited training to respond to a chemical spill, so the district is vulnerable to chemical spills.

FLOODING

Creek flooding and road flooding are the most common in the district. Many areas have poor stormwater drainage. Severe flooding may require response from the fire district, though transportation will be interrupted by inundated roads. In 2019 the flooding affected roads which impacted the department's access and ability to respond.

Figure CFD.2: Critical Facilities



GRASS/WILDFIRES

Field and vegetation fires are a concern for the district because they damage crops, grass, and property. The Village of Colon is not protected from wildfire by a Wildland-Urban Interface Code. The district owns two pumpers and three tankers. They do not participate in any public outreach on fire prevention and response.

HAIL

Hail damage to critical facilities is the main concern regarding hailstorms. The fire hall is not fitted with hail resistant building materials, but it is insured against hail damage. The fire hall has been damaged by hail in the past.

HIGH WINDS

High winds can lead to property damage and power outages. The fire hall only has a small portable generator to mitigate the impacts of prolonged power outages from windstorms. There have been past power outages but not during a call. If one did occur during a call it could impact water well access and getting garage doors open. The district does not have FEMA certified safe rooms.

SEVERE THUNDERSTORMS

Wind and hail damage to property has occurred because of severe thunderstorms in the past. The pump house does not have a backup generator to protect its power supply in case of a surge from a lightning storm. The fire hall has a portable generator that would provide minimal power services to lights, doors, and heat.

SEVERE WINTER STORMS

Severe winter storms can cause power outages and road closures. Road closures could impede response efforts across the district. The village and county are responsible for snow removal in the district. The fire station has no backup generator in case of a prolonged power outage.

TORNADOES

No tornadoes have occurred in the district, but a future event could be catastrophic. The Village of Colon has a warning siren, activated by County Dispatch or the fire department. Rural areas outside of Colon are not covered by the siren. There are no FEMA certified safe rooms in the district. In case of a disaster, Mutual Aid Agreements are in place with all the fire districts in Saunders County.

STAFFING

Colon's fire district is supervised by a five-member rural fire district board and a fire chief who will oversee the implementation of hazard mitigation projects. 12 volunteers are registered to help with emergency response. Other offices are listed below.

- Assistant Fire Captain
- Rescue Captain
- President

CAPABILITY ASSESSMENT

The Colon Volunteer Fire District will continue to utilize existing relationships with local, county, state, and federal agencies in the implementation of mitigation projects. The district applied and won the FEMA Firefighter Operations grant in 2009. Tax funds are used to pay for any cost sharing associated with awarded grants. Due to the unique structure of fire districts, the typical capability assessment table was not used. The following table summarizes the district's overall capabilities.

Table CFD.3: Overall Capability Assessment

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

PLAN INTEGRATION

The fire district does not have any formal planning documents; however, they do have standard operating procedures and standing operating guidelines. The procedures and guidelines are updated as needed. They cover how to respond to any sort of call the district could receive. No other examples of plan integration were identified. There are currently no plans to further integrate existing or future planning mechanisms.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	Identify and evaluate current backup and emergency generators. Obtain additional generators based on identification and evaluation. The fire department would like a backup generator for the new fire station and at the well house.
Hazard(s) Addressed	All Hazards
Estimated Cost	Varies by size
Funding	Rural Board Budget
Timeline	2-5 years
Priority	High
Lead Agency	Rural Fire District
Status	New Action. Not Started

MITIGATION ACTION	CIVIL SERVICE IMPROVEMENTS
Description	The county is currently upgrading the communication system for response agencies. Old radios might not work with the new upgrade and new radios would need to be purchased.
Hazard(s) Addressed	All Hazards
Estimated Cost	Varies
Funding	Rural Board Budget
Timeline	2-5 years
Priority	Medium
Lead Agency	Rural Fire District
Status	New Action. Not Started

DISTRICT PROFILE

COTTERELL DIKING AND DRAINAGE DISTRICT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

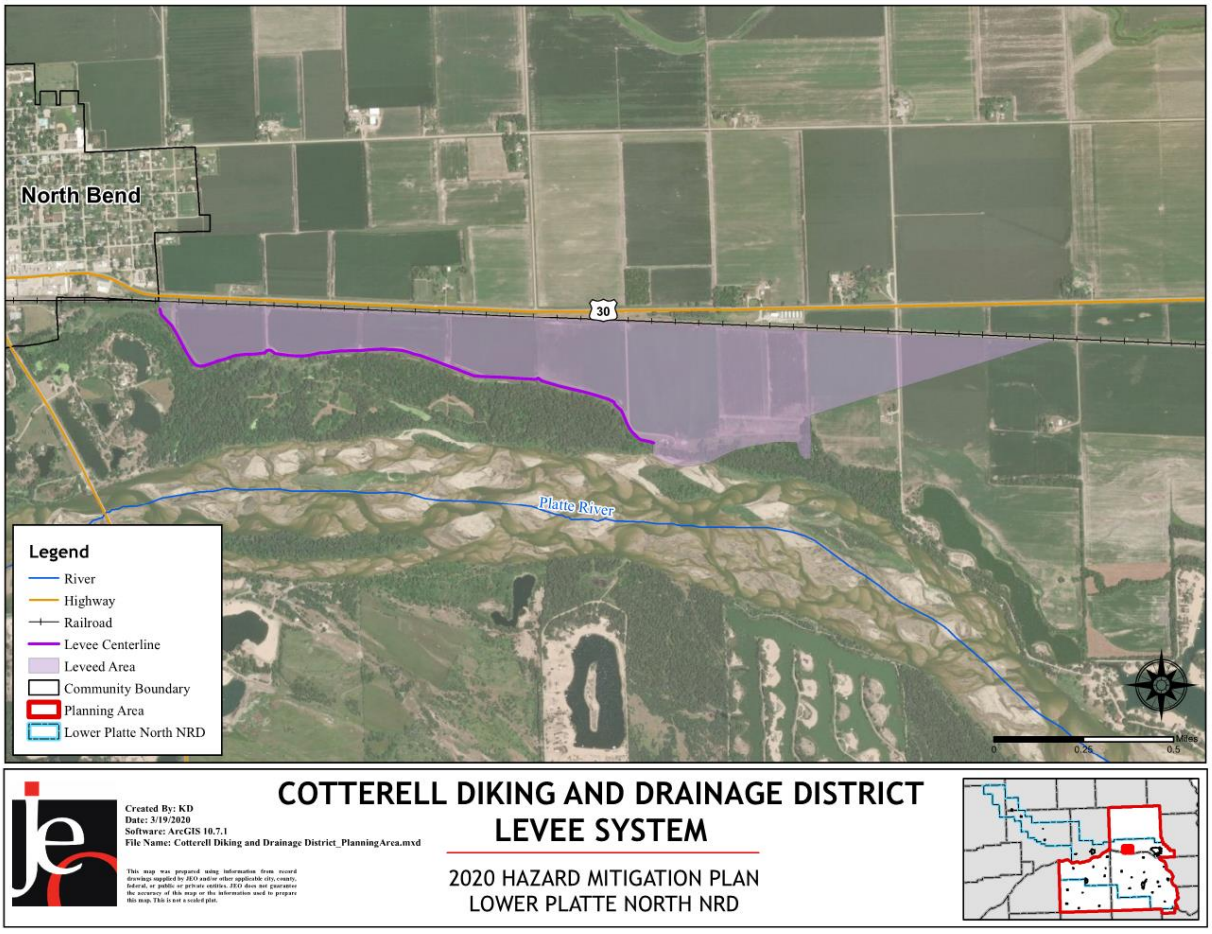
Table CDD.1: Cotterell Diking and Drainage District Local Planning Team

NAME	TITLE	JURISDICTION
Mike Eason	President	Cotterell Diking and Drainage District
Ken Beebe	Secretary	Cotterell Diking and Drainage District

LOCATION AND GEOGRAPHY

The Cotterell Diking and Drainage District is organized levee authority that owns and maintains the Cotterell Diking and Drainage District Levee System located in southern Dodge County. The dike stretches from the City of North Bend to the east along the Platte River until Eason Lake. It protects a Union Pacific Railroad rail line and farmland.

Figure CDD.1: Cotterell Diking and Drainage District Levee System



FUTURE DEVELOPMENT TRENDS

The diking district does not plan to develop or add dikes in the district in the near future. Any further development of the district will involve improvements to the current dike so that it will meet the Army Corps of Engineers (USACE)'s specifications

CRITICAL FACILITIES

The Cotterell Diking and Drainage District does not have critical facilities.

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

FLOODING

Impacts to the rail line are the most important impact of flooding. Heavy floods wash out the stones underneath the tracks, leaving them suspended in the air. Farm ground and Highway 30 are also protected by the dike. The March 2019 floods closed Highway 30 for three weeks. The dike provides 100-year flood protection from the Platte River, and is generally only vulnerable to ice jams on the river in early spring. Ice jams along the district are most likely to happen near the City of North Bend because of the bend in the river there.

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

LEVEE FAILURE

The Cotterell Dike has failed once, in the early spring of 1988 near North Bend because of an ice jam on the Platte River. The dike was noncompliant with USACE standards before the dike failure and was rebuilt to the same noncompliance by USACE. Many of the dike's deficiencies have been rectified by the district since 1988 but the dike remains in noncompliance today because of its steep slopes, crest narrower than ten feet, and several larger cottonwood trees along the base of the dike. An ice jam in 1964 caused flooding that pushed water to the north side of the dike but did not damage it. The dike sustained no damage in the 2019 flood.

GOVERNANCE

A three-member board of directors govern the drainage district with a president, secretary, and treasurer. They do not employ any staff.

CAPABILITY ASSESSMENT

The drainage district's board of directors is responsible for implementing any mitigation projects.

Table CDD.2: Capability Assessment

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

PLAN INTEGRATION

The Cotterell Diking and Drainage District does not have any formal planning documents. There are no plans to add any planning documents in the next five years.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

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

MITIGATION ACTION	FLOOD DAMAGE REPAIR
Description	Repair damages from the March 2019 flood event.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	General Budget
Timeline	1 year
Priority	High
Lead Agency	District Board
Status	New action. In progress, the district is currently looking for funding options

MITIGATION ACTION	LEVEE/FLOODWALL CONSTRCUTION AND/OR IMPROVEMENTS
Description	Levees and floodwalls serve to provide flood protection to businesses and residents during large storm events. Improvements to existing levees and floodwalls will increase flood protection. If possible, the structure should be designed to FEMA standards to provide 1-percent flood protection providing additional flood insurance benefits
Hazard(s) Addressed	Levee failure, flooding
Estimated Cost	Varies
Funding	General Budget
Timeline	2-5 years
Priority	High
Lead Agency	District Board
Status	New action. In progress, the district is currently looking for funding options

DISTRICT PROFILE

DAVID CITY VOLUNTEER FIRE DEPARTMENT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table DCF.1: David City Volunteer Fire Department Local Planning Team

NAME	TITLE	JURISDICTION
Joe Birkel	Secretary/Treasurer of Rural Board	David City Fire Department

LOCATION AND GEOGRAPHY

The David City Volunteer Fire Department has jurisdiction in central Butler County, surrounding the David City. The Villages of Garrison and Octavia are also within their jurisdiction. The fire district mainly addresses grass and wildfire in the region's rural area. The Platte River forms the northern boundary of the district and the North Branch Big Blue River runs through the southwest corner.

TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors and areas more at risk of transportation incidents. Nebraska State Highways 15, 64, and 92 travel through the David City fire district. Highway 15 is traveled by a total annual average of 6,005 vehicles daily, 475 of which are trucks. Highway 64 is traveled by a total annual average of 2,665 vehicles daily, 255 of which are trucks. Highway 92 is traveled by a total annual average of 5,155 vehicles daily, 665 of which are trucks.[6] A Nebraska Central Railroad Company rail line runs east to west through the district, intersecting in David City with a Burlington Northern Santa Fe rail line that runs north to south. Highway 15 and 92 are the transportation routes of most concern as agricultural, medical, and commercial chemicals are regularly transported.

DEMOGRAPHICS

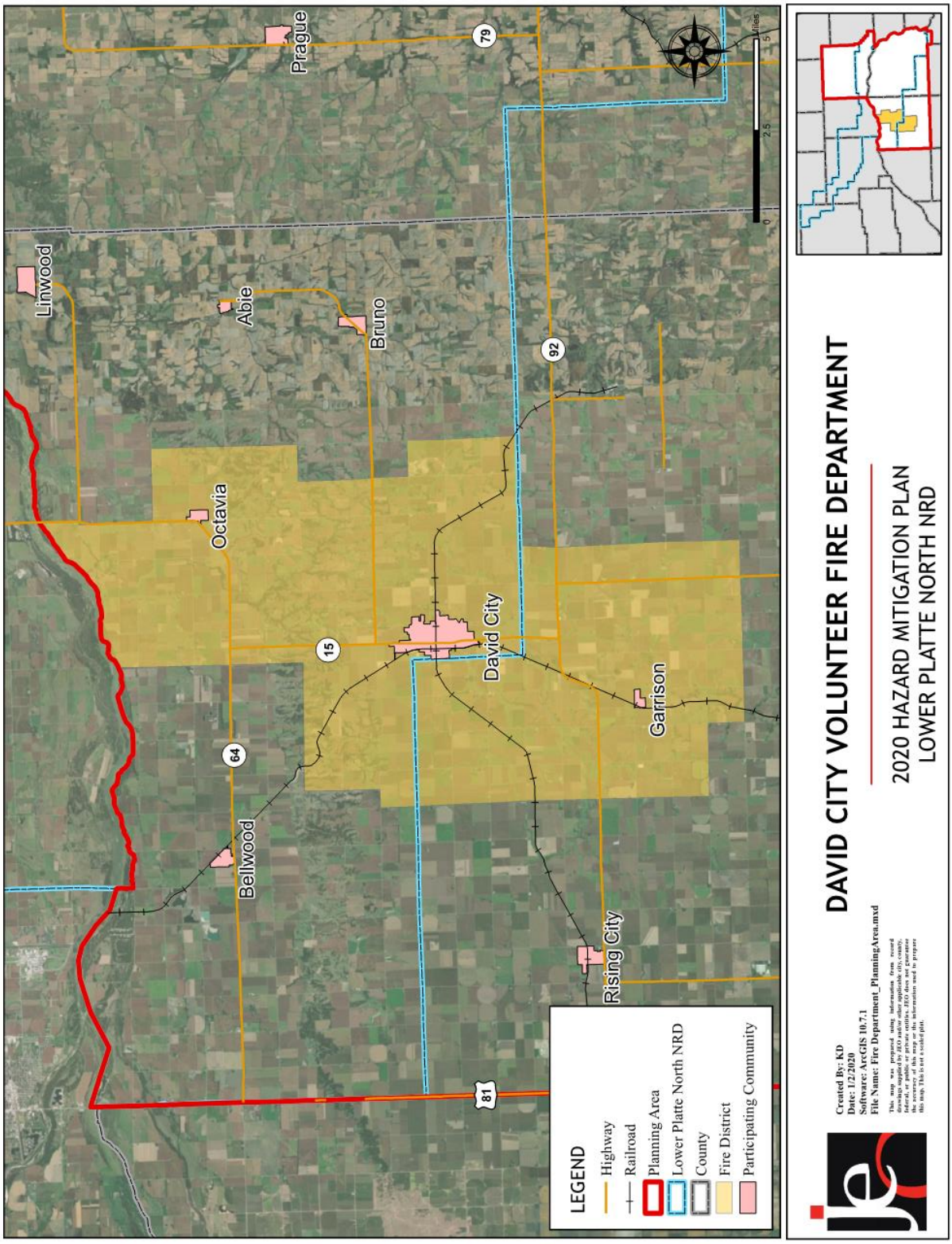
See the David City, Village of Garrison, Village of Octavia, and Butler County profiles for regional demographic information. There are between 3,000 to 4,000 people that the district serves.

FUTURE DEVELOPMENT TRENDS

There have been no changes within the last five years. In the next five years a new building is planned that will store and deploy ice rescue, grain rescue, and specialty equipment. Demolition of the old storage building will take place as well.

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

Figure DCF.1: David City Volunteer Fire Department



CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

Information on chemical storage sites can be found in the David City, Village of Garrison, Village of Octavia, and Butler County profiles. Sites which concern the district include the hospital, repair shops, Trans Canada pipeline, co-ops, and railroad tankers. In the event of a hazardous materials response, the Columbus or Lincoln HazMat teams are called in.

CRITICAL FACILITIES

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

Table DCF.2: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	David City Fire Hall	No	Yes	No

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

GRASS/WILDFIRES

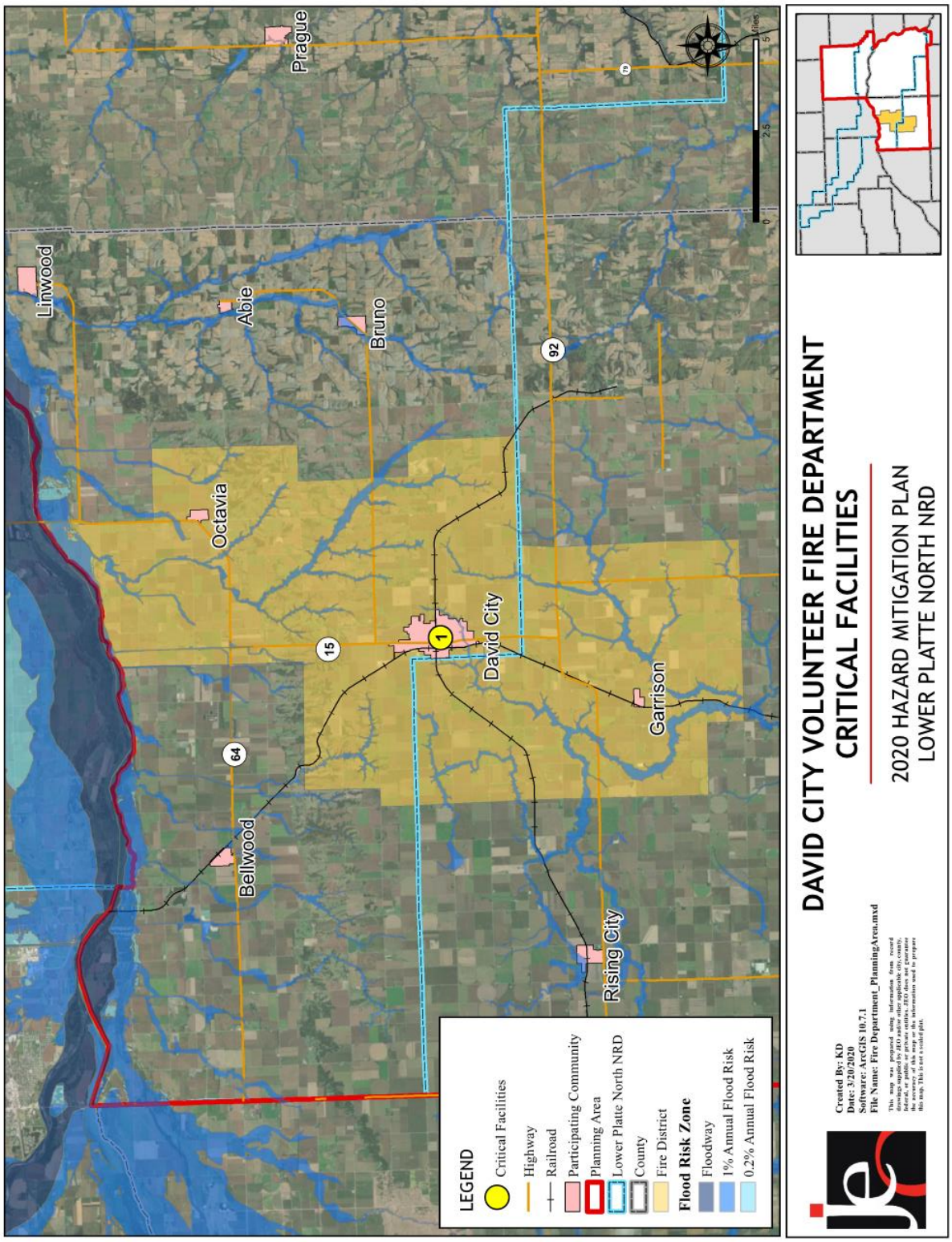
The primary mission of the fire department is to respond to fires in both urban and rural areas. The ability to access remote areas presents the largest challenge to district. Wildfires occur multiple times annually but have all been relatively minor incidences. For response the fire department has two rescue squads, one rescue pumper, one aerial ladder, two tankers, three grass rigs, and one air trailer. To mitigate the occurrence of wildfires, the district imposes a ban on open burning during periods of high risk and performs community education. Community education includes fire safety week and visits to schools.

SEVERE THUNDERSTORMS

Past significant events occurred in 2018 and 2014 and were both large hail events that caused significant damage to structures and crops. No critical facilities were damaged from the events. Critical facilities are protected by hail resistant building materials and are insured for hail damage. The fire department is primarily concerned with readiness and advanced warning. To help mitigate these issues, storm spotter classes are held every spring. Text alerts for severe weather are offered by the County Emergency Management and weather radios are used in the fire station. The local planning team estimates that less than five percent of power lines are buried in the

district. In the event of power loss and power surges, the department has surge protectors, battery backups, and a backup power generator.

Figure DCF.2: Critical Facilities



TORNADOES

The district experienced a tornado and straight lines winds in 2007. No damage occurred to critical facilities. The city has a warning siren which is activated by dispatch or hand help radios. Rural areas of the district are unable to hear the warning siren. There are no safe rooms in the district, options for shelter include basements, city auditorium, fire station, schools, and the event center. In the event of a disaster the fire department has mutual aid agreements with other fire departments in the county and neighboring counties. Fire station software is backed up to the could.

STAFFING

The David City Volunteer Fire Department is supervised by a fire chief who will oversee the implementation of hazard mitigation projects. The department has 40 volunteers and four cadets registered to help with emergency response. Other offices are listed below. The district is governed by a rural board made up of five individuals.

- Assistant Fire Chiefs
- Fire Training Officer
- EMS Training Officer
- Captains
- Lieutenants
- President
- Secretary/Treasurer

CAPABILITY ASSESSMENT

Due to the unique structure of fire districts, the typical capability assessment table was not used. The following table summarizes the district's overall capabilities. The David City Volunteer Fire Department will continue to utilize existing relationships with local, county, state, and federal agencies in the implementation of mitigation projects. The fire department has applied for grants in the past.

Table DCF.3: Overall Capability Assessment

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

PLAN INTEGRATION

The fire department does not have any formal planning documents but does have standard operating procedures (SOPs). These SOPs cover any type of call the department could receive and what type of response they warrant.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	ALERT/WARNING SIRENS
Description	Perform an evaluation of existing alert sirens in order to determine sirens which should be replaced or upgraded. Install new sirens where lacking with remote activation options
Hazard(s) Addressed	Tornadoes and high winds, severe thunderstorms
Estimated Cost	$5,000+
Funding	General Fund
Timeline	5+ years
Priority	Medium
Lead Agency	Fire Chief, County Emergency Management
Status	New action. Not started

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	Identify and evaluate current backup and emergency generators. Obtain additional generators based on identification and evaluation. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by size
Funding	General Fund
Timeline	5+ years
Priority	Medium
Lead Agency	Fire Chief
Status	New action. Not started

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

MITIGATION ACTION	COMPLETE/UPDATE WILDFIRE PROTECTION PLAN
Description	Complete and or update a Community Wildfire Protection Plan (CWPP). The CWPP enables a community to plan how it will reduce the risk of wildfire
Hazard(s) Addressed	Wildfire
Estimated Cost	$20,000
Funding	General Fund
Timeline	5+ years
Priority	Low
Lead Agency	Rural Fire Board
Status	New action. Not started

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

MITIGATION ACTION	FIRE PREVENTION PROGRAM: PLANNING AND TRAINING
Description	Participate in the Nebraska Forest Service Wildland Fire Protection Program which provides services in wildfire suppression training, equipment, pre-suppression planning, wildfire preventions, and aerial fire suppression
Hazard(s) Addressed	Wildfire
Estimated Cost	$100 per person
Funding	General Fund
Timeline	1 year
Priority	High
Lead Agency	Fire Chief
Status	New action. Not started

MITIGATION ACTION	FIRST AID TRAINING
Description	Promote first aid training for all residents and staff
Hazard(s) Addressed	All hazards
Estimated Cost	$100 per person
Funding	General Fund
Timeline	1 year
Priority	High
Lead Agency	Fire Chief
Status	New action. In progress, all staff are first aid trained.

MITIGATION ACTION	HAZARDOUS TREE REMOVAL
Description	Conduct tree inventory. Develop and implement tree maintenance and trimming program to remove hazardous limbs and trees
Hazard(s) Addressed	Severe thunderstorms, severe winter storms, tornadoes and high winds, hail
Estimated Cost	$200 per tree
Funding	General Fund
Timeline	1 year
Priority	Medium
Lead Agency	REA, Fire Chief
Status	New action. Not started

MITIGATION ACTION	POWER, SERVICE, AND ELECTRICAL LINES
Description	Work with local Public Power District or community electricity department to identify vulnerable transmission and distribution lines and plan to replace or retrofit existing structures to be less vulnerable to storm events
Hazard(s) Addressed	All hazards
Estimated Cost	Varies
Funding	General Fund
Timeline	2-5 years
Priority	Medium
Lead Agency	Fire Chief, REA
Status	New action. Not started

MITIGATION ACTION	SAFE ROOM AND STORM SHELTERS
Description	Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, school, and other areas. Identify any existing private or public storm shelters
Hazard(s) Addressed	Tornadoes and high winds, severe thunderstorms
Estimated Cost	$350+ per square foot
Funding	General Fund
Timeline	2-5 years
Priority	High
Lead Agency	Fire Chief, City Council, County Emergency Management
Status	New action. Not started

DISTRICT PROFILE

DAVID CITY PUBLIC SCHOOLS

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table DPS.1: David City Public Schools Local Planning Team

NAME	TITLE	JURISDICTION
Chad Denker	Superintendent	David City Public Schools

LOCATION

The David City Public School District is in western Butler County and consists of three schools and an administration building. The school district provides services to students in the communities of Abie, Bellwood, Bruno, David City, Garrison, Linwood, Octavia, Surprise, and Ulysses.

TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests areas more at risk of transportation incidents. Four major transportation corridors intersect near the district's schools: US Highway 81 and Nebraska State Highways 15, 64, and 92. US Highway 81 is traveled by a total annual average of 8,110 vehicles daily, 710 of which are trucks. Nebraska State Highway 15 is traveled by a total annual average of 6,005 vehicles daily, 475 of which are trucks. Nebraska State Highway 64 is traveled by a total annual average of 3, 005 vehicles daily, 285 of which are trucks. Nebraska State Highway 92 is traveled by a total annual average of 3,435 vehicles daily, 400 of which are trucks. [7] Each of these transportation routes is of concern to the school district because of their heavy traffic. County roads are also a concern. No transportation incidents have occurred to date. A Burlington Northern Santa Fe Railway rail line run north to south through the district and a Nebraska Central Railroad Company rail lines runs east to west through the district. The district owns nine buses and transports approximately 120 children to and from school.

DEMOGRAPHICS

The following figure displays the student population trend. It indicates that the student population has been relatively stable since 2000. The district does not anticipate any major changes in this trend. In the 2018-2019 school year there were 630 students enrolled at David City Public Schools.[8]

7 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." [map]. https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34.
8 Nebraska Department of Education. 2019. "Nebraska Education Profile." https://nep.education.ne.gov/.

