



# City of Grand Island

Tuesday, November 14, 2017

Council Session

## Item G-26

**#2017-330 - Approving Adoption of the 2017 Hazard Mitigation Plan**

Staff Contact:

# Council Agenda Memo

**From:** Jon Rosenlund, Director of Emergency Management

**Meeting:** November 14, 2017

**Subject:** Approving Adoption of the 2017 Hazard Mitigation Plan

**Presenter(s):** Jon Rosenlund, Director of Emergency Management

## Background

The Federal Disaster Mitigation Act of 2000 requires that local jurisdictions have a Hazard Mitigation Plan in order to identify local hazards and methods that these hazards could be mitigated. Working with the Central Platte Natural Resources District, Hall County, the City of Grand Island and other Hall County jurisdictions have completed an update of the local Hazard Mitigation Plan for adoption by the City. This Plan adoption is valid with FEMA for 5 years.

## Discussion

The Federal Disaster Mitigation Act of 2000 requires that local jurisdictions have a Hazard Mitigation Plan in order to identify local hazards and methods that these hazards could be mitigated. Plans are reviewed by the Nebraska Emergency Management Agency and then the Federal Emergency Management Agency (FEMA). Once approved by FEMA, the plan is valid for 5 years and must be renewed following that time.

Working with the Central Platte Natural Resources District, Hall County, the City of Grand Island and other Hall County political subdivisions have completed an update of the local Hazard Mitigation Plan. This plan includes the efforts and information for many jurisdictions along the Central Platte River and received input from dozens of jurisdictions.

Mitigation projects identified in the Plan are not a requirement for the City to complete in a specified time, but are the City's stated priorities for mitigation efforts should resources and opportunities avail themselves. Thus, the City is not committed to any specific expenditures by adopting this Plan, but projects identified therein are eligible for Federal and State grant funding. This Plan adoption is valid with FEMA for 5 years and will be reviewed and renewed in 5 years' time. Failure to have an adopted hazard mitigation plan will make a jurisdiction ineligible for FEMA post disaster funding in case of a major disaster.

## **Alternatives**

It appears that the Council has the following alternatives concerning the issue at hand. The Council may:

1. Move to approve
2. Refer the issue to a Committee
3. Postpone the issue to future date
4. Take no action on the issue

## **Recommendation**

City Administration recommends that the Council adopt the Central Platte NRD Hazard Mitigation Plan.

## **Sample Motion**

Move to approve the 2017 Central Platte NRD Hazard Mitigation Plan.

AUGUST 2017

HALL COUNTY APPENDIX  
CENTRAL PLATTE NRD MULTI-JURISDICTIONAL  
HAZARD MITIGATION PLAN



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## **PLAN OVERVIEW**

This plan is an update to the Central Platte Natural Resources District (CPNRD) Multi-Hazard Mitigation Plan (HMP) approved in 2012. The plan update was developed in compliance with the requirements of the Disaster Mitigation Act of 2000 (DMA 2000).

Hazard mitigation planning is a process in which hazards are identified and profiled, people and facilities at risk are identified and assessed for threats and potential vulnerabilities, and strategies and mitigation measures are identified. The goal of the process is to reduce risk and vulnerability, to lessen impacts to life, the economy, and infrastructure. Hazard mitigation planning increases the ability of communities to effectively function in the face of natural and manmade disasters.

The potential for disaster losses and the probability of occurrence of natural and manmade hazards present a significant concern for the communities participating in this plan update. The driving motivation behind the update of this hazard mitigation plan is to reduce vulnerability and the likelihood of impacts to the health, safety, and welfare of all citizens in the planning area. To this end, the Regional Planning Team reviewed, updated, and approved goals and objectives which helped guide the process of identifying both broad-based and community-specific mitigation strategies and projects that will, if implemented, reduce their vulnerability and help build stronger, more resilient communities. The goals and objectives for this plan update are as follows:

### **Goal 1: Protect Public Health and Safety from Natural Hazard Events**

**Objective 1.1:** Provide Adequate Public Safe Rooms and Post-Disaster Storm Shelters

**Objective 1.2:** Improve/Provide Adequate Backup and Emergency Generators

**Objective 1.3:** Improve Warning Systems

**Objective 1.4:** Improve Emergency Communication Systems

**Objective 1.5:** Improve Electrical Service

**Objective 1.6:** Develop Emergency Snow/Evacuation Routes

**Objective 1.7:** Study/Improve Drinking Water Supply

**Objective 1.8:** Reduce Water Demand/Improve Drought Education

**Objective 1.9:** Improve Response to Hazardous Materials (Hazmat) Incidents

**Objective 1.10:** Improve Flood/Dam Failure Warning System

### **Goal 2: Protect Existing and New Properties from Natural Hazard Events**

**Objective 2.1:** Reduce Bottleneck/Flow Restrictions

**Objective 2.2:** Reduce Wildfire Damage

**Objective 2.3:** Reduce Stormwater Damage

**Objective 2.4:** Develop/Update Floodplain Information

**Objective 2.5:** Reduce Damages in Floodplain

**Objective 2.6:** Facility Flood Proofing

**Objective 2.7:** Reduce Tree Damage & Damage from Trees

**Objective 2.8:** Evaluate Stream Channelization/Bank Stabilization

**Objective 2.9:** Improve Construction Standards and Building Survivability

**Objective 2.10:** Evaluate and Improve Berm, Floodwall and/or Levee

**Goal 3: Increase Public Awareness and Education about Natural Hazard Events**

**Objective 3.1:** Community Education and Awareness

**Objective 3.2:** Increase Soil and Water Conservation

***PLAN ORGANIZATION***

This HMP is comprised of three primary components:

- The regional overview, analysis, and plan documentation
- Seven participant appendices (One for each of the five participating counties plus one for the Central Platte NRD and one for communities participating outside of the five participating counties)
- An appendix of procedural documentation and resolutions of adoption

This participant appendix includes all participating jurisdictions from Hall County, which includes jurisdictional-specific information for each participant. Additional information regarding the planning process, demographics and asset inventory, regional risk assessment and methodology, mitigation strategy, and plan implementation and maintenance can be found in the regional portion of the plan.

PARTICIPANT SECTION  
FOR

HALL COUNTY

Central Platte NRD  
Multi-Jurisdictional Hazard Mitigation Plan

August 2017

**LOCAL PLANNING TEAM**

Table HAL.1 provides the list of participating members that comprised the Hall County local planning team. Members of the planning team attended Round 1 and Round 2 meetings, and provided important information including, but not limited to: confirming demographic information, critical facilities, future development trends, hazard history and impacts, identifying hazards of greatest concern, and the prioritization of mitigation actions that address the hazards at risk to the County.

**Table HAL.1: Hall County Local Planning Team**

Name	Title	Jurisdiction/Department
Jon Rosenlund	Director of Emergency Management	Hall County
Chad Nabity	Planning Director/Floodplain Administrator	Hall County
Steve Riehle	Engineer	Hall County Highway Department

**LOCATION AND GEOGRAPHY**

Hall County is located in southcentral Nebraska and is bordered by Buffalo, Howard, Merrick, Hamilton, and Adams counties. The total area of Hall County is 552 square miles. The major waterways within the County are the Platte River, Wood River, Prairie Creek, Silver Creek, Moores Creek and Beaver Creek. Most of Hall County lies in the valleys and plains topographic region, with the vast majority of the County’s land characterized by agricultural fields.

**CLIMATE**

For Hall County, the normal high temperature for the month of July is 87.7°F. The normal low temperature for the month of January is 14.0°F. On average, Hall County receives 26.7 inches of rain and 29.0 inches of snowfall per year. The following table compares these climate indicators with those of the entire state. Climate data are helpful in determining if certain events are more or less likely to occur in specific geographic locations.

**Table HAL.2: Climate Data for Hall County**

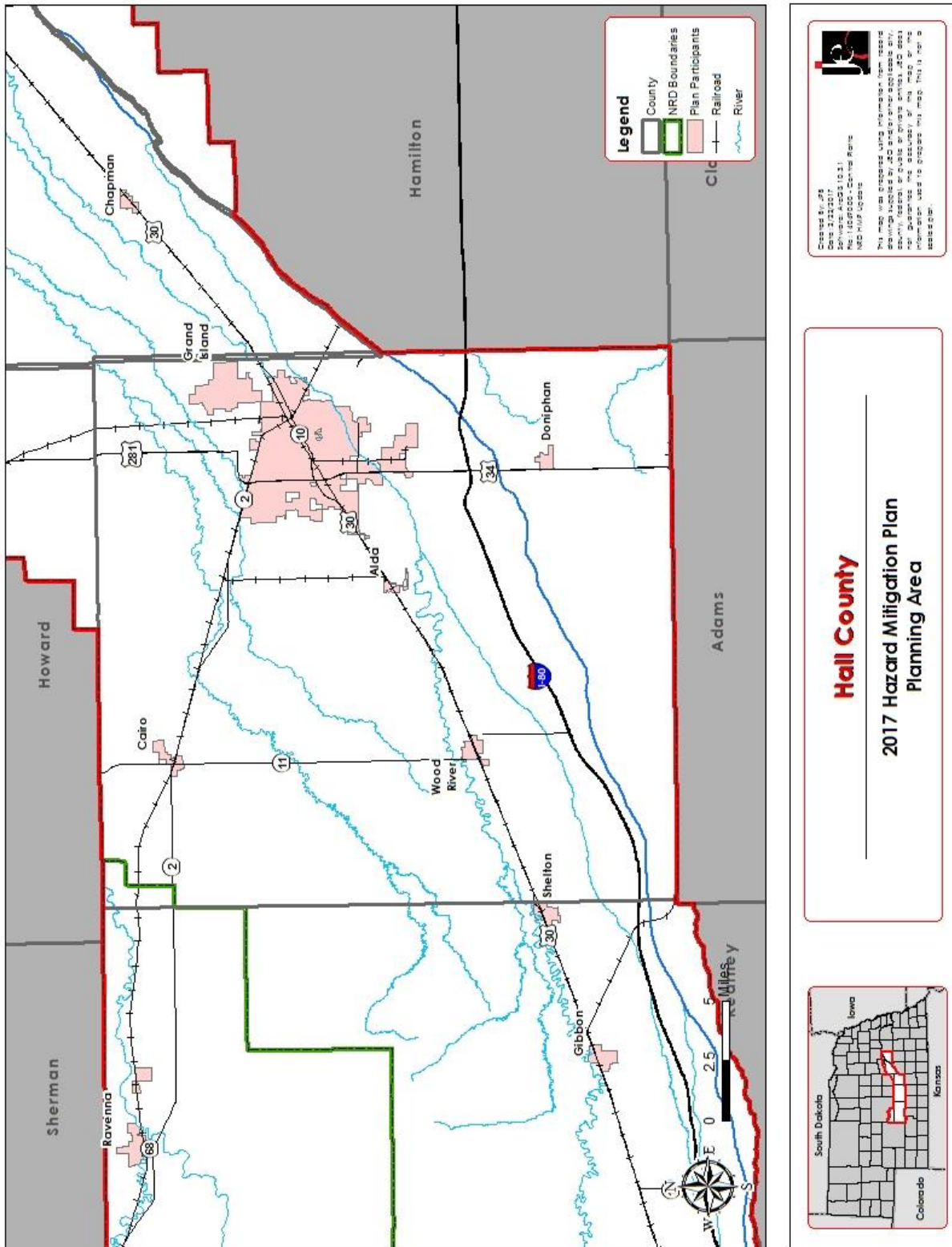
Age	Hall County	Planning Area	State of Nebraska
July Normal High Temp	87.7°F	87.0°F	88.0°F
January Normal Low Temp	14.0°F	14.2°F	12.0°F
Annual Normal Precipitation	26.7 inches	26.65 inches	23.89 inches
Annual Normal Snowfall	29.0 inches	26.2 inches	25.9 inches

Source: NCEI Climate Data Online, 1981-2010 Climate Normals  
 \*Precipitation includes all rain and melted snow and ice.

**TRANSPORTATION**

Hall County’s major transportation corridors include Interstate 80, Highways 2, 11, 30, and 281 with railways including Union Pacific, Burlington Northern–Santa Fe, and Nebraska Central Railroad Company. There is an airport, the Central Nebraska Regional Airport, located northeast of Grand Island.

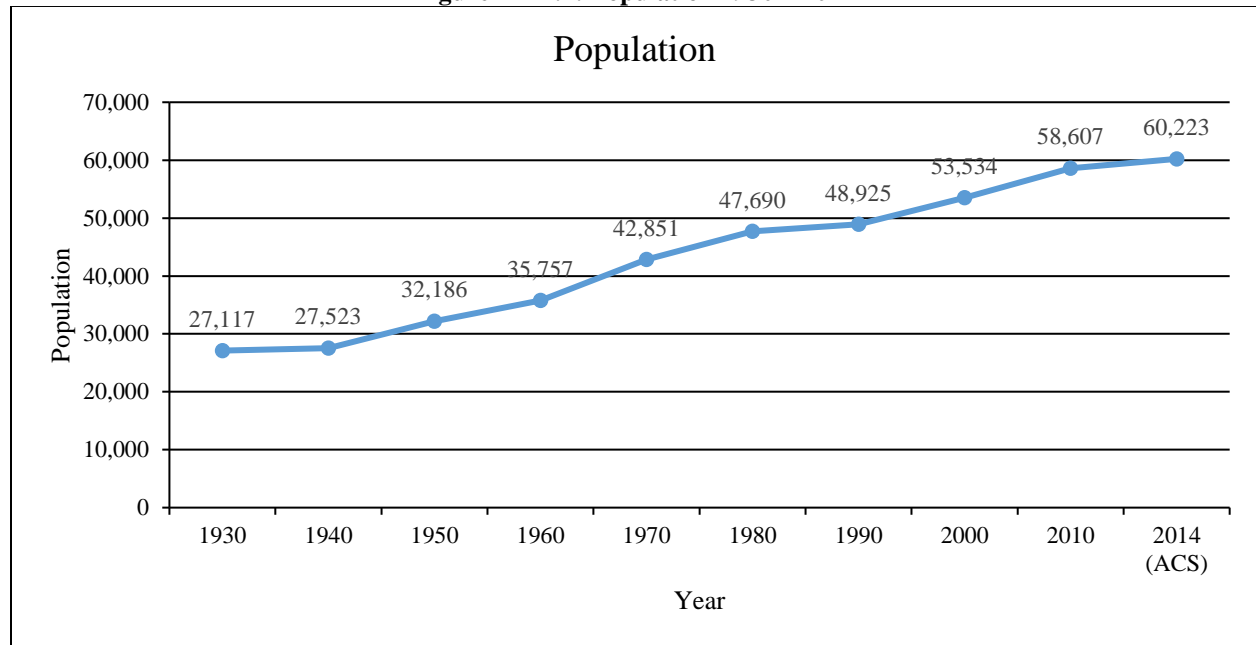
Figure HAL.1: Hall County Map



**DEMOGRAPHICS**

The following figure displays the historical population trend from 1930 to 2014. This figure indicates that the population of Hall County has been increasing since 1930. This is notable for hazard mitigation for several important reasons. When population is increasing, areas of the County may experience housing developments. Increasing populations can also represent increasing tax revenue for the County, which could make implementation of mitigation actions possible.

**Figure HAL.2: Population 1930 – 2014**



Source: U.S. Census Bureau

The following table indicates that Hall County has a higher percentage of people under the age of 5 than the state. However, Hall County has slightly lower percentages of the population between the ages of 5 and 64 and older than 64 years of age when compared to the state. Finally, the County has a lower median age than that of the state.

**Table HAL.3: Population by Age**

Age	Hall County	State of Nebraska
<5	8.1%	7.2%
5-64	78.5%	79.2%
>64	13.4%	13.6%
Median	35.9	36.2

Source: U.S. Census Bureau, 2010, Table DP-1

The following table indicates that the County’s median household income is higher when compared to the State of Nebraska, however the County’s per capita income is lower than that of the state. The median home value and rent are also lower than the rest of the state. These economic indicators are relevant to hazard mitigation because they indicate the relative economic strength compared to the state as a whole.

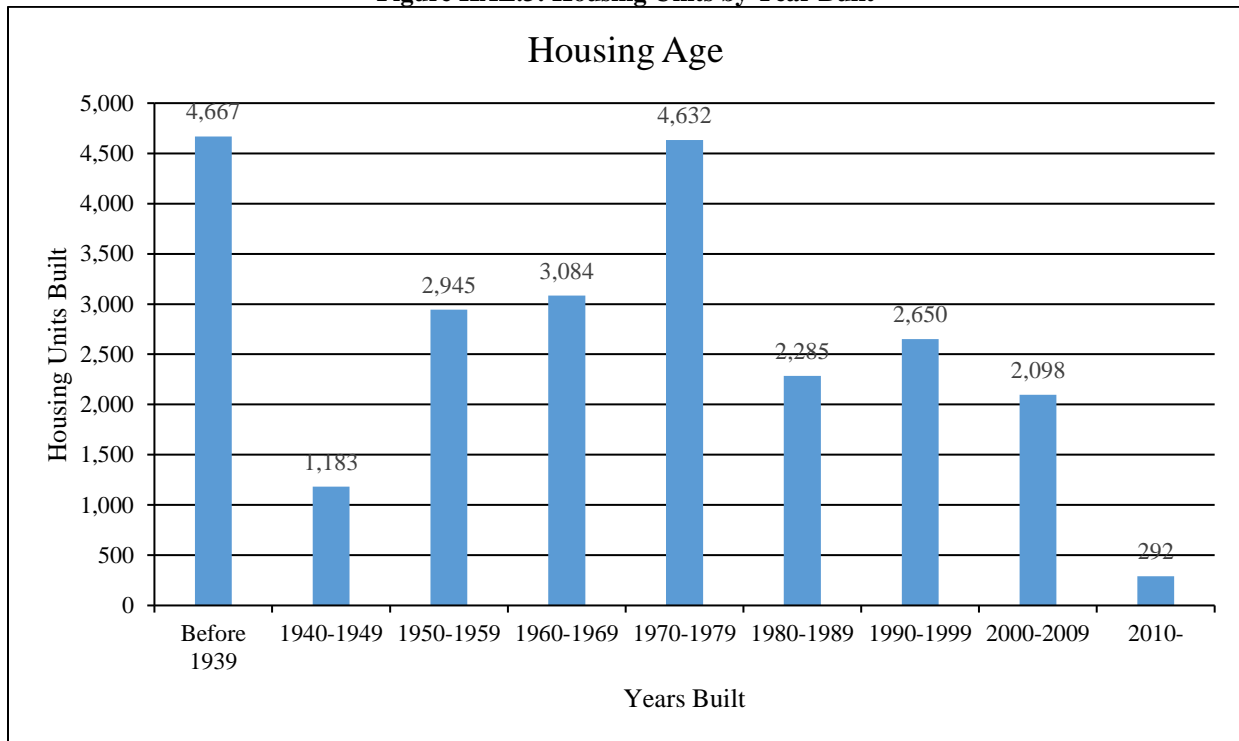
**Table HAL.4: Housing and Income**

	Hall County	State of Nebraska
Median Household Income	\$61,677	\$52,400
Per Capita Income	\$24,075	\$27,339
Median Home Value	\$118,300	\$130,100
Median Rent	\$656	\$721

Source: U.S. Census Bureau, 2010-2014 American Community Surveys 5-year Estimates, Table DP03 and DP04

According to 2010-2014 ACS 5-year estimates, the County has 23,836 housing units with 94.1 percent of those units occupied. There are approximately 962 mobile homes in the County. The initial Flood Insurance Rate Map (FIRM) was developed in August 1990.

**Figure HAL.3: Housing Units by Year Built**



Source: U.S. Census Bureau, 2010-2014 American Community Surveys 5-year Estimates, Table DP04

**Table HAL.5: Housing Units**

Jurisdiction	Total Housing Units				Occupied Housing Units			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Hall County	22,418	94.1%	1,418	5.9%	14,326	63.9%	8,092	36.1%
Nebraska	731,347	90.8%	73,909	9.2%	486,036	66.5%	245,311	33.5%

Source: Selected Housing Characteristics: 2010 - 2014 ACS 5-year estimate

**MAJOR EMPLOYERS**

According to 2014 Business Patterns Census Data, Hall County had 1,822 business establishments. The following table presents the number of establishments, number of paid employees, and the annual pay role in thousands of dollars. This information is relevant to hazard mitigation insofar as it indicates the diversification of industry. Communities which have a diverse economic makeup may be more resilient following a hazardous event, especially if certain industries are more impacted than others.



**Table HAL.6: Business in Hall County**

	Total Businesses	Number of Paid Employees	Annual Payroll (in thousands)
<b>Total for all Sectors</b>	1,822	30,308	\$1,068,434

Source: U.S Census 2014, Table CBI400A11

Agriculture is important to the economic fabric of Hall County, and the state of Nebraska as a whole. Hall County’s 593 farms cover 329,668 acres of land. Crop and livestock production are the visible parts of the agricultural economy, but many related businesses contribute as well. Related business contributions include producing, processing and marketing farm and food products. These businesses generate income, employment, and economic activity throughout the region.

**Table HAL.7: Hall County Agricultural Inventory**

Hall County Agricultural Inventory	
Number of Farms	593
Land in Farms	329,668 acres

Source: USDA 2012 Census of Agriculture

***FUTURE DEVELOPMENT TRENDS***

In the last five years, agricultural outbuildings have been added, but no additional new housing or industrial developments have been added. There are no plans for new businesses, industry, or housing developments at this time.

***PARCEL IMPROVEMENTS AND VALUATION***

GIS parcel data was requested from the County Assessor. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

**Table HAL.8: Parcel Improvements**

Number of Improvements	Total Improvement Value	Mean Value of Improvements Per Parcel	Number of Improvements in Floodplain	Value of Improvements in Floodplain
26,175	\$3,142,032,878	\$120,039	4,337	\$485,242,269

Source: Hall County Assessor

***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 37 chemical storage site that house hazardous materials in Hall County. Six of these sites are located in either the 1 or 0.2 percent floodplain (Figure HAL.5).

**Table HAL.9: Chemical Storage Fixed Sites**

Facility	Address	City	In Floodplain?
Agricultural Services Inc	150 Railroad St	Alda	No
Agricultural Services Inc	6068 N Highway 11	Cairo	Yes – 1%
Aurora Co-op Elevator Company	10501 W One-R Rd	Cairo	Yes – 1%
AT&T 0610	190th Rd	Cairo	No
CenturyLink	103 E Nile St	Cairo	No
Agricultural Services Inc	101 E Pine St	Doniphan	No
Nebraska Machinery Co	10501 S US Highway 281	Doniphan	No
Aurora Co-op Doniphan Plant	101 E Plum St	Doniphan	No
Pioneer Hi-Bred Intl Inc	12937 S US Highway 281	Doniphan	No

Facility	Address	City	In Floodplain?
NPPD Doniphan Sys Control Ctr	2060 W Platte River Dr	Doniphan	No
Doniphan Remote	106 W Plum St	Doniphan	No
Agricultural Services Inc	2777 N Broadwell Ave	Grand Island	No
Alter Nebraska Corporation	1119 E 4th St	Grand Island	No
AmeriCold Logistics LLC	204 E Roberts St	Grand Island	No
AT&T Communications 0900	144 W Roberts St	Grand Island	No
Aurora Co-op Elevator Company	4155 E US Highway 30	Grand Island	Yes – 1%
Aurora Co-op Elevator Company	920 N Shady Bend Rd	Grand Island	No
C W Burdick Generating Station	800 Bischeld St	Grand Island	No
CenturyLink	105 N Wheeler Ave	Grand Island	No
Charter Communications	2533 W Old Lincoln Hwy	Grand Island	No
Charter Communications	205 N Webb Rd	Grand Island	No
Chief Industries Inc	1119 S Adams St	Grand Island	No
Christensen Concrete Products	235 W Roberts St	Grand Island	No
Christensen Concrete Products	3990 W US Highway 30	Grand Island	No
CNH America LLC - Miller Bldg	1011 Claude Rd	Grand Island	No
CNH Industrial America LLC	3445 W Stolley Park Rd	Grand Island	No
Coca-Cola Refreshments	1617 Holland Dr	Grand Island	No
Darling Ingredients Inc	5251 W Guenther Rd	Grand Island	Yes – 1%
Diamond Truck Wash	6499 S US Highway 281	Grand Island	No
Gerhold Concrete Co	1431 S Webb Rd	Grand Island	No
GIUD Burdick Reservoir	S Stuhr Rd	Grand Island	No
GIUD Rogers Reservoir	3990 W Old Potash Hwy	Grand Island	No
Grand Island Potable Water	2700 Wellfield Rd	Grand Island	No
Grand Island Water Department	364 N Pine St	Grand Island	No
Lineage Logistics LLC	205 E Roberts St	Grand Island	No
McCain Foods USA Inc	2629 N Broadwell Ave	Grand Island	No
Optimas OE Solutions	3319 Island Cir	Grand Island	No
Overhead Door Co	2514 E US Highway 30	Grand Island	No
Platte Generating Station	1035 W Wildwood Dr	Grand Island	No
Platte Valley Energetics LLC	8318 W Old Potash Hwy	Grand Island	No
Sprint Grand Island POP	333 N Pine St	Grand Island	No
Standard Iron Inc	4160 Gold Core Rd	Grand Island	No
Swift Beef Company	555 S Stuhr Rd	Grand Island	No
The Home Depot Store 3208	911 Allen Dr	Grand Island	No
VA Nebraska - Western Iowa HCS	2201 N Broadwell Ave	Grand Island	No
Verizon Wireless MTSO	3650 W 13th St	Grand Island	No
Verizon Wireless Newfair	1203 S Stuhr Rd	Grand Island	Yes – 1%
Windstream Communications	3650 W 13th St	Grand Island	No
Wilbur-Ellis Company	11544 W Rosedale Rd	Prosser	No
Aurora Co-op Elevator Company	6236 S Schappsville Rd	Wood River	Yes – 0.2%
Agricultural Services Inc	106 W Railroad St	Wood River	No
Cooperative Producers Inc	15123 W Wood River Rd	Wood River	No
Green Plains Wood River LLC	7874 S 140th Rd	Wood River	No

Source: Nebraska Department of Environmental Quality, 2016



**HISTORIC SITES**

Per the National Register of Historic Places for Nebraska, there are five historic sites located in rural Hall County. Urban sites for Hall County can be found in their respective participant sections.

**Table HAL.10: National Historic Registry**

Site Name	Date Listed	In Floodplain?
Lincoln Highway-Grand Island Seeding Mile	4/24/2013	No
William Stolley Homestead and Site of Fort Independence	4/21/1976	No
Shady Bend Gas Station, Grocery & Diner	7/2/2008	No
Nine Bridges Bridge	6/29/1992	Yes
Townsley-Murdock Immigrant Trail Site	3/5/1998	No

Source: Nebraska State Historical Society, 2016

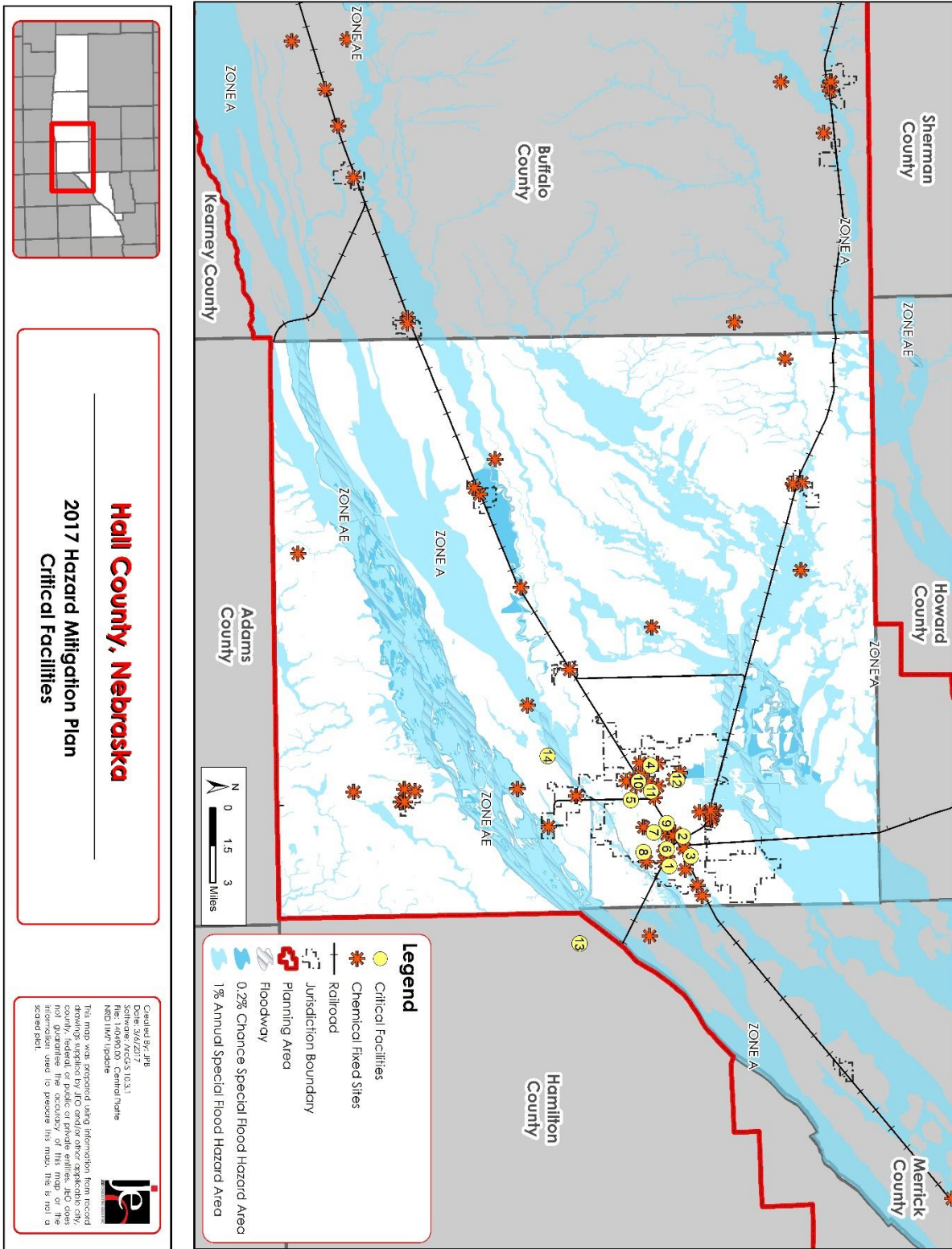
**CRITICAL FACILITIES**

Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public (i.e. Red Cross Shelter), 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 provides a summary of the critical facilities for the jurisdiction.

**Table HAL.11: List of Critical Facilities in Hall**

CF #	Name	Address	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in 1% Floodplain (Y/N)
1	Hall County Jail	112 Public Safety Drive, Grand Island, NE 68801	N	Y	N
2	Hall County Courthouse	111 W. 1 <sup>st</sup> Street, Grand Island, NE 68801	N	Y	N
3	Law Enforcement Center	111 Public Safety Drive, Grand Island, Nebraska 68801	N	N	N
4	Nebraska State Patrol	3431 W Old Potash Hwy, Grand Island, NE 68801	N	Y	N
5	Hall County PW	2900 W. 2nd Street, Grand Island, NE 68803	N	Y	N
6	FBI Office	203 W 2nd Street, Grand Island, NE 68801	N	N	N
7	Nebraska Health & Human Services	116 S. Pine St., Grand Island, NE 68801	N	N	N
8	Central District Health Dept.	1137 S. Locust Grand Island, NE 68801	N	Y	N
9	Hall County Admin	121 South Pine Street, Grand Island, NE 68801	N	N	N
10	NDOR Maintenance Yard	3305 W. Old Potash Hwy, Grand Island NE 68803	N	Y	N
11	NDOR District Office	211 N. Tilden St. Grand Island, NE	N	Y	N
12	KRGI Station	3205 W. North Front St., Grand Island, NE 68803	N	Y	N
13	KRGI Transmitter	Lat N 40-52-26 Long W 98-16-24	N	Y	N
14	KRGI Transmitter	Lat N 40-51-53 Long W 98-23-47	N	Y	Y

Figure HAL.5: Critical Facilities and Hazardous Materials Storage Facilities with Floodplain



**HISTORICAL OCCURRENCES**

The following table provides a statistical summary for hazards that have occurred in the County. The property damages from the NCEI Storm Events Database (January 1996 – December 2015) should be considered only as broad estimates. Sources include, but are not limited to: emergency management, local law enforcement, Skywarn spotters, NWS damage surveys, newspaper clipping services, insurance industry, and the general public.

Crop damages are from the USDA Risk Management Agency (RMA) between 2000 and 2015.

