Plan Supplement

Clark County Multi-Hazard Mitigation Plan 2026-2036









Draft – 10/16/26

WCWRPC
WEST CENTRAL WISCONSIN
REGIONAL PLANNING COMMISSION

CLARK COUNTY MULTI-HAZARD MITIGATION PLAN SUPPLEMENT

This *Mitigation Plan Supplement* is a supporting document containing additional data and analysis of the hazard threats facing the County, capabilities to mitigate these threats, and supplementary information regarding the *Mitigation Plan* update. For purposes of meeting FEMA mitigation planning requirements, the main Mitigation Plan document and this supplement, together, constitute Clark County's Multi-Hazard Mitigation Plan.

Note: References to Sections herein (e.g., Section III.C.) refer to chapters of the main document. References to chapters within this Supplement are identified as Supplement #s (e.g., Supplement 1.C.).

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SUPPLEMENT I.
COMMUNITY PROFILE

A. NATURAL FEATURES AND ENVIRONMENT

The ecological landscape of Clark County is comprised of Central Sand Plains, Forest Transition, and North Central Forest. The topography is generally gently rolling, becoming increasingly more rugged and hilly in the southwestern portion of the county where the most recent glacial activity had not eroded away the sandstone. Prime farm soils dominate the northeast and east central portions of the county, while forest, wetlands, and other undeveloped uses dominate the more poorly drained soils in the western and southern areas of the county. The DNR provides a full summary of the various ecological landscapes, including its topographic and climatic features, in a report titled "Ecological Landscapes of Wisconsin".

i. Watersheds

A watershed is an area of land that drains or "sheds" its water to a lake, river, stream, or wetland. Some watersheds encompass several hundred square miles and multiple counties, while others may be small, covering only a few square miles that drain into a lake. This is important to understand since the effects of natural and man-made activities in one area can have a direct impact on other areas. For example, run-off from heavy rainfall upstream in a watershed will eventually reach the downstream part of the watershed.

Surface waters in Clark County fall within one of three river basins – the Upper Wisconsin River Basin in the east, the Black River Basin in central Clark County, and the Lower Chippewa River Basin to the west. **Figure 1** shows the locations of the watersheds within Clark County at the ten-digit hydrologic unit code (HUC) level.

ii. Surface Waters, Floodplains, and Wetlands

Figure 2 delineates the County's surface waters, floodplains, and wetlands. While Clark County has a total surface water area of 1,865 acres in 19 lakes, none of these lakes are natural. In most cases, water levels on these man-made flowages are controlled by dams, which reduce the potential of flooding. The county also has numerous streams which flow into one of three major waterways—Eau Claire River to north and west, Yellow River to the east, and Black River which runs directly through the center of the county. The Black River and its tributaries are the predominant network of waterways within the County.

Wetland areas within the watersheds can affect the water levels of rivers and creeks flowing through Clark County. Wetlands are defined by the State Statute as "an area where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic (water-loving) vegetation and which has soils indicative of wet conditions." Wetlands may be seasonal or permanent and are commonly referred to as swamps, marshes, or bogs. Wetland areas can have an important natural mitigation role given their capacity to store and filter pollutants, replenish groundwater supplies, store floodwaters, and maintain stream flows.

One sensitive land feature that most residents are aware of is the floodplain, which is the flood-prone land adjacent to water bodies. Floodplains can be desirable development areas due to the proximity to lakes, rivers, and streams, but pose problems by possibly putting residents and property at risk. Altering the floodplain landscape by filling or building levees, structures, or other hardscape (e.g., parking lots) can exacerbate flooding conditions. The filling of wetlands in flood prone areas has also been proven to increase the likelihood of flooding. Development in floodplains can also affect the environmental quality of the waterway.

Figure 1. Clark County Watersheds

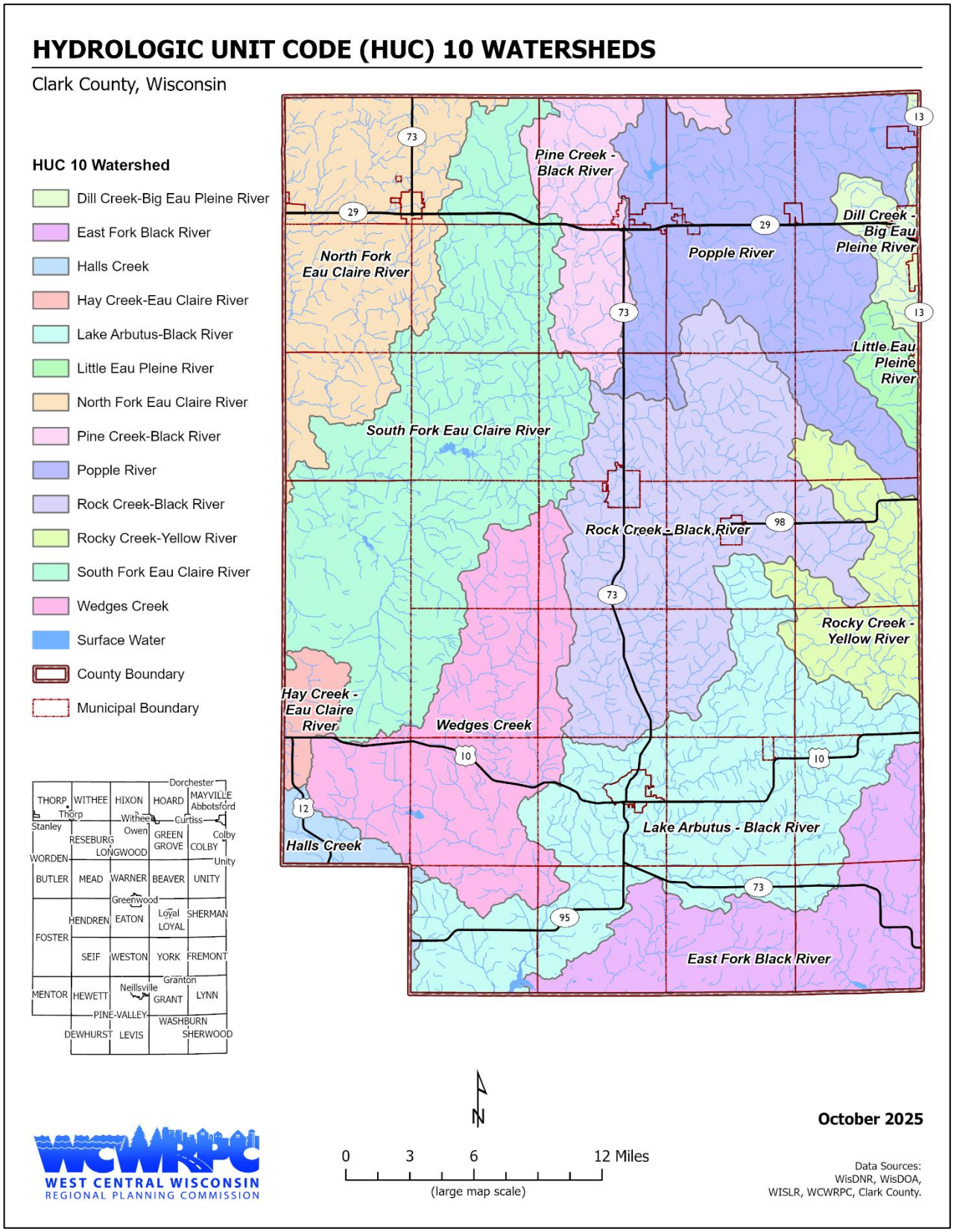
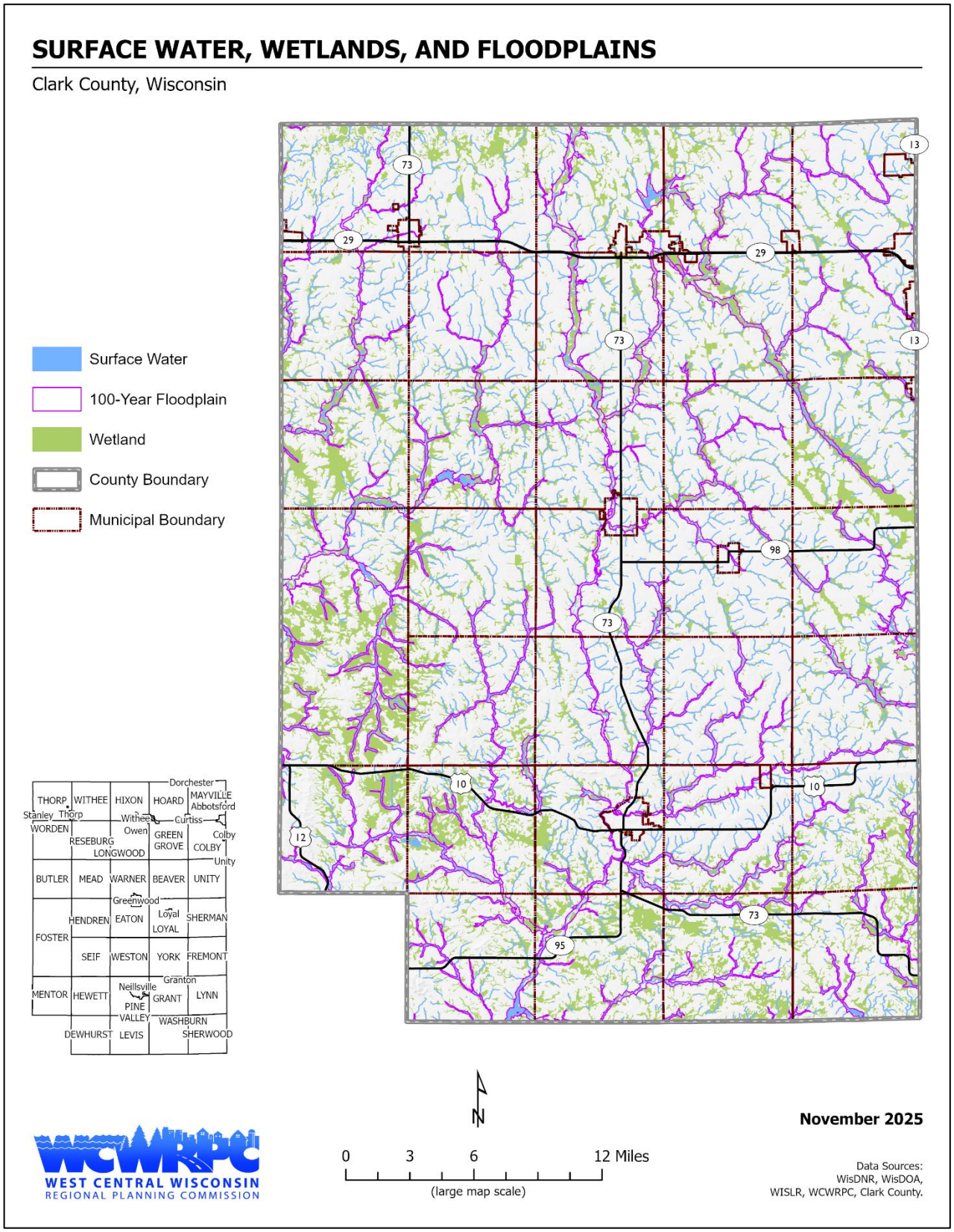


Figure 2. Clark County Floodplains & Wetlands



To better protect the residents throughout the state, and to minimize the loss of property, the State of Wisconsin, under Wisconsin Statute 87.30(1), requires counties, cities, and villages to adopt and enforce floodplain zoning. In addition, Wisconsin Administrative Code NR116, Floodplain Management Program, has been promulgated for the protection of property and public investments from the effects of flooding. The floodplain and flood-hazard areas within the County associated with these water bodies are discussed in greater detail within Section III.C. of the main plan document.

iii. General Climate

The National Oceanic and Atmospheric Administration (NOAA) classifies Clark County as having a mid-latitude continental climate. Warm, humid summers and cold, snowy winters are the main characteristics. At the NOAA weather station in Neillsville, the average monthly temperature since 1990 ranges from 14.6º Fahrenheit in January to 68.1º Fahrenheit in July. Annual precipitation averages 31 to 34 inches, with the wettest months of May through September averaging between 3.8 to 4.8 inches. Seasonal snowfall averages 40.6 inches, but can vary dramatically from year to year, with a 73-inch snow depth being the deepest ever recorded in 1901 followed by 44 inches in 1971. Clark County is susceptible to a range of natural hazards, including flooding. A description of these natural hazards, along with historical trends and current risks, is included in Section III.C. of the main plan document.

iv. General Land Cover

USGS provides annual land cover maps. **Figure 3 in the main plan document** shows the landscape of Clark County in 2023 was dominated by agriculture and deciduous forests. **Table 1** provides the acreage and percentage of each land cover type. Approximately 45% of the County was agricultural land cover and about 25% was forest or forested wetlands. Developed areas comprise roughly 6% of land area. This reflects the rural character within Clark County, where the highly developed areas are contrasted by forested and agricultural areas throughout the remainder of the County.

Table 1. Clark County Land Cover

Land Cover Type	Acres	Percent
Open Water	2,914.96	0.37%
Developed. Open Space	33,395.54	4.28%
Developed, Low Intensity	10,110.13	1.30%
Developed, Medium Intensity	2,893.24	0.37%
Developed, High Intensity	415.75	0.05%
Barren Land (Rock/Sand/Clay)	831.24	0.11%
Deciduous Forest	193,298.19	24.79%
Evergreen Forest	16,260.83	2.09%
Mixed Forest	20,235.97	2.59%
Shrub/Scrub	10,374.13	1.33%
Grassland/Herbaceous	4,877.54	0.63%
Pasture/Hay	37,413.33	4.80%
Cultivated Crops	317,170.81	40.67%
Woody Wetlands	109,209.90	14.00%
Emergent Herbaceous Wetlands	20,494.21	2.63%

B. Demographic and Economic Profile

i. Population and Housing

Table 2. Clark County Housing Unit & Population Change • 1980 to 2020

Year	Number of Housing Units	Numerical Change	Percent Change	Population	Numerical Change	Percent Change
1980	12,384	2,471	24.9	32,910	2,549	8.4
1990	12,904	520	4.2	31,647	-1,263	-3.8
2000	13,531	627	4.9	33,557	1,910	6.0
2010	15,076	1,545	11.4	34,690	1,133	3.4
2020	14,755	-321	-2.1	34,659	-31	-0.1

Source: 1980, 1990, 2000, 2010, & 2020 Census

Table 3. Clark County Demographics

Municipality	Census 2010	Census 2020	% Change 2010-2020	Proj. 2050	Per Capita Income	% Persons Below Poverty Line	Median Age	*Economic Disadvantaged Rural Cmty
Towns								
Beaver	885	826	-6.7	739	26,571	10.46	26.3	Yes
Butler	96	112	16.7	161	42,681	5.74	40	
Colby	874	922	5.5	1012	31,474	11.36	33.7	Yes
Dewhurst	323	349	8.0	449	76,538	3.72	62.6	
Eaton	712	718	0.8	719	30,518	8.21	41.7	Yes
Foster	95	118	24.2	162	70,886	6.77	63.7	
Fremont	1,265	1,312	3.7	1,599	25,487	14.07	33.3	Yes
Grant	916	858	-6.3	824	36,686	7.26	48.8	
Green Grove	756	748	-1.1	791	37,940	7.27	27	
Hendren	499	433	-13.2	380	36,254	4.49	50.2	
Hewett	293	295	0.7	290	39,522	9.57	41.9	
Hixon	808	902	11.6	1,020	35,578	16.13	28.6	
Hoard	841	787	-6.4	767	34,903	18.5	57.2	
Levis	492	437	-11.2	370	29,697	15.72	50.6	Yes
Longwood	858	877	2.2	863	28,389	8.23	23.5	Yes
Loyal	826	790	-4.4	779	27,766	4.38	21.4	Yes
Lynn	861	834	-3.1	972	25,629	21.73	30.7	Yes
Mayville	961	963	0.2	1,012	33,992	6.36	27.1	Yes
Mead	321	357	11.2	470	37,933	8.47	49.5	
Mentor	584	546	-6.5	551	23,354	13.6	47.6	Yes
Pine Valley	1,157	1,175	1.6	1,408	43,641	2.39	50.1	
Reseburg	776	793	2.2	977	35,760	9.51	23.9	
Seif	172	188	9.3	236	36,071	18.06	37.2	
Sherman	882	831	-5.8	790	30,349	4.3	31	Yes
Sherwood	220	230	4.5	266	34,259	9.78	53.3	Yes
Thorp	808	840	4.0	1,074	25,129	3.18	38.5	Yes
Unity	878	751	-14.5	573	30,980	8.42	44	Yes
Warner	669	635	-5.1	623	36,354	8.96	24.8	
Washburn	290	289	-0.3	315	30,935	12.64	50.4	Yes
Weston	699	686	-1.9	832	26,844	14.25	30.6	Yes
Withee	966	1,033	6.9	1,176	27,774	13.3	27.5	Yes
Worden	666	708	6.3	825	33,309	29.68	24.8	Yes
York	886	844	-4.7	751	25,538	22	27.4	Yes
Subtotal:	**22,335**	**22,187**	**-0.7**	**23,776**				
Villages								
Curtiss	216	292	35.2	451	21,905	10.82	22.5	Yes
Dorchester	871	846	-2.9	860	31,672	14.07	33.4	Yes
Granton	355	381	7.3	370	28,018	26.94	28	Yes
Unity	139	151	8.6	170	27,686	26.14	27.7	Yes
Withee	487	506	3.9	516	35,839	14.37	52.2	
Subtotal:	**2,068**	**2,176**	**5.2**	**2,367**				

Cities								
Abbotsford*	1,616	1,665	3.0	2,549	27,195	17.48	35.7	Yes
Colby*	1,354	1,275	-5.8	1,060	28,268	12.85	40.7	Yes
Greenwood	1,026	1,058	3.1	1,074	34,181	15.39	38.7	Yes
Loyal	1,261	1,203	-4.6	1,137	34,958	12.85	43.2	
Neillsville	2,463	2,384	-3.2	2,275	33,520	11.69	43.1	Yes
Owen	940	916	-2.6	922	29,365	10.91	40.9	Yes
Stanley*	6	0	-100.0	560				
Thorp	1,621	1,795	10.7	1,970	29,247	8.55	41.9	Yes
Subtotal:	**10,287**	**10,296**	**0.1**	**11,547**				
Clark County	**34,690**	**34,659**	**-0.1**	**37,690**	**31,744**	**12.03**	**37**	

Sources: 2010 & 2020 US Census, 2019-2023 American Community Surveys (5-year estimates). Projections by ESRI.
**Economic disadvantaged rural community is defined by population 3,000 or less and average per capita income no more than 80% of national per capita income ($34,631) based on US Census Data.*

Table 4. Clark County Housing Conditions

Municipality	1 Unit Detached	1 Unit Attached	2 Units	3 to 9	10 to 19	20 or more	Mobile Home	Seasonal, Occasional, Rec Use
Towns								
Beaver	278	-	-	1	-	-	16	6
Butler	53	-	-	-	-	-	5	5
Colby	250	3	2	-	-	-	5	2
Dewhurst	364	4	-	-	-	-	35	254
Eaton	206	-	-	-	-	-	6	0
Foster	156	2	-	-	-	-	17	94
Fremont	382	18	32	3	-	-	50	3
Grant	318	3	-	-	-	2	70	7
Green Grove	246	-	-	-	-	-	25	4
Hendren	243	1	-	-	-	-	13	37
Hewett	157	-	1	-	-	-	31	30
Hixon	267	-	-	-	-	-	7	7
Hoard	210	-	-	-	-	-	34	7
Levis	236	2	-	4	-	-	71	49
Longwood	270	-	-	12	-	-	8	0
Loyal	162	7	2	-	-	-	2	0
Lynn	300	15	2	-	-	-	18	7
Mayville	395	5	2	-	-	-	16	1
Mead	285	2	-	-	-	-	29	144
Mentor	308	4	3	-	-	-	47	76
Pine Valley	568	7	-	-	-	-	43	58
Reseburg	233	5	-	-	-	-	2	0
Seif	133	-	-	-	-	-	2	43
Sherman	305	8	7	-	-	-	16	13
Sherwood	107	6	-	-	-	-	31	49
Thorp	254	5	-	-	65	-	23	5
Unity	235	-	-	-	-	-	27	0
Warner	233	-	-	-	-	-	13	0
Washburn	141	-	-	-	-	-	45	61
Weston	257	3	-	-	18	-	36	28
Withee	285	2	2	-	-	-	3	0
Worden	242	-	-	-	-	-	4	23
York	284	2	-	1	-	-	19	0
Subtotal:	**8,363**	**104**	**53**	**21**	**83**	**2**	**769**	**1,013**
Villages								
Curtiss	74	3	2	15	16	-	19	0
Dorchester	215	13	28	75	1	-	15	7
Granton	147	2	6	18	-	-	5	5
Unity	57	-	5	-	-	-	14	0
Withee	201	48	9	-	25	-	27	10
Subtotal:	**694**	**66**	**50**	**108**	**42**	**0**	**80**	**22**
Cities								
Abbotsford	410	-	42	33	91	22	12	0
Colby	345	-	40	12	68	25	-	0
Greenwood	402	4	3	52	31	16	48	0
Loyal	496	-	30	46	38	-	32	14
Neillsville	827	-	32	54	63	131	6	6
Owen	284	-	7	59	6	1	24	0
Stanley	-	-	-	-	-	-	-	0
Thorp	546	25	35	23	24	42	20	0
Subtotal:	**3,310**	**29**	**189**	**279**	**321**	**237**	**142**	**20**
Clark County	**12,367**	**199**	**292**	**408**	**446**	**239**	**991**	**1,055**

Sources: 2019-2023 American Community Survey (5-year estimates).

Table 5. Clark County Assisted Living and Nursing Home Facilities

Municipality	Assisted Living Facilities						Licensed Nursing Homes	
	Adult Family Home Care		Community-Based Residential		Residential Care Apartment Complex			
	Facilities	Capacity	Facilities	Capacity	Facilities	Capacity	Facilities	Capacity
TOWNS								
Beaver	-	-	-	-	-	-	-	-
Butler	-	-		-	-	-	-	-
Colby	-	-	-	-	-	-	-	-
Dewhurst	-	-	-	-	-	-	-	-
Eaton	-	-	-	-	-	-	-	-
Foster	-	-	-	-	-	-	-	-
Fremont	-	-	-	-		-	-	-
Grant	-	-	-	-	-	-	-	-
Green Grove	-	-	-	-	-	-	-	-
Hendren	-	-	-	-	-	-	-	-
Hewett	-	-	-	-	-	-	-	-
Hixon	-	-	-	-	-	-	-	-
Hoard	-	-	1	8	-	-	1	172
Levis	-	-	-	-	-	-	-	-
Longwood	-	-	-	-	-	-	-	-
Loyal	-	-	-	-	-	-	-	-
Lynn	-	-	-	-	-	-	-	-
Mayville	-	-	-	-	-	-	-	-
Mead	1	4	-	-	-	-	-	-
Mentor	-	-	-	-	-	-	-	-
Pine Valley	-	-	-	-	-	-	-	-
Reseburg	-	-	-	-	-	-	-	-
Seif	-	-	-	-	-	-	-	-
Sherman	-	-	-	-	-	-	-	-
Sherwood	-	-	-	-	-	-	-	-
Thorp	1	4	-	-	-	-	-	-
Unity	-	-	-	-	-	-	-	-
Warner	-	-	-	-	-	-	-	-
Washburn	-	-	-	-	-	-	-	-
Weston	-	-	-	-	-	-	-	-
Withee	-	-	-	-	-	-	-	-
Worden	-	-	-	-	-	-	-	-
York	-	-	-	-	-	-	-	-
Subtotal:	**2**	**8**	**1**	**8**	**0**	**0**	**1**	**172**
VILLAGES								
Curtiss	-	-	-	-	-	-	-	-
Dorchester	-	-	1	14	-	-	-	-
Granton	-	-	-	-	-	-	-	-
Unity	-	-	-	-	-	-	-	-
Withee	-	-	-	-	-	-	-	-
Subtotal:	**0**	**0**	**1**	**14**	**0**	**0**	**0**	**0**
CITIES								
Abbotsford	-	-	1	16	-	-	-	-
Colby	1	4			1	24	1	70

Greenwood	3	12	1	8	-	-	-	-
Loyal	-	-	-	-	-	-	-	-
Neillsville	1	4	3	57	1	24	-	-
Owen	-	-	-	-	-	-	-	-
Stanley	-	-	-	-	-	-	-	-
Thorp	7	28	1	15	1	16	1	58
Subtotal:	**12**	**48**	**6**	**96**	**3**	**64**	**2**	**128**
Clark County	**14**	**56**	**8**	**118**	**3**	**64**	**3**	**300**

Source: Assisted Living and Licensed Nursing Home data is from directories provided by the Wisconsin Department of Health Services.