Figure DPS.1: David City Public Schools

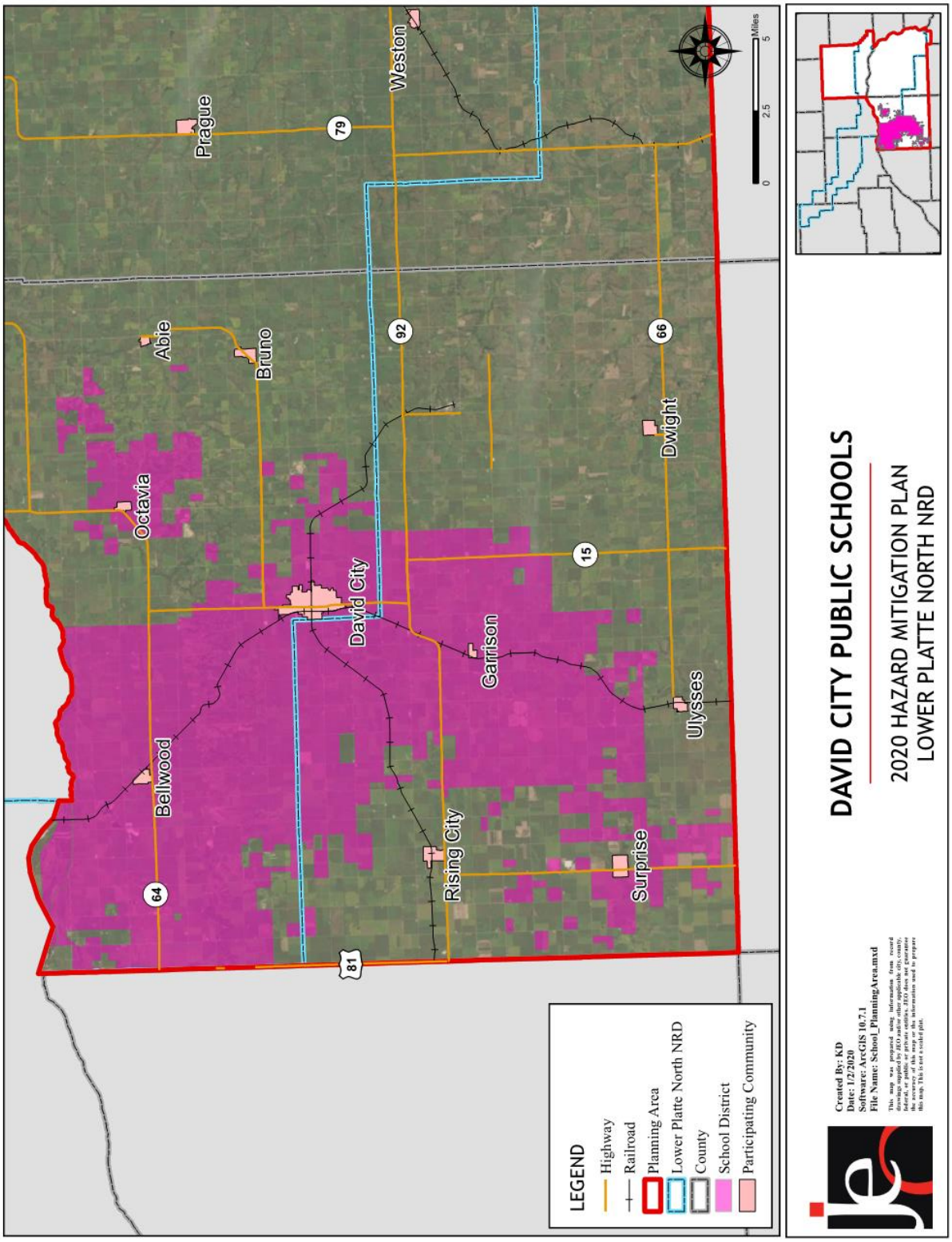
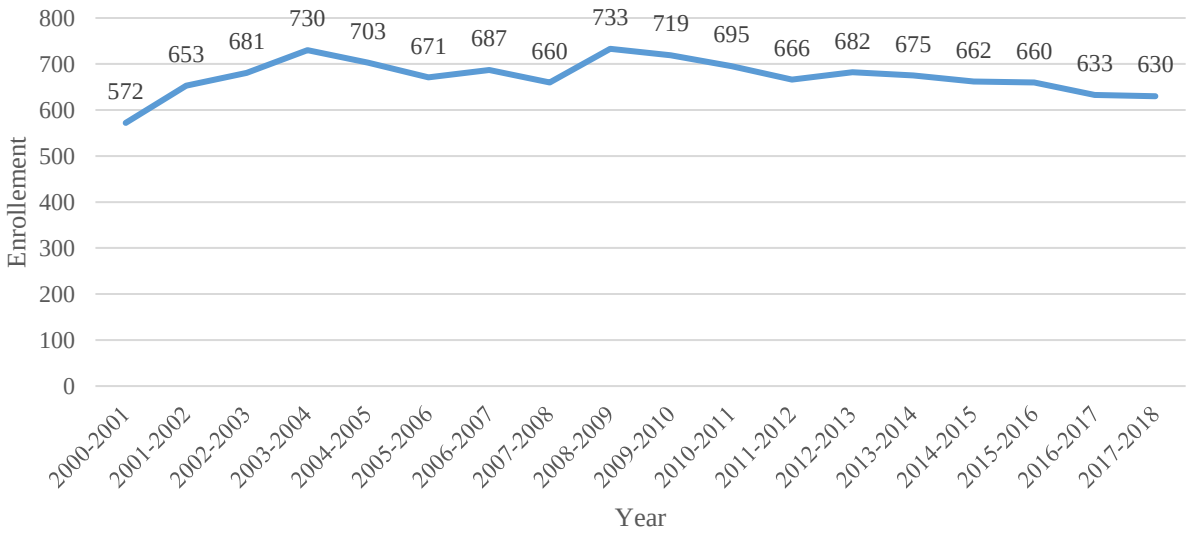


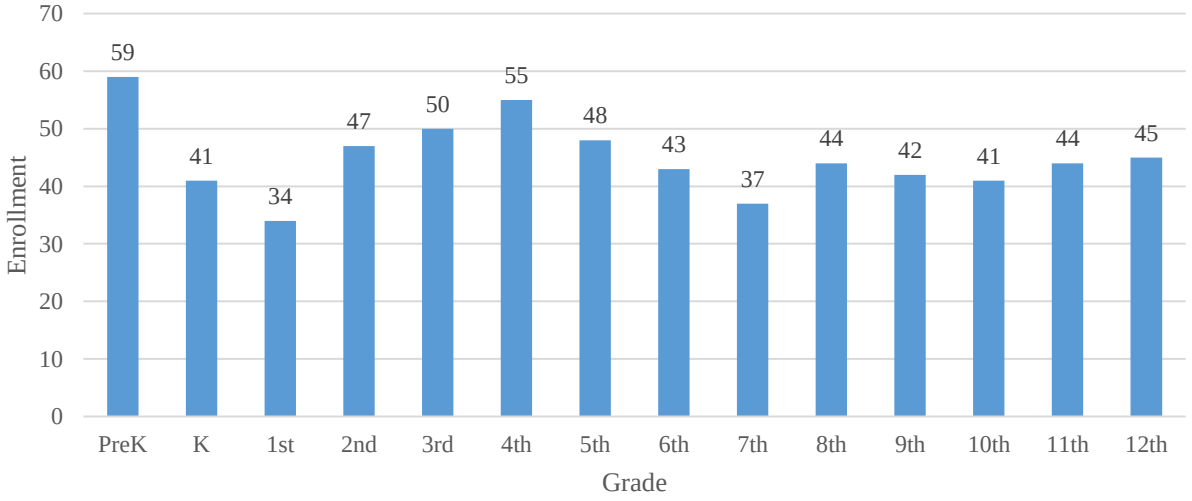
Figure DPS.2: Student Population



Source: Nebraska Department of Education, 2019

During the 2018-2019 school year, the student population was about evenly distributed by age, though the largest number of students were in prekindergarten, 4th, and 5th grade. The lowest population of students was in 1st grade. Children under 16 are especially vulnerable to hazard events because they are dependent on parents and guardians for transportation and financial support.

Figure DPS.3: Number of Students by Grade



Source: Nebraska Department of Education, 2019

According to the Nebraska Department of Education, 21% of students are in a Special Education program. This is higher than the state average of 15%. About 46% of students receive either free or reduced priced meals at school. About 2% of students are English Language Learners;

students fluent in a second language most commonly speak Spanish. These students may be more vulnerable during a hazardous event than the rest of the student population.

Table DPS.2: Student Demographics

	SCHOOL DISTRICT	STATE OF NEBRASKA
Free/reduced priced meals	46%	45%
English Language Learners	2%	6%
Special Education students	21%	15%

Source: Nebraska Department of Education, 2019

FUTURE DEVELOPMENT TRENDS

In the past five years, the high school addition included a weight room, commons area, and restrooms. A second addition to the high school will begin in 2020, adding 26,000 square feet in offices, eight classrooms, and restrooms. The David City Elementary School expanded the cafeteria seating and added classrooms and offices.

CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

According to the Tier II System reports submitted to the Nebraska Department of Environmental Quality, there are a total of 16 chemical storage sites that house hazardous materials in the David City Public Schools district. Refer to the David City and Butler County profiles for more information on these sites. No schools are located near chemical storage sites, though the David City Elementary School is near rail lines. There have not been any chemical releases that caused a school to be on a lock down or evacuate.

CRITICAL FACILITIES

David City Public Schools identified the following critical facilities necessary to maintain the functions of the schools. Critical facilities were identified during the 2015 planning process and revised for this plan update. The following table and figure provide a summary of the critical facilities for the community.

Table DPS.4: Critical Facilities

CF #	NAME	# OF STUDENTS	# OF STAFF	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Bellwood Elementary School	90	20	Yes	No	No
2	David City Middle & High School	270	45	Yes	No	No
3	David City Preschool & District Office	50	9	No	No	No
4	David City Elementary	245	65	Yes	No	No

HISTORICAL OCCURRENCES

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

HAARD PRIORITIZATION

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

DROUGHT

Drought is likely to impact the entire region's economic system. Because David City Public Schools relies on tax funds to maintain its educational services, a drought would also impact the district. A severe drought may also increase the needs of students, in turn requiring more assistance from school resources. Droughts also impact water quality, which is especially dangerous for small children, so the school may need to purchase bottled water.

FLOODING

The March 2019 flooding across Nebraska affected David City Public Schools and the surrounding community. Impacts from flooding can include school cancelation and damage to critical facilities. Flooding of county roads has prevented busing in the past, impacting attendance. Both flash and riverine flooding are a concern, with Bellwood Lake, North Lake, Bone Creek, Platte River, and Loup River all prone to flooding. Of these bodies of water, the Platte River and Bone Creek are of most concern. Other areas around the district may have poor stormwater drainage that could affect the schools.

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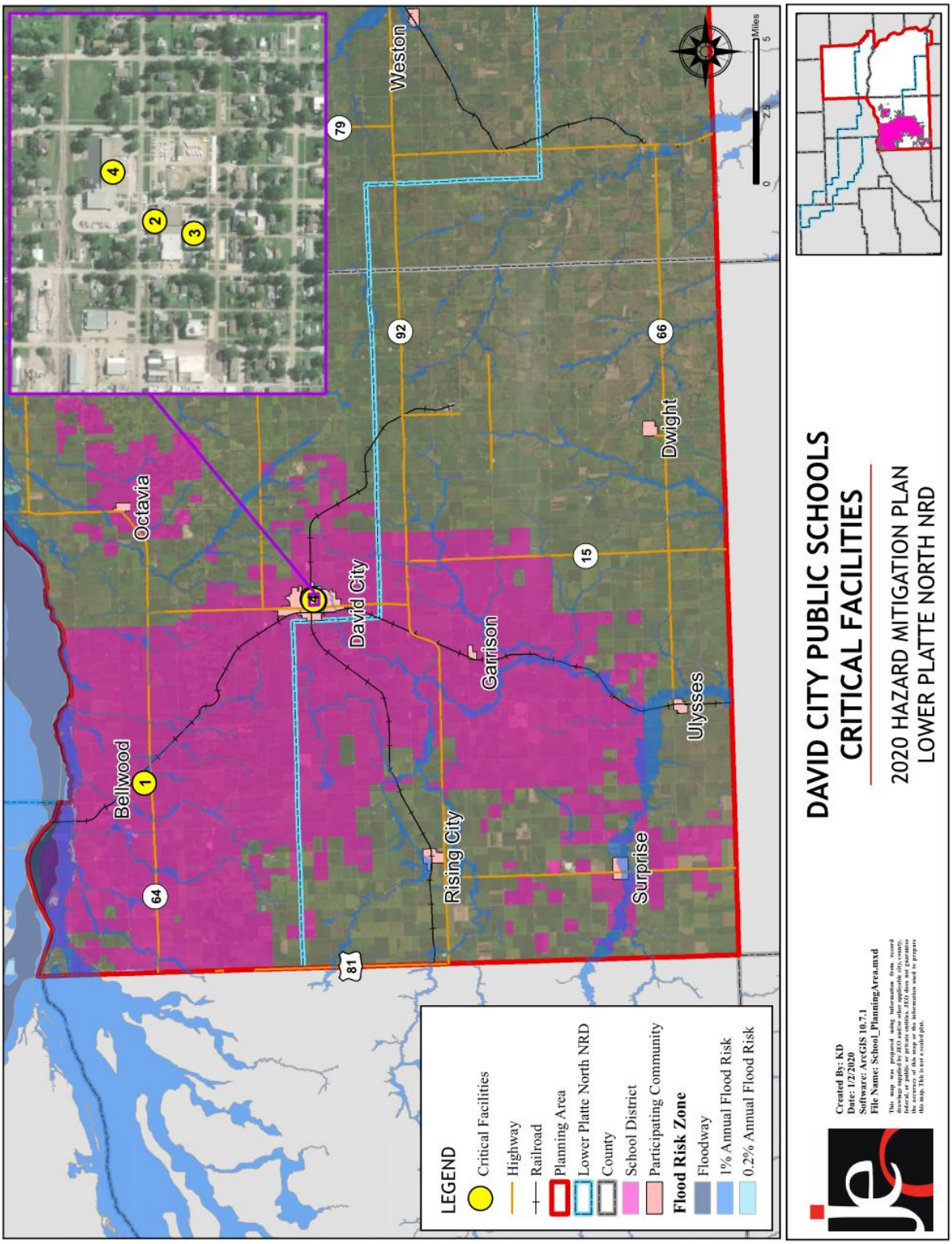
Figure DPS.4: Critical Facilities



HAIL

The district's four buildings are mostly constructed from brick, but the roofs and windows are still vulnerable to damage from hail. Each building is insured against hail and other damage by EMC Insurance Company, but damage from hail could still financially impact the district and disrupt school services.

SEVERE THUNDERSTORMS

Severe thunderstorms have caused power outages; washed out roads; and caused damage from flooding, high winds, and hail throughout the district. County roads are particularly likely to be affected. The district's IT infrastructure is protected from power surges with a backup battery system and backup servers that protect school records. None of the district owned buildings have a backup power generator. Two of the four buildings do have weather radios

SEVERE WINTER STORMS

County road closures and power outages from severe winter storms impact the school district's ability to bus students and to hold classes. The school district maintains a tractor and a snow blower for snow removal on school grounds, though more snow removal resources would be helpful.

ADMINISTRATION

The David City Public Schools Board of Education, comprised of a locally elected six-member panel, establishes regulations and policies to govern the school district. They appoint a superintendent to implement these regulations. The superintendent in turn appoints principals who supervises the schools' operations. These administrators will manage the implementation of hazard mitigation projects. The district also has the following offices, departments, and committees.

- Library/Media Services
- Para-Education
- Technology
- Transportation
- Food Service
- Maintenance/Custodial
- Teachers
- Nurses
- Secretarial Staff

CAPABILITY ASSESSMENT

The district trains staff on emergency procedures with professional development days, crisis training, and practice drills. Students are educated on emergency procedures with practice drills; no education is offered for parents. Instruction for students on preparedness is mostly limited to the practice drills, with some limited partnerships with local fire and police departments. Hazard mitigation principles have been considered in the development of building additions but not implemented aside from backup generators. The following table summarizes the district's overall capability to implement mitigation projects.

Table DPS.5: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Planning Capability	Capital Improvements Plan/Long-Term Budget	Yes
	Continuity of Operations Plan	No
	Disaster Response Plan	Yes
	Other (if any)	
Administration & Technical Capability	GIS Capabilities	No
	Civil Engineering	No
	Local staff who can assess community's vulnerability to hazards	Yes
	Grant Manager	Yes
	Mutual Aid Agreement	Yes
	Other (if any)	
Fiscal Capability	Applied for grants in the past	Yes
	Awarded grants in the past	Yes
	Authority to levy taxes for specific purposes such as mitigation projects	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Approved bonds in the past	No
	Flood Insurance	No
	Other (if any)	
Education & Outreach Capability	Local school groups or non-profit organizations focused on environmental protection, emergency preparedness, access, and functional needs populations, etc. (Ex. Parent groups, hazard mitigation boards, etc.)	No
	Ongoing public education or information program (Ex. Responsible water use, fire safety, household preparedness, environmental education, etc.)	Yes
	StormReady Certification	No
	Other (if any)	
Drills	Fire	10 / year
	Tornado	2 / year
	Intruder	1 / year
	Bus evacuation	2 / year
	Evacuation	1 / year
	Other (if any)	

Table DPS.6: Overall Capability Assessment

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

PLAN INTEGRATION

David City Public Schools has a crisis response plan which is updated annually each summer. Hazards discussed in the plan included tornado, fire, severe thunderstorm, and terrorism. The plan assigns specific responsibilities to individuals, addresses shelter in place protocols, identifies scenarios that would require evacuation, lists sheltering locations, and identifies evacuation routes. A community crisis team was recently created and I a group consisting of all three schools. The school district is currently in the process of creating a strategic plan that will be completed by the end of 2020. No other examples of plan integration were identified. There are currently no plans to further integrate existing or future planning mechanisms.

MITIGATION STRATEGY

ONGOING AND NEW MITIGATION ACTIONS

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	Provide a portable or stationary source of backup power for all three schools, high school wrestling room, and the district office
Hazard(s) Addressed	High winds, severe thunderstorms, severe winter storms, tornadoes
Estimated Cost	Varies by size
Funding	Special Building Funds, General Fund
Timeline	2-5 years
Priority	High
Lead Agency	Superintendent and Maintenance Department
Status	Not started, though the elementary school and wresting room has been identified as the building with the primary need

MITIGATION ACTION	FIRST AID TRAINING
Description	Promote first aid training for all staff
Hazard(s) Addressed	All hazards
Estimated Cost	$100 per person
Funding	General Fund
Timeline	Ongoing
Priority	High
Lead Agency	Superintendent and nurses
Status	New Action. Ongoing, first aid training is offered every year.

MITIGATION ACTION	HAZARDOUS TREE REMOVAL
Description	Conduct a tree inventory. Develop and implement tree maintenance and trimming program to remove hazardous limbs and trees
Hazard(s) Addressed	Tornadoes, high winds, severe thunderstorms, severe winter storms, drought
Estimated Cost	$200 per tree
Funding	General Fund
Timeline	Ongoing
Priority	Medium
Lead Agency	Superintendent and maintenance
Status	New Action. Ongoing, as hazardous limbs are identified they are removed.

MITIGATION ACTION	INSTALL VEHICULAR BARRIERS
Description	Install vehicular barriers to protect buildings where possible. This would be located the high school and David City elementary
Hazard(s) Addressed	Terrorism
Estimated Cost	$500 per concrete barrier, 420 per linear foot of chain link fence
Funding	General Fund
Timeline	1 year
Priority	High
Lead Agency	Superintendent and maintenance
Status	New Action. Not Started

MITIGATION ACTION	SCHOOL EMERGENCY COMMUNICATIONS
Description	Establish an action plan to improve communication between schools and other government agencies to better assist students and staff during and following emergencies. Establish inner-operable communications
Hazard(s) Addressed	All hazards
Estimated Cost	$10,000+
Funding	General fund
Timeline	2-5 years
Priority	Medium
Lead Agency	Superintendent and administration
Status	New Action. Not Started

MITIGATION ACTION	WEATHER RADIOS
Description	Conduct an inventory of weather radios at the schools and district office
Hazard(s) Addressed	All hazards
Estimated Cost	$100 each
Funding	General Funds
Timeline	1 year
Priority	High
Lead Agency	Superintendent
Status	In progress, radios have already been purchased for two of four buildings

REMOVED MITIGATION ACTIONS

MITIGATION ACTION	PUBLIC AWARENESS/EDUCATION
Hazard(s) Addressed	All hazards
Reason for Removal	While student awareness to hazard response is a priority of the district, general public awareness and education is the responsibility of other jurisdictions

DISTRICT PROFILE

DWIGHT VOLUNTEER FIRE DEPARTMENT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table DFD.1: Dwight Volunteer Fire Department Local Planning Team

NAME	TITLE	JURISDICTION
Jim Mastny	Fire Chief	Dwight Volunteer Fire Department

LOCATION AND GEOGRAPHY

The Dwight Volunteer Fire Department has jurisdiction over 56 square miles of land in southwestern Butler County, surrounding the Village of Dwight. The fire district mainly addresses grass and wildfire in the region's rural area.

TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors and areas more at risk of transportation incidents. Nebraska State Highways 15 and 66 travel through the fire district. Highway 15 is traveled by a total annual average of 3,015 vehicles daily, 385 of which are trucks. Highway 66 is traveled by a total annual average of 950 vehicles daily, 80 of which are trucks.[9] Fuel and anhydrous ammonia are often transported along major transportation routes in the district. Gravel and minimal maintenance roads are of most concern to the community because they can be impassible during hazard events.

DEMOGRAPHICS

The Dwight Volunteer Fire Department serves approximately 450 people. See the Village of Dwight and Butler County profiles for regional demographic information.

FUTURE DEVELOPMENT TRENDS

There have been no changes in the district in the past five years. The district hopes to upgrade some equipment in the next five years.

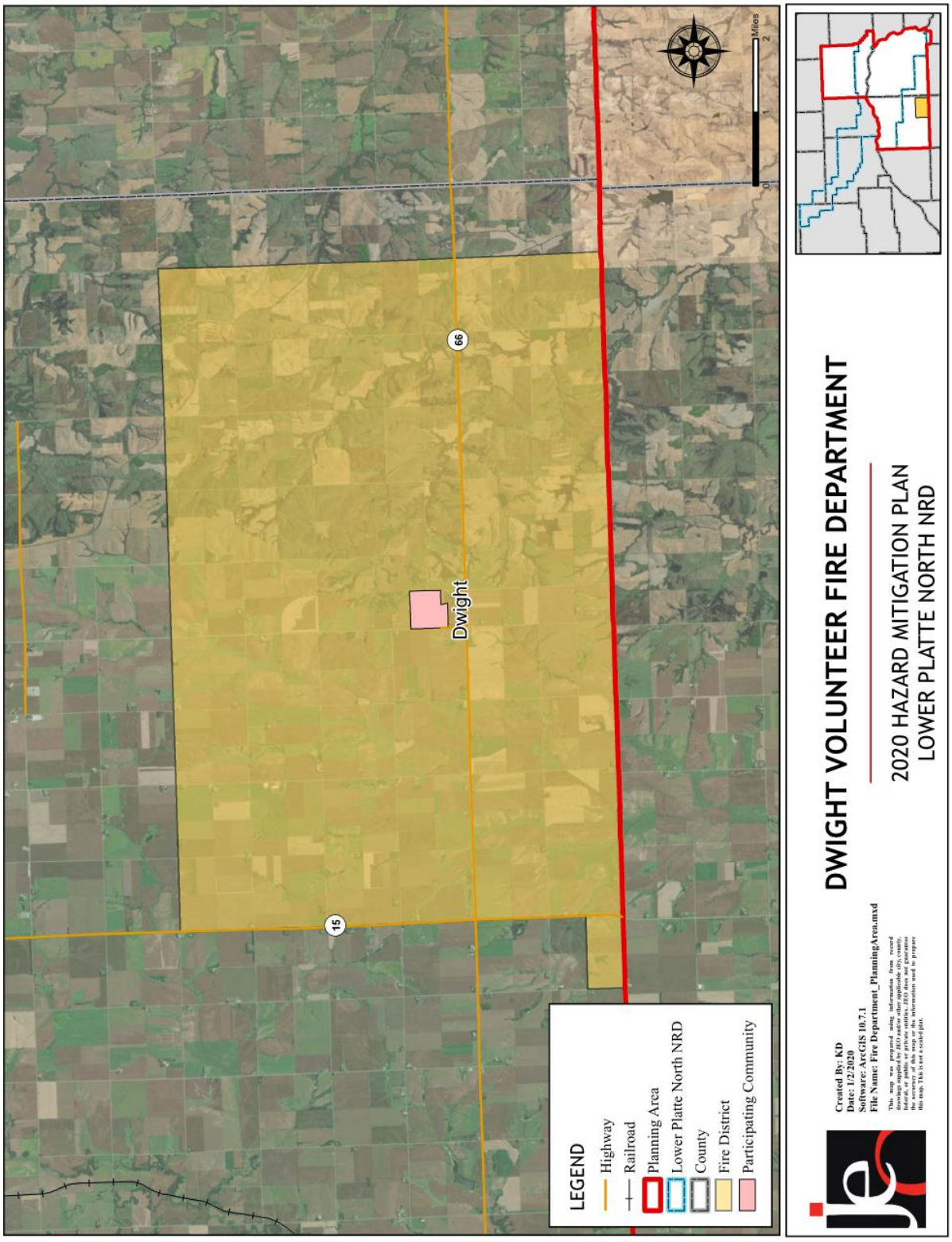
CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

Spills at fixed chemical storage sites are not a concern for the fire district at this time. Mutual Aid Agreements are in place in case of a spill. The district has gear and limited training for spill response. Information on chemical storage sites can be found in the Village of Dwight and Butler County profiles.

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

Figure DFD.1: Dwight Volunteer Fire Department



CRITICAL FACILITIES

The planning team identified critical facilities necessary for the fire district's disaster response and continuity of operations per the FEMA Community Lifelines guidance. The following table and figure provide a summary of the critical facilities for the Dwight Volunteer Fire Department.

Table DFD.2: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	East Butler Grade School	Yes	Yes	No
2	Fire Hall	No	Yes	No
3	Maintenance Building	No	Yes	No
4	Well House	No	Yes	No

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

DROUGHT

Drought is a concern for the fire department because a lack of water and dry conditions can have negative impacts on regional fires. Dry conditions can lead to more fires and a decreased water supply could reduce the fire departments ability to fight fires. The department takes water from the town wells to fight fire. Water quantity has been sufficient in the past.

GRASS/WILDFIRES

Occasional grass and wildfires in the region are inevitable but are a concern when they get out of control and threaten property and crops. The Village of Dwight does not have a Wildland-Urban Interface Code, but property owners are encouraged to have defensible space around structures to mitigate fire near urban areas.

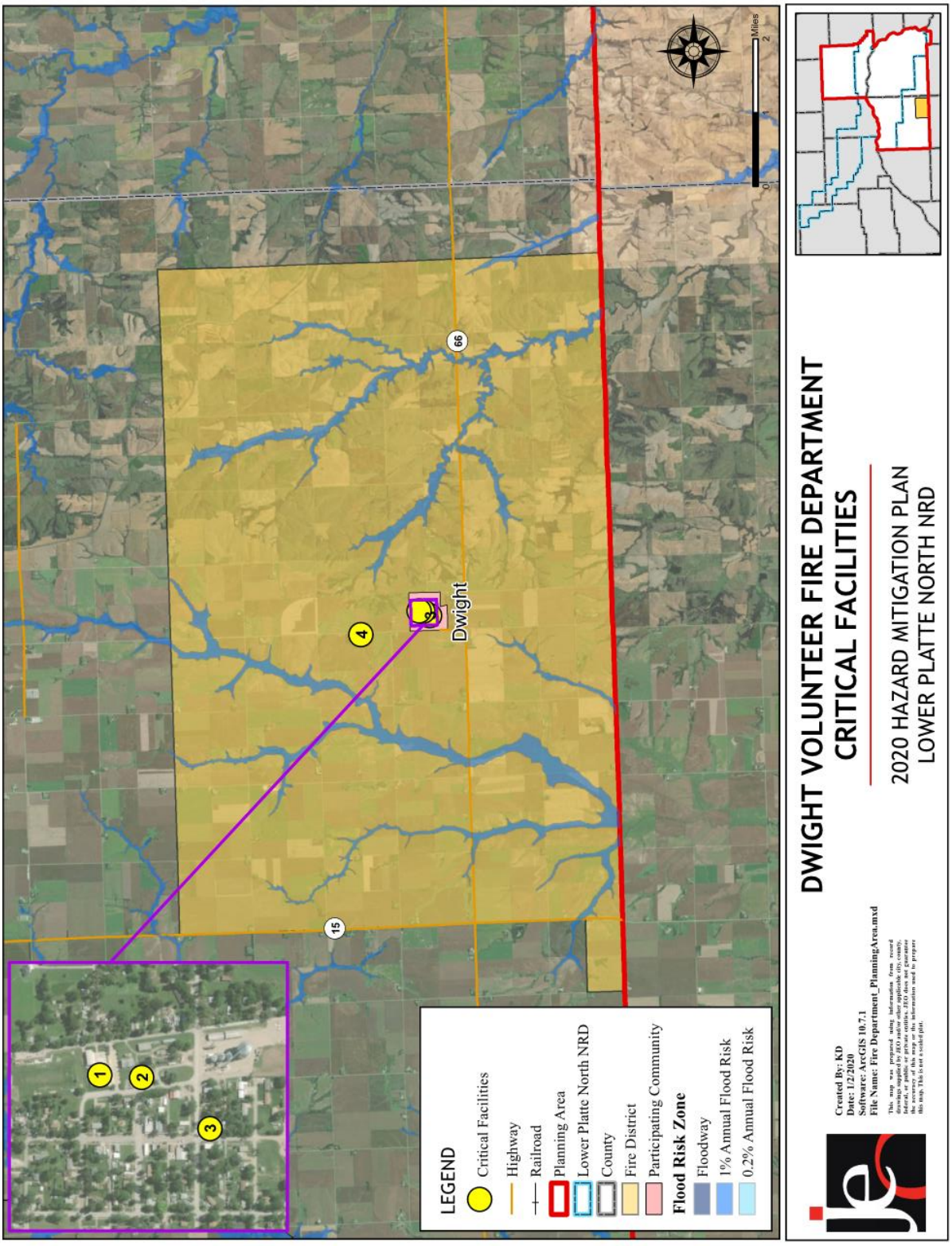
HAIL

Hail damage is a risk for the fire department because it could damage the fire station and equipment. A significant hailstorm in 2006 left property and crop damage throughout the Village of Dwight. The fire hall is not built with hail resistant materials but is insured against hail damage.

HIGH WINDS

Trees throughout the Village of Dwight were severely damaged by high winds in 2018, blocking roads. This tree damage is the most pressing concern for the village regarding high winds because it could block roads from emergency transportation and cause power outages. Critical facilities have not been damaged in the past.

Figures DFD.2: Critical Facilities



SEVERE WINTER STORMS

Significant severe winter storms occurred in 2007. Six inches of snow blocked all travel out of town and damaged the awning of the fire station. It is important to maintain transportation routes, especially in case fire and rescue teams are called. Townships are responsible for snow removal on county roads while the village clears its roads and the fire department facilities. All roads are usually accessible during the winter months. Power outages and water supply are also a concern. Approximately 15% of power lines are buried. The fire hall has a backup generator in case of a power outage.

TORNADOES

In 2008 an EF1 tornado passed through the west end of Village of Dwight, uprooting trees and damaging homes. The Village of Dwight has a warning siren for severe weather, activated by the fire department, but it does not reach the surrounding lake communities. County Emergency Management does offer text alerts. There are no FEMA certified safe rooms, but residents can seek shelter at the village hall, fire hall, and in the basement of the library. The elementary school also has a tornado shelter, though it is not open to the public. In case of a disaster Mutual Aid Agreements are in place with surrounding fire departments. The fire department provides educational outreach on tornado safety with pamphlets and public notices.

The district has two pumpers, two grass rigs, three tankers, and one rescue truck available for response. They participate in Fire Prevention Week and general fire prevention outreach during the summer.

STAFFING

The Dwight Volunteer Fire Department is supervised by a five-member rural board and a fire chief who will oversee the implementation of hazard mitigation projects. 31 volunteers are registered to help with emergency response. Other offices are listed below.

- Fire Chief
- Assistant Fire Chief
- Rescue Captain
- President
- Vice President
- Treasurer
- Secretary

CAPABILITY ASSESSMENT

The Dwight Volunteer Fire Department will continue to utilize existing relationships with local, county, state, and federal agencies in the implementation of mitigation projects. In 2013 the district applied and won a federal assistance grant to purchase 34 sets of complete fire bunker gear, 15 SCUBAs, and 15 extra oxygen tanks. The grant specified $223,000 in funding, 10% of which was provided by the fire department. Due to the unique structure of fire districts, the typical capability assessment table was not used. The following table summarizes the district's overall capabilities.