**Table HAL.12: NCEI Severe Weather Events**

HAZARD TYPE		COUNT	PROPERTY LOSS	CROP LOSS <sup>3</sup>
Agricultural Disease	Animal Disease <sup>2</sup>	2	-	-
	Plant Disease <sup>3</sup>	19	-	\$292,424
Chemical Spills-Transportation <sup>4</sup> 8 Injuries		157	\$339,450	-
Drought <sup>1</sup>		17	\$0	\$9,215,609
Extreme Heat <sup>1</sup>		2	\$200,000	\$4,129,854
Flooding <sup>1</sup>	Flash Flood	11	\$10,471,000	\$1,501,373
	Flood	11	\$115,000	
Grass/Wildfires <sup>5</sup>		51	5,247.8 acres	\$0
High Winds <sup>1</sup> Average: 51 kts Range: 35 - 70 kts		33	\$209,080	\$4,994,094
Severe Thunderstorms <sup>1</sup>	Thunderstorm Wind Average: 56 kts Range: 50 - 80 kts	102	\$3,273,000	\$6,152,756
	Hail Average: 1.18 in. Range: 0.75 - 3.00 in.	173	\$10,362,000	\$20,920,536
	Heavy Rain	11	\$0	-
Severe Winter Storms <sup>1</sup>	Blizzard	5	\$30,000	\$355,905
	Heavy Snow	2	\$0	
	Ice Storm	6	\$230,000	
	Severe Winter Storm 2 Deaths; 4 Injuries	41	\$435,000	
Tornadoes <sup>1</sup>	Funnel Cloud	8	\$0	\$0
	Tornado Most Common Rating: F0 Range: EF0 - F1	10	\$1,005,000	\$0
<b>Total</b>			<b>\$26,669,530</b>	<b>\$47,562,551</b>

<sup>1</sup> Data from NCEI (1996 - 2015)

<sup>2</sup> Data from NDA (2014-2016)

<sup>3</sup> Data from USDA RMA (2000 - 2015)

<sup>4</sup> Data from PHMSA (1970 - 2016)

<sup>5</sup> Data from NFS (2000 - 2014)

in. = inches; kts = knots



**COUNTY HAZARD PRIORITIZATION**

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

**Flooding**

Waterways in the County include the Platte River, Wood River, Prairie Creek, Moores Creek, Silver Creek, and Dry Creek. The Platte River is the controlling drainage for most of the County, which means that the waterways listed previously either run parallel or drain into the Platte River. Riverine and ice jam flooding are the primary concerns for Hall County.

The unincorporated area of Hall County has 106 NFIP policies in-force for \$ 8,344,800. There is one single family repetitive flood loss property in an unincorporated area of Hall County. The following table is parcel improvement information as provided by the County Assessor for the entire County area. It indicates that an estimated 16.6 percent of all parcel improvements in the County are located in the floodplain.

**Table HAL.14: Structures in the 1% Annual Flood Risk Area**

Value of Improvements in Floodplain	Number of Improvements in Floodplain	Total Number of Improvements in County	Percentage of Improvements in Floodplain
\$485,242,269	4,337	26,175	16.6%

Source: Hall County Assessor

According to the County Emergency Manager, there have been several floods along the Platte River just in the past few years. The following list provides a brief description of each of these events:

- Platte River Ice Jam, January 2015: Minor ice jam flooding in Hall County near Hwy 34 and Platte River.
- Platte River Flood, May-June 2015: Minor flooding near I-80 Exit 312 and surrounding fields. Hotels and restaurant surrounded but not damaged.
- Platte River Ice Jam, January 2015: Ice Jam flooding from Alda to the end of Hall County. Damaged roads leading to Grand Island Utilities water wellfields east of South Locust north of the Interstate near Exit 314. County Road damage to Shoemaker Island Road on Shoemaker Island between branches of the Platte. Homes along Shoemaker Island Road surrounded but not damaged.
- Plate River Flood, November 2014: Ice Jam flooding near I-80 Exit 312 and surrounding fields. Homes south of Mormon Island impacted. Nine Bridge Road bridge impacted by debris and ice.
- Platte River Ice Jam, Feb – March 2014: Ice Jam flooding near I-80 Exit 312 and surrounding fields. Hotels & restaurant surrounded, but not damaged.
- Platte River Flood, September 2013: Minor flooding near I-80 Exit 312 and surrounding fields.

It has been noted that floods following heavy rains appear to be decreasing in occurrence over the past four to five years along the Silver and Prairie Creeks. This is most likely due to the progress made on the detention cells for the Prairie Silver Moore’s flood control project near Grand Island.

Mitigation projects for flooding include stormwater drainage studies, implementing recommendations from the studies, and improving electrical service.

### **Hail**

Hail storms can cause serious damage to buildings throughout Hall County, as well as damage crops, which can have a large economic impact across the County. Per the NCEI database, 173 hail events have been reported since 1996 causing over \$10.3 million in damages and nearly \$21 million in crop damages as reported by the RMA. The County Emergency Management regularly provides public education on hazards. The County has also identified reducing damage from trees during hail and thunderstorms events as a mitigation action.

### **Severe Thunderstorms**

Severe thunderstorms are a common occurrence in the region and have caused damage to property and crops. The local planning team is concerned with possible damage to government property as well as private and residential property. Heavy rains associated with severe thunderstorms can also cause flash flooding in poor drainage areas. There have been no reports of damages to critical facilities from severe thunderstorms in the past. Backup power generators are available at several critical facilities including the 911 Center, Fire Stations, Courthouse, Sheriff's Office, and County Public Works. Hall County completed the StormReady certification in 2016.

Mitigation actions to reduce the impacts of severe thunderstorms include improving electrical service, reducing damages from trees, and providing backup power generators to critical facilities in need.

### **Severe Winter Storms**

Heavy snow, blowing and drifting snow, and ice accumulation can cause road closures, the need for rescuing stranded motorists, power outages, and property damage. On December 30, 2006, a significant ice storm lead to ice accumulation on power lines, trees, and roads. This lead to widespread tree damage, along with power outages, and damage to power lines and poles. Many residents were without power for several days. Total property damages across the region were estimated at \$10 million. The Christmas Blizzard of 2009 dumped approximately 12 inches of snow across the County. The combination of heavy snow and high winds lead to white-out conditions, which lead to numerous roadway closures. This included the closing of Interstate 80. More recently, on February 1, 2016, 18 inches of snow fell along with high winds caused blowing and drifting snow making travel impossible.

Currently, County snow removal resources, which includes motor graders and front end loaders, are sufficient. City resources, though, need to be improved. Mitigation actions include improving electrical service and obtaining backup generators for critical facilities in need.

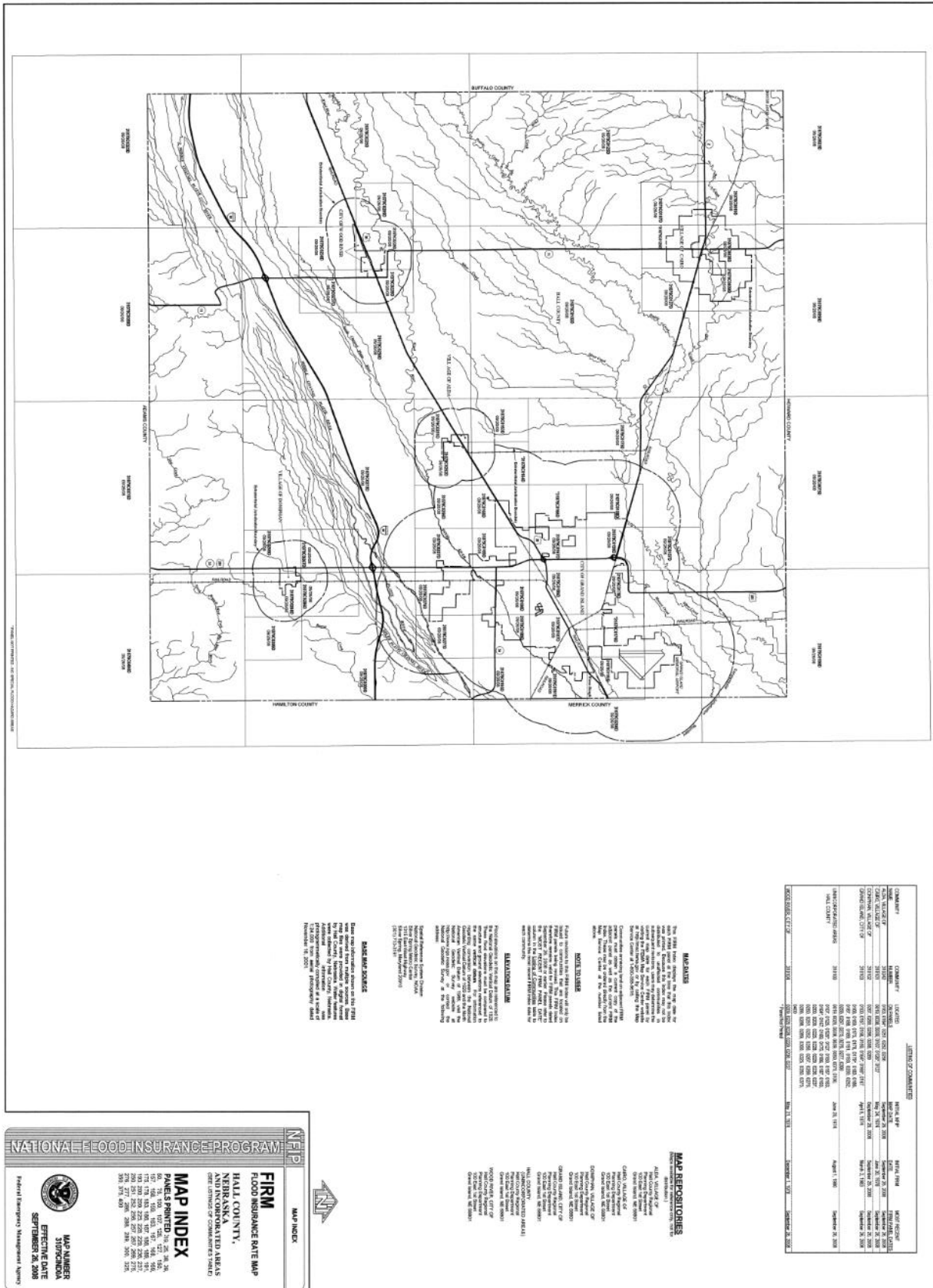
### **Tornadoes and High Winds**

Tornadoes and high winds have a long and devastating history in Hall County. On June 3<sup>rd</sup>, 1980, several tornadoes hit Grand Island, devastating entire sections of the community, especially the City's northwest and north central residential areas, and the southern business district. The tornadoes killed five people and injured more than 400. When it was over, the tornadoes had caused \$300 million in damages. This event is most famously referred to as *Night of the Twisters* after a book and television movie were made based on these events. In 1994, a smaller tornado in northwest Grand Island struck a train, overturning several boxcars. High winds are a constant risk to all structures in Hall County. Since 1996, over \$200,000 in property damages have been reported to the NCEI database. Radio antennas were damaged in 2006-2007 during an ice storm with high winds.

The County offers text alerts through AlertSense, for which residents can register at no cost. County Emergency Management also conducts regular public presentations, storm spotter training, and general information through various communications channels. Mitigation actions include constructing public safe rooms and obtaining backup power generators for critical facilities in need.



Figure HAL.6: Hall County FIRM Panel



**MAP INDEX**  
 This map is one of many maps that are available for purchase from the National Flood Insurance Program. The map is intended to be used in conjunction with the other maps in the series. The map is not to be used as a substitute for a detailed flood hazard study or other engineering study. The map is not to be used as a basis for any insurance policy or other financial instrument. The map is not to be used as a basis for any other action.

**MAP REPORTS**  
 A list of reports that are available for purchase from the National Flood Insurance Program. The reports include information on flood hazards, flood insurance rates, and other information. The reports are available for purchase from the National Flood Insurance Program.

COMMITTEE	LOCATION	DATE OF COMMITTEE
HALL COUNTY	HALL COUNTY	11/11/08
HAMILTON COUNTY	HAMILTON COUNTY	11/11/08
MERRIAM COUNTY	MERRIAM COUNTY	11/11/08
ADAMS COUNTY	ADAMS COUNTY	11/11/08

**NATIONAL FLOOD INSURANCE PROGRAM**  
**FIRM FLOOD INSURANCE RATE MAP**  
 HALL COUNTY, NEBRASKA AND INCORPORATED AREAS (SEE LISTING OF COMMITTEES PANEL)  
**MAP INDEX**  
 MAP NUMBER: 310XND004A  
 EFFECTIVE DATE: SEPTEMBER 26, 2008  
 Federal Emergency Management Agency

**GOVERNANCE**

A community’s governance structure impacts its capability to implement mitigation actions. Hall County is governed by a seven member Board of Supervisors. The County also has the following offices and departments:

- County Clerk
- County Treasurer
- County Assessor
- Building and Grounds Department
- Emergency Management
- Highway Superintendent
- IT Department
- Public Works Department
- Parks and Recreation
- Planning and Zoning
- Floodplain Administrator
- Sheriff’s Department
- Surveyor

**CAPABILITY ASSESSMENT**

Thus far, the planning process has identified the major hazards for the County, and described and quantified the vulnerability of the County to these risks by acquiring updated information from FEMA, local jurisdictions, and other sources. The following step, referred to as a capability assessment, assesses what loss prevention or preparedness mechanisms are already in place. Combining the risk assessment with the local capability assessment results in a stronger mechanism for understanding a locality’s “net vulnerability,” and to what extent they are able to implement the identified goals, objectives, and actions.

A two-step approach was applied to conduct this assessment for each participant. First, an inventory of common mitigation activities was developed through the Capability Assessment Survey completed by the participants’ representatives. Four major local capabilities were examined in this assessment, and they are planning & regulatory capability, administrative & technical capability, fiscal capability, and education & outreach capability.

The purpose of this effort was to identify policies and programs that were either in place, needed improvement, or could be undertaken, if deemed appropriate. Second, local existing policies, regulation, plans, and programs were reviewed and evaluated to determine their contributions to reducing hazard-related losses.

**Table HAL.15: Capability Assessment**

Survey Components/Subcomponents		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	Yes
	Capital Improvements Plan	Yes
	Economic Development Plan	No
	Emergency Operational Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
	Building Codes	Local Codes
	National Flood Insurance Program	Yes
	Community Rating System	No
	Other (if any)	

Survey Components/Subcomponents		Yes/No
Administrative & Technical Capability	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	Yes
	Chief Building Official	Yes
	Civil Engineering	Yes
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	Yes
	Mutual Aid Agreement	Yes
	Other (if any)	
Fiscal Capability	Capital Improvement Plan/1 & 6 Year plan	Yes
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
Other (if any)		
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	Yes
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
	Natural Disaster or Safety related school programs	Yes
	StormReady Certification	Yes
	Firewise Communities Certification	No
	Tree City USA	No
Other (if any)		

**Table DAW.16: Overall Jurisdictional Capability**

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

**PLAN INTEGRATION**

The following paragraphs provide a summary of the community plans that were analyzed using guidance from FEMA’s 2014 *Plan Integration Guide*.

The Hall County Comprehensive Plan, last updated in 2004, contains some of the goals and objectives consistent with hazard mitigation. The plan directs development away from the flood and chemical storage facilities. It also limits density in areas adjacent to known hazardous areas, encourages infill development, clustering of development in sensitive areas, and elevation of structures located in the floodplain. Furthermore, it encourages the preservation of open space in hazard-prone areas and allows for emergency access to all areas of the County. At this time, there are no current plans to further incorporate the HMP into the Comprehensive Plan.

The County Zoning Ordinance was also last updated in 2004, but there have been occasional changes since then. The Ordinance discourages development in the floodplain, requires at least one-foot of elevation above base flood elevation in the floodplain, and prohibits development within the floodways. Additionally, it discourages residential development near chemical storage sites and along major transportation routes. The Ordinance also encourages maintaining open space within the floodplain and accounts for current population trends.

The County Emergency Operations Plan is reviewed and updated annually, with the last major updated completed in 2015. The Plan is an all hazards plan that assigns specific responsibilities to individual communities. It also identifies scenarios that would require evacuation including critical evacuation routes, and routes that are vulnerable to flooding. Shelter locations are also included for each community in the County.

The Building Codes for Hall County were recently updated in 2016 and are based on the 2012 International Building Codes. The Codes outline proper sump pump installation, allow for raingardens in residential areas, and require the use of fire resistant building materials.

The County also has a 1 & 6-Year Road Plan and is updated annually. The Plan includes many hazard mitigation projects such as stormwater projects, upsizing culverts and drainage structures, and regular maintenance of drainage structures. It also includes upgrading storm sewer system, the installation of street aprons to facilitate drainage, and improving transportation routes for drainage. Lastly, the plan includes bridge improvements and constructing a new public works facility.

**MITIGATION STRATEGY**

**Completed Mitigation Actions**

	Improve Warning Systems
Description	Evaluate current warning systems (defined as alert sirens, weather radios, and television, telephone, and radio warning systems, etc.); improve warning systems/develop new warning system; obtain/upgrade warning system equipment and methods; conduct evaluation of existing alert sirens for replacement or placement of new sirens; identify location of weather warning radios; improve weather radio system; obtain/upgrade weather radios
Hazard(s) Addressed	All Hazards
Location	Hall County Incorporated Areas
Funding	General Funds and HMGP
Status	Completed 2011.

Improve Emergency Communication Systems	
Description	Develop Emergency Communication Action Plan; implement Emergency Communication Action Plan; obtain/upgrade emergency communication equipment
Hazard(s) Addressed	All Hazards
Estimated Cost	\$5,000+
Location	Hall County
Funding	General Funds and EMPG
Status	Completed 2015.

Community Education and Awareness	
Description	Obtain or develop hazard education materials; conduct multi-faceted public education; distribute fact sheets or maps at community events, public schools, other venues and to public and private communication systems; conduct scheduled siren/warning system tests; prepare educational materials listing safe rooms and shelters and evacuation plans; distribute educational materials listing safe rooms and shelters; purchase equipment such as overhead projectors and laptops to facilitate presentation of information
Hazard(s) Addressed	All Hazards
Location	Hall County
Funding	General Funds
Status	Completed 2008.

Water Supply Augmentation/Conservation	
Description	Apply for a new and separate water supply; contract with Grand Island to construct a water line
Hazard(s) Addressed	Drought
Location	18 inch Water Main from Grand Island to Alda
Funding	Enterprise Funds
Status	Completed 2014.

**Ongoing and New Mitigation Actions**

Improve/Provide Adequate 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	\$20,000 - \$75,000+ per generator
Funding	General Funds, HMGP
Timeline	5+ years
Priority	Medium
Lead Agency	Individual Departments
Status	Several facilities have purchased and installed generators, but a few remaining facilities need generators.

	Reduce Damages from Floods, Stormwater, and Heavy Precipitation Event
Description	Conduct stormwater drainage study; evaluate and implement recommendations or comparable measures to improve drainage; evaluate and improve stormwater system
Hazard(s) Addressed	Flooding
Estimated Cost	\$10,000 - \$100,000+ depending on project
Funding	General Funds
Timeline	5+ years
Priority	Medium
Lead Agency	Public Works
Status	Public Works regularly evaluates flooding and drainage issues.

	Provide Adequate Public Safe Rooms and Post-Disaster Storm Shelters
Description	Identify and evaluate existing safe rooms and/or storm shelters; improve and/or construct safe rooms and/or storm shelters; design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
Hazard(s) Addressed	Tornadoes, Severe Thunderstorms
Estimated Cost	\$150/sf for retrofit; \$300/sf for new construction
Funding	General Fund, Bonds, HMPG
Timeline	5+ years
Priority	Medium
Lead Agency	Emergency Management, Local Agencies
Status	Head start building beginning its construction. Stuhr Museum in planning stage. Grand Island Public Schools incorporating safe rooms in construction of new school buildings.

	Improve Electrical Service
Description	Evaluate hardening, retrofitting, looping and/or burying of power lines and related infrastructure and/or comparable protection measures; 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; implement measures to improve electrical service; bury power lines for future construction
Hazard(s) Addressed	All Hazards
Estimated Cost	Varies by Project
Funding	Enterprise Funds, PPD
Timeline	5+ years
Priority	Medium
Lead Agency	Public Works
Status	New electrical services are buried.

	Reduce Tree Damage & Damages from Trees
Description	Conduct tree inventory; develop tree maintenance/trimming program; implement tree maintenance/trimming program; remove hazardous limbs and/or trees
Hazard(s) Addressed	Tornadoes, Severe Winter Storms, Severe Thunderstorms, High Winds, Grass/Wildfire
Estimated Cost	Unknown
Funding	General Funds
Timeline	2 – 5 years
Priority	Medium
Lead Agency	Parks and Recreation
Status	Tree inventory planned for 2017.

	Develop an Emergency Preparedness Plan
Description	Develop an Emergency Preparedness Plan (EPP) for the Grand Island Levee System in coordination with Hall County Emergency Management and the CPNRD; the plan should include stakeholder roles and responsibilities, a risk communication plan, emergency activation levels, activation process, evacuation plan, and training and exercise plan
Hazard(s) Addressed	Levee Failure
Estimated Cost	\$10,000
Funding	General Funds
Timeline	1 year
Priority	High
Lead Agency	Planning Commission, Emergency Management, CPNRD
Status	Early planning stages. Planning workshop conducted April 2017.

**Removed Mitigation Actions**

	Maintain NFIP Participation
Description	Continue to regulate development in floodplain areas; additional floodplain mapping/remapping
Reason for Removal	County will continue to participate in program, however, this is no longer considered a hazard mitigation action.

	Prevent Injury or Loss of Life in Manufactured Homes
Description	Ensure that all manufactured homes are secured with tie-downs or are properly anchored to prevent rolling during high winds; educate owners of these properties on the availability of techniques to make the dwelling safer
Reason for Removal	Low community and county support for the project at this time.

PARTICIPANT SECTION

FOR THE

VILLAGE OF ALDA

Central Platte NRD

Multi-Jurisdictional Hazard Mitigation Plan

August 2017



**LOCAL PLANNING TEAM**

Table ALD.1 provides the list of participating members that comprised the Village of Alda local planning team. Members of the planning team attended Round 1 and Round 2 meetings, and provided important information including, but not limited to: confirming demographic information, critical facilities, future development trends, hazard history and impacts, identifying hazards of greatest concern, and the prioritization of mitigation actions that address the hazards at risk to the community.

**Table ALD.1: Village of Alda Local Planning Team**

Name	Title	Department / Organization
Ramona Schafer	Clerk and Treasurer	Village of Alda
Jerry Bond	Chairperson	Village Board
Ron Miles	Board Member	Village Board
Jerry Shears	Board Member	Village Board
Linda Thompson	Board Member	Village Board
Verna Rae Clampitt	Board Member	Village Board

**LOCATION AND GEOGRAPHY**

The Village of Alda is located in the center of Hall County and covers an area of 0.35 square miles. The major waterway in the area is the Wood River.

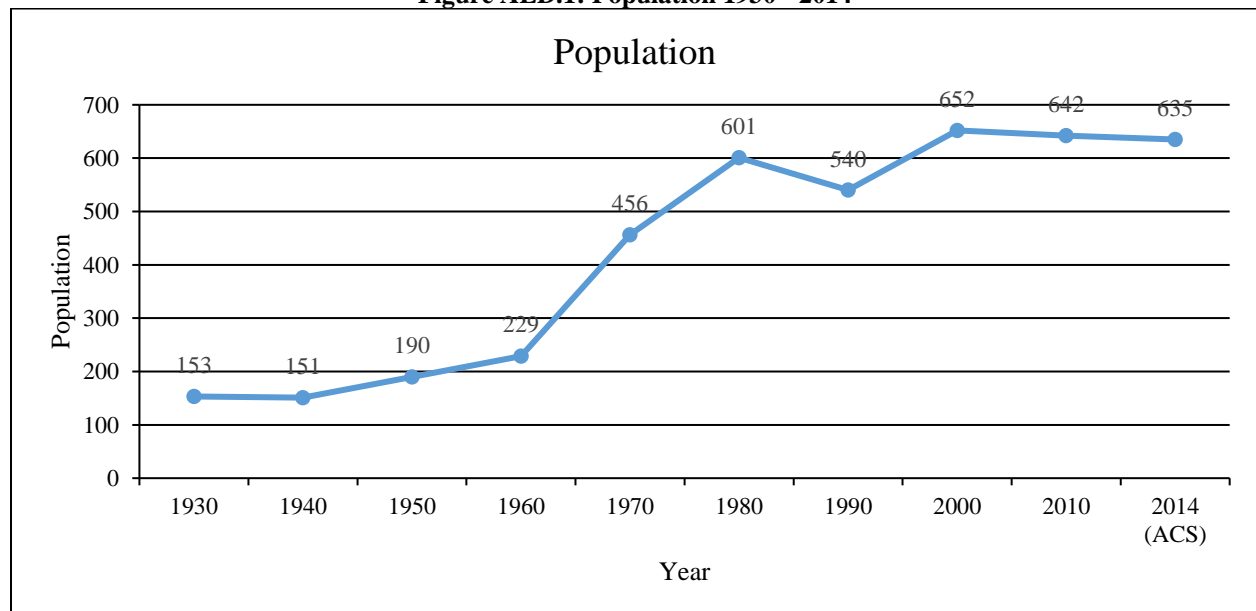
**TRANSPORTATION**

Alda’s major transportation corridor is Highway 30 which has an average of 4,640 vehicles per day with 405 of those categorized as heavy commercial vehicles. Alda has one rail line, a Union Pacific line. At Alda, the line runs in a northeast to southwest direction and is located south of Highway 30.

**DEMOGRAPHICS**

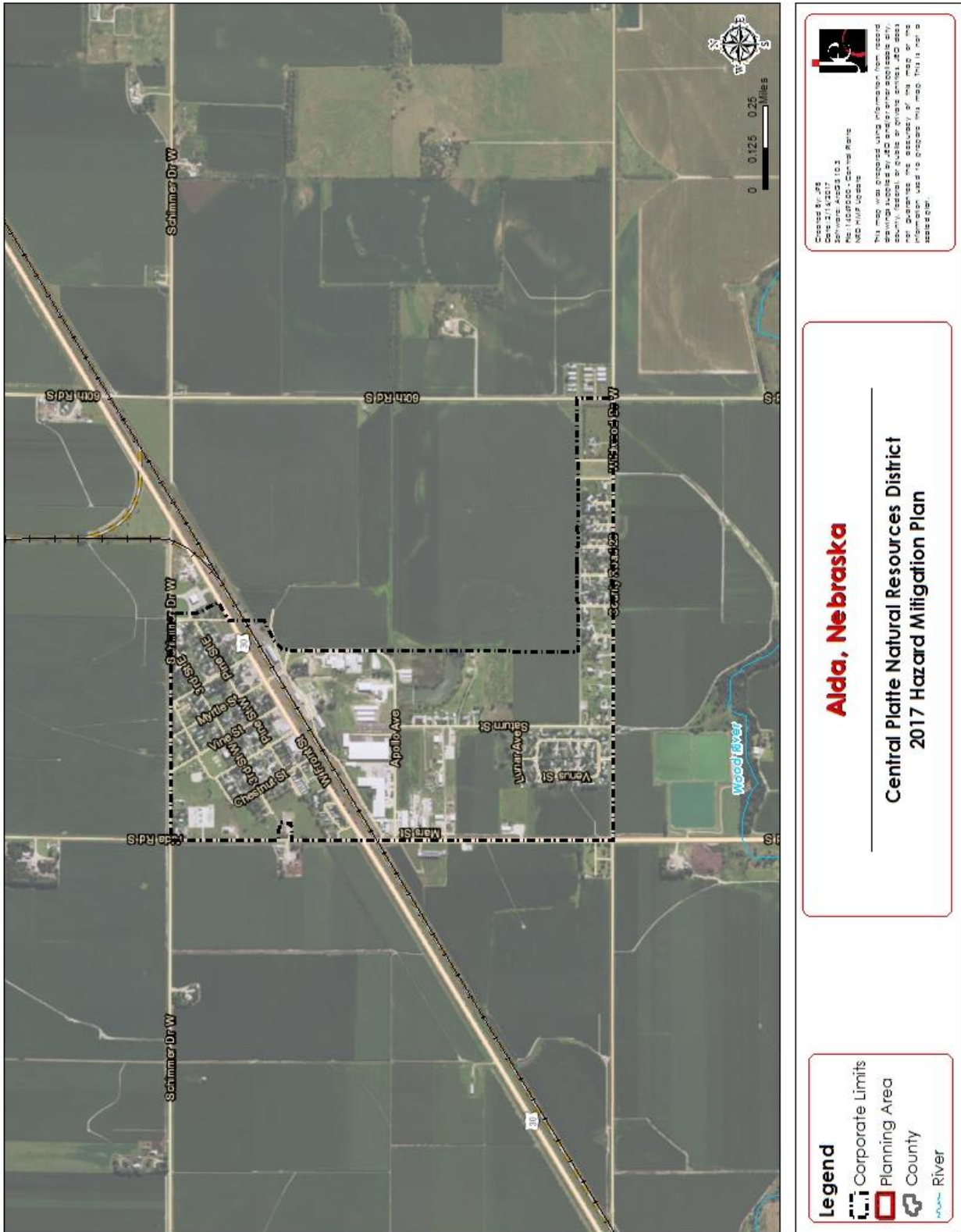
The following figure displays the historical population trend from 1930 to 2014. This figure indicates that the population of Alda has been increasing since 1960 with a slight decline period from 1980 to 1990. Population again increased from 1990 to 2000, but then a slight decline since 2000.

**Figure ALD.1: Population 1930 - 2014**



Source: U.S. Census Bureau

Figure ALD.2: Map of the Village of Alda



The following table indicates the Village has a higher percentage of the population under the age of 5 and a slightly higher percentage of population between 5 and 64 years of age when compared to the County and the state. However, Alda has a slightly lower percentage of its population over the age of 64 as compared to the County, but has a comparable median age.

**Table ALD.2: Population by Age**

Age	Alda	Hall County	State of Nebraska
<5	10.1%	8.1%	7.2%
5-64	79.4%	78.5%	79.2%
>64	10.4%	13.4%	13.6%
Median	35.9	35.9	36.2

Source: U.S. Census Bureau, 2010, Table DP-1

The following table indicates that Alda’s median household income, per capita income, and median home value are all lower than the County’s. However, Alda has a significantly higher median rent value than the County.

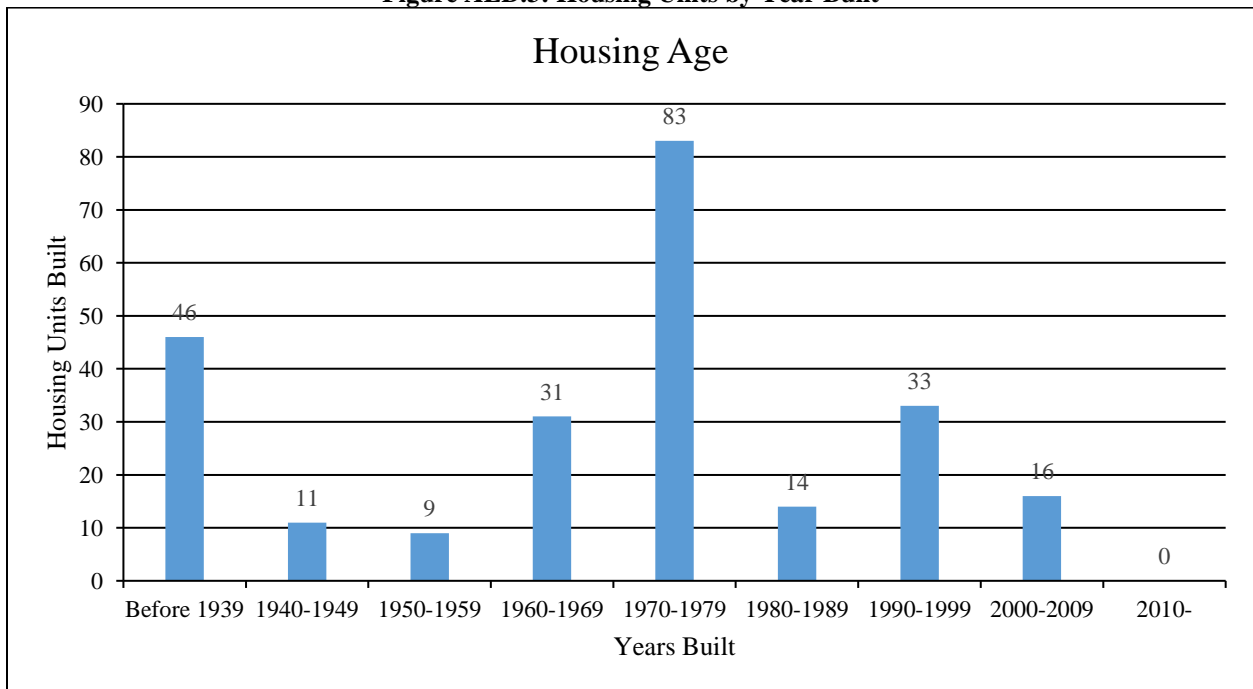
**Table ALD.3: Housing and Income**

	Alda	Hall County	State of Nebraska
Median Household Income	\$45,781	\$61,677	\$52,400
Per Capita Income	\$17,753	\$24,075	\$27,339
Median Home Value	\$74,000	\$118,300	\$130,100
Median Rent	\$803	\$656	\$721

Source: U.S. Census Bureau, 2010-2014 American Community Surveys 5-year Estimates, Table DP03 and DP04

According to 2010-2014 ACS 5-year estimates, the community has 243 housing units with 97.1 percent of those units occupied. There are approximately 69 mobile homes in the community. A mobile home park is located along Highway 30 on the west side of town. The initial Flood Insurance Rate Map (FIRM) was developed in September 2008.