Figure 3. Clark County Population Change by Census Tract

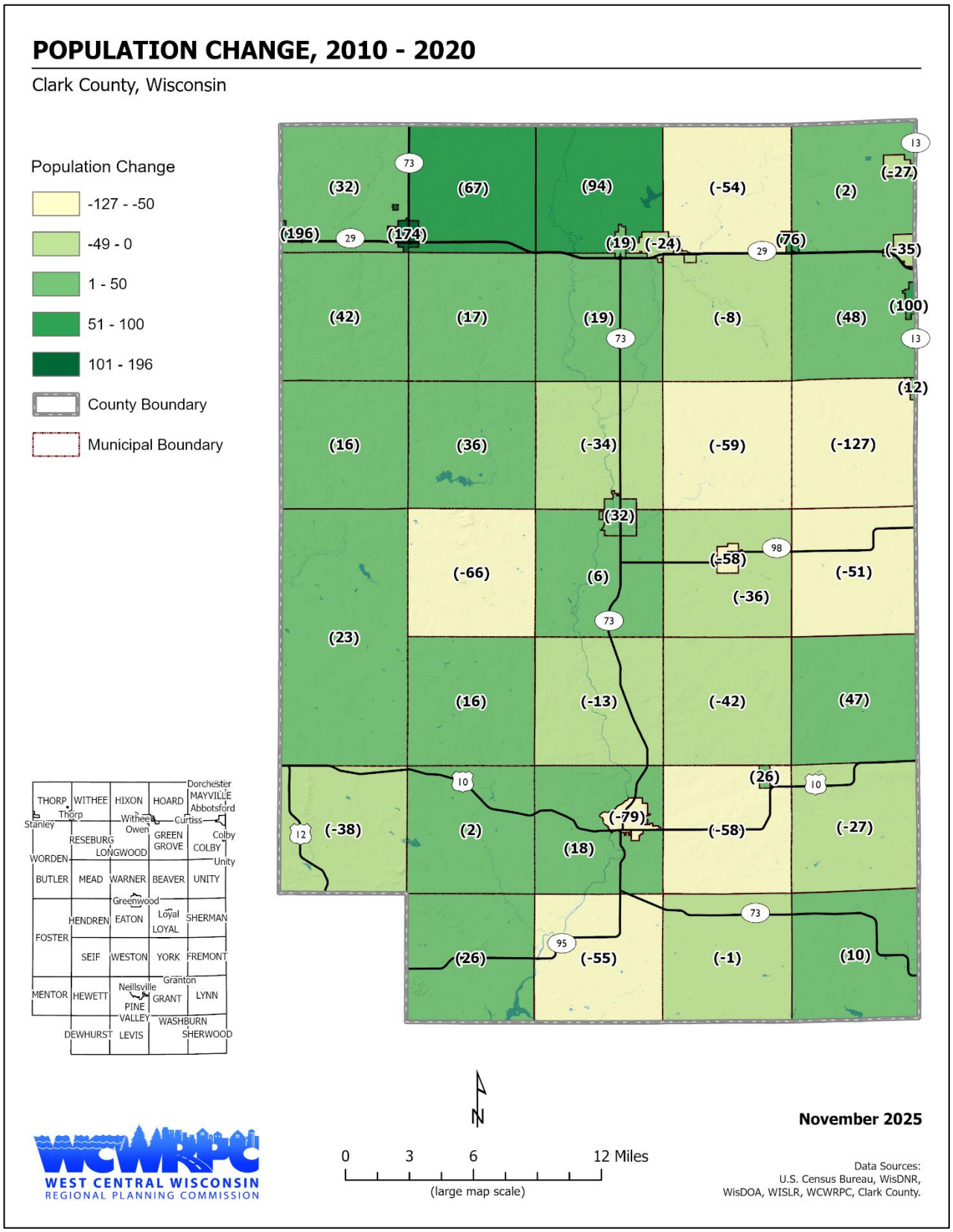
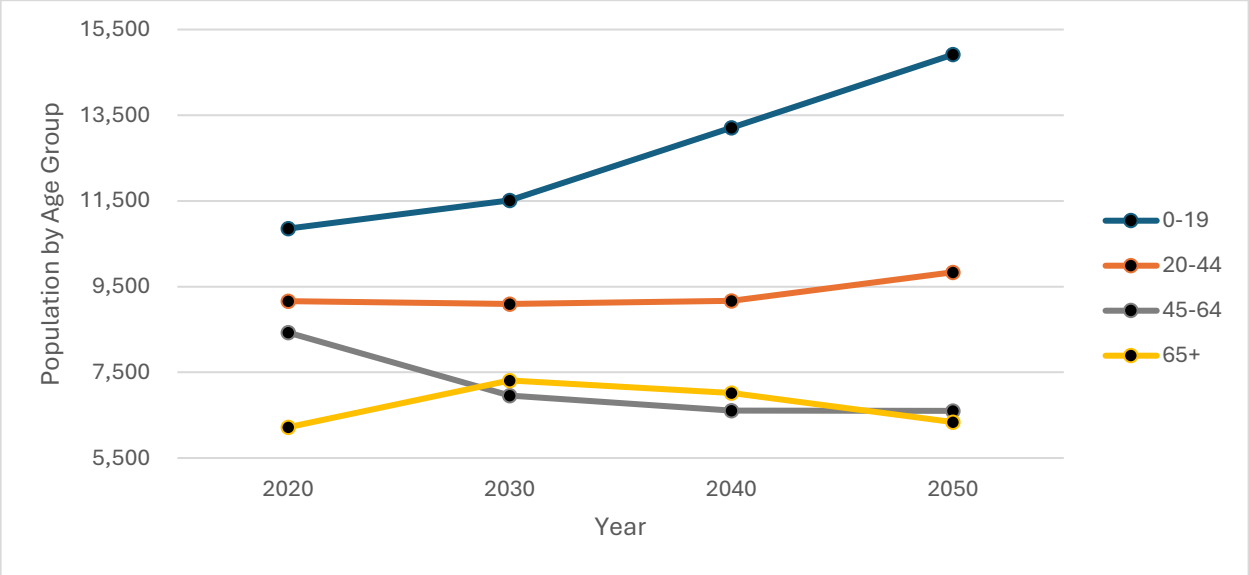


Figure 4. Clark County Age Group Projections • 2020 to 2050



Source: Wisconsin Department of Administration, Population Projections (2024)

ii. Economic Overview

The economy of a county is an important determining factor driving land use and development as well as hazard vulnerabilities and community resiliency.

- The infographic on the following page provides an overview of Clark County's economy. The County has low unemployment and strong trade and manufacturing sectors.
- Over half of the County's residents (56%) do not have a college education.
- Employment in the County is predominantly white-collar jobs. While the median net worth exceeds the national average ($204,032), median household income of County residents is lower ($74,365).
- **Table 6** summarizes Clark County's employment by primary industry sector. In 2024, the County had over 1,900 payrolled business locations and almost 26,000 jobs.
- Manufacturing is the County's largest employment sector with 3,635 jobs (31.9% of all jobs). Government is the second highest employment sector (17.4%).
- Clark County added 827 jobs between 2014 and 2024. The composition of jobs has changed dramatically, with 10 industries increasing employment and 8 decreasing (with 3 having insufficient data). If the Manufacturing sector's growth is removed, the County lost 46 jobs over the 10-year period.

Economic Profile

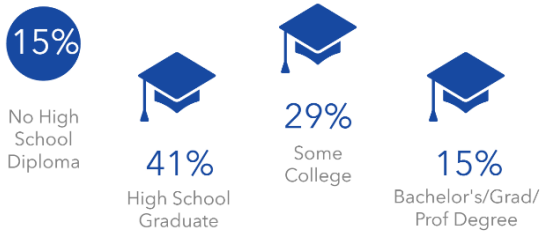
Clark County, WI

Geography: County

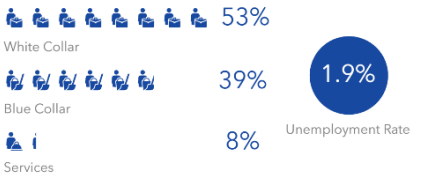
SALES (2023)



EDUCATION

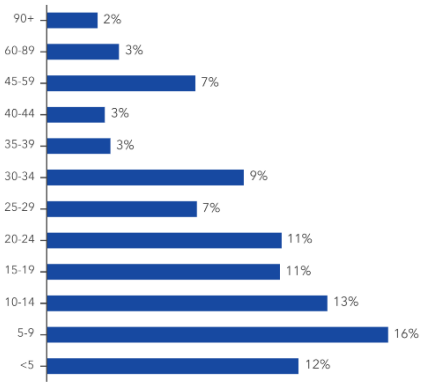


EMPLOYMENT



Economic Overview

COMMUTE TIMES (minutes)



INTERNET ACCESS (2023)



INCOME



Source: This infographic contains data provided by Esri (2025, 2030), Esri-Data Axle (2025), ACS (2019-2023), Esri-MRI-Simmons (2025).

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Table 6. Clark County Establishments & Employment By Industry Sector

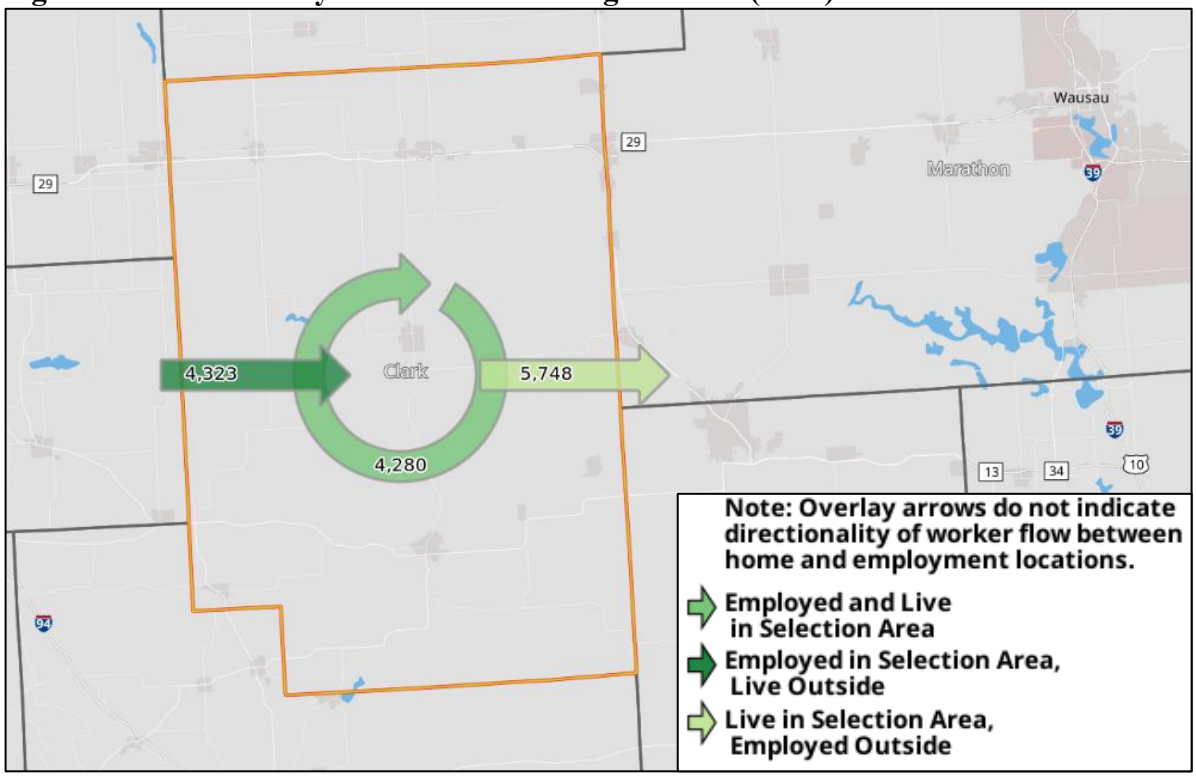
Industry Sector (2-digit NAICS)	2023 Payrolled Business Locations	2014 Jobs	2024 Jobs	2014 - 2024 % Change	Competitive Effect
Manufacturing	69	2,776	3,635	31%	728
Government	96	1,948	1,974	1%	(101)
Retail Trade	89	1,150	930	(19%)	(230)
Health Care and Social Assistance	181	1,092	865	(21%)	(490)
Transportation and Warehousing	57	742	696	(6%)	(413)
Accommodation and Food Services	63	550	656	19%	96
Wholesale Trade	62	466	618	33%	129
Construction	116	466	688	48%	68
Agriculture, Forestry, Fishing and Hunting	65	460	461	0%	(56)
Finance and Insurance	19	198	192	(3%)	(18)
Administrative and Support and Waste Management and Remediation Services	54	197	214	9%	(3)
Professional, Scientific, and Technical Services	24	194	140	(28%)	(77)
Other Services (except Public Administration)	30	99	109	10%	(19)
Arts, Entertainment, and Recreation	10	73	66	(10%)	(12)
Real Estate and Rental and Leasing	7	63	64	2%	(14)
Utilities	4	34	17	(49%)	(24)
Information	3	25	32	25%	5
Management of Companies and Enterprises	0	12	0	(100%)	(8)
Mining, Quarrying, and Oil and Gas Extraction	6	<10	<10	Insf. Data	5
Educational Services	3	<10	10	Insf. Data	9
Unclassified Industry	0	<10	0	Insf. Data	(1)
Totals	957	10,552	11,379	8%	(428)

Source: Lightcast, largely based on Bureau of Labor Statistics data

Generally, the data above represents payrolled businesses paying Federal unemployment insurance. Smaller businesses and sole proprietor enterprises, including many smaller farms, are underestimated in such data.

As shown in **Figure 5**, Cllark County's workforce is very mobile, often with significant commuting distances that can be impacted by severe weather or the disruption of community lifelines. According to the U.S. Census Bureau, 4,280 County residents had their primary job within Clark County in 2022, while 5,748 residents commuted outside the County. An additional 4,323 workers lived outside Clark County but commuted in for their primary job.

Figure 5. Clark County Worker Commuting Patterns (2022)



Source: U.S. Census Bureau. OnTheMap.

The United Way has developed a financial hardship measure that identifies the number of households that are not considered to be in poverty by federal standards, but still struggle financially to secure basic needs. This measure is called ALICE – or Asset Limited, Income Constrained, Employed – threshold. The threshold is determined by the cost of basic living expenses and is calculated for each county. The United Way groups households within a given county into three categories: poverty households, ALICE households (which are above the poverty level, but below the ALICE threshold), and above ALICE households. Between 2010 and 2023, Clark County has seen the percentage of households under the federal poverty level decline, from 12.4% to 10.7% (-1.7%). During this same period, the ALICE households increased, from 26.9% to 29.3% (+2.4%). The overall number of households at or below the ALICE threshold increased from 39.3% to 40%. Therefore, while some households are improving their financial situations (moving up from below the poverty level to within the ALICE range), others are beginning to see challenges (moving from above the ALICE range down into it). All households at or below the ALICE threshold present a vulnerability within the County, as they have less capacity to prepare for and recover from hazardous events.

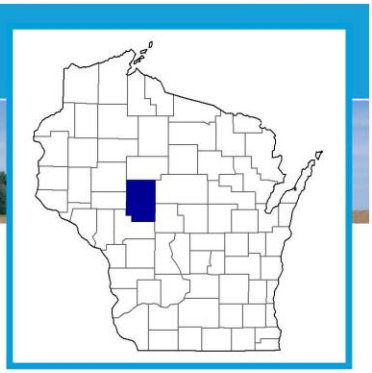
iii. Agricultural Overview

The hazard threats discussed later in this plan can impact parts or all of Clark County's agricultural base and economy. In 2022, Clark County had 1,785 farms and over 409,500 acres used for farm-based activities. Both the overall number of farms and total farmland acreage have declined since the last census in 2017.

The following two pages are the Clark County summary from the 2022 U.S. Census of Agriculture, which provides an overview of agriculture in the County. The County is the fifth largest agricultural producer in the state by total sales, and is first in livestock, poultry, and related.

2022 CENSUS OF AGRICULTURE *County Profile*





Clark County
Wisconsin

Total and Per Farm Overview, 2022 and change since 2017

	2022	% change since 2017
Number of farms	1,785	-15
Land in farms (acres)	409,582	-9
Average size of farm (acres)	229	+7
Total	($)	
Market value of products sold	568,151,000	+41
Government payments	1,985,000	+39
Farm-related income	10,926,000	-17
Total farm production expenses	394,033,000	+24
Net cash farm income	187,029,000	+86
Per farm average	($)	
Market value of products sold	318,292	+65
Government payments [a]	7,942	+224
Farm-related income [a]	9,924	+8
Total farm production expenses	220,747	+45
Net cash farm income	104,778	+118

3 Percent of state agriculture sales

Share of Sales by Type (%)

Crops	22
Livestock, poultry, and products	78

Land in Farms by Use (acres)

Cropland	300,614
Pastureland	21,131
Woodland	61,212
Other	26,625

Acres irrigated: 613

(Z)% of land in farms

Land Use Practices (% of farms)

No till	16
Reduced till	27
Intensive till	44
Cover crop	19

Farms by Value of Sales

	Number	Percent of Total [b]
Less than $2,500	311	17
$2,500 to $4,999	131	7
$5,000 to $9,999	109	6
$10,000 to $24,999	149	8
$25,000 to $49,999	153	9
$50,000 to $99,999	162	9
$100,000 or more	770	43

Farms by Size

	Number	Percent of Total [b]
1 to 9 acres	120	7
10 to 49 acres	318	18
50 to 179 acres	652	37
180 to 499 acres	530	30
500 to 999 acres	107	6
1,000+ acres	58	3

USDA United States Department of Agriculture
National Agricultural Statistics Service
www.nass.usda.gov/AgCensus

Clark County
Wisconsin, 2022
Page 2

2022 CENSUS OF AGRICULTURE *County Profile*

Market Value of Agricultural Products Sold

	Sales ($1,000)	Rank in State [c]	Counties Producing Item	Rank in U.S. [c]	Counties Producing Item
Total	**568,151**	**5**	**72**	**156**	**3,078**
Crops	**122,353**	**21**	**72**	**695**	**3,074**
Grains, oilseeds, dry beans, dry peas	98,456	19	72	633	2,917
Tobacco	-	-	5	-	267
Cotton and cottonseed	-	-	-	-	647
Vegetables, melons, potatoes, sweet potatoes	906	47	72	886	2,831
Fruits, tree nuts, berries	1,595	23	71	463	2,711
Nursery, greenhouse, floriculture, sod	2,863	22	71	621	2,660
Cultivated Christmas trees, short rotation woody crops	251	16	67	184	1,274
Other crops and hay	18,282	1	71	187	3,035
Livestock, poultry, and products	**445,798**	**1**	**72**	**97**	**3,076**
Poultry and eggs	9,133	14	71	617	3,027
Cattle and calves	59,798	8	71	249	3,047
Milk from cows	374,736	1	66	20	1,770
Hogs and pigs	552	20	68	619	2,814
Sheep, goats, wool, mohair, milk	817	17	68	236	2,967
Horses, ponies, mules, burros, donkeys	568	9	65	505	2,907
Aquaculture	-	-	53	-	1,190
Other animals and animal products	193	30	71	725	2,909

Producers [d]	**3,309**
Sex	
Male	2,047
Female	1,262
Age	
<35	589
35 – 64	1,898
65 and older	822
Race	
American Indian/Alaska Native	3
Asian	13
Black or African American	2
Native Hawaiian/Pacific Islander	-
White	3,288
More than one race	3
Other characteristics	
Hispanic, Latino, Spanish origin	18
With military service	134
New and beginning farmers	829

Percent of farms that:

Have internet access	**56**
Farm organically	**3**
Sell directly to consumers	**5**
Hire farm labor	**26**
Are family farms	**97**

Top Crops in Acres [e]

Forage (hay/haylage), all	93,953
Corn for grain	72,540
Soybeans for beans	58,007
Corn for silage/greenchop	40,281
Wheat for grain, all	4,044

Livestock Inventory (Dec 31, 2022)

Broilers and other meat-type chickens	27,484
Cattle and calves	148,739
Goats	1,904
Hogs and pigs	1,717
Horses and ponies	3,044
Layers	193,933
Pullets	1,514
Sheep and lambs	1,582
Turkeys	222

[a] Average per farm receiving. [b] May not add to 100% due to rounding. [c] Among counties whose rank can be displayed. [d] Data collected for a maximum of four producers per farm. [e] Crop commodity names may be shortened; see full names at www.nass.usda.gov/go/cropnames.pdf. [f] Position below the line does not indicate rank. (D) Withheld to avoid disclosing data for individual operations. (NA) Not available. (Z) Less than half of the unit shown. (-) Represents zero.

USDA is an equal opportunity provider, employer, and lender.

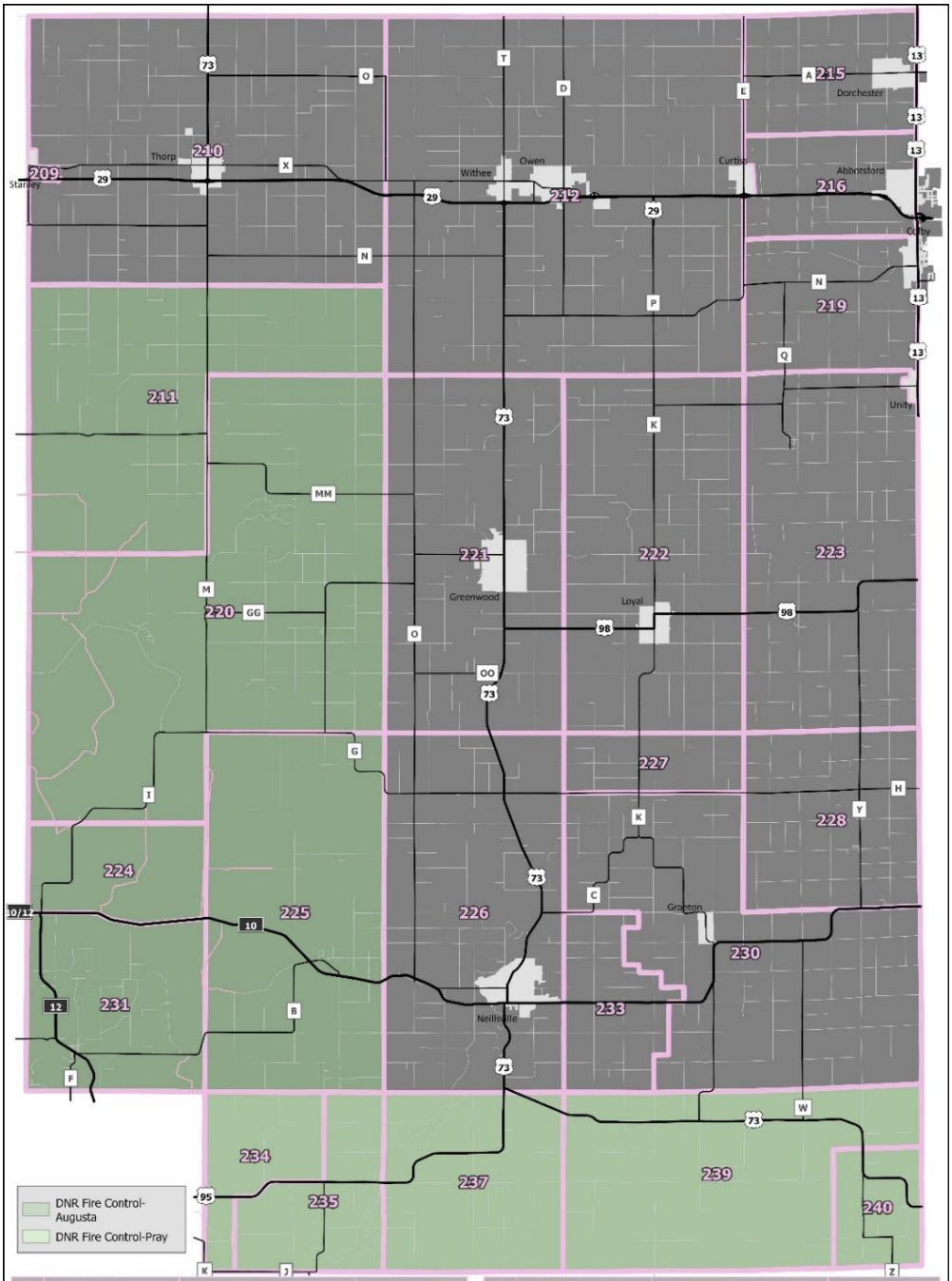
Agriculture is an essential part of the County's economy, and the indirect impact of agriculture in Clark County is significant. According to UW-Extension's *Agriculture Impact Report for Clark County* (2019), the County is the top producer of dairy products in the state, with $266 million worth of milk. Additionally, $57.5 million worth of grains and $57.3 million worth of cattle and calves are produced annually. In addition to direct outputs, farming in the County has several indirect and induced impacts:

- Agricultural helps support 7,083 jobs.
- The overall economic impact of agricultural production and processing in the County exceeds $2.5 billion.
- Farms pay $41.2 million in sales, property, and income taxes annually. This figure does not include all property taxes paid to local schools.

It is very unlikely that any single hazard would endanger all livestock or crops, though large proportions could be at-risk from a prolonged, severe drought or the introduction of a new a pest or disease (e.g., Bovine Spongiform Encephalopathy, or "mad cow disease"). Large-scale impacts to crops or livestock from a hazard can also have devastating impacts on the local economy, related industries (e.g., food processing), and local service providers. The state of the agricultural economy is tenuous for the local farmer, and a hazard event may result in farmers making fewer purchases or getting out of the business altogether. In short, an agricultural and farming sector that is less vulnerable to the impacts of disaster events will greatly contribute to Clark County's resiliency overall.

C. Fire & First Responder Service Areas

Figure 6. Clark County Emergency Services Network



ESN	AMBULANCE	FIRE	FIRST_RESP
209	Boyd Amb	Stanley Fire Dept.	Stanley First Resp
210	Thorp Amb	Thorp Fire Dept.	
211	Thorp Amb	Thorp Fire Dept.	
212	Owen-Withee Amb	Owen-Withee-Curtiss Fire Dept.	
215	Central-Dorchester Amb	Central Fire District	
216	Central-Abbotsford Amb	Central Fire District	
219	Central-Colby Amb	Central Fire District	
220	Greenwood Amb	Greenwood Fire Dept.	
221	Greenwood Amb	Greenwood Fire Dept.	
222	Loyal Amb	Loyal Fire Dept.	
223	Spencer Amb	Spencer Fire Dept.	
224	Osseo Amb	Fairchild Fire	Fairchild First Resp

ESN	AMBULANCE	FIRE	FIRST_RESP
225	Neillsville Amb	Neillsville Fire Dept.	
226	Neillsville Amb	Neillsville Fire Dept.	
227	Loyal Amb	Granton Fire Dept.	Granton First Resp
228	Marshfield Amb	Chili Fire Dept.	Chili First Resp
230	Neillsville Amb	Granton Fire Dept.	Granton First Resp
231	Black River Falls Amb	County Line Fire	County Line Rescue
233	Neillsville Amb	Neillsville Fire Dept.	Granton First Resp
234	Black River Falls Amb	Hatfield/County Line Fire	County Line Rescue
235	Black River Falls Amb	Hatfield/County Line Fire	Hatfield First Resp
237	Neillsville Amb	Neillsville Fire Dept.	
239	Neillsville Amb	Granton Fire Dept.	Granton First Resp
240	Pittsville Amb	Pittsville Fire Dept.	Granton First Resp

D. TRANSPORTATION SYSTEMS

Transportation is one of the community lifelines, and roads and rail lines are frequently mentioned in various sections of this plan due to related vulnerabilities (e.g., winter storms, HazMat spills). Providing an uninterrupted transportation network is critical to Clark County. As **Figure 7** shows, residents and goods often travel significant distances for services, critical facilities, and employment.

Clark County maintains over 601 miles of county trunk highway (see Figure 12), reflecting the largely rural nature of much of the County. The roughly 320 miles of highways with State jurisdiction reflect Clark County's location as an important transportation crossroads in west central Wisconsin. The remaining 3,500 plus miles of roads in the County are owned by the towns, cities, and villages. The County has a relatively high number of bridges (215), of which 44 are owned by the County, another 44 by the State of Wisconsin, and the remaining 127 by local municipalities

U.S. Highway 10, U.S. Highway 12, and five State highways, or portions thereof, in Clark County are designated as long-truck routes. Traffic volumes on the State Highway system average between 4,700 to 5,300 daily trips. On the USH 10 and USH 12 bypasses, traffic volumes average between 2,800 and 3,200 daily trips in some areas with volumes not exceeding 6,500.