Table DFD.3: Overall Capability Assessment

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

PLAN INTEGRATION

Dwight Fire Department does not have any formal planning documents. The department does have standard operating procedures, which outlines the response for any type of call that could be received.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

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

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

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	Identify and evaluate current backup and emergency generators. Obtain additional generators based on identification and evaluation. Provide a portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by size
Funding	Rural board funds
Timeline	5+ years
Priority	Low
Lead Agency	Rural Board
Status	New action. Not started

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

MITIGATION ACTION	EVALUATE WATER SUPPLY
Description	Evaluate and locate new sources of ground and/or surface water to ensure adequate supplies to support the existing community and any additional growth which may occur
Hazard(s) Addressed	Drought, grass/wildfire
Estimated Cost	Varies
Funding	Village funds
Timeline	5+ years
Priority	Medium
Lead Agency	Village Board
Status	New action. Not started

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

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

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

MITIGATION ACTION	WATER SYSTEM IMPROVEMENTS
Description	Make water system improvements to include additional fire hydrants/increase supply and pressure to effectively fight fires and meet increasing demands. Update/improve water distribution system (identifying and replacing leaky pipes, assisting residents in identifying inefficiencies, transitioning to smart irrigation systems, etc.). Upgrade water district infrastructure to decrease likelihood of damages and improve water system for emergency use
Hazard(s) Addressed	Grass/Wildfire, drought
Estimated Cost	Varies
Funding	Village funds, bond
Timeline	5+ years
Priority	Medium
Lead Agency	Village Board
Status	New action. Not started

MITIGATION ACTION	WELL IMPROVEMENT
Description	Improve community well system
Hazard(s) Addressed	Grass/Wildfire, drought
Estimated Cost	Varies
Funding	Village funds, bonds
Timeline	5+ years
Priority	Medium
Lead Agency	Village Board
Status	New action. Not started

DISTRICT PROFILE

EAST CENTRAL DISTRICT HEALTH DEPARMENT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table ECH.1: East Central District Health Department Local Planning Team

NAME	TITLE	JURISDICTION
Tyler Woodard	Emergency Response Coordinator	East Central District Health Department

LOCATION AND GEOGRAPHY

The East Central District Health Department is headquartered in the City of Columbus. The district serves primarily rural communities in Boone, Colfax, Nance, and Platte Counties.

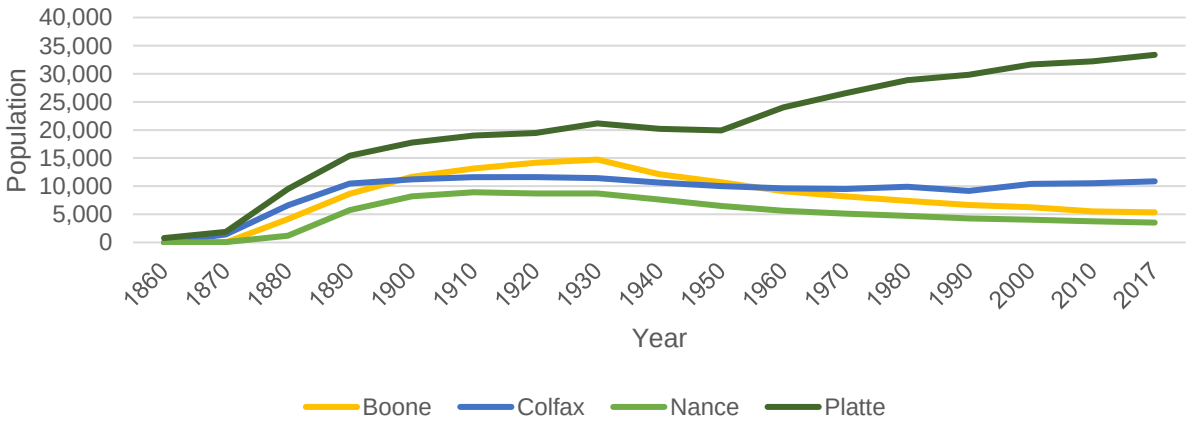
TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors and areas more at risk of transportation incidents. US Highways 30 and 81 and Nebraska State Highways 14, 15, 22, 32, 39, 52, 56, and 91 all travel through the district. A Union Pacific Railroad rail line runs east to west through Platte and Colfax County and a Nebraska Central Railroad Company rail line runs north to south through Boone, Nance, and Platte Counties. The accessibility of ingress and egress routes are the biggest concerns to the district regarding transportation routes. In the March 2019 flood event, transportation routes in and out of the City of Columbus were inaccessible, tripling drive times in and out of the community. Highway 81 north to the City of Norfolk, Highway 22 west to the City of Genoa, and Highway 30 to the Villages of Duncan and Silver Creek are the most important transportation routes in the district.

DEMOGRAPHICS

The population served by the East Central District Health Department has been growing since 2010 because of the steady population growth in Platte County. The total population of the four-county region was 53,105 people in 2017.[10]

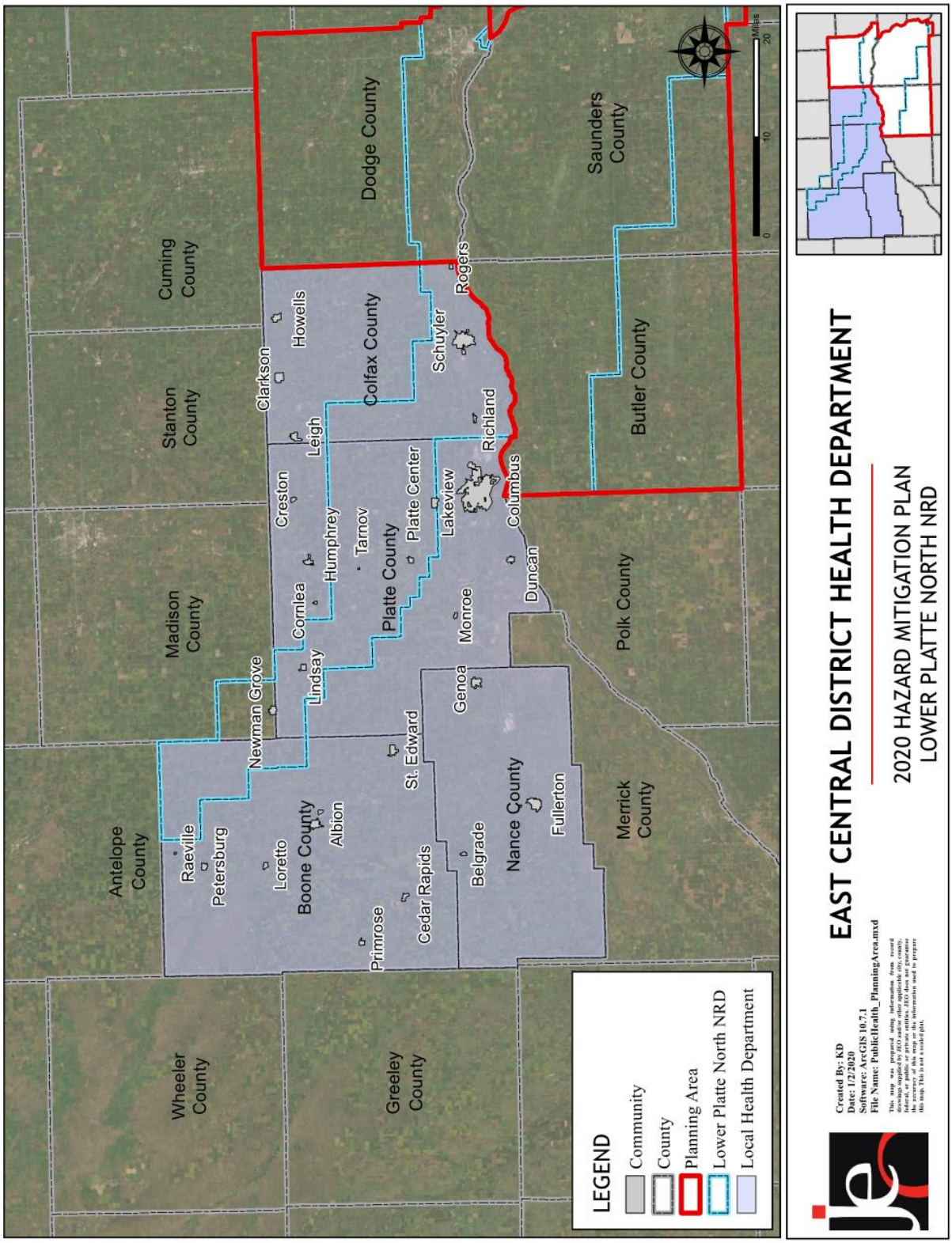
Figure ECH.1: Population



Source: U.S. Census Bureau, 1860 - 2017

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

Figure ECH.2: East Central District Health Department



The young, elderly, minority populations and poor may be more vulnerable to certain hazards than other groups. In comparison to the state, the population served by the East Central District Health Department was:

- **Slightly older.** The median age of the district was 41.7 years old in 2017, compared with the state's median of 36.3 years. The region's population has stayed about the same age since 2010, when the median age was 41.5 years old.[2]
- **More ethnically diverse**. Since 2010, the district grew more ethnically diverse. In 2010, 12.6% of the population was Hispanic or Latino. By 2017, about 16.7% was Hispanic or Latino. During that time, the Hispanic population in the state grew from 8.4% in 2010 to 2.5% in 2017.[2]
- **Less likely to be below the federal poverty line.** The poverty rate in the region (9.0% of people living below the federal poverty line) was lower than the state's poverty rate (12.0%) in 2017.[11]

FUTURE DEVELOPMENT TRENDS

The East Central District Health Department completed construction of their new headquarters in 2015. The building serves the community with medical and behavioral health care, dental care, x-ray facilities, a medical lab, and the Women, Infants, and Children (WIC) program. The building houses a FEMA-certified safe room.

CRITICAL INFRASTRUCTURE

ACCESS TO CARE

The four-county region served by the East Central District Health Department has four hospitals with a total of 116 beds. If a hazard event were to occur, there may be a shortage of available beds within these facilities.

Table ECH 2: Hospital Locations

COUNTY	HOSPITAL NAME	CITY	NUMBER OF BEDS
Boone	Boone County Health Center	Albion	25
Colfax	CHI Health Center	Schuyler	25
Nance	Genoa Community Hospital	Genoa	19
Platte	Columbus Community Hospital	Columbus	47

CHEMICAL STORAGE FIXED SITES

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy (NDEE), there are a total of 120 fixed hazardous chemical storage sites within the district's four county region. The following table lists the sites that are located in the floodplain. A full list of facility locations can be found on the NDEE website. The district has no specific concerns regarding chemical fixed sites.

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

Table ECH.3: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	IN FLOODPLAIN (YES/NO)
Boone County		
Helena Agri-Enterprises LLC	2493 State Highway 14, Albion	Yes
Valero Renewable Fuels Company	2615 260th St, Albion	Yes
Colfax County		
Arps Gravel & Concrete Inc	1080 Lake Socorro Rd, Schuyler	Yes
Schuyler Co-op Assn	1303 G St, Schuyler	Yes
Schuyler Co-op Assn	Road 3, Richland	Yes
Verizon Wireless	1166 Road W, Howells	Yes
Platte Colfax		
Central Sand & Gravel Co 71	6621 Shady Lake Rd, Columbus	Yes
Central Valley Ag	1362 3rd Ave, Columbus	Yes
Duo Lift Manufacturing Co Inc	2810 38th St, Columbus	Yes
Frontier Co-op Company	24072 310th Ave, Columbus	Yes
Island Supply Welding Co	3825 S 9th St, Columbus	Yes
NPPD Columbus East Substation	3600 E 8th St, Columbus	Yes
Sapp Bros Columbus	517 E 23rd St, Columbus	Yes
Silver Creek Ready Mix Plant	3328 37th Rd, Silver Creek	Yes

Source: Nebraska Department of Environment and Energy, 2019[12]

CRITICAL FACILITIES

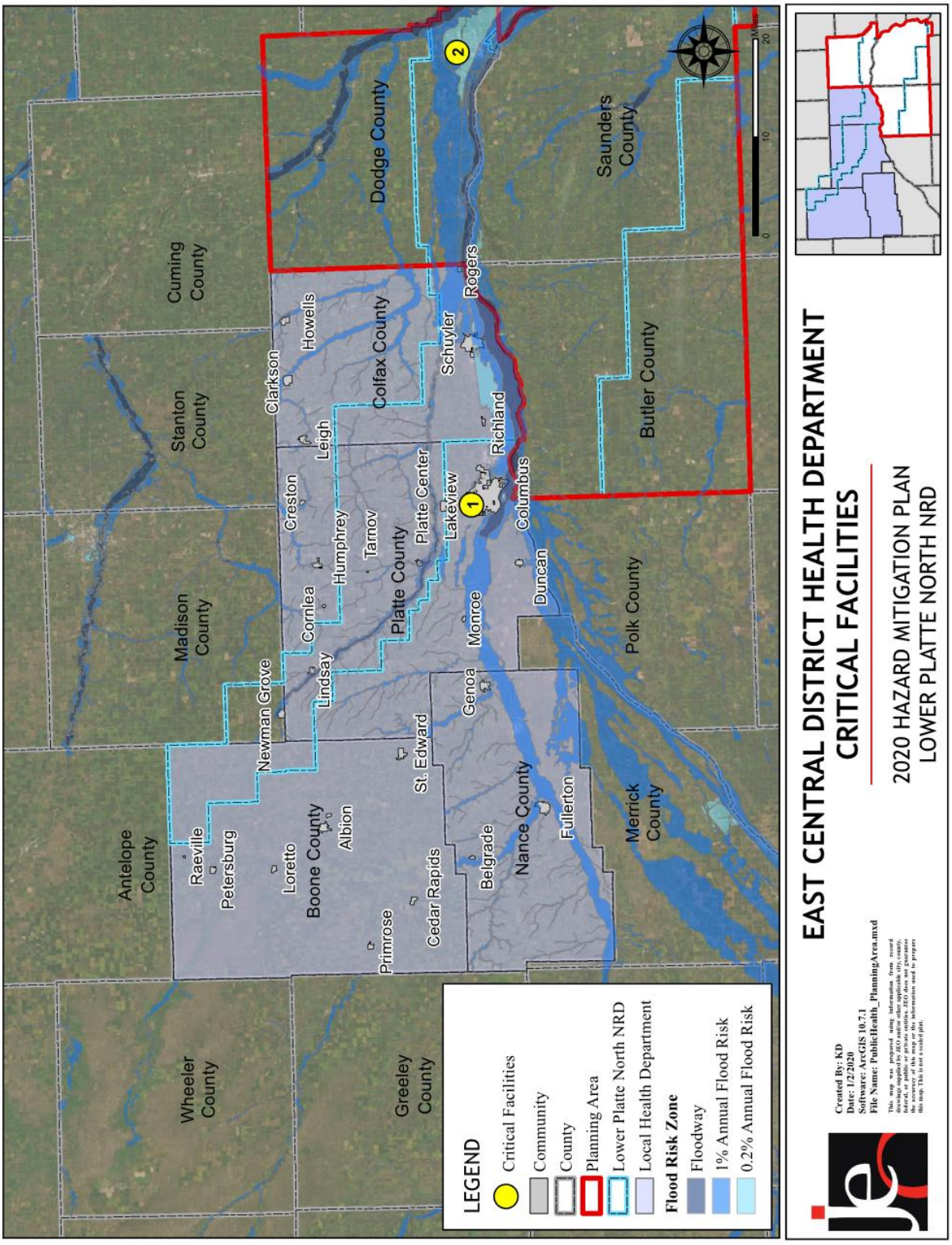
The planning team identified critical facilities necessary for the health department's disaster response and continuity of operations per the FEMA Community Lifelines guidance. The following table and figure provide a summary of the critical facilities for the East Central District Health Department.

Table ECH.4: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	East Central District Health Department and Storage Unit	Yes	Yes	No
2	Good Neighbor Community Health Center	No	No	Yes (0.2%)

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

Figure ECH.3: Critical Facilities



HISTORICAL OCCURRENCES

See the Platte County Hazard Loss History table in Appendix E for a hazard matrix and historical hazard events, including the number of events, damage estimates, and any fatalities or injuries.

HAZARD PRIORITIZATION

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

AGRICULTURAL ANIMAL AND PLANT DISEASE

There are no clear plans in place to respond to outbreaks of animal and plant disease that involve the local health department including containment and mass casualty protocols for animals. Coordination between the state, county emergency managers, and local public health departments is lacking, particularly information sharing between agencies. When Wayne County had an outbreak of Avian flu in 2015, the local public health department was left out of the response proceedings. After a positive E. coli test result from the Platte Center water tower in 2019 the town was placed on a boil-water advisory for two weeks by the state – the local public health department was not informed. In case of an animal or plant disease outbreak, the department would use CDC resources to educate local communities on proper response methodologies.

EXTREME HEAT

Local public health department emergency management coordinators across the state are increasingly considering the impacts of extreme heat as changing weather patterns make them more common. Heat shelters are a potential solution though their implementation is contentious because outreach on their use is difficult. If building housing concentrated vulnerable populations such as nursing homes were to lose power during an extreme heat event the health department's clinic could house 30 people and the FEMA room on the health department's campus could house up to another 30. To mitigated some of the impacts of hazard events, the health department has been working to re-establish its Community Organizations Active in Disaster (COAD). COAD serves to organize and streamline community organizations like United Way, Simon House, and Centro Hispano with emergency response efforts. DHHS did provide a portable generator to each county emergency manager so this generator may be available to power hospitals and clinics during a power outage.

FLOODING

Both Platte and Colfax County experienced substantial effects from the March 2019 flood event. Two of the four state-wide fatalities occurred in Platte County. One man was crossing a bridge on his tractor to rescue stranded drivers on the other side when the bridge collapsed, and he was swept away by flood water. Another woman died in her home after being stranded there for two days. The health department's satellite clinic in the City of Fremont was threatened by the flood because it would have been inundated with water if the levee north of the city had failed. The clinic was also preparing for power loss from this event because it would threaten the refrigerated vaccines and medications stored there. Finding a backup storage location proved difficult because

the hospital would likely have also lost power if the clinic did, as their generators are store in the basement, so another backup storage location had to be found. Because the clinic is located outside of the health department's boundaries, the department manually identified possible pharmacies to store the vaccines and medications using the phone book. The health department's Columbus campus was built outside of the floodplain

The health department sheltered approximately 10 people during this event. Only about half of these used the shelter overnight, most often because the flooding left them stranded in the City of Columbus away from their homes. The health department was originally expecting 80 – 100 people, though they only have room for up to 30 occupants if there is no need for extra supplies like geriatric cots or oxygen supply tanks. The health department was involved in moving people from Pawnee Park as they were dropped off from their homes by a helicopter. WIC vans were used to transport people to a hotel, family home or friend's home. Along with the flooding of communities on the Platte River and its tributaries, lake communities were also being flooded because of high ground saturation.

LEVEE FAILURE

Levee failure of the Loup River Levee outside of the City of Columbus and the levee north of the City of Fremont would most impact the health department. If the Loup River Levee were to fail, the Columbus would need to be evacuate. Shelters have been identified but the Red Cross does not have the capacity to run all of the shelters that would be needed. The city would have little time to evacuate. The Loup River Levee sustained damage during the 2019 flood events. The levee was originally built after severe flooding in 1966 and then raised after it was nearly breached in 1993. If the Fremont levee north of the city were to fail, flood water could inundate the health departments satellite clinic.

SEVERE WINTER STORMS

Severe winter storms are a regular occurrence in the region. The most severe winter storm in recent history occurred in 1998. Heavy snow combined with 40-45 mph winds resulted in snow drifts six to fifteen feet tall. Transportation was difficult as near blizzard condition and large snow drifts blocked roads. Communication with residents of the region are a concern during events such as these, especially if power outages were widespread. The County Emergency Manager offers emergency text alerts for hazard events and also has access to Alert Sense to notify residents of emergencies. Maintaining services is essential, especially to diabetic patients and other patients that regularly travel to the clinic for treatment. If there were widespread road closures in the region, health department staff would likely have to deliver medications throughout the region. The health department has only personal vehicles that would be capable of traveling in severe winter weather conditions. The roads in the rural regions of the district are frequently closed during hazard events because there are no funds to maintain them regularly. The health department's Columbus campus has a backup generator that can provide power for 72 hours. The satellite clinic does not have a generator. The Simon House and United Way provide outreach to vulnerable populations during severe winter storms.

Across the district, counties rely on their county attorney to function as their mass casualty plan coroner. This could lead to vulnerabilities during a mass casualty event if the county attorney is inexperienced with their functions as coroner.

STAFFING

The East Central District Health Department is supervised by a nine-member Board of Directors. They appoint the Chief Public Health Officer, who in turn appoints the Emergency Response Coordinator who will oversee the implementation of hazard mitigation projects. Other offices are listed below.

- Infectious Disease Surveillance Coordinator
- Emergency Response Coordinator
- Health Promotion and Outreach Coordinator
- Project Coordinator
- Minority Health Coordinator
- WIC Program Coordinator
- Early Development Network Program Coordinator
- Clinic Coordinator

CAPABILITY ASSESSMENT

Due to the unique structure of health departments, the typical capability assessment table was not used. The following table summarizes the district's overall capabilities. The East Central District Health Department Profile will continue to utilize existing relationships with local, county, state, and federal agencies to aid in the implementation of mitigation projects.

The East Central District Health Department provides public outreach and education on immunizations, emergency preparedness, emergency and severe weather outreach, environmental health, and support for new mothers.

Table ECH.5: Overall Capability Assessment

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

PLAN INTEGRATION

The East Central Public Health Department has several plans, studies, and reports related to infectious diseases and public health. The department's emergency response plan includes an overview of the four county area response capabilities, assigns responsibilities, and defines broad policies, plans, and procedures related to a wide variety of potential hazards. No other examples of plan integration were identified. There are currently no plans to further integrate existing or future planning mechanisms.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	Identify and evaluate current backup and emergency generators. Obtain additional generators based on identification and evaluation. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by size
Funding	General Fund
Timeline	5+ years
Priority	Low
Lead Agency	Health Director
Status	New action. Not started

MITIGATION ACTION	CIVIL SERVICE IMPROVEMENTS
Description	Improve emergency rescue and response equipment and facilities by providing additional or updating existing equipment. For example: backup systems for emergency vehicles, training additional personnel, upgrading radio systems, etc.
Hazard(s) Addressed	All hazards
Estimated Cost	Varies
Funding	General Fund
Timeline	Ongoing
Priority	Medium
Lead Agency	All Departments
Status	New action. Ongoing, equipment is purchased as necessary

MITIGATION ACTION	COMMUNITY EDUCATION AND AWARENESS
Description	Establish a community education program to increase awareness related to household level mitigation actions. Utilize outreach projects and the distribution of maps. Purchasing equipment such as projectors and laptops to facilitate presentation of information
Hazard(s) Addressed	All hazards
Estimated Cost	$5,000+
Funding	General Fund
Timeline	Ongoing
Priority	High
Lead Agency	All Departments
Status	New action. Ongoing, community education occurs all the time by all departments using a variety of tools

MITIGATION ACTION	FIRST AID TRAINING
Description	Promote first aid training for all staff and residents
Hazard(s) Addressed	All hazards
Estimated Cost	$100 per person
Funding	General Fund
Timeline	Ongoing
Priority	Low
Lead Agency	Health Director
Status	New action. Ongoing, first aid classes are regularly held

DISTRICT PROFILE

LAKE VENTURA SID #3

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table LVE.1: Lake Ventura SID #3 Local Planning Team

NAME	TITLE	JURISDICTION
Mike Winterfeld	Clerk	Lake Ventura SID # 3
Randy Wagner	Chairperson of the Board	Lake Ventura SID # 3
Rebecca Winterfeld	Committee Member	Lake Ventura SID #3

LOCATION AND GEOGRAPHY

The Lake Ventura SID #3 is a private lake community in the southeastern portion of Dodge County, two miles west of the City of Fremont. The SID covers approximately 90 acres of land and 110 acres of lake. The Platte River is just south of the community.

TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community and areas more at risk of transportation incidents. Lake Ventura's major transportation corridor is US Highway 30. It is traveled by a total annual average of 8,310 vehicles daily, 900 of which are trucks.[13] A Union Pacific Railroad rail line passes along the northern edge of the community. County Road 18, Military Avenue, and Highway 30 are the transportation of most concern because of their heavy traffic. Chemicals are regularly transported along these routes including petroleum products.

DEMOGRAPHICS

The Lake Ventura community has about 100 homes housing about 142 people. The median age of the population is 55 to 60 years old.

EMPLOYMENT AND ECONOMICS

MAJOR EMPLOYERS

There are no employers within the community. Most residents commute to Fremont, Omaha, and other nearby communities for work.

HOUSING

Lake Ventura's community consists of about 116 lots, most located in the island in the center of the lake. The housing in the community is approximately valued at $41,000,000. All homes were built after 1972 when the community was founded. The age of housing may indicate which housing units were built prior to the development of state building codes. Homes built within a flood hazard area before the adoption of their community's Flood Rate Insurance Map (FIRM) are not likely to be built above the 1% annual chance floodplain.

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

Figure LVE.1: Lake Ventura SID #3

FUTURE DEVELOPMENT TRENDS

Three new buildings have been added to the SID in the last five years. The population has been relatively stable over that time frame. Only minor home renovations are expected in the next five years.

PARCEL IMPROVEMENTS AND VALUATION

The planning team acquired GIS parcel data from the County Assessor to analyze the location, number, and value of property improvements (e.g. buildings, paved lots, roads, etc.) at the parcel level. The data did not contain the number of structures on each parcel. The parcel data was analyzed to determine the number and valuation of property improvements located in the 1% annual chance floodplain. A summary of the results of this analysis is provided in the following table.

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

NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	MEAN VALUE OF IMPROVEMENTS PER PARCEL	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN
99	$25,385,270	$256,417	22	$4,567,740

Source: GIS Workshop/Dodge County Assessor, 2019[14]

CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

According to the Tier II System reports submitted to the Nebraska Department of Environmental Quality, there is one fixed hazardous chemical storage site within two miles of Lake Ventura. The following table lists this site. Platte Valley Equipment in the City of Fremont also stores small amounts of chemicals.

Table LVE.3: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	IN FLOODPLAIN (YES/NO)
Titan Machinery, Inc	3701 W Highway 30, Fremont	Yes

Source: Nebraska Department of Environmental Quality, 2019[15]

14 GIS Workshop/Saunders County Assessor. 2019. [Personal correspondence].
15 Nebraska Department of Environmental Quality. 2019. "Nebraska DEQ Tier 2 Data Download: 2018." https://deq-iis.ne.gov/tier2/.

Figure LVE.2: Critical Facilities

CRITICAL FACILITIES

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

Table LVE.4: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Pressure Tank Building	No	No	No
2	Wastewater Treatment Plant	No	No	Yes
3	Well #1	No	No	Yes
4	Well #2	No	No	Yes

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

DROUGHT

Drought is a concern for Lake Ventura because it increases the water used by surrounding agricultural producers for irrigation, dropping the community well levels. In the past the wells have dropped by 40 feet to a depth of four to eight feet. This creates a high risk of losing potable water for the lake's residents during a drought. Approximately five years ago the wells were deepened to adjust for these low water table issues.

There are two drought definitions for the SID: the first is when the wells are no longer operable because the well level is too low. The second is when the lake level is low causing limited lake access and stress to the fish population. Well levels are monitored daily. During drought events lawn water restrictions are put in place. Lake Ventura can connect to the City of Fremont's water system if potable water becomes unavailable. The SID has not had issues with water quality during drought events.

FLOODING

The March 2019 floods had a significant impact on Lake Ventura. There was low level flooding in the sewage treatment building and at the gas pump of the boat fueling system. This caused minor damage to the sewage treatment building. The east end of Lake Ventura and the sewage treatment plant are most prone to flooding. There is minor ponding of stormwater in the subdivision and poor stormwater drainage in the farmland to the west of the community.

In response to the March 2019 flood, communities and diking and drainage districts, including Lake Ventura, in southern Dodge County along the Platte River formed the Dodge County Joint

Water Management Advisory Board. They've partnered together to develop a comprehensive flood risk reduction and mitigation strategy along the Platte River. The Board is currently looking for funding alternatives to develop a Flood Mitigation and Flood Resiliency Plan to identify, evaluate, and prioritize flood mitigation alternatives to improve flood resiliency along the Platte River.

HAIL

Hail is a concern for the SID because it can cause property damage. There have been no significant hail events in the past 10 years. Critical facilities are not fitted with hail resistant building materials, but they are insured against hail damage.

LEVEE/BERM FAILURE

Berms surround all four sides of Lake Ventura. The berms on the north, south and east sides failed during the March 2019 flooding event. They were breached in two places. Berm failures could cause floodwater to inundate the sewage treatment plant, wells, and many residences. A berm failure could also cut off access to the community; cause a loss of infrastructure; contaminate the lake with fertilizer, chemicals, invasive species, and soil; and damage the major transportation routes. The northern, southern, and western berms provide 100-year or more flood protection.

TORNADOES

No tornadoes have occurred in Lake Ventura, but a future tornado could be catastrophic. The SID has only paper municipal records – they are not backed up in case of a disaster. The community does not have a warning signal. The County Emergency Manager does offer text alerts. There are no FEMA certified safe rooms, so community member can only seek shelter in their homes. The SID does not provide education on tornado response and does not have Mutual Aid Agreements in place in case of a disaster.