**Figure ALD.3: Housing Units by Year Built**



Source: U.S. Census Bureau, 2010-2014 American Community Surveys 5-year Estimates, Table DP04

**Table ALD.4: Housing Units**

Jurisdiction	Total Housing Units				Occupied Housing Units			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Alda	236	97.1%	7	2.9%	183	77.5%	53	22.5%
Hall County	22,418	94.1%	1,418	5.9%	14,326	63.9%	8,092	36.1%

Source: Selected Housing Characteristics, 2010 - 2014 ACS 5-year Estimates

**MAJOR EMPLOYERS**

The major employers in the community are Hornady, PMI, Traid, Futek, Bullet Weights, and Merrick Machines. Many of the residents in Alda commute to neighboring communities such as Grand Island, Kearney, and Wood River for work.

**FUTURE DEVELOPMENT TRENDS**

Over the past five years, two new businesses have opened in Alda: PMI and Hornady Manufacturing. A new road was resurfaced and extended water and sewer lines on Wildwood Drive. Also, Apollo and Saturn Roads were also resurfaced. In the next five years, the local planning team indicated that a new housing development is planned for the Argo 6<sup>th</sup> subdivision. There are no new businesses expected in the next five years.

Alda’s population is growing. This is due, reports the local planning team, to low property taxes and available lots to new residents.

**PARCEL IMPROVEMENTS AND VALUATION**

GIS parcel data was requested from the County Assessor. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

**Table ALD.5: Parcel Improvements**

Number of Improvements	Total Improvement Value	Mean Value of Improvements Per Parcel	Number of Improvements in Floodplain	Value of Improvements in Floodplain
331	\$20,166,997	\$60,927	0	\$0

Source: Hall County Assessor

**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 houses hazardous materials in Alda. There are no chemical storage sites located in the floodplain (Figure ALD.4).

**Table ALD.6: Chemical Storage Fixed Sites**

Facility	Address	In Floodplain?
Agricultural Services Inc.	150 Railroad St	No

Source: Nebraska Department of Environmental Quality

**HISTORIC SITES**

According to the National Register of Historic Places for Nebraska, there are no historic sites located in or near Alda.

***CRITICAL FACILITIES***

Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public (i.e. Red Cross Shelter), 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 ALD.7: List of Critical Facilities in Alda**

<b>CF #</b>	<b>Name</b>	<b>Address</b>	<b>Red Cross Shelter (Y/N)</b>	<b>Generator (Y/N)</b>	<b>Located in 1% Floodplain (Y/N)</b>
1	Village Hall/Community Center	6410 W US HWY 30	Y	Y	N
2	Fire Hall	100 Apollo Ave	N	Y – portable	N
3	Water Tower and Well	100 Apollo Ave	N	N	N
4	Well	3820 S 60 <sup>th</sup> Rd	N	Y	N
5	Wastewater Lagoon	5159 S Alda Rd	N	N	N

Figure ALD.4: Critical Facilities and Hazardous Materials Storage Facilities with Floodplain





**HISTORICAL OCCURRENCES**

For a table of historical hazard occurrences, please see the Participant Section for Hall County.

**LOCAL HAZARD PRIORITIZATION**

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

**Chemical Spills (Transportation)**

The Village of Alda is concerned about chemical spills on the Union Pacific railway and Hwy 30. Gasoline, oil, anhydrous ammonia, and other unknown chemicals are regularly transported on these routes. There are no significant chemical spills reported by PHMSA. Critical facilities vulnerable to a chemical spill during transportation include the Village Office and Community Center, the water tower, Fire Hall, water booster station, and wastewater lagoons. Mitigation plans include identifying an emergency shelter for vulnerable populations, participating in hazardous spill emergency exercises, providing public education on the hazards associated with chemical spills, and improving available first responder equipment.

**Flooding**

Although flooding was not identified as a hazard of top concern for the community, the Village does have a history of flooding. In 2005, torrential rainfall of 5-11 inches on May 11 and 12 led to widespread flash flooding throughout the County. Alda was part of an area that was declared a federal disaster area. Wood River near Alda, which had been dry for three years, tied a record with a crest of 12.2 feet early on the 12<sup>th</sup>. Records also indicate that Wood River flooded in 1967, 1968, and 1969, although no damage estimates are available. Flood crest data indicates that the June 1968 flood was 11.7 feet and the March 1969 event was 12 feet. The National Centers for Environmental Information reported a flood event for Alda on February 20, 2007.

The Village of Alda has flood risk areas to the south and east of the Village. Alda is a member of the NFIP however there are no NFIP policies in-force. There are no repetitive flood loss properties in the Village of Alda. The following table is parcel improvement information as provide by the County Assessor. It indicates there are no parcel improvements located in the floodplain.

**Table ALD.8: Structures in the 1% Annual Flood Risk Area**

Value of Improvements in Floodplain	Number of Improvements in Floodplain	Total Number of Improvements in Community	Percentage of Improvements in Floodplain
\$0	0	331	0%

Source: Hall County Assessor

Alda plans to mitigate further damages from flooding with public education.

**Hail**

The local planning team’s concerns regarding hail center on property damage. The most significant event in recent history occurred in June of 1997. During this event, one-inch hail combined with 60 mph winds and caused tree and property damages totaling \$150,000. A second storm in August of 2014 caused \$150,000 in property damages due to one-inch hail combined with 60 mph wind. Alda’s critical facilities are not fitted with hail resistant building materials, but they are insured against hail damage. Future mitigation plans include implementing a tree planting and maintenance program and providing education to the public on the hazards associated with hail.

### **Severe Thunderstorms**

Alda experiences severe summer thunderstorms annually. The worst of these was in August of 2014, when thunderstorm winds topping 60 mph coupled with one-inch hail that caused \$150,000 in property damages. Community concerns about severe thunderstorms include property damage, power outages, and fire caused by lightning. Critical municipal records are protected by surge protectors. Most of the critical facilities in Alda have backup power generators. Approximately 25 percent of the power lines in the Village are buried. The community has a weather radio in the Village Office. There are several hazardous trees on personal property that need to be removed. This hazard will be mitigated with the proposed tree planting and maintenance program. Further mitigation actions include the provision of adequate public safe rooms and emergency shelters, the installation of surge protectors on critical facilities, a public education program, and improvement of available first responder equipment.

### **Severe Winter Storms**

The most severe winter storm to occur in Alda in recent memory was in December of 2006. Half-inch ice deposits cause widespread tree damage and power outages, resulting in \$10,000,000 in property damages throughout central Nebraska. The local planning team is concerned that future severe winter storms will lead to more power outages and a loss of mobility for residents of the Village. Approximately 25 percent of phone and power lines are buried in Alda. There are no snow routes in the Village, but there is one snow fence in use on the north side of Schimmer Drive. The Village Maintenance Department has sufficient equipment to remove snow including a truck, bobcat, and loader with a snow blade. Mitigation plans include public education and improvement of available first responder equipment.

### **Tornadoes**

In 1974, a tornado passed through Alda, damaging homes and businesses. The Village is covered by two warning sirens, one on the south and one on the north sides of town. The County Emergency Manager offers text alerts. There is one public safe room at the Community Center, but it is not FEMA-certified. Education outreach occurs through the schools during October Safe Month and at the annual community festival, Alda Days. In the event of a future disaster, Mutual Aid Agreements are in place with Rural Hall County, Wood River, Doniphan, Grand Island, Phillips, Chapman, Shelton, St. Libory, Cairo, and Aurora. Completed mitigation actions for tornadic events in 2016 included updating home standards to ensure that they are well anchored. Future mitigation plans include providing adequate public safe rooms, developing a tree planting and maintenance program, providing emergency shelters for vulnerable populations, identifying existing storm shelters, and improving the available first responder equipment.

### **GOVERNANCE**

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Alda is governed by a Chairperson and a four member Village Board. Furthermore, Alda has a number of offices or departments that may be involved in implementing hazard mitigation initiatives.

- Clerk/Treasurer
- Planning Commission
- Housing Authority
- Water and Sewer Department
- Volunteer Fire Department
- Village Board of Trustees



**CAPABILITY ASSESSMENT**

Thus far, the planning process has identified the major hazards for the community, and described and quantified the vulnerability of the community to these risks by acquiring updated information from FEMA, local jurisdictions, and other sources. The following step, referred to as a capability assessment, assesses what loss prevention or preparedness mechanisms are already in place. Combining the risk assessment with the local capability assessment results in a stronger mechanism for understanding a locality’s “net vulnerability,” and to what extent they are able to implement the identified goals, objectives, and actions.

A two-step approach was applied to conduct this assessment for each participant. First, an inventory of common mitigation activities was developed through the Capability Assessment Survey completed by the participants’ representatives. Four major local capabilities were examined in this assessment, and they are planning & regulatory capability, administrative & technical capability, fiscal capability, and education & outreach capability.

The purpose of this effort was to identify policies and programs that were either in place, needed improvement, or could be undertaken, if deemed appropriate. Second, local existing policies, regulation, plans, and programs were reviewed and evaluated to determine their contributions to reducing hazard-related losses.

**Table ALD.9: Capability Assessment**

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

Survey Components/Subcomponents		Yes/No
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	Yes
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
	Natural Disaster or Safety related school programs	Yes
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	

**Table ALD.10: Overall Jurisdictional Capability**

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

**PLAN INTEGRATION**

The following paragraphs provide a summary of the community plans that were analyzed using guidance from FEMA’s 2014 *Plan Integration Guide*.

The Village of Alda Comprehensive Plan, last updated in 2003, contains some goals and objectives consistent with hazard mitigation. The plan directs development away from the floodplain, chemical facilities, and major transportation routes. Furthermore, it encourages infill development, clustering of development in sensitive areas, and elevation of structures located in the floodplain. The plan also encourages preservation of open space in hazard-prone areas, and allows for emergency access to all areas of town. There is not currently a timeline for updating the Comprehensive Plan, nor do they anticipate to further integrate the HMP into the Comprehensive Plan.

The Village’s Zoning Ordinance was last updated in 2004. It discourages development in the floodplain, requires at least one-foot of elevation above base flood elevation in the floodplain, and prohibits development in within the floodway. It also discourages development near chemical storage sites and along major transportation routes in residential areas. The Ordinance encourages maintaining open space within the floodplain, limits development in the extraterrestrial jurisdiction, and accounts for current population trends.

Alda has an annex to the Hall County Local Emergency Operations Plan, last updated in 2015. The plan addresses the hazards of greatest concern, identifies scenarios that would require evacuation and critical evacuation routes, locations to be used for mass sheltering, and provides a clear assignment of responsibility during an emergency.

The Building Codes for Alda were recently updated in 2016 and are based on the 2012 International Building Codes. The Codes allow for raingardens in residential areas and require the use of fire resistant building materials.

Alda has a 1 & 6 Year Street Plan and Transportation Improvement Plan that is reviewed and updated annually. The plan includes many hazard mitigation projects such as stormwater projects, upsizing of culverts and drainage structures, and upgrading and regular maintenance of the storm sewer system. It also includes installing street aprons to facilitate drainage, improvements to transportation routes for drainage, bridge improvements, updating electrical distribution system, and installing emergency generators in critical facilities.

**MITIGATION STRATEGY**

**Completed Mitigation Actions**

	<b>Improve/Provide Adequate Backup and Emergency Generators</b>
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	\$20,000-\$75,000+
Funding	Village Funds
Status	Completed in 2006.
Location	Village Community Center

	<b>Prevent Injury or Loss of Life in Manufactured Homes</b>
Description	Ensure that all manufactured homes are secured with tie-downs or are properly anchored to prevent rolling during high winds; educate owners of these properties on the availability of techniques to make the dwelling safer
Hazard(s) Addressed	High Winds, Tornadoes, Severe Thunderstorms
Estimated Cost	Unknown
Funding	N/A
Status	Completed 2016 – Updated Village Ordinance.

	<b>Reduce the Need for Snow Clearing in Village Boundary Streets</b>
Description	Purchase and install a snow fence; acquire easement on which to build a snow fence or to plant a ‘living fence’ of pine trees or other shelterbelt-type of tree
Hazard(s) Addressed	Severe Winter Storms
Estimated Cost	Unknown
Funding	Village Funds
Status	Completed in 2000.
Location	North of Schimmer Drive

**Ongoing and New Mitigation Actions**

<b>Provide Adequate Public Safe Rooms and Post-Disaster Storm Shelters</b>	
Description	Identify and evaluate existing safe rooms and/or storm shelters; improve and/or construct safe rooms and/or storm shelters; design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
Hazard(s) Addressed	Tornadoes, Severe Thunderstorms, High Winds
Estimated Cost	\$150/sf for retrofit, \$300/sf for new construction
Funding	General Fund, HMGP, PDM, CDBG
Status	Ongoing - Planning stage.
Timeline	2-5 years
Priority	High
Lead Agency	Village Board

<b>Tree Planting Assistance</b>	
Description	Educate public on appropriate tree planning and establish an annual tree trimming program to assist low income and elderly residents; develop tree planting and maintenance guidelines
Hazard(s) Addressed	Tornadoes, Severe Thunderstorms, High Winds
Estimated Cost	\$500, Staff Time
Funding	General Fund, NRD cost share
Status	Not yet started.
Timeline	2-5 years
Priority	High
Lead Agency	Village Board

<b>Storm Shelter Identification</b>	
Description	Identify any existing private or public storm shelters
Hazard(s) Addressed	Tornadoes, Severe Thunderstorms, High Winds
Estimated Cost	Staff Time
Funding	Staff Time
Status	Not yet started.
Timeline	2-5 years
Priority	High
Lead Agency	Village Board, Emergency Management

<b>Surge Protectors</b>	
Description	Purchase and install surge protectors on sensitive equipment in critical facilities
Hazard(s) Addressed	Severe Thunderstorms, Severe Winter Storms
Estimated Cost	\$25 per unit
Funding	General Fund
Status	Not yet started.
Timeline	1 year
Priority	High
Lead Agency	Maintenance

<b>Emergency Exercise: Hazardous Spill</b>	
Description	Utilize exercise to prepare for potential explosions or hazardous spills; ensure that nearby businesses and residents have appropriate plans in place
Hazard(s) Addressed	Chemical Transportation
Estimated Cost	\$5,000+
Funding	General Fund, HMGP, PDM, EMPG
Status	Not yet started.
Timeline	1 year
Priority	High
Lead Agency	Village Board, Emergency Management

<b>Community Education and Awareness</b>	
Description	Obtain or develop hazard education materials; conduct multi-faceted public education; distribute fact sheets or maps at community events, public schools, other venues and to public and private communication systems; conduct scheduled siren/warning system tests; prepare educational materials listing safe rooms and shelters and evacuation plans; distribute educational materials listing safe rooms and shelters; purchase equipment such as overhead projectors and laptops to facilitate presentation of information
Hazard(s) Addressed	All Hazards
Estimated Cost	\$3,000+
Funding	General Fund, NPD
Status	Not yet started.
Timeline	1 year
Priority	High
Lead Agency	Village Board, Emergency Management

<b>Civil Service Improvements</b>	
Description	Improve emergency rescue and response equipment and facilities by providing additional, or updating existing emergency response equipment (includes developing backup system for emergency vehicles and identifying and training additional personnel for emergency response)
Hazard(s) Addressed	All Hazards
Estimated Cost	Varies by need
Funding	General Fund, Fire Department Funds
Status	Not yet started.
Timeline	2-5 years
Priority	High
Lead Agency	Fire Department, Village Board

**Removed Mitigation Actions**

<b>Maintain NFIP Participation</b>	
Description	Continue to regulate development in floodplain areas; additional floodplain mapping/remapping
Reason for Removal	Village will continue to participate in program, however, this is no longer considered a hazard mitigation action.

<b>Reduce Damages from Floods, Stormwater, and Heavy Precipitation Event</b>	
Description	Conduct stormwater drainage study; evaluate and implement recommendations or comparable measures to improve drainage; evaluate and improve stormwater system
Reason for Removal	The project is not a priority at this time.

PARTICIPANT SECTION  
FOR THE  
VILLAGE OF CAIRO

Central Platte NRD  
Multi-Jurisdictional Hazard Mitigation Plan

August 2017

**LOCAL PLANNING TEAM**

Table CRO.1 provides the list of participating members that comprised the Village of Cairo local planning team. Members of the planning team attended Round 1 and Round 2 meetings, and provided important information including, but not limited to: confirming demographic information, critical facilities, future development trends, hazard history and impacts, identifying hazards of greatest concern, and the prioritization of mitigation actions that address the hazards at risk to the community.

**Table CRO.1: Village of Cairo Local Planning Team**

Name	Title	Department / Organization
Jaime Rathman	Clerk	Village of Cairo

**LOCATION AND GEOGRAPHY**

The Village of Cairo is located in the northwestern portion of Hall County and covers an area of 0.77 square miles. The major waterway in the area is the Middle Loup River.

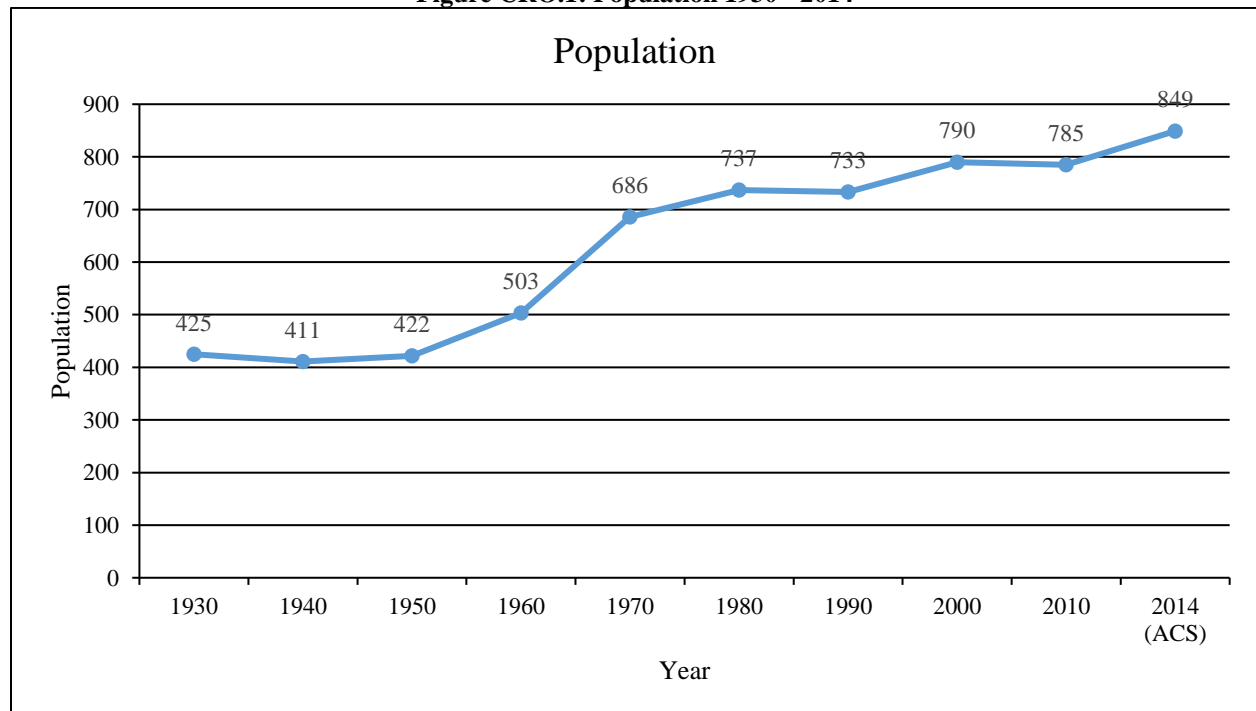
**TRANSPORTATION**

Cairo’s major transportation corridors include Highways 2 and 11. The average daily vehicle load for Highway 2 is 3,065 with 370 of those considered heavy commercial vehicles. The average daily vehicle load for Highway 11 is 2440 with 220 of those considered heavy commercial vehicles. Cairo has one rail line, a Burlington Northern line. The railway travels in an east to west direction and is located in the northern part of the Village.

**DEMOGRAPHICS**

The following figure displays the historical population trend from 1930 to 2014. This figure indicates that the population of Cairo has been increasing since 1950.

**Figure CRO.1: Population 1930 - 2014**



Source: U.S. Census Bureau

Figure CRO.2: Map of the Village of Cairo





The following table indicates the Village has a higher percentage of the population under the age of 5 and a slightly lower percentage of population between 5 and 64 years of age when compared to the County and the state. However, Cairo has a slightly higher percentage of its population over the age of 64 as compared to the County, as well as a higher median age.

**Table CRO.2: Population by Age**

Age	Cairo	Hall County	State of Nebraska
<5	9.4%	8.1%	7.2%
5-64	76.1%	78.5%	79.2%
>64	14.5%	13.4%	13.6%
Median	36.5	35.9	36.2

Source: U.S. Census Bureau, 2010, Table DP-1

The following table indicates that Cairo’s median household income, median home value, and per capita income are all lower than the County’s. However, Cairo has a higher median rent value than the County.

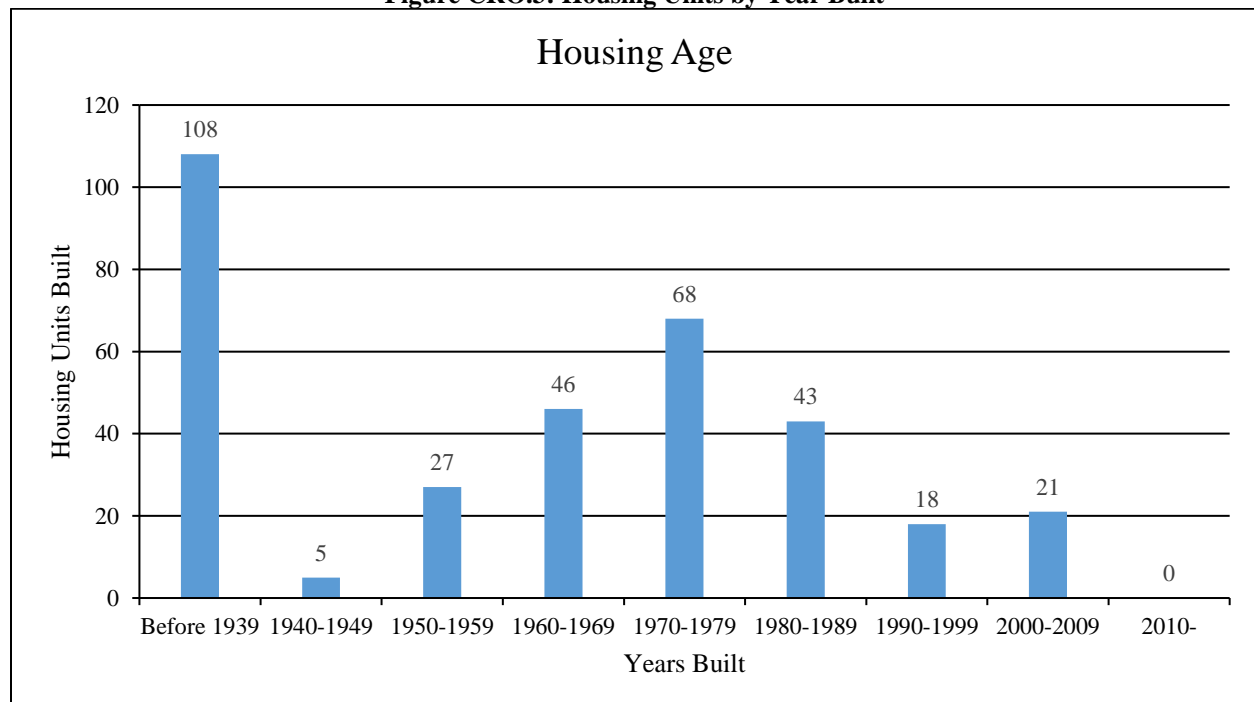
**Table CRO.3: Housing and Income**

	Cairo	Hall County	State of Nebraska
Median Household Income	\$59,167	\$61,677	\$52,400
Per Capita Income	\$23,979	\$24,075	\$27,339
Median Home Value	\$106,900	\$118,300	\$130,100
Median Rent	\$680	\$656	\$721

Source: U.S. Census Bureau, 2010-2014 American Community Surveys 5-year Estimates, Table DP03 and DP04

According to 2010-2014 ACS 5-year estimates, the community has 336 housing units with 88.1 percent of those units occupied. There are approximately 24 mobile homes in the community. Many of the mobile homes are located in a mobile home park on the south side of the community. The initial Flood Insurance Rate Map (FIRM) was developed in June 1978.

**Figure CRO.3: Housing Units by Year Built**



Source: U.S. Census Bureau, 2010-2014 American Community Surveys 5-year Estimates, Table DP04

**Table CRO.4: Housing Units**

Jurisdiction	Total Housing Units				Occupied Housing Units			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Cairo	296	88.1%	40	11.9%	216	73.0%	80	27.0%
Hall County	22,418	94.1%	1,418	5.9%	14,326	63.9%	8,092	36.1%

Source: Selected Housing Characteristics, 2010 - 2014 ACS 5-year Estimates

### **MAJOR EMPLOYERS**

The major employers in the community are Baasch, Pump and Pantry, ABC Daycare, and Centura. Many of the residents commute to neighboring communities such as Grand Island for work.

### **FUTURE DEVELOPMENT TRENDS**

Over the past five years, a few new businesses have opened in the Industrial Park, which continues to grow. It should be noted that the Industrial Park is located in the floodplain, but follows the Village's floodplain ordinances. In the next five years, the community will add a housing development for residents over the age of 55. Also, the Industrial Park is expected to see additional businesses added, such as farmer shops, self-storage units, and an ATV shop.

Cairo's population is growing. This is due, reports the local planning team, to the community's available parks, pool, and schools.

### **PARCEL IMPROVEMENTS AND VALUATION**

GIS parcel data was requested from the County Assessor. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

**Table CRO.5: Parcel Improvements**

Number of Improvements	Total Improvement Value	Mean Value of Improvements Per Parcel	Number of Improvements in Floodplain	Value of Improvements in Floodplain
476	\$36,708,914	\$77,120	54	\$3,069,878

Source: Hall County Assessor

### **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 four chemical storage sites that house hazardous materials in Cairo. A total of two chemical storage sites are located in the floodplain (Figure CRO.4).

**Table CRO.6: Chemical Storage Fixed Sites**

Facility	Address	In Floodplain?
Agricultural Services Inc	6068 N Highway 11	Yes – 1%
Aurora Co-op Elevator Company	10501 W One-R Rd	Yes – 1%
AT&T 0610	190th Rd	No
CenturyLink	103 E Nile St	No

Source: Nebraska Department of Environmental Quality

**HISTORIC SITES**

According to the National Register of Historic Places for Nebraska, there are no historic sites located in or near Cairo.

**CRITICAL FACILITIES**

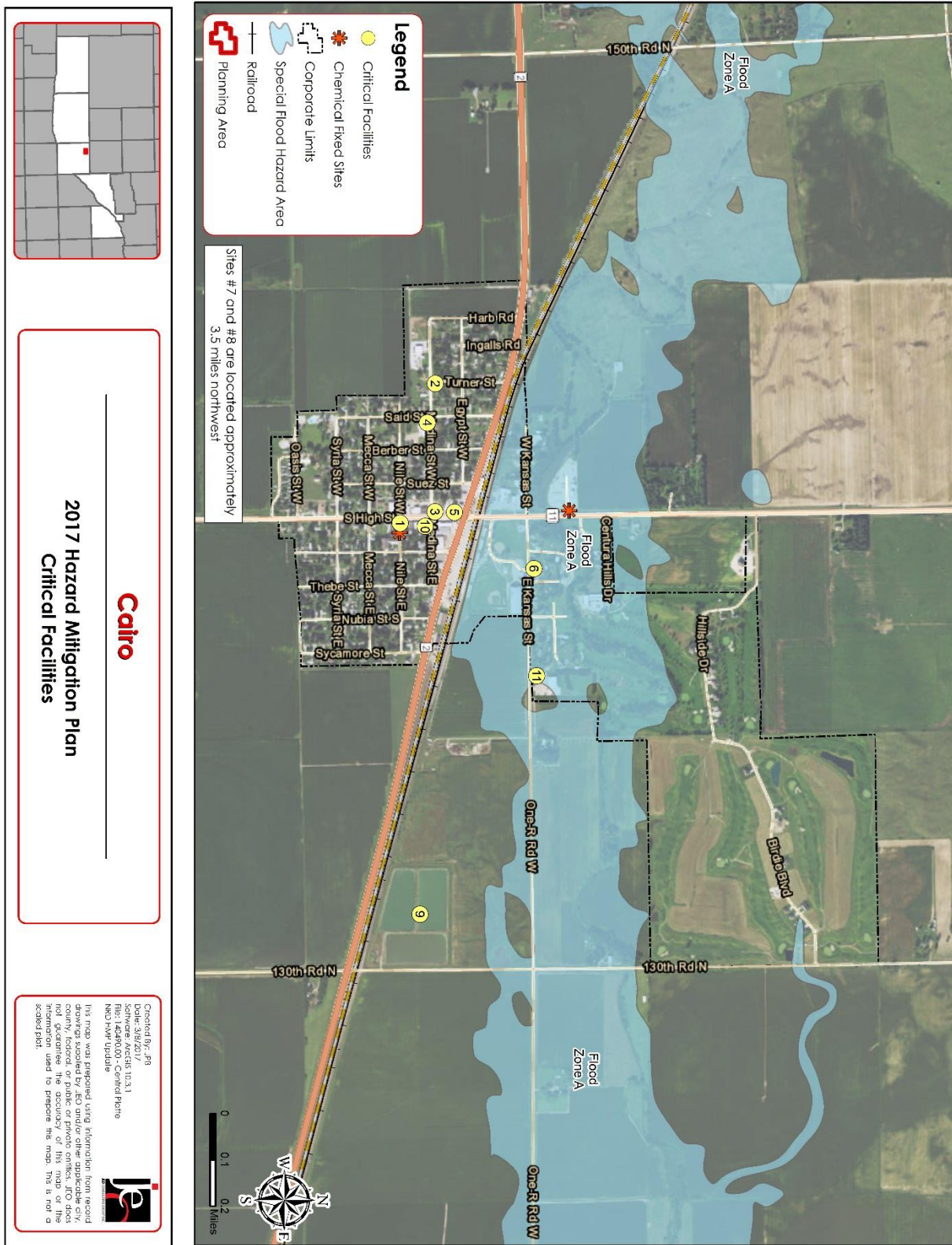
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public (i.e. Red Cross Shelter), and essential for returning the jurisdiction’s functions to normal during and after a disaster. Critical facilities were identified during the original 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 CRO.7: List of Critical Facilities in Cairo**

CF #	Name	Address	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in 1% Floodplain (Y/N)
1	Fire & Rescue/Village Hall Building	402 S. High St.	N	Y	N
2	Christ Lutheran Church	501 W. Medina	Y	N	N
3	First Baptist Church	107 Nile	Y	N	N
4	Cairo Community Center	305 Said St	Y	N	N
5	Centura Public School	201 N Hwy 11	Y	N	N
6	Water Tower	205 E. Kansas	N	N	Y
7*	Water Well	8750 N. Nebraska Hwy 11	N	N	N
8*	Water Well	14400 W. Loup River Rd	N	N	Y
9	Wastewater Lagoon	East to 130 <sup>th</sup> Rd, north across tracks, left side	N	N	N
10	Senior Center	314 S High	N	N	N
11	Methodist Church	506 E Kansas St	N	N	Y

*\*Not included on Figure CRO.4 due to distance from the municipality*

Figure CRO.4: Critical Facilities and Hazardous Materials Storage Facilities with Floodplain



### **HISTORICAL OCCURRENCES**

For a table of historical hazard occurrences, please see the Participant Section for Hall County.