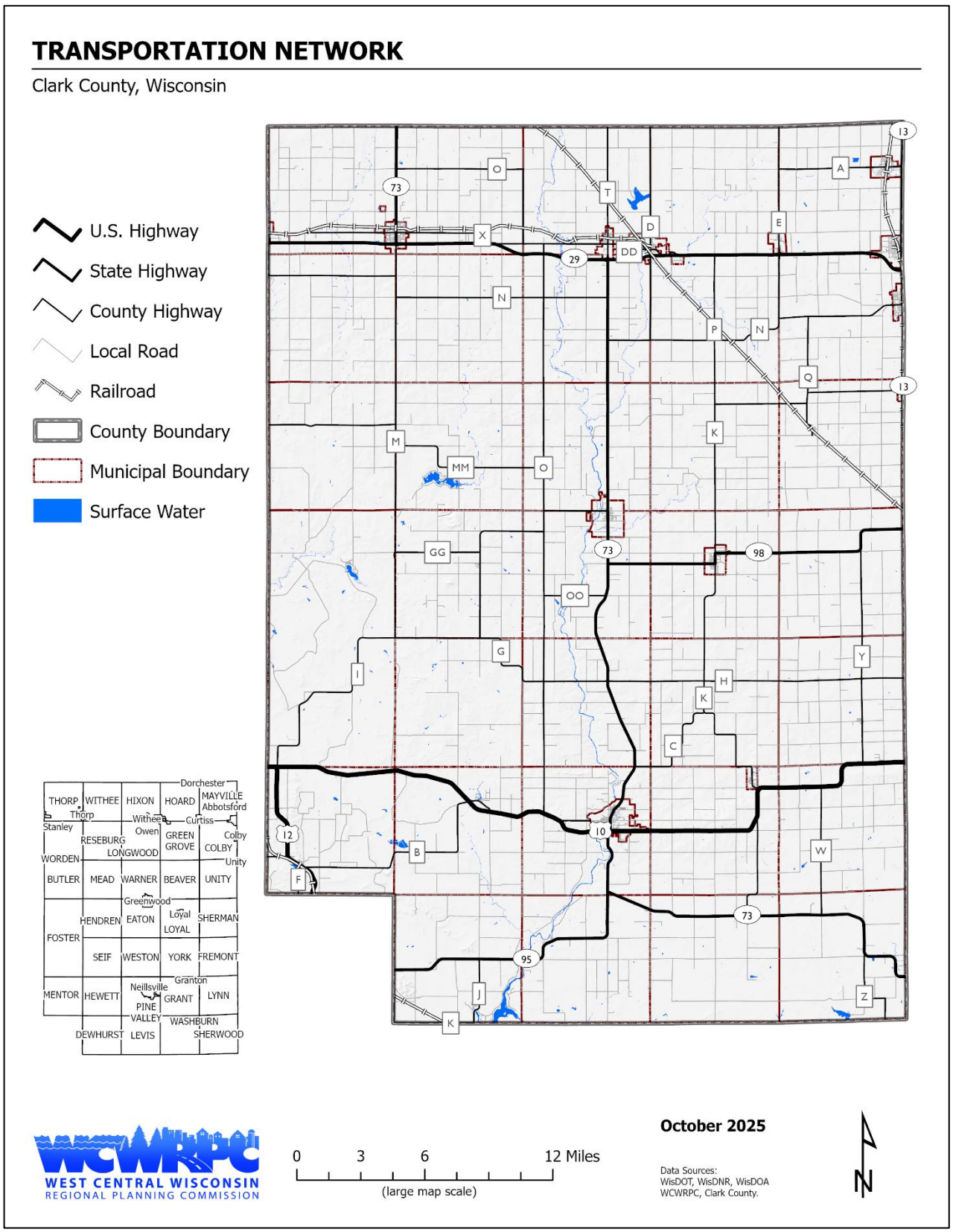
Rail service in the County is primarily operated by Wisconsin Central Railroad, a subsidiary of Canadian Network, with a rail line paralleling STH 29 from Stanley to Withee-Owen area and connects to another line that runs diagonally throughout the County. This line eventually connects with another that runs from north of Dorchester and parallels STH 13 south through Unity. A small portion of a Union Pacific line and a Fox Valley & Western Railroad line run through the southwestern corner of the County and intersect with each other in Jackson County. Interest in a passenger rail service to the Twin Cities continues to grow.

The Neillsville Municipal Airport is in the City of Neillsville and is a small general aviation carrier/cargo facility with commercial passenger flights.

Recreational transportation systems in the County have been increasing and include and bicycle trails and routes within Neillsville and Abbotsford-Colby area, along multiple ATV, snowmobile, horseback, and off-road motorcycles trails and routes in rural areas.

Public transit service in the County is provided by the Clark County's Department of Social Services, which includes non-emergent medical transportation for those with disabilities and those over the age of 60 without access to other alternatives. In addition, there are a number of private and non-profit entities that provide transportation services to residents.

Figure 7. Clark County Transportation System



E. HISTORICAL RESOURCES

Historic structures, sites, and districts are sometimes targeted for hazard mitigation strategies due to their unique, often irreplaceable, social value. According to the National Register of Historic Places[1], Clark County has a total of twenty-one historic properties and one historic district which received Federal or State historic landmark designation. All but five historic structures are located within the City of Neillsville. **Table 7** lists the formally recognized locations of the places of historic significance within Clark County.

Table 7. Clark County Historic Properties

#	Historic Site	Address	City	Listed
1	The Silver Dome Ballroom	US 10, 1 mile west of US 10 and Collier Road	Town of Hewett	1997
2	Neillsville Downtown Historic District	500 block Hewett Street & 118 West 6th Street	Neillsville	2000
3	Neillsville Post Office	619 Hewett Street	Neillsville	2000
4	First Church of Christ, Scientist	132 East Fourth Street	Neillsville	2003
5	Owen High School	101 East Third Street	Owen	2004
6	Neillsville Downtown Historic District (Boundary Increase)	432, 436, 442, 450 Hewett Street	Neillsville	2004
7	Neillsville Masonic Lodge No. 163	316 Hewett Street	Neillsville	2004
8	Charles Foote House	W 5055 US 10	Town of Pine Valley	1997
9	Forrest D. and Marian Calway House	318 East Fourth Street	Neillsville	2005
10	George W. and Sarah Trogner House	108 Grand Avenue	Neillsville	2005
11	Decatur and Kate Dickinson House	411 State Street	Neillsville	2006
12	John and Mary Hein House	824 Hewett Street	Neillsville	2006
13	William B. and Jennie Tufts House	321 East 4th Street	Neillsville	2011
14	Wisconsin Pavilion	1201 East Division Street	Neillsville	2010
15	Charles C. and Katharyn Sniteman House	319 Hewett Street	Neillsville	2010
16	Omaha Hotel	317 West 7th Street	Neillsville	2012
17	Herman M. and Hanna Hediger House	8 Grand Avenue	Neillsville	2013
18	Neillsville Standpipe	325 East 4th Street	Neillsville	2012
19	Charles and Theresa Cornelius House	118 Clay Street	Neillsville	2012
20	Woodland Hotel	207 North Central Avenue	Owen	2015
21	Clark County Jail	215 E 5th Street	Neillsville	1978
22	Robert Schofield House	303 W. Schofield Avenue	Greenwood	1982
23	Grand Avenue Bridge	Grand Avenue	Neillsville	1987

The above list includes historic districts (listed twice due to a boundary increase) within the City of Neillsville, which encompass seventeen contributing buildings.

The list above is not inclusive of all sites of historic and cultural significance, however. Additional structures undoubtedly qualify as National Register candidates. As previously mentioned, the Wisconsin Architecture & History Inventory (AHI) identifies over 661 buildings, structures, or objects in Clark County which illustrate

[1] National Register of Historic Places database. April 2, 2026.

Wisconsin's unique history. A detailed assessment of the vulnerability of each of these sites to hazard events is not currently available. Such sites are quite varied and include churches, cemeteries, homes, and barns, as well as archeological sites.

Most of these historic buildings are very well constructed, and they continue to serve as an important role in recognizing Clark County's past. As will be discussed later in the hazard vulnerability assessment of this Plan, these structures are generally not any more vulnerable to hazard risks (e.g., tornado, winter storms) than more recent construction. The historic properties of Clark County will be further considered during the vulnerability assessment of critical facilities as each hazard type is analyzed, but no unique vulnerability or specific mitigation action for a historic structure was identified during the planning effort.

SUPPLEMENT 2.
ADDITIONAL HAZARD ASSESSMENT INFORMATION

A. DESCRIPTION OF HAZARDS OF NO SIGNIFICANT RISK

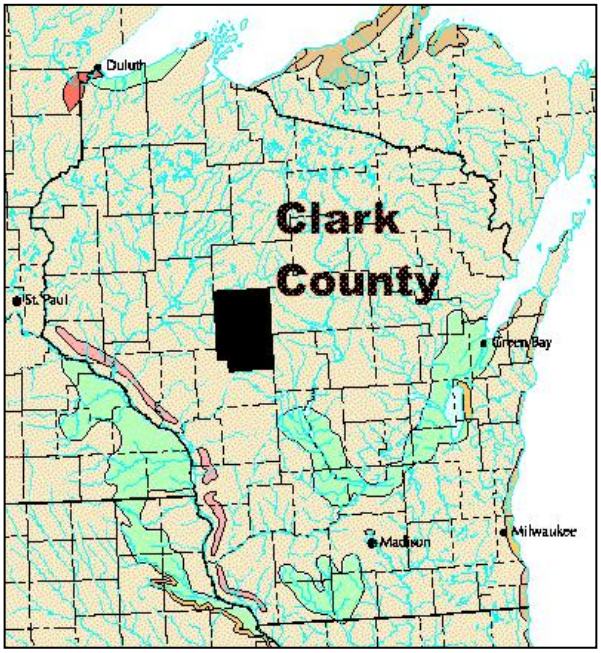
There are very few or no NOAA records of the following natural hazard events occurring in Clark County, or the local impacts were very low when events have occurred. In order to meet the comprehensive requirements for developing an all hazards mitigation plan, these other hazards are identified and described below. It is important to note that these hazard events may still pose some threat to the community, but they were considered by the Steering Committee to either have a minimal chance of occurring, pose a minimal widespread vulnerability to residents or communities, or offer very limited mitigation options.

Landslides & Land Subsidence

The term **landslide** includes a wide range of ground movement, such as rock falls, deep failure of slopes, and shallow debris flows. Although gravity acting on a steep slope is the primary reason for a landslide, there can be other contributing factors. Erosion by surface waters or excess weight from rain, snow or man-made structures may stress weak slopes to failure. Slope material that becomes saturated with water may develop a debris flow or mudflow.

Past glacial activity has created some topography in Clark County that is scenic, but may also be sensitive to development in some areas. The USGS *Landslide Overview Map of the Conterminous United States*[2] (excerpt for Wisconsin in **Figure 8**) identifies no large-scale landslide risks for the Clark County area.

Figure 8. Landslide Hazards in Wisconsin



source: U.S. Geologic Service. Landslide Overview Map of the Conterminous United States. <http://landslides.usgs.gov/html_files/landslides/nationalmap/national.html>.

Areas of steep slopes do exist in Clark County. Definitions of steep slopes can vary, though slopes of greater than 12% are generally considered to be steep for which erosion control and stabilization best management practices are advised. Development upon slopes of 20% or greater should be avoided if possible. Based on the National Resources Conservation Service (NRCS) Soil Survey for Clark County, there are there are 78,000 acres that potentially have a slope of 13 percent or greater representing 11.7 percent of the total Clark County land base. Of this, 13,815 acres (2.1% of Clark County) have slopes of 21% or greater. The majority of these steep slopes are located in the northern and western portions of the County. Additional localized and site-specific variations in topography and slope may exist. A 2024 landslide susceptibility analysis by the U.S. Geological Survey found that only about 6% of Clark County is potentially susceptible to landslides due to topography, which is a relatively low amount of land.

[2] U.S. Geological Survey. Landslide Overview Map of the Conterminous United States. <http://landslides.usgs.gov/html_files/landslides/nationalmap/national.html>

While steeper areas exist, the area's soils pose more of a gradual erosion risk, rather than the sudden, large-scale movement of ground associated with the conventional definition of a landslide hazards. Land disturbances upon steep slopes can increase the risk of landslide. Wildfire events in areas of steep slope or along waterways can also create landslide risks.

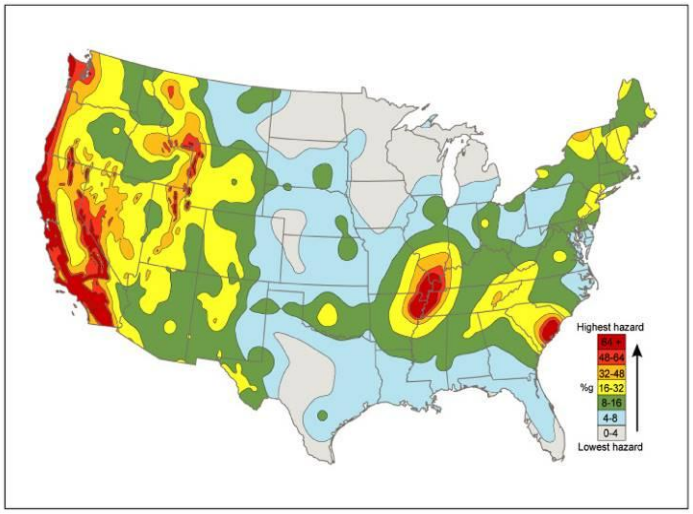
Land subsidence is an event in which a portion of the land surface collapses or settles. Common locations of subsidence are in areas having karst topography or in areas in which large quantities of groundwater have been withdrawn. Unlike St. Croix County to the west, Clark County does not have large areas of karst topography that could lead to land subsidence. There are no records of substantial damage or injury from large landslides or land subsidence within Clark County. A greater concern for Clark County has been localized river or stream bank erosion. Areas of the County have experienced erosion or washouts along shorelines, that have been exacerbated by riverine flood events and ice damming.

Overall, in the context of all hazards facing Clark County, the probability (likelihood) and vulnerability (potential losses) of a serious landslide event was rated by the Steering Committee as **extremely low**.

Earthquakes

According to the U.S. Geological Survey, there have been 19 earthquake events in Wisconsin, with none noted for west-central Wisconsin. Where readings are available, these events were relatively small, most being 3.0-3.8 on the Richter Scale in size and the largest being an intensity of 5, which may be strong enough to crack some plaster, but not cause serious damage. Due to the lack of recent events, some geologists question whether many of these events were true earthquakes, but rather quarry collapses, blasts, etc.

Figure 9. U.S. Geological Survey Earthquake Hazard-Shaking Map



source: U.S. Geological Survey. Earthquake Hazard in the Heart of the Homeland. <http://pubs.usgs.gov/fs/fs-131-02/CUShazard.html>.

The nearest active earthquake fault outside of Wisconsin is the New Madrid Fault which has a seismic zone that stretches from northeast Arkansas to southern Illinois.

As **Figure 9** shows, the Clark County area falls within the lowest earthquake hazard-shaking area, with the different colors representing the levels of horizontal shaking that have a 1-in-50 chance of being exceeded in a 50-year period. Similarly, Clark County falls within a 0%g peak ground acceleration (PGA) zone as shown on the USGS PGA values map for the United States with a 10 percent chance of being exceeded over 50 years; Clark County is a non-affected area.[3]

University of Wisconsin-River Falls students and geologists have studied an ancient major fault line which is located approximately 2 miles south of Hudson and extends north towards Willow River State Park and west towards Hastings, MN. Called the Hastings Fault, it has characteristics similar to the New Madrid Fault; but there has been no evidence of any motion on the Hastings Fault for the last 400 million years. While an earthquake along the Hastings Fault could be catastrophic, geologists estimate that no significant effects on this fault will

[3] U.S. Geologic Service. Peak Acceleration (%g) with 10% Probability of Exceedance in 50 Years. map. <http://geohazards.cr.usgs.gov/eq/pubmaps/US.pga.050.map.gif> November 1996.

likely occur within the next few millions years. As such, the earthquake threat to Clark County is considered **very extremely low** as rated by the Steering Committee.

Land Subsidence and Sinkholes

Land subsidence is an event in which a large area of the land surface collapses or settles. Common locations of subsidence are in areas having karst topography or in areas in which large quantities of groundwater have been withdrawn. A sinkhole or closed depression is one type of subsidence where a depression in the ground has no natural external surface drainage. Clark County does not have sizable areas of karst geology and closed depressions (or sinkholes) are very uncommon. There are no records of substantial damage or injury from land subsidence within Clark County. The Steering Committee rated this hazard as **extremely low**.

Dense Fog

Fog is low-level moisture that can reduce visibility. It can occur in isolated low-lying areas or be a widespread event that can cover several counties. In general, fog is often hazardous when the visibility is reduced to 1/4 mile or less. Thick fog reduces visibility, creating a hazard to motorists as well as to air traffic. Airports may close because of heavy fog. The intensity and duration of fog varies with the location and type of fog. Generally, strong winds tend to prevent fog formation. In Clark County, dense fog occurs infrequently and is typically a short-term weather event lasting only for portions of a day.

The NCDC database has two Clark County records for dense fog from December 2010 and February 2011, which included much of west-central Wisconsin; visibilities of one-quarter of a mile or less were commonplace across the region. Fog on February 17, 2011, was a contributing factor for a nine-vehicle accident at the intersection of State Highway 29 and County Road P east of Owen that resulted in **one death and nine injuries.**

The Steering Committee rated the probability (frequency) of past and future fog events as **moderate**, while vulnerabilities were identified as **low**. Given that only two significant dense fog events are included in the NCDC storm events database and that alternatives to mitigate such events are largely limited to highway signage and education, this hazard is not included as a significant risk at this time, though may be reconsidered for future plan updates.

Coastal Hazards (Hurricanes, Tsunamis, Tidalwaves, Waterspouts, etc.)

Coastal hazards can cause increases in tidal elevations (storm surges), high winds, and erosion caused by tropical cyclones (such as hurricanes) or the sudden displacement of water (such as tsunamis from earthquakes). Clark County is located in the upper Midwest, approximately 1,000 miles from the Atlantic Ocean, 1,200 miles from the Gulf to the south and 2,000 miles from the Pacific Ocean. Clark County also has no large inland lakes within its boundaries. Such coastal hazards have no direct impact on Clark County, and only occasionally indirectly impact the county in the form of thunderstorms, which are discussed separately. There have been reported instances of waterspouts in the region, but these are not unique coastal hazards within the region, but are primarily being associated with tornados. For example, the 1899 New Richmond tornado was reported as a waterspout as it passed over Lake St. Croix. The Steering Committee rated this hazard as **extremely low**.

B. Hazards Addressed in Other Plans

The communicable disease hazard described in this subsection poses a significant risk for Clark County. The Steering Committee desired to bring attention to this hazard by its inclusion here, but decided not to include a full risk and vulnerability assessment within this Plan update for the following reasons:

- It is typically included in a county-level mitigation plan.
- It is largely addressed through other intensive planning and preparedness efforts for which Clark County Emergency Management does not have a lead role—most notably the Clark County Public Health Emergency Preparedness Plan. Instead of duplicating and repeating these planning activities within this Mitigation Plan, this subsection recognizes that communicable disease risks exist and refers to other existing plans and programming to mitigate these risks.

This approach does not diminish the importance or the efforts to prepare for these other risks.

i. COMMUNICABLE DISEASE

Definitions

For purposes of this subsection, the focus is on biological diseases that are a potential threat to humans and are infectious and communicable. **Infectious diseases** are illnesses caused by germs (such as bacteria, viruses, and fungi) that enter the body, multiply, and can cause an infection, though not all infectious diseases are contagious (or communicable). According to the Federal Center for Disease Control, a **communicable disease** is an illness caused by an infectious agent or its toxins that occur through the direct or indirect transmission of the infectious agent or its products from an infected individual or via an animal, vector or the inanimate environment to a susceptible animal or human host. A **novel disease, virus, or virus strain** is a disease that hasn't been found in humans or a geographic region in the past. **Zoonotic diseases** are diseases that are spread between people and animals. An **epidemic** occurs when a disease affects a greater number of people than usual. A **pandemic** is a global disease epidemic.

Infectious Disease Probability, Vulnerability, and Capabilities

The 2025 Health Vulnerability Assessment (HVA) completed by the North Central Wisconsin Healthcare Emergency Readiness Coalition (NCW-HERC) provides valuable regional expert insights into infectious disease risks for Clark County and the larger area:

	Emerging Infectious Disease (Global)	Infectious Disease Outbreak (Local/Regional)
Probability of Future Occurrence		
Probability	Moderate; 2-3 events / 30 years	Moderate; 2-3 events / 30 years
Potential Impacts/Vulnerabilities		
Human/Population	High	High
Property	Low	Low
Business	Moderate	Moderate
Capabilities/Capacity of Region/State to Manage the Events		
Preparedness	Moderate	Moderate
Internal Response	Moderate	Moderate
External Response	Moderate	Moderate

Overall, the 2025 NCW-HERC HVA assessed global and local/regional outbreaks equal in terms of probability, potential impacts, and mitigation. Of the 65 different hazard types in the HVA, the NCW-

HERC-participating public health officials rated Infectious Disease Outbreaks as the nineth highest public health threat facing the region, tied with a number of other risks.

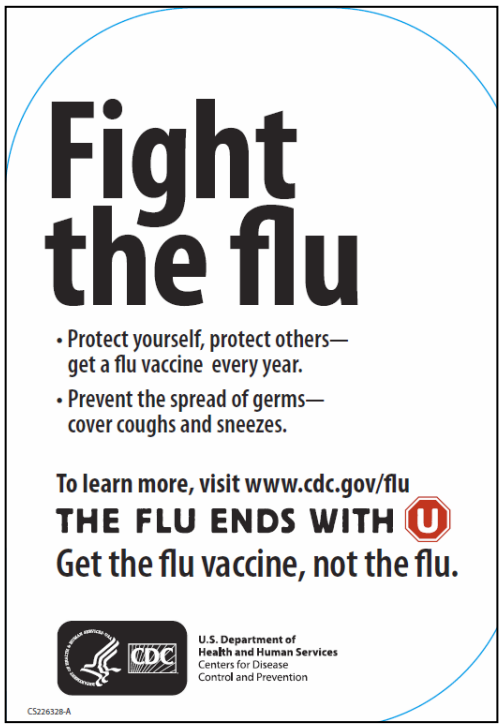
Clark County Public Health takes a lead role in county-level planning and response for communicable disease in concert with area health care providers, County Emergency Management, State and Federal agencies, and local communities. As a small, rural county, Public Health staff and local officials are often required to "wear multiple hats", so collaborative support from organizations such as the NCW-HERC is important. The County actively participates in the Western Wisconsin Public Health Readiness Consortium, which has provided collaborative support for public health preparedness planning and enhancing the capacity of the region's public health agencies to respond to all type of health emergencies, including bioterrorism, infectious disease outbreaks, and natural disasters. The Consortium also helps coordinate regional exercises and training.; recent exercises include flooding and extreme heat.

Notable Communicable Disease Events

An **influenza pandemic (or pandemic flu)** occurs when a new influenza virus emerges for which there is little or no immunity in the human population, begins to cause serious illness, and then easily spreads person-to-person worldwide. The potential risk of transmission, vulnerabilities, and impacts can vary widely by type of virus and availability of vaccines. Viruses can also mutate and increase in deadliness and spread more easily.

Historically, the 20th century saw three large pandemics of influenza impacting the United States:

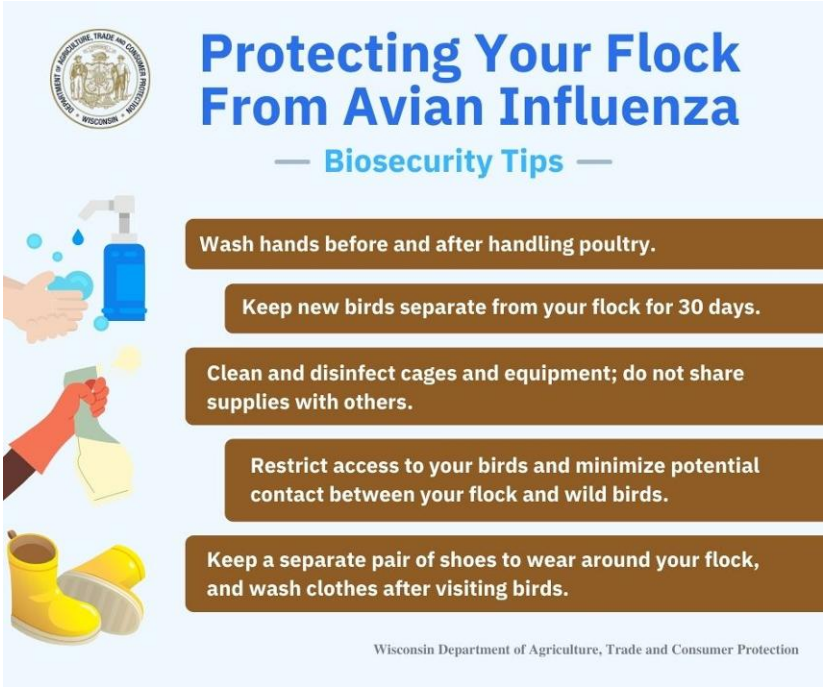
- 1918 influenza pandemic caused at least 675,000 U.S. deaths and up to 50 million deaths worldwide.
- 1957 influenza pandemic caused at least 70,000 U.S. deaths and 1-2 million deaths worldwide.
- 1968 influenza pandemic caused about 34,000 U.S. deaths and 700,000 deaths worldwide.



Beginning in 2009, there was significantly increased attention to pandemic flu at the state and regional level due to **zoonotic diseases** capable of being transmitted between animals and humans. **Swine Flu (H1N1)** was declared a pandemic by the World Health Organization (WHO) in June 2009 and resulted in about 17,000 deaths worldwide before the pandemic was declared over in August 2010. During the H1N1 outbreak from April 2009 through March 2010, an estimated 43-88 million H1N1 cases and 192,000-398,000 H1N1-related hospitalizations were estimated to have occurred in the United States according to the Center for Disease Control (CDC).[4] The CDC further estimated that 8,720 to 18,050 H1N1-related deaths occurred during the same timeframe. H1N1 continues to spread and there is some concern about the long-term effectiveness of current vaccines. During the 2010-2011 influenza season, five cases of Novel Influenza A viruses were reported in the United States, including one in Wisconsin and two in Minnesota; all patients fully recovered from their illness.

[4] U.S. Center for Disease Control. CDC Estimates of 2009 H1N1 Influence Cases, Hospitalizations, and Deaths in the United States, April 2009-March 13, 2010. http://www.cdc.gov/h1n1flu/estimates/April_March_13.htm

More recently, a **highly pathogenic avian influenza outbreak (H5N2)** struck the United States in April 2015. More broadly, H5N2 is a subtype of avian flu (i.e., influenza A(H5)) distinctly different than H1N1. In nearby Barron County, 650,000 turkeys were euthanized as a result. A milder, low pathogenic strain of H5N2 would occur in March 2017 requiring quarantine and monitoring of poultry operations in the region. An outbreak of a different highly pathogenic strain called EA H5N1 would hit domestic flocks and wild birds throughout much of North America in 2021-2022, including poultry in the region. The outbreak would lull for about a year before hitting the region's poultry producers especially hard; the seasonal re-emergence was partially attributed to migrating waterfowl. Barron County again was hit especially hard. As of December 2023, over 70,000 turkeys in Barron County were depopulated and strong biosecurity measures were advised. Producers in other counties in the region were also impacted. The U.S. Department of Agriculture reported a decline in avian flu cases among wild birds in 2023, offering a glimmer of hope to the poultry industry which has lost 76.9 million birds since 2022.[5] For Clark County, the relative threat is lower than some other counties in the region that have larger numbers of poultry producers.



