

# COMMUNITY PROFILE

## UPPER LOUP NATURAL RESOURCES DISTRICT



### Upper Loup Natural Resources District Multi-Jurisdictional Hazard Mitigation Plan Update

2019

## Local Planning Team

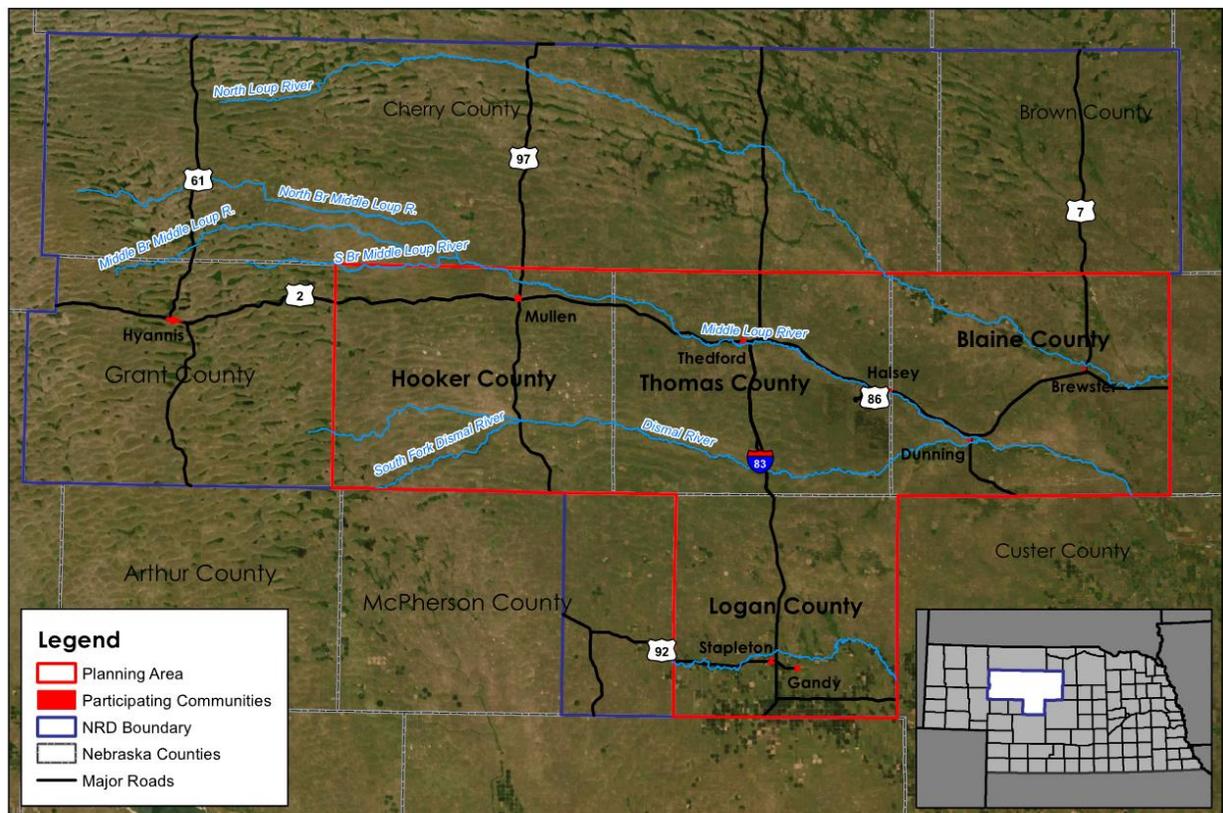
**Table ULNRD.1: ULNRD Local Planning Team**

Name	Title	Jurisdiction
Anna Baum	General Manager	Upper Loup NRD
Lexi Hingtgen	Information and Education Coordinator	Upper Loup NRD

## Location and Geography

The ULNRD is located in central Nebraska and includes the entirety of Blaine, Grant, Hooker, Logan, and Thomas Counties and portions of Cherry, Brown, and McPherson Counties. Major waterways in the area include the Dismal River and its branches, the North Fork Dismal River and South Fork Dismal River; and the Middle Loup River and its branches, North Branch Middle Loup, Middle Branch Middle Loup, and South Branch Middle Loup. There are no major lakes or reservoirs in the planning area, however the planning area sits atop the Ogallala Aquifer. The ULNRD topographic region mainly includes Sand Hills, with some Dissected Palins and Valleys located in the eastern portion and a vast majority of the ULNRD land is characterized by livestock ranching. Altogether, the ULNRD covers an area of 6,680 square miles.

**Figure ULNRD.1: Upper Loup NRD Planning Area**



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Date: 7/23/2019  
Software: ArcGIS 10.4.1

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### Upper Loup NRD

Planning Area

## Transportation

ULNRD’s major transportation corridors include Nebraska Highways 2, 61, 91, 92, and 97, and US Highway 83. On these major transportation routes, the planning area experiences between 200 and 2,700 vehicles per day. The local planning team indicated Highways 2, 83, and 97 are of greatest concern as they are the most frequently traveled. Coal and oil are frequently transported throughout the planning area via these transportation routes, but no significant transportation accidents have occurred.

Only one major railroad, a Burlington Northern Santa Fe line, runs through the planning area and bisects Blaine, Thomas, Hooker and Grant counties. The rail line frequently transports hazardous materials including coal, oil, or waste products. At least one county airport is located in Blaine, Grant, Hooker, Logan and Thomas Counties, with smaller private airstrips spread across the planning area.<sup>ii</sup> Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

## Demographics

It is estimated that the ULNRD serves a population of about 3,400 people over five counties (Table 2). However, the NRD does not collect the demographic information of their population, nor does the U.S. Census Bureau recognize the NRD as a distinct unit. As a result, there is no population data generated specifically for the NRD. For information regarding population data, please refer to a specific jurisdiction’s community profile or to *Section Three: Demographics and Asset Inventory*.

**Table ULNRD.2: ULNRD Estimated Population**

County	2010 Population	2016 Population	Percent Change
BLAINE	478	580	21%
GRANT	661	647	-2%
HOOKER	736	669	-9%
LOGAN	763	830	9%
THOMAS	647	675	4%
<b>TOTAL</b>	<b>3,285</b>	<b>3,401</b>	<b>4%</b>

Source: US Census Bureau<sup>iii</sup>

## Future Development Trends

In the past five years the Upper Loup NRD has added a Learning Center to the main office. The Learning Center is open to residents throughout the district and provides a location for education and outreach activities from schools, communities, organizations, or the general public. Additionally, there are planned road construction improvements within the next five years on Highway 97 over the Dismal River in Hooker County.

**Figure ULNRD.2: ULNRD Learning Center**



## Parcel Improvements and Valuation

Please refer to the individual Community Profiles for information regarding parcel improvements, valuation, and discussion for specific jurisdictions across the planning area.

## Critical Infrastructure/Key Resources

### Chemical Storage Fixed Sites

Chemical sites are located throughout the NRD. Complete lists of chemical storage sites in each jurisdiction may be found in their community profile.

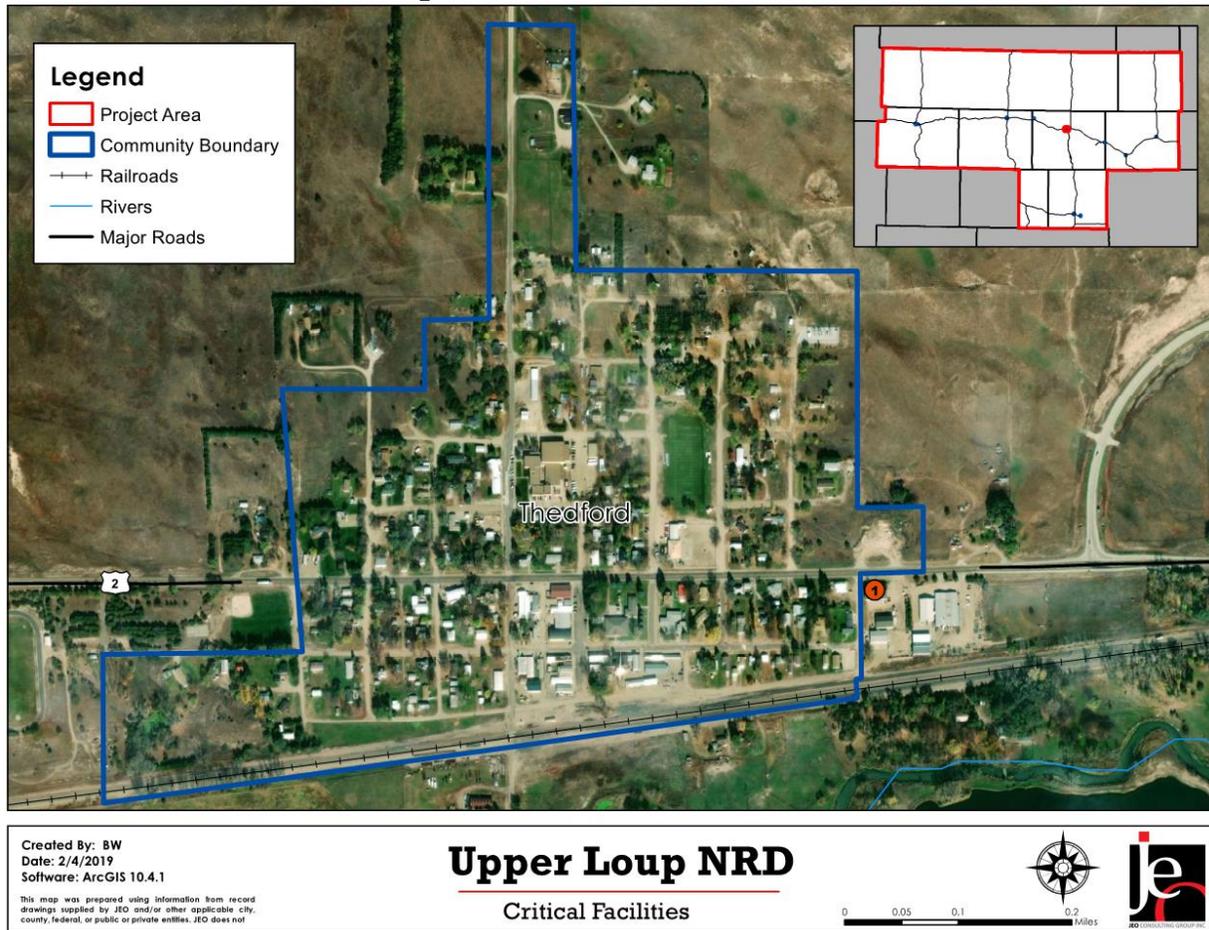
### Critical Facilities

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

**Table ULNRD.3: Critical Facilities**

CF Number	Name	Address	Red Cross Shelter (Y/N)	Generator (Y/N)
1	Upper Loup NRD Office (3 Buildings)	39252 NE-2 Thedford NE	N	N