GOVERNANCE

Lake Ventura SID #3 is managed by the SID Board; they will oversee the implementation of hazard mitigation projects. The community also has the following staff:

- Facilities/Water Manager/Operator

CAPABILITY ASSESSMENT

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

Table LVE.5: Capability Assessment

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

SURVEY COMPONENTS/SUBCOMPONENTS		YES/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	Yes (county)
	Community Rating System	No
	Other (if any)	
Administrative & Technical Capability	Planning Commission	No
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	Yes (JEO Consulting Group)
	Local Staff Who Can Assess Community's Vulnerability to Hazards	No
	Grant Manager	No
	Mutual Aid Agreement	No
	Other (if any)	Joint Water Management Advisory Board - Member
Fiscal Capability	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 (City of Fremont)
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	No
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No

SURVEY COMPONENTS/SUBCOMPONENTS	YES/NO
Firewise Communities Certification	No
Tree City USA	No
Other (if any)	

Table LVE.6: Overall Capability Assessment

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

PLAN INTEGRATION

Lake Ventura SID #3 does not have any formal planning documents. Any new construction be approved by the county and building codes are at the county level.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	ABOVE GROUND STORMWATER SYSTEM AND DRANIAGE IMPROVEMENTS
Description	Stormwater systems comprising of ditches, culverts, or drainage ponds can be used to convey runoff. Undersized systems can contribute to localized flooding. Drainage improvements may include ditch upsizing, ditch cleanout and culvert improvements. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other stormwater system improvements. Bridges typically serve as flow restrictions along streams and rivers. Cleanout and reshaping of channel segments at bridge crossings can increase conveyance, reducing the potential for flooding.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	Operations budget
Timeline	2-5 years
Priority	Medium
Lead Agency	SID #3
Status	New action. Not started

MITIGATION ACTION	ASSESS VULNERABLILITY TO DROUGHT RISK
Description	Review relevant plans and systems to identify factors which may increase drought impacts or gaps in planning and service delivery. This may include but is not limited to: assessing water distribution system(s), reviewing well levels and identifying alternative water sources (if needed), examining water intensive consumers, review of water pricing structures, considering the need for municipal water meters, and other locally appropriate actions.
Hazard(s) Addressed	Drought
Estimated Cost	$10,000+
Funding	Operations budget
Timeline	1 year
Priority	High
Lead Agency	SID #3
Status	New action. Not started

MITIGATION ACTION	BACKUP ANDEMERGENCY GENERATORS
Description	Identify and evaluate current backup and emergency generators. Obtain additional generators based on identification and evaluation. The SID #3 relies solely on the City of Fremont for electricity and would like backup power generators near the sewage treatment facility and wells
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by size
Funding	Tax levy, bond
Timeline	2-5 years
Priority	Medium
Lead Agency	SID #3
Status	New action. Planning stage, funding is currently being sought.

MITIGATION ACTION	BACKUP RECORDS
Description	Develop protocol for backing up critical records onto a portable storage device or service. Maintain routine backup of records
Hazard(s) Addressed	All hazards
Estimated Cost	Staff time
Funding	Operations budget
Timeline	1 year
Priority	High
Lead Agency	SID #3
Status	New action. Not started

MITIGATION ACTION	COMPREHENSIVE DISASTER / EMERGENCY REPONSE PLAN
Description	Develop a comprehensive disaster and emergency response plan
Hazard(s) Addressed	All hazards
Estimated Cost	$15,000
Funding	Operations budget
Timeline	2-5 years
Priority	Medium
Lead Agency	SID #3
Status	New action. Not started

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	$10,000+
Funding	Operations budget
Timeline	1 year
Priority	High
Lead Agency	SID #3
Status	New action. Not started

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

MITIGATION ACTION	DRAINAGE STUDY/STORMWATER MASTER PLAN
Description	Identify potential flooding sources and flood-vulnerable areas. Explore solutions and prioritize
Hazard(s) Addressed	Levee failure, flooding
Estimated Cost	$10,000+
Funding	Bond
Timeline	1 Year
Priority	High
Lead Agency	SID #3
Status	New action. Not started

MITIGATION ACTION	DROUGHT MANAGEMENT PLAN
Description	Work with relevant stakeholders to develop a drought management plan. Includes: identify water monitoring protocols, outline drought responses (watering restrictions), identify opportunities to reduce water consumption (swimming pools, fountains), and establish the jurisdictional management procedures
Hazard(s) Addressed	Drought
Estimated Cost	$25,000+
Funding	General operations
Timeline	1 year
Priority	High
Lead Agency	SID #3
Status	New action. Not started

MITIGATION ACTION	EMERGENCY EXERCISE
Description	Conduct tabletop exercises to determine the response scenarios in the event of levee failure.
Hazard(s) Addressed	Levee failure, Flooding
Estimated Cost	$5,000+
Funding	Operations budget
Timeline	1 year
Priority	High
Lead Agency	SID #3
Status	New action. Not started

MITIGATION ACTION	EMERGENCY FUEL SUPPLY PLAN
Description	Plan to ensure adequate fuel supply is available during an emergency. Prioritization and rationing plans for gasoline and diesel uses in extended loss of fuel supply or electric power supply; plans to purchase local fuel supply; etc.
Hazard(s) Addressed	All hazards
Estimated Cost	$6,000+
Funding	Operations budget
Timeline	2-5 years
Priority	Medium
Lead Agency	SID #3
Status	New action. Not started

MITIGATION ACTION	EMERGENCY OPERATIONS CENTER
Description	Identify and establish an emergency operations center
Hazard(s) Addressed	All hazards
Estimated Cost	Staff time
Funding	Operations budget
Timeline	1 year
Priority	High
Lead Agency	SID #3
Status	New action. Not started

MITIGATION ACTION	FACILITY FLOODPROOFING
Description	Explore the possibility of floodproofing for facilities which fall into the one percent flood inundation areas. The SID would like to harden the sewage treatment site
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	Bond
Timeline	1 year
Priority	High
Lead Agency	SID #3
Status	New action. Planning stage, currently seeking funding

MITIGATION ACTION	FIRST AID TRAINING
Description	Promote first aid training for all residents
Hazard(s) Addressed	All hazards
Estimated Cost	$100 per person
Funding	Operations budget
Timeline	2-5 years
Priority	Medium
Lead Agency	SID #3
Status	New action. Not started

MITIGATION ACTION	INCORPORATE NATIVE SPECIES INTO MUNICIPAL LANDSCAPES
Description	Work to incorporate native species of plans into municipal landscapes when updates/improvements are implemented
Hazard(s) Addressed	Drought
Estimated Cost	$1,000+
Funding	Bonds, Operations budget
Timeline	5+ Years
Priority	Low
Lead Agency	SID #3
Status	New action. Not started

MITIGATION ACTION	INFRASTRUCUTRE ASSESSMENT STUDY
Description	Conduct an assessment of bridges and infrastructure in potential areas of concern
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by size of jurisdiction
Funding	Operations budget
Timeline	5+ years
Priority	Low
Lead Agency	SID #3
Status	New action. Not started

MITIGATION ACTION	INFRASTRUCTURE HARDENING
Description	Harden critical facilities to withstand high winds, hail, heavy snow, etc. by: hardening roofs, hail resistant barriers to HVAC systems, shatter-proofing windows, building tie-downs and anchors, flood walls, and other architectural designs that reduce damage. A floodwall is needed around the sewage treatment plan.
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by structure
Funding	Bond
Timeline	1 year
Priority	High
Lead Agency	SID #3
Status	New action. Planning stage, funding is currently being sought

MITIGATION ACTION	LEVEE FAILURE EVACUATION PLAN
Description	Work with officials to develop an evacuation plan if the levee were to fail
Hazard(s) Addressed	Levee failure, Flooding
Estimated Cost	$10,000+
Funding	Operations budget
Timeline	1 year
Priority	High
Lead Agency	SID #3
Status	New action. Not started

MITIGATION ACTION	LEVEE/FLOODWALL CONSTRUCTION AND/OR IMPROVEMENTS
Description	Levees and floodwalls serve to provide flood protection to businesses and residents during large storm events. Improvements to existing levees and floodwalls will increase flood protection. If possible, the structure should be designed to FEMA standards to provide 1-percent flood protection providing additional flood insurance benefits.
Hazard(s) Addressed	Levee failure, Flooding
Estimated Cost	Varies
Funding	Bond
Timeline	1 year
Priority	High
Lead Agency	SID #3

MITIGATION ACTION	LEVEE/FLOODWALL CONSTRUCTION AND/OR IMPROVEMENTS
Status	New action. Planning stage, currently seeking funding.

MITIGATION ACTION	POWER, SERVICE, AND ELECTRICAL LINES
Description	Work with local Public Power District or community electricity department to identify vulnerable transmission and distribution lines and plan to replace or retrofit existing structures to be less vulnerable to storm events. Also work to bury power and service lines. The SID will work with Fremont Public Power Department
Hazard(s) Addressed	All hazards
Estimated Cost	Staff time
Funding	Operations budget
Timeline	1 year
Priority	High
Lead Agency	SID #3, Fremont Public Power Department
Status	New action. Not started

MITIGATION ACTION	SAFE ROOMS AND STORM SHELTERS
Description	Design and construct storm shelters and safe rooms at the west park and boat ramp area.
Hazard(s) Addressed	Tornadoes, High Winds
Estimated Cost	$350+ per square foot
Funding	Bond, Operations budget
Timeline	5+ years
Priority	Low
Lead Agency	SID#3
Status	New action. Not started

MITIGATION ACTION	STREAM BANK STABILIZATION / GRADE CONTROL STRUCTURES / CHANNEL IMPROVEMENTS
Description	Stabilize banks along streams and rivers. This may include, but is not limited to: reducing bank slope, addition of riprap, installation of erosion control materials/fabrics
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	Operations budget
Timeline	2-5 years
Priority	Medium
Lead Agency	SID #3
Status	New action. Not started

DISTRICT PROFILE

LINWOOD VOLUNTEER FIRE DEPARTMENT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table LFD.1: Linwood Volunteer Fire Department Local Planning Team

NAME	TITLE	JURISDICTION
Joel Cerny	Fire Chief	Linwood Volunteer Fire Department

LOCATION AND GEOGRAPHY

The Linwood Volunteer Fire Department has jurisdiction in the northeast corner of Butler County, a small portion of Dodge County, and the northwest corner of Saunders County, surrounding the Village of Linwood. It covers approximately 32,640 acres of land. The fire department mainly addresses grass and wildfire in the region's rural area.

TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors and areas more at risk of transportation incidents. Nebraska State Highway 15 travels through the Linwood fire district. It is traveled by a total annual average of 2,450 vehicles daily, 310 of which are trucks.[16] A Union Pacific Railroad rail line runs to the north of the district, in Colfax County across the Platte River. Transportation routes of most concern are Highway 15, spur 12B, and Linwood road due to farm chemicals and propane being regularly transported.

DEMOGRAPHICS

See the Village of Linwood, Saunders County, and Butler County profiles for regional demographic information. The department serves approximately 250 people.

FUTURE DEVELOPMENT TRENDS

Over the past five years the fire department has not made any updates to fire buildings. In the next five years there are no plans for any updates.

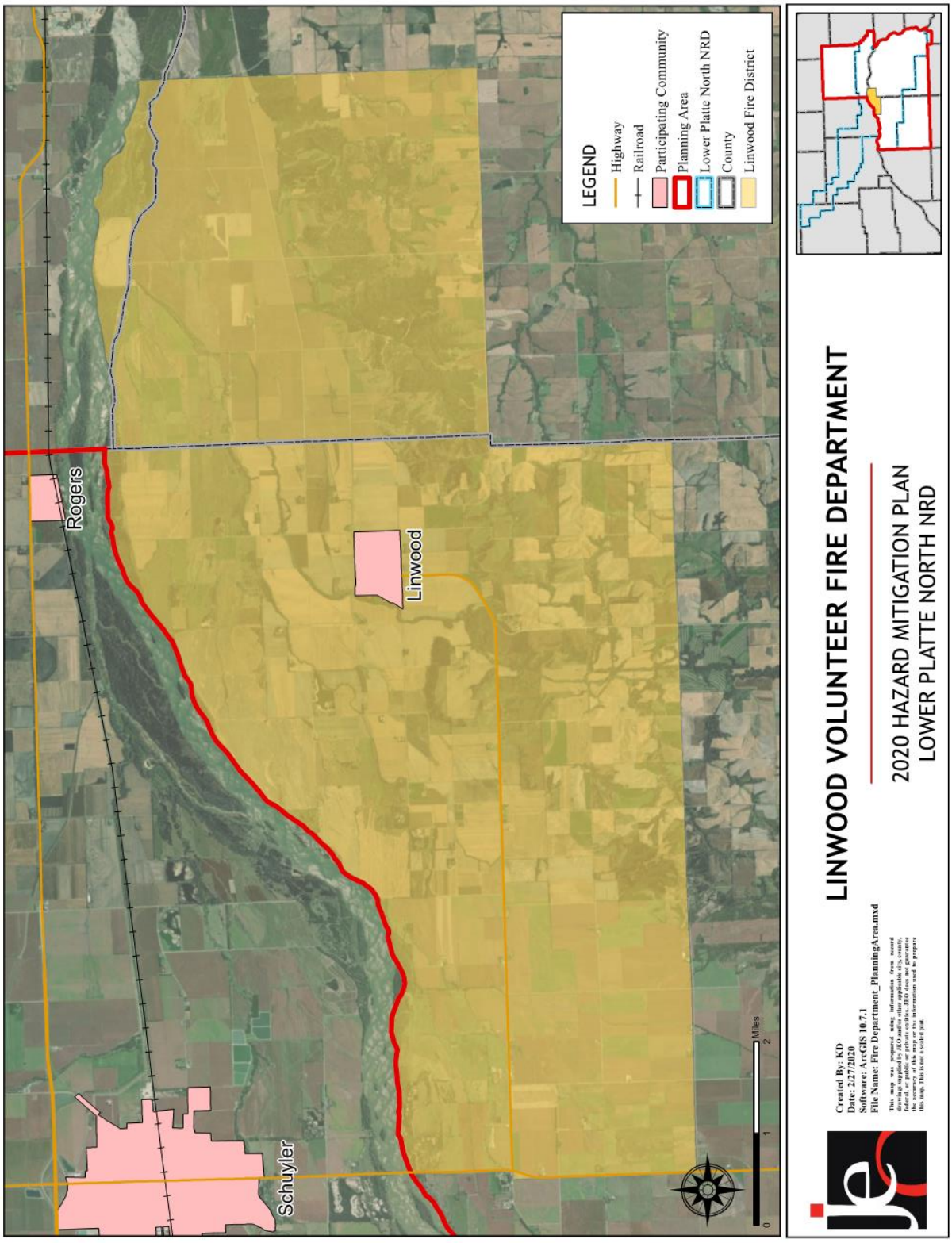
CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

Information on chemical storage sites can be found in the Village of Linwood, Saunders County, and Butler County profiles.

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

Figure LFD.1: Linwood Volunteer Fire Department



CRITICAL FACILITIES

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

Table LFD.2: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	FLOODPLAIN (YES/NO)
1	Fire Station	No	Yes	No

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

CHEMICAL SPILLS FIXED SITE

There have been no reported fixed site chemical spills in the fire district. The main site of concern Otte Propane which has a large amount of propane storage. If a spill were to occur the fire department would likely be the first to respond. All staff are trained on spill containment; however, they are not HazMat certified and would likely have to use mutual aid for a large spill.

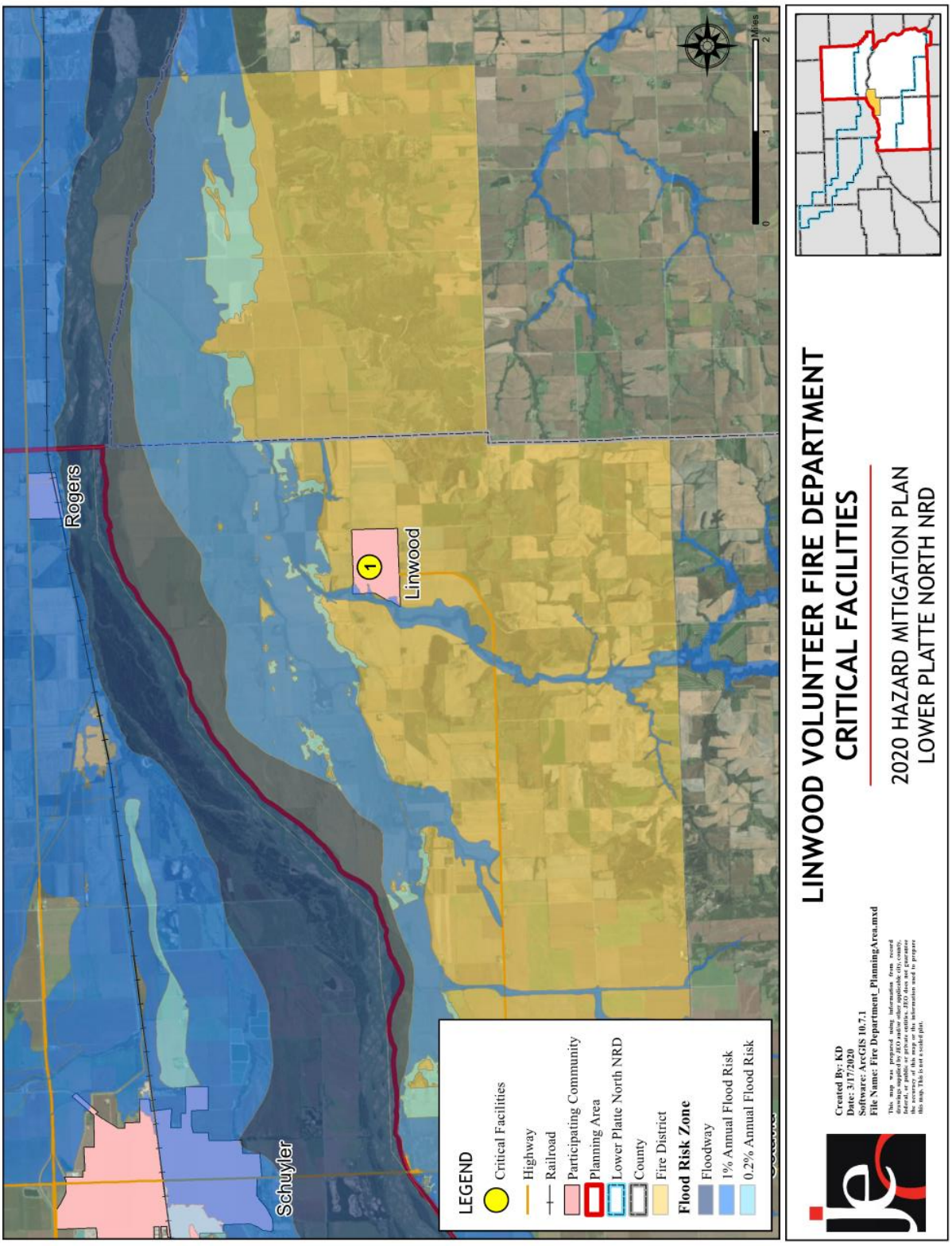
CHEMICAL SPILLS TRANSPORTATION

Highway 15, Highway Spur 12B, and Linwood Road are the transportation routes of most concern due to farm chemicals and propane being regularly transported. The district is in a very rural agriculturally based area, so depending on the time of year, lots of farm chemicals are being transported. There have been no reported transportation chemical spills in the district. If spill were to occur the fire department would likely be the first to respond but may need to use mutual aid for a larger spill.

FLOODING

Linwood has experienced several significant flooding events. In 1963 Skull Creek flooded the whole village. Flooding of Skull Creek occurred again in 1987, 2009, 2010, 2017, and 2018. The fire station was not impacted during these events. Drainage issues are a larger concern than riverine flooding with only the eastern edge of the community in the floodplain. Previous impacts to the fire department include reduced response times due to county roads being closed or washed out.

Figure LFD.2: Critical Facilities



GRASS/WILDFIRES

The Linwood Volunteer Fire Department has had 27 reported wildfires since 2000. No injuries or fatalities have occurred due to these fires. The largest fire occurred in 2006 when a fire burned 41 acres of crop land. For fire response the department has two tankers, two grass rigs, one 750-gallon pumper, and one emergency response rescue truck. Public outreach for the department consists of offering a fire prevention program.

TORNADOES

NCEI data shows that no tornadoes have occurred in the district, but the likelihood still exists. No power lines in the village are buried making power outages very likely during a tornado or high wind event. The department has a small generator at the fire hall; however, it is only able to run heat and lights. The fire department uses storm spotters to alert the community of a potential incoming storm.

STAFFING

The Linwood Volunteer Fire Department is supervised by a fire chief who will oversee the implementation of hazard mitigation projects. Other offices are listed below. The department is governed by a five-member Linwood Rural Fire Protection Board. There are 20 volunteers registered to help with emergency response.

- Assistant Fire Chief
- Treasurer
- Secretary

CAPABILITY ASSESSMENT

Due to the unique structure of fire districts, the typical capability assessment table was not used. The following table summarizes the district's overall capabilities. The Linwood Volunteer Fire Department will continue to utilize existing relationships with local, county, state, and federal agencies in the implementation of mitigation projects. The department has not applied for grants in the past.

Table LFD.3: Overall Capability Assessment

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

PLAN INTEGRATION

The Linwood Volunteer Fire Department does not have any formal planning documents in place. What it does have is standard operating procedures (SOPs). These SOPs provide guidelines for response on any type of call the department is likely to receive.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	Identify and evaluate current backup and emergency generators. Obtain additional generators based on identification and evaluation. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters.
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by size
Funding	General Fund
Timeline	5+ years
Priority	Medium
Lead Agency	Fire Chief
Status	New action. Not started

MITIGATION ACTION	CIVIL SERVICE IMPROVEMENTS
Description	Improve emergency rescue and response equipment and facilities by providing additional or updating existing equipment. For example: backup systems for emergency vehicles, training additional personnel, upgrading radio systems, etc.
Hazard(s) Addressed	All hazards
Estimated Cost	Varies
Funding	General Fund
Timeline	Ongoing
Priority	Medium
Lead Agency	Fire Chief
Status	New action. Ongoing, equipment is purchased as needed

MITIGATION ACTION	COMMUNITY EDUCATION AND AWARENESS
Description	Establish a community education program to increase awareness related to household level mitigation actions. Utilize outreach projects and the distribution of maps. Purchasing equipment such as projectors and laptops to facilitate presentation of information
Hazard(s) Addressed	All hazards
Estimated Cost	$500+
Funding	General Fund
Timeline	Ongoing
Priority	Medium
Lead Agency	Fire Chief
Status	New action. Ongoing, the department regularly participates in community education

DISTRICT PROFILE

MEAD PUBLIC SCHOOLS

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table MPS.1: Mead Public Schools Local Planning Team

NAME	TITLE	JURISDICTION
Dr. Dale Rawson	Superintendent of Schools	Mead Public Schools
PJ Quinn	Upcoming Superintendent of Schools	Mead Public Schools

LOCATION

The Mead Public School District is in eastern Saunders County and consists of two schools. The school district provides services to students in the communities of Mead, Ashland, Ceresco, Colon, Fremont, Ithaca, Memphis, Wann, Wahoo, and Yutan. The district covers approximately 93 square miles.

TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests areas more at risk of transportation incidents. Two major transportation corridors intersect near the district's schools: US Highway 77 and Nebraska State Highway 92. US Highway 77 is traveled by a total annual average of 6,220 vehicles daily, 625 of which are trucks. Nebraska State Highway 92 is traveled by a total annual average of 4,850 vehicles daily, 775 of which are trucks. A Union Pacific Railroad rail line runs east to west through the center of Mead. County Road 10 and Nebraska Highways 92 and 66 are of most concern for the district because of their heavy traffic. The district transports 95 students with five buses.

DEMOGRAPHICS

The following figure displays the student population trend. It indicates that the student population has been relatively stable since 2013. This population trend is a result of steady populations in the surrounding communities. In the 2017-2018 school year there were 243 students enrolled in Mead Public Schools.[17]

17 Nebraska Department of Education. 2019. "Nebraska Education Profile." https://nep.education.ne.gov/.

Figure MPS.1: Mead Public Schools

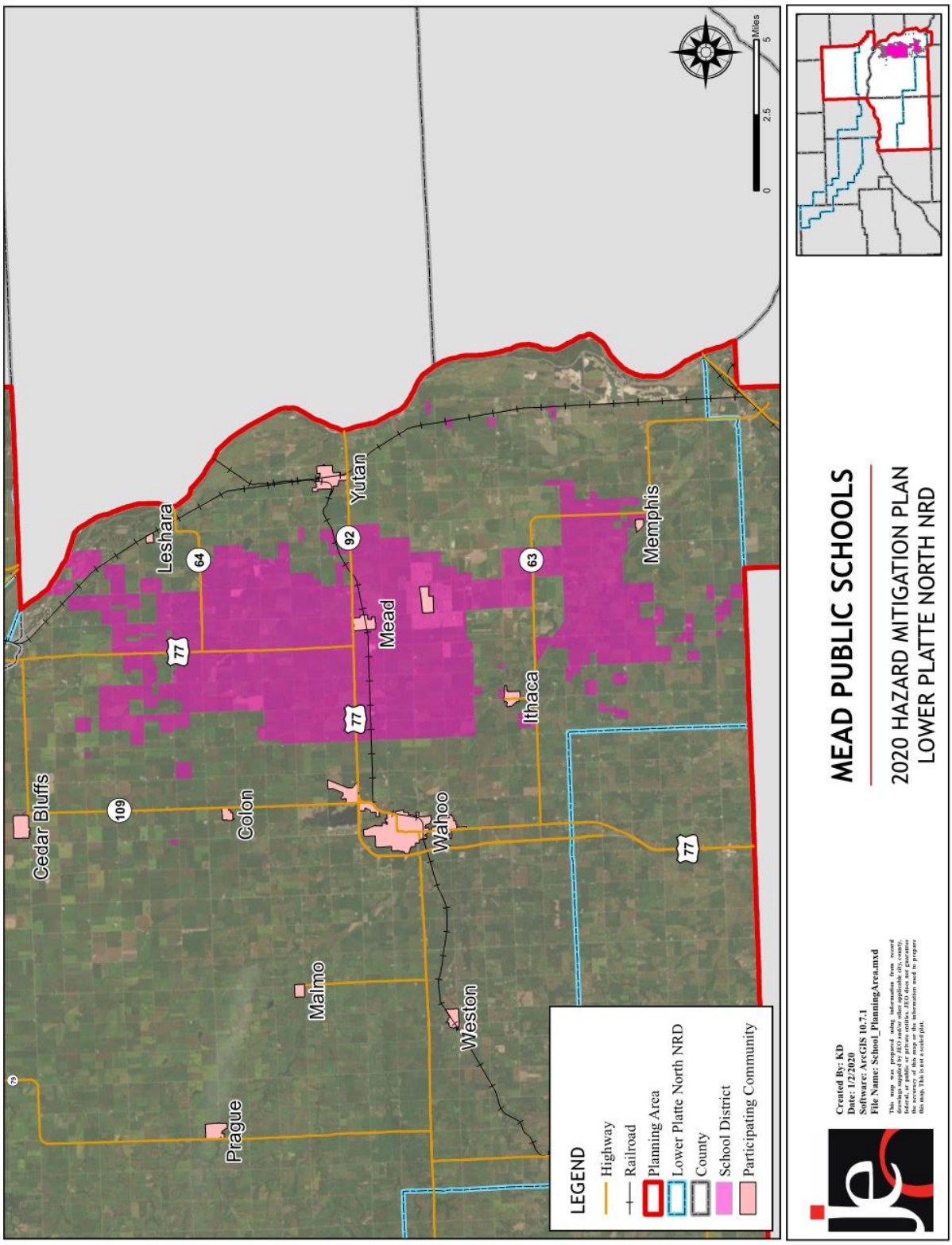
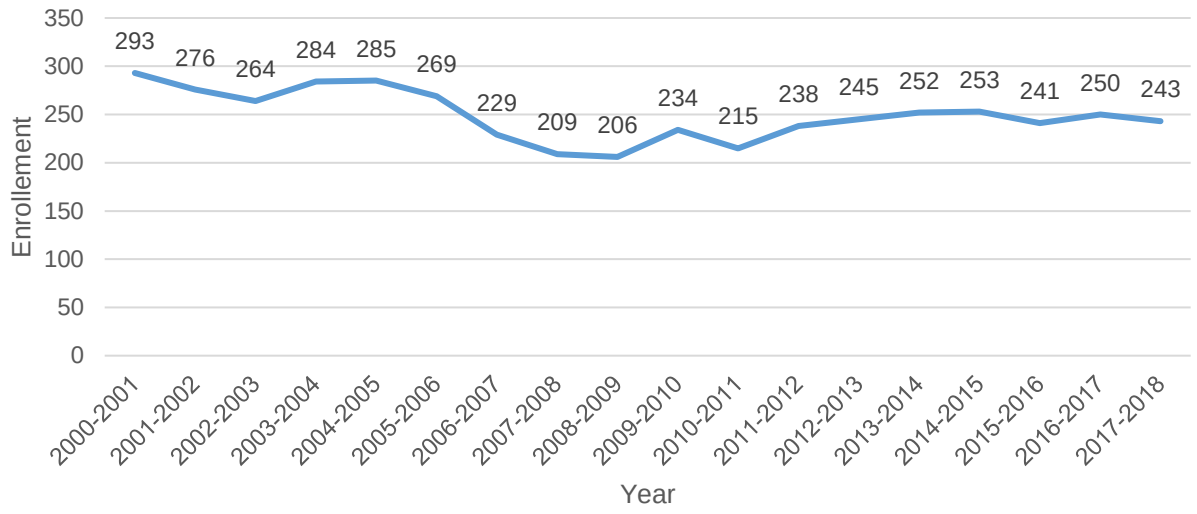


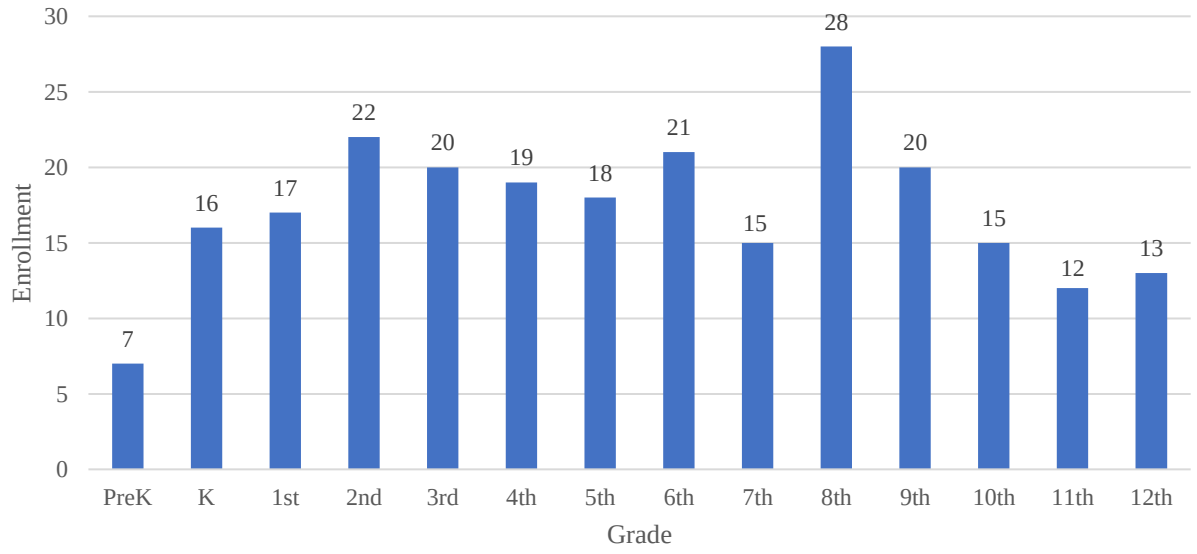
Figure MPS.2: Student Population



Source: Nebraska Department of Education, 2019

During the 2017-2018 school year, the largest number of students were in the 8th, 2nd, 3rd, and 9th grades. The lowest population of students was in prekindergarten. Children under 16 are especially vulnerable to hazard events because they are dependent on parents and guardians for transportation and financial support.