In March 2024, avian flu was confirmed as spreading to dairy cattle and several human cases were reported. As of March 2026, there have been 71 reported cases of A(H5) bird flu in the United States, including two deaths; there is no known person-to-person spread. According to the CDC, since 2024 in the United States:

- A(H5) has been detected in 541 wild bird flocks and is believed to be in wild birds worldwide.
- A(H5) has been detected in 508 commercial poultry flocks, including 6 in Wisconsin and 51 in Minnesota.
- A(H5) has been detected in 1,088 dairy herd, including 1 in Wisconsin; 733 were in California.
- Wisconsin has had one human A(H5) case confirmed associated with a poultry worker.

As of March 2026, the CDC considered Avian Flu to be a low public health risk but is actively monitoring individuals with animal exposure. The H5N1 virus usually does not infect people, though there is no human immunity, and no commercial vaccine is available. One study showed that it is possible for avian flu viruses (and bacteria like Salmonella) to enter groundwater from a large source of poultry fecal waste, though the risk of virus transmission from groundwater to people is not known.[6] And some avian flu variants have undergone mutations, which could impact the vulnerability to humans.

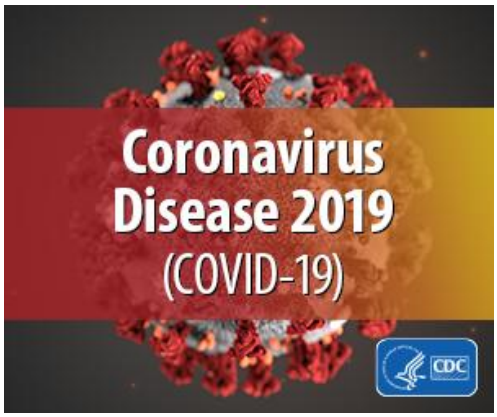
In August 2019, the CDC stated that it is impossible to predict when the next pandemic will occur or how bad a future pandemic will be, so advanced planning is needed. A great variety of mitigation and planning measures

[5] https://www.poultryproducer.com/u-s-sees-diminishing-avian-flu-cases-in-wild-birds-a-potential-silver-lining-for-poultry-sector/

[6] Borchardt, Mark A. et. al. *Avian Influenza Virus RNA in Groundwater Wells Supplying Poultry Farms Affected by the 2015 Influenza Outbreak.* Environmental Science & Technology Letters. 2017, 4, p268-272.

for pandemics has been undertaken over past two decades since the SARS epidemic in 2002-2003. The Avian Flu (H5N1, H5N2) and Swine Flu (H1N1) outbreaks have further increased awareness, cooperation, monitoring, and planning for large-scale disease or viral outbreak. But it would be less than a year later when these preparedness efforts would be truly tested.

The **coronavirus disease 2019 (COVID-19)** pandemic is a global outbreak of coronavirus – an infectious disease caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Cases of novel coronavirus (nCoV) were first detected in China in December 2019, with the virus spreading rapidly to other countries across the world. Since January 1, 2020, there have been nearly 1.1 million deaths in the United States attributed to COVID-19. As of 3/10/23, there were over 9,070 confirmed COVID-19 cases in Clark County and 133 deaths. In addition, according to the CDC website, up to 41% of non-hospitalized adults in the United States who have had COVID-19 also experience a wide range of ongoing respiratory, neurologic, cardiovascular, and other symptoms that can last for weeks, months, or years (a/k/a Long Covid).[7]



The COVID-19 Federal Public Health Emergency expired on May 11, 2023. And while it may seem that the pandemic has passed, the threat still exists. As of August 15, 2026, statewide average SARS-COV-2 levels in municipal wastewater sampling was low or very low among the 44 Wisconsin locations being monitored, though COVID-19 cases have been increasing nationally.

The COVID-19 pandemic had great (and often long-lasting) impacts on the economy, health care services, educational systems, and governmental services. During the 2026 mitigation plan update, local officials and stakeholders were asked about their experiences and lessons learned during the pandemic. Some highlights were:

- Most cities and villages stated that their operations did not significantly change, though they did temporarily practice social distancing and most did require masks during meetings for a time.
- Multiple communities found that the practice of remote or virtual meetings to be useful, once the initial technological logistics were overcome. Some communities are continuing with this option for some meetings.
- There was some confusion among the public and mixed messages from the Federal government, contributing to some residents and entities not taking recommended precautions. This misinformation also contributed to a deterioration of trust with public health officials and lower immunization rates.

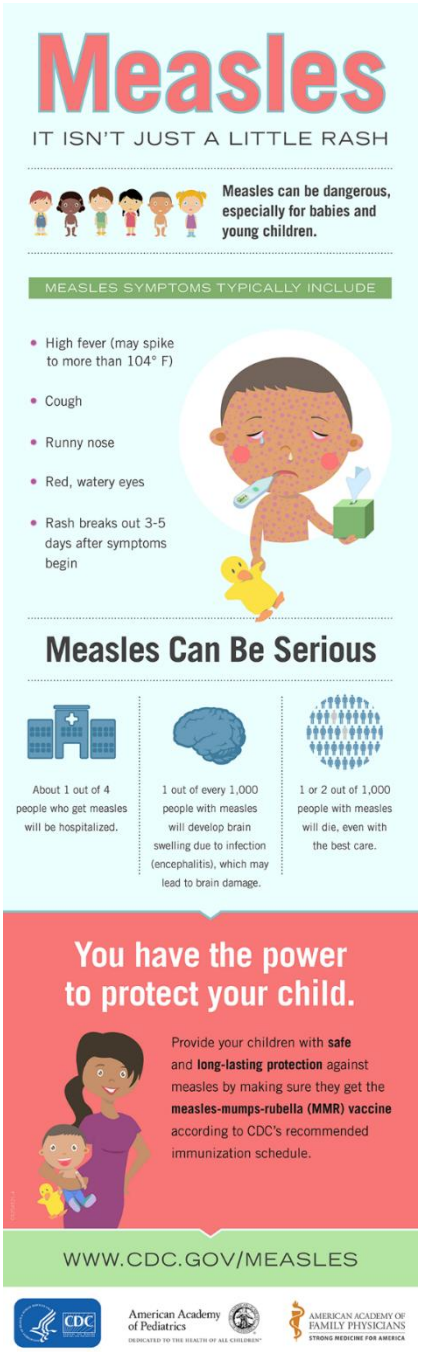
The Center for Disease Control continues to monitor other communicable disease threats and issue related travel health notices. Mosquito-borne illnesses, such as Yellow Fever, Malaria, and the Zika virus are among the most common concerns over the past decade. **Zika virus** in particular has received increased attention due to the risk of severe birth defects and the potential to transmit the disease through sex. Mosquitoes carrying the Zika virus have been reported in a large portion of the world, including most of Mexico, Central America, South America, the Caribbean, and large parts of Africa and Southeast Asia. Cases of Zika spread by local mosquitoes were reported in Florida and Texas in 2015-2016, but there have been no reports of locally acquired Zika cases in the U.S. since 2017.

[7] https://www.cdc.gov/mmwr/volumes/72/wr/mm7232a3.htm#:~:text=Long%20COVID%20includes%20a%20wide%20range%20of%20ongoing%20respiratory%2C%20neurologic,to%2041%25%20(1).

In 2018, the Eastern Democratic Republic of the Congo experienced an outbreak of **Ebola Virus Disease** (EVD), which is the second largest outbreak since the virus was discovered in 1976. According to the CDC, 3,470 cases were confirmed with a 66% fatality rate.[8] Additional cases were reported in the Congo Republic, Uganda, and Guinea in 2020-2022. In Spring 2026, another EVD outbreak in Congo began, which has quickly spread to Uganda. EVD is a rare, but often fatal, zoonotic disease that can be spread through contact with an infected fruit bat or nonhuman primate, but can also spread from person to person through direct contact with bodily fluids. There have been no reported Ebola cases in the United States since 2014. Diagnosing EVD is difficult since symptoms require 8-10 days on average to manifest. Currently, there is no approved vaccine or treatment for EVD.

In August 2024, the World Health Organization (WHO) declared a public health emergency of international concern due to an outbreak of **mpox**. Mpox (previously called monkeypox) is a viral, zoonotic disease that can cause scarring, blindness, and other infections, but rarely leads to death. An mpox vaccine is used to help prevent infection. Mpox was first detected in humans in 1970 and is endemic to parts of Africa. There was a worldwide outbreak of mpox in 2022 with 122 counties reporting nearly 100,000 cases and 207 deaths.[9] The United States had the highest number of reported cases and death with 33,435 cases and 60 deaths. While mpox cases went down in 2023, a mpox variant is now surging in Africa; the Democratic Republic of Congo reporting more than 14,000 cases and 524 deaths since the start of 2024, which has triggered the WHO declaration.

Immunizations (or vaccinations) for more common or preventable viruses and diseases, such as **Whooping Cough (Pertussis), Polio, Diphtheria, Measles, and Mumps**, have been in the news in recent years. **From 2022-2025, there were 348-433** reported cases of Mumps in the United States each year. **Measles** was nearly eliminated in the United States in 2000, but there were 284 reported cases during 2024 with less than 10 cases reported in Wisconsin. For 2025, 2,284 Measles cases were confirmed in the U.S. and 36 in Wisconsin; 70% or more of these cases are in children less than 20 years in age. Measles cases have continued to increase in 2026 with 263 cases so far in Wisconsin as of October 12th`. While these outbreaks have been growing, a highly effective vaccine exists for Measles; over 90% of those affected were believed to be unvaccinated.



In 2026, a **Hantavirus** outbreak (Andes form) occurred among cruise ship passengers. There are more than 20 different types of Hantavirus, which can cause severe respiratory symptoms. The virus is spread primarily by wild rodents, but can become airborne. The Andes form can be spread from person-to-person. According to John Hopkins Medicine website, the current risk for hantavirus infection to the United States public is extremely low.

[8] https://www.cdc.gov/ebola/outbreaks/index.html

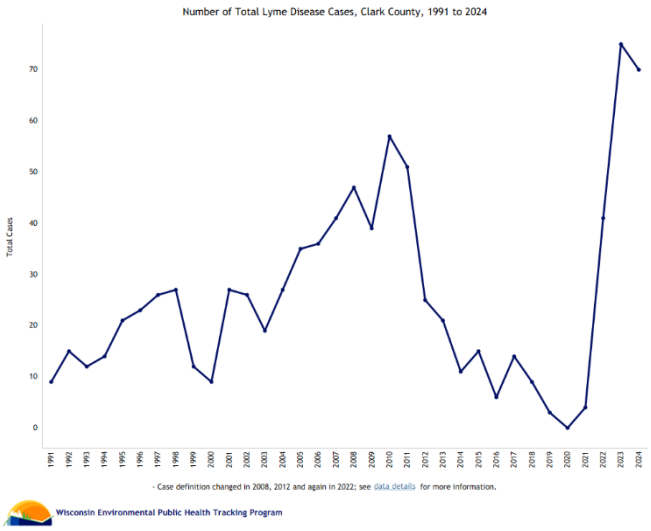
[9] https://www.cdc.gov/poxvirus/mpox/response/2022/index.html

Some members of the public choose to delay, skip, or reject vaccinations for themselves and/or their family. But avoiding vaccinations puts family members, friends, and the community at risk. According to the Wisconsin Department of Health Services, 63.3% of two-year old residents in Clark County in 2025 were immunized, which hasn't changed significantly since 2013.[10] This percentage is slightly lower than Wisconsin overall. The County's early childhood immunization rate has been decreasing from a high of 78.2% in 2013.

Some Public Health offices in the region have also been seeing increased cases of **Tuberculosis (TB)**, **Hepatitis B & C,** and **Sexually Transmitted Diseases (STDs)**; there is currently no vaccine for Hep C and many of the most common STDs.

Overall, local public health agencies and medical providers have been able to handle smaller (less than four month) disease outbreaks well. COVID-19 was a greater challenge due to the length of the "severe phase" of the outbreak and changing information during the early phases of the outbreak. Incident Command System (ICS) approaches are not well suited for lengthy, multi-year disease outbreaks.

Concerns related to **tick-borne diseases**, such as **Lyme (Borrelia)** and **Babesiosis**, were also mentioned a number of times during the planning process. Though Lyme disease is native to Wisconsin, the number of reported cases have increased dramatically over the past three decades, with 6,469 cases reported in in 2024, the highest on record. In 2024, there were 70 cases reported for Clark. It is believed that many cases of Lyme Disease are not reported. Ticks have been expanding their ranges northward as average winter temperatures have been increasing long-term.



Communicable Disease Prevention and Control

Within Clark County, the County Public Health Department has been the primary coordinating entity on communicable disease and pandemic flu, working in conjunction with other public and private partners. Clark County Public Health maintains a Public Health Emergency Preparedness Plan (PHEP Plan) specific to the County, which follows the covers 15 public health preparedness capabilities:

Public health preparedness capabilities. CDC identified the following 15 public health preparedness capabilities (shown in their corresponding domains) as the basis for state and local public health preparedness:

Biosurveillance
- Public Health Laboratory Testing
- Public Health Surveillance and Epidemiological Investigation

Community Resilience
- Community Preparedness
- Community Recovery

Countermeasures and Mitigation
- Medical Countermeasure Dispensing
- Medical Materiel Management and Distribution
- Non-Pharmaceutical Interventions
- Responder Safety and Health

Incident Management
- Emergency Operations Coordination

Information Management
- Emergency Public Information and Warning
- Information Sharing

Surge Management
- Fatality Management
- Mass Care
- Medical Surge
- Volunteer Management

[10] The 4:3:1:3:3:1:4 vaccination series is a comprehensive set of immunizations for children protecting against diseases like pertussis, polio, and measles

The following are some key points regarding the PHEP Plan and Public Health activities:

- The PHEP Plan serves as a core resource among local health departments and is a focal point within the NWW-HERC, which can provide mutual aid if needed. The PHEP Plan includes situational-specific components (e.g., Mass Clinic Plan, Pandemic Flu Plan) as well as general education, monitoring, and response procedures under an "all hazards approach" not specific to pandemic flu or other specific threat. Review and update of these sub-plans is an ongoing process.
- The County is currently updating and converting its PHEP Plan to the new Consortium model and addressing priorities within the Plan. The State dictates some priorities/actions each year. With recent communicable disease outbreaks, quarantine/isolation capabilities are a current priority. Plans are being updated for medical/vaccine points of distribution (PODs), which were very effective during the peak COVID outbreak; MOUs for closed PODs are in place and being finalized for open PODs
- The County's PHEP Plan includes a communications plan as well as an educational component with emphasis on prevention and control (e.g., recognizing symptoms, vaccinations, and personal preparedness).
- The PHEP Plan also includes an At-Risk Populations component, including exploring strategies related to identifying and serving persons who are at greater risk during times of emergencies. At-risk populations contemplated in the plan include rural residents that may lack support during a disaster event, seniors, and persons reliant on oxygen or other medical devices. Additional coordination is recommended on how HHS emPOWER data may be used to help support persons reliant on medical devices during a power outage.
- The PHEP Plan is periodically tested, in cooperation with partners, through drills and exercises. There is a high degree of necessary coordination between the County's Emergency Operations Plan maintained by Emergency Management and the PHEP Plan. While there is strong cooperation, additional opportunities to coordinate response plans, invite other partners to exercises, and clarify response roles and resources exist. Exercises to consider include establishing a family assistance center, volunteer reception center, and donation management.
- Public panic could ensue should a public health emergency occur, such as a pandemic flu outbreak. Getting the word out quickly and providing accurate information from a trusted source is critical.
- In addition to monitoring and preparing for communicable diseases, Clark County Public Health continues to work cooperatively with County Emergency Management on general public emergency and disaster preparedness education and can be a vital partner during any such educational initiatives recommended in this Mitigation Plan update. County Emergency Management and Red Cross take the lead in identifying and coordinating emergency shelters.
- County Public Health resources and additional educational materials are available at their webpage and offices.

Long-term weather patterns suggest that the area's climate is becoming warmer, which could change the seasonality of diseases as well as introduce new vectors. With warmer weather, diseases may be more abundant and some outbreaks may last longer.

C. TORNADOS & HIGH WINDS

The information below is supplemental to the information contained within Section III.C.i. of the *Clark County Hazard Mitigation Plan.*

Defining the Hazard —Tornadoes & High Winds

Tornados are relatively short-lived local storms composed of an intense rotating column of air, extending from a thunderstorm cloud system. It is nearly always visible as a funnel, although its lower end does not necessarily touch the ground. Average winds in a tornado, although never accurately measured, are between 100 and 200 miles per hour; however, some tornados may have winds exceeding 300 miles per hour.

High winds can affect much larger areas than a tornado and occur for a longer period of time. More intense types of high winds are downbursts or straight-line winds. Straight-line winds are often responsible for most of the wind damage associated with a thunderstorm. These winds are often confused with tornadoes because of similar damage and wind speeds. However, the strong and gusty winds associated with straight-line winds blow roughly in a straight line unlike the rotating winds of a tornado.

Hazard Location

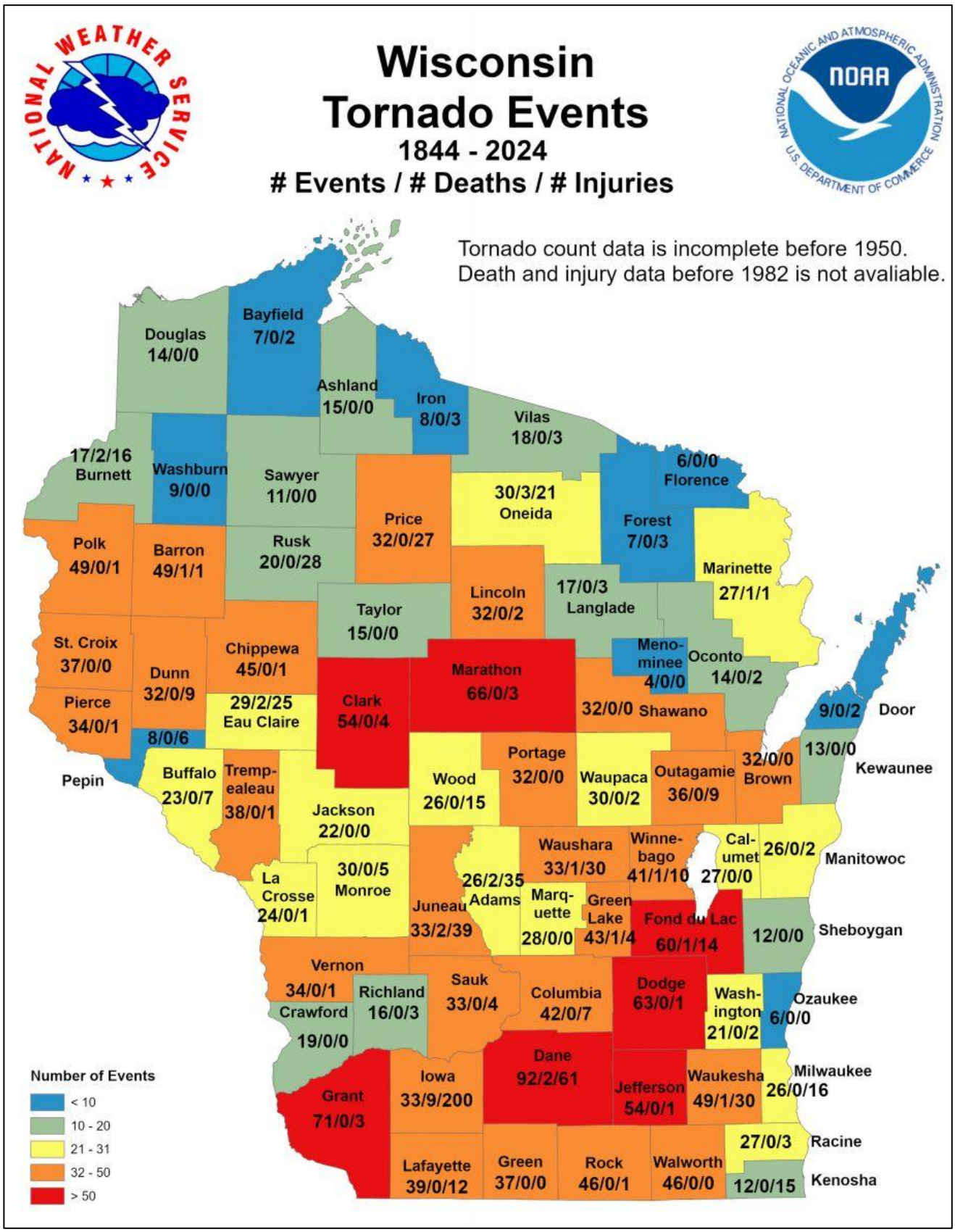
Tornadoes and high winds are capable of killing or injuring residents and damaging or destroying homes, businesses, public buildings, and infrastructure throughout Clark County. There are no geographic boundaries or locations within Clark County uniquely affected by tornadoes or high wind events. As shown in **Figure 10**, tornadoes and high winds occur throughout the State of Wisconsin and have no defined hazard area within Clark County. All Clark County jurisdictions are equally at risk of experiencing a tornado or high wind event.

Tornadoes and high winds can impact assets outside the area struck by the hazard, such as impacting the regional supply of electrical service or disrupting transportation networks. For example, these events can uproot trees and topple power lines, impacting the regional supply of electrical service to homes, businesses, and services. Roadways can also be blocked by debris, impacting regional transportation networks, and debris can accumulate in rivers or stormwater systems and contribute to washouts or flooding

Hazard Extent (Potential Intensities)

Tornadoes are generally associated with severe storm systems, which are often accompanied by high winds, hail, torrential rain, flooding, and intense lightning. High winds are discussed with tornadoes within this subsection given that high wind damage can be difficult to distinguish from tornado damage. It is not uncommon for local residents to debate whether the damage from an area storm event was the result of high, straight-line winds (as officially recorded) or a tornado. Further, tornado and thunderstorm / high wind events are very often part of the same storm cell.

Figure 10. Wisconsin Tornado Events • 1844 to 2024



Shown in **Table 8** is the Enhanced Fujita (EF) Scale, recognized as the accepted tornado magnitude measurement rating and is based on damage estimates for a 3-second wind gust. The EF scale replaced the original Fujita scale in 2006 and considers 28 different damage indicators for a more accurate indication of tornado strength.[11] The new EF scale does have higher wind speed thresholds, and a larger percentage of reported tornadoes will likely fall within the EF0 category. The destructive power of the tornado results primarily from its high wind velocities and sudden changes in pressure. Wind and pressure differentials probably account for 90 percent of tornado-caused damage.

Table 8. Tornado Magnitude Measurement Enhanced Fujita (EF) Scale

Operational EF-Scale	Wind Speed (miles per hour)	Character of Damage	Relative Frequency (percent)
EF0 (GALE)	65-85	Minor or No Damage	53.5
EF1 (WEAK)	86-110	Moderate Damage	31.6
EF2 (STRONG)	111-135	Considerable Damage	10.7
EF3 (SEVERE)	136-165	Severe Damage	3.4
EF4 (DEVASTATING)	166-200	Devastating damage	0.7
EF5 (INCREDIBLE)	Over 200	Extreme damage	<0.1

Source: National Oceanic Atmospheric Administration (NOAA)

The following types of damage could be expected for each EF-Scale tornado:

F0 Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees.

F1 Peels surface off roofs; mobile homes badly damaged or overturned; moving autos pushed off roads; attached garages may be destroyed.

F2 Roofs torn off well-constructed homes; mobile homes demolished; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.

F3 Entire stories of well-constructed homes destroyed; trains overturned; trees debarked.

F4 Well-constructed houses leveled; cars thrown and large missiles generated.

F5 Strong frame houses lifted off foundations and carried considerable distances; automobile-sized missiles fly through the air in excess of 100 meters; trees debarked; steel reinforced concrete structures badly damaged.

Table 9 provides a straight-line wind gust estimating guide with definitions that is frequently used by SkyWarn Weather Spotters, which shows the range of potential intensities of such events. Wisconsin lies along the northern edge of the nation's maximum frequency belt for tornados (known as "tornado alley") which extends northeastward from Oklahoma into Iowa and then across to Michigan and Ohio. Generally, the frequency and severity of tornado events decreases as one travels north.

[11] None of the tornadoes recorded on or before January 31, 2007, will be re-categorized from F to EF.

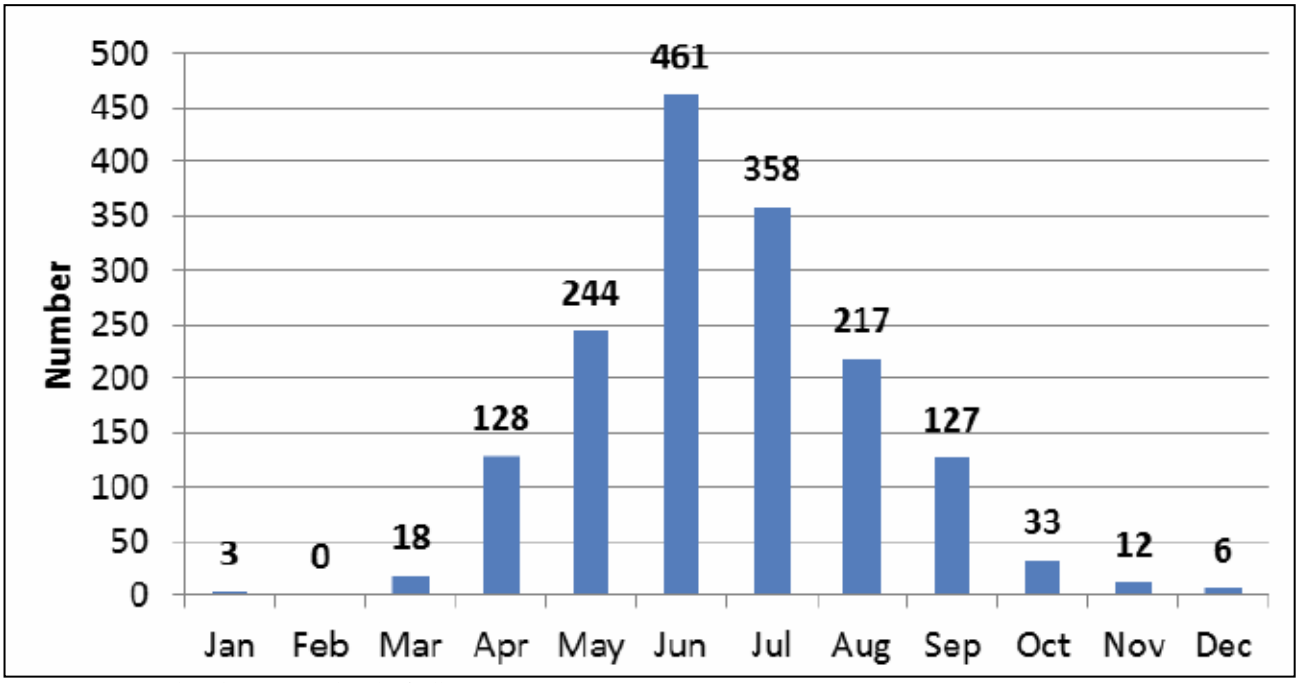
Table 9. Straight-Line Wind Gust Estimates

45-57 mph (39-49 kts)	**Non Severe** - Large trees bend; twigs, small limbs break, and a few larger dead or weak branches may break. Old/weak structures (e.g., sheds, barns) may sustain minor damage (roof, doors). Some loose shingles may be removed from houses.
58-75 mph (50-64 kts)	**Severe** - Large limbs break; shallow rooted trees pushed over. Semi-trucks overturned. More significant damage to old/weak structures. Shingles, awnings removed from houses; damage to chimneys and antennas; mobile homes, carports incur minor structural damage; large billboard signs may be toppled.
75-89 mph (65-77 kts)	**Hurricane Force** - Widespread tree damage (trees either broken or uprooted). Mobile homes may incur more significant structural damage; be pushed off foundations or overturned. Roofs may be partially peeled off industrial/commercial/warehouse buildings. Some minor roof damage to homes. Weak or open structures (e.g. farm buildings, airplane hangars) may be severely damaged.
90+ mph (78+ kts)	**Significant Severe** - Groves of trees flattened. Mobile homes severely damaged; moderate roof damage to homes. Roofs partially peeled off homes and buildings. Barns and sheds completely demolished.