Figure ULNRD.2: Critical Facilities



## Historical Occurrences

For the complete discussion on historical occurrences, please refer to *Section 4: Risk Assessment*.

## Hazard Prioritization

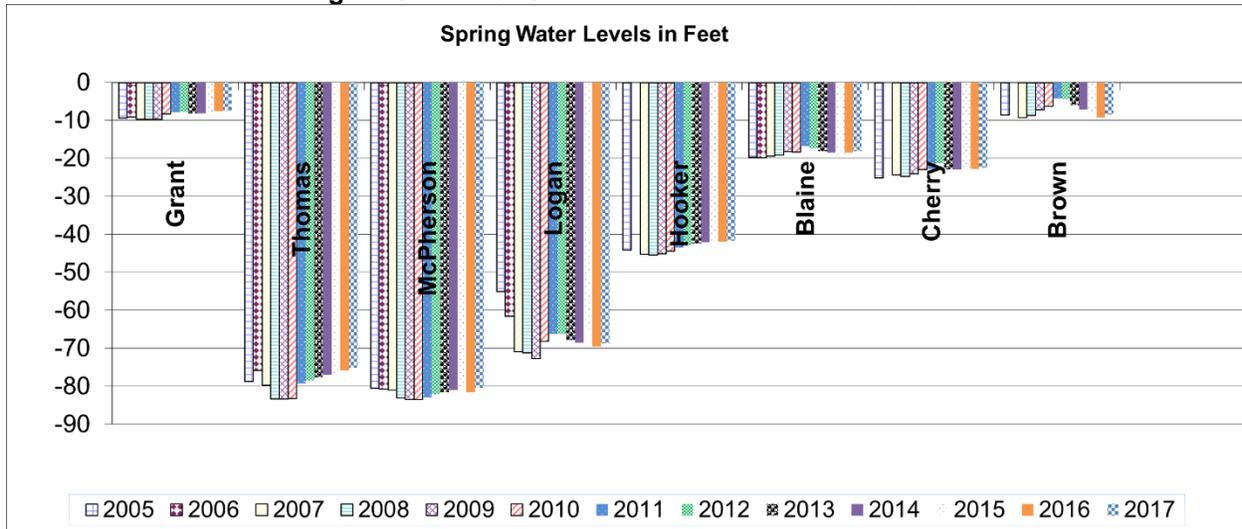
For an in-depth discussion regarding area wide hazards, please see *Section Four: Risk Assessment*. The hazards discussed in detail below were prioritized by the local planning team based on the identification of hazards of greatest concern, hazard history, and the jurisdiction’s capabilities.

### Drought

The local planning team indicated the planning area is vulnerable to the impacts of drought as the local economy is heavily tied to rangeland and livestock production. Since 1895 the planning area has been in drought conditions 20% of all months. Specifically, drought conditions in 2012 and 2016 negatively impacted the local communities. The ULNRD has begun a drought study on the South Loup River. While there are no specific areas with high levels of nitrates, several hotspots exist in Grant County which could be exacerbated by drought conditions. The ULNRD annually tests and records water levels (Figure ULNRD.3) and water quality across the district and is a part of the Nebraska Rainfall Assessment and Information Network (NE Rain). These tools are

available to help manage water supplies and land use, as well as to help address long-term demands for water across the planning area.

Figure ULNRD.3: ULNRD District Well Water Levels



Source: ULNRD website, 2018

### Extreme Heat

Local concerns regarding extreme heat focus on impacts to vulnerable populations, especially older residents who live outside of communities and do not have air conditioning. Extreme heat conditions also exacerbate drought and grass/wildfire events and impacts. The summer of 2012 had significant drought, extreme heat, and wildfire events which strained local resources and impacted the local agricultural economy. The ULNRD is implementing and expanding a Fan and Air Conditioning Program which will allow residents in need to check out AC/fan units to cool homes.

### Grass/Wildfire

Grass/wildfire threatens people, buildings, and rangeland for livestock across the planning area. Losing viable cropland to fire severely hinders the planning areas local economy, in turn impacting the tax basis for the ULNRD. While the NRD is not responsible for fighting wildfires, the planning area is served by volunteer fire departments. The ULNRD has several programs in place for brush management and removing Eastern Red Cedars, both of which can produce high fuel loads. Grass/wildfires have burned over 73,000 acres of land, destroyed six homes and structures, and threatened 33 others since 2000.

### High Winds

High winds can cause widespread damages to crops, trees, infrastructure, and personal property. The NCEI reported 75 high wind events across the entire planning area between 1996 and 2018. The local planning team indicated that high winds are common place across the entire planning area and often occur in conjunction with other hazards, such as severe thunderstorms and severe winter storms. The ULNRD works with Region 26 to spread CodeRed messages in Blaine, Logan, Thomas, and Hooker Counties including for high winds.

### Severe Thunderstorms

Severe thunderstorms occur regularly across the planning area and the state. They often span large areas and are accompanied by hail, high winds, heavy rain, and lightning strikes which can

cause significant damage to homes, businesses, facilities, trees, and agriculture across the district. The local planning team stated that severe storms occur at least once a year in which power is lost from several hours to several days at a time. Severe thunderstorms have caused over \$525,000 in damages between 1996 and 2018.

### **Severe Winter Storms**

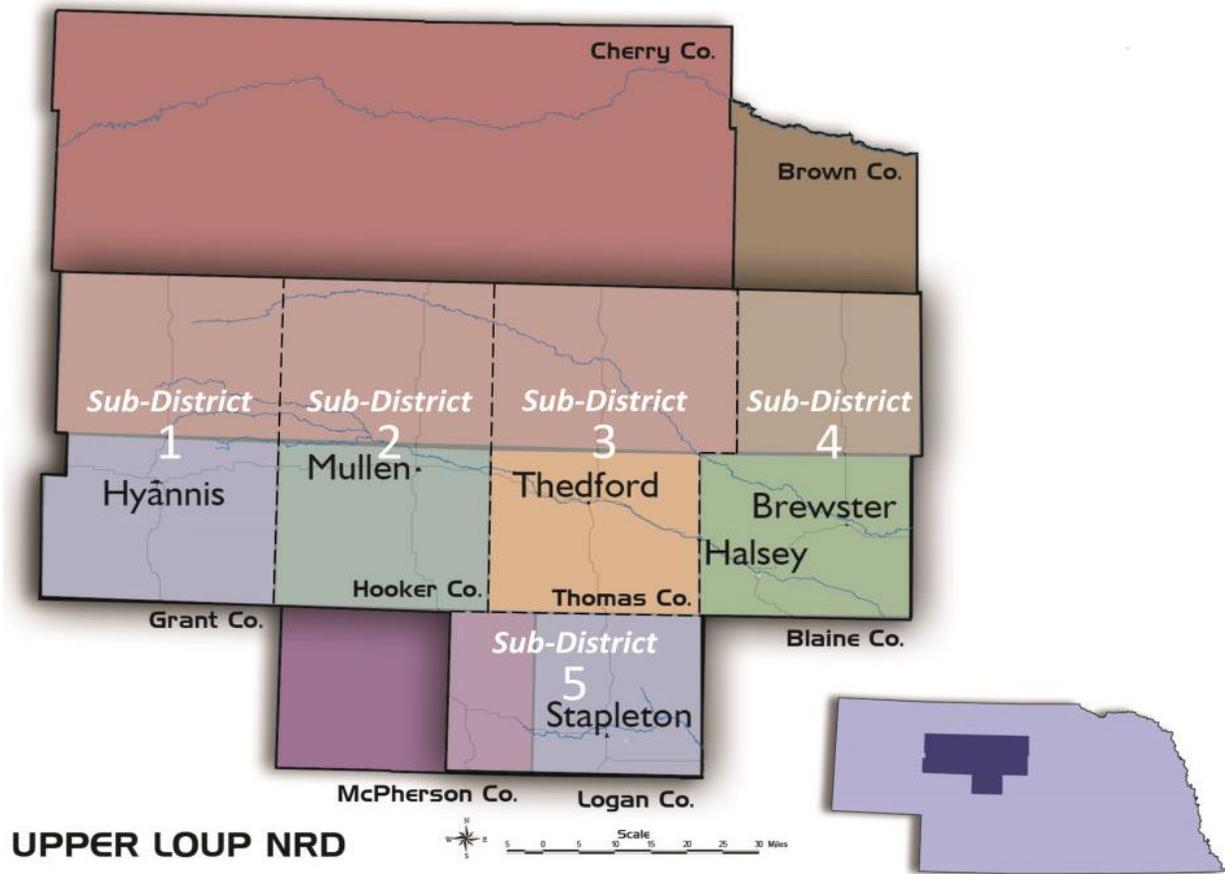
The local planning team listed severe winter storms as a hazard of top concern due to the widespread nature of this hazard and the potential of significant damages. Severe winter storms impacted the eastern portion of the planning area in 2000 and in 2018 a severe storm caused power loss in Mullen. The local planning team indicated the following impacts are of concern from severe winter storms: power outages; injuries or fatalities to residents and travelers; cut off access to food, water, or fuel; blocked transportation routes; damage to sandhills topography from heavy snow; and economic loss due to winter weather impacts on livestock and agriculture. The ULNRD maintains equipment to assist in clearing snow including skid steers, bobcats, and pickups with plows.