Figure MPS.3: Number of Students by Grade



Source: Nebraska Department of Education, 2019

According to the Nebraska Department of Education (NDE), 39% of students receive either free or reduced priced meals at school. This is lower than the state average of 46%. About 14% of students are in the Special Education Program. Less than 1% of students are English Language Learners from Spanish-speaking families. These students may be more vulnerable during a hazardous event than the rest of the student population.

Table MPS.2: Student Demographics

	SCHOOL DISTRICT	STATE OF NEBRASKA
Free/reduced priced meals	39%	46%
English language learners	<1%	7%
Special education students	14%	15%

Source: Nebraska Department of Education, 2019

FUTURE DEVELOPMENT TRENDS

There have been no changes to the district in the past five years. Plans are in place for gym and locker room addition to the high school in 2022.

CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

According to the Tier II System reports submitted to the Nebraska Department of Environmental Quality, there are a total of six chemical storage sites that house hazardous materials in the Mead Public Schools district. Refer to the Village of Mead and Saunders County profiles for more information on these sites. The school buildings are located near chemical storage facilities, but the district is not concerned about the potential impacts of a chemical release.

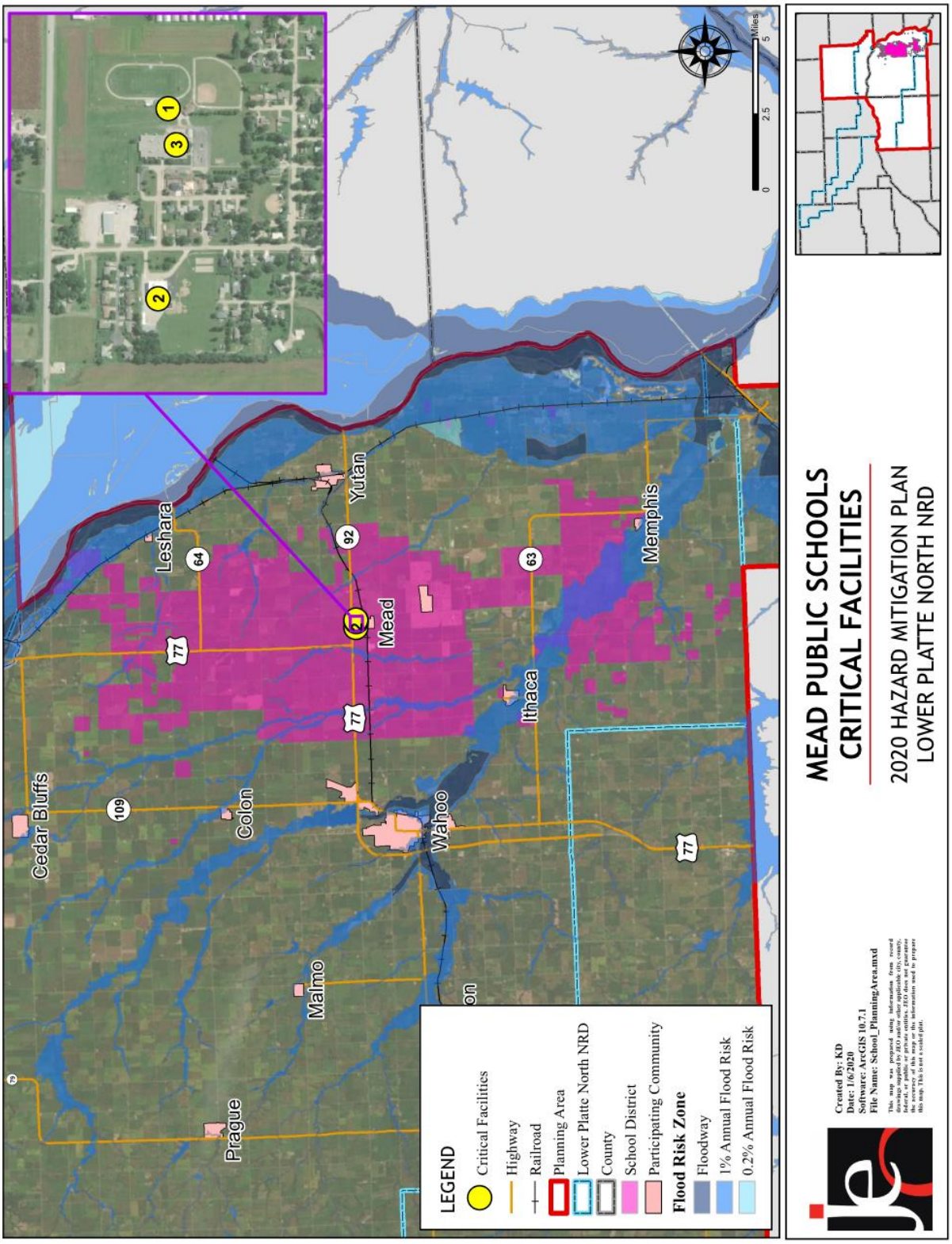
CRITICAL FACILITIES

Mead Public Schools identified the following critical facilities necessary to maintain the functions of the schools. Critical facilities were identified during the 2015 planning process and revised for this plan update. The following table and figure provide a summary of the critical facilities for the community.

Table MPS.3: Critical Facilities

CF #	NAME	# OF STUDENTS	# OF STAFF	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	LOCATED IN FLOODPLAIN (YES/NO)
1	4-Stall Parking Garage	0	0	No	No	No
2	Mead Elementary School	140	11	Yes	No	No
3	Mead High School	103	12	Yes	No	No

Figure MPS.4: Critical Facilities



HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

CHEMICAL SPILLS TRANSPORTATION

The school district is concerned with transportation chemical spills because the schools are located near the co-op, rail line, and highway where a lot of chemicals are transported. In January 2020 the pumping station near the school had a leak. A smell of gas was in the school. Windows were closed, no evacuation was necessary. The district has policies in place for how to respond to nearby chemical spills.

EXTREME HEAT

Extreme is only a concern for outdoor sporting events and practices. These events are held at the discretion of coaches. An event cancelation policy is in place; cancelation notices are sent by email and the school's Beacon Text system. The school does not have a backup generator in case of a power outage caused by an extreme heat event.

HAIL

The primary concern for hail is damage to roofs and windows. All school facilities are insured for hail damage. Roof repairs have been done twice in 11 years after damage from hail events. The high school has a metal roof and elementary school has a spray foam roof. There have been no other impacts from hail in the district.

SEVERE THUNDERSTORMS

Lightning during severe thunderstorms cause safety issues for students being transported on school buses. The bus drivers have safety protocols to direct their response to severe thunderstorms. One day while loading students on buses home, the children were evacuated from the buses and sheltered for 45 minutes. The district has surge protectors to protect critical equipment during lighting storms. In Fall of 2019 lightning hit a light pole on the football field. The resulting power surge destroyed the fire alarm system and electrical disconnect.

SEVERE WINTER STORMS

The district maintains a school cancelation policy in case of impassible roads and extreme cold. Snow removal is contracted out for sidewalks and parking lots. Their snow removal resources are sufficient at this time. Past severe winter storm impacts include power outages, stuck busses, and bus rerouting.

TORNADOES

No tornadoes have impacted school facilities, but a future event could be catastrophic. The school conducts tornado drills twice per year to protect students and staff in case of a disaster. The high school does not have a basement so student must go to interior spaces. Elementary students go to the library which is located under the gymnasium. The district does not have mutual aid agreements in place. Data is backed up nightly to a local server and to site 15 miles away.

ADMINISTRATION

The Mead Public Schools Board of Education, comprised of a locally elected six-member panel, establishes regulations and policies to govern the school district. They appoint a superintendent to implement these regulations. The superintendent in turn appoints one principal who supervises the schools' operations. These administrators will manage the implementation of hazard mitigation projects. The district also has the following offices, departments, and committees.

- Jr/Sr High Secretary
- Elementary Secretary
- Bookkeeper

CAPABILITY ASSESSMENT

Mead Public Schools annually reviews their crisis plan with school staff. Students and families are educated on emergency procedures. Students and staff participate in lockout, tornado, evacuation, and fire drills regularly. Mitigation principals have been considered but not implemented in the development of new or renovated school buildings. The following table summarizes the district's overall capability to implement mitigation projects.

Table MPS.4: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Planning Capability	Capital Improvements Plan/Long-Term Budget	Yes
	Continuity of Operations Plan	No
	Disaster Response Plan	No
	Other (if any)	
Administration & Technical Capability	GIS Capabilities	No
	Civil Engineering	No
	Local staff who can assess community's vulnerability to hazards	Yes
	Grant Manager	Yes
	Mutual Aid Agreement	No
	Other (if any)	
Fiscal Capability	Applied for grants in the past	No
	Awarded grants in the past	No
	Authority to levy taxes for specific purposes such as mitigation projects	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Approved bonds in the past	Yes
	Flood Insurance	No

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
	Other (if any)	
Education & Outreach Capability	Local school groups or non-profit organizations focused on environmental protection, emergency preparedness, access, and functional needs populations, etc. (Ex. Parent groups, hazard mitigation boards, etc.)	Yes
	Ongoing public education or information program (Ex. Responsible water use, fire safety, household preparedness, environmental education, etc.)	Yes
	StormReady Certification	No
	Other (if any)	
Drills	Fire	10 / year
	Tornado	2 / year
	Intruder	6 / year
	Bus evacuation	2 / year
	Evacuation	6 / year
	Other (if any)	

Table MPS.5: Overall Capability Assessment

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

PLAN INTEGRATION

Mead Public School's crisis response plan is updated on an annual basis. It covers response to fire, terrorism, and tornadoes. Most responses are either to shelter in place or to evacuate to a building one block away. The plan also assigns specific responsibilities to individuals and identifies evacuation routes. The districts strategic plan consists of an annual retreat and goal setting with the school board. Mead Public Schools also has a student and staff tragedy plan and response team for deaths, major accidents, and suicide.

MITIGATION STRATEGY

ONGOING AND NEW MITIGATION ACTIONS

MITIGATION ACTION	BACKUP GENERATORS AND EMERGENCY GENERATORS
Description	Provide a portable or stationary source of backup power for the two schools
Hazard(s) Addressed	All hazards
Estimated Cost	$100,000
Funding	Local revenue
Timeline	5+ years
Priority	Low
Lead Agency	Superintendent

MITIGATION ACTION	BACKUP GENERATORS AND EMERGENCY GENERATORS
Status	Not started, this is not a priority project at this time

MITIGATION ACTION	COMMUNITY EDUCATION AND AWARENESS
Description	Through activities such as outreach projects, distribution of maps and environmental education increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards. Also, educate citizens on water conservation methods, evacuation plans, etc.
Hazard(s) Addressed	All hazards
Estimated Cost	None
Funding	Local funds
Timeline	5+ years
Priority	Low
Lead Agency	Superintendent
Status	The school provides ongoing education to students, parents, and staff on disaster response

MITIGATION ACTION	CONTROL AIR-IN FILTRATION
Description	In the event of a chemical spill that releases a vapor cloud, initiate a “kill switch” of the air ventilation system
Hazard(s) Addressed	Chemical fixed site and transportation spills
Estimated Cost	Minimal
Funding	Local funds
Timeline	2-5 years
Priority	Medium
Lead Agency	Superintendent
Status	This project is in progress and will be located in both school buildings

MITIGATION ACTION	SAFE ROOMS AND STORM SHELTERS
Description	Design and construct storm shelters and safe rooms in all schools in the district
Hazard(s) Addressed	High wind, tornadoes
Estimated Cost	$4,400,000
Funding	Local revenue
Timeline	5+ years
Priority	Low
Lead Agency	Superintendent
Status	Safe room construction is being planned as an addition to the high school

DISTRICT PROFILE

NORTH BEND DRAINAGE DISTRICT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

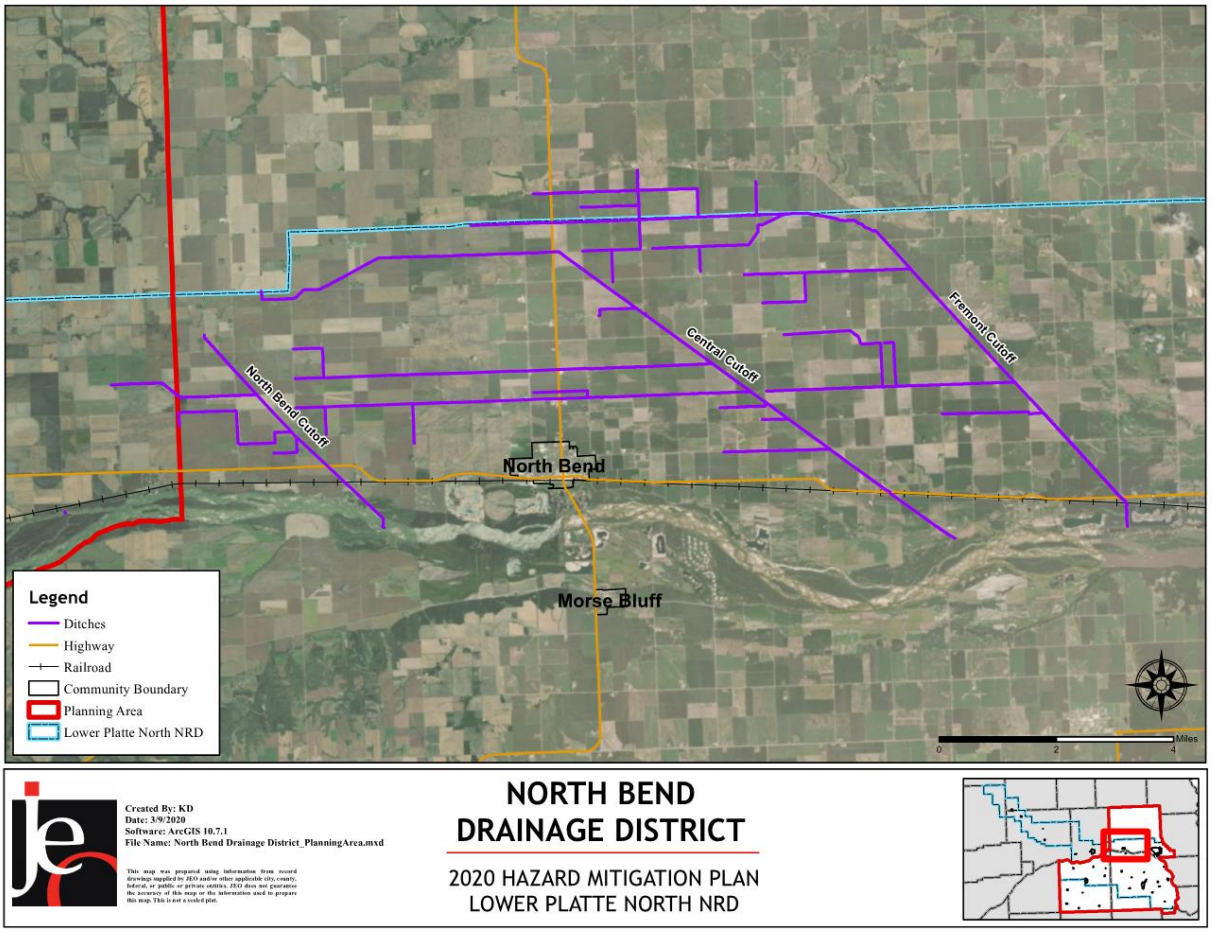
Table NDD.1: North Bend Drainage District Local Planning Team

NAME	TITLE	JURISDICTION
Larry Ruzicka	President	North Bend Drainage District
Chuck Emanuel	Board Member	North Bend Drainage District

LOCATION AND GEOGRAPHY

The North Bend Drainage District maintains and repairs approximately 60 miles of drainage ditches in Dodge County. Figure DGE.2 shows the location of the drainage ditches that the district maintains. The district is located from the North Bend Cutoff to the west, the Central Cutoff to the north, the Fremont Cutoff to the east, and the Platte River to the south. All drainage ditches are owned by private landowners and the district has an easement to get to and maintain the ditches. The drainage district contracts out the repair and maintenance work to private companies. The North Bend Cutoff serves as the channel to capture stormwater and floodwater from the Platte River and Shell Creek, diverting floodwater back into the Platte River before entering the City of North Bend and impacting Highway 79.

Figure NDD.1: North Bend Drainage District Location



FUTURE DEVELOPMENT TRENDS

There have been no changes to the drainage district in the last five years. The drainage district does not plan to develop or add ditches in the district in the near future. Annual budget for the district is typically $23,000 to $25,000. However, in 2020 they are asking for $30,000 due to the 2019 flood impacts.

CRITICAL FACILITIES

The district does not have any critical facilities because no equipment or structures are owned by the district.

HISTORICAL OCCURRENCES

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

COUNTY HAZARD PRIORITIZATION

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

FLOODING & BERM/LEVEE FAILURE

The North Bend Drainage District's mission is flood control. The two largest flood events in recent history occurred in 1990 and 2019. In 1990 Shell Creek flooded causing damage to the North Bend and Central Cutoffs. Damage consisted of debris in the ditch and bank washouts. The district received FEMA assistance after the event. In 2019 large amounts of snow runoff damaged all the Cutoffs and tributaries. Damage consisted of debris in the ditch and bank erosion. Breaches occurred on the North Bend and Central Cutoffs. Because of the breach, floodwater impacted the City of North Bend, county roads, Highways 30 and 79, and a rail line. Damages from the event were estimated at $500,000. Currently there is still debris and erosion that needs to be removed and repaired.

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

GOVERNANCE

The North Bend Drainage District is governed by a five-member elected board. No staff is employed by the district and all maintenance/repair work is contracted out. The drainage district

was created in 1960 and is funded from a property tax on properties that benefit from the drainage district. An annual meeting is held to elect the board and identify repair projects.

CAPABILITY ASSESSMENT

Table NDD.2: Capability Assessment

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

PLAN INTEGRATION

The district does not have any formal planning documents. At the annual meetings problem areas are identified and a plan for repairs is made.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	ABOVE GROUND STORMWATER SYSTEM AND DRAINAGE IMPROVEMENTS
Description	Perform yearly maintenance and repair of ditches within the district.
Hazard(s) Addressed	Flooding
Estimated Cost	$10,000 - $60,000
Funding	General Budget
Timeline	Ongoing
Priority	High
Lead Agency	Drainage Board
Status	New Action. Ongoing. Issues are repaired once they are identified.

MITIGATION ACTION	CONSTRUCT A RETENTION POND
Description	Improve the North Bend cutoff to create a retention pond. The pond will increase the holding capacity of flood waters and protect property to the east.
Hazard(s) Addressed	Flooding
Estimated Cost	$1,700,000
Funding	General Budget
Timeline	2-5 years
Priority	Medium/High
Lead Agency	Drainage Board
Status	New Action. In Process. The board is currently looking for funding options.

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

MITIGATION ACTION	FLOOD DAMAGE REPAIR
Description	Repair ditches that were impacted by the 2019 flood event. Bank repair and debris removal is needed for most of the cutoffs and their tributaries.
Hazard(s) Addressed	Flooding
Estimated Cost	$1,000,000+
Funding	General Budget
Timeline	1 year
Priority	High
Lead Agency	Drainage Board
Status	New Action. In Process. The board is currently looking for funding.

DISTRICT PROFILE

NORTH BEND VOLUNTEER FIRE DEPARTMENT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table NFD.1: North Bend Volunteer Fire Department Local Planning Team

NAME	TITLE	JURISDICTION
Don Kruger	Rural Board Section	North Bend Volunteer Fire Department
Waylon Fischer	Fire Chief	North Bend Volunteer Fire Department

LOCATION AND GEOGRAPHY

The North Bend Volunteer Fire Department has jurisdiction over 80,000 acres of land in southwestern Dodge County, surrounding the City of North Bend. The Platte River forms the southern boundary of the district. The fire district mainly addresses grass and wildfire in the region's rural area.

TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors and areas more at risk of transportation incidents. US Highway 30 and Nebraska State Highway 79 travel through the fire district. US Highway 30 is traveled by a total annual average of 7,790 vehicles daily, 915 of which are trucks. State Highway 79 is traveled by a total annual average of 1,480 vehicles daily, 350 of which are trucks.[18] A Union Pacific Railroad rail line runs east to west through the southern part of the district. The railroad is the transportation route of most concern to the district because it regularly transports unknown chemicals.

DEMOGRAPHICS

The North Bend Volunteer Fire Department serves approximately 3,500 people. See the City of North Bend and Dodge County profiles for regional demographic information.

FUTURE DEVELOPMENT TRENDS

There have been no changes in the district in the past five years. The district plans to construct a new fire hall in the City of North Bend in the next five years.

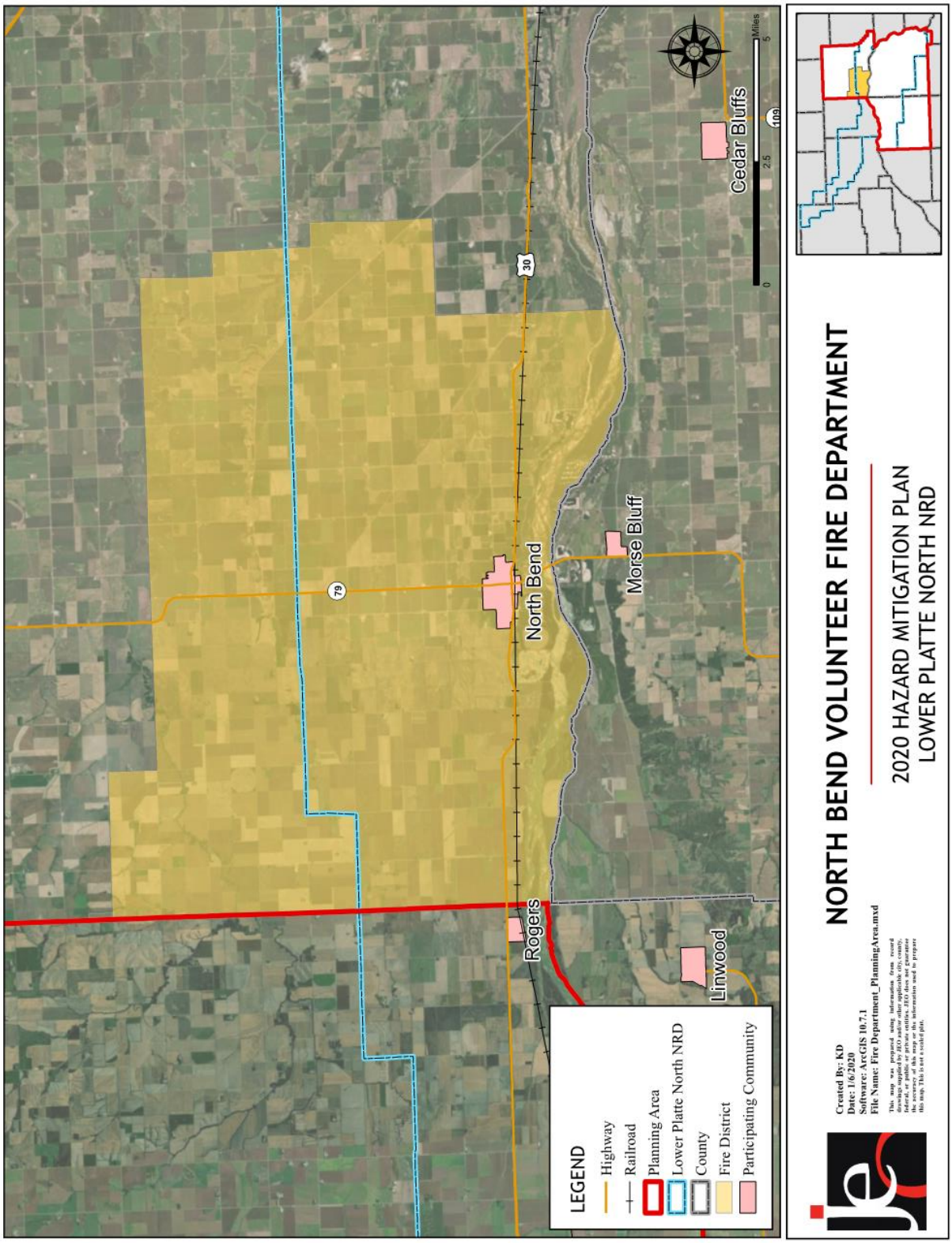
CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

Fixed chemical storage sites in the floodplain are a concern for the district because the risk of a spill and contaminated water supply are larger at these sites. The district has turnout gear and hazmat ops training in case they are called to respond to a spill. Information on chemical storage sites can be found in the City of North Bend and Dodge County profiles.

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

Figure NFD.1: North Bend Volunteer Fire Department



CRITICAL FACILITIES

The planning team identified critical facilities necessary for the fire district's disaster response and continuity of operations per the FEMA Community Lifelines guidance. The following table and figure provide a summary of the critical facilities for the North Bend Volunteer Fire Department.

Table NFD.2: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Fire Station	No	Yes	Yes

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

CHEMICAL FIXED SITES

Anhydrous ammonia storage is a concern in the district. Spills have occurred when the tanks are transported. The fire station is about four blocks from a storage facility. Residents of North Bend are not educated on the threat of chemical spills or spill response. The fire district has spill response training and gear for the operational level.

CHEMICAL TRANSPORTATION

Chemicals are often transported on US Highway 30 and the Union Pacific Railroad through the district. The fire station is located along these routes. A chemical spill would require response by the fire department. They have hazmat ops training in case of a spill.

FLOODING

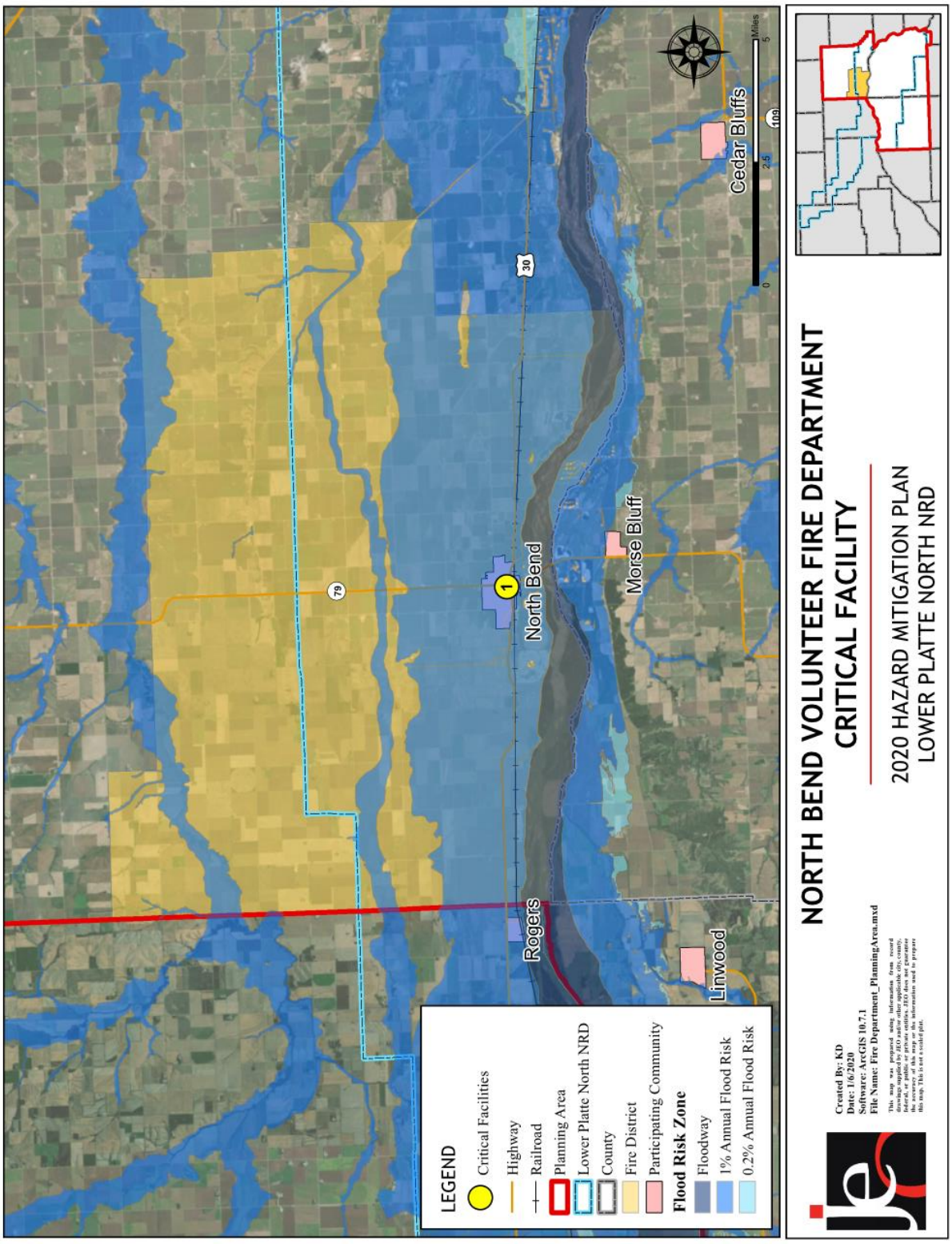
Recent severe flooding has occurred in 2019, 2010, and 2007. Flooding of the Platte River and Shell Creek is a larger concern than flash floods for the community. The North Platte River and an area south of the expressway are most prone to flooding. Much of the district has poor stormwater drainage. The fire station has been damaged by flooding in the past.