Regional Trends & Events

Tornados have occurred in Wisconsin in every month except February, as shown in **Figure 11** below:

Figure 11. Wisconsin Tornado Events by Month • 1844 to 2015



source: WEM THIRA based on NWS, Milwaukee/Sullivan, 2016

Wisconsin's tornado season runs from the beginning of April through September. The most severe tornados typically occur during April, May, and June. Many tornados strike in late afternoon or early evening. However, tornados have occurred during other times of the day. Personal property damage, deaths, and injuries have and will continue to occur in Wisconsin.

Clark County has had numerous tornadoes of varying degrees of magnitude and severity. On July 3, 1907, an F4 tornado struck south-central Clark County that was reported to have a path 12 miles long and ¼ mile wide. The tornado appeared to first touchdown near Tioga, then travelled east causing damage in the towns of Seif, Weston, Pine Valley, and Grant. Many homes and barns were damaged or demolished, and crop losses were sizable. The Marshfield Times reported three deaths and nine injuries in the Neillsville area. A second tornado associated with the same storm hit southeastern Clark County, resulting in three additional deaths.

A September 21, 1924, storm is considered the worst in Clark County history. Two tornadoes struck northern Clark County, destroying many farms, injuring at least 50 people, and resulting in 18 dead. The William Oberele home south of Thorp was lifted clear off its foundation by an F4 tornado and carried over 50 yards; their barn and machinery were scattered far and wide. But the Oberele family took refuge in their cellar, and no one was hurt. The Obereles provide us all with a valuable example of the importance of taking shelter.

On August 23, 2011, an EF2 tornado destroyed four homes and caused damage to eleven other homes and some buildings. Damages were estimated at around $1.5 million. There were a number of injuries and one indirect death associated with this event. Around 2,130 area residents were temporarily without power after this storm.

On July 19, 2019, a complex of severe thunderstorms moved across north-central Wisconsin. This storm complex produced an EF0 and EF1 tornado in Clark County. The first touched down west of Withee and resulted in a torn barn roof, damaged silo, pole barn damage, and downed 15 to 20 trees. The second, larger tornado occurred north of Withee and resulted in trees blown onto a mobile home and bent or snapped numerous power poles along Center Rd.

Later that year, Clark County experienced an EF1 tornado on the evening of September 24, 2019. The tornado occurred across rural sections of central Clark County, touching down near the Black River southwest of Greenwood. Some farm building damage occurred, and at least three cows were killed at one farm. The Governor declared a state of emergency for Clark County.

Our region has also experienced the 9th deadliest tornado in U.S. history. On June 12, 1899, the City of New Richmond in St. Croix County had about 2,500 residents in addition to hundreds of tourists who had come to town to see the circus. At about 4:30 P.M., a heavy rain with some hail fell, driving people temporarily indoors. But after the circus ended and the rain let up, people began to head home for the day. At 6:00 P.M., the streets were full of tourists, travelers, and residents. Unknown to them, approximately 30 minutes earlier, a waterspout was seen on Lake St. Croix about 15 miles southwest of New Richmond. The tornado reached New Richmond about 6:00 P.M. with little or no warning. The Milwaukee Journal at that time estimated more than 500 structures were destroyed, most totally splintered and torn from their foundations, though another damage estimate states 230 buildings were destroyed. Official estimates determined that 117 people had been killed (114 within the city) and more than 200 injured. Twenty-six families lost more than one individual, while six reported four or more deaths in the family. Over 400 animals were also killed. More than $600,000 (over $17 million in 2018 dollars) in damage claims were made, though it was believed that many people did not file claims, moved elsewhere, or there was no one left in the household to file a claim.

D. THUNDERSTORMS, LIGHTNING, & HAIL

The information below is supplemental to the information contained within Section III.C.ii. of the *Clark County Hazard Mitigation Plan.*

Defining the Hazard – Thunderstorms, Lightning, & Hail

Thunderstorms are severe and violent forms of convection produced when warm, moist air is overrun by dry, cool air. As the warm air rises, thunderheads (cumuli-nimbus clouds) form which cause the strong winds, lightning, thunder, hail and rain associated with these storms. The National Weather Service definition of a severe thunderstorm is a thunderstorm event that produces any of the following: winds of 58 miles per hour or greater (often with gusts of 74 miles per hour or greater), hail 3/4 inch in diameter or greater, or a tornado.

The thunderheads formed may be a towering mass six miles or more across and 40,000 to 50,000 feet high. They may contain as much as 1.5 million tons of water and enormous amounts of energy that often are released in the form of high winds, excessive rains, and three violently destructive natural elements: lightning, hail, and tornadoes.[12]

A thunderstorm often lasts no more than 30 minutes, as an individual thunderstorm cell frequently moves between 30 to 50 miles per hour. Strong frontal systems, though, may spawn more than one squall line composed of many individual thunderstorm cells. These fronts can often be tracked from west to east. Because thunderstorms may occur singly, in clusters, or as a portion of large storm lines, it is possible that several thunderstorms may affect a single area in the course of a few hours.

Heavy Rain definitions can vary based on factors such as duration, intensity, and location. For purposes of this plan, a heavy rain event is a 100-year event. According to the *Rainfall Atlas of the United States*, a 100-year rainfall event in Clark County would produce at a single location:

3” of rain in 1 hour or less,
3.5” of rain in 3 hours or less,
4” of rain in 6 hours or less
5” of rain in twelve hours or less, or
5” of rain in 24 hours or less.

However, the above Rainfall Atlas was completed by the U.S. Weather Bureau in May 1961 is very outdated and does not represent more recent climate trends that would likely result in an increase in the rainfall thresholds (i.e., more inches of rain in a given time period to qualify as a heavy rain event).

Lightning can strike anywhere. Lightning is formed from the build-up of an electrical charge in a cloud. When this charge is big enough, the air ionizes and a discharge occurs with another cloud, the ground, or the best conducting object. The resulting electric charge reaches temperatures higher than 50,000°F. This rapid heating and subsequent cooling cause the air to expand and contract, which results in thunder.

Hail is the accumulation of ice crystals due to warm, moist air rising rapidly into the freezing temperatures of the upper atmosphere. When frozen droplets accumulate enough weight, they fall as precipitation. Hail or sleet occurs when these frozen ice balls do not fully melt upon descent, and they can reach the size of softballs.

[12] Tornadoes and high wind vulnerabilities (potential impacts) are discussed separately in Section III.B.ii.

Thunderstorms can develop in a variety of ways, with the most common storm types are listed below:

Single-Cell Storm	Small, brief, weak storms that grow and die within an hour or so. They are typically driven by heating on a summer afternoon. Single-cell storms may produce brief heavy rain and lightning.
Multi-Cell Storm	A common, garden-variety thunderstorm in which new updrafts form along the leading edge of rain-cooled air (the gust front). Individual cells usually last 30 to 60 minutes, while the system as a whole may last for many hours. Multicell storms may produce hail, strong winds, brief tornadoes, and/or flooding.
Supercell	A long-lived (greater than 1 hour) and highly organized storm feeding off an updraft (a rising current of air) that is tilted and rotating. This rotating updraft can be present as much as 20 to 60 minutes before a tornado forms. The tornado is a very small extension of this larger rotation. Most large and violent tornadoes come from supercells.

Hazard Location

There are no geographic boundaries or locations within Clark County uniquely affected by or from thunderstorms, heavy rain, lightning, or hail events; all Clark County jurisdictions are equally at risk of experiencing these types of severe weather. The maps included later in this section show that lightning and hail events occur throughout the State of Wisconsin. It is notable that lightning strikes can occur up to 20 miles away from the parent thunderstorm.

Hazard Extent (Potential Intensities)

Heavy rain intensities for 100-year rainfall events for Clark County were previously identified in the definitions.

Lightning strike intensity can be measured in megajoules, length, or the density strikes per storm or over time. For purposes of this plan, exploring a scale for the voltage or heat of lightning strikes is largely irrelevant; any strike can cause serious damage, injury, or death. According to Vaisala's *2023 Annual Lightning Report*, Clark County experienced 12-16 total lightning events per square kilometer per year from 2016-2024, though the density of cloud-to-ground flash is much lower at 1-2 strokes per square kilometer per year.[13]

The Tornado & Storm Research Organisation in the United Kingdom has developed the TORRO **Hailstorm Intensity Scale** in **Table 10** to evaluate and report hail storm intensity and typical damage, which is largely a function of hail diameter. The scale also considers the kinetic energy of the hail stones, which is impacted by wind speed. As the TORRO webpage[14] explains, "a fall of walnut-sized hail with little or no wind may scar fruit and sever the stems of crops but would not break vertical glass and so would be ranked H2-3. However, if accompanied by strong winds, the same hail may smash many windows in a house and dent the bodywork of a car, and so be graded an intensity as high as H5."

Table 10. TORRO Hailstorm Intensity Scale

Scale	Intensity Category	Typical Hail Diameter (mm)*	Probable Kinetic Energy (J m^{-2})	Typical Damage Impacts
H0	Hard hail	5	0-20	No damage
H1	Potentially damaging	5-15	>20	Slight general damage to plants and crops
H2	Significant	10-20	>100	Significant damage to fruit, crops, vegetation
H3	Severe	20-30	>300	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
H4	Severe	25-40	>500	Widespread glass damage, vehicle bodywork damage

[13] https://www.xweather.com/annual-lightning-report
[14] https://www.torro.org.uk/research/hail/hscale

H5	Destructive	30-50	>800	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
H6	Destructive	40-60		Bodywork of grounded aircraft dented, brick walls pitted
H7	Destructive	50-75		Severe roof damage, risk of serious injuries
H8	Destructive	60-90		(Severest recorded in the British Isles) Severe damage to aircraft bodywork
H9	Super Hailstorms	75-100		Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
H10	Super Hailstorms	>100		Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

NOAA tracks and reports severe thunderstorms using watches and warnings:

Severe Thunderstorm Watch	Severe thunderstorms are possible in and near the watch area. Stay informed and be ready to act if a severe thunderstorm warning is issued. The watch area is typically large, covering numerous counties or even states.
Severe Thunderstorm Warning	Severe weather has been reported by spotters or indicated by radar. Warnings indicate imminent danger to life and property. Take shelter in a substantial building. Get out of mobile homes that can blow over in high winds. Warnings typically encompass a much smaller area (around the size of a city or small county) that may be impacted by a large hail or damaging wind identified by an NWS forecaster on radar or by a trained spotter/law enforcement who is watching the storm.

Event History – Thunderstorm, Lightning, & Hail

Figures 12 and 13 on the following pages show that lightning and hail events occur statewide. Since 1982, Clark County has experienced a low number of reported lightning events (4). In comparison, Clark County has had a relatively high number of hail events (116).

Figure 12. Wisconsin Lightning Events, 1982-2024

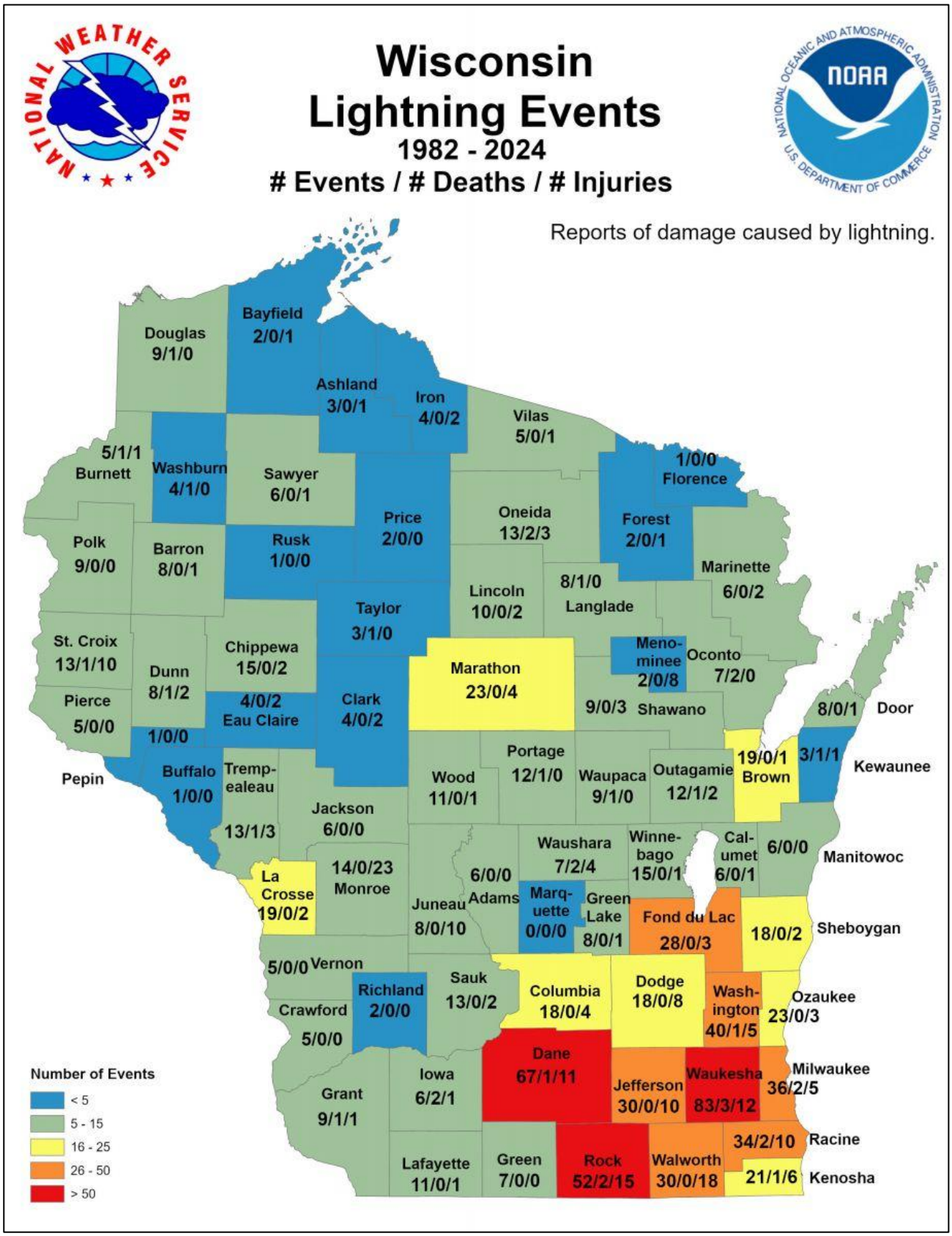
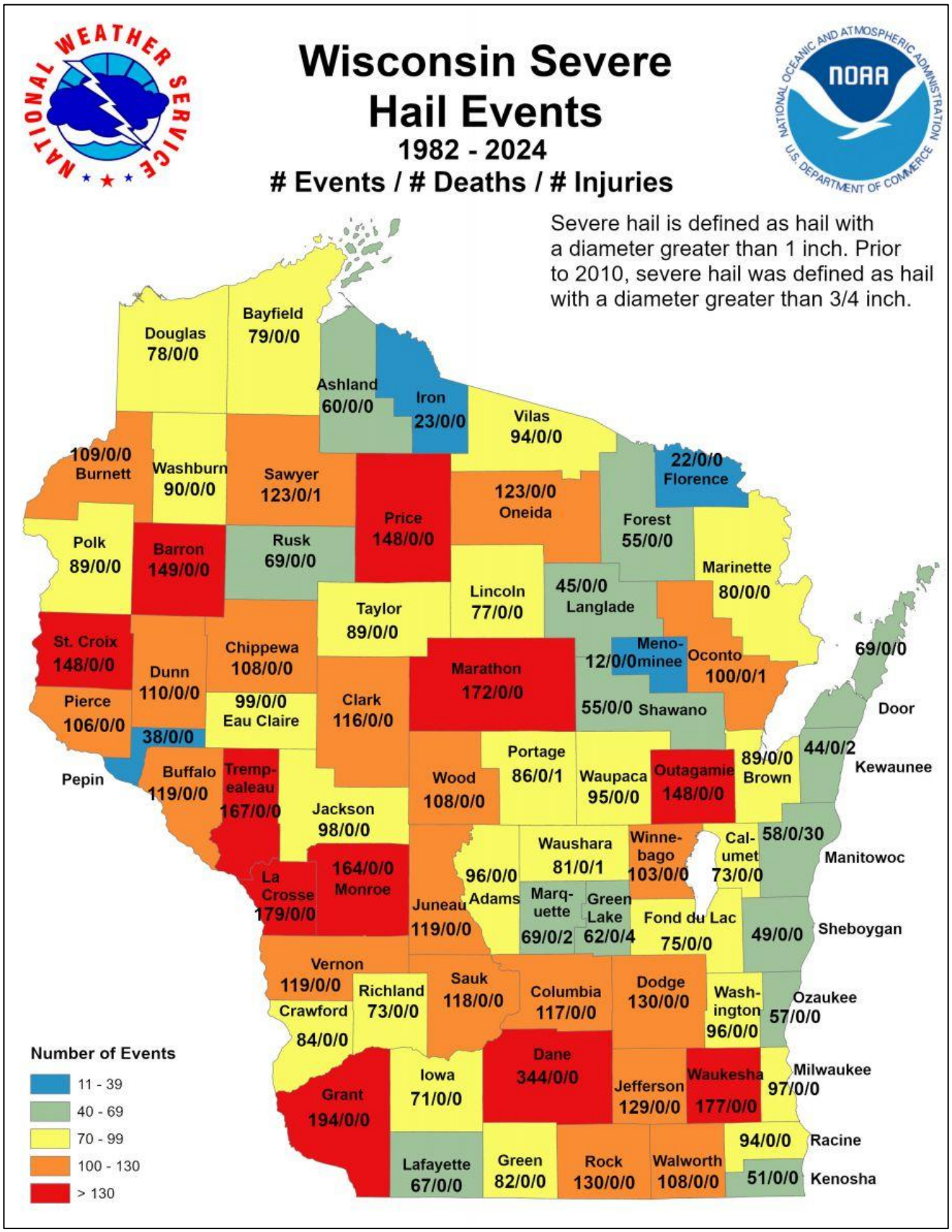


Figure 13. Wisconsin Hail Events, 1982-2024



E. WINTER STORMS & EXTREME COLD

The information below is supplemental to the information contained within Section III.C.iii. of the *Clark County Hazard Mitigation Plan.*

Defining the Hazard —Winter Storms and Extreme Cold

The *Clark County Hazard Mitigation Plan* defines several terms associated with winter storms and extreme cold.

Hazard Extent

The **Sperry-Piltz Ice Accumulation (SPIA) Index** in **Figure 14** provides five impact categories based on precipitation totals, temperature, wind speed and wind direction; wind is an included factor since ice accumulation on trees, utility lines, etc., is much more prone to causing damage due to the added stress of high winds. The SPIA index is used to predict and communicate the potential impacts of ice storm events, including the potential for long-term power loss.

Cold temperatures can be deadly, especially when accompanied by high winds. The combination of cold temperature and wind creates a perceived temperature known as "wind chill." When wind blows across the skin, it removes the insulating layer of warm air adjacent to the skin. When all factors are the same, greater heat loss and a colder feeling is experienced as wind speed increases. As winds increase, heat is carried away from the body at a faster rate, driving down both the skin temperature and, eventually, the internal body temperature. Shown in **Table 11** are the calculated **wind chill temperatures** as a result of specified air temperatures and wind speed.

Figure 14. Ice Storm Damage Index

ICE DAMAGE INDEX	DAMAGE AND IMPACT DESCRIPTIONS
0	Minimal risk of damage to exposed utility systems; no alerts or advisories needed for crews, few outages.
1	Some isolated or localized utility interruptions are possible, typically lasting only a few hours. Roads and bridges may become slick and hazardous.
2	Scattered utility interruptions expected, typically lasting 12 to 24 hours. Roads and travel conditions may be extremely hazardous due to ice accumulation.
3	Numerous utility interruptions with some damage to main feeder lines and equipment expected. Tree limb damage is excessive. Outages lasting 1 – 5 days.
4	Prolonged & widespread utility interruptions with extensive damage to main distribution feeder lines & some high voltage transmission lines/structures. Outages lasting 5 – 10 days.
5	Catastrophic damage to entire exposed utility systems, including both distribution and transmission networks. Outages could last several weeks in some areas. Shelters needed.

Table 11. Wind Chill Table (in Degrees Fahrenheit)

Temperature (°F)	Wind Speed (MPH)								
	5	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**
30	25	21	19	17	16	15	14	13	12
25	19	15	13	11	9	8	7	6	5
20	13	9	6	4	3	1	0	-1	-2
15	7	3	0	-2	-4	-5	-7	-8	-9
10	1	-4	-7	-9	-11	-12	-14	-15	-16
5	-5	-10	-13	-15	-17	-19	-21	-22	-23
0	-11	-16	-19	-22	-24	-26	-27	-29	-30
-5	-16	-22	-26	-29	-31	-33	-34	-36	-37
-10	-22	-28	-32	-35	-37	-39	-41	-43	-44
-15	-28	-35	-39	-42	-44	-46	-48	-50	-51
-20	-34	-41	-45	-48	-51	-53	-55	-57	-58

Source: National Weather Service

The potential and intensity of winter storms and extreme cold/wind chill events is publicly shared through NOAA's weather alert systems. The table below outlines NOAA's definitions and criteria for each of the primary winter weather-related alerts.

Watch - Generally issued in the 24 to 72 hour forecast time frame when the risk of a hazardous winter weather event has increased (50 to 80% certainty that warning thresholds will be met). It is intended to provide enough lead time so those who need to set their plans in motion can do so.	Winter Storm Watch	Conditions are favorable for a winter storm event (heavy sleet, heavy snow, ice storm, heavy snow and blowing snow or a combination of events) to meet or exceed local winter storm warning criteria in the next 24 to 72 hours. Criteria for snow is 7 inches or more in 12 hours or less; or 9 inches or more in 24 hours covering at least 50 percent of the zone or encompassing most of the population. Criteria for ice is 1/2 inch or more over at least 50 percent of the zone or encompassing most of the population.
	Extreme Cold Watch	Dangerously cold air, with or without wind, is possible. Prior to October 2024, was called a Wind Chill Watch when conditions are favorable for wind chill temperatures to meet or exceed local wind chill warning criteria in the next 24 to 72 hours. Wind chill temperatures may reach or exceed -25°F.
Warning - Issued when a hazardous winter weather event is occurring, is imminent, or has a very high probability of occurrence (generally greater than 80%). A warning is used for conditions posing a threat to life or property.	Blizzard Warning	Blizzard event is imminent or expected in the next 12 to 36 hours. Sustained wind or frequent gusts greater than or equal to 35 mph will accompany falling and/or blowing snow to frequently reduce visibility to less than 1/4 mile for three or more hours.
	Ice Storm Warning	An ice storm event is expected to meet or exceed local ice storm warning criteria in the next 12 to 36 hours. Criteria for ice is 1/2 inch or more over at least 50 percent of the zone or encompassing most of the population
	Winter Storm Warning	A winter storm event (heavy sleet, heavy snow, ice storm, heavy snow and blowing snow or a combination of events) is expected to meet or exceed local winter storm warning criteria in the next 12 to 36 hours.
	Extreme Cold Warning	Dangerously cold air, with or without wind, is expected. Prior to October 2024, was called a Wind Chill Watch when wind chill temperatures are expected to meet or exceed local wind chill warning criteria in the next 12 to 36 hours. Wind chill temperatures may reach or exceed -25°F.
Advisory - Issued when a hazardous winter weather event is occurring, is imminent, or has a very high probability of occurrence (generally greater than 80%). An advisory is for less serious conditions that cause significant inconvenience and, if caution is not exercised, could lead to situations that may threaten life and/or property. NOTE: The issuance of an "Advisory" is being phased out by the National Weather Service in the near future and will be replaced with a plain language description of the possible hazardous conditions.	Winter Weather Advisory	A winter storm event (sleet, snow, freezing rain, snow and blowing snow, or a combination of events) is expected to meet or exceed local winter weather advisory criteria in the next 12 to 36 hours but stay below warning criteria.
	Cold Weather Advisory	Cold air is expected. Prior to October 2024, was called a Wind Chill Advisory when wind chill temperatures are expected to meet or exceed local wind chill advisory criteria in the next 12 to 36 hours. Wind chill temperatures may reach or exceed -15°F.

Event History – Winter Storms & Extreme Cold

Regional Trends

Most winter storm events are typically regional in nature and are not limited to a localized area or county. However, levels of snowfall or ice accumulations can vary significantly over relatively short distances. Much of the snowfall in Wisconsin occurs in small amounts of between one and three inches per occurrence. Heavy snowfalls that produce at least six inches of accumulation occur on average about 10-12 times per winter statewide. True blizzards are rare in Wisconsin. They are more likely to occur in northwestern Wisconsin than in southern portions of the State, even though heavy snowfalls are more frequent in the southeast. However, blizzard-like conditions can exist during heavy snowstorms when gusty winds cause the severe blowing and drifting of snow. Seasonal average snowfalls in Wisconsin vary between approximately 30 inches in extreme southern parts of the State to over 100 inches in the Lake Superior snowbelt.

The following are some of the winter storm record-breaking events for Wisconsin:

Record	Location	County	Date	Magnitude
24-hour snow accumulation	Neillsville	Clark	December 27-28, 1904	26 inches
Seasonal snow accumulation	Hurley	Iron	Winter 1996-97	25.2 feet
Snowless streak	Milwaukee	Milwaukee	March 4-December 18, 2012	288 days
Coldest temperature	Couderay	Sawyer	February 4, 1996	-55° F

Both ice and sleet storms can occur at any time throughout the winter season from October into April. Early- and late-season ice and sleet storms are generally restricted to northern Wisconsin. Otherwise, the majority of these storms during the winter months occur in southern Wisconsin. In a typical winter season, there are 3 to 5 freezing rain events; and a major ice storm occurs on a frequency of about once every other year. If a half-inch of rain freezes on trees and utility wires, extensive damage can occur, especially if accompanied by high winds that compound the effects of the added weight of the ice. There are also between three to five instances of glazing (less than 1/4 inch of ice) throughout the State during a normal winter.