## **Governance**

The ULNRD is governed by a group of 11 elected Board of Directors and entrusted with a broad range of responsibilities to protect and enhance Nebraska's many natural resources. The NRD serves both incorporated and unincorporated areas within their district, and has the capability to financially and administratively assist communities and counties with mitigation actions (most commonly flood control and drainage improvements). The following positions may help implement mitigation projects:

- General Manager
- Information and Education Coordinator
- Administration Secretary
- Resource Technicians

Figure ULNRD.3: NRD Voting Districts



Source: Upper Loup NRD Website<sup>v</sup>

### 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 and information programs related to hazard mitigation in the area, and routinely works with other counties, cities, and villages within their jurisdictional boundaries.

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

## Plan Integration

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

The Upper Loup NRD Master Plan, last updated in 2012, includes some limited discussion on hazards identified in the HMP (i.e. flooding). An update of the plan is planned for 2022 when goals and objectives will be added which are consistent with the current HMP. Additional hazards of top concern will be added and discussed in the Master Plan when updated.

The District's Long-Range Implementation Plan is annually updated. As part of this plan, the NRD has identified to continue soil and water conservation, open lands, and forestry cost share programs. The next update will integrate some HMP mitigation actions into future planned activities.

The Groundwater Management Plan was last updated in 1994 but is currently undergoing an updated with an expected completion of late 2019. Some Groundwater Area Rules and Regulations which are associated with this plan were last updated in 2019. This plan provides a framework to manage groundwater quantity and quality in the district. The Upper Loup NRD is currently working on a drought study that will connect drought response triggers to mandatory reductions or restrictions in water use. This plan may also integrate discussion of no-till practices, soil sensors, and best management practices for the entire district.

The ULNRD's Integrated Management Plan was developed in 2016 and last updated in 2018. This plan undergoes annual reviews per regulatory requirements. The plan discusses water allocation and appropriations in the district. Currently no areas within the district are fully or over-appropriated.

The Upper Loup NRD is part of the Lower Platte River Basin Water Management Plan Coalition. This interlocal agreement is designed to pursue and discuss water management components which may comprise a voluntary water quality management plan. More information about this effort can be found here: <https://lprbc.nebraska.gov/>. This plan's purpose include:

- "Providing guidance and a framework for Coalition members to develop water use policies and practices that contribute to the protection of existing surface and groundwater uses, while allowing for future water development.
- Assisting in the development and maintenance of a water supply and use inventory, based on the best available data and analysis.
- Providing consistency and information for incorporation into individual NRD Integrated Management Plans."

The NRD also facilitates other programs which are consistent with the goals and objectives identified in this HMP. These programs include the Erosion and Sediment Act, NSWCP Practices/Shelter Belts/Planned Grazing, Soil Testing, and Chemigation. These programs are available to all residents within the district. At this time there are no plans to update these plans.

## Mitigation Strategy

### Completed Actions:

MITIGATION ACTION		FIRE WISE DEFENSIBLE SPACE
DESCRIPTION	Work with the Nebraska Forest Service and US Forest Service to become a Fire Wise Communities/USA participant. Develop a Community Wildfire Protection Plan. Train land owners about creating defensible space. Enact ordinances and building codes to increase defensible space, improve building materials to reduce structure ignitability, and increase access to structures by responders. Develop and implement brush and fuel thinning projects.	
HAZARD(S)	Grass/wildfire	
STATUS	The ULNRD is engaged as a stakeholder in the Central Sandhills Community Wildfire Protection Plan and Western Sandhills Community Wildfire Protection Plans. These plans include the planning area. Additionally, the ULNRD provides cost-share programs for brush management and Eastern Red Cedar tree removal from state funding and the annual budget.	

MITIGATION ACTION		POST CONTACT INFORMATION
DESCRIPTION	Post maps of emergency management regions and contact information on the ULNRD website for residents.	
HAZARD(S)	All hazards	
STATUS	This project was completed in 2017 by posting the contact information on the Upper Loup NRD website and funded by the Upper Loup NRD budget.	

MITIGATION ACTION		PRESERVATION OF OPEN SPACE
DESCRIPTION	Work with communities and landowners to preserve open spaces.	
HAZARD(S)	Tornadoes, high winds, flooding	
STATUS	The NRD offers cost-share programs to improve wildlife habitat (Corners for Wildlife) and a Nature in Neighborhoods Grant program for local residents/schools/non-profits/civic groups to enhance public spaces. The grant program is funded through the ULNRD annual budget.	

MITIGATION ACTION		SOURCE WATER CONTINGENCY PLAN
DESCRIPTION	ULNRD will work with villages and cities to evaluate and locate new sources of groundwater to ensure adequate supplies to support the existing community and any additional growth which may occur.	
HAZARD(S)	Drought, grass/wildfire	
STATUS	The ULNRD has implemented several groundwater management policies and continually model water supply levels and water quality across the planning area. These services are paid through the annual operating budget.	

MITIGATION ACTION		WEATHER RADIOS
DESCRIPTION	Provide weather radios to the ULNRD office and shop.	
HAZARD(S)	All hazards	
STATUS	A weather radio was acquired for the ULNRD office in 2017.	

**New and Ongoing Actions:**

MITIGATION ACTION		ACQUIRE IDENTIFICATION RESOURCES
DESCRIPTION	Provide the opportunity to purchase and have available the most current Emergency Response Guidebook. This guidebook outlines emergency protocol and visually identifies hazardous materials labels. This would aid in the identification of which chemicals were being transported, to further inform actions on the part of the observer and responders.	
HAZARD(S)	Chemical Transportation	
ESTIMATED COST	\$9 per book	
FUNDING	ULNRD budget	
TIMELINE	1 year	
PRIORITY	High	
LEAD AGENCY	Upper Loup NRD	
STATUS	This is a new action. Resource books will be located at the ULNRD office in Thedford.	

MITIGATION ACTION		BACKUP GENERATORS
DESCRIPTION	Provide a portable or stationary source of backup power to redundant power supplies, NRD office and shop.	
HAZARD(S)	Tornadoes, high winds, severe thunderstorms, severe winter storms	
ESTIMATED COST	\$15,000-\$30,000 per generator	
FUNDING	ULNRD budget	
TIMELINE	5+ years	
PRIORITY	Low	
LEAD AGENCY	Upper Loup NRD	
STATUS	Not Started. A backup generator has been identified as a need for the ULNRD office in Thedford.	

MITIGATION ACTION		DEVELOP A DROUGHT MANAGEMENT PLAN
DESCRIPTION	Work with relevant stakeholders to develop a drought management plan. 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)	Drought	
ESTIMATED COST	\$25,000+	
FUNDING	ULNRD budget	
TIMELINE	5+ years	
PRIORITY	Medium	
LEAD AGENCY	Upper Loup NRD	
STATUS	This is a new action.	

Section Seven: Upper Loup NRD Community Profile

MITIGATION ACTION		EDUCATION REGARDING CODERED WARNING PROTOCOL
DESCRIPTION		Work with Region 26 EMA and County EMAs to educate communities and residents about the CodeRed Warning System.
HAZARD(S)		All hazards
ESTIMATED COST		N/A
FUNDING		ULNRD budget
TIMELINE		1 year
PRIORITY		High
LEAD AGENCY		Upper Loup NRD
STATUS		This is an ongoing action. The ULNRD provides information about CodeRed on their website and actively encourages residents to sign up for the service. The NRD plans to continue participating in the program indefinitely.

MITIGATION ACTION		FAN & AIR CONDITIONING PROGRAM
DESCRIPTION		Work with regional EMAs, counties, and communities to develop a supply of fans and air conditioners available to low income community members during times of extreme heat.
HAZARD(S)		Extreme heat
ESTIMATED COST		\$1,000-\$10,000
FUNDING		ULNRD General Budget
TIMELINE		2-5 years
PRIORITY		Low
LEAD AGENCY		Upper Loup NRD
STATUS		The NRD has purchased some fans and supplies which are stored at the NRD office in Theford. Additional supplies are still a need and the NRD will work to replace stock as needed.

GROUNDWATER/IRRIGATION/WATER CONSERVATION MANAGEMENT PLAN AND PRACTICES	
<b>MITIGATION ACTION</b>	
<b>DESCRIPTION</b>	Develop and implement a plan/best management practices to conserve water use and reduce total use (high water use to low water use) and consumption of groundwater resources by citizens and irrigators of agricultural land during elongated periods of drought. Identify water saving irrigation projects, such as sprinkler systems with soil moisture sensors. Potential restrictions on water could include limitation on lawn watering, car washing, farm irrigation restrictions, or water sold to outside sources. Implement BMPs through water conservation practices such as changes in irrigation management, education on no-till agriculture and use of xeriscaping in communities.
<b>HAZARD(S)</b>	Drought
<b>ESTIMATED COST</b>	\$25,000+
<b>FUNDING</b>	ULNRD budget
<b>TIMELINE</b>	5+ years
<b>PRIORITY</b>	Medium
<b>LEAD AGENCY</b>	Upper Loup NRD and NeDNR
<b>STATUS</b>	The Upper Loup NRD is currently developing a plan that integrates discussion of no-till practices, soil sensors, and best management practices for the entire district. Establishing drought monitoring protocols to serve as drought response triggers will be included.