LEVEE FAILURE

There are two levees along the Platte River in the district: from the Platte River bridge stretching west four miles and the Cotterell Diking and Drainage District to the east of the City of North Bend. A third levee in the district is on County Road 3, stretching along Shell Creek. This Shell Creek levee is of most concern because it protects all of North Bend and the surrounding lake communities. Levee failure could cause flood damage, damage to streets and roads, sewer system backups, well contamination, evacuations, people stranded by flood waters, and necessitate Mutual Aid supplies and support. The levees in the district have been able to provide

100-year flood protection but are damaged after the March 2019 floods so they will be vulnerable to future floods until they are repaired.

Figure NFD.1: Critical Facilities



TORNADOES

Two tornadoes have occurred in the district in recent history. A funnel cloud appeared in 1998 but caused no damage. In 1999 a tornado damaged homes, trees, and power lines. The City of North Bend has a warning siren for severe weather, activated by the fire department, but it does not reach the surrounding lake communities. County Emergency Management does offer text alerts. There are no FEMA certified safe rooms in the district. In case of a disaster Mutual Aid Agreements are in place with surrounding fire departments.

STAFFING

The North Bend Volunteer Fire Department is supervised by a five-member rural board and a fire chief who will oversee the implementation of hazard mitigation projects. 22 volunteers are registered to help with emergency response. Other offices are listed below.

- Fire Chief
- Assistant Fire Chief
- Rescue Captain (2)
- Fire Captain
- President
- Vice President
- Secretary
- Fire Lieutenant
- EMS Lieutenant
- Fire Fighters
- EMT
- Paramedics

CAPABILITY ASSESSMENT

The North Bend Volunteer Fire Department will continue to utilize existing relationships with local, county, state, and federal agencies in the implementation of mitigation projects. In 2007 the district applied and won a safer grant to purchase an air pack. In 2008 they won a second safer grant for turnout gear. Tax funds are used to pay for any cost sharing associated with awarded grants. Due to the unique structure of fire districts, the typical capability assessment table was not used. The following table summarizes the district's overall capabilities.

The district has two fire engines, two squad cars, a heavy rescue truck, an off-road tanker pumper, a grass rig, and two command vehicles available for response. They participate in National Night Out, the local health fair, and school visits to educate the public on fire safety and prevention.

Table NFD.3: Overall Capability Assessment

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

PLAN INTEGRATION

North Bend Fire Department has response plans for flooding and railroad accidents. These plans outline the procedures to follow when going out on a flooding or railroad accident call. No other examples of plan integration were identified. There are currently no plans to further integrate existing or future planning mechanisms.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATOR
Description	Purchase a backup generator for the new fire station.
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by size
Funding	General Fund
Timeline	2-5 years
Priority	Medium
Lead Agency	Fire Chief
Status	New action. Not started

MITIGATION ACTION	BUILD A NEW FIRE STATION
Description	The fire department would like to build a new fire station as the old one is not large enough
Hazard(s) Addressed	All hazards
Estimated Cost	$500,000+
Funding	General Fund, Fundraiser
Timeline	2-5 years
Priority	High
Lead Agency	Rural Fire Board
Status	New action. Planning stage, the department is looking at potential locations and funding options

TOWNSHIP PROFILE

PLATTE TOWNSHIP

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

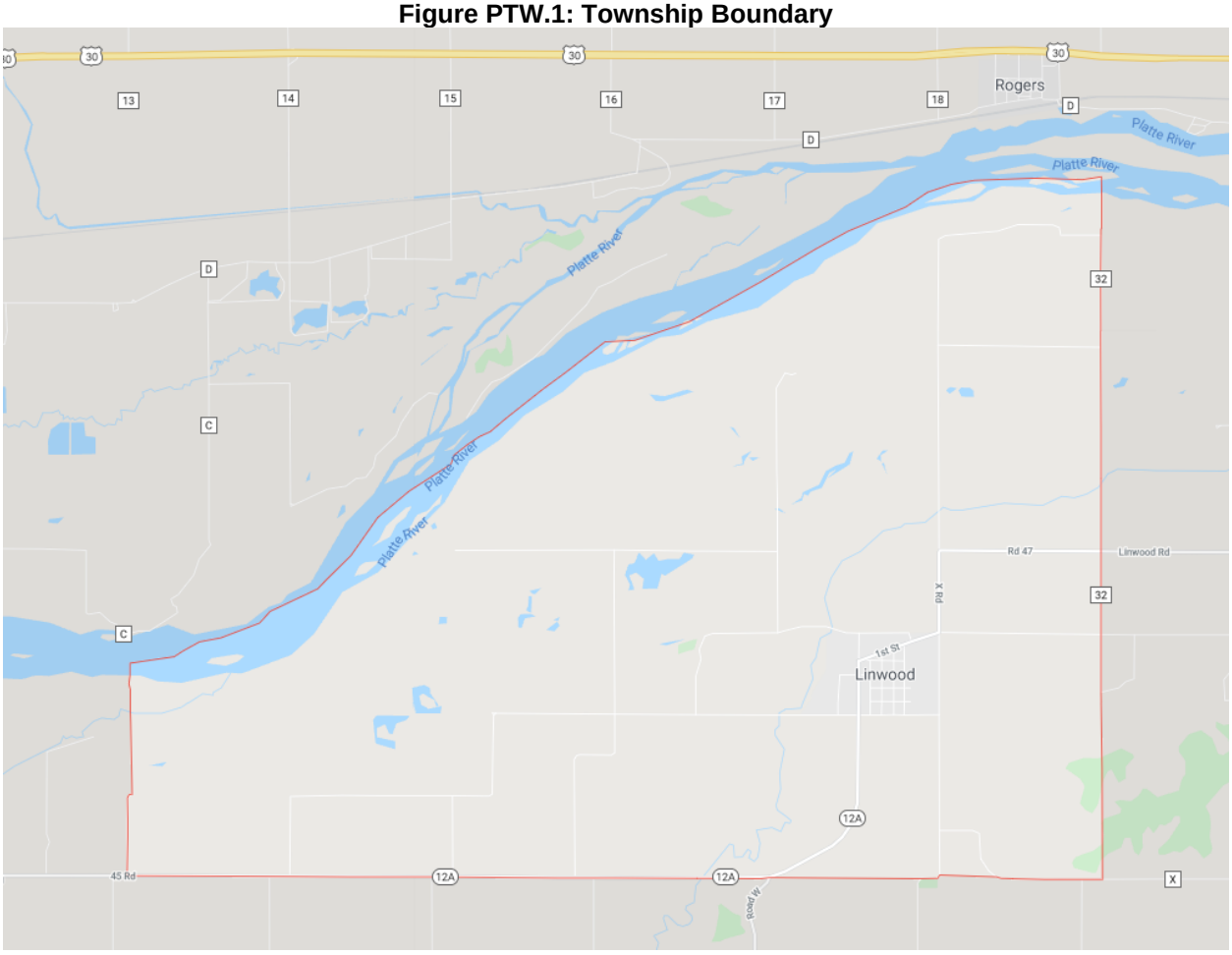
Table PTW.1: Local Planning Team

NAME	TITLE	JURISDICTION
Will A. Eaton	Chairperson	Platte Township
Mike Croghan	Treasurer	Platte Township
Frank Peltz	Board Member	Platte Township

LOCATION AND GEOGRAPHY

The Platte Township is a 17 square mile subdivision of Butler County, located in the northeast corner of the county. The township is responsible for maintaining approximately 20 miles of road. Figure BLR.1 shows the location of the township. All large culverts and bridges are maintained by the county.

Figure PTW.1: Township Boundary



FUTURE DEVELOPMENT TRENDS

There have been no developments in the township in the past five years and none are anticipated in the coming five years.

CRITICAL INFRASTRUCTURE

CRITICAL FACILITIES

The Platte Township does not own any structures or equipment, therefore does not have any critical facilities.

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

FLOODING

Platte Township has experienced recurrent flood impacts. The March 2019 flooding event washed out roads throughout the region. Prior to that, Skull Creek flooded repeatedly over the years as it passed through the Village of Linwood. Flash flooding is a larger concern in the community than riverine flooding, impacting the areas adjacent to Skull Creek and the Platte River.

GRASS/WILDFIRE

In 2012 a fire in a wooded area two miles from the Village of Linwood burned for a week before it was controlled. Grass and wildfires like the 2012 fire are a concern for the township because they threaten the wooden bridges in the district. The Linwood Volunteer Fire Department is available to respond to fires in the region, with help from other local fire departments as indicated by mutual aid agreements. The jurisdiction does not have a Wildland-Urban Interface Code to protect structures from fires.

SEVERE THUNDERSTORMS AND HAIL

Thunderstorm winds, flooding, hail, and downed trees and power lines are the most concerning impacts of severe thunderstorms for the township. Severe thunderstorms are a common occurrence in the region from spring to fall. There are hazardous trees throughout the township that are vulnerable to severe storms. The township does carry insurance in case of damage from events such as severe storms.

SEVERE WINTER STORMS

Several severe winter storms have occurred in the region, but the most significant was in March 2000 when power was lost for 16 hours. Severe winter storms can cause blocked roads, power outages, and hazardous travel in the township. This is especially concerning when travel is restricted during an emergency. There are no designated snow routes or snow fences in use in the township to aid in snow removal. The township relies on other townships or the county for snow removal services.

GOVERNANCE

The township is governed by a three-member board of directors including a chairperson, secretary, and treasurer. They do not employ any staff. All maintenance and repair work are contracted out. Funding for the township comes from property taxes.

CAPABILITY ASSESSMENT

The board of directors are responsible for implementing any mitigation actions.

Table PTW.2: Capability Assessment

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

PLAN INTEGRATION

No formal plans are in place for the township. The board of directors meets once a month to identify issues and decide if action need to take place.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	HAZARDOUS TREE REMOVAL
Description	Develop and implement tree maintenance and trimming program to remove hazardous limbs and trees.
Hazard(s) Addressed	Severe thunderstorms, tornadoes and high winds, severe winter storms
Estimated Cost	$100+ per tree
Funding	District budget
Timeline	Ongoing
Priority	Low/Medium
Lead Agency	District Board
Status	Ongoing, as issue are identified

MITIGATION ACTION	STORMWATER SYSTEM IMPROVEMENTS
Description	Drainage improvements may include ditch upsizing, ditch cleanout and culvert improvements. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other stormwater system improvements.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	Township budget
Timeline	Ongoing
Priority	Medium
Lead Agency	District Board
Status	Ongoing, as issues are identified.

DISTRICT PROFILE

PLATTE VALLEY DRAINAGE DISTRICT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

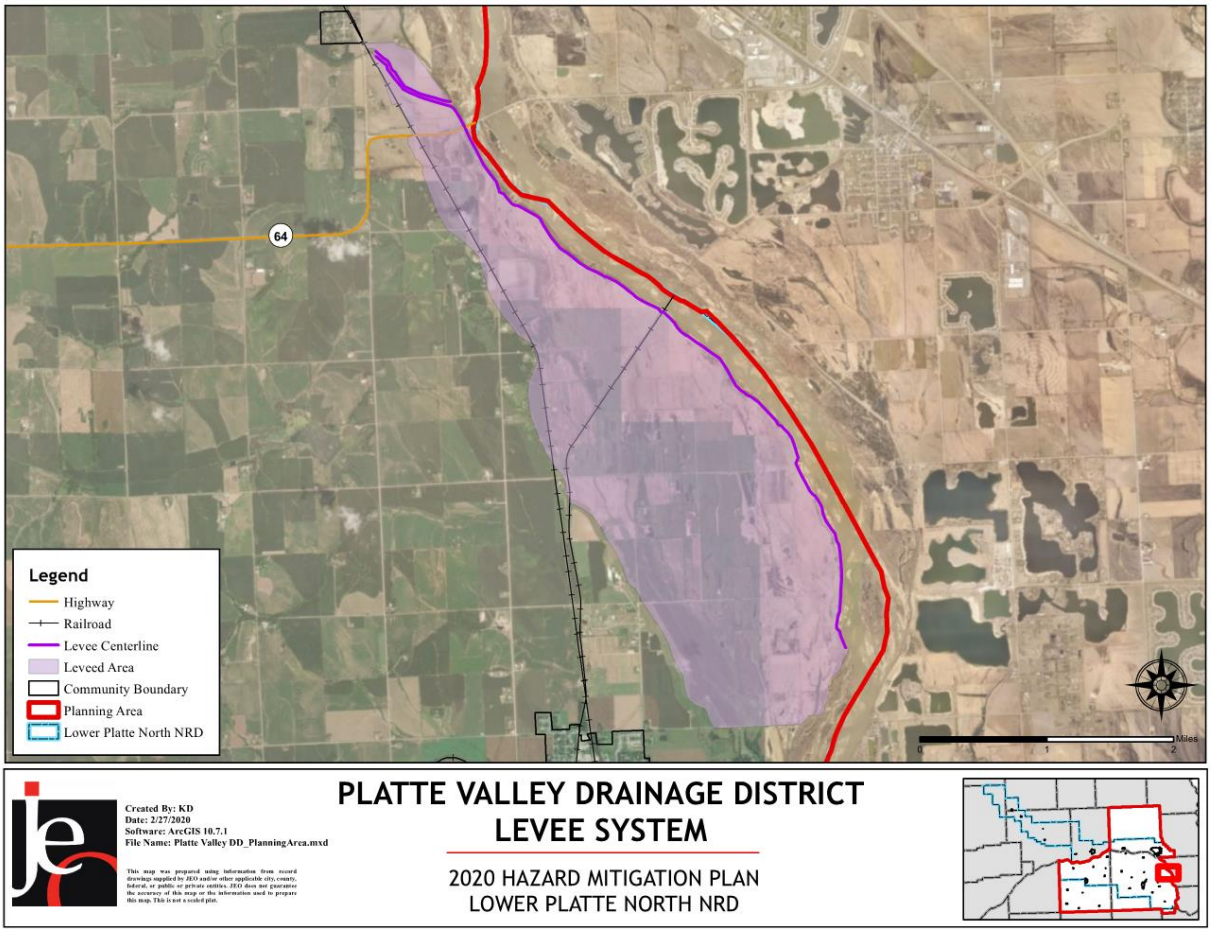
Table PVD.1: Platte Valley Drainage District Local Planning Team

NAME	TITLE	JURISDICTION
Ron Drews	District Board Member	Platte Valley Drainage District
Kent Merryweather	District Board Member	Platte Valley Drainage District

LOCATION AND GEOGRAPHY

Platte Valley Drainage District is an organized levee authority that owns and maintains the Platte Valley Drainage District Levee System located in eastern Saunders County. The levee centerline runs approximately north to south from Leshara to Yutan along the Platte River for 6.36 miles. It is estimated that the levee system protects 30 people and 16 structures estimated at $5,680,000. The district was created in 1918 in order to protect agricultural land from flooding.

Figure PVD.1: Platte Valley Drainage District Levee System



FUTURE DEVELOPMENT TRENDS

The drainage district does not plan to develop or add ditches in the district in the near future. Improvements to the existing levee is likely to be made. The district would like to remove trees and add gravel to the top of the levee for easier access.

CRITICAL INFRASTRUCTURE

CRITICAL FACILITIES

The Platte Valley Drainage District does not have critical facilities as it does not own any buildings.

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

FLOODING

The 2019 March flooding of the Platte River caused several breaches and eventually put the Platte Valley Drainage District's levee underwater. Every year the district makes repairs to the levee due to high river levels eroding away the bank.

LEVEE FAILURE

The drainage district's levee failed during the 2019 March flood event, flooding farmland roads and threatening Union Pacific Railroad rail lines and the Keystone oil pipeline. Eight total spots along the levee were either damaged or breached. On the southern tip of the levee, flood waters destroyed a 1,000-foot section. Two other holes (50 feet and 100 feet) were also created on the northern half of the levee. The rail line was closed for a month due to damage. County roads were also washed out and flooded. Water surrounded many houses in the area and most had water in the basements. It took ten days for the water to fully drain out of the district which impacted pastureland and livestock. On the south end of the district many fields have several feet of sand making it impossible to grow crops. The local planning team indicated that the pipeline was not affected by the floodwaters. The levee is not FEMA certified and it needs extensive repairs after the flood.

GOVERNANCE

The Platte Valley Drainage District is governed by a two-member board of directors. They do not employ any staff. The district's funds come from taxes on properties protected by the levee. Funds are typically $5,000 to $10,000 a year.

CAPABILITY ASSESSMENT

The drainage district's board of directors is responsible for implementing any mitigation projects. Repair work is contracted out to private companies.

Table PVD.2: Capability Assessment

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

PLAN INTEGRATION

The district does not have any formal planning documents in place. Once an issue is identified the district works to repair the issue.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	HAZARDOUS TREE REMOVAL
Description	Develop and implement tree maintenance and trimming program to remove hazardous limbs and trees. Remove trees and shrubs so access on the levee is improved.
Hazard(s) Addressed	Flooding, Levee failure
Estimated Cost	$200 per tree
Funding	General budget
Timeline	Ongoing
Priority	Medium
Lead Agency	Board of directors
Status	New Action. Ongoing, trees are removed as funding is available.

MITIGATION ACTION	LEVEE/FLOODWALL CONSTRUCTION AND/OR IMPROVEMENTS
Description	Levees and floodwalls serve to provide flood protection to businesses and residents during large storm events. Improvements to existing levees and floodwalls will increase flood protection. The district would like to standardize the height of the levee and fortify it to withstand large flood events.
Hazard(s) Addressed	Flooding, Levee failure
Estimated Cost	$2,000,000+
Funding	General budget
Timeline	2-5 years
Priority	High
Lead Agency	Board of directors
Status	New Action. In process, currently the design is completed, and the district is waiting on funding.

TOWNSHIP PROFILE

POHOCCO TOWNSHIP

LOWER POHOCCO NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table PHT.1: Pohocco Township Local Planning Team

NAME	TITLE	JURISDICTION
Jim Ondracek	Township Chairman	Pohocco Township

LOCATION AND GEOGRAPHY

The Pohocco Township primarily handles road maintenance within the township boundaries. It is located in the northern Saunders County and covers 28 miles of county roads. Figure SAU.8 shows the location of the township. All large culverts and bridges are maintained by the county.

Figure PHT.1: Pohocco Township Location

FUTURE DEVELOPMENT TRENDS

The township has not had any new developments in the past five years and has no plans for future developments.

CRITICAL INFRASTRUCTURE

CRITICAL FACILITIES

The Pohocco Township does not have critical facilities. However, it does own a motor grader and fuel tank that is stored at one of the board member private residence.

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

FLOODING

Excess amounts of water have the potential to damage roads. The township usually experiences excess water as a result of heavy rains or fast snow melts. The creeks flooding throughout the township are more of a concern than the Platte River. Stormwater drainage is poor throughout the district.

SEVERE THUNDERSTORMS, TORNADOES, AND HIGH WINDS

Severe thunderstorms and high winds have the potential to block roads with downed trees and to cause water damage. Hazardous trees line county roads in several places. Property owners are in charge of tree maintenance on their property. The township does not have any enforcement powers to remove hazardous trees.

SEVERE WINTER STORMS

Road closures are the major concern for the township regarding severe winter storms. The township has access to a motor grader and a v-plow to remove snow from county roads have a significant event. These resources are not sufficient for the large number of roads under the township's jurisdiction. Often the township has to request assistance from the county roads department. Drifting is an issue in certain areas; however, snow fences are not installed due to a potential liability issue.

GOVERNANCE

The township is governed by a three-member board of directors including a chairperson, secretary, and treasurer. They employee two part-time additional staff to help operate equipment.

CAPABILITY ASSESSMENT

The township's board of directors is responsible for implementing any mitigation projects. Once projects go beyond the ability of the township, the county will step in.

Table PHT.2: Capability Assessment

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

PLAN INTEGRATION

No formal plans are in place for the township. Once an issue is identified, the township will take action.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	CIVIL SERVICE IMPROVEMENTS
Description	Improve emergency rescue and response equipment and facilities by providing additional or updating existing equipment. A small backhoe is needed for cleaning out ditches. Additional attachments are also needed for the grader.
Hazard(s) Addressed	All Hazards
Estimated Cost	Varies
Funding	Tax Levy, Township Budget
Timeline	2-5 years
Priority	Medium
Lead Agency	Township Board
Status	New Action. Not Started

DISTRICT PROFILE

SCHUYLER VOLUNTEER FIRE DEPARTMENT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table SFD.1: Schuyler Volunteer Fire Department Local Planning Team

NAME	TITLE	JURISDICTION
Brad Sock	Fire Chief	Schuyler Volunteer Fire Department

LOCATION AND GEOGRAPHY

The Schuyler Volunteer Fire Department has jurisdiction over 134,000 acres of land in southern Colfax County, surrounding the City of Schuyler, the Village of Richland, and the Village of Rogers. The Platte River forms the southern boundary of the district. The fire district mainly addresses grass and wildfire in the region's rural area.

TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors and areas more at risk of transportation incidents. US Highway 30 and Nebraska State Highway 15 travel through the fire district. US Highway 30 is traveled by a total annual average of 11,390 vehicles daily, 1,505 of which are trucks. State Highway 15 is traveled by a total annual average of 5,720 vehicles daily, 350 of which are trucks.[19] A Union Pacific Railroad rail line runs east to west through the southern part of the district. Highway 30 and the railroad are the transportation routes of most concern to the district because of their heavy traffic. Chemicals are regularly transported on these routes. In the past, a tanker crash led to a chemical release.

DEMOGRAPHICS

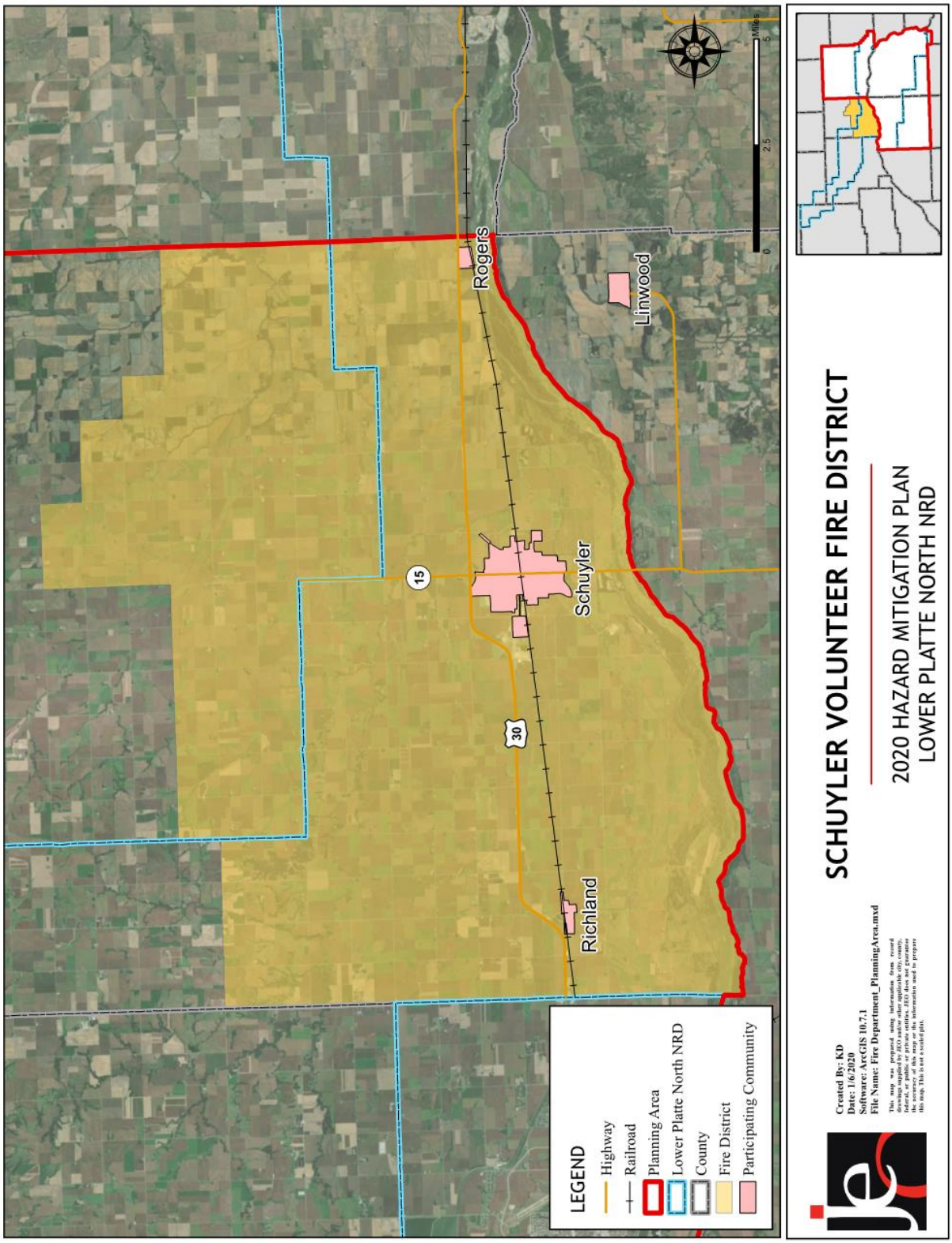
The Schuyler Volunteer Fire Department serves approximately 6,200 people. See the City of Schuyler, Village of Richland, Village of Rogers, profiles for regional demographic information. Demographic details on Colfax County can be found in the 2019 Lower Elkhorn NRD Multi-Jurisdictional Hazard Mitigation Plan.

FUTURE DEVELOPMENT TRENDS

There have been no changes in the district in the past five years and no plans in place for future developments.

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

Figure SFD.1: Schuyler Volunteer Fire Department



CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

Co-ops in the district are especially concerning for the fire district because of the number of facilities, hazardous nature of the chemicals stored, and amount of transportation to and from sites. The department has the appropriate gear and training to respond to a chemical spill. Information on chemical storage sites can be found in the City of Schuyler, Village of Richland, and Village of Rogers profiles. Refer to the 2019 Lower Elkhorn NRD Multi-Jurisdictional Hazard Mitigation Plan for information of chemical storage sites in Colfax County.

CRITICAL FACILITIES

The planning team identified critical facilities necessary for the fire district's disaster response and continuity of operations per the FEMA Community Lifelines guidance. The following table and figure provide a summary of the critical facilities for the Schuyler Volunteer Fire Department.

Table SFD.2: Critical Facilities

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

HISTORICAL OCCURRENCES

See the Colfax County Hazard Loss History table in Appendix E for a hazard matrix and historical hazard events, including the number of events, damage estimates, and any fatalities or injuries.

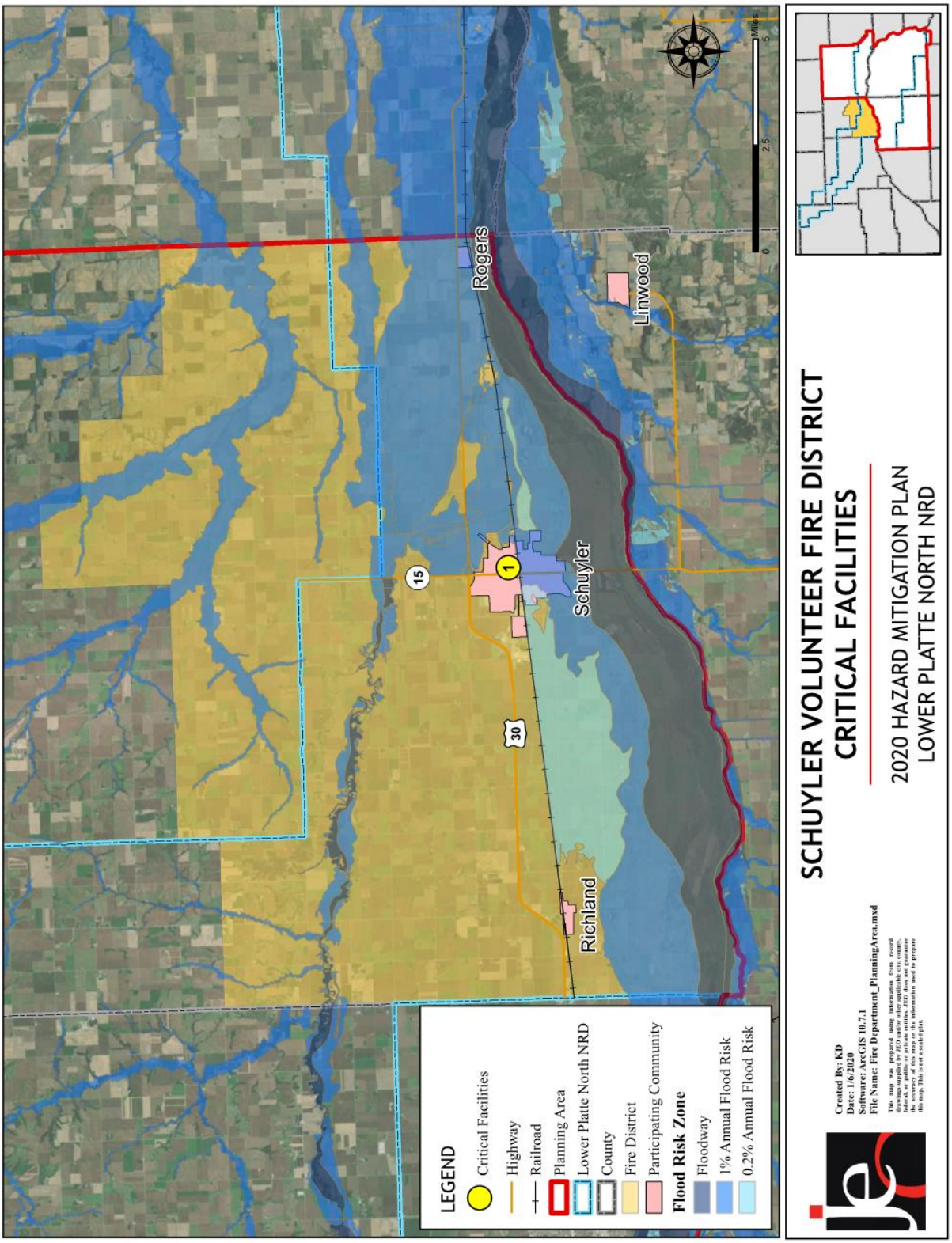
HAZARD PRIORITIZATION

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

CHEMICAL SPILLS (TRANSPORTATION)

Chemicals are often transported on Highway 30 and the Union Pacific Railroad. There are also a couple of Co-ops located in the district. The rail line caries a lot of ethanol but other chemicals are unknown, which concerns the local planning team. Anhydrous Ammonia is primarily the chemical that is transported on the highway. There have been small chemical releases due to fires and vehicle wrecks, but no major spills. The fire department has some staff trained to a HazMat awareness level, with minor amounts of technician training. However, if a large spill were to occur, the HazMat team from Columbus or the state would need to be called in. The fire department has two spill kits, blockage devices, and floor dry on hand to clean up small spills.