### **LOCAL HAZARD PRIORITIZATION**

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

#### **Flooding**

Cairo's flood risk area of concern passes through the center of the community parallel to Highway 2, along its northern edge. The creek in this area is at risk of flash flooding.

Cairo has six NFIP policies in-force for \$781,900. There are no repetitive flood loss properties in the Village of Cairo. The following table is parcel improvement information as provided by the County Assessor. It indicates that an estimated 11.3 percent of all parcel improvements in Cairo are located in the floodplain.

**Table CRO.8: Structures in the 1% Annual Flood Risk Area**

<b>Value of Improvements in Floodplain</b>	<b>Number of Improvements in Floodplain</b>	<b>Total Number of Improvements in Community</b>	<b>Percentage of Improvements in Floodplain</b>
\$3,069,878	54	476	11.3%

Source: Hall County Assessor

Previously, the northern part of town was at greatest risk of flooding during heavy rain events, and poor stormwater drainage in that area was an issue. However, many of the risks associated with flooding have been mitigated in part by previous actions. The community conducted a stormwater drainage study, and implemented the subsequent findings.

#### **Severe Thunderstorms**

In May of 2002, a particularly strong thunderstorm passed through central Nebraska. In Cairo, 80mph winds blew windows out of cars and roofs off businesses. Property damages totaled \$150,000 in the area. The primary concern in the community regarding severe thunderstorms is power outages. Approximately ten percent of the power lines in Cairo are buried. There are weather radios in the Fire Hall and Centura. Critical municipal records are protected with surge protectors and most critical facilities have backup power generators. Future thunderstorm hazard mitigation plans include providing backup generators to the critical facilities without backup sources of power and identifying storm shelters.

#### **Severe Winter Storms**

Cairo has experienced many significant severe winter storms. The NCEI and the local planning team report three storms that were particularly fierce. In January of 1999, several deaths were caused in vehicle accidents on Highway 30 when ice and snow caused the Highway to become treacherous. Sub-zero temperatures during this storm caused the death of a 55-year old man in Cairo due to exposure. The December 2009 blizzard brought almost a foot of snow in three days and subsequent power outages across central Nebraska. The blizzard of February 2016 had such significant snow falls that snow removal and associated public works costs totaled \$438,000. The main concern about winter storms is power outages. Approximately ten percent of power lines in the community are buried. Village Maintenance is in charge of snow removal for the Village, especially along the snow route. Their tractor, bobcat, and payloader are considered adequate for Cairo's snow removal needs. Severe winter storm hazard mitigation plans involve providing backup generators for those critical facilities without them.

### **Tornadoes and High Winds**

The last tornado to touch down near Cairo occurred in June of 1997. This F1 tornado destroyed a barn and resulted in \$450,000 in property damage. A thunderstorm with 80 mph winds in May of 2002 caused \$150,000 in property damage to car windows and residential roofing. The local planning team is concerned about power outages related to tornadoes and high winds. Critical municipal records are backed up with software and thumb drives. There is a FEMA-certified safe room in the Community Center for public use, and alternate safe rooms in the bank and Fire Hall. Community education outreach centers mostly on tornadoes. The school conducts tornado drills, and the Fire Department sponsors weather alert meetings. Severe weather notification is limited to the warning siren located by the Fire Department. It effectively covers all of Cairo. In the case of a disaster event, Mutual Aid Agreements are in place with Doniphan, Wood River, Alda, Grand Island, and Rural Hall County. Hazard mitigation plans include providing backup generators and identifying storm shelters in the community.

### **GOVERNANCE**

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Cairo is governed by a Chairperson and a four member Village Board. Furthermore, Cairo has a number of offices or departments that may be involved in implementing hazard mitigation initiatives.

- Clerk/Treasurer
- Volunteer Fire Department
- Cairo QRT
- Street/Water Commissioner
- Park and Recreation

### **CAPABILITY ASSESSMENT**

Thus far, the planning process has identified the major hazards for the community, and described and quantified the vulnerability of the community to these risks by acquiring updated information from FEMA, local jurisdictions, and other sources. The following step, referred to as a capability assessment, assesses what loss prevention or preparedness mechanisms are already in place. Combining the risk assessment with the local capability assessment results in a stronger mechanism for understanding a locality's "net vulnerability," and to what extent they are able to implement the identified goals, objectives, and actions.

A two-step approach was applied to conduct this assessment for each participant. First, an inventory of common mitigation activities was developed through the Capability Assessment Survey completed by the participants' representatives. Four major local capabilities were examined in this assessment, and they are planning & regulatory capability, administrative & technical capability, fiscal capability, and education & outreach capability.

The purpose of this effort was to identify policies and programs that were either in place, needed improvement, or could be undertaken, if deemed appropriate. Second, local existing policies, regulation, plans, and programs were reviewed and evaluated to determine their contributions to reducing hazard-related losses.

**Table CRO.9: Capability Assessment**

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

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

**Table CRO.10: Overall Jurisdictional Capability**

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

**PLAN INTEGRATION**

The following paragraphs provide a summary of the community plans that were analyzed using guidance from FEMA’s 2014 *Plan Integration Guide*.

The Village of Cairo Comprehensive Plan, last updated in 2003, contains some of the goals and objectives that are consistent with the hazard mitigation plan. It directs development away from the floodplain, chemical storage facilities, and major transportation routes. It also limits density in areas adjacent to known hazards areas, encourages infill development, and encourages elevation of structures located in the floodplain. The plan also encourages preservation of open space in hazard-prone areas and allows for emergency access to all areas of town. At this time, there is currently no plan to further integrate the HMP into the Comprehensive Plan.

The Zoning Ordinance was last updated in 2004. The Ordinance discourages development in the floodplain, prohibits development in the floodway, discourages residential development near chemical storage sites and major transportation routes, and contains natural hazard layers. It also encourages maintaining open space within the floodplain, limits development in the extraterrestrial jurisdiction, and accounts for current population trends.

Cairo has an annex to the Hall County Local Emergency Operations Plan, last updated in 2015. The plan addresses the hazards of greatest concern, identifies scenarios that would require evacuation and critical evacuation routes, locations to be used for mass sheltering, and provides a clear assignment of responsibility during an emergency.

The Village’s Building Codes were recently updated in 2016 and are based on the 2012 International Building Codes. The Codes allow for raingardens in residential areas and require the use of fire resistant building materials. In a future update, the Codes will require a safe room in multiple dwelling units such as apartments.

Cairo has a 1 & 6-year Plan that is reviewed and updated annually. The plan includes stormwater projects, upsizing of culverts and drainage structures, regular maintenance of structures, and upgrading and maintenance of the storm sewer system. It also includes the installation of street aprons to facilitate drainage, improving transportation routes for drainage, bridge improvements and installing emergency generators in critical facilities.



**MITIGATION STRATEGY**

**Completed Mitigation Actions**

<b>Ensure Adequate Severe Weather Notifications to Critical Facilities</b>	
Description	For Village-owned critical facilities, the Village should consider purchasing a weather radio to be use in each facility for the rapid dissemination of a severe weather warning; in areas of the Village with noisy manufacturing facilities which may not hear tornado sirens, the Village could inform the owners of these facilities of the option of purchasing a weather radio
Hazard(s) Addressed	All Hazards
Location	Swimming Pool, Village Office, Schools
Funding	General Funds
Status	Completed in 2014.

<b>Reduce Damages from Floods, Stormwater, and Heavy Precipitation Events</b>	
Description	Conduct stormwater drainage study; evaluate and implement recommendations or comparable measures to improve drainage; evaluate and improve stormwater system
Hazard(s) Addressed	Flooding
Location	Industrial Park
Funding	General Funds
Status	Completed in 2016.

**Ongoing and New Mitigation Actions**

<b>Improve/Provide Adequate Backup and Emergency Generators</b>	
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	\$20,000 – \$75,000+ per generator
Funding	Village funds, HMGP
Status	Not yet started.
Timeline	2-5 years
Priority	Medium
Lead Agency	Village Board

<b>Storm Shelter Identification</b>	
Description	Identify any existing private or public storm shelters
Hazard(s) Addressed	Tornadoes, Severe Thunderstorms, High Winds
Estimated Cost	Staff Time
Funding	Staff Time
Status	Ongoing. Emergency Management annually inspects new businesses for the location of storm shelters.
Timeline	Ongoing
Priority	Medium
Lead Agency	Village Board, Emergency Management

**Removed Mitigation Actions**

<b>Maintain NFIP Participation</b>	
Description	Continue to regulate development in floodplain areas; additional floodplain mapping/remapping
Reason for Removal	Village will continue to participate in program, however, this is no longer considered a hazard mitigation action.

<b>Reduce Tree Damage and Damage from Trees</b>	
Description	Conduct tree inventory; develop tree maintenance/trimming program; implement tree maintenance/trimming program; remove hazardous limbs and/or trees
Reason for Removal	The planning team determined this project not to be a priority.

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PARTICIPANT SECTION  
FOR THE  
VILLAGE OF DONIPHAN

Central Platte NRD  
Multi-Jurisdictional Hazard Mitigation Plan

August 2017

**LOCAL PLANNING TEAM**

Table DPH.1 provides the list of participating members that comprised the Doniphan local planning team. Members of the planning team attended Round 1 and Round 2 meetings, and provided important information including, but not limited to: confirming demographic information, critical facilities, future development trends, hazard history and impacts, identifying hazards of greatest concern, and the prioritization of mitigation actions that address the hazards at risk to the community.

**Table DPH.1: Doniphan Local Planning Team**

Name	Title	Department / Organization
Francis Hannon	Maintenance Supervisor	Village of Doniphan

**LOCATION AND GEOGRAPHY**

The Village of Doniphan is located in the southeastern corner of Hall County and covers an area of 0.51 square miles. The major waterway in the area is the Platte River.

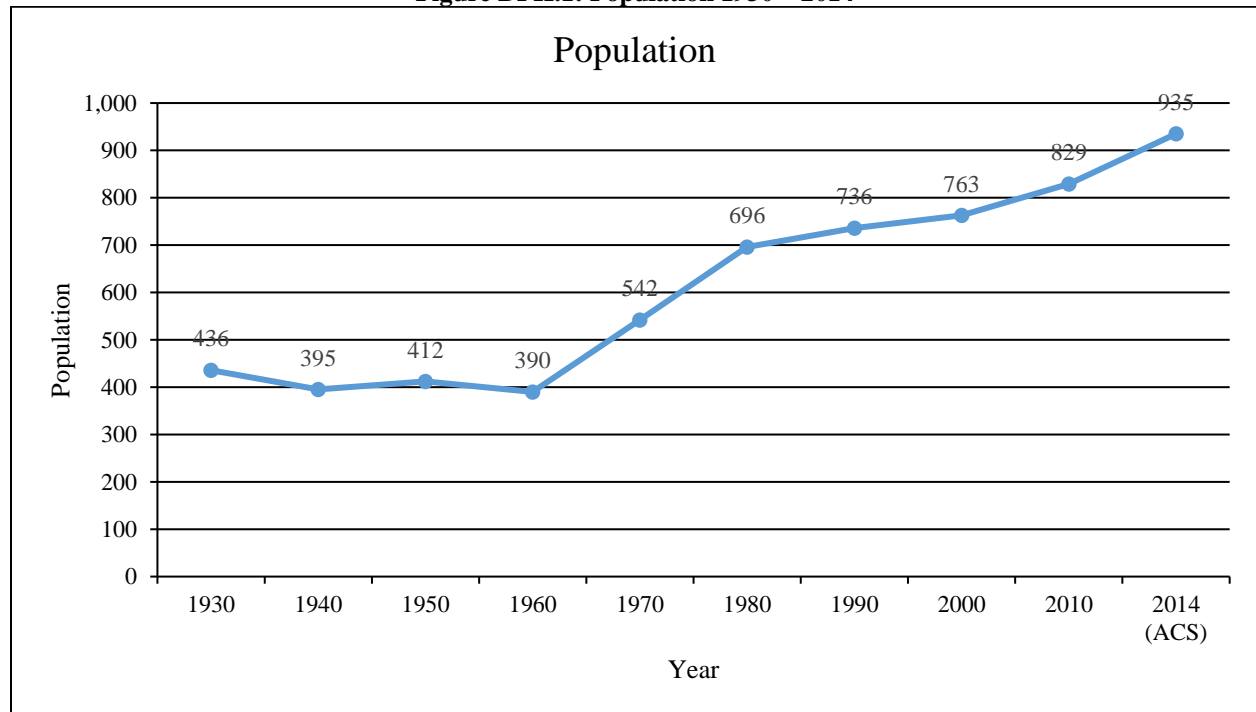
**TRANSPORTATION**

Doniphan’s major transportation corridor is Highway 34 which has an average of 11,000 vehicles per day with 1,085 of those categorized as heavy commercial vehicles. There are no rail lines that pass through Doniphan.

**DEMOGRAPHICS**

The following figure displays the historical population trend from 1930 to 2014. This figure indicates that the population of Doniphan has been increasing since 1960.

**Figure DPH.1: Population 1930 – 2014**



Source: U.S. Census Bureau

Figure DPH.2: Map of the Village of Doniphan



The following table indicates the Village has a lower percentage of the population under the age of 5 but a slightly higher percentage of population between 5 and 64 years of age when compared to the County and the state. Additionally, Doniphan has a slightly lower percentage of its population over the age of 64 as compared to the County, as well as a lower median age.

**Table DPH.2: Population by Age**

Age	Doniphan	Hall County	State of Nebraska
<5	7.0%	8.1%	7.2%
5-64	80.8%	78.5%	79.2%
>64	12.2%	13.4%	13.6%
Median	31.8	35.9	36.2

Source: U.S. Census Bureau, 2010, Table DP-1

The following table indicates that Doniphan’s median household income and per capita income are lower than the County’s. However, Doniphan has a higher median home and median rent value than the County.

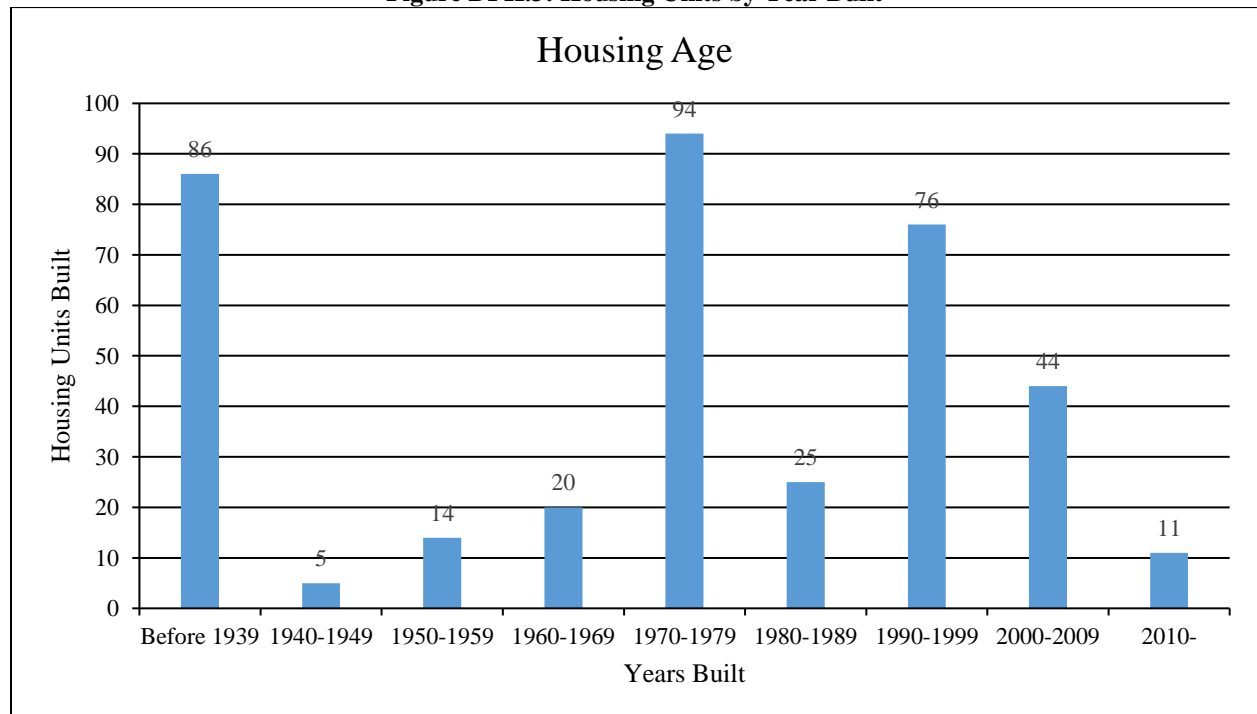
**Table DPH.3: Housing and Income**

	Doniphan	Hall County	State of Nebraska
Median Household Income	\$47,969	\$61,677	\$52,400
Per Capita Income	\$20,909	\$24,075	\$27,339
Median Home Value	\$120,800	\$118,300	\$130,100
Median Rent	\$675	\$656	\$721

Source: U.S. Census Bureau, 2010-2014 American Community Surveys 5-year Estimates, Table DP03 and DP04

According to 2010-2014 ACS 5-year estimates, the community has 375 housing units with 93.6 percent of those units occupied. There are approximately 38 mobile homes in the community and are concentrated at 318 N. 1<sup>st</sup> Street. The initial Flood Insurance Rate Map (FIRM) was developed in August 1978.

**Figure DPH.3: Housing Units by Year Built**



Source: U.S. Census Bureau, 2010-2014 American Community Surveys 5-year Estimates, Table DP04

**Table DPH.4: Housing Units**

Jurisdiction	Total Housing Units				Occupied Housing Units			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Doniphan	351	93.6%	24	6.4%	264	75.2%	87	24.8%
Hall County	22,418	94.1%	1,418	5.9%	14,326	63.9%	8,092	36.1%

Source: Selected Housing Characteristics, 2010 - 2014 ACS 5-year Estimates

### ***MAJOR EMPLOYERS***

The major employers in the community are the Doniphan-Trumbull School District, Frito Lay Distribution Center, H & H Concrete and Construction, and Nebraska Machinery. A large percentage of residents commute to work in Grand Island and Kearney.

### ***FUTURE DEVELOPMENT TRENDS***

In the past five years, a new event center was constructed. This event center was not developed in the floodplain. The local planning team attributes the community's growth to their proximity to Grand Island, Kearney, and Hastings and the quality of the school district. A new housing development is planned in the next five years on Platte River Drive. There are no new businesses or industries planned for the next five years.

### ***PARCEL IMPROVEMENTS AND VALUATION***

GIS parcel data was requested from the County Assessor. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

**Table DPH.5: Parcel Improvements**

Number of Improvements	Total Improvement Value	Mean Value of Improvements Per Parcel	Number of Improvements in Floodplain	Value of Improvements in Floodplain
432	\$41,386,751	95,803	17	\$3,540,989

Source: Hall County Assessor

### ***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 six chemical storage sites that house hazardous materials in Doniphan. None of the chemical storage sites are in the floodplain (Figure DPH.4).

**Table DPH.6: Chemical Storage Fixed Sites**

#	Facility	Address	In Floodplain?
1	Agricultural Services Inc	101 E Pine St	No
2	Aurora Co-op Doniphan Plant	101 E Plum St	No
3	Doniphan Remote	106 W Plum St	No
4	Nebraska Machinery Co	10501 S US Highway 281	No
5	NPPD Doniphan Sys Control Ctr	2060 W Platte River Dr	No
6	Pioneer Hi-Bred Intl Inc	12937 S US Highway 281	No

Source: Nebraska Department of Environmental Quality



**HISTORIC SITES**

According to the National Register of Historic Places for Nebraska, there are no historic sites located in or near Doniphan.

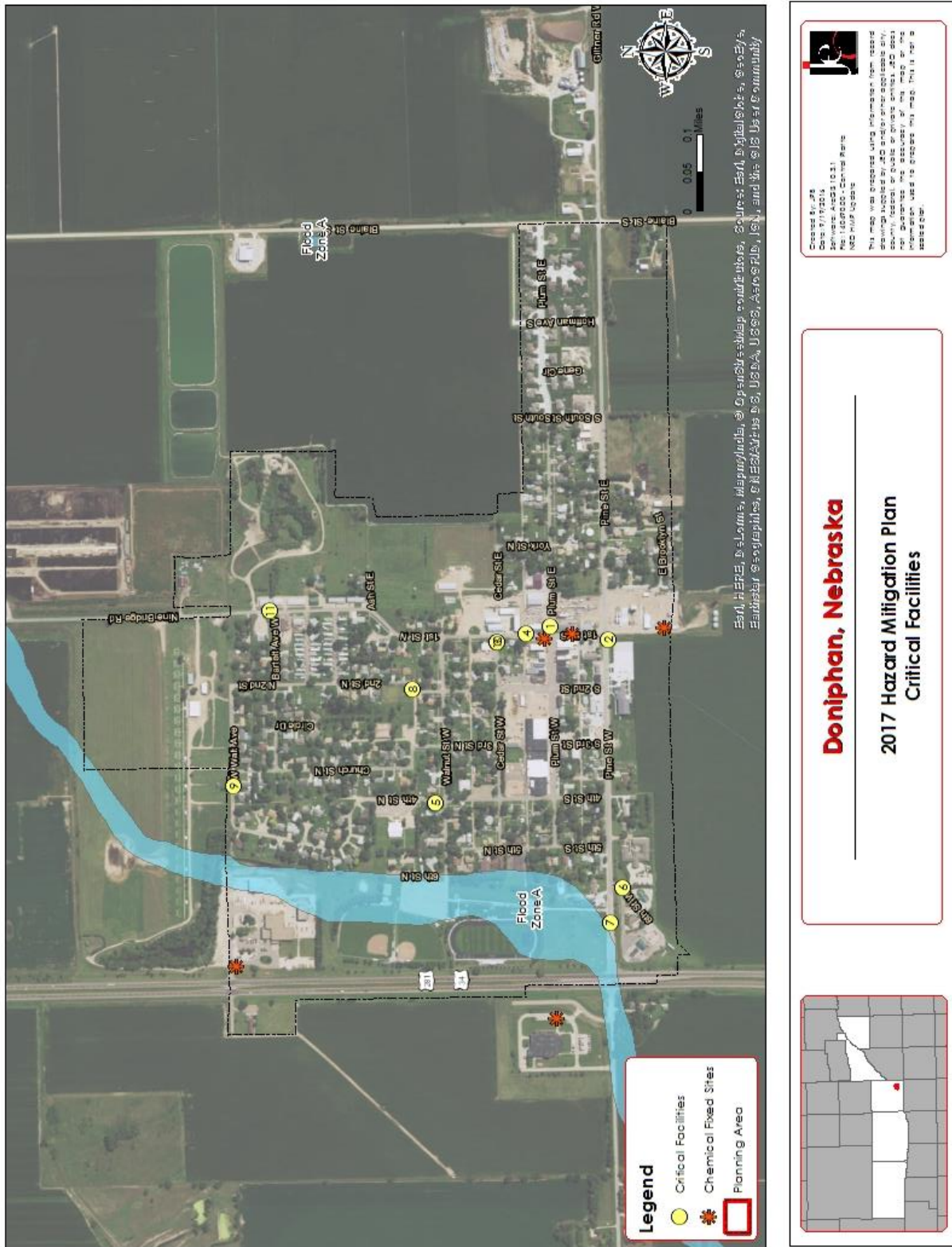
**CRITICAL FACILITIES**

Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public (i.e. Red Cross Shelter), 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 DPH.7: List of Critical Facilities in Doniphan**

CF #	Name	Address	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in 1% Floodplain (Y/N)
1	Fire & Rescue	106 E Plum St	N	Y	N
2	Village Hall	103 W Pine St	N	Y - Portable	N
3	Village Maintenance Shop	102 W Cedar St	N	N	N
4	Doniphan-Trumbull Public School	302 W Plum St	Y	N	N
5	United Methodist Church	304 N 4 <sup>th</sup> St	Y	N	N
6	Prairie Winds Assisted Living Center	603 W 6 <sup>th</sup> St	N	Y	N
7	Water Tower	590 W Pine St	N	N	N
8	Well	304 ½ N 2 <sup>nd</sup> St	N	N	N
9	Well	302 W Walt Ave	N	N	N
10	Well	102 W Cedar St	N	N	N
11	Wastewater Lagoon	401 N First St	N	N	N

Figure DPH.4: Critical Facilities and Hazardous Materials Storage Facilities with Floodplain



### **HISTORICAL OCCURRENCES**

For a table of historical hazard occurrences, please see the Participant Section for Hall County.

### **LOCAL HAZARD PRIORITIZATION**

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

#### **Flooding**

The Village of Doniphan has a flood risk area that goes through the western side of the community.

Doniphan has two NFIP policies in-force for \$1,500,000. There are no repetitive flood loss properties in the Village of Doniphan. The following table is parcel improvement information as provided by the County Assessor. It indicates that an estimated 3.9 percent of all parcel improvements in Doniphan are located in the floodplain.

**Table DPH.8: Structures in the 1% Annual Flood Risk Area**

<b>Value of Improvements in Floodplain</b>	<b>Number of Improvements in Floodplain</b>	<b>Total Number of Improvements in Community</b>	<b>Percentage of Improvements in Floodplain</b>
\$3,540,989	17	432	3.9%

*Source: Hall County Assessor*

Two major flooding events in Doniphan are reported by NCEI. In December of 2010, ice jams caused the Platte to flood, necessitating home evacuations for areas just west of Doniphan. A second flood in June of 2015 was caused by heavy rains. Water accumulated on the southbound lane of Highway 281 near Rosedale Road, causing a few traffic accidents. Flooding hazard mitigation actions include providing backup generators and weather radios to critical facilities.

#### **Hail**

Hail is a top concern for the local planning team because of the potential for property damage. The most significant hail event in Doniphan caused \$1,000,000 in property damage in May of 2002 when 2.75-inch hail destroyed roofs, windows, and vehicles. The community's critical facilities are not fitted with hail resistant building materials but are insured for hail damage. Residents do not receive information on hail resistant building materials with building permits. The local tree board manages hazardous trees in the area. Hail mitigation actions include initiating a power line burying project, requiring new construction to bury utility lines, and requesting a tree inventory from the Nebraska Forestry Service.

#### **Severe Thunderstorms**

Of the severe thunderstorms reported by NCEI, the storm that occurred in August of 1999 was the most severe, with property damages totaling \$250,000. Thunderstorm winds combined with hail and heavy rain and damaged five homes west of Doniphan, and many trees within the Village. The local planning team is most concerned with flash flooding associated with severe thunderstorms. Doniphan protects its critical municipal records with surge protectors and a cloud-based backup system. Approximately ten percent of power lines are buried. Thunderstorm hazard mitigation actions include providing weather radios and backup power generators to critical facilities, providing adequate storm shelters for the community, initiating a power line burying project, requiring new construction to bury utility lines, and requesting a tree inventory from the Nebraska Forestry Service.

### **Severe Winter Storms**

One of the most severe winter storms in recent memory is an ice storm that occurred in December of 2006. Property damages of \$100,000 were incurred when freezing rain broke tree limbs and downed power lines and power poles. Several days of power outages were reported in the area. A blizzard in February 2016 had such significant snow falls that snow removal and associated public works costs totaled \$438,000. The local planning team is concerned about power outages and emergency personnel mobility during severe winter storms. Approximately ten percent of power lines are buried in the community. There are no designated snow routes or snow fences in place. The Maintenance Department utilizes a truck with a plow and a loader with a plow for snow removal. Severe winter storm hazard mitigation actions include providing weather radios and backup power generators to critical facilities, initiating a power line burying project, requiring new construction to bury utility lines, and requesting a tree inventory from the Nebraska Forestry Service.

### **Tornadoes and High Winds**

In June of 1997, several EF0 tornadoes passed near Doniphan, causing no property damage. In October of 2000, a funnel cloud was spotted near the Village, also causing no property damage. Critical municipal records are backed up with cloud-based software. The warning siren in Doniphan is maintained by Hall County Emergency Management, and reaches all areas of the community. They also offer text alerts. Doniphan has Mutual Aid Agreements with surrounding communities and participates in NEWARN, a mutual aid network that provides essential utilities after a disaster event. As there are no safe rooms in Doniphan, hazard mitigation actions include providing safe rooms to shelter the community. The Event Center and bank are available for shelter if necessary. Further mitigation actions include: providing generators to critical facilities; initiating a power line burying project; requiring new construction to bury utility lines; requesting a tree inventory from the Nebraska Forestry Service; and improving warning systems by providing critical facilities with weather radios.

### **GOVERNANCE**

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Doniphan is governed by a Chairperson and a four member Village Board. Furthermore, Doniphan has a number of offices or departments that may be involved in implementing hazard mitigation initiatives.

- Clerk/Treasurer
- Utility Superintendent
- Streets/Parks Commissioner
- Planning Commission
- Housing Authority
- Water and Sewer Department
- Volunteer Fire Department

### **CAPABILITY ASSESSMENT**

Thus far, the planning process has identified the major hazards for the community, and described and quantified the vulnerability of the community to these risks by acquiring updated information from FEMA, local jurisdictions, and other sources. The following step, referred to as a capability assessment, assesses what loss prevention or preparedness mechanisms are already in place. Combining the risk assessment with the local capability assessment results in a stronger mechanism for understanding a locality's "net vulnerability," and to what extent they are able to implement the identified goals, objectives, and actions.

A two-step approach was applied to conduct this assessment for each participant. First, an inventory of common mitigation activities was developed through the Capability Assessment Survey completed by the participants' representatives. Four major local capabilities were examined in this assessment, and they are planning & regulatory capability, administrative & technical capability, fiscal capability, and education & outreach capability.

The purpose of this effort was to identify policies and programs that were either in place, needed improvement, or could be undertaken, if deemed appropriate. Second, local existing policies, regulation, plans, and programs were reviewed and evaluated to determine their contributions to reducing hazard-related losses.

**Table DPH.9: Capability Assessment**

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

Survey Components/Subcomponents		Yes/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	Yes
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	Yes
	Other (if any)	

**Table DPH.10: Overall Jurisdictional Capability**

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

***PLAN INTEGRATION***

The following paragraphs provide a summary of the community plans that were analyzed using guidance from FEMA’s 2014 *Plan Integration Guide*.

The Village of Doniphan Comprehensive Plan, last updated in 2003, contains some of the goals and objectives that are consistent with the hazard mitigation plan. It directs development away from the floodplain, chemical storage facilities, and major transportation routes. It also limits density in areas adjacent to known hazards areas, encourages infill development, and encourages elevation of structures located in the floodplain. The plan also encourages preservation of open space in hazard-prone areas and allows for emergency access to all areas of town. At this time, there is no strategy regarding further plan integration. Local officials may consider including a list of critical facilities, examination of chemical storage, and documenting the hazard prioritization in future Comprehensive Plan updates.

The Zoning Ordinance was last updated in 2004. The Ordinance discourages development in the floodplain, prohibits development in the floodway, and discourages residential development near chemical storage sites and major transportation routes. It also encourages maintaining open space within the floodplain, limits development in the extraterrestrial jurisdiction, and accounts for current population trends.

Doniphan has an annex to the Hall County Local Emergency Operations Plan, last updated in 2015. The Plan addresses the hazards of greatest concern, identifies scenarios that would require evacuation and critical evacuation routes, locations to be used for mass sheltering, and provides a clear assignment of responsibility during an emergency.

The Village’s Building Codes were recently updated in 2016 and are based on the 2012 International Building Codes. The Codes allow for raingardens in residential areas and require the use of fire resistant building materials. In a future update, the Codes will require a safe room in multiple dwelling units such as apartments.