IMPROVE COMMUNICATIONS	
<b>MITIGATION ACTION</b>	
<b>DESCRIPTION</b>	Work with regional EMAs and other first responders to ensure interoperability of communication equipment.
<b>HAZARD(S)</b>	All hazards
<b>ESTIMATED COST</b>	\$1,000-\$10,000
<b>FUNDING</b>	Local EMAs, HMGP, PDM, ULNRD budget
<b>TIMELINE</b>	5+ years
<b>PRIORITY</b>	Medium
<b>LEAD AGENCY</b>	ULNRD, Local EMA, Region 26
<b>STATUS</b>	This is an ongoing action. The ULNRD actively works with other emergency managers and districts to share hazard event information and work collaboratively on communication tools (i.e. CodeRed, LEOPs, HMP).

Section Seven: Upper Loup NRD Community Profile

MITIGATION ACTION		PUBLIC AWARENESS/EDUCATION
DESCRIPTION	Through activities such as outreach projects, distribution of maps and environmental education increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards. In addition, educate citizens on erosion control and water conservation methods. Educate residents on response and rescue plans for all hazard types.	
HAZARD(S)	All hazards	
ESTIMATED COST	\$500+	
FUNDING	ULNRD budget	
TIMELINE	5+ years	
PRIORITY	Medium	
LEAD AGENCY	Upper Loup NRD	
STATUS	This is an ongoing action. On an annual basis, ULNRD staff visit schools to educate the students on hazards and environmental conservation methods. This information is also posted on the ULNRD website. Information about hazards is annually presented in the Emergency Management region newsletters.	

MITIGATION ACTION		WINDBREAKS AND SNOW FENCES
DESCRIPTION	Work with communities and land owners to plant living snow fences or to construct snow fences to protect main transportation routes and critical facilities from excessive snow drifting and road closures. Snow fences also act as windbreaks and increase water storage capacity in soil.	
HAZARD(S)	Severe winter storms	
ESTIMATED COST	\$1,000+	
FUNDING	ULNRD budget	
TIMELINE	5+ years	
PRIORITY	Medium	
LEAD AGENCY	Upper Loup NRD	
STATUS	The ULNRD has already worked with several landowners in an effort to protect major transportation routes. This is an ongoing project each spring.	

MITIGATION ACTION		STORM SHELTER/SAFE ROOMS
DESCRIPTION	Support communities within the planning area in the design and construction of fully supplied storm shelters and safe rooms.	
HAZARD(S)	Tornadoes, high winds, severe thunderstorms, severe winter storms	
ESTIMATED COST	\$200-\$300 sf stand-alone, \$150-200/sf addition/retrofit	
FUNDING	ULNRD budget	
TIMELINE	5+ years	
PRIORITY	Low	
LEAD AGENCY	Upper Loup NRD	
STATUS	This program is available to local communities. At this point no specific projects have been identified. The NRD maintains a program to connect residents and businesses with safe room and storm shelter contacts as needed and local shelters are listed on the NRD website.	

MITIGATION ACTION		WEATHER SPOTTER TRAINING
DESCRIPTION	Work with Region 26 EMA and County EMAs to provide Weather Spotter Training programs.	
HAZARD(S)	All hazards	
ESTIMATED COST	N/A	
FUNDING	ULNRD budget	
TIMELINE	5+ years	
PRIORITY	Low	
LEAD AGENCY	Upper Loup NRD	
STATUS	This is an ongoing action. The Upper Loup NRD goes to local communities annually to help with any training efforts. Training opportunities are posted on the NRD's website.	

MITIGATION ACTION		WATER STORAGE
DESCRIPTION	Work with communities to identify needs for additional water storage facilities. Act as a point of contact for local jurisdictions for water suppliers.	
HAZARD(S)	Tornadoes, high winds, severe thunderstorms, severe winter storms, grass/wildfire, drought	
ESTIMATED COST	\$30,000+	
FUNDING	Local funds	
TIMELINE	5+ years	
PRIORITY	Medium	
LEAD AGENCY	Local governments, ULNRD Board	
STATUS	This project is in the planning stages. The ULNRD plans to maintain contacts with suppliers to provide water in times of shortage.	

**Removed Actions:**

<b>MITIGATION ACTION</b>		<b>BACKUP POWER</b>	
DESCRIPTION		Develop regional residential/small business generator program.	
HAZARD(S)		All hazards	
REASON FOR REMOVAL		This project was identified as being cost prohibitive and will not be pursued.	

<b>MITIGATION ACTION</b>		<b>CIVIL SERVICE IMPROVEMENTS</b>	
DESCRIPTION		Work with communities to improve emergency rescue and response equipment and facilities by providing additional or updating existing emergency response equipment. This could include fire trucks, ATVs, water tanks/truck, snow removal equipment, etc. This would also include developing backup systems for emergency vehicles and identifying and training additional personnel for emergency response.	
HAZARD(S)		All hazards	
REASON FOR REMOVAL		This project was identified to be the responsibility of local communities and counties. This project is also cost prohibitive for the NRD to pursue at this time.	

<b>MITIGATION ACTION</b>		<b>ELECTRICAL SYSTEM LOOPED DISTRIBUTION/REDUNDANCIES</b>	
DESCRIPTION		Work with power supplies and communities to 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)		Tornadoes, high winds, severe thunderstorms, severe winter storms	
REASON FOR REMOVAL		Due to the large distances between communities and the high cost of this project, it will not be pursued.	

<b>MITIGATION ACTION</b>		<b>HAZARDOUS TREE REMOVAL PROGRAM</b>	
DESCRIPTION		Work with communities and private landowners to identify and remove hazardous limbs and/or trees.	
HAZARD(S)		Tornadoes, high winds, severe thunderstorms, severe winter storms	
REASON FOR REMOVAL		This project was identified to be the responsibility of local communities and counties. The NRD only helps with the removal of the invasive Eastern Red Cedar.	

<b>MITIGATION ACTION</b>		<b>STANDARDIZED HAZARD COMMUNICATION</b>	
DESCRIPTION		Work with Region 26 EMA and other first responders to standardize language used in conveying hazard/risk related communications.	
HAZARD(S)		All hazards	
REASON FOR REMOVAL		This project was identified as no longer a need as information posts and updates shared through CodeRed and ULNRD social media is currently sufficient.	

<sup>i</sup> Center for Applied Rural Innovation. "Topographic Regions Map of Nebraska." 2001. <http://digitalcommons.unl.edu/caripubs/62>.

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

iii United States Census Bureau. "2016 American Fact Finder: S0101: Age and Sex." [database file]. <https://factfinder.census.gov>.

iv Upper Loup Natural Resources District. "Directors." 2016. <http://www.upperloupnrd.org/directors/>.

v Lower Platte River Basin Coalition. 2019. "Lower Platte River Basin Coalition: Basin-Wide Water Management Plan." <https://lprbc.nebraska.gov/>.

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# SCHOOL PROFILE

## MULLEN PUBLIC SCHOOLS



Upper Loup Natural Resources District  
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## Local Planning Team

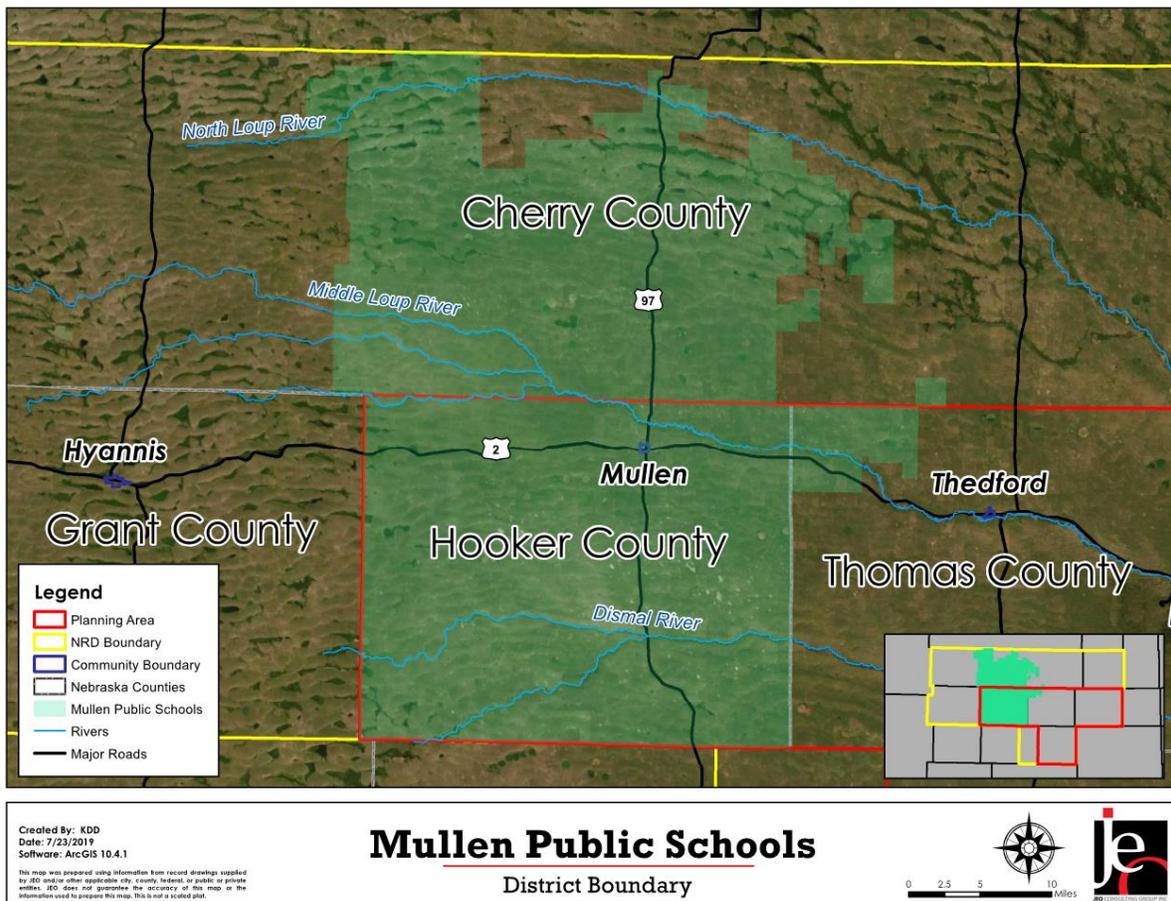
**Table MPS.1: Mullen Public Schools Local Planning Team**