Figure SFD.2: Critical Facilities



FLOODING

Recent flooding has occurred in 2019, 2010, and 2007. The flooding in 2019 damaged the southern portion of Schuyler, roads, and structures near the Platte River. There were no impacts to the fire hall, but response to calls were impacted due to road closures. Currently bridges are still out which impacts response times. The Platte River and Shell Creek are the water bodies of most concern, but Shell Creek has not been an issue since the levee was built. Much of the district has poor stormwater drainage. When flooding occurs in the district, the fire department helps provide manpower to evacuate residents and sandbag. They also provide additional assistance to County Emergency Management.

GRASS/WILDFIRES

Wildfires and structure fires are the primary hazards of concern for the Schuyler Fire Department. The department responds to approximately 80-100 fires a year. Typically, those are small fires which are easily put out. The district has two pumpers, an aerial, two tankers, a utility truck, two grass rigs, and an ATV for use by the two rescue squads for response. There are usually around 38 volunteer staff.

LEVEE FAILURE

There are two levees in the district: The Schuyler – Lost Creek and Platte River RB levee and the Schuyler – Shell Creek RB levee. Both levees are a concern because they protect parts of Schuyler and the surrounding lake communities. Levee failure could cause flood damage, damage to streets and roads, sewer system backups, well contamination, evacuations, people stranded by flood waters, and necessitate mutual aid supplies and support. The levees in the district have been able to provide 100-year flood protection but are damaged after the March 2019 floods so they will be vulnerable to future floods until they are repaired.

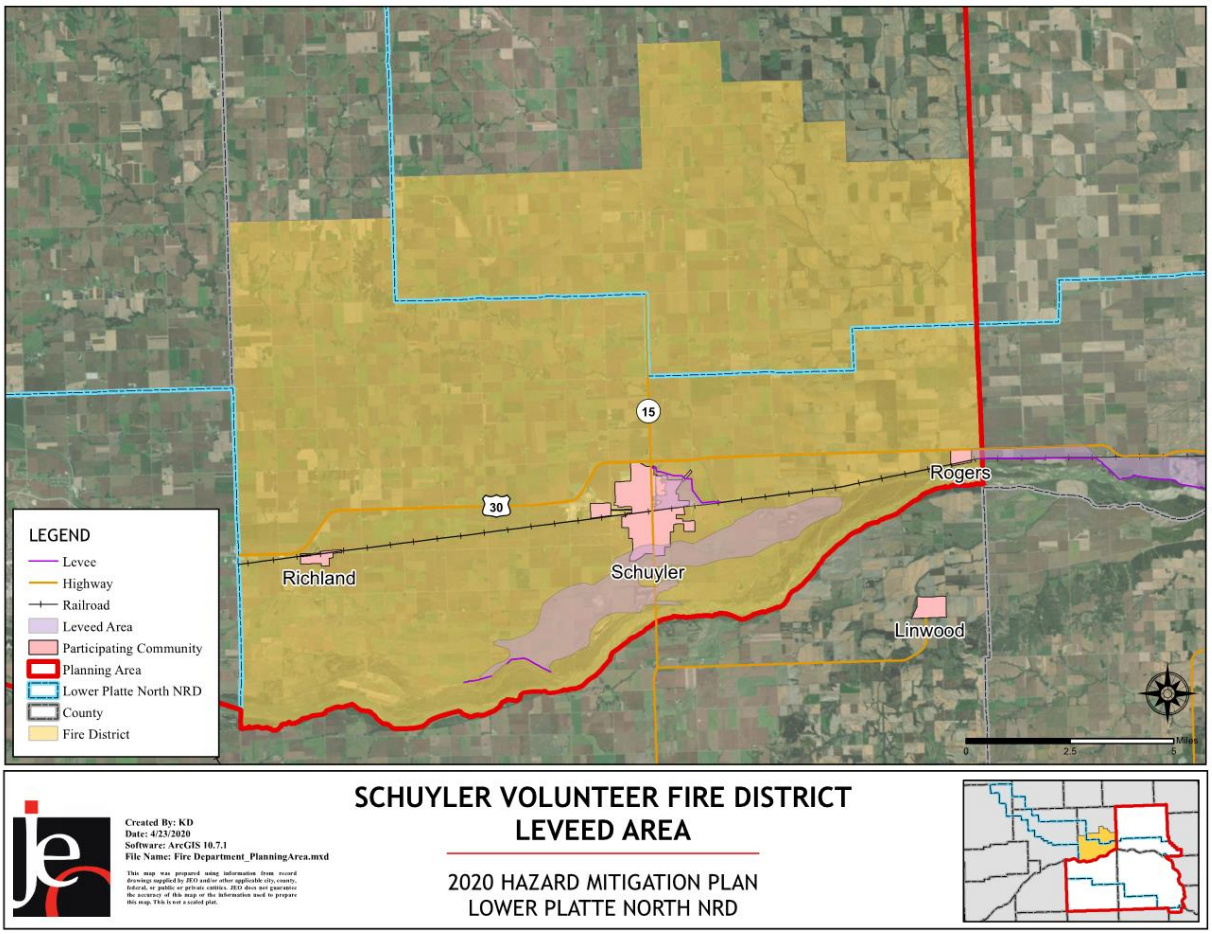
SEVERE WINTER STORMS

The primary concern related to severe winter storms is heavy snow and ice storms affecting response capabilities of the department. Damage to the fire hall is not a concern as it is a brick building and has not been damaged in the past. Snow removal is done by the communities within their jurisdictions, the state on the highways, and the county on the county roads. The local planning team indicated that snow removal could be better across the district, but the fire department does not have control of that. The state does not plow at night, which has impacted road conditions during night calls.

TORNADOES AND HIGH WINDS

No tornadoes have impacted Schuyler or the other villages, but some have occurred in the rural areas. However, if a tornado were to touch down in a community, the potential damages would be high. The fire department would help in the rescue, recovery, and clean-up stages. Power loss is not a concern as the fire hall has a backup generator. The building is also insured should any damages occur. In the event of a power surge, electronic devices have surge protectors. Records are not backed up. For notification, the fire department does storm spotting on occasion and has a weather radio in the fire hall.

Figure SFD.3: Levee Area



STAFFING

The Schuyler Volunteer Fire Department is supervised by a five-member rural board and a fire chief who will oversee the implementation of hazard mitigation projects. 38 volunteers are registered to help with emergency response. Other offices are listed below.

- Fire Chief
- Assistant Fire Chief
- Rescue Captain
- Fire Captain
- President
- Vice President
- Treasurer
- Secretary

CAPABILITY ASSESSMENT

The Schuyler Volunteer Fire Department will continue to utilize existing relationships with local, county, state, and federal agencies in the implementation of mitigation projects. The district has not applied for grants in the past. Due to the unique structure of fire districts, the typical capability assessment table was not used. The following table summarizes the district's overall capabilities.

Table SFD.3: Overall Capability Assessment

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

PLAN INTEGRATION

The Schuyler Fire Department has a five- and ten-year plan and standard operating guild lines (SOGs). The five- and ten-year plan outlines any potential facility improvements or equipment that is planned over those time periods. SOGs cover the response procedures to any type of call that the fire department could receive. The district does not have any other types of formal planning documents.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATOR
Description	Identify and evaluate current backup and emergency generators. Obtain additional generators based on identification and evaluation. Provide portable or stationary source of backup power to the fire hall.
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by size
Funding	General fund
Timeline	5+ years
Priority	Low
Lead Agency	Fire Chief
Status	New action. Not started

MITIGATION ACTION	BUILD A NEW TRAINING FACILITY
Description	Build a new training tower east of 16th Street.
Hazard(s) Addressed	All hazards
Estimated Cost	$300,000+
Funding	General fund
Timeline	5+ years
Priority	Medium
Lead Agency	Fire Chief
Status	New action. Planning stage, the department is working with the Schuyler Utility Department on the location

MITIGATION ACTION	CIVIL SERVICE IMPROVEMENTS
Description	Improve emergency rescue and response equipment and facilities by providing additional or updating existing equipment. For example: backup systems for emergency vehicles, training additional personnel, upgrading radio systems, etc. The district would like to upgrade the radio system to digital.
Hazard(s) Addressed	All hazards
Estimated Cost	$300,000+
Funding	General fund
Timeline	5+ years
Priority	High
Lead Agency	Fire Chief
Status	New action. Planning stage, the project is identified int eh five- and ten-year plan

DISTRICT PROFILE

WESTON VOLUNTEER FIRE & RESCUE DEPARTMENT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table WVF.1: Weston Volunteer Fire & Rescue Department Local Planning Team

NAME	TITLE	JURISDICTION
Bruce Arp	Fire Chief	Weston Volunteer Fire & Rescue

LOCATION AND GEOGRAPHY

The Weston Volunteer Fire & Rescue Department has jurisdiction over the area surrounding the Village of Weston in western Saunders County, covering approximately 35,200 acres of land. The fire district mainly addresses grass and wildfire in the region's rural area.

TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors and areas more at risk of transportation incidents. Nebraska State Highways 79 and 92 both travel through the Weston fire district. Nebraska State Highway 79 is traveled by a total annual average of 1,110 vehicles daily, 110 of which are trucks. Nebraska State Highway 92 is traveled by a total annual average of 4,725 vehicles daily, 475 of which are trucks.[20] Along with these two highways, North T Corner Road, South T Corner Road, and Country Road J are the most vulnerable transportation routes in the district because anhydrous ammonia, liquid fertilizer, and agricultural pesticides and herbicides are transported along these routes.

DEMOGRAPHICS

See the Village of Weston and the Saunders County profiles for regional demographic information. The district serves approximately 1,500 people.

FUTURE DEVELOPMENT TRENDS

There have been no changes to the district in the past five years and there are no developments planed for the next five years.

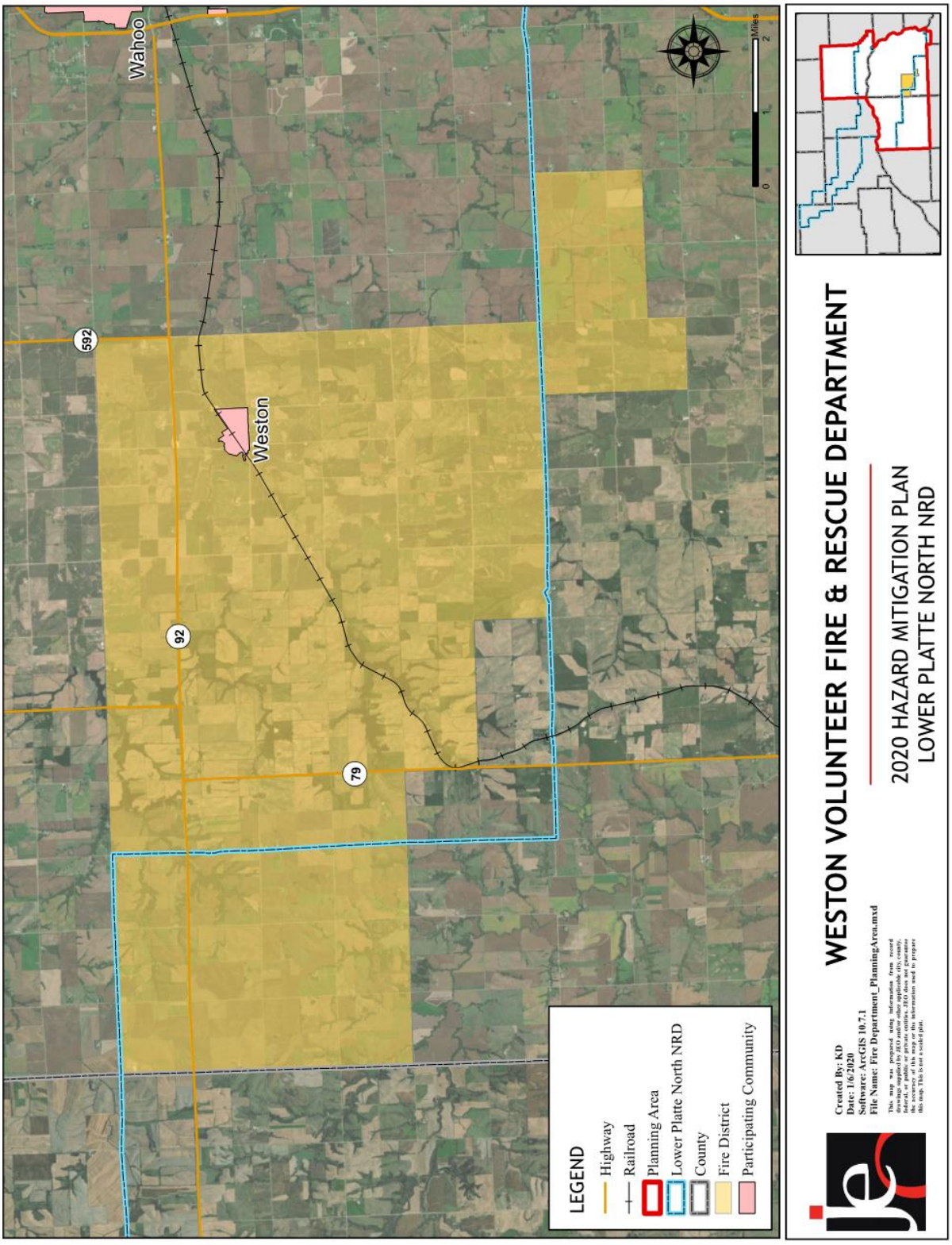
CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

Information on chemical storage sites can be found in the Village of Weston and Saunders County profiles. The fire department is most likely to see anhydrous ammonia leaks and spills at the co-ops surrounded the Village of Weston. They do not have the gear or training necessary to respond to spills.

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

Figure WVF.1: Weston Volunteer Fire & Rescue Department



CRITICAL FACILITIES

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

Table WVF.2: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Fire Hall	No	No	No
2	Lift Station	No	Yes	No
3	St. John Nepomucene Catholic School & Church	No	No	No
4	Village Hall	No	No	No
5	Water Tower	No	No	No
6	Water Well	No	No	No
7	Water Well	No	Yes	No

HISTORICAL OCCURRENCES

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

HAZARD PRIORITIZATION

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

CHEMICAL FIXED SITES

There have been multiple leaks from mobile anhydrous tanks in and around the community at the surrounding co-op facilities. These leaks pose a community health threat, with one family already evacuated and treated for ammonia exposure. The entire community is at risk from chemical spills because sites are located in the east and central parts of town. Community members have not been educated about the threat of chemical spills and appropriate response measures. The fire department is not trained to respond to a chemical spill and does not have the appropriate gear.

CHEMICAL TRANSPORTATION

Chemical spills, particularly from mobile anhydrous ammonia tanks, are a concern while chemicals are being transported to or from co-op facilities. There have been incidents of mobile anhydrous ammonia tanks leaking, both in town and other the northeast side of town. Another transportation incident occurred when a semi-tanker overturned with delivering anhydrous ammonia to a co-op facility, though no leak occurred. Highway 92, North T Corner Road, South T Corner Road, and the county roads surrounding Weston are all heavily traveled with vehicles transporting chemicals. Well #2 and fire hall are all located along main transportation routes.

FLOODING

Annual localized flooding occurs along Wahoo Creek because of heavy rain events. Impacts have been limited to several flooded residential basements in the Village of Weston. The community also has poor stormwater drainage.

GRASS/WILDFIRES

Grass and wildfires area concern for the district, especially when they are on the outskirts of towns, impacting residents and inundating structures. A lack of personnel and firefighting equipment is also a concern, especially during weekdays when most volunteers are working. There have been no fires near the Village of Weston but multiple large fires in the surrounding rural areas.

HIGH WINDS

High winds can lead to power outages and broken power lines. Windstorms are fairly common in the district. The fire hall does not have a generator to mitigate the impacts of prolonged power outages.

SEVERE THUNDERSTORMS

The fire district experiences large severe storms annually, causing property damage and localized flooding. The fire hall does not have a backup generator to protect its power supply in case of a surge from a lightning storm.

SEVERE WINTER STORMS

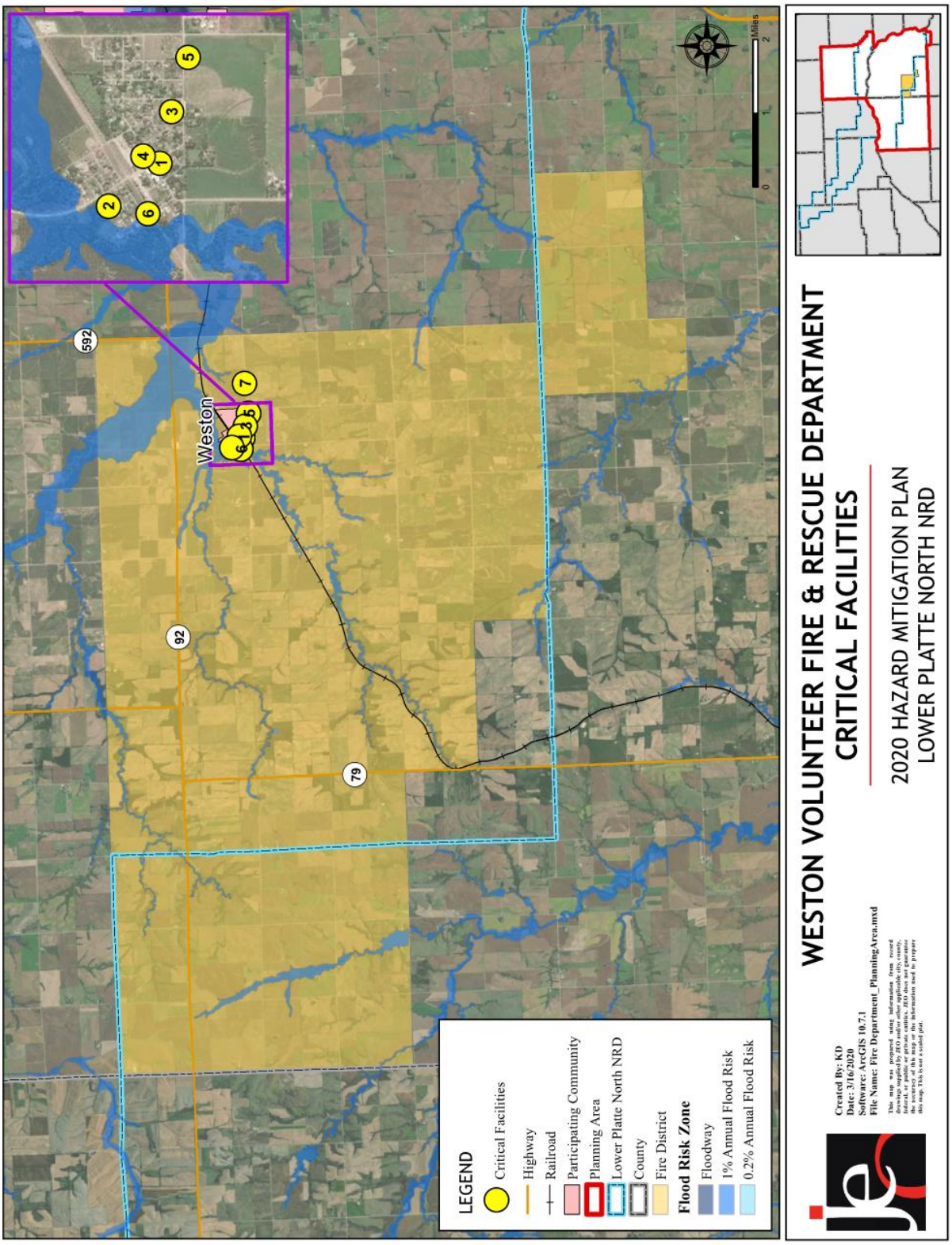
Heavy snow and ice storms occur annually in the district. Severe winter storms can cause power outages and road closures. Village maintenance and hired contractors are in charge of snow removal in the village.

TORNADOES

No tornadoes have occurred in the district, but a future event could be catastrophic. A warning sire is located in downtown Weston, activated by County Dispatch. There are no FEMA certified safe rooms in the district. In case of a disaster, Mutual Aid Agreements are in place with all surrounding fire departments.

The district owns one 2,100-gallon tanker truck, one pumper, two grass trucks, and one utility truck. They offer public outreach in their Fire Prevention Week program.

Figure WVF.2: Critical Facilities



STAFFING

Weston's fire district is supervised by a five-member rural fire district board and a fire chief who will oversee the implementation of hazard mitigation projects. 30 volunteers are registered to help with emergency response. Other offices are listed below.

- Assistant Fire Chief
- President/2nd Assistant Rescue Chief
- Secretary/Treasurer

CAPABILITY ASSESSMENT

Due to the unique structure of fire districts, the typical capability assessment table was not used. The following table summarizes the district's overall capabilities. The Weston Volunteer Fire & Rescue Department will continue to utilize existing relationships with local, county, state, and federal agencies in the implementation of mitigation projects. The district has applied for grants in the past and has been awarded funding for a tanker and miscellaneous equipment. Property tax levies are used to pay for any cost sharing associated with awarded grants.

Table WVF.3: Overall Capability Assessment

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

PLAN INTEGRATION

Weston Volunteer Fire and Rescue Department does not have any formal planning documents but does have standard operating guidelines. These guidelines outline any type of call that could be received what the response protocol is.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	Obtain a backup generator for the fire hall
Hazard(s) Addressed	All hazards
Estimated Cost	Varies by size
Funding	Tax revenue
Timeline	5+ years
Priority	High
Lead Agency	Weston Volunteer Fire & Rescue Department
Status	New Action. In Process. Generator and funding options are being considered

DISTRICT PROFILE

WOODCLIFF SID #8

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table WCF.1: Woodcliff SID #8 Local Planning Team

NAME	TITLE	JURISDICTION
Dave Langenfeld	Board Member – Roads Committee	Woodcliff SID #8 Woodcliff HOA
John Menning	Director	Woodcliff HOA
Lonnie Mahrt	Board Chairman	Woodcliff SID #8
Tommy Sawyer	Clerk	Woodcliff SID #8
Nick Borman	Trustee	Woodcliff SID #8
Barry Taylor	Trustee	Woodcliff SID #8
Tony Bromm	President	Woodcliff HOA
Terry Miller	Director	Saunders County Emergency Management
Rob Beneke	Fire Chief	Cedar Bluffs Rural Fire Dept

LOCATION AND GEOGRAPHY

The Woodcliff SID #8 is a private lake community in the northeastern portion of Saunders County, two miles south of the City of Fremont. The community covers approximately 128 acres surrounding two lakes that cover approximately 145 acres. The community lies immediately adjacent to the Platte River, which flows generally from the northwest to the southeast.

TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community and areas more at risk of transportation incidents. Woodcliff SID #8's major transportation corridor is US Highway 77, which is approximately a half mile west of the community. It is traveled by a total annual average of 5,605 vehicles daily, 880 of which are trucks.[21] A Burlington Northern Santa Fe rail line passes along the western edge of the community. Train derailment is the transportation incident of most concern for the community. Chemicals are transported on the rail line and highway daily, including hazardous chemicals like crude oil.

DEMOGRAPHICS

Woodcliff SID #8 has 441 housing lots. Although official records are not kept, it is estimated that about 1,000 people live at the SID during the peak summer months with 400 of those living there year-round. Over summer holidays like Memorial Day and the Fourth of July the population can swell to 10,000. A stable population will provide a reliable tax base to fund mitigation projects. The median age of Woodcliff SID #8's population is estimated to be 45 years old.

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

EMPLOYMENT AND ECONOMICS

MAJOR EMPLOYERS

There are five business tracts of land within the SID. Most employment is retail or food service related. Due to limited employment opportunities and the part-time nature of residency within the community, the majority of residents commute to work.

HOUSING

The total evaluation for the homes and properties in the SID are valued at approximately $140 million. One lot is available for new construction. The other available lots from the previous plan were re-platted to neighboring homeowners. All housing in Woodcliff SID #8 was built after 1965 when the SID was founded. The age of housing may indicate which housing units were built prior to the development of state building codes. Homes built within a flood hazard area before the adoption of their community's Flood Rate Insurance Map (FIRM) are not likely to be built above the 1% annual chance floodplain.

FUTURE DEVELOPMENT TRENDS

In the past five years many homes have been converted from small summer cabins to larger year-round houses. The planning team estimates that at least 30-40 homes have been updated and elevated out of the floodplain. Cedar Bluffs Rural Fire and Rescue has proposed a new fire hall within the Woodcliff boundaries. Discussion is also taking place for a new storage facility.

PARCEL IMPROVEMENTS AND VALUATION

The planning team acquired GIS parcel data from the County Assessor to analyze the location, number, and value of property improvements (e.g. buildings, paved lots, roads, etc.) at the parcel level. The data did not contain the number of structures on each parcel. The parcel data was analyzed to determine the number and valuation of property improvements located in the 100-year floodplain. A summary of the results of this analysis is provided in the following table. Note that assessor does not have information on whether or not a home has been elevated above the floodplain.

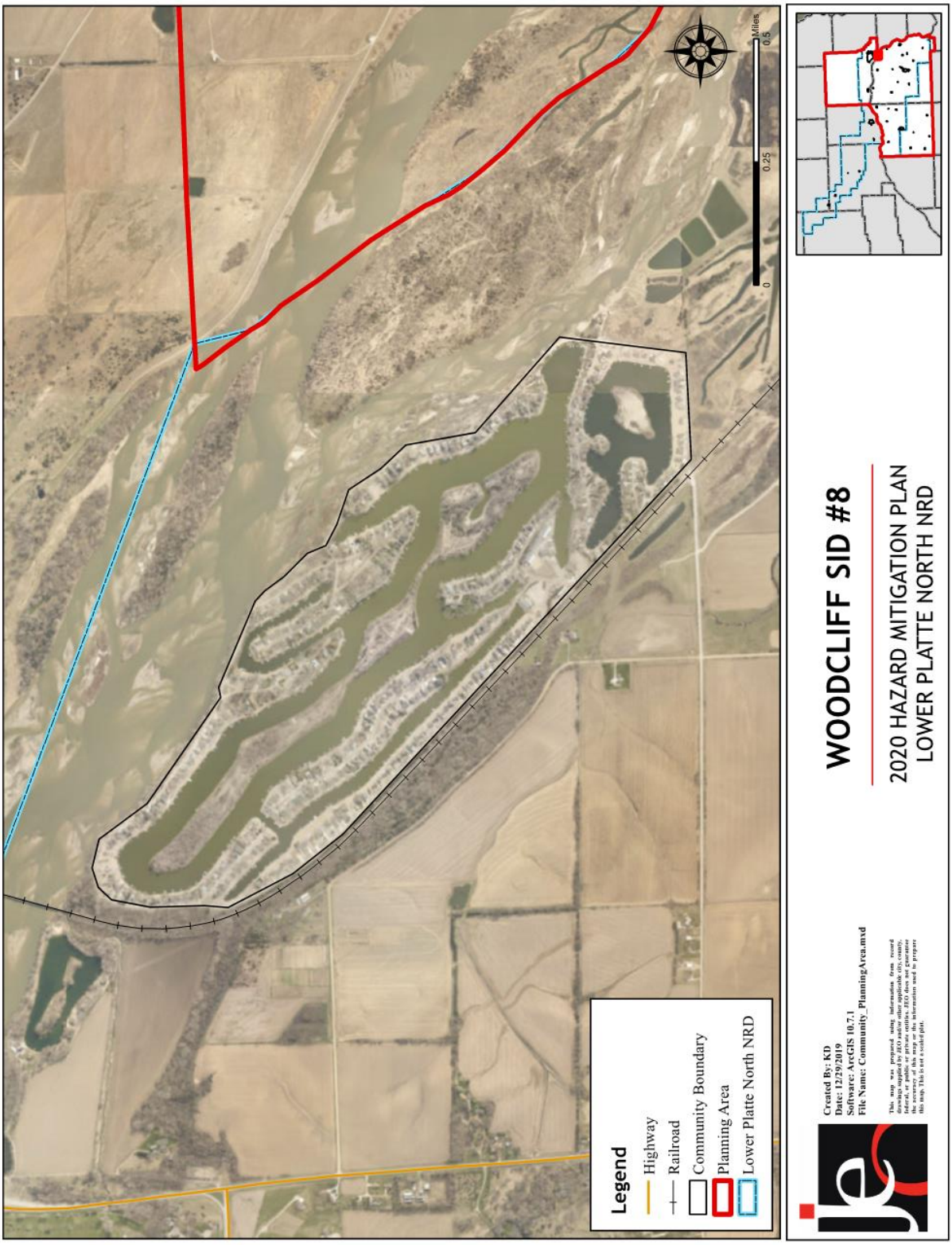
Table WCF.2: Parcel Improvements and Value in the Floodplain

NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	MEAN VALUE OF IMPROVEMENTS PER PARCEL	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN
431	$86,519,220	$200,741	431	$86,519,220

Source: GIS Workshop/Saunders County Assessor, 2019[22]

22 GIS Workshop/Saunders County Assessor. 2019. [Personal correspondence].

Figure WCF.1: Woodcliff SID #8



CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are a total of 14 fixed hazardous chemical storage sites within two miles of Woodcliff. The following table lists these sites. Chemical sites could be a concern for the community if a spill or leak contaminated the drinking water supply. Cedar Bluffs Fire and Rescue have protective gear and training to respond to chemical spills in the area.

Table WCF.3: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	IN FLOODPLAIN (YES/NO)
All Metals Market Inc	1225 Country Road Y	No
AmeriCold Logistics LLC	950 Schneider St	Yes
CRD Inc Transfer Station	1200 Hamilton St	Yes
Fremont Beef Company	960 Schneider St	Yes
Helena Agri-Enterprises LLC	1880 Proctor Rd	Yes
Horizon Biofuels Inc Pellets	950 S Union St	Yes
Jayhawk Boxes Inc	1150 S Union St	Yes
Magnus Division of LV Ventures	1300 Morningside Rd	Yes
Nutrien Ag Solutions	750 S Union St	Yes
OPPD Substation No 992	Jct Hwy 77 and Country Road W	No
Provimi North America Inc	943 Schneider St	Yes
Rawhide Chemoil Inc	1146 Proctor Rd	Yes
The Oilgear Company	905 S Downing St	Yes
WholeStone Farms Cooperative	900 S Platte Ave	Yes

Source: Nebraska Department of Environmental Quality, 2019[23]

23 Nebraska Department of Environmental Quality. 2019. "Nebraska DEQ Tier 2 Data Download: 2019." https://deq-iis.ne.gov/tier2/tier2Download.html.