**MITIGATION STRATEGY**

**Ongoing and New Mitigation Actions**

	<b>Provide Adequate Safe Rooms and Post-Disaster Storm Shelters</b>
Description	Identify and evaluate existing safe rooms and/or storm shelters; improve and/or construct safe rooms and/or storm shelters; design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
Hazard(s) Addressed	Tornadoes, High Winds, Severe Thunderstorms
Estimated Cost	\$150/safe room for retrofit; \$300/safe room for new construction
Funding	Local Budget, HMGP, PDM
Status	Not yet started.
Timeline	5+ years
Priority	Low
Lead Agency	Village Board

	<b>Improve Electrical Service</b>
Description	Evaluate hardening, retrofitting, looping and/or burying of power lines and related infrastructure and/or comparable protection measures; 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; implement measures to improve electrical service; bury power lines for future construction
Hazard(s) Addressed	Tornadoes, High Winds, Severe Thunderstorms, Severe Winter Storms
Estimated Cost	Dependent on project
Funding	Local Budget, NFS
Status	Not yet started.
Timeline	2-5 years
Priority	Medium
Lead Agency	Village Board, Utilities Department

	<b>Reduce Tree Damage and Damage from Trees</b>
Description	Conduct tree inventory; develop tree maintenance/trimming program; implement tree maintenance/trimming program; remove hazardous limbs and/or trees
Hazard(s) Addressed	Tornadoes, High Winds, Severe Thunderstorms, Severe Winter Storms
Estimated Cost	\$500
Funding	Local Budget, NFS
Status	Not yet started.
Timeline	2-5 years
Priority	Medium
Lead Agency	Village Board, Utilities Department

	<b>Ensure Adequate Severe Weather Notifications to Critical Facilities</b>
Description	Purchase weather radios for all critical facilities; inform areas with high noise pollution to consider purchasing a weather radio
Hazard(s) Addressed	All Hazards
Estimated Cost	\$30/weather radio
Funding	Local Budget, HMGP
Status	In progress.
Timeline	Ongoing
Priority	Medium
Lead Agency	Fire Department

	<b>Improve/Provide Adequate Backup and Emergency Generators</b>
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	\$3,500+ depending on site requirements
Funding	Local Budget, HMGP
Status	Not yet started.
Timeline	2-5 years
Priority	High
Lead Agency	Utilities Department

**Removed Mitigation Actions**

	<b>Maintain NFIP Participation</b>
Description	Continue to regulate development in floodplain areas; adopt future floodplain maps when they become available; perform additional floodplain mapping/remapping as necessary
Reason for Removal	Village will continue to participate in program, however, this is no longer considered a hazard mitigation action.



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PARTICIPANT SECTION  
FOR THE  
DONIPHAN-TRUMBULL PUBLIC  
SCHOOL DISTRICT

Central Platte NRD  
Multi-Jurisdictional Hazard Mitigation Plan

August 2017

**LOCAL PLANNING TEAM**

Table DTS.1 provides the list of participating community members that comprised the Doniphan-Trumbull Public School District local planning team. Members of the planning team attended Round 1 and Round 2 meetings and provided important information including but not limited to: confirming demographic information, critical facilities, structural inventory, future development trends, hazard history and impacts, identifying hazards of greatest concern for the community, and the prioritization of mitigation actions that address the hazards at risk to the community.

**Table DTS.1: Doniphan-Trumbull Public Schools Local Planning Team**

Name	Title	Department / Organization
Kirk Russell	Superintendent	Doniphan-Trumbull Schools

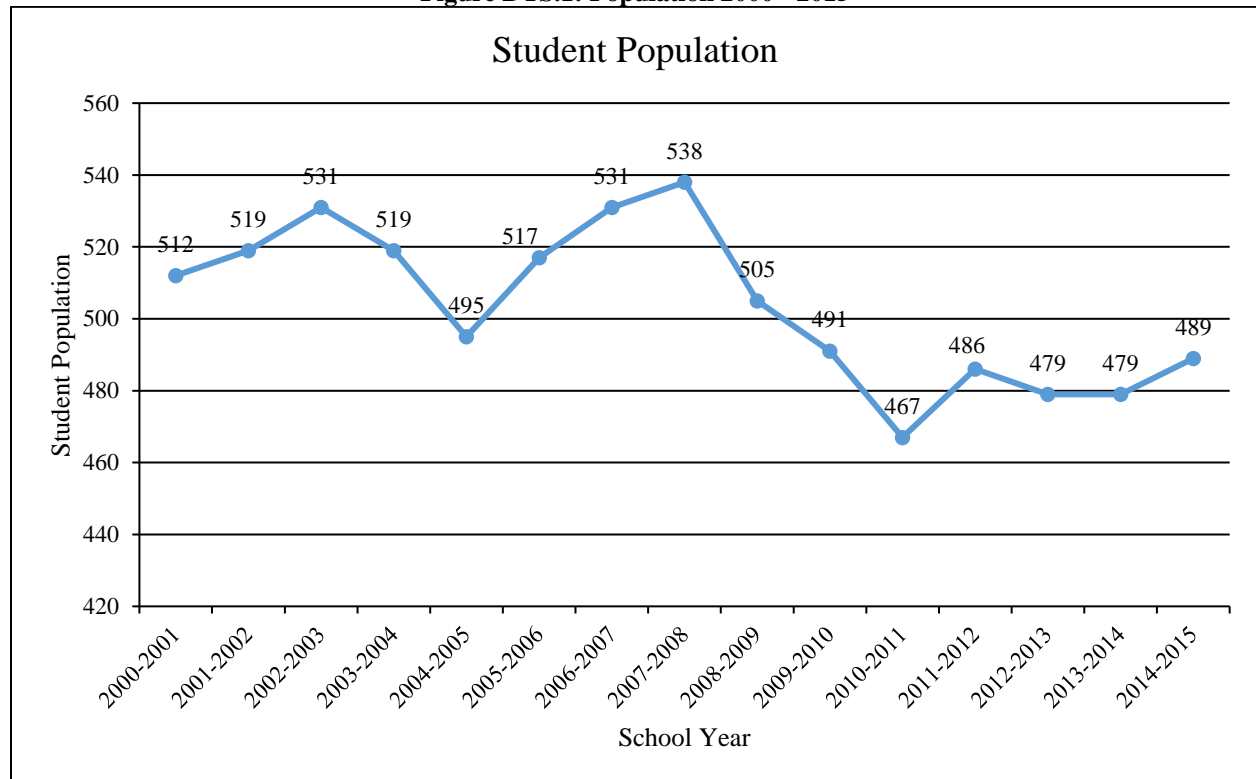
**DISTRICT PROFILE**

The Doniphan-Trumbull Public Schools District is located in the southern portion of Hall County. The District has an enrollment of 485 students. Figure DTS.2 shows the location of the School District’s boundaries.

**DEMOGRAPHICS**

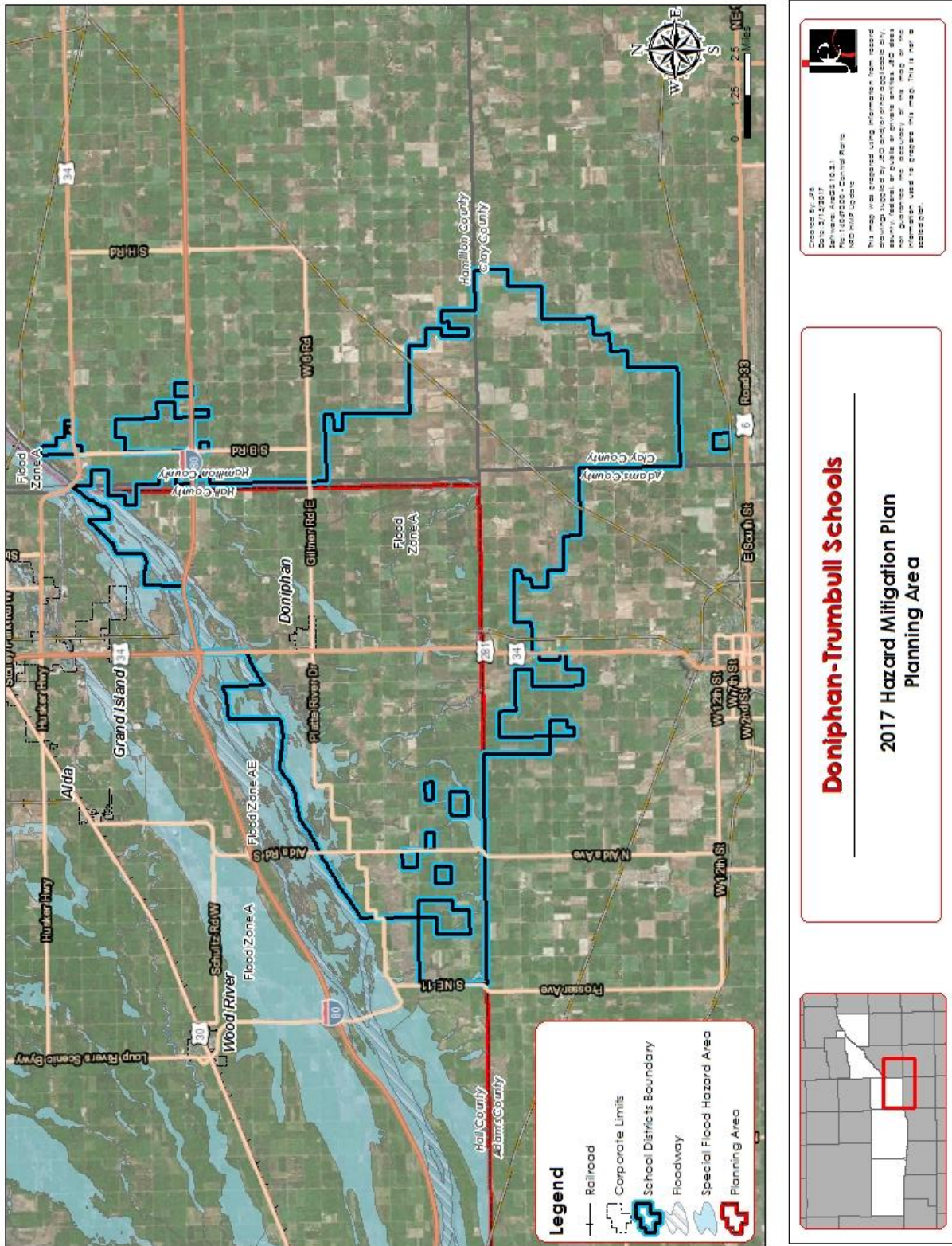
The following figure displays the historical population trend starting with the 2000-2001 school year and ending with the 2014-2015 year. This figure indicates that the student population of Doniphan-Trumbull Schools has been fluctuating since 2000, but has steadied since 2011 with 489 students enrolled in 2014.

**Figure DTS.1: Population 2000 - 2015**

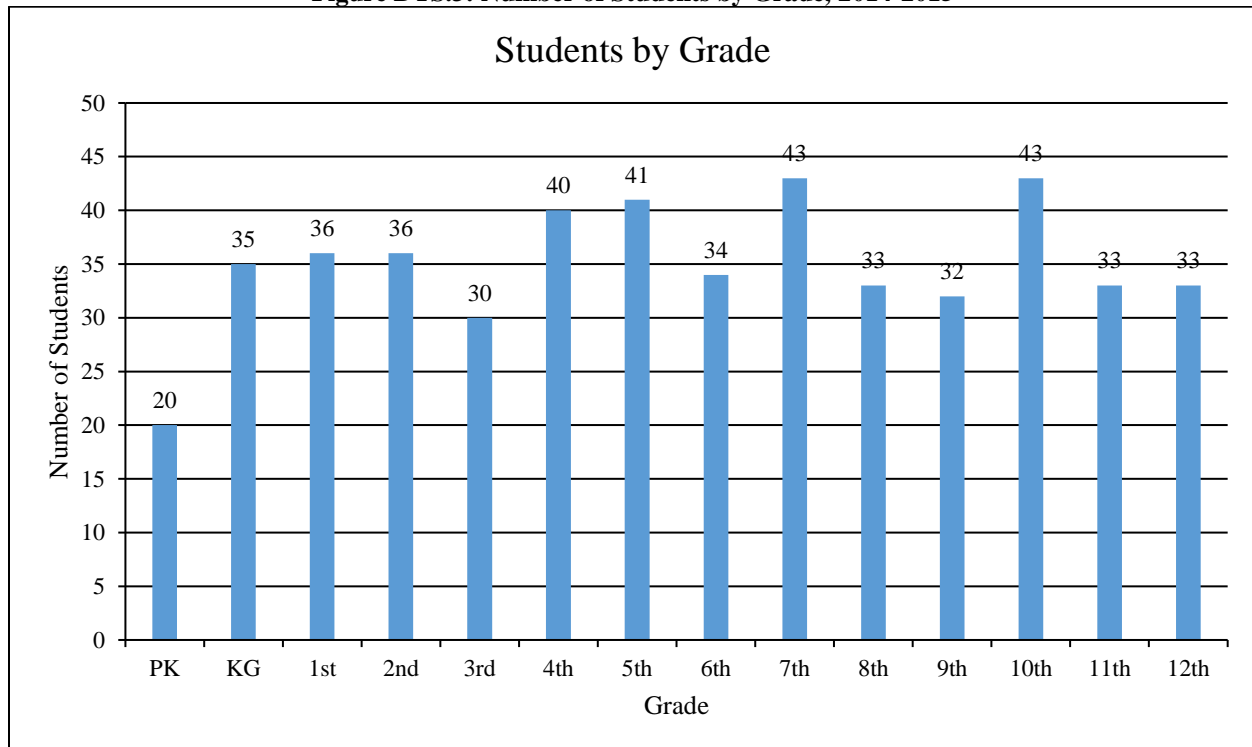


Source: Nebraska Department of Education

Figure DTS.2: Map of Doniphan-Trumbull Public Schools District



**Figure DTS.3: Number of Students by Grade, 2014-2015**



Source: Nebraska Department of Education

The figure above indicates that the largest number of students are in the 4<sup>th</sup>, 5<sup>th</sup>, 7<sup>th</sup>, and 10<sup>th</sup> grades. The lowest population of students are pre-kindergarten, 3<sup>rd</sup>, and 9<sup>th</sup> grades. According to the Nebraska Department of Education, 30 percent of students receive either free or reduced priced meals at school. This is significantly lower than the state average at 44 percent. Additionally, over 15 percent of students are in the Special Education Program. These particular students may be more vulnerable during a hazardous event than the rest of the student population.

**Table DTS.2: School District Statistics, 2014 - 2015**

	School District	State of Nebraska
Free/Reduced Priced Meals	30.06%	44.17%
School Mobility Rate	7.04%	12.25%
English Language Learners	-	6.20%
Special Education Students	15.57%	14.71%

Source: Nebraska Department of Education

**STRUCTURAL INVENTORY AND VALUATION**

The School District has six buildings, one grand stand, and one 8-lane track for a total value of \$20,732,525.

**FUTURE DEVELOPMENT TRENDS**

There have been no new construction or renovations in the last few years nor are there currently plans for additions.

**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 six chemical storage sites that house hazardous materials in Doniphan. None of these facilities are located near the school.

**Table DPH.3: Chemical Storage Fixed Sites**

#	Facility	Address	In Floodplain?
1	Agricultural Services Inc	101 E Pine St	No
2	Aurora Co-op Doniphan Plant	101 E Plum St	No
3	Doniphan Remote	106 W Plum St	No
4	Nebraska Machinery Co	10501 S US Highway 281	No
5	NPPD Doniphan Sys Control Ctr	2060 W Platte River Dr	No
6	Pioneer Hi-Bred Intl Inc	12937 S US Highway 281	No

Source: Nebraska Department of Environmental Quality

**CRITICAL FACILITIES**

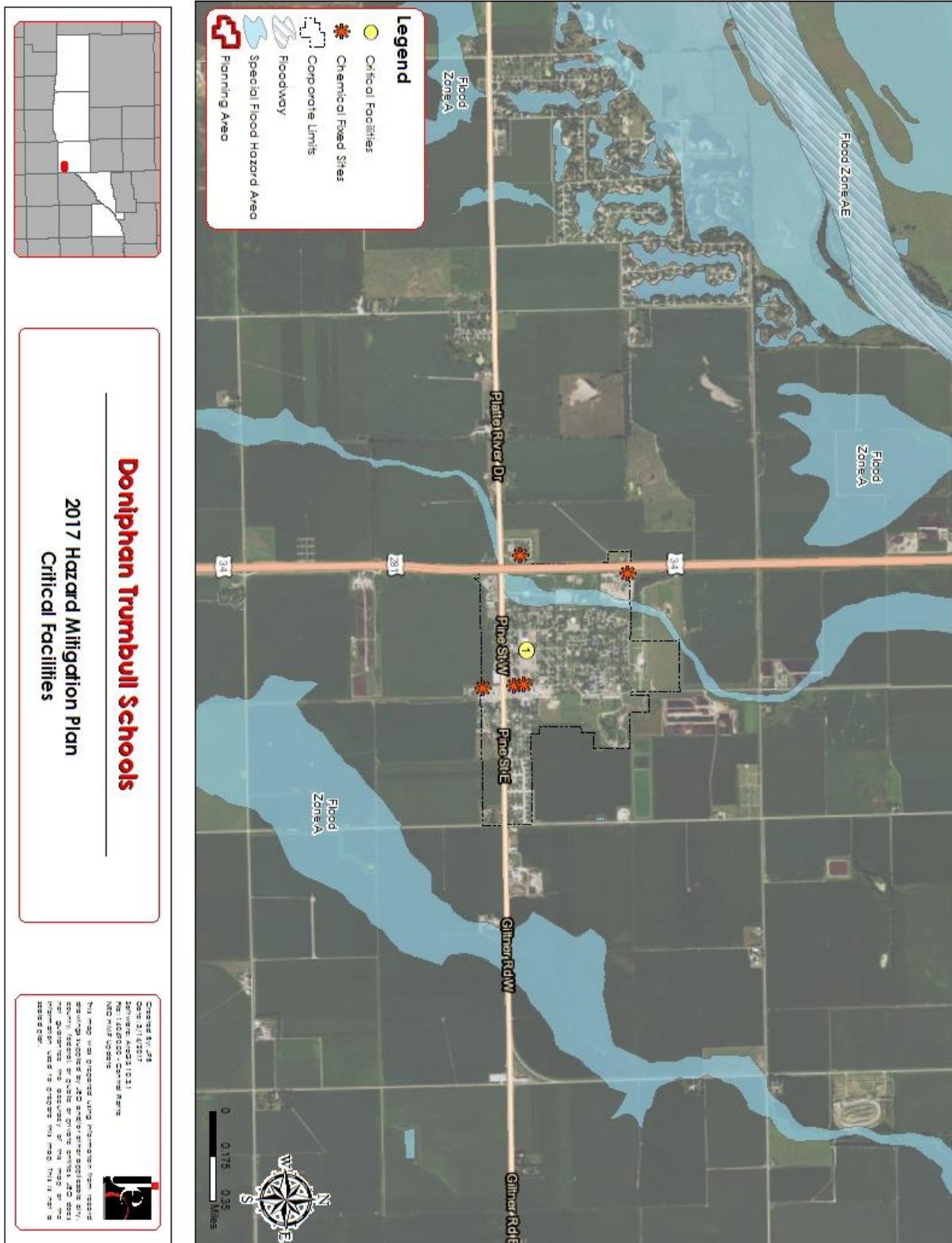
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction’s functions to normal during and after a disaster. Critical facilities were identified during the original planning process and updated 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 DTS.4: List of Critical Facilities for Doniphan-Trumbull Schools**

CF #	Name	Address	Red Cross Shelter (Y/N)	Generator (Y/N)	Weather Radio (Y/N)	Safe Room (Y/N)	Located in 1% Floodplain (Y/N)
1	Doniphan-Trumbull Elementary and Secondary School	302 W. Plum	Y	N	Y	N	N



Figure DTS.4: Critical Facilities and Hazardous Materials Storage with Floodplain



### ***SCHOOL DRILLS AND STAFF TRAINING***

The School District is required by law to conduct a number of drills throughout the year. Students and staff participate in monthly fire drills and a tornado drill every spring. In coordination with the County Sheriff's Office in 2015, the School conducted a mock active shooter situation with students and staff participating. Two to three days a year are dedicated to staff training on potential emergency scenarios. The District has a Safety and Security Team comprised of staff, parents, Sheriff Deputy, local civil defense, emergency management, local EMTs, and the Superintendent. The School District also meets with the County Sheriff's Office twice a year and the local fire department comes to the school during Fire Prevention Week. Parents and students are educated on emergency procedures through the website, local newspaper, and the student handbook.

### ***HISTORICAL OCCURRENCES***

For a table of historical hazard occurrences, please see the Participant Section for Hall County.

### ***SCHOOL 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 District by the local planning team, or based on the occurrence and risk of the hazard to the District are discussed in detail below.

#### **Flooding**

The District is concerned with heavy rains that have caused flash flooding concerns around the school campus due to poor stormwater drainage on Plum Street. Street flooding has backed up onto school property and has gone as far as seeping under a door, causing damage to the floor. The District has spoken with the Village and the Village Engineer to determine the best method of fixing the drainage issue. A drainage study may be conducted to identify drainage improvement projects to implement.

#### **Hail**

Hail storms are a regular part of the climate for Doniphan. The School District has not experienced damaging hail storms in the last ten years. The most significant event happened in May 2002 when a \$1 million in damages accrued across the community when 2.75-inch hail fell and damaged roofs, windows, vehicles, and trees. The District annually hires a contractor to trim trees of any dead or hazardous limbs. Mitigation actions include promoting first aid training and installing weather radios in the school.

#### **Severe Thunderstorms**

The local planning team is most concerned with high winds and lightning from severe thunderstorms. Ten years ago, lightning struck the school's digital sign causing \$3,500 in damages. Brief power outages at the school have occurred following high winds from thunderstorms. The school has not had any known damages from high winds in the last ten years. Weather radios are installed at the school.

#### **Severe Winter Storms**

Heavy snow and ice are of concern to the school due to the possibility of power outages, school closures, and the safety of students during transportation. One of the most severe winter storms was an ice storm that occurred in December of 2006. Heavy tree damage occurred from the freezing rain and power lines and power poles. Several days of power outages were reported in the area, including at the school. The local planning team noted that the National Weather Service contacts all area schools within 48 hours when an approaching severe winter storm may greatly impact operations. The information provided by the NWS gives the superintendent insight into the winter storm situation. The School District is responsible for snow removal, and if the snow is particularly deep, the Village will offer its help as well. Snow removal resources are sufficient at this time. A backup power generator is a mitigation action included in the plan.



**Tornadoes**

Although the school has not been directly impacted by a tornado, the District is concerned for the vulnerability of students and staff and the potential for damages to the school. Per the NCEI, an EF0 tornado passed near the Village in June 1997 and a funnel cloud was spotted in the community in October of 2000. Staff and students use the school’s weight room, which is located underground, as a storm shelter during tornado warnings. School data is regularly backed up using the cloud and via external hard drive. Mitigation actions include installing a backup power generator and improving emergency communications.

**ADMINISTRATION/CAPABILITY ASSESSMENT**

The School District has a superintendent, two principals, two assistant principals, and several supportive staff. The School Board is made up of a six-member panel.

Doniphan-Trumbull Schools would likely fund hazard mitigation projects through a combination of available grants, school building fund, and the general fund.

**Table DTS.5: Overall Jurisdictional Capability**

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

**PLAN INTEGRATION**

Doniphan-Trumbull Public School District maintains, updates, and annually reviews the Safety and Security Manual with the Safety and Security Team. The manual outlines roles, responsibilities, and procedures for response to hazards.

No other examples of plan integration were identified, and there are currently no plans to further integrate planning mechanisms.

**MITIGATION STRATEGY**

**New Mitigation Actions**

	<b>Improve/Provide Adequate Backup and Emergency Generators</b>
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	\$3,500+ depending on site requirements
Funding	General Funds
Status	Not yet started.
Timeline	2-5 years
Priority	High
Lead Agency	Superintendent

	<b>Reduce Tree Damage and Damage from Trees</b>
Description	Conduct tree inventory; develop tree maintenance/trimming program; implement tree maintenance/trimming program; remove hazardous limbs and/or trees
Hazard(s) Addressed	High Winds, Severe Thunderstorms, Tornadoes, Severe Winter Storms, Grass/Wildfire
Estimated Cost	\$3,600/year
Funding	General Funds
Status	Ongoing. Contractor hired every year to trim trees.
Timeline	Ongoing
Priority	Medium
Lead Agency	Superintendent

	<b>Improve Emergency Communication</b>
Description	Develop/Improve Emergency Communication Action plan; implement Emergency Communication Action Plan; establish inner-operable communications; obtain/upgrade emergency communication facilities/equipment; obtain/upgrade/distribute weather warning radios
Hazard(s) Addressed	All Hazards
Estimated Cost	\$1,000+ Staff Time
Funding	General Funds
Status	Ongoing.
Timeline	Ongoing
Priority	High
Lead Agency	Administration Team

	<b>Improve Warning Systems</b>
Description	Evaluate current warning systems; improve warning systems/develop new warning system; obtain/upgrade warning system equipment and methods; conduct evaluation of existing alert sirens for replacement or placement of new sirens; identify location of weather warning radios; improve weather radio system; obtain/upgrade weather radios
Hazard(s) Addressed	All Hazards
Estimated Cost	\$1,000+ Staff Time
Funding	General Funds
Status	Ongoing. Currently the school has a radio but may need to replace it in the future.
Timeline	Ongoing
Priority	Low
Lead Agency	Administration Team

	<b>First Aid Training</b>
Description	Promote first aid training for all residents
Hazard(s) Addressed	All Hazards
Estimated Cost	\$100 per person
Funding	General Funds
Status	Ongoing
Timeline	Ongoing
Priority	High
Lead Agency	Superintendent and Secretary

<b>Drainage Study/Stormwater Master Plan</b>	
Description	Identify and prioritize design improvements with preliminary drainage studies and assessments; address site specific localized flooding/drainage issues; identify stormwater problem areas and potential drainage improvements with Stormwater Master Plans
Hazard(s) Addressed	Flooding
Estimated Cost	\$15,000+
Funding	General Funds
Status	In early conversations with Village on drainage issue around school.
Timeline	2-5 years
Priority	High
Lead Agency	Board of Education

PARTICIPANT SECTION  
FOR THE  
CITY OF GRAND ISLAND

Central Platte NRD  
Multi-Jurisdictional Hazard Mitigation Plan

August 2017

### ***LOCAL PLANNING TEAM***

Table GID.1 provides the list of participating members that comprised the City of Grand Island local planning team. Members of the planning team attended Round 1 and Round 2 meetings, and provided important information including, but not limited to: confirming demographic information, critical facilities, future development trends, hazard history and impacts, identifying hazards of greatest concern, and the prioritization of mitigation actions that address the hazards at risk to the community.

**Table GID.1: City of Grand Island Local Planning Team**

<b>Name</b>	<b>Title</b>	<b>Department / Organization</b>
Chad Naby	Planning Director/Floodplain Administrator	City of Grand Island
Jon Rosenlund	Emergency Manager	City of Grand Island

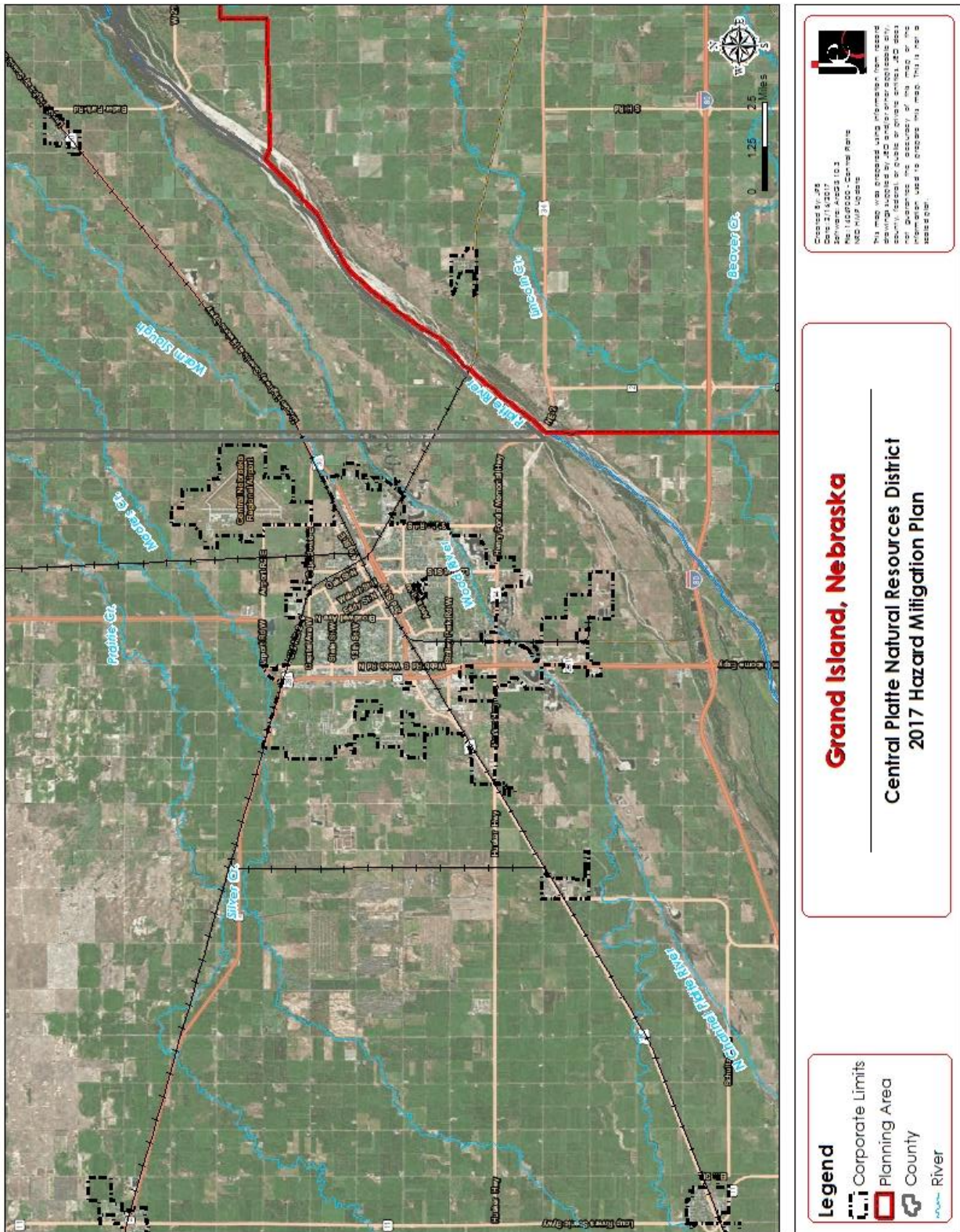
### ***LOCATION AND GEOGRAPHY***

The City of Grand Island is located in the northeastern portion of Hall County and covers an area of 28.6 square miles. The major waterway in the area is the Platte River, located south of the City and running from the southwest to the northeast.

### ***TRANSPORTATION***

Grand Island's major transportation corridors include Highways 2, 30, 34, and 281. Highway 2 is located along the northwestern edge of the City and has an average of 4,260 vehicles per day with 315 of those categorized as heavy commercial vehicles. Highway 30 travels through the center of the City in a southwest to northeast direction and has an average of 6,265 vehicles per day with 1,080 of those categorized as heavy commercial vehicles. Highway 34 travels in an east to west direction and is located in the southeast corner of the City and has an average of 5,040 vehicles per day with 550 of those categorized as heavy commercial vehicles. Finally, Highway 281 travels in a north to south direction through the center of the City and have an average of 11,000 vehicles per day with 1,085 of those categorized as heavy commercial vehicles. Grand Island has three active rail lines in or near the City limits, these include a Union Pacific, a Burlington Northern, and a Nebraska Central line. There is also one non-operating rail line that is owned by the United States Government and located to the west of the City.

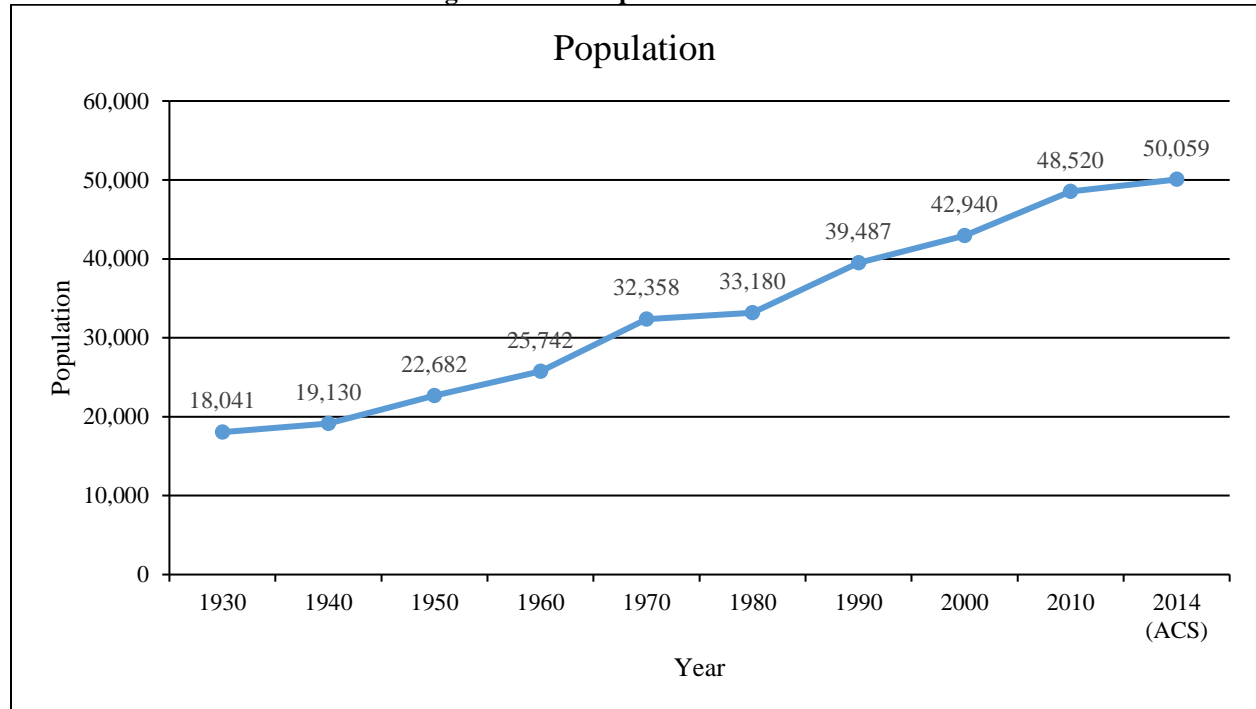
Figure GID.1: Map of the City of Grand Island



**DEMOGRAPHICS**

The following figure displays the historical population trend from 1930 to 2014. This figure indicates that the population of Grand Island has been increasing since 1930.