Name	Title	Jurisdiction
Chris Kuncel	Superintendent	Mullen Public Schools

## Location and Services

Mullen Public Schools is located in the Village of Mullen in Hooker County and serves two schools, Mullen High School and Mullen Elementary School. The school district provides services to students in Hooker, Thomas, and Cherry Counties. English is the predominant language in the district, with some Spanish speaking students as well. The district also serves opt-in students from neighboring communities including Thedford (Thomas County), Tryon (McPherson County), Valentine (Cherry County), and Hyannis (Grant County).

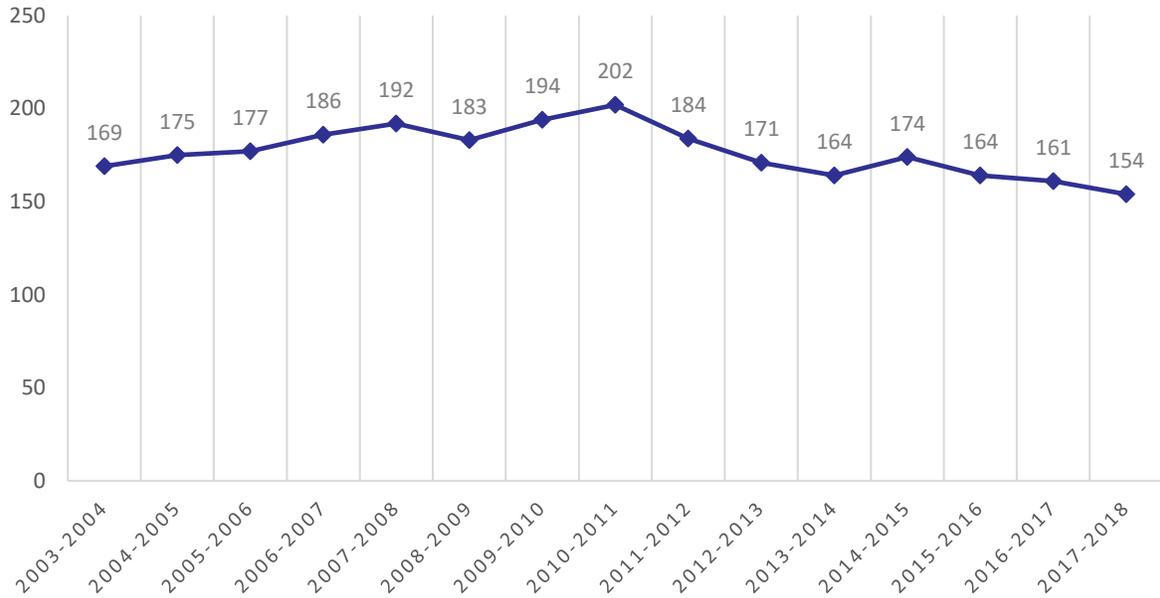
**Figure MPS.1: Mullen Public Schools District**



## Demographics

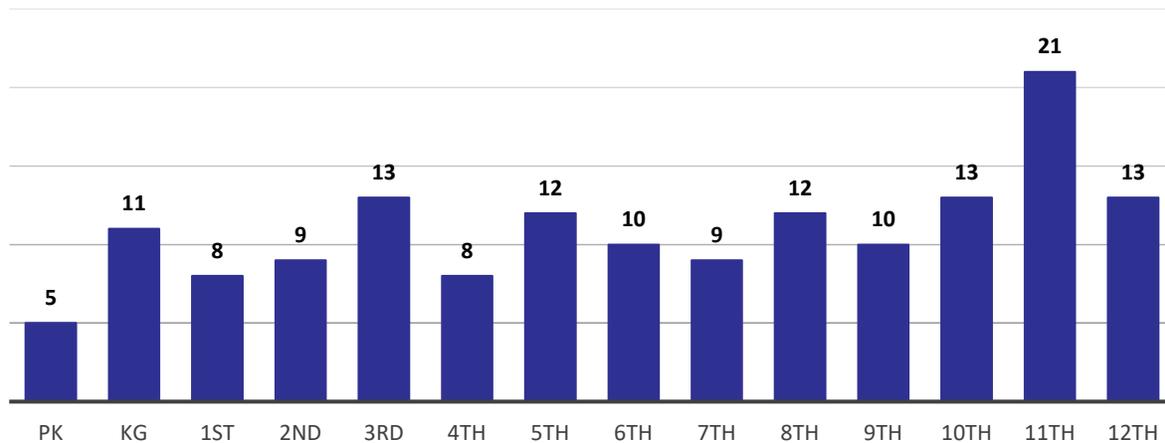
The following figure displays the historical student population trend starting with the 2003-04 school year and ending with the 2017-18 year. It indicates that the student population has been relatively stable since the early 2000s. There are 154 students enrolled in Mullen Public Schools.<sup>vi</sup> The local planning team indicated they expect little change in student population.

**Figure MPS.2: Student Population 2003-2018**



Source: Nebraska Department of Education

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



Source: Nebraska Department of Education

The figure above indicates that the largest number of students are in 11<sup>th</sup> grade, followed by 3<sup>rd</sup>, 10<sup>th</sup>, and 12<sup>th</sup>. The lowest population of students are Pre-Kindergarten, 1<sup>st</sup>, and 4<sup>th</sup> grades. According to the Nebraska Department of Education (NDE), 40.26% of students received either free or reduced priced meals at school in the 2017-18 year. This is lower than the state average of 45.83%. Additionally, nearly 13.42% of students are in the Special Education Program. These students may be more vulnerable during a hazardous event than the rest of the student population.

**Table MPS.2: Student Statistics, 2017-2018**

	School District	State of Nebraska
Free/Reduced Priced Meals	40.26%	45.83%
School Mobility Rate	1.23%	4.23%
English Language Learners	N/A	6.87%
Special Education Students	13.42%	15.12%

Source: Nebraska Department of Education<sup>vii</sup>

### Future Development Trends

In the past five years the school district has added a gymnasium at Mullen High School and a district wide website (<https://www.mullenpublicschools.org/>). The district intends to continue adding to the gym by added new locker rooms in the coming years. These new facilities are built to higher building codes. The district has also acquired several new vehicles and education related materials.

### Critical Infrastructure/Key Resources

#### Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environmental Quality, there are a total of three chemical storage sites that house hazardous materials in Mullen. None of these facilities are located within a mile of either Mullen High School or Mullen Elementary School.