CRITICAL FACILITIES

The planning team identified critical facilities necessary for Woodcliff SID #8's disaster response and continuity of operations per the FEMA Community Lifelines guidance. Critical facilities were identified during the 2015 planning process and revised for this plan update. The following table and figure provide a summary of the critical facilities for the community.

Table WCF.4: Critical Facilities

CF NUMBER	NAME	COMMUNITY SHELTER (YES/NO)	GENERATOR (YES/NO)	IN FLOODPLAIN (YES/NO)
1	Community Center	Yes	No	Yes
2	Sanitary Lift Station	No	No	Yes
3	Sanitary Lift Station	No	No	Yes
4	Sanitary Lift Station	No	No	Yes
5	Sanitary Lift Station	No	No	Yes
6	Sanitary Lift Station	No	No	Yes
7	Sewage Lagoons	No	No	Yes
8	Water Tower	No	No	No
9	Well #1	No	No	No
10	Well #2	No	No	No
11	Woodcliff Lakes Association General Office	No	No	Yes

HISTORICAL OCCURRENCES

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

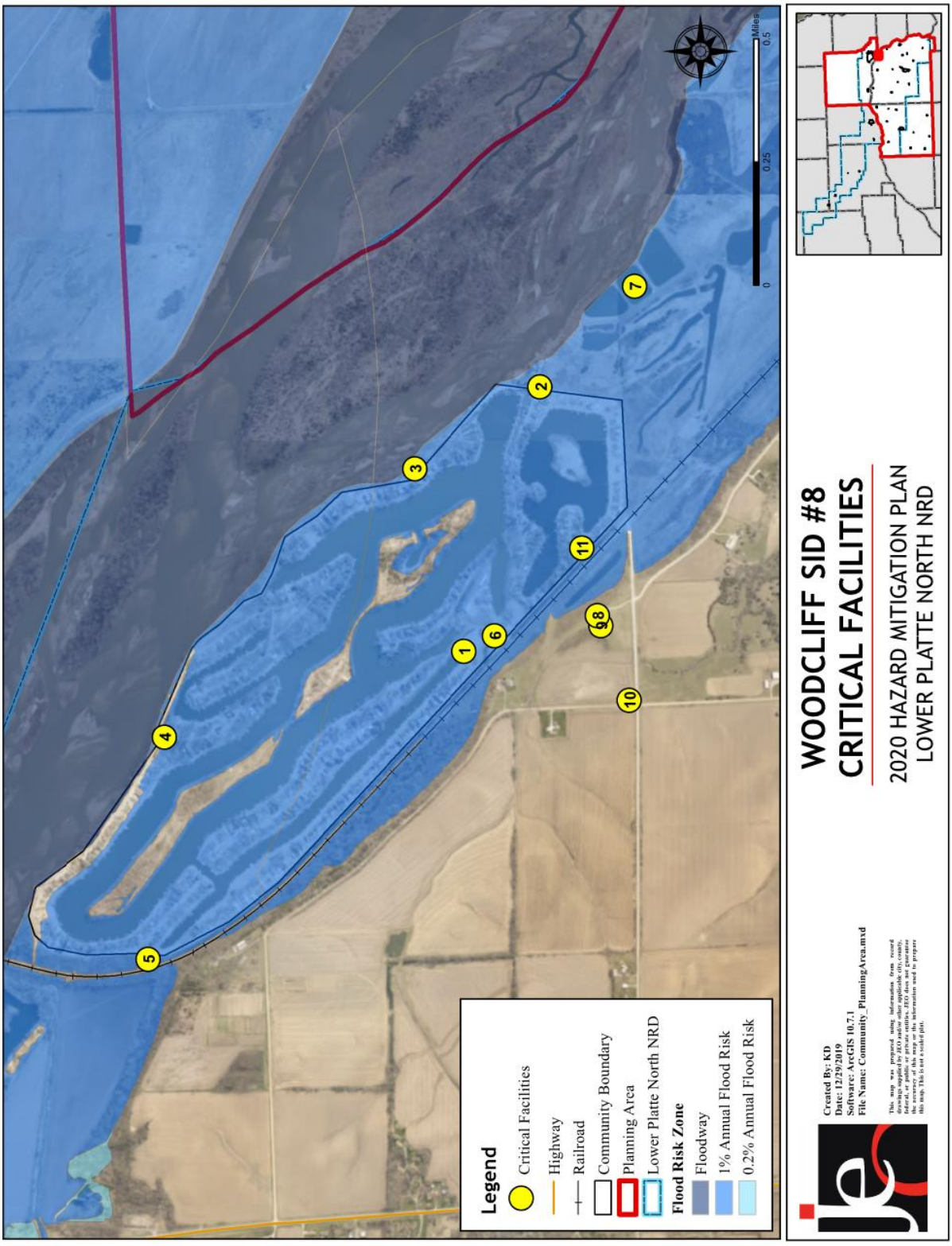
HAZARD PRIORITIZATION

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

CHEMICAL TRANSPORTATION SPILLS

The Burlington Northern Santa Fe railway frequently transports a large volume of crude oil, ethanol, and other unknown chemicals directly south of the community, less than 100 yards from homes, and crosses the only access road for Woodcliff. The railroad passes by homes, the homeowner's association (HOA) offices, sewage treatment facilities, restaurants, and the community center. Though there have not been train derailments in the area, a derailment could cause significant damages. The chance of a derailment is increased because of a substantial roadbed embankment, a near 90-degree curve, multiple bridges and culverts leading to the Platte River bridge, and a roadbed lying in the 100-year floodplain.

Figure WCF.2: Critical Facilities



FLOODING

Woodcliff experienced flooding as a result of ice jamming on the Platte River along with rapid snow melt in February 2011 and March 2019. During each event, emergency berms and sandbagging were needed to prevent significant damage to the community. During the 2012 flood, at least three homes were minimally flooded, and floodwaters retreated within a day. In the 2019 floods, the stream embankment and road adjacent to the Woodcliff lagoon system was significantly damaged, and 12 homes sustained moderate to significant damage. The Platte River, particularly during the spring, is the primary source of flooding for the community; all homes and businesses lie within the 1% annual flood risk zone. Woodcliff is working to mitigate future riverine flooding by repairing the jetties and bendway weirs damaged in 2019 and raising the access road to the 100-year flood level. The HOA is continuing to invest in their Stormwater Management Plan to manage localized flooding.

HIGH WINDS

There was significant damage in Woodcliff in 2008 from a severe thunderstorm with hail and high winds exceeding 120 mph. Homes, businesses, vehicles, the HOA offices, the community center, and equipment were damaged. There are no public safe rooms in the community. County emergency management offers text alerts for emergencies and severe weather, and the community is served by sirens connected to both the City of Fremont and Saunders County. Some emergency mitigation and disaster preparation are discussed at quarterly HOA meetings.

SEVERE THUNDERSTORMS

The severe thunderstorm in June of 2008 caused property and crop damage throughout Saunders County but in the Woodcliff area the winds appeared to have been the strongest. Several boats and boat lifts flipped, and many homes sustained damage due to fallen trees. In addition to the tree and subsequent home damage by fallen trees, the wind whipped hail caused additional damage to siding, roofs, and vehicles. Around 160 of the 440 homes in the community sustained damage. There are no surge protectors to protect critical electronic devices from power surges and critical facilities do not have backup generators in case of a power outage. All power lines remain overhead, making them vulnerable to severe storms. In addition to these vulnerabilities, hazardous trees are scattered throughout the community.

SEVERE WINTER STORMS

Severe winter storms are a regular occurrence in the region that impede travel and occasionally cause power outages. No power lines in the community are buried, making them vulnerable to severe storms. Snow removal is done by a contractor.

TORNADOES

While no tornadoes have occurred in the community, a future tornado could cause significant damage. There are no public safe rooms in Woodcliff so community members must seek shelter from severe weather in their own homes. County emergency management offers emergency and severe weather text alerts. Saunders County and the City of Fremont maintain emergency sirens that serve Woodcliff.

GOVERNANCE

Woodcliff SID #8 is governed by a board; they will oversee the implementation of hazard mitigation projects. The community also has the following staff:

- Law Enforcement Officer
- Facilities/Water Management Contractor
- HOA/SID Administration Staff
- SID Board (Five Members)
- HOA Board (Seven Members)

CAPABILITY ASSESSMENT

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

Table WCF.5: Capability Assessment

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Planning & Regulatory Capability	Comprehensive Plan	No
	Capital Improvements Plan	Yes
	Economic Development Plan	No
	Emergency Operational Plan	In-Process
	Floodplain Management Plan	No
	Storm Water Management Plan	In-Process
	Zoning Ordinance	Yes – County
	Subdivision Regulation/Ordinance	Yes – Covenants
	Floodplain Ordinance	Yes – County
	Building Codes	Yes
	National Flood Insurance Program	Yes – County
	Community Rating System	No
	Other (if any)	Yes – Committees within the HOA (Lake Health, Dredging, Roadway)
Administrative & Technical Capability	Planning Commission	Yes
	Floodplain Administration	Yes – County
	GIS Capabilities	No
	Chief Building Official	Yes
	Civil Engineering	Yes – Contract
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	Yes – Contract
	Mutual Aid Agreement	Yes
	Other (if any)	
Fiscal	Capital Improvement Plan/ 1 & 6 Year plan	Yes

SURVEY COMPONENTS/SUBCOMPONENTS		YES/NO
Capability	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	No
	Gas/Electric Service Fees	Yes
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	Yes, 15 Individuals recently received CERT Training
	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)	

Table WCF.6: Overall Capability Assessment

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

PLAN INTEGRATION

The community HOA is currently in the process of creating an emergency operation plan for Woodcliff. Information from the Hazard Mitigation Plan, CERT Training, and the 2019 floods will be included in the plan. As part of the emergency operation plan, the HOA would like to create a pamphlet for all residents which discusses hazards of concern and actions to take if they occur. The community is currently working with a consulting firm to update the stormwater master plan. Flooding mitigation actions from the Hazard Mitigation Plan will be included in the plan. HOA and County approval is needed for any building construction. The HOA is more stringent in certain areas like housing setbacks.

All other planning mechanisms for the community are through Saunders County and integration with the hazard mitigation plan will be at the discretion of the county.

MITIGATION STRATEGY

ONGOING AND NEW MITIGATION ACTIONS

MITIGATION ACTION	BACKUP AND EMERGENCY GENERATORS
Description	Provide a portable or stationary source of backup power for critical facilities. The planning team would like a permanent generator for Well #1, Well #2, and the Community Center. A portable backup generator is needed for the sanitary lift stations.
Hazard(s) Addressed	Tornadoes and High Winds, Severe Winter Storms, Severe Thunderstorms
Estimated Cost	$50,000 - $100,000 each
Funding	HMGP, Local Funds
Timeline	2-5 Years
Priority	High
Lead Agency	SID
Status	Planning Phase, New Action. The community is currently looking for funding options.

MITIGATION ACTION	DRAINAGE STUDY/STORMWATER MASTER PLAN
Description	Drainage studies can be conducted to identify and prioritize improvements to address site specific localized flooding/ drainage problems. Storm water master plans can be conducted to perform a community-wide storm water evaluation, identifying multiple problem areas, and potentially multiple drainage improvements for each.
Hazard(s) Addressed	Flooding
Estimated Cost	$150,000
Funding	Local budget
Timeline	5+ years
Priority	Medium
Lead Agency	SID
Status	Woodcliff has adopted a stormwater master plan and is in the process of enacting stormwater system improvement projects identified by the plan

MITIGATION ACTION	LAKE DRAINAGE DEVICE
Description	Design and construct a device which would allow the SID to lower and raise lake levels further than it can currently.
Hazard(s) Addressed	Flooding
Estimated Cost	$20,000 - $50,000
Funding	HMGP, Local Funds
Timeline	2-5 Years
Priority	High
Lead Agency	SID
Status	Planning Phase, New Action. The community is currently looking at designs for the device.

MITIGATION ACTION	LEVEE/FLOODWALL CONSTRUCTION AND/OR IMPROVEMENTS
Description	Construct a levee or floodwall to protect critical facilities and residences by raising the roadway of Platte Shore Drive to the 100-year flood level
Hazard(s) Addressed	Flooding
Estimated Cost	$660,000
Funding	Bonds, HMGP
Timeline	2-5 years
Priority	High
Lead Agency	SID
Status	First phase of road raise construction is underway. HMGP funding is being pursued to fund additional phases of road raises. Interior drainage improvements are being addressed at the same time of road raise construction.

MITIGATION ACTION	PARCEL LEVEL EVALUATION OF FLOOD PRONE PROPERTIES
Description	Conduct a study examining parcels located in flood prone areas and identify mitigation measures that can reduce future impacts.
Hazard(s) Addressed	Flooding
Estimated Cost	$25,000+
Funding	HMGP, Local Funds
Timeline	2-5 Years
Priority	Medium
Lead Agency	SID, HOA
Status	Not Started, New Action.

MITIGATION ACTION	STREAM BANK STABILIZATION / GRADE CONTROL STRUCTURES / CHANNEL IMPROVEMENTS
Description	Stabilize banks to protect the sanitary lagoons
Hazard(s) Addressed	Flooding
Estimated Cost	$692,000
Funding	Bonds, 406 Mitigation
Timeline	2-5 years
Priority	High
Lead Agency	SID
Status	Currently this project is in design phase. Waiting on final approval for 406 mitigation funding.

REMOVED MITIGATION ACTIONS

MITIGATION ACTION	DAM ENGINEERING AND ANALYSIS
Hazard(s) Addressed	Dam Failure
Reason for Removal	This action would be better done by the NRD or the dam owners.

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

DISTRICT PROFILE

YUTAN VOLUNTEER FIRE DEPARTMENT

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

2020

LOCAL PLANNING TEAM

Table YFD.1: Yutan Volunteer Fire Department Local Planning Team

NAME	TITLE	JURISDICTION
Don Dooley	Fire Chief	Yutan Volunteer Fire Department

LOCATION AND GEOGRAPHY

The Yutan Volunteer Fire Department covers 26 square miles in the northeast portion of Saunders County, surrounding the City of Yutan. The fire district mainly addresses grass and wildfire in the region's rural area.

TRANSPORTATION

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors and areas more at risk of transportation incidents. Nebraska State Highways 64 and 92 both travel through the Yutan fire district. Nebraska State Highway 64 is traveled by a total annual average of 1,470 vehicles daily, 140 of which are trucks. Nebraska State Highway 92 is traveled by a total annual average of 5,225 vehicles daily, 485 of which are trucks.[24] A Burlington Northern Santa Fe rail line and a Union Pacific Railroad rail line run north to south through the district. Highway 92 and the rail lines are the transportation routes of most concern because of their high traffic. Chemicals are frequently transported along rail lines.

DEMOGRAPHICS

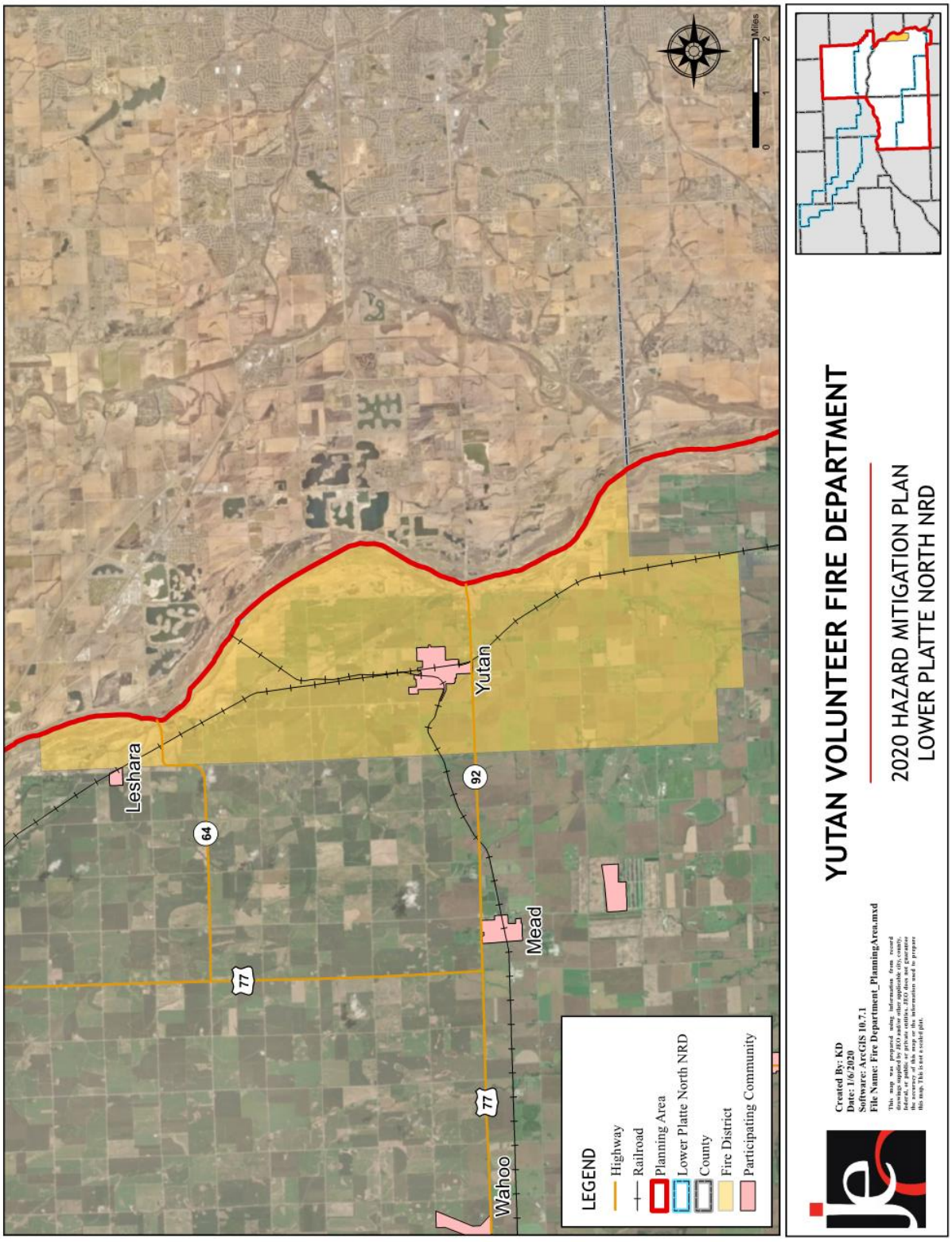
The district serves approximately 2,600 people. See the City of Yutan and the Saunders County profiles for regional demographic information.

FUTURE DEVELOPMENT TRENDS

Water capacity in the region has increased in the last five years within Yutan city limits with the installation of 12-inch water lines. The Yutan fire station was built in 2012. A new pumper tanker was purchased in 2015 and a new medic unit purchased in fall of 2019. The department is hoping to replace a fire truck in two to five years, as funding allows. No other future developments are anticipated.

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

Figure YFD.1: Yutan Volunteer Fire Department



CRITICAL INFRASTRUCTURE

CHEMICAL STORAGE FIXED SITES

Information on chemical storage sites can be found in the City of Yutan and Saunders County profiles. The district has no concerns regarding chemical fixed sites. They have limited training and gear for chemical spill response but know how to issue an evacuation area or shelter-in-place protocol while backup is called. They rely on the Tri-County Mutual Aid for full spill response, comprised of fire departments in Douglas County, Sarpy County, Washington County, the City of Yutan, the City of Wahoo, the City of Plattsmouth, and several contiguous areas in Iowa across the Missouri River. HazMat rigs from Omaha would likely be the first to respond to a spill in the Yutan fire district.

CRITICAL FACILITIES

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

Table YFD.2: Critical Facilities

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

HISTORICAL OCCURRENCES

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

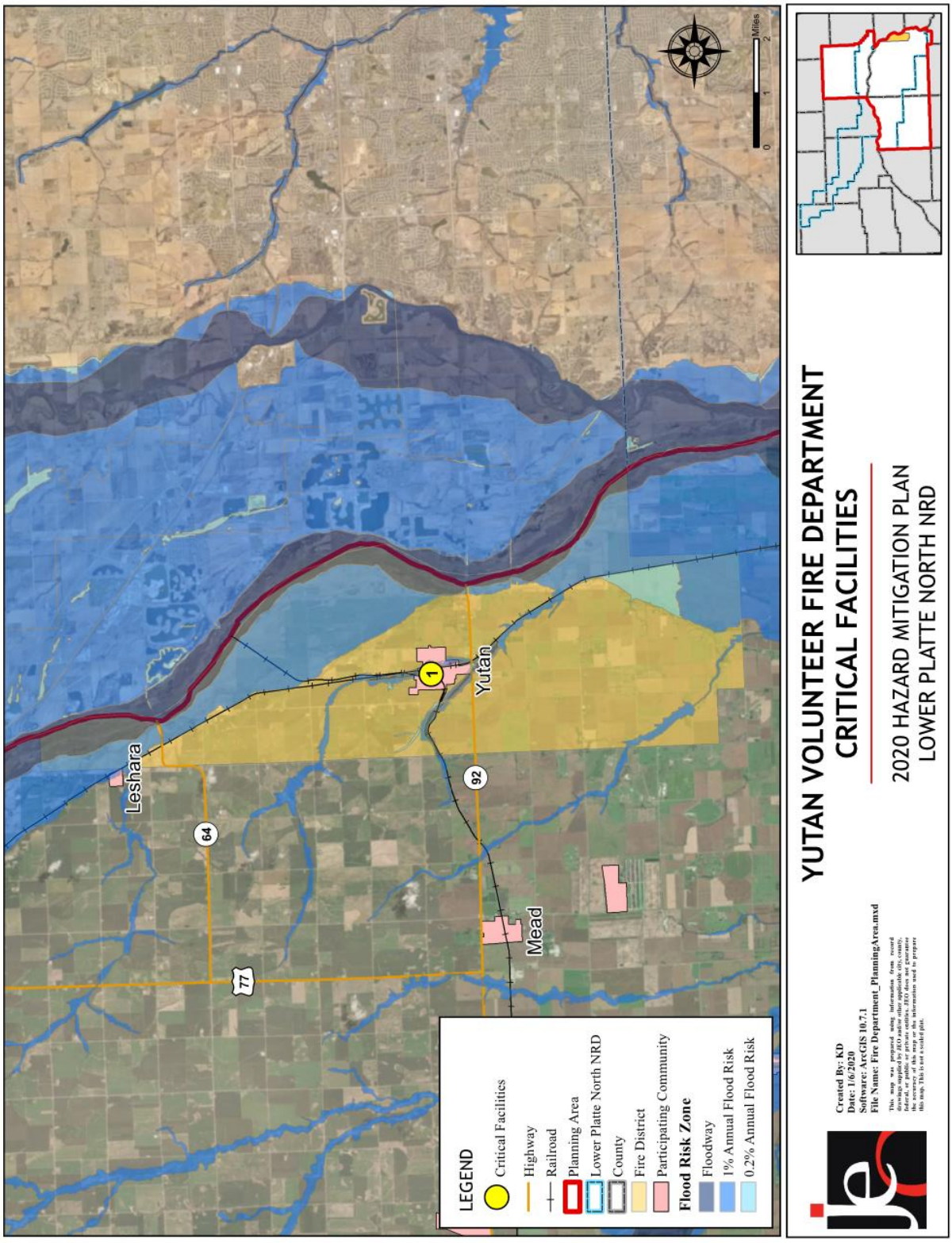
HAZARD PRIORITIZATION

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

CHEMICAL TRANSPORTATION SPILLS

Many unknown chemicals are transported on the railroads including fracked oil and nuclear waste, across highways and near residences. Highway 92 and the Burlington Northern Santa Fe rail line are the routes of most concern because they are the most heavily traveled. The Burlington Northern Santa Fe rail line is one block from the fire station and boarders both schools and the well in Yutan. A derailment or other incident on either rail line would block a third to half of the volunteer first response crew from access to the fire hall.

Figure YFD.2: Critical Facilities



FLOODING

In March 2019 flooding of the Platte River blocked the boarders of the fire district from Omaha and from the east, limiting the availability of mutual aid. During this time the district aided evacuations for homes on the Platte River just east of the Village of Leshara and provided response resources to the City of Ashland. Transportation was difficult during this time, with many roads and highways flooded. Within the district the Platte River, Clear Creek, and the lake four miles north of Yutan have the potential to flood. Within the district flood impacts would likely be limited to delayed emergency response times because of road closures, unless the levees along the Platte River were to fail. Failure of the levees in the north part of the district could impact Highways 64, 77, and 92, cutting off hospital transportation to the Cities of Omaha and Fremont. Levee failure could also impact Yutan Road and County Road 4, closing hospital transportation to the City of Ashland.

GRASS/WILDFIRES

Grass and wildfires occur annually, with variations in the number and intensity of fires based on drought conditions. They have been caused by anything from rail cars sparking to intentional burning to clear old vegetation. High winds spread fires faster and increase the likelihood of damaged to rural homes. A fire in 2017 by the Village of Leshara, started by a barrel burn, sparked a wildfire that destroyed a house. In this same year a field fire spread along the rail tracks and destroyed a barn. Large fires such as these occur every few years. The district usually has a sufficient water supply to fight fires and can call on mutual aid to bring more. Property owners are encouraged to keep a defensible space around structures, but this does not always occur, particularly in the city's subdivisions.

SEVERE THUNDERSTORMS

Severe thunderstorms are a concern for the fire district because they can damage trees and power lines, which can in turn block roads, and result in medical calls for those dependent on electronics for oxygen and other health needs. Localized flash flooding from heavy rain can also be a concern if it floods or otherwise damage transportation routes. After one severe storm, the fire department was called to clear roads and isolate areas around a downed power line that was arcing and sparking. In Yutan, about 60% of the power lines are buried. The fire hall and main well have generators in case of a power outage. In the event of data loss, the department has a redundant hard drive system that was install in 2019.

SEVERE WINTER STORMS

Every winter calls for motorist rescues increase because of highway conditions. The highways in Saunders County are plowed at three to four inches of snowfall and lack snow fencing to manage drifts. They are particularly hazardous between Yutan and the Village of Mead. Roads in Yutan can also be hazardous, particularly with ice, but county roads are generally well maintained. Hazardous transportation routes and power outages are the main concerns regarding severe winter storms. There are no places identified to house people within the district during a prolonged power outage. Snow removal at the fire hall is done by the city with help from fire department volunteers after particularly heavy snows.

TORNADOES

There have been no tornado touch downs in the fire district except in open fields, but a tornado has the potential to cause catastrophic damage. The Village of Leshara, just outside of the district,

has no warning sirens. There is some miseducation in Yutan, with most of the population unaware that sirens do not work well to alert those within their home or asleep. Sirens are activated by Saunders County Dispatch. The sirens in Yutan can also be activated from the fire station. County Emergency Management also offers emergency text alerts. There is no FEMA certified safe room in the community, including at the school though most of the city's daytime population is located at the school. This has been a problem in the past – the local planning team reports that a funnel cloud traveled over the school while a large group of students were gathered there for a dance. The fire station does have a lower level that could be used as a shelter, but the space is very limited. In case of a disaster Mutual Aid Agreements are in place with Tri-County Mutual Aid and all of the other fire departments in Saunders County.

The department has two medic units, an ALS cable, a dedicated pumper truck, a backup pumper truck, an additional tanker, two weed trucks for remote fires, a heavy rescue/dive truck, a command vehicle, a floating utility truck, and a boat for water rescue. The department holds annual fire prevention outreach events at the Yutan grade and high school. They also provide fire prevention education throughout the year at fire department open houses. They do not provide severe weather outreach but do hold in-house training for the fire response crew.

STAFFING

Yutan's fire district is governed by a five-member rural fire board and supervised by a fire chief who will oversee the implementation of hazard mitigation projects. There are 30 volunteers registered to help with emergency response. Other offices are listed below.

- Assistant Fire Chief
- President
- Vice-president
- Secretary
- Treasurer
- Captains (four)
    - EMS
    - Fire
    - Training
    - Dive/Water Rescue

CAPABILITY ASSESSMENT

Due to the unique structure of fire districts, the typical capability assessment table was not used. The following table summarizes the district's overall capabilities. The Yutan Volunteer Fire Department will continue to utilize existing relationships with local, county, state, and federal agencies in the implementation of mitigation projects. The district has applied for an won a fire grant from the federal government, a SAFER grant, and numerous small grants including the Jack Lewis Safety Fund grant for water rescue. Most of these have grants have not required a local funding match but where necessary local match funding comes from the fire district general funds. The department holds a weekly training on a wide variety of topics.

Table YFD.3: Overall Capability Assessment

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

PLAN INTEGRATION

The fire department does not have any formal planning documents; however, it does have standard operation procedures (SOPs). SOPs are updated on an annual basis and covers how the department will respond to any type of call that could be received.

MITIGATION STRATEGY

NEW MITIGATION ACTIONS

MITIGATION ACTION	CIVIL SERVICE IMPROVEMENTS
Description	Improve emergency rescue and response equipment and facilities by providing additional or updating existing equipment. The department would like to Improve the radio communication system Purchase new air packs.
Hazard(s) Addressed	All hazards
Estimated Cost	$500,000 for radios, $174,000 for air packs
Funding	Tax money, Assistance to funding grant
Timeline	2 years
Priority	High
Lead Agency	Fire chief
Status	New action. In process, the fire department is currently looking at funding options for the two projects.

MITIGATION ACTION	COMMUNITY EDUCATION AND AWARENESS
Description	Establish a community education program to increase awareness related to household level mitigation actions. Utilize outreach projects and the distribution of maps. Purchasing equipment such as projectors and laptops to facilitate presentation of information.
Hazard(s) Addressed	All hazards
Estimated Cost	$2,000+
Funding	Donations, Staff time
Timeline	Ongoing
Priority	High
Lead Agency	Fire department
Status	New action. Ongoing. The fire department works with schools on fire prevention, mock DUI crash, and the cadet program.