Significant Historical Clark County Events (pre 2010)

At the NOAA weather station in Neillsville, the average monthly low temperature since 1990 is 14.6º Fahrenheit in January. A low temperature of –48º was recorded for January 30, 1951. Seasonal snowfall averages 40.6 inches, but can vary dramatically from year to year, with a 73-inch snow depth being the deepest ever recorded in 1901 followed by 44 inches in 1971. Ten or more inches of snow has fallen within a 24-hour period during the months of January, February, March, April, and December. The winter storm assessment in Section III.C. discusses the most recent severe winter storm events for Clark County. According to the National Weather Service, the worst snowstorms in the State of Wisconsin from 1881 to 2010 that potentially included Clark County are:

- **March 2-4, 1881** - Southern / Central - Blizzard - 2 to 4 feet of snow. Drifts to 20 feet. Milwaukee reported 28.5 inches.
- **January 15, 1887** - Southern / Central - Snowstorm - 2 feet of snow. Huge drifts.
- **December 27-28, 1904** - Southern / Central - Heavy snow/ice. 26 inches of snow at Neillsville (Clark County).

- **January 30-February 1, 1915** - Southern / Central - Heavy snow / ice – severe glazing. 10 inches of snow in Milwaukee.
- **February 12-14, 1923** - Statewide - Blizzard - Heavy snow - severe drifting.
- **February 8-10, 1936** - Statewide - Blizzard - severe drifting.
- **November 6-8, 1943** - Statewide - Heavy snow / ice - 10 to 18 inches of snow. Roads blocked for several days.
- **January 28-30, 1947** - Southern / Central - Blizzard - 10 to 27 inches. Drifts to 15 feet. Roads blocked.
- **January 22-23, 1982** - North half - Blizzard - 10 to 20 inches. Superior had 19 inches.
- **November 30 - December 2, 1985** - Statewide (except southeast corner) - Widespread snows of 10 to 18 inches. Madison had about 10 inches.
- **October 31 - November 2, 1991** - Northwest / West Central - Blizzard - "Halloween Storm" - 15 to 30 inches, 6 to 10 foot drifts. 30 inches in Burnett, Douglas, Polk, and Clark counties.
- **January 26-27, 1996** - Statewide - Heavy snow - 6 to 18 inches. Localized amounts of 16 to 18 inches fell along a line from La Crosse to Green Bay.
- **March 13-14, 1997** - West Central / Northeast - Snowstorm - 12 to 28 inches. 28 inches at Wautoma in Waushara County.
- **January 21-22, 2005** - Statewide - Blizzard (gusts to 50 mph) - 6 to 15 inches. Although winds gusted up to 50 mph in some areas and visibilities were reduced to less than 1/4 mile due to falling or blowing snow, many areas didn't experience these conditions for 3 hours or more to classify as a full blizzard. Nonetheless, heavy snow and very windy conditions created near white-out conditions especially in the south and east. The heaviest totals occurred near Lake Michigan due to additional lake effect, where some areas ended up near 15 inches.
- **March 18-19, 2005** – West-central – Winter Storm – 18 to 23 inches in a swath from southern Buffalo County to western Jackson County, with 12 to 15.6 inches in La Crosse County. The maximum of 23 inches occurred in northwestern Jackson County.
- **March 13-14, 2006** – West-central to North-central– Winter Storm – 17 to 32 inch swath from the La Crosse area northeast to Iron County. Thundersnow enhanced the accumulations. Very poor visibility resulted from gusty winds around 30 mph and drifting resulted in hundreds of accidents and windchills of negative 20 to 30.
- **February 23-26, 2007** – West-central (through southern and eastern Wisconsin) – Blizzard - Two-round storm, with one overnight the 23rd to 24th, and the second round overnight the 24th into the 25th. Leftover snow accumulations continued overnight the 25th into the 26th. In counties surrounding La Crosse, 8 to 15.6 inches (Galesville) fell in round one, while round two produced 6 to 12.5 inches (Sullivan NWS office) over the southern three-fourths of the State. The leftover snow added another 1 to 4 inches, except for 6 to 14 inches from New London into Door County. Many locations totaled 20 to 25 inches for this long-duration two-punch episode from around La Crosse to Port Washington and a small part of Door County. Gusty winds generated snow drifts up to 5 to 7 feet in height.
- **December 8-9, 2009** – Nearly statewide – winter storm – large area experienced 12 inches or more. Madison area had 17 to 20 inches, 15 to 17 inches in the La Crosse area, 14 to 16 inches in the Green Bay area, and 16 to 28 inches in the Lake Superior snow-belt. The greatest amount of around 28 inches occurred in the Hurley, Iron County area.

Winter-Related Accidents & Drifting in Clark County

Drifting of snow on many of the roads of Clark County is common during winters when snow and high winds are present, but can be a serious hazard resulting in accidents or restricting travel.

One of the most frequently winter-related concern mentioned during meetings and interviews was winter travel on State Highway 29 due to the speeds and traffic volumes involved. Overall, 61 vehicle crashes occurred on State and Federal highways in Clark County during Winter 2016-2017, all occurring in rural areas. The crash rate per 100 million vehicle miles of 28 was higher than the regional average of 20, but much less than St. Croix County (70), which was the highest rate in Wisconsin.

Westbound traffic on U.S. Highway 10 near The Highground Veterans Memorial Park and Museum was noted to be prone to accidents during icy conditions as travelers descending the steep hill on the highway make a turn at the base of the hill. Similarly, ice and drifting on Highway 13 north of Abbotsford has prevented semi-truck traffic from being able to ascend a hill. Due to the speeds and higher traffic volumes, STH 29 and its at-grade intersections can be particularly dangerous under slippery conditions.

The Highway Department and law enforcement patrols give special attention to known winter hazard driving "hotspots." Though Winter 2016-2017 did not have a high number of winter storm events, the County Highway Department reported that Clark County had higher than average snow totals (83.2 inches) and thirty storm events requiring highway maintenance. For state and federal highways during that winter, the County Highway Department reported using over 5,000 tons of salt, applying nine anti-icing applications, and incurring about $910,000 in related winter maintenance costs (or about $2,260 per lane mile).[15]

The Highway Department also installs snow fencing in areas prone to drifting on county, state, and federal highways, if farmers and landowners allow. No formal windbreak programs or initiatives exist. The Wisconsin DOT does have a program that reimburses farmers to leave corn rows standing that serve as snow fencing. During the planning process, there was very little familiarity with this program and high corn prices may also be decreasing its popularity.

While increases in traffic volumes and severe weather contributes to accidents, local officials also added that increasing speeds, distracted drivers, and less cautious drivers are also very important factors.

Winter-Related Threats to Agriculture

Overall, Clark County farmers are aware of the winter-related agricultural risks and most use best management practices to mitigate these risks. Winter crops are vulnerable to winter kill during periods of extreme cold without sufficient snow on the ground to help act as an insulator. Four inches of snow cover will allow up to a 20ºF difference in temperature between the soil and air and will prevent the premature breaking of dormancy during temporary warm spells. Some amount of winter kill is common and can be expected almost annually; more substantial winter kill events can be expected to occur one or two seasons each decade on average (about a 10 to 20 percent chance per year) based on recent trends. Late-spring frosts can also damage crops, especially fruit trees.

Alfalfa is especially vulnerable to winter kill, compared to other forage types. In 2002-2003, winter kill combined with drought during summer 2004 to reduce feed for cattle and create significant hardships for some Clark County producers. At about $1,500 of additional feed per mature cow for a year and with 160,000 head cattle in the County, feed replacement costs can accumulate quickly. Since alfalfa is a relatively low-value crop, it is typically uninsured. These additional costs can result in less of revenue to the individual producer and can be added costs to manufacturers (e.g., dairies, grocery stores, food processing) and consumers. Late fall alfalfa or hay cuttings can further contribute to winter kill since time is not allowed for adequate re- growth of ground cover which

[15] Wisconsin Department of Transportation Winter Storm Reports, 2016-2017.

provides an additional insulating blanket. Periods of freezing and thawing in the spring can also contribute to frost heaving within certain types of soils, leading to additional crop damage.

While less frequent, early frosts can also severely impact agricultural crops. The most significant early frost in recent history transpired in September 1974. This severe frost event occurred on multiple nights, included much of northern and western Wisconsin, and stretched as far south as Kansas. Some counties in the region lost more than 80 percent of the soybean and corn crops. Combined with the impacts of a summer drought, the soybean and corn losses were near 100 percent in Clark and also in nearby Chippewa, and Eau Claire counties. In today's dollars, the total statewide crop losses as a result of that September frost exceed $520 million. Late frosts can also be a concern for different crops. Following an unseasonably warm March, fruit crops got an early start on their growing season in 2012; however, an April frost then cause considerable damage to these vulnerable fruit crops. Production at some apple orchards in the region decreased by 20 to 100 percent. Pears and plums were hit hard, some tart cherry orchards had losses up to 80 percent, and the first picking of strawberries was completely lost.

F. EXTREME HEAT

The information below is supplemental to the information contained within Section III.C.v. of the *Clark County Hazard Mitigation Plan.*

Defining the Hazard - Extreme Heat

The National Weather Service issues the following heat-related announcements and advisory warnings in order of severity:

Extreme Heat Outlook Statement — Issued two to seven days in advance of when Heat Advisory or Excessive Heat Warning conditions are anticipated. Issued as a Hazardous Weather Outlook (HWO). Broadcasted on NOAA All Hazards Weather Radio and posted on NWS websites (www.weather.gov).

Heat Advisory — Issued six to 24 hours in advance of any 24-hour period in which daytime heat index (HI) values of 100 degrees or more and/or when air temperatures are expected to be 95 degrees or higher. If four consecutive days of these conditions are expected, then the Excessive Heat Warning will be issued.

Excessive Heat Watch — Issued generally 12 to 48 hours in advance of any 24-hour period in which daytime heat index (HI) values are expected to be 105 degrees or higher and nighttime HI values will be 75 degrees or higher.

Excessive Heat Warning — Issued six to 24 hours in advance of any occurrence of a 48-hour period in which daytime heat index (HI) values are expected to be 105 degrees or higher and nighttime HI values will be 75 degrees or higher.

If such conditions persist for a prolonged period of time, it is called a **heat wave**. Excessive or extreme heat is typically a slowly evolving phenomenon that can catch many people by surprise. Unlike tornados or thunderstorms that normally develop and occur more quickly and with more observable characteristics, a heat wave typically builds slowly over time. Because of this creeping effect, it is important for forecasters and officials to be constantly aware of heat and humidity conditions in order to properly warn and protect citizens.

Hazard Location

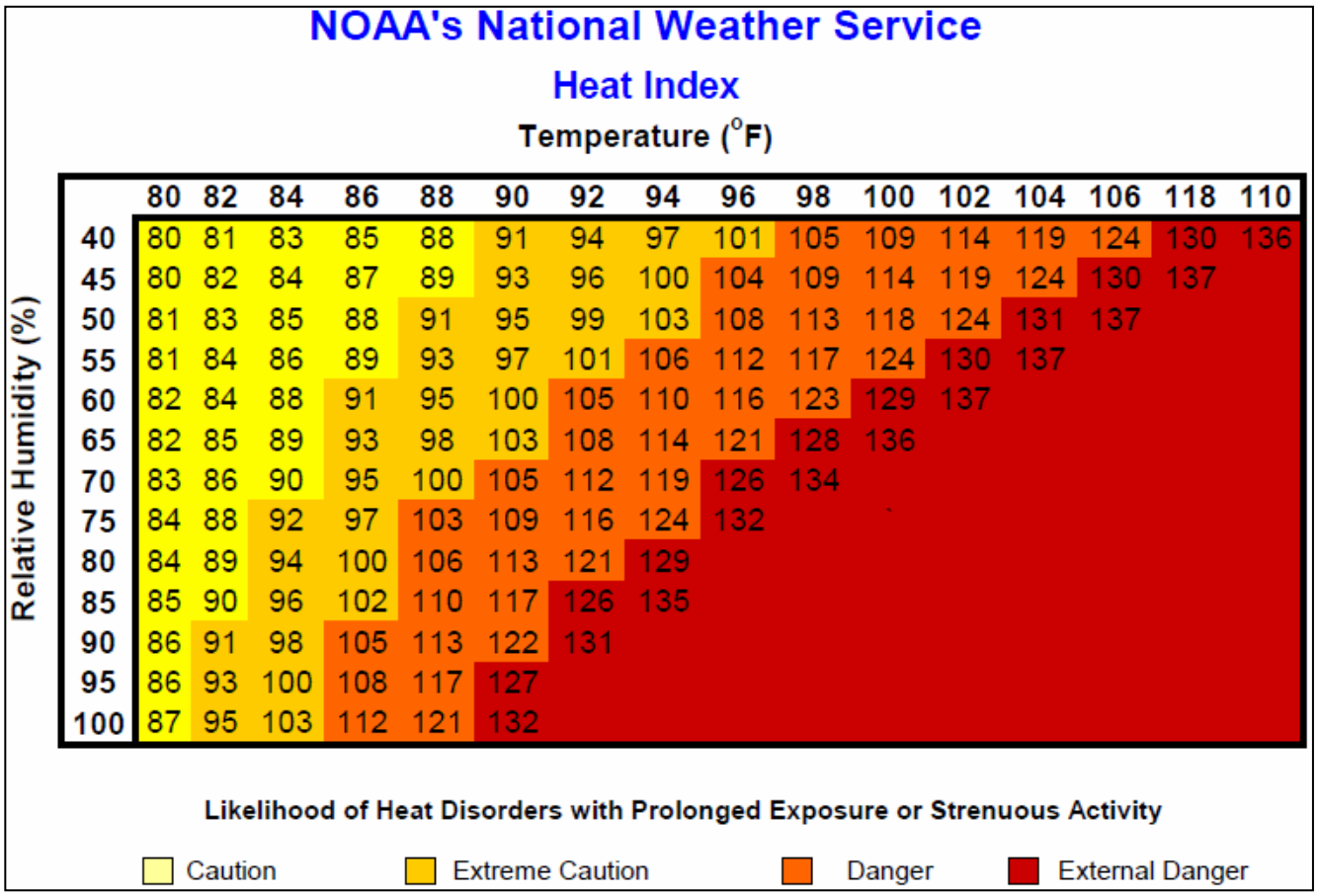
Extreme Heat is capable of causing health concerns, especially for vulnerable populations. Generally, extreme heat events are regional and will not impact assets outside of the heat event, although they will place additional pressure on medical services.

Hazard Extent (Potential Intensities)

Heat waves usually consist of high temperatures and high relative humidity. The combination of high temperatures and high relative humidity makes it difficult for the human body to dissipate heat through the skin and sweat glands. Sweating will not cool the human body unless the water is removed by evaporation. High relative humidity retards evaporation and, thus, inhibits the cooling process.

The National Weather Service (NWS) uses the heat index as a measure of the combined effects of high temperatures and high relative humidity, as shown in **Figure 15**.

Figure 15. Heat Index Table



SOURCE: NATIONAL WEATHER SERVICE

As indicated above, the heat index is a function of the actual temperature and the relative humidity. The categories in light orange, dark orange, and red indicate when the heat index values are of concern and precautions should be taken limiting sun exposure and physical activity.

Any time the temperature and humidity combine to produce a heat index that could cause health concerns for humans, the National Weather Service will issue various statements on heat conditions. For example, the NWS

issues “Heat Advisories” when it expects the daytime heat index to equal or exceed 105° for 3 hours or more and the nighttime heat index equals or exceeds 80° for any 24-hour period. The NWS issues “Excessive Heat Warnings” when it expects the daytime heat index to equal or exceed 115° for 3 hours or more and the nighttime heat index equals or exceeds 80° for any 24-hour period. The NWS may issue an "Excessive Heat Watch" 24 to 8 hours in advance of anticipated heat wave conditions.

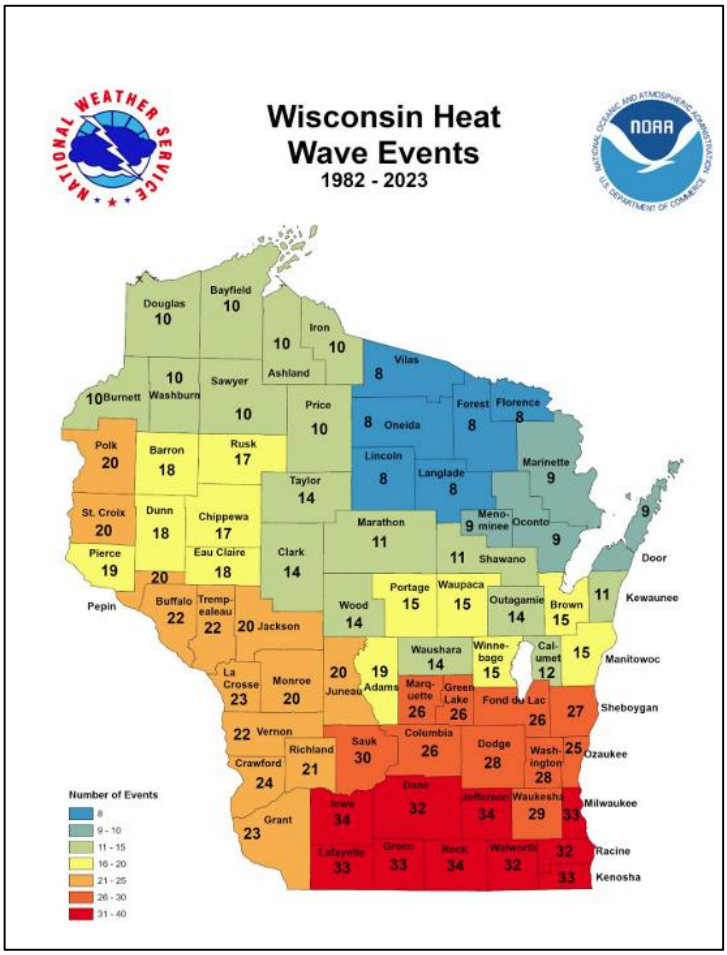
Event History – Extreme Heat

Regional Trends

Although Wisconsin may not be thought of as a high-risk area for deadly heat waves, every year the State of Wisconsin experiences a period or series of periods in which the temperature and humidity produce a heat index which could be harmful to human health. From 1982 to 2015, there were 137 deaths directly attributed to heat in Wisconsin and 102 indirect deaths. A death is considered direct if the medical examiner ruled that heat was the primary cause of death and not just a contributing factor. Department of Health Services identified 22 heat-related deaths from 2016 to 2022 (no breakdown or direct versus indirect). In total from 1982 to 2020, 261 people have died in Wisconsin from heat-related causes. It is likely that this estimate is lower than the actual number given the difficulty of determining and tracking heat-related deaths.

The following are examples of recent heat wave events affecting Wisconsin:

- During the summer of 1995, two heat waves affected most of Wisconsin. Together, they resulted in 154 heat-related deaths and an estimated 300 to 400 heat-related illnesses. This makes the combined 1995 summer heat waves the biggest weather-related killers in Wisconsin for the past 50 years, far exceeding tornado deaths. Nationwide, the heat waves claimed 1,021 lives.
- In 1999, heat waves occurred on in multiple weeks of July. Collectively, these heat waves were directly and indirectly responsible for 21 deaths.
- Several heat waves from mid-July through early August 2001 claimed 15 fatalities across Wisconsin. Additionally, it is estimated that 300 or more individuals were treated at hospitals for heat-related conditions.
- There were an additional 21 heat-related deaths and likely hundreds of related illnesses in July 2012, with heat indices peaking in the 100º to 115º F range, especially in the southern parts of the Wisconsin.



- In July of 2016, hot temperatures and very high dew point temperatures persisted over southern Wisconsin; the area saw heat index values in the lower to mid-100s. There were 3 heat-related deaths in 2016.

Vulnerability Assessment - Extreme Heat

Assessing the Potential Vulnerability & Impacts to County Residents

Temperatures in excess of 90°F pose a risk of heat-related illness and death, especially when humidity levels exceed 35 percent. The risk is highest for individuals who are suffering from chronic illnesses and for those who are not acclimated to these conditions. Most health-related illnesses involve the elderly, especially those residing in urban areas for which temperatures can be further elevated due to the urban heat island effect. However, people on certain medications, isolated individuals who live alone and seldom leave their home, infants and young children, persons with chronic heart or lung problems, overweight people, persons with disabilities, and people who work outside are also at greater risk during extreme heat events. Research findings strongly suggest that heat index values of 90 to 105 make sunstroke, heat cramps, and heat exhaustion possible with prolonged exposure and/or physical activity. Heat index values of 105 to 130 degrees make sunstroke, heat cramps, and heat exhaustion likely with prolonged exposure and/or physical activity. Shown in **Table 12** are the potential dangers associated with heat index temperatures.

Table 12. Apparent Temperature Heat Stress Index (Dangers Associated with Heat Index Temperatures)

Category	Apparent Temperature (Heat Index - °F)	Associated Dangers
Caution	80-90°F	Exercise more fatiguing than usual.
Extreme Caution	90-105°F	Heat cramps, exhaustion possible.
Danger	105-130°F	Heat exhaustion likely; heatstroke possible.
Extreme Danger	Greater than 130°F	Heatstroke or Sunstroke imminent.

Source: National Weather Service

Heat cramps are muscle spasms from the result of a large amount of salt and water, and generally cease to be a problem after acclimatization. **Heat exhaustion** may cause dizziness, weakness, nausea, or fatigue from the depletion of body fluids, and may be accompanied by slightly to moderately elevated body temperatures. **Heatstroke** is when the body is unable to regulate and prevent a substantial rise in the body's core temperature. It is usually diagnosed when the body's temperature exceeds 105º F due to environmental temperatures. **Sunstroke** is a form of heatstroke brought about by excessive exposure to the sun. Heatstroke or sunstroke are considered medical emergencies and can be fatal. The risk of heat-related injury or death is for individuals who are suffering from chronic illnesses and for those who are not acclimated to these conditions. Most health-related illnesses involve the elderly. However, people on certain medications, isolated individuals who live alone and seldom leave their home, infants and young children, persons with chronic heart or lung problems, overweight people, persons with disabilities, homeless individuals who do not have an air conditioned place to go, and people who work outside are also at greater risk during extreme heat events. Mobile homes, campers, pole buildings, and similar construction, if not air conditioned, can also become dangerous under extreme-heat conditions.

The Building Resilience Against Climate Effects (BRACE) program in the Wisconsin Department of Health Services has compiled a heat vulnerability index map for the State based on a combination of risk factors (population density, health factors, demographic and socioeconomic factors, and the natural and built environment). **Figure 16** shows the heat vulnerability index map for Wisconsin. The vulnerability for most of Clark County was primarily rated low with some areas rated as moderate low, likely due to lower average incomes and/or an aging population.

Any time the temperature and humidity combine to produce a heat index that could cause health concerns for humans, the National Weather Service will issue various statements on heat conditions. For example, the NWS issues "Heat Advisories" when it expects the daytime heat index to equal or exceed 105° for 3 hours or more and the nighttime heat index equals or exceeds 80° for any 24-hour period. The NWS issues "Excessive Heat

Warnings" when it expects the daytime heat index to equal or exceed 115° for 3 hours or more and the nighttime heat index equals or exceeds 80° for any 24-hour period. The NWS may issue an "Excessive Heat Watch" 24 to 8 hours in advance of anticipated heat-wave conditions.

Few options are available for a community to mitigate extreme heat. Cooling shelters or centers can be activated or identified for persons without air conditioning. The Red Cross and other service agencies may become involved if a longer-term, critical event occurs which impacts large numbers of people (extended power outage during very extreme heat). Clark County has not formally identified, designated, or opened cooling shelters in the past, though some communities have identified libraries or other community buildings as an option during normal hours of operation, if needed. Opportunities exist to consider such agreements with partner organizations in conjunction with Great Rivers 2-1-1.

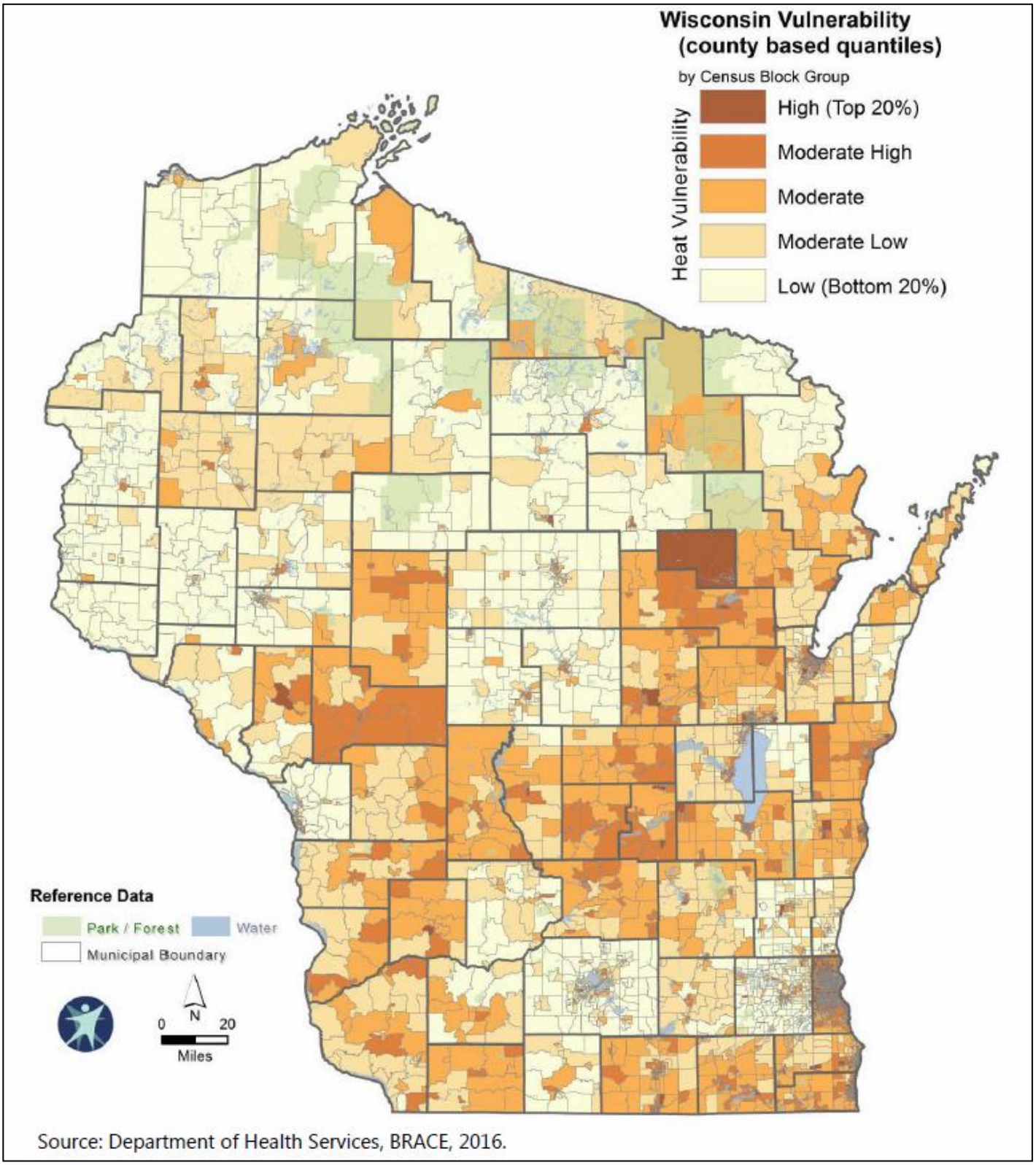
In the region, most efforts focus on educating the public to the risks, vulnerabilities, and how to prevent heat-related illness. Clark County Emergency Management and Public Health offices distribute educational information via local media and social media on steps to minimize the impacts of extreme heat. Local media often provide their own news coverage and educational outreach. In addition, the Clark County Aging and Disability Resource Center distributes educational information through its newsletter to the County's elderly; and its meal delivery personnel help maintain watch over elderly clients who might be more at-risk of succumbing to the impacts of extreme heat.