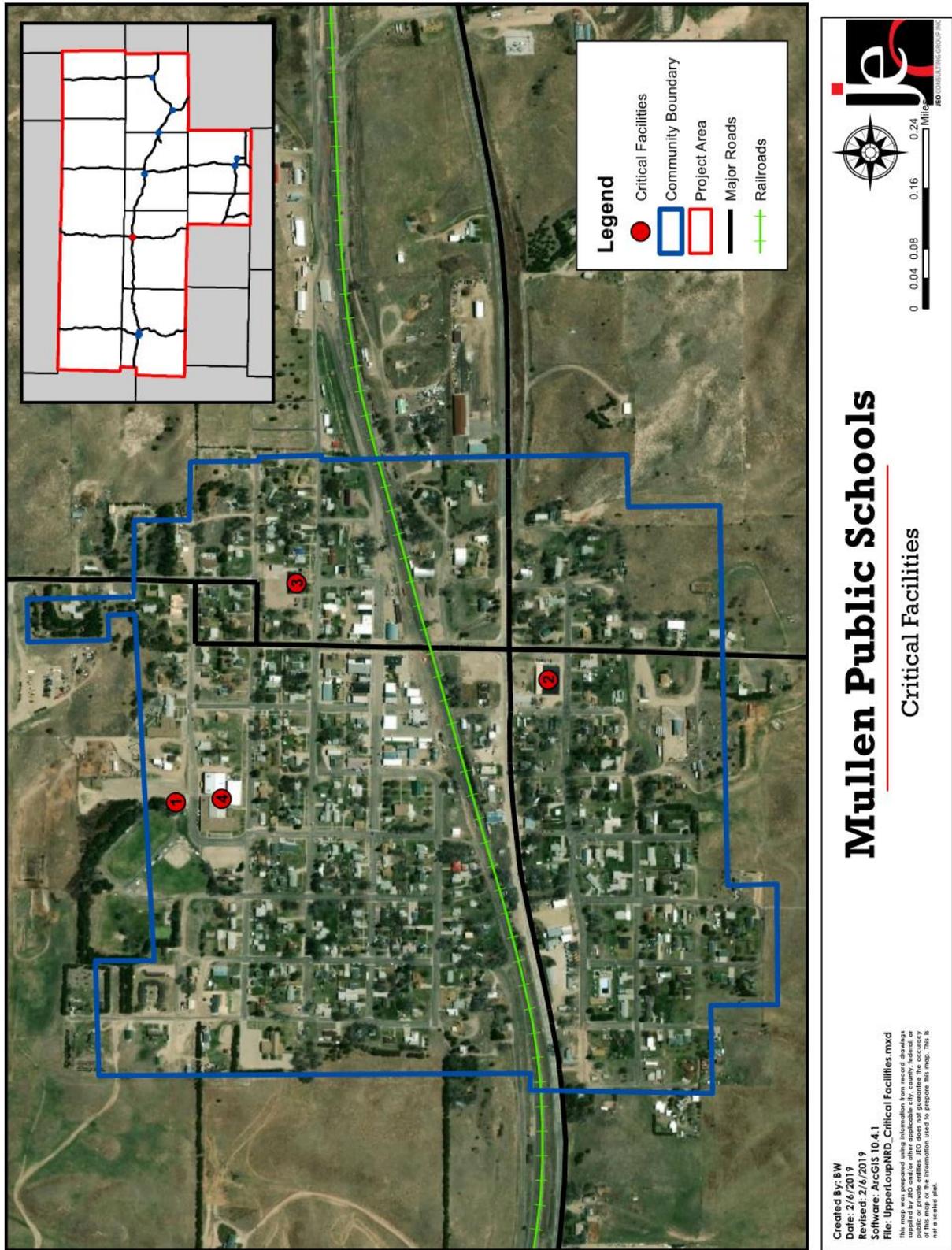
#### Critical Facilities

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

**Table MPS.3: Critical Facilities**

CF #	Name	Address	Number of Students	Number of Staff	Red Cross Shelter (Y/N)	Safe Room (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Bus Barn	NW 4 <sup>th</sup> St 206 S	-	-	N	N	N	N
2	Lariat Auditorium	Washington	-	-	N	Y	N	N
3	Mullen Elementary School	106 NE 2 <sup>nd</sup> St	76	23	Y	N	N	N
4	Mullen High School	404 N Blaine Ave	78	24	Y	Y	N	N

Figure MPS.4: Critical Facilities



## School Drills and Staff Training

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

- Fire – monthly
- Lockdown – twice a year
- Tornado – annually
- Evacuation – annually

The school district conducts regular professional development sessions for emergency procedures. The school's Safety and Security team trains with the Nebraska Department of Education. The student handbook and open house nights are an opportunity to inform students and families about emergency procedures. In the case of school closures or hazard events, parents and staff are notified via an automated call system, social media posts, and the school district website.

## Historical Occurrences

See the Hooker County community profile for historical hazard events.

## Hazard Prioritization

For an in-depth discussion regarding area wide hazards, please see *Section Four: Risk Assessment*. The following discussion provides specific information reported by the local planning team. Only hazards either identified as a concern to the school district by the local planning team, or based on the occurrence and risk of the hazard to the school district are discussed in detail below.

### Agricultural Plant and Animal Disease

The school district is concerned about agricultural plant and animal disease as it relates to the local economy. The planning area is heavily dependent on the surrounding rangelands. Plant and animal diseases have the potential to cripple the local economy, on which school funds are reliant. According to the USDA there have been no major outbreaks of animal or plant disease in the planning area.

### Drought

Periods of drought can affect the local agricultural economy and reduce fire fighting water supplies. Long term droughts could indirectly affect school funding due to its connect to land valuation. Severe drought can also have a negative psychological impact on students. The Village of Mullen meters residential water users and has four wells located in the village.

### Grass/Wildfire

Grass/wildfire is a major concern across the school district and planning area. Grass/wildfires can be exacerbated by drought conditions, spread by high winds, or caused by lightning strikes. The school district is not responsible for fire fighting response, but concerns exist for the surrounding rangeland tied to the local economy and the safety of students and staff.

### Hail

The primary concern regarding hail is the potential for property damages. Hail can damage windows in facilities and vehicles and rooftop utilities. The school facilities are not outfitted with hail resistant roofing materials. The school district provides services to students from other communities, increasing the potential exposure to damage from hail with long commutes.

**High Winds**

High winds can cause widespread damages to crops, trees, and property and are a common occurrence across the school district and planning area. Concerns about high winds include damage to property, loss of power from downed power lines, and the spread of wildfire. The school backs up school records in the case of a power failure, but the schools do not have backup generators.

**Severe Winter Storms**

Severe winter storms can cause power outages from downed power lines, damage to buildings or school vehicles, and hinder transportation for students and staff. Severe winter storms in April and December 2018 cause school closures. The school has an automated call and text alert system to notify students, parents, and staff of school closures from weather conditions. Both the Mullen Elementary and Mullen High School have weather radios.

**Administration/Capability Assessment**

The school district has a superintendent and two principals. The school board is made up of a six-member panel.<sup>viii</sup>

- Communications
- Curriculum/Assessment
- Facilities
- Finance Department
- Human Resources
- Learning Coaches
- Library/Media Services
- Media Specialist
- PARA Education
- IT Department
- Transportation

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

**Plan Integration**

The school district has a Safety and Security Plan which was last updated in November 2018. This plan outlines safety, security, lockdown procedures, tornado drills, fire drills, reunification procedures, and evacuation routes and procedures. Additionally, the school district has an Emergency Evacuation Plan, Emergency Dismissal Plan, Crisis Response Plan, and Strategic Plan address additional man-made hazards such as active shooter. These plans also build on appropriate evacuation and emergency response protocols in the case of a natural disaster. There are no scheduled updates to these plans at this time.

The Crisis Response Plan is updated each semester with new information and relevant changes. The plan assigns specific roles to individuals, addresses shelter in place protocols, evacuation

protocols and routes, and offers an opportunity to implement mitigation efforts following an event. The plan is shared locally with the fire department, police department, and Village of Mullen officials. The school district identifies continued education and training for drills and safety as a top priority. Fire, tornado, and lock out drills are conducted periodically. The district has a Threat Assessment team which is in charge of threat mitigation.

## Mitigation Strategy

### New and Ongoing 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)	All hazards
ESTIMATED COST	\$15,000
FUNDING	HMGP, PDM, General School Budget
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village of Mullen, School Board
STATUS	The Village of Mullen needs a new alert siren. New siren may be located at one of the schools.

MITIGATION ACTION	HAZARDOUS TREE REMOVAL PROGRAM
DESCRIPTION	Identify and remove hazardous limbs and/or trees on school property
HAZARD(S)	All hazards
ESTIMATED COST	\$200 per tree
FUNDING	General School Budget
LOCATION	School Grounds
TIMELINE	1 year
PRIORITY	Medium
LEAD AGENCY	School
STATUS	This is a new mitigation action.

MITIGATION ACTION	PROMOTE FIRST AID
DESCRIPTION	Promote first aid training for all staff
HAZARD(S)	All hazards
ESTIMATED COST	\$100 per person
FUNDING	General School Budget
TIMELINE	1 year
PRIORITY	Medium
LEAD AGENCY	School Board
STATUS	This is an ongoing action. Coaches and staff are trained every one to two years for recertification.

<sup>vi</sup> Nebraska Department of Education. December 2018. "2017-2018 Education Profile for District: Mullen Public Schools." <http://nep.education.ne.gov/Districts/Index/46-0001-000?DataYears=20172018>.

<sup>vii</sup> Nebraska Education Profile. "School Report Card." Accessed December 2018. <http://nep.education.ne.gov/Home/>.

<sup>viii</sup> Mullen Public Schools. Accessed December 2018. <https://www.mullenpublicschools.org/o/mullen-public-schools>.

# SCHOOL PROFILE

## SANDHILLS PUBLIC SCHOOLS



Upper Loup Natural Resources District  
Multi-Jurisdictional Hazard Mitigation Plan Update