**Figure GID.2: Population 1930 - 2014**



Source: U.S. Census Bureau

The following table indicates the City has a higher percentage of the population that is under the age of 5 when compared to Hall County. However, Grand Island has a comparable percentage of the population between the ages of 5 and 64 and over the age of 64 as the County. The median age is also very similar to the County's.

**Table GID.2: Population by Age**

Age	Grand Island	Hall County	State of Nebraska
<5	8.4%	8.1%	7.2%
5-64	78.7%	78.5%	79.2%
>64	13.0%	13.4%	13.6%
Median	35	35.9	36.2

Source: U.S. Census Bureau, 2010, Table DP-1

The following table indicates that Grand Island's median household income is significantly lower than the County. The per capita income, the median home value, and median rent value are also lower than that of the County.

**Table GID.3: Housing and Income**

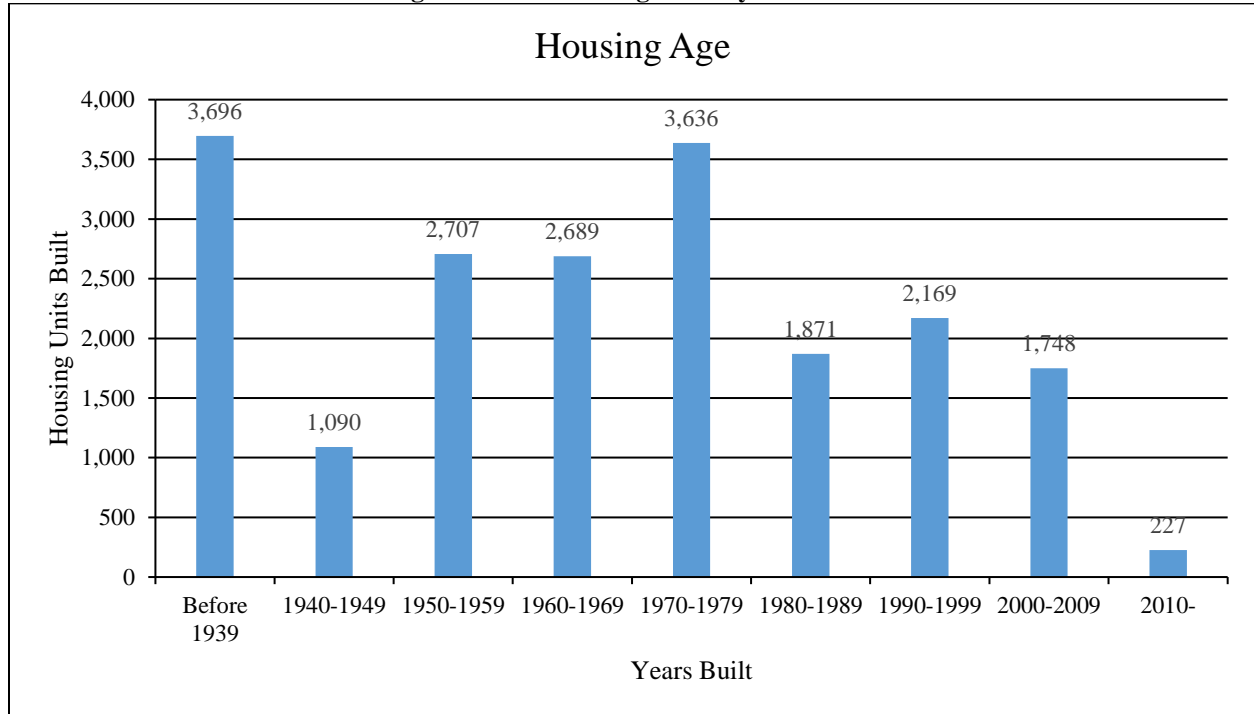
	Grand Island	Hall County	State of Nebraska
Median Household Income	\$46,527	\$61,677	\$52,400
Per Capita Income	\$23,221	\$24,075	\$27,339
Median Home Value	\$113,500	\$118,300	\$130,100
Median Rent	\$653	\$656	\$721

Source: U.S. Census Bureau, 2010-2014 American Community Surveys 5-year Estimates, Table DP03 and DP04



According to 2010-2014 ACS 5-year estimates, the community has 19,833 housing units with 94.3 percent of those units occupied. There are approximately 599 mobile homes in the community. Mobile home parks are in almost every zoning district in Grand Island. The initial Flood Insurance Rate Map (FIRM) was developed in March 1983.

**Figure GID.3: Housing Units by Year Built**



Source: U.S. Census Bureau, 2010-2014 American Community Surveys 5-year Estimates, Table DP04

**Table GID.4: Housing Units**

Jurisdiction	Total Housing Units				Occupied Housing Units			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Grand Island	18,702	94.3%	1,131	5.7%	11,379	60.8%	7,323	39.2%
Hall County	22,418	94.1%	1,418	5.9%	14,326	63.9%	8,092	36.1%

Source: Selected Housing Characteristics, 2010 - 2014 ACS 5-year Estimates

**MAJOR EMPLOYERS**

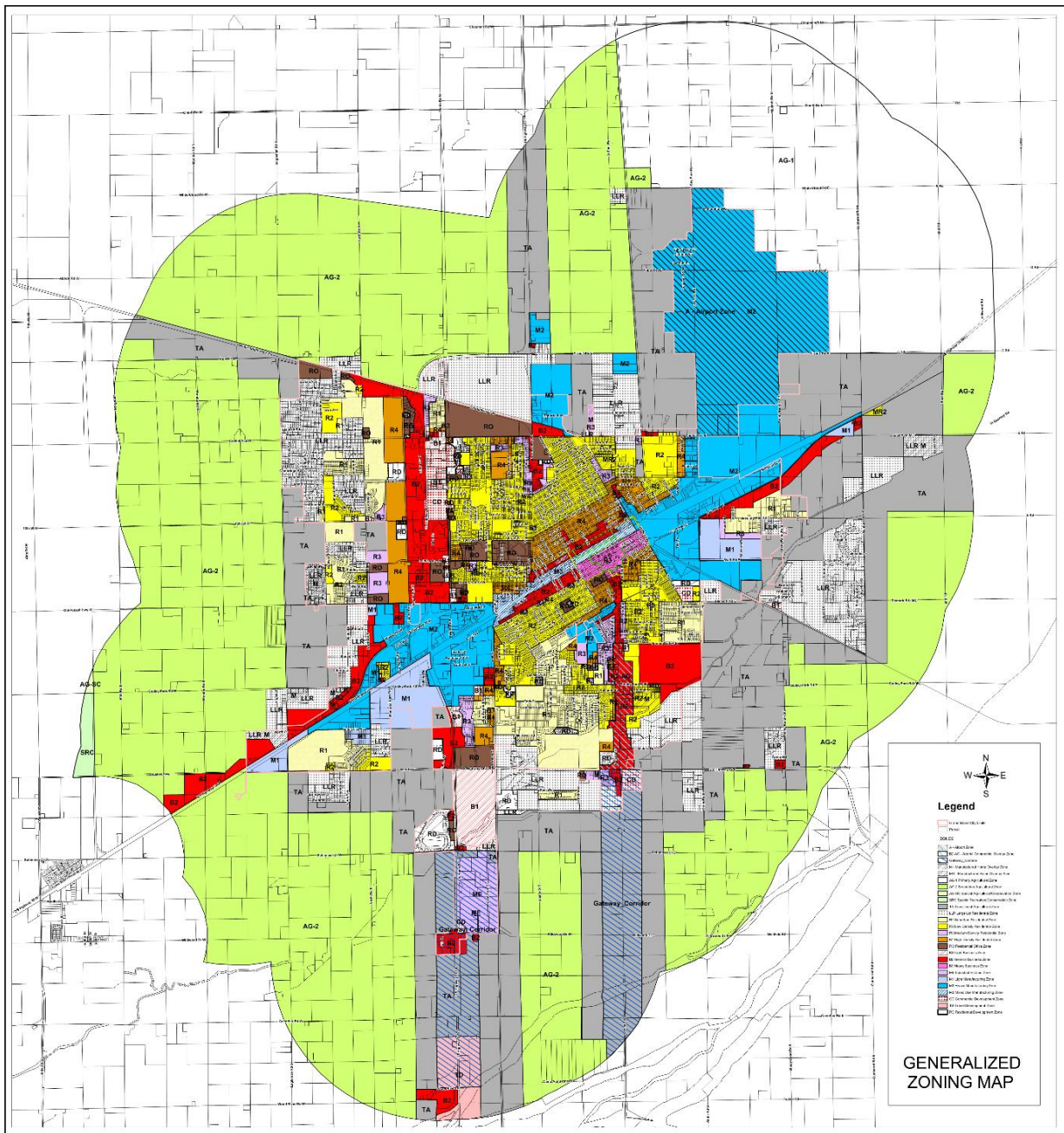
The major employers in the community are the St. Francis Hospital, JBS Swift, Principal Financial, Chief Industries, Grand Island Public Schools, and Global Industries. Most community members stay in Grand Island for work.

**FUTURE DEVELOPMENT TRENDS**

Over the past five years, Grand Island has seen many new buildings, redevelopments, and new roads. Some new houses were built in the floodplain, but all are compliant with floodplain regulations. Overall, Grand Island’s population is growing. The local planning team reports that Grand Island is a regional hub with varied employers, retailers, and medical facilities. There are new housing developments planned for the next five years, mostly in the northwest part of the City. Furthermore, a few apartment complexes are planned for the southeast section of Grand Island in the next five years. A new hospital and a retail center are planned to be built as well.



Figure GID.4: Zoning Map



**PARCEL IMPROVEMENTS AND VALUATION**

GIS parcel data was requested from the County Assessor. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

**Table GID.5: Parcel Improvements**

Number of Improvements	Total Improvement Value	Mean Value of Improvements Per Parcel	Number of Improvements in Floodplain	Value of Improvements in Floodplain
18,386	\$2,492,047,641	\$135,541	988	229,290,374

Source: Hall County Assessor

**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 37 chemical storage sites that house hazardous materials in Grand Island. A total of three chemical storage sites are located in the floodplain (Figure GID.5).

**Table GID.6: Chemical Storage Fixed Sites**

Facility	Address	In Floodplain?
Agricultural Services Inc	2777 N Broadwell Ave	No
Alter Nebraska Corporation	1119 E 4th St	No
AmeriCold Logistics LLC	204 E Roberts St	No
AT&T Communications 0900	144 W Roberts St	No
Aurora Co-op Elevator Company	4155 E US Highway 30	Yes – 1%
Aurora Co-op Elevator Company	920 N Shady Bend Rd	No
C W Burdick Generating Station	800 Bischeld St	No
CenturyLink	105 N Wheeler Ave	No
Charter Communications	2533 W Old Lincoln Hwy	No
Charter Communications	205 N Webb Rd	No
Chief Industries Inc	1119 S Adams St	No
Christensen Concrete Products	235 W Roberts St	No
Christensen Concrete Products	3990 W US Highway 30	No
CNH America LLC - Miller Bldg	1011 Claude Rd	No
CNH Industrial America LLC	3445 W Stolley Park Rd	No
Coca-Cola Refreshments	1617 Holland Dr	No
Darling Ingredients Inc	5251 W Guenther Rd	Yes – 1%
Diamond Truck Wash	6499 S US Highway 281	No
Gerhold Concrete Co	1431 S Webb Rd	No
GIUD Burdick Reservoir	S Stuhr Rd	No
GIUD Rogers Reservoir	3990 W Old Potash Hwy	No
Grand Island Potable Water	2700 Wellfield Rd	No
Grand Island Water Department	364 N Pine St	No
Lineage Logistics LLC	205 E Roberts St	No
McCain Foods USA Inc	2629 N Broadwell Ave	No
Optimas OE Solutions	3319 Island Cir	No
Overhead Door Co	2514 E US Highway 30	No
Platte Generating Station	1035 W Wildwood Dr	No
Platte Valley Energetics LLC	8318 W Old Potash Hwy	No
Sprint Grand Island POP	333 N Pine St	No
Standard Iron Inc	4160 Gold Core Rd	No

Facility	Address	In Floodplain?
Swift Beef Company	555 S Stuhr Rd	No
The Home Depot Store 3208	911 Allen Dr	No
VA Nebraska - Western Iowa HCS	2201 N Broadwell Ave	No
Verizon Wireless MTSO	3650 W 13th St	No
Verizon Wireless Newfair	1203 S Stuhr Rd	Yes – 1%
Windstream Communications	3650 W 13th St	No

Source: Nebraska Department of Environmental Quality

**HISTORIC SITES**

According to the National Register of Historic Places for Nebraska, there are 16 historic sites located in or near Grand Island.

**Table GID.7: National Historic Registry**

Site Name	Date Listed	In Floodplain?
Burlington Railroad Depot, Grand Island	12/2/2014	No
Hall County Courthouse	9/15/1977	No
Grand Island Carnegie Library	5/2/1975	No
Cathedral of the Nativity of the Blessed Virgin Mary	7/15/1982	No
Liederkrantz	11/30/1978	No
Evangelische Lutherische Dreinenigkeit Kirche	12/4/1986	No
Hotel Yancey	12/13/1984	No
Grand Island United States Post Office and Courthouse	2/14/2006	No
Hamilton-Donald House	3/13/1986	No
Mrs. H. J. Bartenbach House	12/8/1986	No
Roeser-Gartner House	6/25/1982	No
Glade-Donald House	9/12/1985	No
Andrew M. Hargis House	6/9/1978	No
Grand Island Senior High School	11/22/1999	No
Lee Huff Apartment Complex	7/1/1994	No
Heinrich Giese House	7/26/2006	No

Source: Nebraska State Historical Society, 2016

**CRITICAL FACILITIES**

Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public (i.e. Red Cross Shelter), 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 GID.8: List of Critical Facilities in Grand Island**

CF #	Name	Address	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in 1% Floodplain (Y/N)
1	Grand Island City Hall	100 E First Street	N	Y	N
2	Central NE Regional Airport	3557 Sky Park Rd	N	N	N
3	GI Fleet Services	1111 W North Front St.	N	N	N
4	Grand Island Transfer Station	5050 W Potash Highway	N	N	N
5	Qwest (GI)	105 N Wheeler	N	N	N
6	GI Fire #1	Fonner Park Rd	N	Y	N
7	GI Fire #2	1710 N Broadwell Ave.	N	Y	N
8	GI Fire #3	2310 S Webb Rd	N	Y - Portable	N
9	GI Fire #4	3690 W State St.	N	Y	N
10	GI Rural Fire	3009 W. Hwy 34	N	Y	N
11	American Red Cross	404 E 3rd St.	N	N	N
12	Salvation Army	818 W. 3 <sup>rd</sup> St.	N	N	N
13	St. Francis Medical Center	2620 West Faidley Ave.	N	Y	N
14	Burdick Power Station	800 E. Bischeld St.	N	N	N
15	Phelps Control Center	700 E Bischeld St.	N	N	N
16	Platte Generation Station	1035 Wildwood Dr.	N	N	N
17	Elec Division Facility	1116 W North Front St.	N	N	N
18	GI Wastewater Treatment Plant	3013 E Swift Rd.	N	Y	Y
19	First Presbyterian Church	2103 W Anna St.	Y	N	N
20	Blessed Sacrament Church	518 W State St.	Y	N	N
21	St. Leos Church	2410 S Blaine St	Y	N	N
22	St. Paul's Lutheran Church	1515 S. Harrison St	Y	N	N
23	Fonner Park Race Track	700 E. Stolley Park Rd.	Y	N	N
24	Newell Elementary School	2700 W 13 <sup>th</sup> St.	Y	N	N
25	Northwest High School	2710 N. North Rd.	Y	N	Y
26	Barr Jr. High School	602 W. Stolley Park Rd	Y	N	N
27	Seedling Mile Elementary	3208 E. Seedling Mile Rd.	Y	N	N
28	G.I. Senior High School	2124 N. Lafayette Ave.	Y	N	N
29	Starr Elementary School	315 Wyandotte St.	Y	N	N
30	Dodge School	641 S Oak St.	Y	N	N
31	Walnut Jr. High School	1600 N. Custer Ave.	Y	N	N
32	United Veterans Club, Inc.	1914 W. Capital	Y	N	Y
33	Y.M.C.A.	221 E South Front St	Y	N	N
34	Y.W.C.A.	211 E Fonner Park Rd	Y	N	N

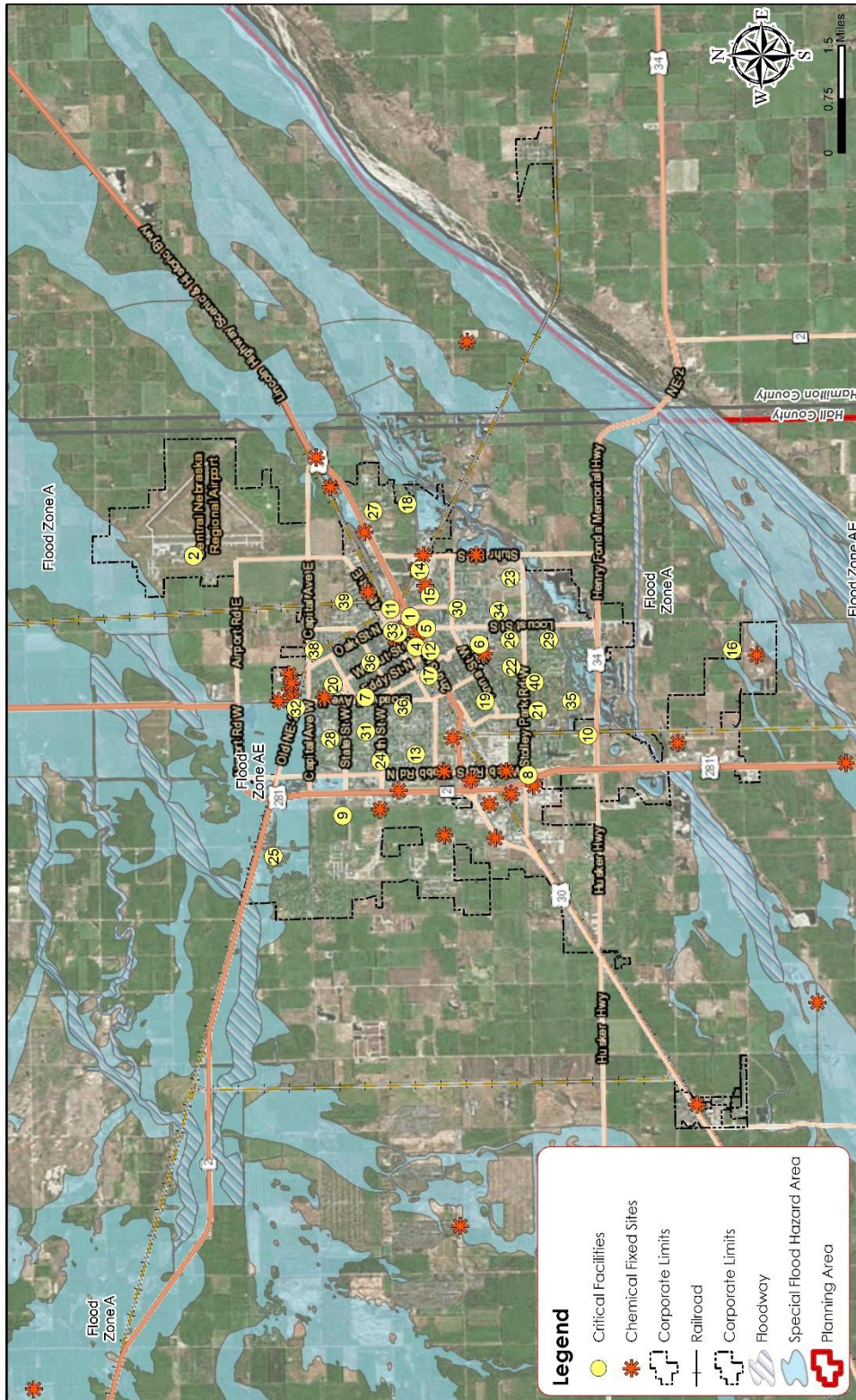
*Section Seven: City of Grand Island Participant Section*

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<b>CF #</b>	<b>Name</b>	<b>Address</b>	<b>Red Cross Shelter (Y/N)</b>	<b>Generator (Y/N)</b>	<b>Located in 1% Floodplain (Y/N)</b>
35	E Free Church	2609 S Blaine	Y	N	N
36	Howard Elementary School	502 W 9 <sup>th</sup>	Y	N	N
37	Jefferson Elementary School	1314 W 7 <sup>th</sup>	Y	N	N
38	Knickrehm Elementary School	2013 N Oak	Y	N	N
39	Lincoln Elementary School	805 N Beal St	Y	N	N
40	Stolley Park Elementary School	1700 W Stolley Pk.	Y	N	N



Figure GID.5: Critical Facilities and Hazardous Materials Storage Facilities with Floodplain



  
 Created by: JE  
 Date: 10/9/2017  
 Software: ArcGIS 10.3.1  
 File: 14049000 - Central Platte  
 NRD HW Update  
 This map was prepared using information from record drawings supplied by JFO and/or other applicable city, county, federal, or public or private entities. JFO does not warrant the accuracy of the information used to prepare this map. This is not a scaled plot.

**Grand Island**  
 2017 Hazard Mitigation Plan  
 Critical Facilities



**HISTORICAL OCCURRENCES**

For a table of historical hazard occurrences, please see the Participant Section for Hall County.

**LOCAL HAZARD PRIORITIZATION**

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

**Chemical Spills (Transportation)**

Both UP and BNSF have main lines through Grand Island. Highways 30, 2, and 281 all run through the City. Many manufacturing facilities have reportable quantities of transported hazardous material. There have been some fuel spills and occasional releases. Chemicals are presumed to be transported daily by highway; however, the local planning team is not sure which types of chemicals are being transported. According to the Pipeline and Hazardous Materials Safety Administration, there have been 149 reports of chemical spills. City Hall, the County Administration Building, Fire Stations 3 and 4, the Police and Sheriff Buildings are critical facilities along the main transportations. Chemical spill hazard mitigation actions include improving the citizen warning systems and educating the public on hazard events.

**Flooding**

Grand Island’s flood risk areas of concern surround the City on the north, east, and south sides. The closest bodies of water of concern are Wood River, Prairie Creek, Silver Creek, and Moores Creek. The local planning team listed several dates of Grand Island flooding events, 1968, 1976, 1993-94, 2005, and 2008. However, the City has completed and is finishing flood control projects to mitigate flooding in the community. First, the Wood River floodplain has largely been mitigated due to the construction of a levee system, completed in 2004. Then in partnership with the CPNRD, the Upper Prairie Silver Moores Flood Control Project will impact the northern floodplain. It is a three-phase flood control project that includes stormwater detention cells, a diversion channel, and a series of upland detention dams. This project is slated to be completed in 2017. For more information on this project, please see the CPNRD’s participant section.

The planning team noted that the areas in the community most prone to flooding are northwest Grand Island, north of Capitol Avenue, west of 281. Compounding this, the planning team mentioned that when the City receives brief intense rain events (at least 2+ inches of water per hour), stormwater drainage systems lose efficiency.

Grand Island has 154 NFIP policies in-force for \$28,496,500. There are two single family repetitive flood loss properties in the City of Grand Island. The following table is parcel improvement information as provided by the County Assessor. It indicates that an estimated 5.4 percent of all parcel improvements in Grand Island are located in the floodplain.

**Table GID.9: Structures in the 1% Annual Flood Risk Area**

Value of Improvements in Floodplain	Number of Improvements in Floodplain	Total Number of Improvements in Community	Percentage of Improvements in Floodplain
\$229,290,374	988	18,386	5.4%

Source: Hall County Assessor

Further mitigation actions for flooding include mitigating repetitive flood loss properties and providing citizens with additional information about hazard events.

**Hail**

The NCEI reports 89 hail events since 1996, causing \$7,852,000 dollars in damages. These costs incurred led the community to rank hail as a top concern. The largest hail stone was reported at 3 inches. The planning team is concerned due to the potential for property damage. Most of the critical facilities are fitted with hail resistant building materials, and are insured. Building code limits to community members to one layer of shingles which encourages hail resistant building materials. Future hail hazard mitigation actions include improving citizen warning systems and educating the public on the hazards associated with hail.

**Levee Failure**

Levee failure may cause loss of life and injuries as well as damages to property, the environment, and the economy. There have been no reports of levee failure in Grand Island. The following table identifies the levee system that is located in the City. An Emergency Preparedness Plan (EPP) for the levee is being developed in coordination with the CPNRD and County Emergency Management. The EPP will include stakeholder roles and responsibilities, a risk awareness communication plan, evacuation plan, and activation process.

**Table GID.10: Hall Levees**

Name	Sponsor	City	River	Length (miles)	Type of Protection	Protected Area (sq miles)	Approximate Level of Protection
Wood River FPP	Central Platte NRD	Grand Island	Wood River	12.3	Urban	25 – 49	50 - 99 Year Flood

Source: Nebraska State Mitigation Plan

The following map provides the location of leveed areas in Grand Island. Shaded areas indicate land areas that are protected by the levee and are therefore vulnerable if the levee were to fail. An estimated 9,480 people and 3,964 buildings reside within the leveed areas.

**Severe Thunderstorms**

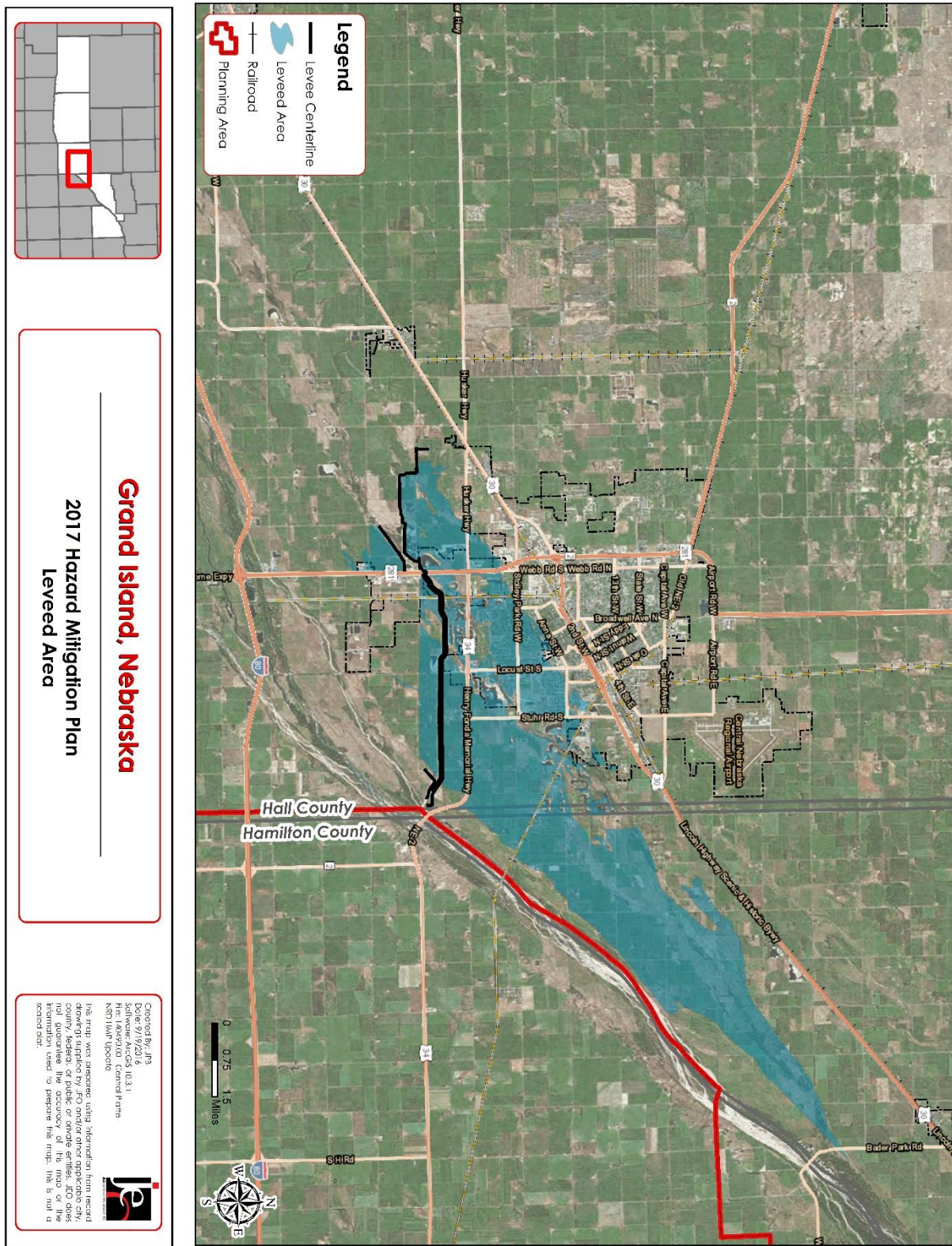
The NCEI reported 33 thunderstorm wind events since 1996. Official reports of property damage topped \$929,000 dollars for Grand Island. The City has severe thunderstorms every year, reported by the planning team, with localized flooding and wind damage. The planning team is concerned with the potential impact on utilities and transportation routes. There are weather radios in critical facilities, but not all have backup generators. Grand Island has an active tree management program that seeks to reduce the damage from falling trees and branches. Mitigation actions include improving the tree management program with a tree inventory and maintenance program. Other hazard mitigation actions are to provide adequate public safe rooms for the community, improve severe weather warning systems, hardening and looping the electrical system, and educating residents on thunderstorms.

**Tornadoes**

There are two reports of tornadoes since 1996 in the City of Grand Island. However, on June 3<sup>rd</sup>, 1980 there were seven tornadoes that touched down in or near the community over the span of nearly three hours. This outbreak devastated entire sections of Grand Island killing five people and injuring 200. Now, municipal servers are backed up to multiple locations; the City has warning sirens and some safe rooms, which are FEMA-certified. The County Emergency Management offers text alerts, and the community does educational outreach through Grand Island TV, and the Weatherwise program. Tornado hazard mitigation plans include providing adequate public safe rooms, improving public severe weather warning systems, hardening and looping the electrical system, reducing tree damage with a tree inventory and maintenance program, and educating the public on tornado hazards.



Figure GID.6: Leveed Areas



**GOVERNANCE**

A community’s governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. The City of Grand Island is governed by a Mayor and a nine member City Council. Furthermore, Grand Island has a number of offices or departments that may be involved in implementing hazard mitigation initiatives.

- Clerk/Treasurer
- Streets/Parks Commissioner
- Planning Commission
- Housing Authority
- Water and Sewer Department
- Volunteer Fire Department
- Tree Board

**CAPABILITY ASSESSMENT**

Thus far, the planning process has identified the major hazards for the community, and described and quantified the vulnerability of the community to these risks by acquiring updated information from FEMA, local jurisdictions, and other sources. The following step, referred to as a capability assessment, assesses what loss prevention or preparedness mechanisms are already in place. Combining the risk assessment with the local capability assessment results in a stronger mechanism for understanding a locality’s “net vulnerability,” and to what extent they are able to implement the identified goals, objectives, and actions.

A two-step approach was applied to conduct this assessment for each participant. First, an inventory of common mitigation activities was developed through the Capability Assessment Survey completed by the participants’ representatives. Four major local capabilities were examined in this assessment, and they are planning & regulatory capability, administrative & technical capability, fiscal capability, and education & outreach capability.

The purpose of this effort was to identify policies and programs that were either in place, needed improvement, or could be undertaken, if deemed appropriate. Second, local existing policies, regulation, plans, and programs were reviewed and evaluated to determine their contributions to reducing hazard-related losses.