Beyond educational efforts and activating cooling shelters, other mitigation alternatives are limited. A targeted air conditioning program, such as working with local suppliers to offer rebates, could be one alternative, but would be expensive. Some communities with significant urban heat islands have attempted to increase vegetative cover, reduce hardscape, or have considered policies to change the albedo (reflectivity) of pavement, roofs, and other surfaces. The impacts of these policies are often difficult to model and prove. For areas experiencing an increase in extreme heat events, another approach is adaptation which considers the type of vegetation being planted, the reuse of water supplies, scheduling of activities, etc. See Section III.B. for additional adaptive strategies.

Extreme heat also has impacts for agriculture. In July 2012, Green Bay-area dairy farmers were reporting up to a 33 percent reduction in milk production due to heat; and it can take months before animals recover.[16] Extreme heat within confined livestock buildings can also result in deaths, especially should power be lost. Water misting is sometimes used to keep confined livestock cool during the hottest of temperatures. Extreme heat and drought can also result in the build-up of toxic gases within grain silos to lethal levels or result in fires or explosions.

[16] http://www.wbay.com/story/19037284/2012/07/16/milk-production-takes-a-dip-with-extreme-heat

Figure 16. Wisconsin Heat Vulnerability Index



Source: Department of Health Services, BRACE, 2016.

G. FLOODING

The information below is supplemental to the information contained within Section III.C.iv. of the *Clark County Hazard Mitigation Plan.*

Defining the Hazard – Flooding

Flooding is defined as a general condition of partial or complete inundation of normally dry land from the overflow of inland waters, or the unusual and rapid accumulation or runoff of surface waters from any source.

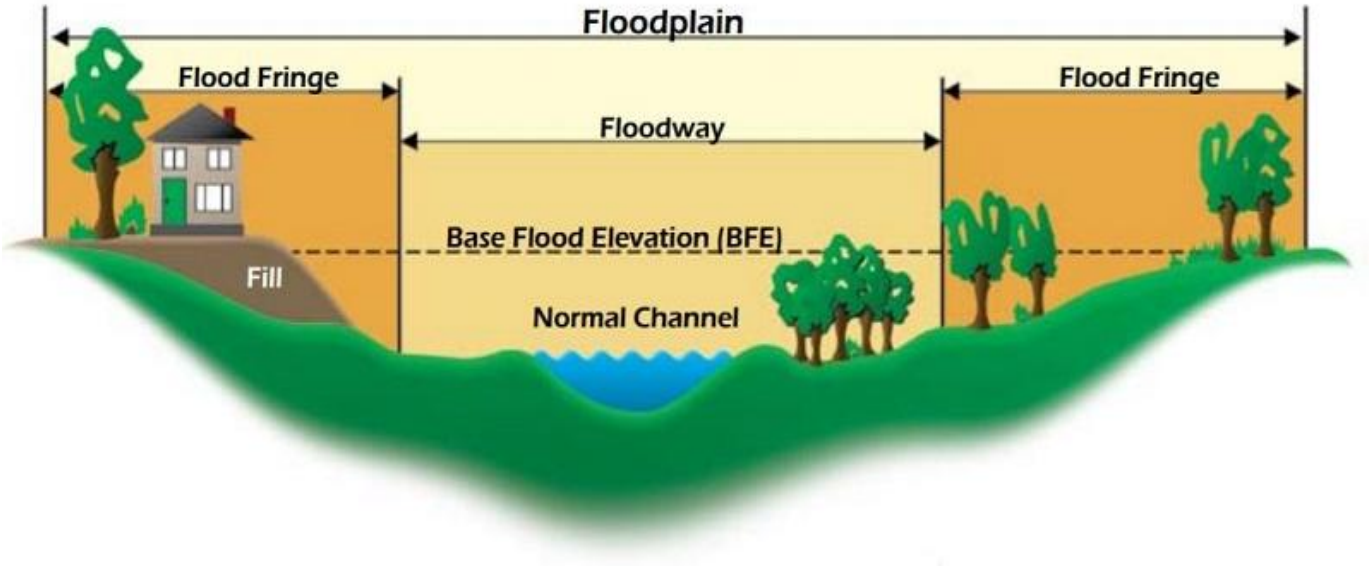
For regulatory purposes, the terms "100-year flood" and "floodplain" are commonly used. A **100-year flood**, often referred to as a **regional flood, special flood hazard area,** or **base flood**, is a flood that has a one percent chance of being equaled or exceeded in any given year. This can be misleading as a 100-year flood is not a flood that will occur once every 100 years. The 100-year flood, which is the standard used by most Federal and State agencies, is used by the National Flood Insurance Program (NFIP) as the standard for floodplain management and to determine the need for flood insurance. Under the NFIP, the 100-year floodplain is also called the Special Flood Hazard Area (SFHA).

Key Definition

A 100-year flood has a 1% chance of being equaled or exceeded in any given year.

A **floodplain** is land which has been or may be covered by floodwater during a flood event and includes the floodway and flood fringe areas (see **Figure 17**). Often, the term "floodplain" is used inappropriately by assuming that floodplains are limited to the 100-year floodplain boundary that is used for regulatory and insurance purposes. This is not the case, and a floodplain can be identified for a 200-year flood, 500-year flood, or other such level of risk.

Figure 17. Elements of a Floodplain



Source: FEMA National Flood Insurance Program Guidebook

Floods greater than a 100-year regional flood event can and do occur. Nationwide, approximately 25 percent of all NFIP loss claims are for structures outside the 100-year floodplain. This is a surprisingly high number, since many homes or structures outside the 100-year floodplain do not have flood insurance; and flood insurance is

typically not required by lending institutions for mortgages on structures not within the 100-year floodplain. But this demonstrates that most properties are at risk of flooding to some degree.

The **floodway** is the channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional flood discharge. Since it is associated with moving water, the floodway is the most dangerous part of the floodplain. The **flood fringe** is the portion of the floodplain outside of the floodway, which is covered by flood water during the regional flood and is generally associated with the storage of water rather than flowing water. The flood fringe is also that part of the floodplain in which development may be allowed in some communities, subject to floodplain development standards.

The **regional flood elevation** is the elevation determined to be representative of large floods known to have occurred in Wisconsin or which may be expected to occur on a particular lake, river, or stream at a frequency of one percent during any given year. The **flood protection elevation** is an elevation which is 2 feet above the regional flood elevation as defined by the Wisconsin Department of Natural Resources. Development is sometimes allowed within the flood fringe if the structure is raised above the flood protection elevation. However, development in the flood fringe can decrease important floodwater storage; hydraulic analysis is often needed to ensure that the development will not result in increased flooding in adjacent areas or farther downstream.

Flash flooding is more difficult to distinguish and can, in fact, be either riverine (overbank) or stormwater (overland) flooding. In this plan, flash flooding has been grouped with stormwater flooding due to its often unpredictable nature and the intense, rapid rise and velocity of the water levels. For prediction and warning purposes, floods are classified by the National Weather Service into two types: those that develop and crest over a period of approximately six hours or more, and those that crest more quickly. The former are referred to as "floods" and the latter as "flash floods." Like stormwater flooding, flash flooding is typically the result of intense rainfalls possibly in conjunction with already saturated soils, though very sudden snow melts can also contribute to stormwater or flash flooding.

Areas with steep slopes and narrow stream valleys are more vulnerable to stormwater and flash flooding, as the water can achieve high velocity in a short time. Developed areas with substantial impervious surfaces can further contribute to stormwater and flash flooding. Flash floods often occur in smaller watersheds, or are very localized, and are not necessarily reflected on most FEMA FIRMS. Flash flooding can also be the result of **dam failure**, which can occur from structural problems at the dam, hydrologic problems, malfunction of equipment, or human error in the monitoring or release of water. As such, dam failure can occur with little or no warning and on clear days with no rain, unlike the other types of flooding.

Event History – Flooding

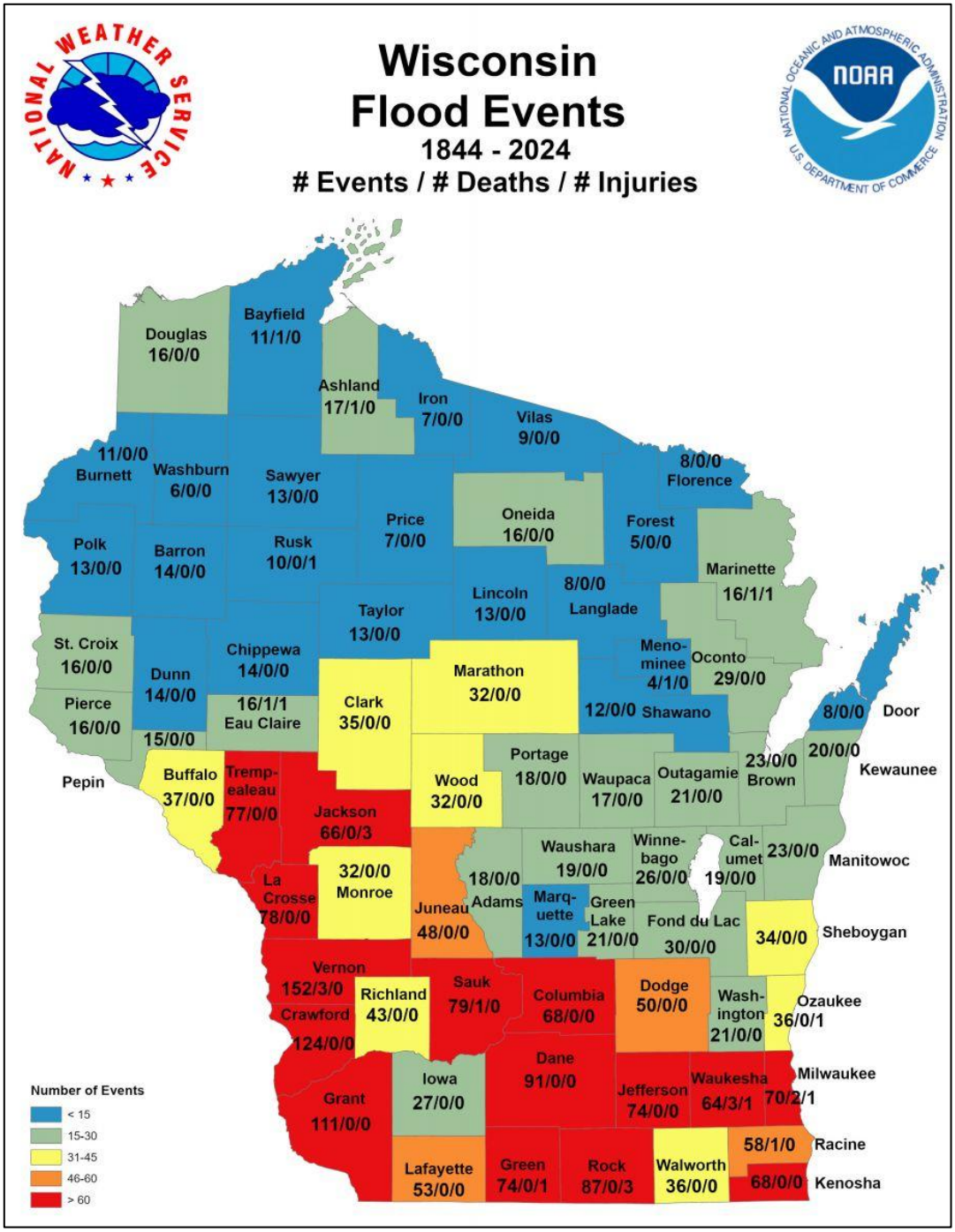
Regional Trends

Figure 18 shows the county-by-county distribution of flood events across Wisconsin for the period of 1844 to 2024. Compared to southern Wisconsin, Clark County has had a relatively low number of severe flooding events, but when compared to norther Wisconsin it has had a relatively large number of flood events. Hilly terrain in the Driftless Area of southwestern Wisconsin and the built-up urban areas in the south-southeast are factors that increase the chances of flooding. Even so, very few flood-related injuries and deaths have occurred.

Low-lying areas of those Wisconsin counties that border the Wisconsin and Mississippi Rivers and many nearby tributaries, including the Chippewa River, are prone to riverine flooding. As development has increased, agricultural flooding in some areas has increased as well. Shoreline development has also increased both the risk and vulnerabilities to flooding. Since the 1960s, the number of homes along northern Wisconsin lakes has increased over 216 percent. Statewide, an estimated 250,000 structures lie within 100-year floodplains.

Nationwide, floodplains have been slowly increasing in size due to increases in runoff and decreases in flood storage areas.

Figure 18. Reported Flooding Events in Wisconsin by County, 1844 to 2024



Flooding is the principal cause of damage for the far majority of Presidential Disaster Declarations in Wisconsin since 1971. From 1971 until 1993, the total flood damages in Wisconsin were estimated at $300 million. In June 1993, flooding over large areas of the State, including in Clark County, resulted in an estimated $352 million in

damages from this single event. Even worse flooding damage was experienced in Wisconsin in June 2008 with damages estimated at roughly $763 million.

There have been very few dam failures in Wisconsin that resulted in major damages or loss of life. The June 1993 flood event included the failure of an embankment associated with the Hatfield Dam on the Black River which contributed to flooding damage downstream in the City of Black River Falls. In June 2008, the Lake Delton Dam broke which resulted in mudslides which washed out a number of homes. Closer to home in 2002, a small privately owned dam in Osceola washed out and caused significant damage to a mobile home park. Many of Wisconsin's approximately 3,800 dams are small logging or milling dams built prior to 1900 and have little or no associated vulnerabilities. Between 1990 and 1995, more than 75 dam failures were documented in Wisconsin. Several of these incidents resulted in injuries and serious property damage, but no loss of life.

Significant Historical Clark County Events

The following summarizes major flood events in the County's history pre-2010; more recent flood events are detailed in Section III.C.iv. of the *Clark County Hazard Mitigation Plan*:

- In 1975, the towns of Unity, Mead, Colby, and Sherman had crop and road damages due to flooding. In 1978, the towns of Mead, Seif, Hendren, Foster, Mentor, Eaton, Weston, Levis, Dewhurst, Hewett, and Pine Valley had damages of $90,000 to road systems. In 1980, the cities of Owen and Neillsville had flooding in June and September. $12,000 of Red Cross money was spent to assist victims with repair and replacement of flood-damaged household goods. Due to the flash flooding, a woman drowned on Highway 29 in the Owen area. Businesses in Owen received flood damages and SBA assistance was requested.
- The year of 1993 was a very cool spring and summer with large amounts of rain which saturated the ground to a very high level. On June 19 (Father's Day), rains started in the very early morning hours, which caused flooding in the entire county. For instance, on June 20, 1993, a severe road washout occurred on Camp Globe Road at the Windy Run Creek crossing into the Town of Foster about 4 miles from Rock Dam. The road was eroded to a depth of about 10 feet and to a centerline length of about 200 feet. Due to saturated ground conditions, the natural retention area overflowed to the road ditch. The sandy soil eroded, causing a complete road washout. A FEMA Presidential Disaster Declaration was requested and approved for flood damages for the entire county. Disbursements to public agencies totaled $638,497. Disbursements to individuals, which included insurance, US Small Business Administration loans to business and grants to individuals, totaled $6,076,093.
- On June 27, l998, very heavy rains, measuring 6 ¾ inches in about a 5-hour period, in the extreme lower portion of Clark County, resulted in flash flooding with many road washouts. The towns with the greatest amount of road damage were Dewhurst, Grant, Levis, Lynn, Mentor, and Washburn. As a result of the severe damage, Clark County was included in a FEMA Presidential Disaster Declaration, with monetary awards to the towns of Dewhurst, Hewett, Levis, Lynn, Mentor, Pine Valley, Sherwood, and Washburn. Clark County Forestry and Parks Department and Clark Electric Cooperative also received monetary reimbursement for damages sustained as a result of the flooding.
- In September 2000, very isolated heavy rains in some northern towns resulted in flooding, causing considerable damage to crops in the Town of Thorp. There was also major road damage, with many impassible washouts in the towns of Thorp and Green Grove. Department of Transportation funds were received for the road damage, and Federal funding was available to farmers who sustained crop damage.
- In April 2001 to June 2001, very heavy rains, strong winds and rapid snow melt resulted in considerable flooding, causing substantial road damage and electrical damage. Clark County was included in Presidential Declaration #1369. The towns of Butler, Hixon, Longwood, Mead, Thorp and Withee; the cities of Greenwood, Neillsville, Owen and Thorp; and the Village of Withee; Clark County Highway Department; and Clark County Forest and Parks Department received funding from the Presidential Declaration.

- In September 2001, heavy rains hit the extreme northern portion of the county resulting in substantial road damage. Once again, assistance was requested and received from the Department of Transportation to repair roads that were impassible due to the flood damage.
- On Saturday, June 22, 2002, very heavy rains, ranging from 4 inches to 6 ½ inches, fell in about a four-hour period in northern Clark County. The towns of Thorp, Withee, Hixon, Reseburg, Longwood, Hoard, Mayville, Beaver, Loyal and Sherman sustained major road damage as a result. The towns of Green Grove, Colby and Unity sustained severe road damage, with almost all town roads being affected with road and culvert wash outs. This storm was included in the Presidential Declaration DR-1429-WI, declared on July 19, 2002.
- On July 30, 2002, a major windstorm again struck the towns of Colby, Hoard, Mayville, and Unity and the cities of Abbotsford and Colby. Power lines were downed throughout the area and, once again, flooding occurred in the area.

Flood Assessment Methodology

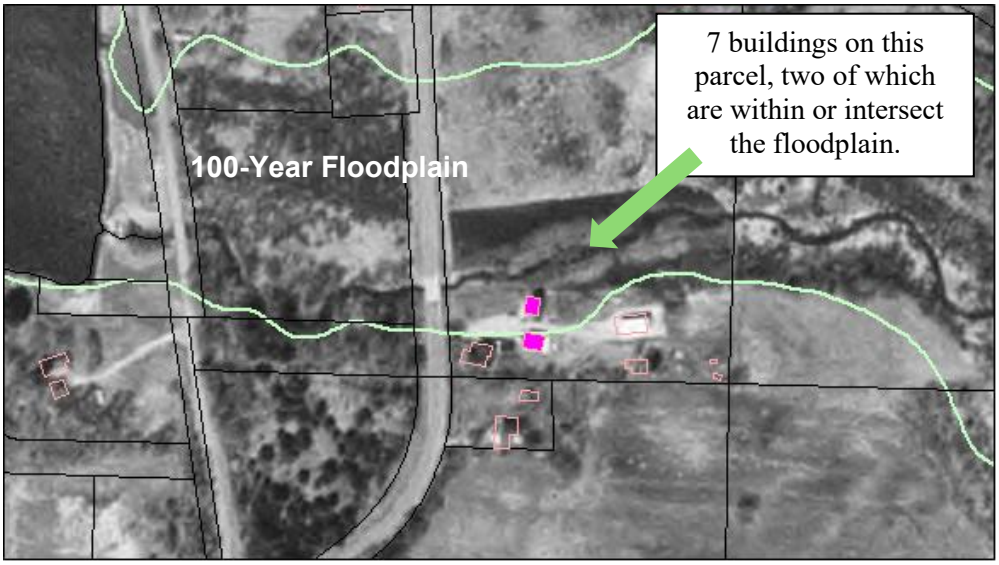
This subsection describes the flood assessment approach utilized in the flood assessment in Section III.C.iv. of the Mitigation Plan to identify potential vulnerabilities within the 100-year floodplains of Clark County.

Flood Assessment Data Challenges

1. No geographic database exists which identifies the characteristics of individual improvements and structures (e.g., basements, number of stories, base flood elevation) in the county. As a result, the flood assessment methodology uses a top-down, "birds-eye" perspective which does not account for site-specific topographic variation. A structure might appear to be located within the 100-year floodplain on a map, but could it have been landscaped or otherwise elevated above the base flood elevation.

2. Assessed values for improvements and tax records are linked to the parcel database, but are not linked to specific building point data. Based on orthophotography, we are able to identify which buildings may potentially be located in a 100-year floodplain, but the use and value of each individual building are not available. Since our assessment information is for the entire parcel, this becomes a problem in cases where not all of the buildings within a single parcel are within or intersect the 100-year floodplain or in case where only a portion of a building may intersect the floodplain boundary.

   It is quite common for a single parcel to include multiple buildings, such as in the example below. And as the example shows, there are instances where not all of the buildings within a single parcel are within or intersect the floodplain; such instances are much less common.



3. Estimated values of improvements are not available for all parcels. Tax data does not include a value of improvements for municipal buildings (e.g., town halls, fire stations), public infrastructure (e.g., wastewater treatment plants, water towers), and other non-taxable structures (e.g., churches, public housing, electric cooperatives, non-profits).
4. While LIDAR improved accuracy, local topographic variation still exists and floodplains change over time. It is important to keep in mind that a serious flood could exceed the estimated 100-year limits, as well as being impacted by other factors which may change over time, such as reduced flood storage or increased stormwater runoff.
5. Related to #4, most designated 100-year floodplain areas in Clark County fall within Zone A which have no base flood elevations (BFEs) established, making it more difficult to determine the actual vulnerability to individual structures.

Flood Assessment Methodology

It is cost prohibitive to perform the detailed survey work of structural characteristics and attaching tax assessment data to the individual structures (versus parcel) necessary to make definitive conclusions in many cases. However, it is critical to remember that the purpose of this assessment is to identify potential flooding risks to structures during a 100-year flood event for general mitigation planning. The assessment methodology used here is sufficient to identify those structures which may be most at risk of flood damage and those areas which may be a priority for flood mitigation activities.

For the assessment of riverine and lake flooding in Clark County the following methodology was used:

1. The D-FIRM G.I.S. shapefiles were used to identify the 100-year floodplain boundaries.
2. Using building footprint G.I.S. data maintained by the Clark County G.I.S. Program, those structures that were within or intersected the 100-year floodplain were identified using G.I.S. technology; some building footprint outlines were updated utilizing more recent 2023 aerial photography. A few buildings that were in the G.I.S. database were removed when it was verified that they had either been torn down or did not identify as a building on the LIDAR data. The updated potential floodplain parcel count of 326 was significantly lower than in 2019 largely due a Black River hydrologic/hydraulic analysis for a LOMR that was completed in the interim.
3. G.I.S. parcel data includes information on municipality, land use, and 2025 assessed values, which was compared to the building footprints. Data was not available to distinguish between primary (e.g., home, business) and secondary structures (e.g., garage, outbuilding) on a single parcel, which would have required field confirmation in many cases. In some cases, a secondary structure may be assessed with the majority value on an adjacent parcel; these cases were individually reviewed and sometimes excluded from the assessment.
4. Potential floodplain structures on properties with LOMAs were removed.
5. An estimated value of improvements potentially in the floodplain was identified based on the 2025 parcel data. However, situations with multiple structures on a single parcel can be a challenge as noted previously. In such cases, the assessed value of all improvements for the parcel was used, rather than attempting to further assign values to individual structures. In many

cases, those structures on a parcel that are likely outside the 100-year floodplain boundary are still close enough to the boundary to potentially be vulnerable to flooding should a large event occur.

Though it has its weaknesses, this approach provides a good picture of which principal structures are most likely to be impacted by a 100-year flood in Clark County. However, this should not be relied upon as an accurate indicator of flood depth or damages during flood events since elevation, flood depth, and assessed value for each individual structure is not currently valued. Many of the structures likely have no recent flood history and may not have a significant vulnerability to a flood event. In some case, local action (e.g., sandbagging, backflow prevention) can prevent flooding.

Hight Hazard and Other Dams of Concern

The following are brief assessments of the high hazard dams and other dams of concern for Clark County, including those dams that are publicly owned, requiring action, or have significant dam shadows in Clark County, but located outside the County. This analysis was prepared in consultation with the Wisconsin Department of Natural Resources Dam Safety Engineer assigned to Clark County as well as Clark County personnel. Using the State of Wisconsin dam safety database as a guide, the high hazard dams and any notable changes or concerns with the other dams of Clark County were discussed during these consultations, including condition, schedule improvements, emergency planning, and current and potential mitigation measures.

High-Hazard Dams (2)

Bear Creek/American Legion Dam (City of Loyal)
This dam is located just east of downtown Loyal and has an estimated high hazard rating due to development downstream. The American Legion Dam in Loyal was designed to allow floodwater to overtop the dam (and a downstream bridge) without damage. The dam is in good repair, though floodwaters have occasionally +topped the bridge downstream and some bank erosion and street shoulder damage occurred in 2016.

Sportsman Lake (Poplar River #1) Dam (Clark County Land Conservation)
Sportsman Lake Dam on the Poplar River is the largest dam in the County at 3,200 acre-feet of normal storage and is one of two dams with an actual (non-estimated) high hazard rating. This is the only County dam established, in part, for flood control. A dam failure analysis was completed in 2007 and showed that a failure would be equivalent to a 100-year flood by the time it reached the City of Owen downstream; the City has considered evacuation plans based on the analysis (or 100-year flood event). Downstream zoning for the dam shadow was adopted by Clark County in 2010. The dam is in good condition.

Significant-Hazard Dams (1)

Owen Park Dam (City of Owen)
No major issues regarding this small dam on the Poplar River were identified during the planning process. City officials noted that flood waters can go around the dam on Mattison Street and flood the park every 2-3 years due to heavy rains and/or frozen ground, but this has not occurred in recent years.. Communications has improved between operations of the Sportsman and Owen Park dams as well as Hatfield Dam downstream, during times of higher water.

Other Dam Concerns or Notes

Humbird Dam (Town of Mentor)
The Humbird or Halls Creek Dam is classified as a large, low hazard dam. The Town of Mentor is exploring WDNR Municipal Dam Grant Program funding to assist with concrete repairs, installation of benchmarks, rip-rapping, and associated plan updates.