2019

## Local Planning Team

**Table SPS.1: Sandhills Public Schools Local Planning Team**

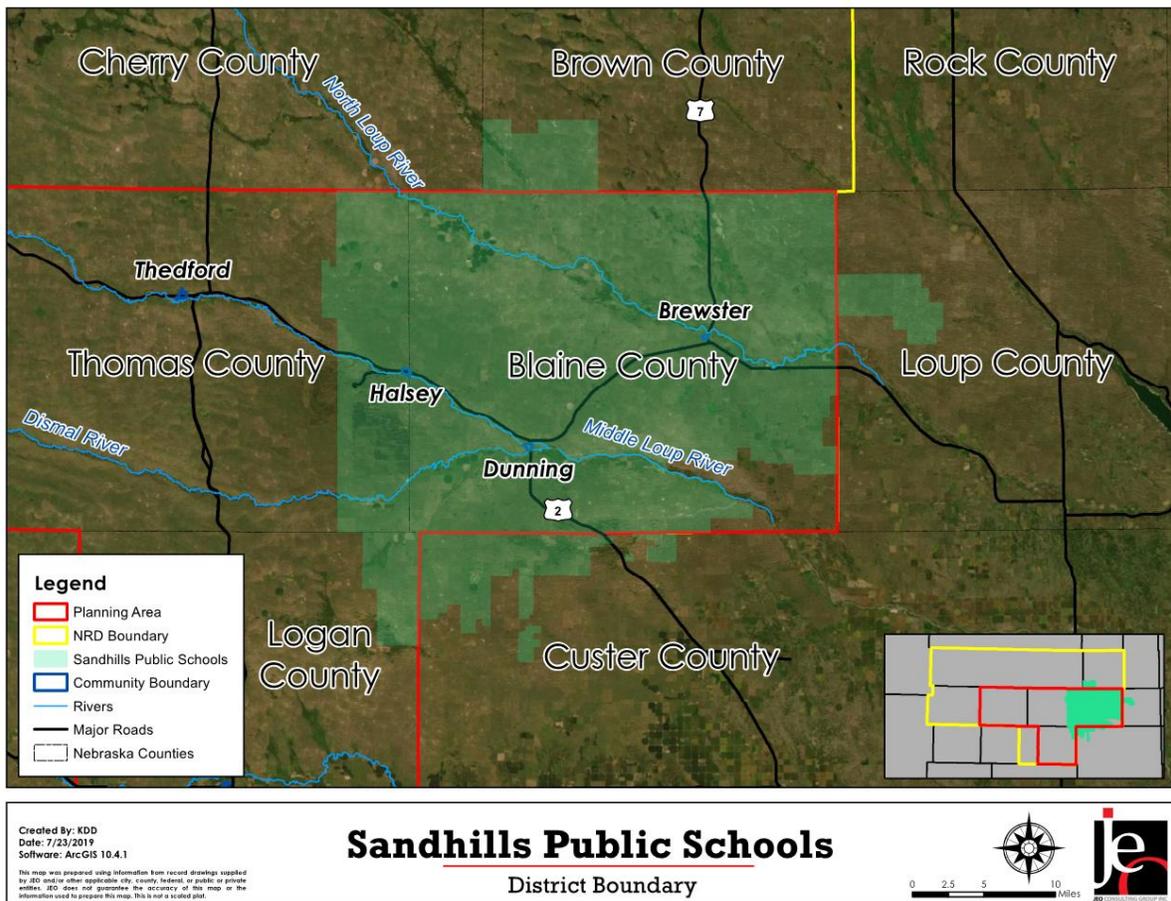
Name	Title	Jurisdiction
Dale Hafer	Superintendent*	Sandhills Public Schools
Gary Cooper	Superintendent	Sandhills Public Schools

Dale Hafer was superintendent during plan development and attended meetings as a representative for Sandhills Public School, but left Sandhills Public School at the end of the 2018-2019 school year to be superintendent at Ainsworth Public Schools. Gary Cooper became the new superintendent of Sandhills Public School starting the 2019-2020 school year.

## Location and Services

Sandhills Public Schools includes two schools, one elementary school in Village of Halsey in Blaine and Thomas Counties and one high school in the Village of Dunning in Blaine County. The school district provides services to students in Thomas, Blaine, Logan, Custer, and Brown Counties. A minor amount of Spanish is spoken in the district, but the primary language used is English. The district does not serve students outside of the district boundary.

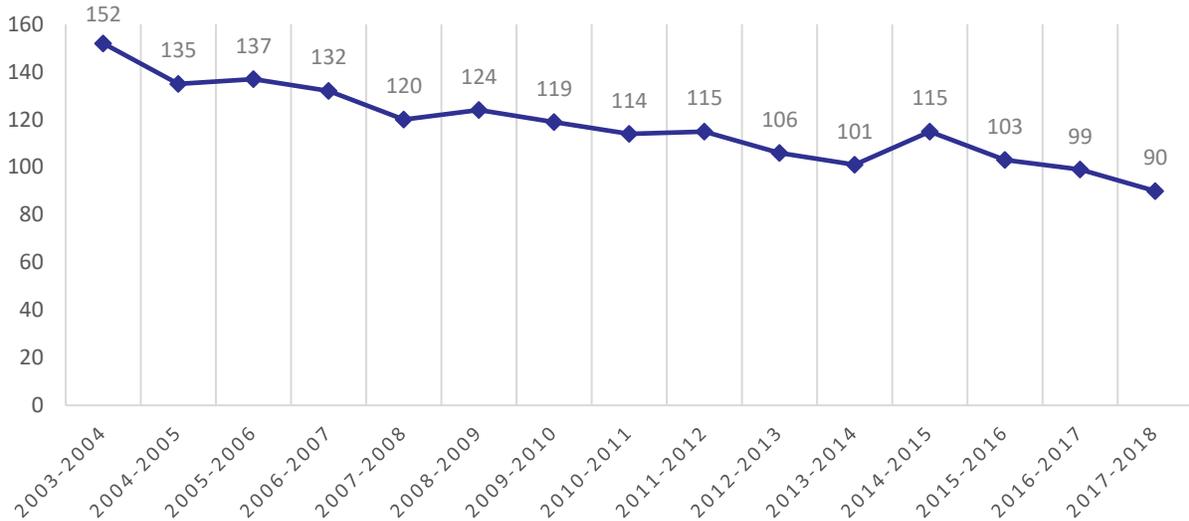
**Figure SPS.1: Sandhills Public Schools District**



## Demographics

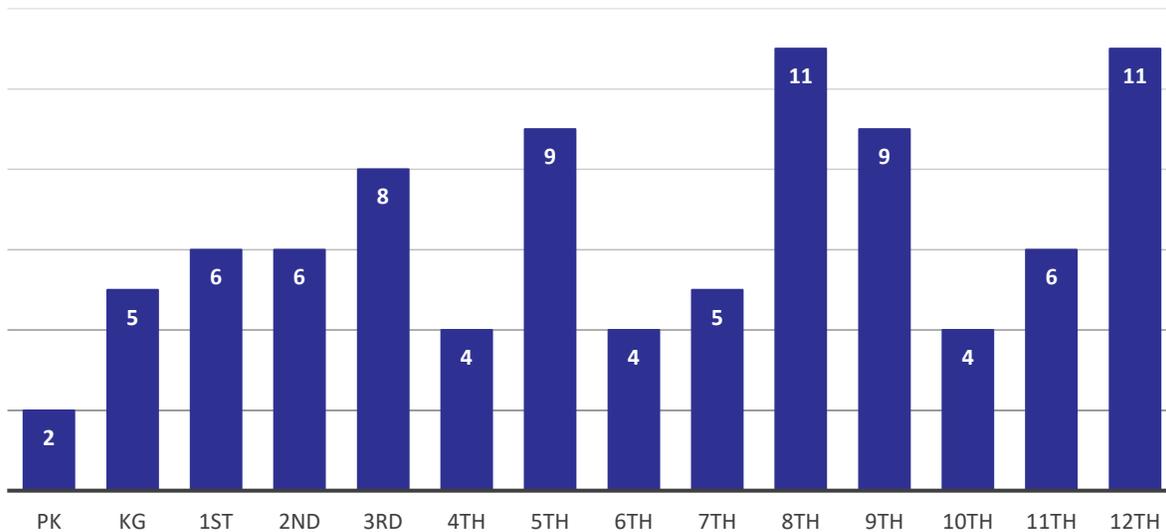
The following figure displays the historical student population trend starting with the 2003-04 school year and ending with the 2017-18 year. It indicates that the student population has been declining since 2003. There are 90 students enrolled in Sandhills Public Schools.<sup>ix</sup> The local planning team indicated they expect a slight decrease or no change in student population.

**Figure SPS.2: Student Population 2003-2018**



Source: Nebraska Department of Education

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



Source: Nebraska Department of Education

The figure above indicates that the largest number of students are in the 8<sup>th</sup> and 12<sup>th</sup> grades, followed by 5<sup>th</sup> and 9<sup>th</sup> grades. The lowest population of students are Pre-Kindergarten. According to the Nebraska Department of Education (NDE), 50% of students receive either free or reduced priced meals at school in the 2017-18 year. This is higher than the state average of 45.83%. Additionally, nearly 14% of students are in the Special Education Program. These students may be more vulnerable during a hazardous event than the rest of the student population.

**Table SPS.2: Student Statistics, 2017-2018**

	School District	State of Nebraska
Free/Reduced Priced Meals	50.00%	45.83%
School Mobility Rate	6.54%	4.23%
English Language Learners	N/A	6.87%
Special Education Students	13.64%	15.12%

Source: Nebraska Department of Education\*

### Future Development Trends

In the past five years the Sandhills Elementary School shifted to provide services to just Kindergarten through 4<sup>th</sup> grade, while the Sandhills High School serves 5<sup>th</sup> through 12<sup>th</sup> grades. There are no new plans for additional construction or renovation.

### Critical Infrastructure/Key Resources

#### Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environmental Quality, there is one chemical storage site that house hazardous materials in the Village of Halsey but no facilities in the Village of Dunning. This facility is not located near either Sandhills Public School facilities.