**Table GID.11: Capability Assessment**

Survey Components/Subcomponents		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	Yes
	Capital Improvements Plan	Yes
	Economic Development Plan	Yes
	Emergency Operational Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
	Building Codes	Local Codes
	National Flood Insurance Program	Yes
	Community Rating System	No
Other (if any)		
Administrative &	Planning Commission	Yes

Survey Components/Subcomponents		Yes/No
Technical Capability	Floodplain Administration	Yes
	GIS Capabilities	Yes
	Chief Building Official	Yes
	Civil Engineering	Yes
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	
Fiscal Capability	Capital Improvement Plan/1 & 6 Year plan	Yes
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	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
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
	Natural Disaster or Safety related school programs	Yes
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	Yes
		Other (if any)

**Table GID.12: Overall Jurisdictional Capability**

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

**PLAN INTEGRATION**

The following paragraphs provide a summary of the community plans that were analyzed using guidance from FEMA’s 2014 *Plan Integration Guide*.

The City of Grand Island Comprehensive Plan, last updated in 2004, contains some goals and objectives consistent with hazard mitigation. The plan directs development away from the floodplain, chemical facilities, and major transportation routes. It also limits density in areas adjacent to known hazardous areas. Furthermore, it encourages infill development, clustering of development in sensitive areas, and elevation of structures located in the floodplain. The plan encourages preservation of open space in hazard-prone areas, and allows for emergency access to all areas of town. At this time, there are no current plans to incorporate the HMP into the Comprehensive Plan.

The City’s Zoning Ordinance was last updated in 2004. It discourages development in the floodplain, requires at least one-foot of elevation above base flood elevation in the floodplain, and prohibits development in within the floodway. It also discourages development near chemical storage sites and along major transportation routes in residential areas. The Ordinance encourages maintaining open space within the floodplain, limits development in the extraterrestrial jurisdiction, and accounts for current population trends.

Grand Island has an annex to the Hall County Local Emergency Operations Plan, last updated in 2015. The Plan addresses the hazards of greatest concern, identifies scenarios that would require evacuation and critical evacuation routes, locations to be used for mass sheltering, and provides a clear assignment of responsibility during an emergency.

The Building Codes for Grand Island were recently updated in 2016 and are based on the 2012 International Building Codes. The Codes outline proper sump pump installation, allow for raingardens in residential areas, and require the use of fire resistant building materials.

Grand Island has a 1 & 6 Year Street Plan and Transportation Improvement Plan that are reviewed and updated annually. The plans include many hazard mitigation projects such as stormwater projects, upsizing of culverts and drainage structures, and upgrading and regular maintenance of the storm sewer system. They also include stalling street aprons to facilitate drainage, improving to transportation routes for drainage, bridge improvements, updating electrical distribution system, and installing emergency generators in critical facilities. Furthermore, they include installing water meters for residential structures, burying power lines, and improving the existing Fire Hall. There are also plans to build a new Emergency Operations Center and 911 facilities in Grand Island, serving all of Hall County.

**MITIGATION STRATEGY**

**Ongoing and New Mitigation Actions**

	<b>Reduce Damages in Floodplain</b>
Description	Evaluate repetitive loss or potential loss structures located in floodplain; acquire and relocate or demolish flood prone property or elevate flood prone property; elevate equipment vulnerable to flooding
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	FMA, PDM, General Funds
Status	Not yet started.
Timeline	5+ years
Priority	Medium
Lead Agency	Floodplain Administrator



<b>Reduce Damages from Floods, Stormwater, and Heavy Precipitation Events</b>	
Description	Conduct stormwater drainage study; evaluate and implement recommendations or comparable measures to improve drainage; evaluate and improve stormwater system
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	General Funds, FMA, PDM, CDBG
Status	Not yet started.
Timeline	2-5 years
Priority	High
Lead Agency	Water and Sewer Department

<b>Provide Adequate Public Safe Rooms and Post-Disaster Storm Shelters</b>	
Description	Identify and evaluate existing safe rooms and/or storm shelters; improve and/or construct safe rooms and/or storm shelters; design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
Hazard(s) Addressed	Tornadoes, Severe Thunderstorms, High Winds
Estimated Cost	\$200 - \$250 per sq ft
Funding	General Funds, HMGP, PDM
Status	Not yet started.
Timeline	5+ years
Priority	Low
Lead Agency	Planning Commission, Emergency Management

<b>Improve Warning Systems</b>	
Description	Evaluate current warning systems (defined as alert sirens, weather radios, and television, telephone, and radio warning systems, etc.); improve warning systems/develop new warning system; obtain/upgrade warning system equipment and methods; conduct evaluation of existing alert sirens for replacement or placement of new sirens; identify location of weather warning radios; improve weather radio system; obtain/upgrade weather radios
Hazard(s) Addressed	All Hazards
Estimated Cost	\$25,000 - \$50,000
Funding	City Emergency Management Budget, HMGP
Status	In progress.
Timeline	Ongoing
Priority	High
Lead Agency	Emergency Management

<b>Reduce Tree Damage and Damage from Trees</b>	
Description	Conduct tree inventory; develop tree maintenance/trimming program; implement tree maintenance/trimming program; remove hazardous limbs and/or trees
Hazard(s) Addressed	Tornadoes, Severe Winter Storms, Severe Thunderstorms, High Winds, Grass/Wildfire
Estimated Cost	\$5,000+
Funding	General Funds
Status	In progress.
Timeline	Ongoing
Priority	Medium
Lead Agency	Tree Board

<b>Improve Electrical Service</b>	
Description	Evaluate hardening, retrofitting, looping and/or burying of power lines and related infrastructure and/or comparable protection measures; 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; implement measures to improve electrical service; bury power lines for future construction
Hazard(s) Addressed	All Hazards
Estimated Cost	Varies
Funding	General Funds, HMGP, PDM
Status	Not yet started.
Timeline	5+ years
Priority	Low
Lead Agency	City Engineer

<b>Community Education and Awareness</b>	
Description	Obtain or develop hazard education materials; conduct multi-faceted public education; distribute fact sheets or maps at community events, public schools, other venues and to public and private communication systems; conduct scheduled siren/warning system tests; prepare educational materials listing safe rooms and shelters and evacuation plans; distribute educational materials listing safe rooms and shelters; purchase equipment such as overhead projectors and laptops to facilitate presentation of information
Hazard(s) Addressed	All Hazards
Estimated Cost	Varies
Funding	Staff Time
Status	In progress.
Timeline	Ongoing
Priority	High
Lead Agency	Emergency Management

<b>Develop an Emergency Preparedness Plan</b>	
Description	Develop an Emergency Preparedness Plan (EPP) for the Grand Island Levee System in coordination with Hall County Emergency Management and the CPNRD (the plan should include stakeholder roles and responsibilities, a risk communication plan, emergency activation levels, activation process, evacuation plan, and training and exercise plan)
Hazard(s) Addressed	Levee Failure
Estimated Cost	\$10,000
Funding	General Funds
Status	Early planning stages.
Timeline	1 year
Priority	High
Lead Agency	Planning Commission, Emergency Management, CPNRD

**Removed Mitigation Actions**

<b>Maintain NFIP Participation</b>	
Description	Continue to regulate development in floodplain areas; additional floodplain mapping/remapping
Reason for Removal	City will continue to participate in program, however, this is no longer considered a hazard mitigation action.

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PARTICIPANT SECTION  
FOR THE

GRAND ISLAND PUBLIC SCHOOL  
DISTRICT

Central Platte NRD  
Multi-Jurisdictional Hazard Mitigation Plan

August 2017



**LOCAL PLANNING TEAM**

Table GIP.1 provides the list of participating community members that comprised the Grand Island Public School District local planning team. Members of the planning team attended Round 1 and Round 2 meetings and provided important information including but not limited to: confirming demographic information, critical facilities, structural inventory, future development trends, hazard history and impacts, identifying hazards of greatest concern for the community, and the prioritization of mitigation actions that address the hazards at risk to the community.

**Table GIP.1: Grand Island Public Schools Local Planning Team**

Name	Title	Department / Organization
Robin Dexter	Associate Superintendent	GIPS
Dan O. Petsch	Director of Buildings & Grounds	GIPS
Rick Ressel	School Safety Coordinator	GIPS
Jon Rosenlund	Emergency Manager	Grand Island/Hall County

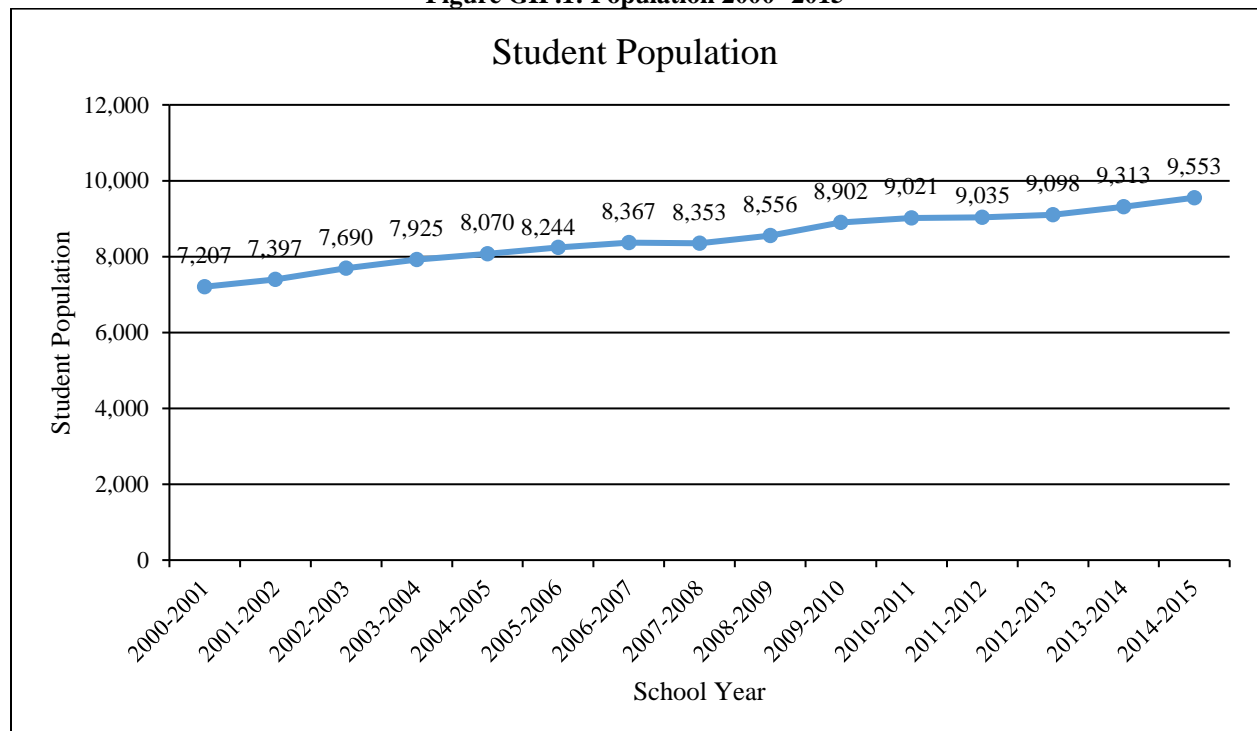
**LOCATION AND SERVICES**

Grand Island Public School District operates 21 schools with 14 elementary schools, three middle schools, and one high school, as well as an Early Learning Center, the Career Pathways Institute, and the Success Academy. The District provides services to students in the City of Grand Island and part of east central Hall County. Figure GIP.2 shows the location of the School District’s boundaries.

**DEMOGRAPHICS**

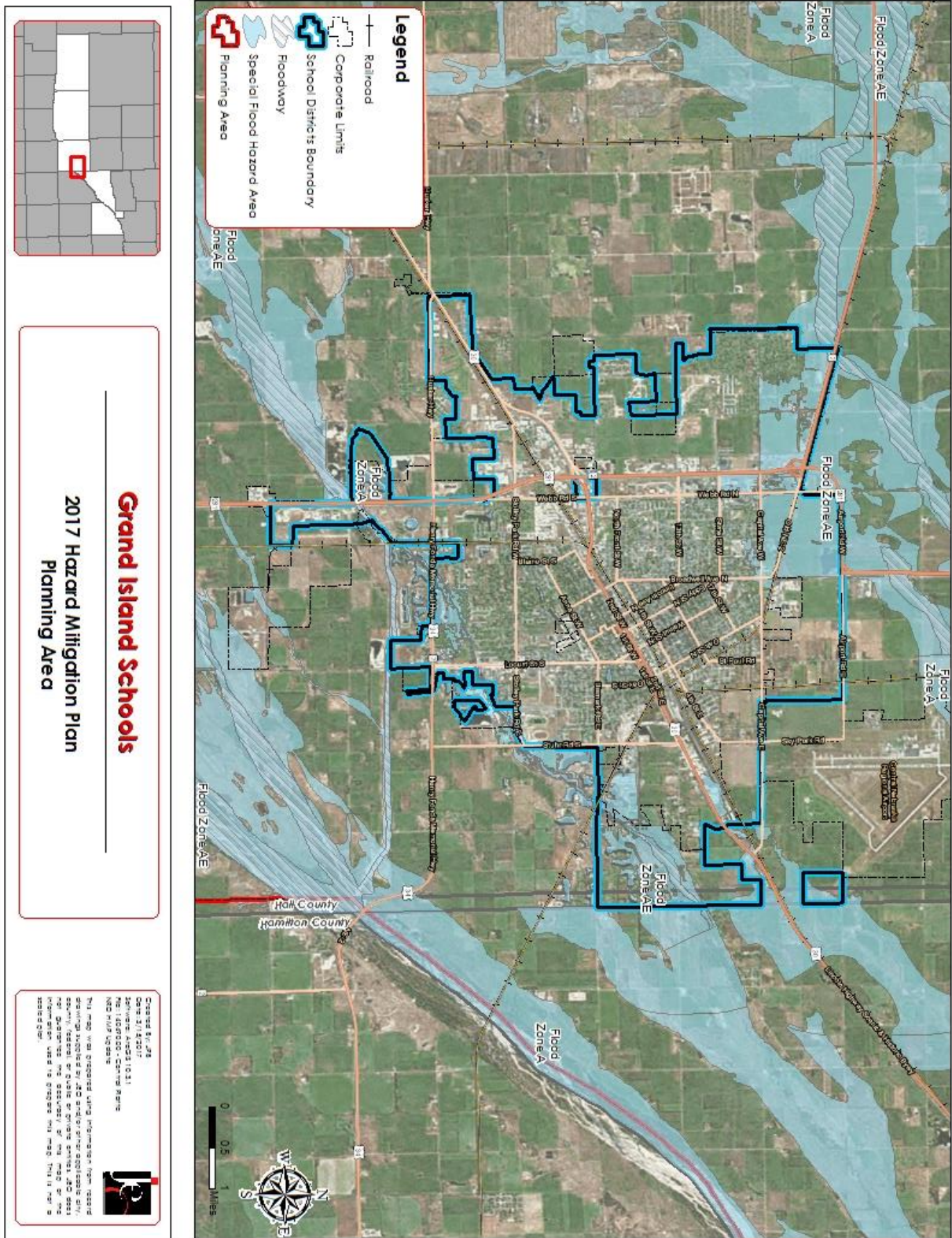
The following figure displays the historical population trend starting with the 2000-2001 school year and ending with the 2014-2015 year. It indicates that the student population has been increasing steadily since 2000 with a total enrollment of 9,553 in 2014. The district anticipates that student enrollment will continue to increase in the coming years.

**Figure GIP.1: Population 2000- 2015**

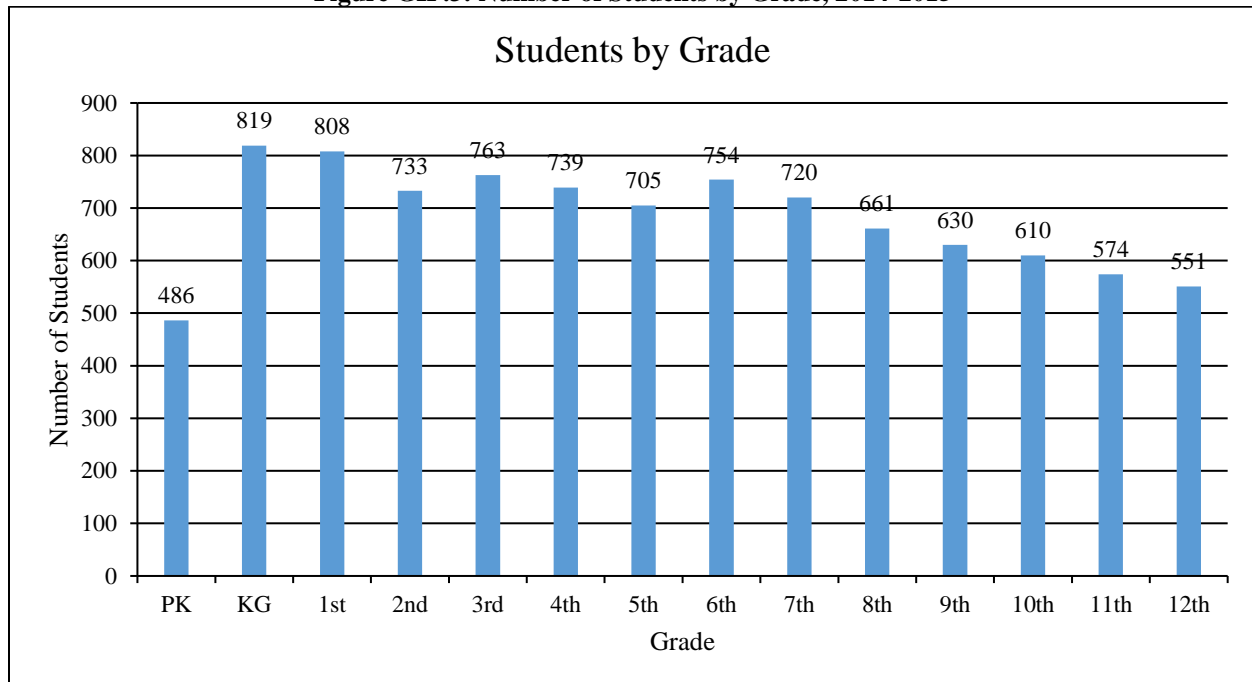


Source: Nebraska Department of Education

Figure GIP.2: Grand Island Public School District



**Figure GIP.3: Number of Students by Grade, 2014-2015**



Source: Nebraska Department of Education

The figure above indicates that the largest number of students are in kindergarten, 1<sup>st</sup>, and 3<sup>rd</sup> grades. The lowest population of students are pre-kindergarten, 11<sup>th</sup>, and 12<sup>th</sup> grades. According to the Nebraska Department of Education, nearly 66 percent of students receive either free or reduced priced meals at school. This is significantly higher than the state average at 44 percent. Additionally, there is nearly 16 percent of students in the English Language Learners Program and nearly 14 percent of students are in the Special Education Program. These particular students may be more vulnerable during a hazardous event than the rest of the student population.

**Table GIP.2: School District Statistics, 2014 - 2015**

	School District	State of Nebraska
Free/Reduced Priced Meals	65.53%	44.17%
School Mobility Rate	16.86%	12.25%
English Language Learners	15.97%	6.20%
Special Education Students	13.57%	14.71%

Source: Nebraska Department of Education

### ***FUTURE DEVELOPMENT TRENDS***

In September 2014, the City of Grand Island voted to approve a \$69.9 million bond issue to complete seven Grand Island Public Schools building projects, all of which are slated to be completed by fall 2019. They include:

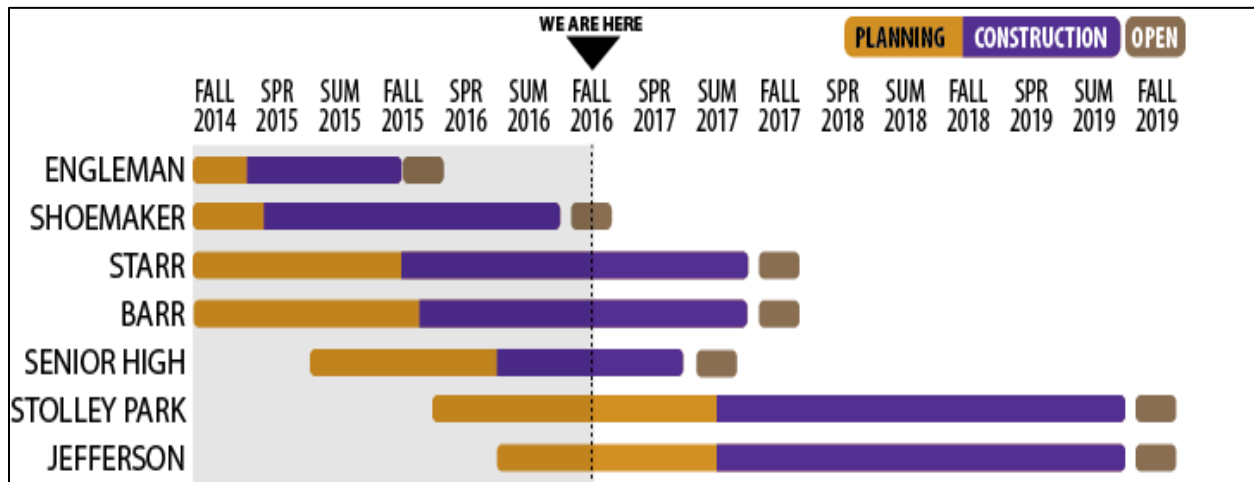
- Engleman Elementary expansion
- Shoemaker Elementary expansion and renovation
- Starr Elementary new building at new location
- Jefferson Elementary new building at current location
- Stolley Park Elementary new building at current location
- Barr Middle School expansion and renovation
- Grand Island Senior High renovation of the 100-wing



As of the fall of 2016, the expansion and renovations of Engleman Elementary and Shoemaker Elementary have been completed. Grand Island Senior High, Starr Elementary, and Barr Middle School projects are slated to be completed by the end of 2017. Jefferson Elementary and Stolley Park Elementary will complete construction in the fall of 2019, and both new facilities will include storm shelters large enough to house all students and staff.

Additional renovations at the schools will address security and life safety hazards such as sprinklers, fire alarm upgrades, and ADA compliance.

Figure GIP.4: School District Construction Timeline



Source: Grand Island Public Schools Website

**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 37 chemical storage sites that house hazardous materials in Grand Island. Some of these facilities are located near schools.

Table GID.3: Chemical Storage Fixed Sites

Facility	Address	In Floodplain?
Agricultural Services Inc	2777 N Broadwell Ave	No
Alter Nebraska Corporation	1119 E 4th St	No
AmeriCold Logistics LLC	204 E Roberts St	No
AT&T Communications 0900	144 W Roberts St	No
Aurora Co-op Elevator Company	4155 E US Highway 30	Yes – 1%
Aurora Co-op Elevator Company	920 N Shady Bend Rd	No
C W Burdick Generating Station	800 Bischeld St	No
CenturyLink	105 N Wheeler Ave	No
Charter Communications	2533 W Old Lincoln Hwy	No
Charter Communications	205 N Webb Rd	No
Chief Industries Inc	1119 S Adams St	No
Christensen Concrete Products	235 W Roberts St	No
Christensen Concrete Products	3990 W US Highway 30	No
CNH America LLC - Miller Bldg	1011 Claude Rd	No
CNH Industrial America LLC	3445 W Stolley Park Rd	No
Coca-Cola Refreshments	1617 Holland Dr	No
Darling Ingredients Inc	5251 W Guenther Rd	Yes – 1%

Facility	Address	In Floodplain?
Diamond Truck Wash	6499 S US Highway 281	No
Gerhold Concrete Co	1431 S Webb Rd	No
GIUD Burdick Reservoir	S Stuhr Rd	No
GIUD Rogers Reservoir	3990 W Old Potash Hwy	No
Grand Island Potable Water	2700 Wellfield Rd	No
Grand Island Water Department	364 N Pine St	No
Lineage Logistics LLC	205 E Roberts St	No
McCain Foods USA Inc	2629 N Broadwell Ave	No
Optimas OE Solutions	3319 Island Cir	No
Overhead Door Co	2514 E US Highway 30	No
Platte Generating Station	1035 W Wildwood Dr	No
Platte Valley Energetics LLC	8318 W Old Potash Hwy	No
Sprint Grand Island POP	333 N Pine St	No
Standard Iron Inc	4160 Gold Core Rd	No
Swift Beef Company	555 S Stuhr Rd	No
The Home Depot Store 3208	911 Allen Dr	No
VA Nebraska - Western Iowa HCS	2201 N Broadwell Ave	No
Verizon Wireless MTSO	3650 W 13th St	No
Verizon Wireless Newfair	1203 S Stuhr Rd	Yes – 1%
Windstream Communications	3650 W 13th St	No

Source: Nebraska Department of Environmental Quality

**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.

Jefferson and Stolley Park Elementary Schools will be building new facilities to include storm shelters. These facilities are slated to be completed in 2019.

**Table GIP.4: List of Critical Facilities**

CF #	Name	Address	Red Cross Shelter (Y/N)	Generator (Y/N)	Storm Shelter Rooms (Y/N)	Located in 1% Floodplain (Y/N)
1	Barr Middle School	602 W. Stolley Park Rd	Y	N	Y	N
2	Career Pathways Institute	1215 Adams St	N	N	N	N
3	Dodge Elementary School	641 S. Oak St	Y	N	N	N
4	Early Learning Center	4360 W. Capital Ave	N	N	N	N
5	Engelman Elementary School	1812 Mansfield Rd	N	N	Y	N
6	Gates Elementary School	2700 W. Louise St	Y	Y	N	N
7	Grand Island Senior High School	2124 N. Lafayette Ave	Y	N	N	N
8	Howard Elementary School	502 W. 9th St	Y	N	N	N
9	Indra House	2131 N. Lafayette St	N	N	N	N
10	Jefferson Elementary School	1314 W. 7th St	Y	N	N/Y (2019)	N
11	Kneale Administration Buidling	123 S. Webb Rd	Y	Y	N	N
12	Knickrehm Elementary School	2013 N. Oak St	Y	N	N	N
13	Lincoln Elementary School	805 Beal St	Y	N	N	N
14	Newell Elementary School	2700 W. 13th st	Y	Y	N	N
15	Seedling Mile Elementary School	3208 E. Seedling Mile Rd	Y	Y	N	N
16	Shoemaker Elementary School	4160 W. Old Potash Hwy	Y	N	Y	N
17	Starr Elementary School	315 Wyandotte St	Y	Y	N	N
18	Stolley Park Elementary School	1700 W. Stolley Park Rd	Y	N	N/Y (2019)	N
19	Success Academy	1912 N. Lafayette Ave	N	N	N	N
20	Walnut Middle School	1600 N. Custer Ave	Y	Y	N	N
21	Wasmer Elementary School	318 S. Clark St	Y	N	N	N
22	West Lawn Elementary School	3022 College St	Y	N	N	N
23	Westridge Middle School	4111 W. 13th St	Y	N	N	N
24	New Starr Elementary (Under Construction)	Adams & Stolley Streets	Unknown	Y	Y	N



### ***SCHOOL DRILLS AND STAFF TRAINING***

The School District is required by law to conduct a number of drills throughout the year. Students and staff participate in monthly fire drills, tornado drills twice per year, lockdown drills at least twice per year, and lockout drill annually. The school's Crisis Team meets as needed following a crisis situation and reviews and updates the Emergency Response Manual. Each school building has a dedicated Emergency Response Team, and they meet twice per year. Principals for each school identify staff to receive First Aid and CPR training. Furthermore, staff are trained annually through safety videos.

Parents and students are made aware of the District's procedures through letters, handouts, and in the student handbook. The District can also quickly notify parents of a situation by utilizing an automated calling system. Texts and emails are also sent out, and social media is utilized as well.

### ***HISTORICAL OCCURRENCES***

For a table of historical hazard occurrences, please see the Participant Section for Hall County.

### ***SCHOOL 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 District by the local planning team, or based on the occurrence and risk of the hazard to the District are discussed in detail below.

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

Union Pacific Railroad, BNSF Railroad, and U.S. Highways 30 and 281 travel through the community and occasionally hazardous chemicals are transported along these routes. There have been no reports of spills impacting the schools, however, and the School District is prepared in the event of a hazardous chemical spill. Written protocols indicate that schools are to shelter-in-place in the event of a spill. Each classroom has a red backpack that contains a folder with instructions for various situations and includes supplies that may be needed such as duct tape to seal windows and doors in the event of a spill. Mitigation actions include improving warning systems and promoting first aid.

#### **Severe Thunderstorms**

The NCEI reported 33 thunderstorm wind events since 1996 in the Grand Island area. The School District reports that in 2014, a severe thunderstorm with large hail heavily damaged school roofs and skylights, which cost \$3 million to repair at nine schools. On May 30, 2011, high winds from a severe thunderstorm were measured at 80 mph, which damaged a storage shed and caused heavy tree damage at most of the school campuses. Lightning has also damaged their fire alarm, communication, and camera systems. The local planning team reports that high winds associated with severe thunderstorms will cause brief power outages about two to three times a year. The northern part of the District is more susceptible to power outages. The School District does trim trees on an annual basis, and weather radios are available in every building. Mitigation projects include using hail resistant roofing materials and installing backup power generators.

#### **Severe Winter Storms**

Severe winter storms with heavy snow, ice, and high winds are a regular part of the climate and have led to school closures in the past. In 2006, an ice storm over the Christmas break caused widespread tree and power line damage. Then in 2009, again over the Christmas break, a significant snow storm dumped a foot of snow of the area, and power was lost at some of the schools. Coupled with high winds, the storm produced white-out conditions and forced the closures of roads across the region. The School District has some staff and equipment available to clear snow, but much of the snow removal resources are contracted



out. Tree trimming and removal of trees is also contracted out. To address power outages, the District has included backup power generators as a mitigation project.

**Terrorism**

Grand Island Public Schools has had to deal with students making general threats on social media, which force schools into a lockdown. In May 2016, a potential shooting threat was made on a social media app, and parents notified police of the threat. The Grand Island Police Department posted extra officers at Barr Middle School. In cooperation with the developers of the app, a student was charged with disturbing the peace. Graffiti and vandalism hit its peak around 2005, however, the District has noticed a decrease in this crime once School Resource Officers were added to the schools. The District works closely with the City’s Police Department in communicating potential threats, and additional precautions have also included the use of security systems, annual lockdown drills, and staff trainings.

**Tornadoes**

Grand Island has a long history of tornadoes impacting the community. The most infamous tornado outbreak occurred on June 3, 1980, when seven tornadoes touched down in or near the community over the span of nearly three hours. In the end, five people were killed and 200 were injured. Starr Elementary School sustained major damage and was rebuilt. The tornadoes also damaged some mechanical equipment at some of the schools and lifted off a section of the High School’s roof. The District has identified several projects to help mitigate the effects of tornadoes, including: installing backup power generators; constructing safe rooms; improving warning systems; promoting first aid; and developing a school continuity plan.

**ADMINISTRATION/CAPABILITY ASSESSMENT**

The school district has a superintendent, an associate superintendent, and 18 principals. The School Board is made up of a nine-member panel. The district also has additional departments and staff that may be available to implement hazard mitigation initiatives. They include:

- Chief Academic Officer
- Chief Leadership and Development Officer
- Chief of Innovation and Engagement
- Chief Financial Officer
- Executive Director of Information Technology
- Safety & Crisis Management
- Director of Buildings and Grounds
- Director of Special Education
- Director of Federal Programs

**Table GIP.5: Overall Jurisdictional Capability**

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

**PLAN INTEGRATION**

Grand Island Public Schools maintain, update, and review annually their Emergency Response Manual. The manual is a plan that outlines the resources, roles, responsibilities, and procedures for response to hazards and emergencies with the goal to protect lives and property. The plan is broken down by seven sections and a sample of the sections include:

- Building Emergency Preparedness
- Emergency Preparedness for Special Needs Children
- Natural and Accidental Disasters
- Imminent Danger Preparedness: Bomb Threats/Shelter-In-Place/Evacuate
- External Threat/Lockout; Imminent Danger in the Building/Lockdown
- Hazardous Material Incidents

No other examples of plan integration were identified, and there are currently no plans to further integrate planning mechanisms.

**MITIGATION STRATEGY**

**Ongoing and New Mitigation Actions**

<b>Improve/Provide Adequate Backup and Emergency Generators</b>	
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	\$3,500+ depending on site requirements
Funding	General Funds
Status	New.
Timeline	2-5 years
Priority	Medium
Lead Agency	Buildings and Grounds

<b>Provide Adequate Public Safe Rooms and Post-Disaster Storm Shelters</b>	
Description	Identify and evaluate existing safe rooms and/or storm shelters; improve and/or construct safe rooms and/or storm shelters; design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$200-\$250/sf
Funding	General Funds or Bond
Status	New.
Timeline	2-5 years
Priority	Medium
Lead Agency	Buildings and Grounds

<b>Improve Warning Systems</b>	
Description	Evaluate current warning systems (defined as alert sirens, weather radios, and television, telephone, and radio warning systems, etc.); improve warning systems/develop new warning system; obtain/upgrade warning system equipment and methods; conduct evaluation of existing alert sirens for replacement or placement of new sirens; identify location of weather warning radios; improve weather radio system; obtain/upgrade weather radios
Hazard(s) Addressed	All Hazards
Estimated Cost	\$50 per unit
Funding	General Funds
Status	New.
Timeline	5+ years
Priority	Medium
Lead Agency	Buildings and Grounds

<b>School Continuity Plan</b>	
Description	Develop continuity plans for critical services to increase resilience after a hazardous event
Hazard(s) Addressed	All Hazards
Estimated Cost	\$5,000+ staff time
Funding	General Funds
Status	New.
Timeline	2-5 years
Priority	Medium
Lead Agency	Buildings and Grounds

<b>Hail Resistant Roofing</b>	
Description	Use roofing materials that are resistant to hail impacts for new buildings; retrofit existing buildings with hail resistant roofing; encourage the use of hail resistant roofing for any new constructions
Hazard(s) Addressed	Hail, Severe Thunderstorms, Severe Winter Storms
Estimated Cost	\$2.50 per square foot
Funding	General Funds
Status	New.
Timeline	2-5 years
Priority	Medium
Lead Agency	Buildings and Grounds

<b>Promote First Aid</b>	
Description	Promote first aid training for all residents or staff
Hazard(s) Addressed	All Hazards
Estimated Cost	\$100 per person
Funding	General Funds
Status	New.
Timeline	5+ years
Priority	High
Lead Agency	All Departments

PARTICIPANT SECTION  
FOR THE  
CITY OF WOOD RIVER

Central Platte NRD  
Multi-Jurisdictional Hazard Mitigation Plan

March 2017

**LOCAL PLANNING TEAM**

Table WDR.1 provides the list of participating members that comprised the City of Wood River local planning team. Members of the planning team attended Round 1 and Round 2 meetings, and provided important information including, but not limited to: confirming demographic information, critical facilities, future development trends, hazard history and impacts, identifying hazards of greatest concern, and the prioritization of mitigation actions that address the hazards at risk to the community.

**Table WDR.1: City of Wood River Local Planning Team**

Name	Title	Department / Organization
Greg Cramer	Mayor	City of Wood River
Vince Boudreau	City Council Member	City of Wood River

**LOCATION AND GEOGRAPHY**

The City of Wood River is located in the western portion of Hall County and covers an area of 0.79 square miles. The major waterway in the area is the Wood River.

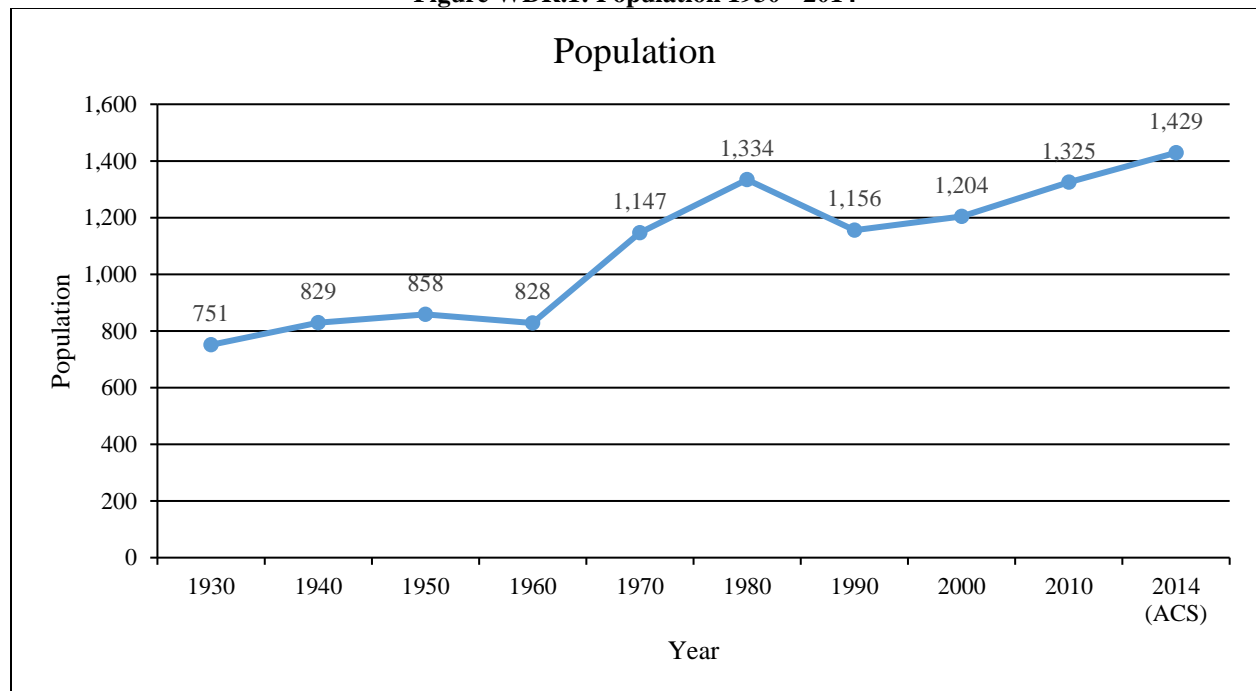
**TRANSPORTATION**

Wood River’s major transportation corridors include Highways 11 and 30. Highway 11 travels north through the center of the City and experiences an average of 1,415 vehicles per day with 130 of those categorized at heavy commercial vehicles. Highway 30 travels northeast to southwest through the City and has an average of 4,640 vehicles per day with 405 of those categorized as heavy commercial vehicles. Wood River has one Union Pacific rail line that travels south of the City from the southwest to northeast along Highway 30.

**DEMOGRAPHICS**

The following figure displays the historical population trend from 1930 to 2014. This figure indicates that the population of Wood River has been increasing since 1990.

**Figure WDR.1: Population 1930 - 2014**



Source: U.S. Census Bureau

Figure WDR.2: Map of the City of Wood River



The following table indicates the City has a slightly higher percentage of the population under the age of 5 but a lower percentage of the population between 5 and 64 years of age when compared to the County and the state. Additionally, the City has a higher percentage of its population over the age of 64 but a lower median age when compared to the County and the state.

**Table WDR.2: Population by Age**

Age	Wood River	Hall County	State of Nebraska
<5	8.2%	8.1%	7.2%
5-64	73.1%	78.5%	79.2%
>64	18.6%	13.4%	13.6%
Median	34.9	35.9	36.2

Source: U.S. Census Bureau, 2010, Table DP-1

The following table indicates that Wood River’s median household income, median home value, median rent value and per capita income are lower than the County’s.

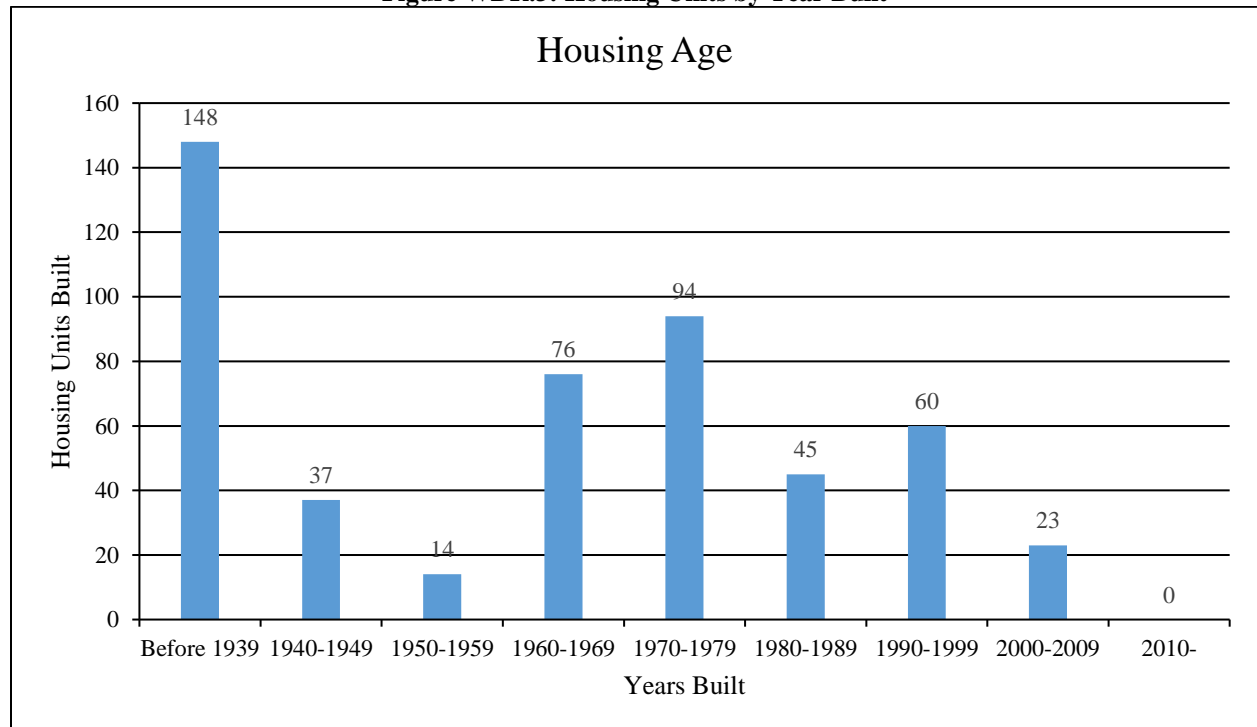
**Table WDR.3: Housing and Income**

	Wood River	Hall County	State of Nebraska
Median Household Income	\$54,338	\$61,677	\$52,400
Per Capita Income	\$20,673	\$24,075	\$27,339
Median Home Value	\$96,000	\$118,300	\$130,100
Median Rent	\$599	\$656	\$721

Source: U.S. Census Bureau, 2010-2014 American Community Surveys 5-year Estimates, Table DP03 and DP04

According to 2010-2014 ACS 5-year estimates, the community has 369 housing units with 93.2 percent of those units occupied. There are approximately 77 mobile homes in the community, and many of them are located in two of the community’s mobile home parks. The initial Flood Insurance Rate Map (FIRM) was developed in December 1978.

**Figure WDR.3: Housing Units by Year Built**



Source: U.S. Census Bureau, 2010-2014 American Community Surveys 5-year Estimates, Table DP04

**Table WDR.4: Housing Units**

Jurisdiction	Total Housing Units				Occupied Housing Units			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Wood River	463	93.2%	34	6.8%	362	78.2%	101	21.8%
Hall County	22,418	94.1%	1,418	5.9%	14,326	63.9%	8,092	36.1%

Source: Selected Housing Characteristics, 2010 - 2014 ACS 5-year Estimates

### **MAJOR EMPLOYERS**

A major employer for the community is public school system. Many of the community's residents commute to neighboring cities including Grand Island, Kearney, and Hastings.

### **FUTURE DEVELOPMENT TRENDS**

Over the next five years, a new housing development is anticipated on the north side of the City. Additionally, the City is working to extend water service lines southeast side of the community and there are plans to resurface Pine Street. A new community pool will also be built. Two new businesses are expected to open in the coming years, and they include Dollar General Store, opening in fall of 2016, and Subway Sandwiches.

### **PARCEL IMPROVEMENTS AND VALUATION**

GIS parcel data was requested from the County Assessor. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

**Table WDR.5: Parcel Improvements**

Number of Improvements	Total Improvement Value	Mean Value of Improvements Per Parcel	Number of Improvements in Floodplain	Value of Improvements in Floodplain
657	\$75,409,641	\$114,779	0	\$0

Source: Hall County Assessor

### **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 four chemical storage sites that house hazardous materials in Wood River. One of the chemical storage sites is located in the 0.2 percent floodplain (Figure WDR.5).

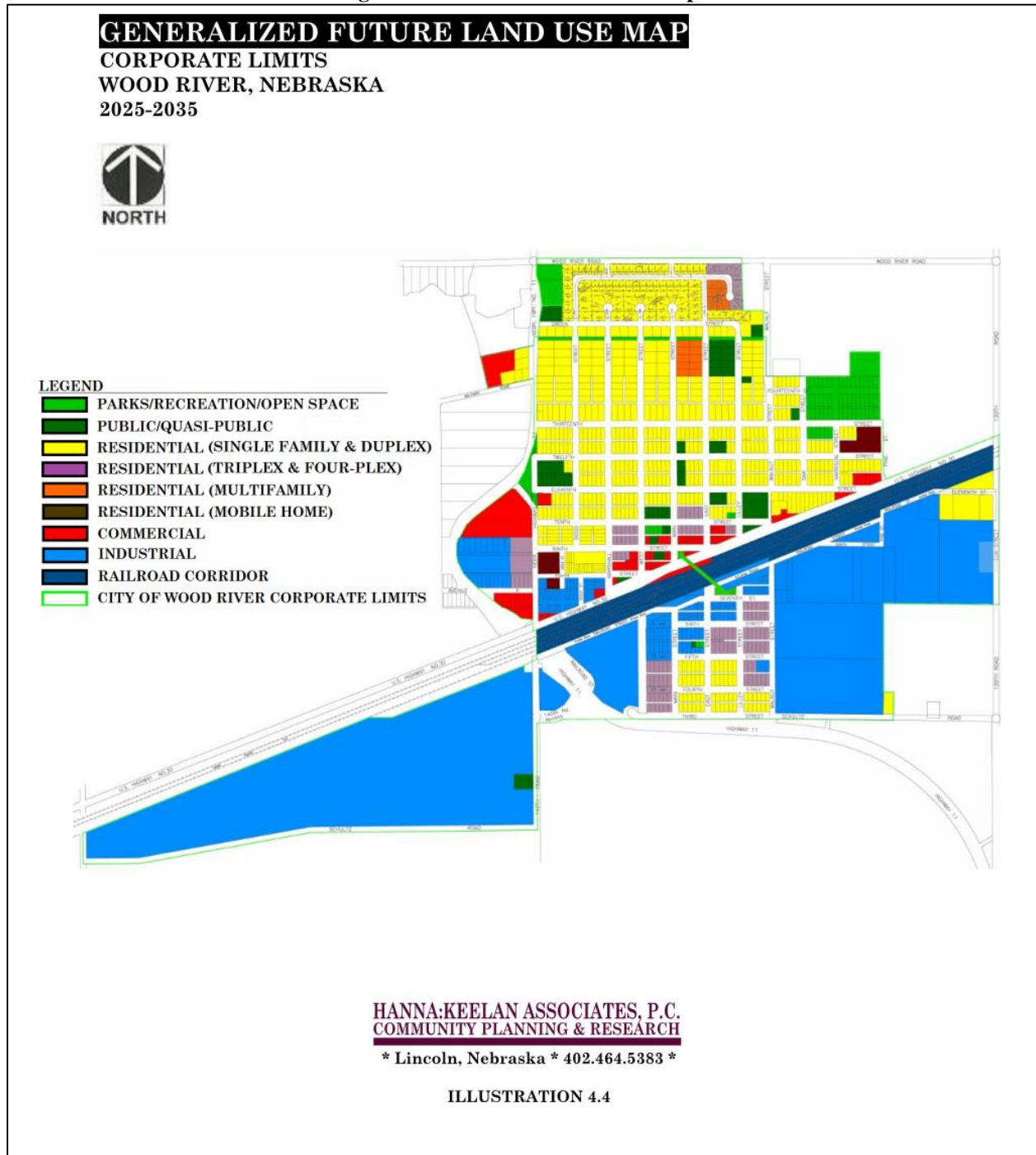
**Table WDR.6: Chemical Storage Fixed Sites**

Facility	Address	In Floodplain?
Aurora Co-op Elevator Company	6236 S Schauppsville Rd	Yes – 0.2%
Agricultural Services Inc	106 W Railroad St	No
Cooperative Producers Inc	15123 W Wood River Rd	No
Green Plains Wood River LLC	7874 S 140th Rd	No

Source: Nebraska Department of Environmental Quality



Figure WDR.4: Future Land Use Map



**HISTORIC SITES**

According to the National Register of Historic Places for Nebraska, Wood River has one historic site.

**Table WDR.7: National Historic Registry**

Site Name	Date Listed	In Floodplain?
Gloe Brothers Service Station	7/5/2000	No

Source: Nebraska State Historical Society, 2016

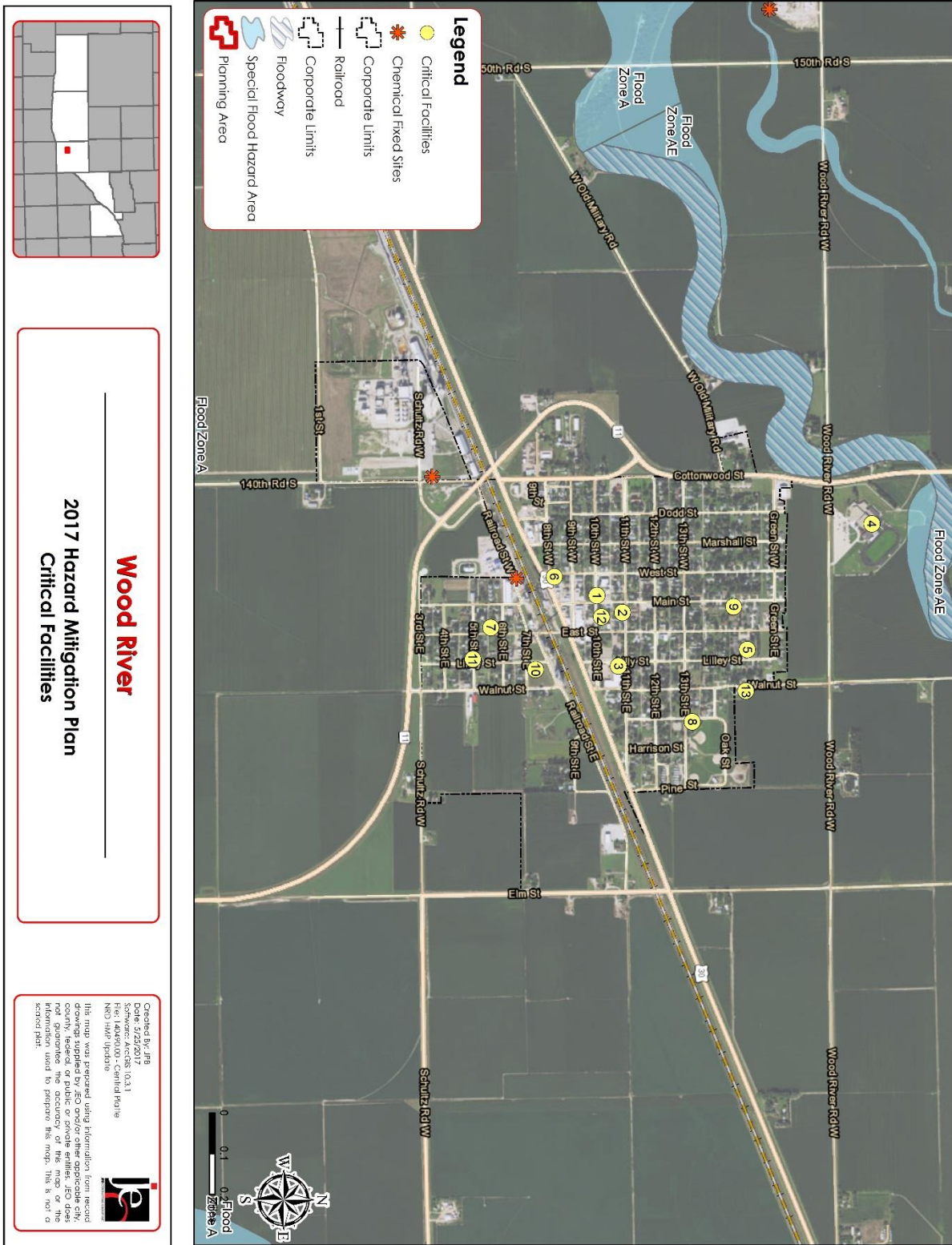
**CRITICAL FACILITIES**

Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public (i.e. Red Cross Shelter), 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 WDR.8: List of Critical Facilities in Wood River**

CF #	Name	Address	Red Cross Shelter (Y/N)	Generator (Y/N)	Located in 1% Floodplain (Y/N)
1	City Hall/Fire Hall	1002 Main St.	N	Y	N
2	Police Department	111 Wood River Ave	N	Y	N
3	Wood River Elementary School	1003 Lilly St.	Y	N	N
4	Wood River Rural High School	13800 W. Wood River Ave	Y	N	N
5	Good Samaritan Center	1401 East St	N	Y	N
6	Water Tower (old)	712 West St	N	N	N
7	Water Tower (new)	5 <sup>th</sup> & East Street	N	N	N
8	Well	13 <sup>th</sup> & Oak	N	N	N
9	Well	1400 East St	N	N	N
10	Well	Lilley St.	N	Y	N
11	Wood River Public Works So. Quancet	5 <sup>th</sup> & East St	N	Y	N
12	Wood River Blue 4H Bldg.	14 <sup>th</sup> & Pine St	N	Y	N
13	Wastewater Treatment Plant		N	Y	N

Figure WDR.5: Critical Facilities and Hazardous Materials Storage Facilities with Floodplain



**HISTORICAL OCCURRENCES**

For a table of historical hazard occurrences, please see the Participant Section for Hall County.

**LOCAL HAZARD PRIORITIZATION**

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

**Chemical Spills (Transportation)**

There are two chemical spills along transportation routes near Wood River recorded by PHMSA. The first was a hydrogen peroxide leak in a defective transport container in 1984. The second spill occurred in January of 2003, when blizzard conditions cause a tanker carrying liquid helium to crash. Neither of these was a significant release event. Ethanol, ammonia and other unknown chemicals are frequently transported by Hwy 30 and the railroad. These transportation corridors are within a half-mile of the Community Center, City Hall, Fire Hall, and elementary school. The community has an adequate warning system. Chemical spill mitigation projects involve participating in a hazardous chemical spill emergency exercise and educating the public on chemical spill hazards and response.

**Flooding**

The flood risk areas of concern for the City of Wood River are located north of Highway 30 and impacts almost all the northern portion of the City.

Wood River has two NFIP policies in-force for \$383,000. There are no repetitive flood loss properties in the City of Wood River. The following table is parcel improvement information as provided by the County Assessor. It indicates none of the parcel improvements in Wood River are located in the 1 percent floodplain.

**Table WDR.9: Structures in the 1% Annual Flood Risk Area**

Value of Improvements in Floodplain	Number of Improvements in Floodplain	Total Number of Improvements in Community	Percentage of Improvements in Floodplain
\$0	0	657	0%

Source: Hall County Assessor

The most significant flooding event in recent history in Wood River occurred in May of 2005. Over 11-inches of rain fell in four hours. Wood River flooded to 9-feet in town, filling the streets with water up to 5-feet deep. Almost every structure in Wood River sustained some damage, including the school and Community Center. Twelve homes sustained severe damage. The Fire Hall was one of the only structures to stay dry. During this event, there were widespread power outages in the area. Hall County was declared a Federal Disaster Area. An overpass was built after this event that has staved off much of the possible flooding since. Wood River has Mutual Aid Agreements with the Hall County Rural Fire Department, Grand Island, Carol, and Doniphan. Future flooding mitigation actions include educating the public on flood hazards and mitigation actions.

**Hail**

Wood River’s local planning team is concerned about property damage, phone service, power outages, injuries, and crop damage related to hail. The most severe hailstorm recorded by the NCEI occurred in June of 2006 when 1.75-inch hail damage property, trees, and crops throughout the area. Property damage from this event totaled \$200,000. Wood River has recently improved the severe weather notification systems in

their critical facilities to mitigate some of the risk associated with hail. They also plan to educate the public on the hazards and response to hailstorms.

### **Tornadoes and High Winds**

Concerns around tornadoes and high winds in Wood River are property damage, communication tower damage, power loss, injuries, and an interruption in natural gas distribution. A high wind event in May of 2012 caused \$350,000 in property damage from fallen trees and power poles. This storm tripped the main breakers at the substation, causing power to be lost until noon the next day. The Fire Hall also suffered some damage during this event. An EF0 tornado hit the south side of Wood River in May of 2005. This tornado caused damage to a house, trees, and overturned an empty rail car. City Hall, the Fire Hall, residential home, and wells all have backup generators. Critical municipal records are backed up on an external hard drive. The Fire Hall and City Hall have weather radios. Wood River plans to mitigate the hazards associated with tornadoes and high winds by providing adequate safe rooms to the community, educating the public on tornado and high wind hazards, and implementing a tree inventory and maintenance program.

### **GOVERNANCE**

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Wood River is governed by a Mayor and a five member City Council. Furthermore, Wood River has a number of offices or departments that may be involved in implementing hazard mitigation initiatives.

- Clerk/Treasurer
- Volunteer Fire Department
- Police Department
- Parks & Recreation
- Housing Authority
- Economic Development

### **CAPABILITY ASSESSMENT**

Thus far, the planning process has identified the major hazards for the community, and described and quantified the vulnerability of the community to these risks by acquiring updated information from FEMA, local jurisdictions, and other sources. The following step, referred to as a capability assessment, assesses what loss prevention or preparedness mechanisms are already in place. Combining the risk assessment with the local capability assessment results in a stronger mechanism for understanding a locality's "net vulnerability," and to what extent they are able to implement the identified goals, objectives, and actions.

A two-step approach was applied to conduct this assessment for each participant. First, an inventory of common mitigation activities was developed through the Capability Assessment Survey completed by the participants' representatives. Four major local capabilities were examined in this assessment, and they are planning & regulatory capability, administrative & technical capability, fiscal capability, and education & outreach capability.

The purpose of this effort was to identify policies and programs that were either in place, needed improvement, or could be undertaken, if deemed appropriate. Second, local existing policies, regulation, plans, and programs were reviewed and evaluated to determine their contributions to reducing hazard-related losses.

**Table WDR.10: Capability Assessment**

Survey Components/Subcomponents		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Emergency Operational Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
	Building Codes	Local Codes
	National Flood Insurance Program	Yes
	Community Rating System	No
	Other (if any)	
Administrative & Technical Capability	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	No
	Chief Building Official	Yes
	Civil Engineering	Yes
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	
Fiscal Capability	Capital Improvement Plan/1 & 6 Year plan	Yes
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
	Natural Disaster or Safety related school programs	Yes
	StormReady Certification	No
	Firewise Communities Certification	No

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

**Table WDR.11: Overall Jurisdictional Capability**

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

**PLAN INTEGRATION**

The following paragraphs provide a summary of the community plans that were analyzed using guidance from FEMA’s 2014 *Plan Integration Guide*.

The City of Wood River Comprehensive Plan, last updated in 2015, contains some goals and objectives consistent with hazard mitigation. The plan directs development away from the floodplain and from major transportation routes. It also encourages infill development, preservation of open space in hazard-prone areas, and allows for emergency access to all areas of town. With the plan having been updated recently, there is currently no plan to further integrate the HMP into the Comprehensive Plan.

The City’s Zoning Ordinance were also recently updated in 2015. The Ordinance discourages development in the floodplain, identifies floodplain areas as parks of open space, and requires at least more than one-foot of elevation above base flood elevation in the floodplain. It also prohibits development within the floodways, encourages maintaining open space within the floodplain, and accounts for current population trends.

Wood River has an annex to the Hall County Local Emergency Operations Plan, last updated in 2015. The plan addresses the hazards of greatest concern, identifies scenarios that would require evacuation and critical evacuation routes, locations to be used for mass sheltering, and provides a clear assignment of responsibility during an emergency.

**MITIGATION STRATEGY**

**Completed Mitigation Actions**

Ensure Adequate Severe Weather Notifications to Critical Facilities	
Description	For public critical facilities, the City should consider purchasing a weather radio to be used in each facility for the rapid dissemination of a severe weather warning; if the City has noisy manufacturing facilities which may not hear tornado sirens, the City could inform the owners of these facilities of the option that they could purchase a weather radio
Hazard(s) Addressed	All Hazards
Cost	\$30 per radio
Location	Good Samaritan, Fire Hall, Churches
Funding	Local funds
Status	Completed.



**Ongoing and New Mitigation Actions**

<b>Ensure Adequate Water Supply for Health and Safety</b>	
Description	Work with the Nebraska Department of Health and Human Services to secure revolving loan funding for supplementing Wood River's water supply with an additional source; determine a method to have citizens from Wood River voluntarily reduce demand for water during times of drought: this may involve instituting a moratorium on unnecessary water usage and implementing a fine/penalty system for those found in violation
Hazard(s) Addressed	Drought
Estimated Cost	Unknown
Funding	Taxes, Service Fees, State Hwy Enterprise Funds
Status	In progress.
Timeline	5+ years
Priority	Medium
Lead Agency	Utilities

<b>Provide Adequate Public Safe Rooms and Post-Disaster Storm Shelters</b>	
Description	Identify and evaluate existing safe rooms and/or storm shelters; improve and/or construct safe rooms and/or storm shelters; design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
Hazard(s) Addressed	Tornadoes, Severe Thunderstorms, High Winds
Estimated Cost	\$150/sf for retrofit, \$300/sf for new construction
Funding	Property tax fund and service fees
Status	Early planning stage.
Timeline	2-5 years
Priority	High
Lead Agency	Fire Department and City Council

<b>Reduce Tree Damage and Damage from Trees</b>	
Description	Conduct tree inventory; develop tree maintenance/trimming program; implement tree maintenance/trimming program; remove hazardous limbs and/or trees
Hazard(s) Addressed	Tornadoes, Severe Winter Storms, Severe Thunderstorms, High Winds, Grass/Wildfire
Estimated Cost	Unknown
Funding	Cost-share program with Homeowners
Status	In progress.
Timeline	5+ years
Priority	Medium
Lead Agency	Parks and Utilities

<b>Emergency Exercise: Hazardous Spill</b>	
Description	Utilize exercise to prepare for potential explosions or hazardous spills; ensure that nearby businesses and residents have appropriate plans in place
Hazard(s) Addressed	Chemical Transportation
Estimated Cost	\$5,000+
Funding	General Fund, EMPG
Status	Not yet started.
Timeline	1 year
Priority	High
Lead Agency	Village Board, Emergency Management



<b>Community Education and Awareness</b>	
Description	Obtain or develop hazard education materials; conduct multi-faceted public education; distribute fact sheets or maps at community events, public schools, other venues and to public and private communication systems; conduct scheduled siren/warning system tests; prepare educational materials listing safe rooms and shelters and evacuation plans; distribute educational materials listing safe rooms and shelters; purchase equipment such as overhead projectors and laptops to facilitate presentation of information
Hazard(s) Addressed	All Hazards
Estimated Cost	Staff Time
Funding	Staff Time
Status	In progress.
Timeline	Ongoing
Priority	High
Lead Agency	Emergency Management

**Removed Mitigation Actions**

<b>Maintain NFIP Participation</b>	
Description	Continue to regulate development in floodplain areas; additional floodplain mapping/remapping
Reason for Removal	City will continue to participate in program, however, this is no longer considered a hazard mitigation action.

RESOLUTION 2017-330

WHEREAS, the Federal Disaster Mitigation Act of 2000 was signed in to law on October 30, 2000, placing new emphasis on state and local mitigation planning for natural hazards and requiring communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, a Multi-Jurisdictional Hazard Mitigation Plan was prepared by the Central Platte Natural Resources District, with assistance from JEO Consulting Group, Inc. of Lincoln, NE, which includes City of Grand Island; and

WHEREAS, the purpose of the mitigation plan was to lessen the effects of disasters by increasing the disaster resistance of the Natural Resources District and participating jurisdictions located within the planning boundary by identifying the hazards that affect City of Grand Island and prioritize mitigation strategies to reduce potential loss of life and property damage from those hazards, and

WHEREAS, FEMA regulations require documentation that the plan has been formally adopted by the governing body of City of Grand Island in the form of a resolution and further requesting approval of the plan at the Federal Level.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, the governing body of City of Grand Island does herewith adopt the Central Platte Natural Resources District Multi-Jurisdictional 2017 Hazard Mitigation Plan Update in its entirety.

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Adopted by the City Council of the City of Grand Island, Nebraska, November 14, 2017.

\_\_\_\_\_  
Jeremy L. Jensen, Mayor

Attest:

\_\_\_\_\_  
RaNae Edwards, City Clerk

Approved as to Form	☐ _____
November 9, 2017	☐ City Attorney