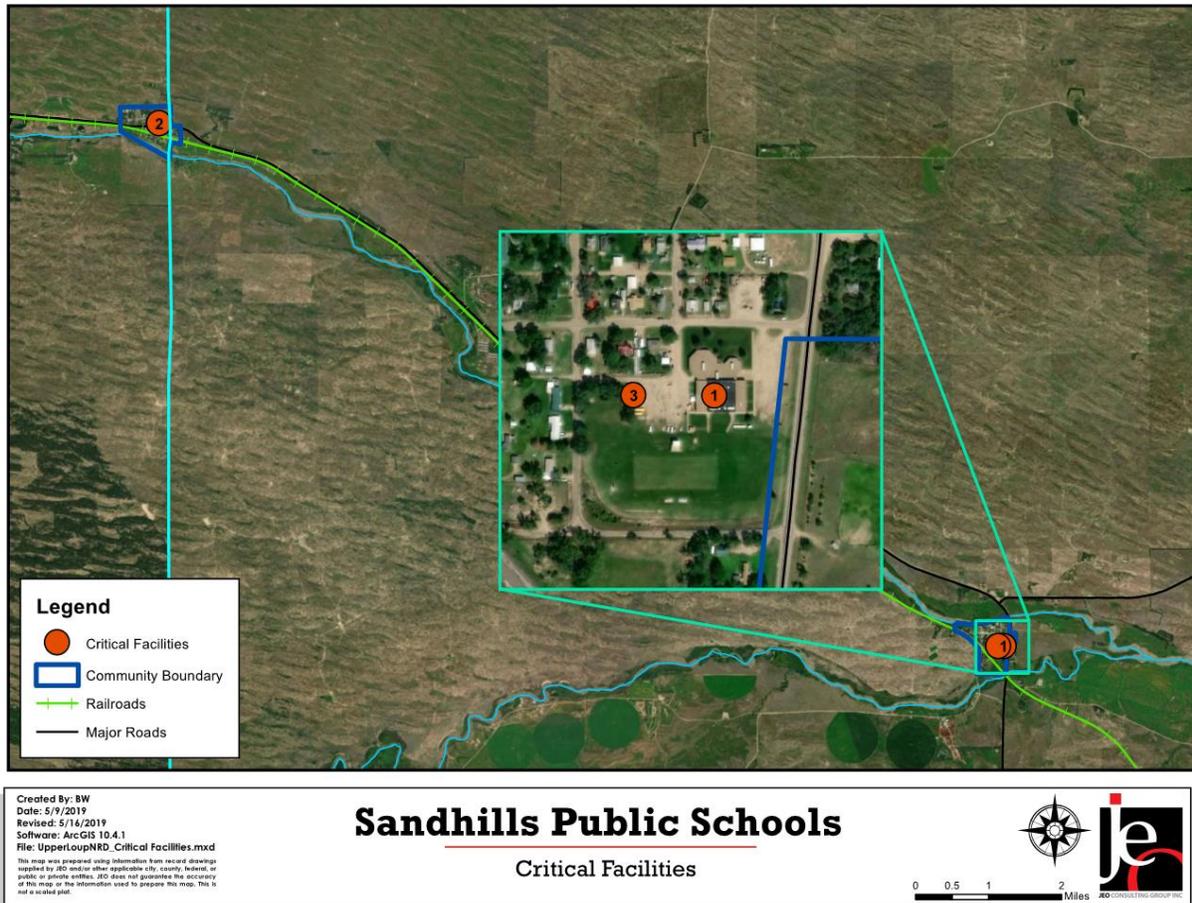
#### Critical Facilities

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

**Table SPS.3: Critical Facilities**

CF #	Name	Address	Number of Students	Number of Staff	Red Cross Shelter (Y/N)	Safe Room (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Sandhills High School	107 Gandy Ave Dunning NE	59	16	Y	Y	N	Y
2	Sandhills Elementary School	103 Main St Halsey NE	31	7	Y	Y	N	Y
3	Bus Barn	107 Gandy Ave Dunning NE	-	-	N	N	N	Y

Figure SPS.4: Critical Facilities



### School Drills and Staff Training

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

- Fire – twice a year
- Tornado – twice a year
- Bus Evacuation – annually
- Intruder/lockdown – twice a year

The school district trains staff about emergency procedures annually. In 2018 the district hired School Security Services to review and revise the district’s safety plans and procedures. In the case of school closures or hazard events, parents and staff are notified via an automated call system and the school district website.

### Historical Occurrences

See the Thomas County or Blaine County community profiles for historical hazard events.

## Hazard Prioritization

For an in-depth discussion regarding area wide hazards, please see *Section Four: Risk Assessment*. The following discussion provides specific information reported by the local planning team. Only hazards either identified as a concern to the school district by the local planning team, or based on the occurrence and risk of the hazard to the school district are discussed in detail below.

### **Chemical Spills (Transportation)**

Chemical transportation spills are a concern for the school district as a rail line and the highway are located directly next to school facilities. A high volume of hazardous chemicals including propane, gasoline, oil, coal, and fertilizers are transported via rail and highway throughout the district. No past chemical spill events have occurred which damaged school facilities.

### **Drought**

Periods of drought can affect the local agricultural economy and reduce firefighting water supplies. Long term droughts could indirectly affect school funding due to its connect to land valuation. Severe drought can also have a negative psychological impact on students. The school district partners with serviced areas to assist during periods of drought. Concerns exist about the interaction of drought and grass/wildfires impacting the area.

### **Grass/Wildfires**

Grass/wildfire is a major concern across the school district and planning area. Grass/wildfires can be exacerbated by drought conditions, spread by high winds, or caused by lightning strikes. The school district relies on the local fire departments for fire fighting response and is concerned about impacts on students, families, and staff in affected areas. There are no formal agreements in place, but the district indicated school buses would be available for evacuation purposes if needed.

### **Severe Thunderstorms**

Severe thunderstorms are typically associated with heavy rain, lightning, high winds, and hail. There are no lightning rods on school facilities, increasing their risk of damages during severe thunderstorm events. Severe events can flood facilities and damage trees or facilities. There are no backup generators in school facilities, however both the high school and elementary school have safe rooms and are designated as Red Cross shelter locations.

### **Tornadoes**

Tornadoes pose significant risk of damage to homes, businesses, infrastructure, and agriculture. The schools do not have backup generators, but do have safe rooms and sheltering locations. Most residents in the Village of Dunning do not have basements; thus the school is used as a community shelter location. Tornadoes are a top concern due to their potential for catastrophic damage to school facilities. The Village of Dunning is currently looking into a new alert siren which would assist in notifying students, staff, and residents.

## Administration/Capability Assessment

The school district has a superintendent. The school board is made up of a six-member panel.<sup>xi</sup>

- Communications
- Finance Department
- Human Resources
- Library/Media Services
- PARA Education
- IT Department
- Transportation

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

## Plan Integration

The school district has a Safety Plan which was last updated in February 2019. This plan outlines school safety including evacuation routes and procedures, fire and tornado drills, and intruder protocols. The school also has flip charts for incident command situations to augment the Safety Plan and the Safety Committee meets four or five times annually to discuss security measures. The district’s insurance also provides an annual safety review.

The school district’s Crisis Response Plan was last updated in 2014 and has is expected to be updated in fall 2019. The new update will include: discussion of weather hazards, specific roles and responsibilities for staff, sheltering locations and protocols, and evacuation scenarios and routes. The district’s guidance and administration departments manage the plan.

## Mitigation Strategy

### New and Ongoing Actions:

MITIGATION ACTION	BACKUP GENERATORS
DESCRIPTION	Provide a portable or stationary source of backup power
HAZARD(S)	All hazards
ESTIMATED COST	\$3,500+ depending on site requirements
FUNDING	General School Budget
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Administration
STATUS	This is a new action.

MITIGATION ACTION		COMPLETE/UPDATE WILDFIRE PROTECTION PLAN
DESCRIPTION	Complete, update, or participate in a Community Wildfire Protection Plan (CWPP). The CWPP enables jurisdictions to plan how it will reduce risk of wildfire.	
HAZARD(S)	Grass/wildfire	
ESTIMATED COST	\$20,000	
FUNDING	General School Budget	
TIMELINE	2-5 years	
PRIORITY	Medium	
LEAD AGENCY	Administration	
STATUS	This is a new action.	

MITIGATION ACTION		EMERGENCY EXERCISE: HAZARDOUS SPILL
DESCRIPTION	Utilize an exercise to prepare for potential explosions or hazardous spill events. Ensure nearby facilities and residents have plans in place.	
HAZARD(S)	Chemical Transportation	
ESTIMATED COST	\$5,000+	
FUNDING	General School Budget	
TIMELINE	2-5 years	
PRIORITY	Medium	
LEAD AGENCY	Administration	
STATUS	This is a new action.	

MITIGATION ACTION		LIGHTNING RODS
DESCRIPTION	Install lightning rods in strategic locations at high points	
HAZARD(S)	Severe Thunderstorms	
ESTIMATED COST	\$2,500+	
FUNDING	General School Budget	
TIMELINE	1 year	
PRIORITY	High	
LEAD AGENCY	Administration	
STATUS	This is a new action.	

MITIGATION ACTION		PROMOTE FIRST AID
DESCRIPTION	Promote first aid training for all staff	
HAZARD(S)	All hazards	
ESTIMATED COST	\$100 per person	
FUNDING	General School Budget	
TIMELINE	2-5 years	
PRIORITY	Medium	
LEAD AGENCY	Administration	
STATUS	Additional training is needed to complement current CPR training programs.	

MITIGATION ACTION	PUBLIC AWARENESS/EDUCATION
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)	All hazards
ESTIMATED COST	\$3,000+
FUNDING	General School Budget
TIMELINE	Ongoing
PRIORITY	Medium
LEAD AGENCY	Administration
STATUS	This is a new action. Additional educational efforts can be taken to notify students, parents, and staff of what to do in hazardous events.

MITIGATION ACTION	SURGE PROTECTORS
DESCRIPTION	Purchase and install surge protectors on sensitive equipment in critical facilities
HAZARD(S)	Severe Thunderstorms
ESTIMATED COST	\$25 per unit
FUNDING	General School Budget
TIMELINE	1 year
PRIORITY	Medium
LEAD AGENCY	Administration
STATUS	This is a new action.

<sup>k</sup> Nebraska Department of Education. December 2018. "2017-2018 Education Profile for District: Sandhills Public Schools." <http://nep.education.ne.gov/Districts/Index/05-0071-000?DataYears=20172018>.

<sup>x</sup> Nebraska Education Profile. "School Report Card." Accessed December 2018. <http://nep.education.ne.gov/Home/>.

<sup>al</sup> Sandhills Public Schools. Accessed December 2018. <https://www.sandhillsknights.org/>.