Hatfield Dam (Northern State Power Company/Xcel Energy)
The Hatfield Dam is privately owned and is actually located in Jackson County, though it is noteworthy since the 774-acre Lake Arbutus (largely in Clark County) is its impoundment. In June 1993, operational issues with the dam gates and flood waters breaching a canal dike contributed to the overtopping of the levee in Black River Falls and significant damage to structures. Some future repairs may be needed at the dam due to seepage; this is somewhat complicated by an abutment being tied into a railroad trestle.

Dam Planning, Mitigation, and Response

For all large dams on navigable waters:

- Owners are required to ensure the safety of their dams by performing regular and frequent inspections. Chapter 31, Wis. Stats., requires owners of large dams to hire professional engineers with experience in dams to inspect their dams once every two to 10 years, depending on the hazard rating:
    - high–hazard large dams – every two years
    - significant hazard large dams – every three to four years
    - low-hazard large dams – every 10 years

  Following research and an inspection, the engineer will prepare a dam safety inspection report and supporting documentation will be prepared and sent to WDNR for review. The regional WDNR will then prepare their inspection report with findings and compliance actions with timelines. For private dams, emergency management and zoning staff from the County and/or local unit of government will work with the dam owner to obtain the dam failure analysis and take any needed action regarding dam failure zoning or emergency action planning.
- Must have a dam failure analysis that shows the hydraulic shadow and structures subject to potential flooding should a failure occur. The geographic scope of this analysis should extend downstream until the dam failure shadow converges with the 100-year floodplain. These analyses are used to determine the hazard rating largely based upon the level of development and regulatory protections in place within the dam shadow downstream. Floodplain zoning controls can then be put into place for the dam shadow; Clark County regulates the dam shadows very similar to the 100-year floodplain. For dams without an analysis, an estimated hazard rating is given by the WDNR Dam Safety Engineer based on development and zoning controls downstream of the dam.

It is important to maintain up-to-date Emergency Action Plans (EAPs) and Inspection, Operations, & Maintenance (IOM) Plans for the large dams and the high- and significant-hazard dams. Emergency Action Plans with current contact information should be on file with County Emergency Management and the Communications Center. With the availability of LIDAR topographic data, mapping of dam shadows could be revisited for the high- and significant- hazard dams. This information can then be integrated into the County emergency notification systems and considered as part of floodplain zoning and comprehensive planning efforts. The one (1) County-owned high-hazard dams was inspected in 2025 and has an updated Emergency Action Plan (EAP) in place.

Should a dam failure occur (or be imminent), law enforcement and fire department personnel would use public address systems and some door-to-door checks to evacuate persons. Local media, social media, Wireless Emergency Alerts, and the County's CodeRed system. Residents with NOAA All Hazard (weather) Radios would also be informed of the situation as asked to evacuate.

Dam Inventory

Official Name	Popular Name	Hazard Rating	Size	Owner Name (if listed)	Impoundment Size (acre ft)	Max Storage (acre ft)
Poplar River #1	Sportsman Lake	High	Large	Clark County	280	9000
Bear Creek	American Legion	High	Small	City of Loyal	0.5	8
Owen Park	City Of Owen	Significant	Small	City of Owen	5	15
Dorchester		Low	Large	Village of Dorchester	7	177
Humbird	Halls Creek	Low	Large	Town of Mentor	33	200
Mead		Low	Large	Clark County	320	4000
Rock	Hay Creek	Low	Large	Clark County	118	1240
Sherwood		Low	Large	Clark County	117	600
Wedges Creek	Snyder Lake	Low	Large	Clark County	20	110
Clark County No. 10	Abbot Ranch Flowage	Low	Large	Clark County	12	50
Clark County 16		Low	Large	Clark County	11	110
Clark County 2	Clark County #2	Low	Large	Clark County	9	90
Spruce Lake	Spruce Lake	Low	Large	Clark County	7	117
Owen City	Mill	Low	Large	City of Owen	18	90
Tobola		Low	Large	Tobola, Richard	6	51
Mech		Low	Large	Mech, Mike	12	100
Kalepp, Lloyd		Low	Large	Kalepp Fish Farms	34	280
Kalepp, Lloyd		Low	Large	Kalepp Fish Farms	12	99
Rock Creek Flowage Dam		Low	Large	Etta, Leonard	26	340
Ziegler, Louis 3		Low	Small	ZIEGLER, LOUIS	2	22
York, James		Low	Small	YORK, JAMES	7	35
Sternitsky, Ernest		Low	Small	STERNITSKY, ERNEST	1	8
Schwanebeck Dam 2		Low	Small	Schwanebeck, Steve	3.1	-50
Schwanebeck Dam 1		Low	Small	Schwanebeck, Steve	3.5	-50
Raddeman, Harold		Low	Small	RADDEMAN, HAROLD	2	12
Opelt, Robert		Low	Small	OPELT, ROBERT	2	24
Opelt Brothers		Low	Small	Opelt Sand & Gravel, LLC	4	32
Larry Oehmichen		Low	Small	Oehmichen, Larry	4.3	21.7
Meissner		Low	Small	Norm-E-Lane Farm, Inc.	4.4	3.8
Capati		Low	Small	Nazario R & Ana C Capati Trust	1.3	13.4
Modes, E.E.		Low	Small	Modes, E	1	13
Ludwig		Low	Small	Ludwig, Wayne, Everhart, Dennis		33
Herington		Low	Small	LDH Income Trust	2	5.8
Kirn, Roger		Low	Small	KIRN, ROGER	2	14
Horn, Kenneth		Low	Small	Horn Trust	5	17
Hiles, William		Low	Small	Hiles, William	1	12
Hasz, Albert		Low	Small	HASZ, ALBERT	2	17
Goeke		Low	Small	Goeke, Harvey and Phyllis	1.6	11
Sorenson, L.D.	Sorenson Levee	Low	Small	Decker, Gary	1	4
Sorenson, L. D.	Sorenson Dike	Low	Small	Decker, Gary	1	6
Horse Creek Dam #1	Horse Creek Dam North	Low	Small	Clark County	8	17
Washwood Flowage	Washwood Flowage	Low	Small	Clark County	7	20
Clark County 9	Clark County	Low	Small	Clark County	5	28
Web Center	Web Center	Low	Small	Clark County	4	20
Oelhofen, J.		Low	Small	Clark County	1	6
Neillsville	City Of Neillsville	Low	Small	City of Neillsville	5	25
Northside Park	City Of Niellsville	Low	Small	City of Neillsville	1	9
Bartels, Kenneth F.	Greenwood Community Schools	Low	Small	City of Greenwood	1	2
Van Gorden Brothers		Low	Small	Brothers, Van Gorden	2	4
Braun, Clayton		Low	Small	BRAUN, CLAYTON	1	10
Bauman, Harry		Low	Small	BAUMAN, HARRY	4	35
Barth, James	Wayne and Janice Kuhl	Low	Small	BARTH, JAMES	0.4	4.1
Badzinski, Louis		Low	Small	Badzinski, Louis	0.7	5
Badzinski		Low	Small	Badzinski, Louis	0.7	5
American Stores	American Stores Dairy Co	Low	Small	AMERICAN STORES DAIRY CO	1	2
American Stores	American Stores Dairy Co	Low	Small	AMERICAN STORES DAIRY CO	1	2
Zubal, Michael		Low	Small		4	17
Lindow, Merlin		Low	Small		2	10
Schaefer, Harold O.		Low	Small		2	30
Misfeldt, Roland		Low	Small		1	11
Howard, Bernadine		Low	Small		1	10
Pakiz, Frank		Low	Small		1	13
Barlow, Walter	Mary Krol	Low	Small		1	2
Scheel, Robert W 3		Low	Small		1	4
Smith, Loretta		Low	Unknown	Smith, Loretta		
Schlinsog, Norman		Low	Unknown	SCHLINSOG, NORMAN		
Dam On Five Mile Creek	Dam On Five Mile Creek	Low	Unknown	R & C Partners LLC		
Price	Price	Low	Unknown	Price,		
Hildebrandt, Tom		Low	Unknown	Hildebrand, Tom		
Winter's	Winter'S	Low	Unknown	Ericksons Holsteins LLC		
Dam On N Fk Eau Claire River	Dam On N Fk Eau Claire River	Low	Unknown	EAU CLAIRE LUMBER COMPANY		
Dam On S Fk Eau Claire R	Dam On S Fk Eau Claire R	Low	Unknown	EAU CLAIRE LUMBER COMPANY		
Dam On S Fk Eau Claire R	Dam On S Fk Eau Claire R	Low	Unknown	EAU CLAIRE LUMBER COMPANY		
Sterling	Sterling	Low	Unknown	EAU CLAIRE LUMBER COMPANY		
Dam On Wedges Creek	Dam On Wedges Creek	Low	Unknown	Clark County		
Clark County		Low	Unknown	Clark County		
South Fork	South Fork	Low	Unknown	Clark County		
Hewittville	Hewittville	Low	Unknown	Clark County		
Dam On Popple River	Dam On Popple River	Low	Unknown	BLACKRIVER CO.		
Dam On Five Mile Creek		Low	Unknown			
Dam On Hay Creek	Dam On Hay Creek	Low	Unknown			
Blakeslee	Blakeslee	Low	Unknown			
Owen	Owen	Low	Unknown			

H. DROUGHT

The information below is supplemental to the information contained within Section III.C.vi. of the *Clark County Hazard Mitigation Plan.*

Defining the Hazard - Drought

Definitions related to drought can be found in the main text of the Hazard Mitigation plan.

Hazard Location

Droughts can occur in all areas throughout the State, including areas with high and low average precipitation. Healthy soils allow more water to infiltrate and retains more moisture, enabling it to effectively absorb extreme rainfalls as well as support crops during droughts. Soil texture refers to the feel of soil; soils are made up of different amounts of sand, silt, and clay. A loamy soil is one that combines all three of these types of particles.

- Sandy soils have the largest particle size, which allows water to drain quickly. This causes water to drain out faster. These soils have low water holding capacity and struggle to retain enough water for good crop growth.
- Silty soils have medium-size particles, providing better water retention than sandy soils. During drought periods, they can retain more water than sandy soils.
- Clay soils have small fine particles and a higher water holding capacity. During extreme heat, clay soils can retain moisture relatively well.

Hazard Extent (Potential Intensities)

The **Palmer Drought Severity Index (PDSI)** utilizes several factors (i.e., temperature, soil moisture, and precipitation) to calculate the magnitude of the drought conditions. The results of the algorithm range from -4 (extreme drought) to 4 (extremely moist); 0 represents normal historical conditions. The index is effective at determining drought over a period of months, but less effective over shorter timeframes. Categories of drought are as follows:

- **D0: Abnormally Dry**
  - Going into drought:
    - Short-term dryness slowing planting and growth of crops or pastures
  - Coming out of drought:
    - Some lingering water deficits
    - Pastures or crops not fully recovered
- **D1: Moderate Drought**
  - Some damage to crops and pastures
  - Streams, reservoirs, or wells low, some water shortages developing or imminent
  - Voluntary water-use restrictions requested
- **D2: Severe Drought**
  - Crop or pasture losses likely
  - Water shortages common
  - Water restrictions imposed
- **D3: Extreme Drought**
  - Major crop and pasture losses
  - Widespread water shortages or restrictions

- **D4: Exceptional Drought**
  - Exceptional and widespread crop and pasture losses
  - Shortages of water in reservoirs, streams, and wells creating water emergencies

The relative severity and geographic extent of drought impacts on crops can also be described in terms of different State and Federal designations:

- State or Governor Drought Emergency or Disaster Declaration
- USDA Secretarial Disaster Declaration
- Presidential Emergency or Disaster Declaration

The above declarations may be limited to the primary counties affected by the drought or may also include contiguous counties that are less impacted, but may also be eligible for financial assistance.

Event History - Drought

Drought is a relatively common phenomenon in Wisconsin and has occurred statewide or nearly statewide in 1895, 1910, 1939, 1948-1950, 1955-1959, 1976-77, 1987-1989, 2003, 2005, and 2006-2007, and 2012. Severe drought for Clark County also occurred in 2009 and 2013. The drought of 1929-1934 (Dust Bowl Years) was probably the most significant in Wisconsin history, given its duration; some of areas of the State experienced drought effects until the early 1940s.

A Presidential Emergency Declaration was issued for the statewide drought in 1976-1977, during which agricultural losses in the State were estimated at over $624 million (over $2.5 billion in today's dollars) and some private wells in Clark County dried up. Stream-flow measuring stations recorded recurrence intervals from 10 to 30 years. Federal assistance was used to help communities drill new wells and obtain new water supplies.

Some people believe the North American Drought of 1988 to be the most severe ever experienced in Wisconsin and much of the Midwest; it was last major drought event in the County. It was characterized not only by below-normal precipitation, but also by persistent dry air and above normal temperatures. Heatwaves killed an estimated 5,000 people nationwide and contributed to high livestock loss. Stream-flow measuring stations indicated a drought recurrence interval of 75 to 100 years. The effects were most severe in north-central and northeastern Wisconsin. The drought occurred early in the growing season and resulted in a 30-60% crop loss with state agricultural losses estimated at $1.3 billion. 52% of the state's 81,000 farms were estimated to have had crop losses of 50% or more, with 14% of farms suffering estimated losses of 70% or more (FEMA). State and federal drought assistance programs helped Wisconsin farmers recover a portion of their losses. All Wisconsin counties were designated eligible for this drought assistance. In total, the drought in the central and eastern states between 1987 and 1989 caused an estimated $39 billion in damages (FEMA). Point wells in certain areas of western Wisconsin also dried up during the drought of 1988-1989.

Regional and Local Events

1970s-1980s Droughts

A Presidential Emergency Declaration was issued for the statewide drought in 1976, during which agricultural losses in the State were estimated at about $2.7 billion in today's dollars and some private wells in western Wisconsin dried up. Point wells in certain areas of the region also dried up during the drought of 1988-1989, and agricultural losses in the State were estimated at approximately $2.6 billion. The 1987-1989 drought not only had below-normal precipitation, but also was characterized by persistent dry air and above-normal temperatures. Heatwaves killed an estimated 5,000 people nationwide and contributed to high livestock loss. An estimated 52%

of Wisconsin's 81,000 farms had crop losses of 50% or more, with 14% of farmers suffering losses of 70% of more.

2003-2013 Droughts

Until 2000, drought conditions had been impacting corn and soybean yields to some degree in the County about once in every five to six years. However, beginning about 2003, northern Wisconsin experienced a lengthy period of drought conditions with serious impacts to agricultural producers and hydraulic levels of surface and ground waters; a number of emergency declarations were issued during this period. Water levels in the region's many seepage lakes dropped precipitously, leaving some docks dry, increasing water temperatures, and exacerbating water quality concerns. Some municipalities instituted municipal water system use restrictions during the summer months. As a result, the Governor issued State of Emergency drought declarations, which included Clark County, during five of the ten years between 2000 and 2010.

Summer 2010 brought some significant relief from the region's drought conditions, as a new record for the average statewide summer rainfall was established (18.65 inches). In June through September 2010, northwest Wisconsin experienced total monthly rainfall amounts of about two inches or more above the mean in each of these four months. Though the rainfall provided relief for agricultural crops, water levels in many surface waters remained below average and monthly rainfall amounts were still below average for six of the months of the year.

A nearly statewide drought would again impact Clark County during the 2012 summer and fall seasons, resulting in reduced crop and alfalfa yields. As feed costs rose, some farmers were forced to sell-off some livestock. There were many reports of wells in Wisconsin running dry, and some well depths had to be increased in order to find water. The drought was generated by a large, warm blocking high pressure in the upper levels of the atmosphere that was centered over the middle of the nation in May and June. Part of this high pressure expanded north into the western Great Lakes region in July, forcing storms to stay mostly north of Wisconsin as the summer progressed. The drought started across the southern third of counties in June and steadily expanded north during July and August. Eventually, the southern two-thirds of the state was in severe (D2) to extreme (D3) drought status. The drought continued into December, thanks to a very dry November.

2022-2024 Drought

While Clark County was less impacted than some areas of the region, a period of drought expanded and intensified in Summer 2023, largely influenced by not only lack of precipitation, but extreme heat and evaporative demand. This drought period was very unusual since Wisconsin experienced the wettest January-April on record, followed by the 4th driest May-August, a wet October, then the 8th dried November on record. These large swings in precipitation was a challenge for crop farmers. The drought period would "break" with above average precipitation in May 2024, though near-drought conditions would return later in the year.

Research from the Wisconsin Initiative on Climate Change Impacts[17] (WICCI) shows that annual precipitation in Clark County has increased since 1950. Concurrently, Clark County's average annual temperatures for most of the County have increased 1.5ºF to 2.0ºF since 1950. WICCI has projected that Clark County's climate will continue to become wetter overall, with more precipitation during the winter months and higher average temperatures.

Vulnerability Assessment - Drought

Other Potential Drought Vulnerabilities

Drought conditions can stress forest vegetation, making it more vulnerable to certain pests and diseases, thereby increasing the potential for wildfires. Drought conditions can also dry up private wells and ponds as well as impact surface and ground water levels. Under such circumstances, shallow wells may need to be replaced at

[17] Wisconsin Initiative on Climate Change Impacts website: www.wicci.wisc.edu

significant cost or a farmer whose livestock relied on a pond in the past may have to install a well and pump to provide water for stock. As surface waters dry up during drought periods, shoreline areas are more vulnerable to erosion, water temperatures can change, and contaminants and nutrients become concentrated, which can further contribute to toxicity, eutrophication, and fish kills.

A high capacity well is defined as one or more wells, drillholes, or mine shafts used or to be used to withdraw water for any purpose on one property, if the total pumping or flowing capacity of all wells, drillholes, or mine shafts on one property is 70 or more gallons per minute (100,000 gallons per day) based on the pump curve at the lowest system pressure setting, or based on the highest flow rate from a flowing well or wells.

High capacity wells have the potential to stress local groundwater supplies, especially during drought periods. Agricultural irrigation and aquaculture have been increasing in the region, which does have the potential to further impact groundwater levels in some areas, though Clark County has not seen great increases in irrigation wells. As of January 2026, the Wisconsin DNR high capacity well database includes 156 high-capacity wells (groundwater sourced) have been permitted for Clark County, of which 66 are public utilities, 61 are used for dairy farming, 8 are for parks & recreation irrigation, and 6 are mining-related.

As surface waters dry-up during periods of drought, shoreline areas are more vulnerable to erosion, water temperatures can change, and contaminants and nutrients become concentrated, which can further contribute to toxicity, eutrophication, and fish kills. Some of the longer-term consequences of rising temperatures and drier summers were discussed previously during the discussion on climate change, such as the loss of cold-water trout streams and further loss of surface waters through increasing evaporation.

Other Factors Influencing Losses

- Agricultural irrigation can help alleviate drought threats, though this is not widely practiced in Clark County. As of January 2026, the Wisconsin DNR reports that there are no active high-capacity wells (groundwater source) in Clark County for agricultural irrigation.
- As surface waters decrease during periods of drought, shoreline areas are more vulnerable to erosion, water temperatures can change, and contaminants and nutrients become concentrated which can further contribute to toxicity, eutrophication, and fish kills.
- Some of the longer-term consequences of rising temperatures and drier summers were discussed previously in Section III.B. on the possible hazard impacts of climate change, such as the loss of cold-water trout streams and further loss of surface waters through increasing evaporation.
- Encouraging agricultural best management practices has the potential to make farmland more resilient to drought. New agricultural technologies may also improve resiliency.

SOIL HEALTH AS A DROUGHT MITIGATION TOOL

Soil health best management practices, such as cover crops and reduced tillage, can improve soil health and make cropland more resilient to drought. Good soil health allows precipitation to infiltrate, thereby increasing moisture in the soil and helping to recharge groundwater.

The conservation of Clark County's farmland soils is important to current and future generations of farmers. Soils that are physically and biologically healthy can produce higher crop yields with fewer external inputs, which is great for the pocketbook.

Healthy soils are also important to the quality of groundwater and surface waters. As precipitation infiltrates, it naturally filters the water. The soils and nutrients stay in place, rather than run-off. Healthy soils reduce erosion, flooding, and pollutant/nutrient loading to surface waters, while increasing the recharge of the groundwater.

I. WILDFIRE

The information below is supplemental to the information contained within Section III.C.vii. of the *Clark County Hazard Mitigation Plan.*

Defining the Hazard —Wildfire

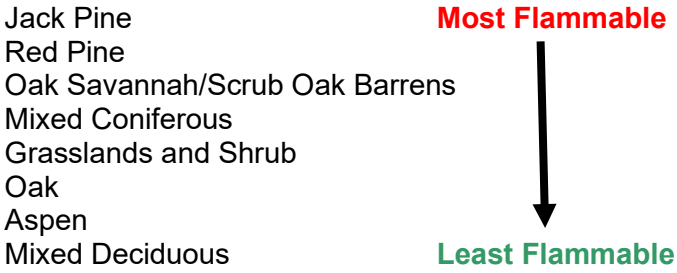
A **forest fire** is defined in Wisconsin State Statues as "an uncontrolled, wild or running fire burning in forest, marsh, field, cutover, or other lands." Any wildfire in Wisconsin, no matter what type of vegetation it is burning, is legally termed a "forest fire." As such, "wildfire" and "forest fire" are often used interchangeably within this plan.

This plan does not attempt to make great distinctions between the different types of wildfires, though more wildfire data is available for the WDNR Intensive Fire Protection area, which has a higher predominance of forest vegetation. It is not uncommon for a large wildfire to include a mix of vegetative types. Grass fires fueled by low-lying vegetation are generally more easily controlled than a wildfire in a forest area, but also will typically spread quicker. Grass fires can be the most dangerous in terms of safety due to highly variable speed, intensity, and direction. In wooded settings, access is often the biggest challenge. In areas of hardwoods, a wildfire is typically less intense, with the fire being commonly limited to leaf litter. Wildfires in coniferous forest that climb into the top of the tree canopy (crown fires) can be the most difficult to control and can produce spotting when large, burning embers are blown to areas outside of the main fire. Regardless of the fuel types, local topography and weather conditions also influence the characteristics of a wildfire.

Hazard Location

Vegetative Fuels

The geographic distribution of vegetative cover type is directly related to wildfire risk. The degree of flammability for different vegetative covers is in the general following order:



The above is highly influenced by local soil type. For example, Oak forests on silt loam soils where more moisture is retained in the soil have a lower wildfire risk compared to Scrub Oak Barrens that are typically found on sandier, excessively drained soils.

As described in Section II.B. of the main mitigation plan text, just under half of Clark County's landscape is made up of cultivated crops of pasture/hay. Approximately 30% of the County is forested, predominantly by deciduous trees, and 1% is shrub and grasslands. Many of the forested areas are actively managed for timber production; thus, vegetative characteristics can change from year-to-year as part of the timber growth and harvesting cycle. Clark County has over 134,000 acres of County Forest land, the majority of which are in large blocks on the western and southern parts of the county as reflected by the large areas of forest and wildfire fuel in the previous two maps. An additional 171,200 acres of forest lands are privately owned. Gross timber sale receipts for County Forest lands averaged approximately $1.9 million per year from 2005 to 2014. If similar annual sales occurred

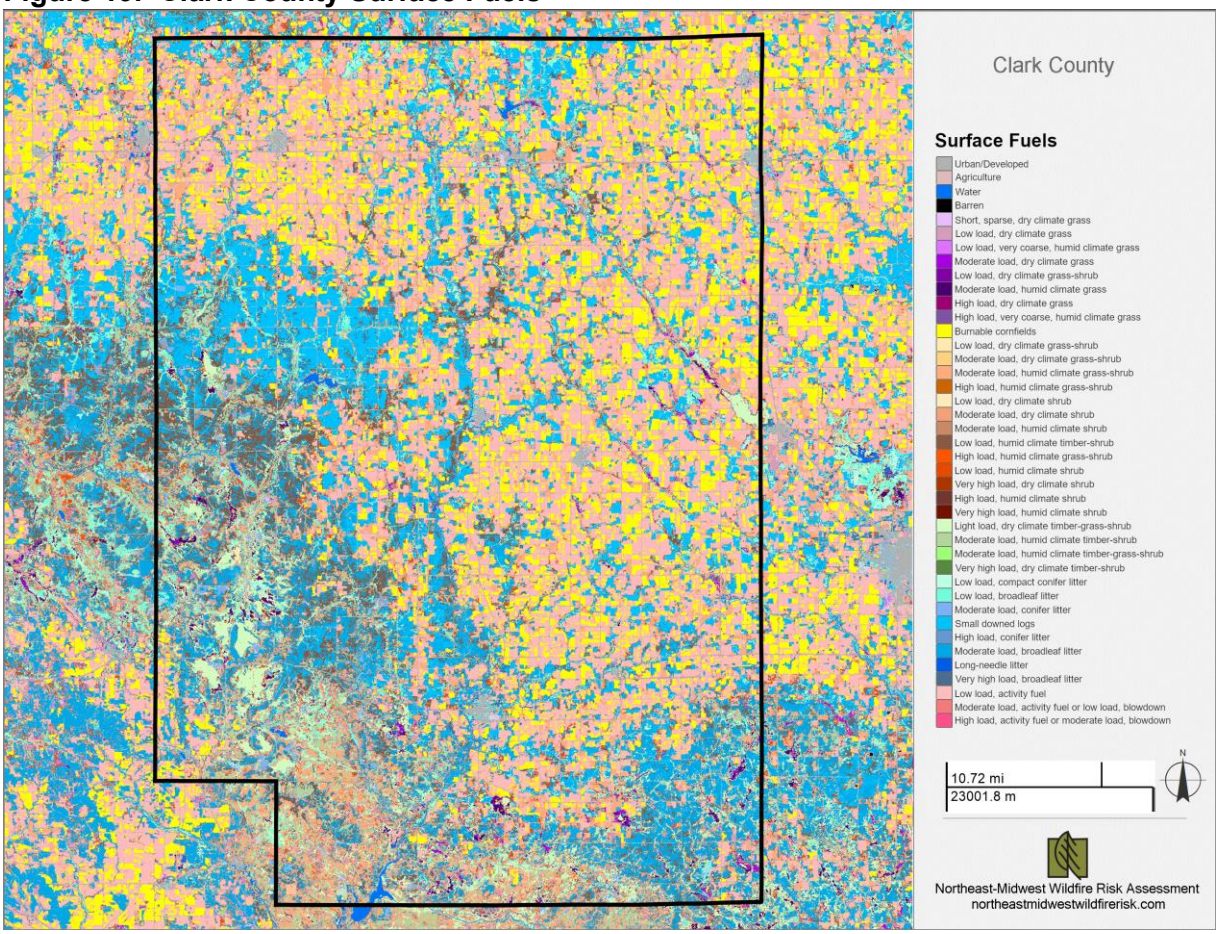
per acre on even 5,000 acres of private forests and tree farm, an additional $80,000 in average annual gross sales are realized within the county.

Not only is the County Forest an important direct income source for Clark County through logging, but it is an important recreational resource as well. Clark County realized over $544,000 in 2014 from net campground receipts, over $4,300 in firewood permits, and over $17,300 in trail fees. The loss of related tourism would also reduce revenues for related Clark County businesses, though no such current study on the extent of potential financial impacts is available. The County would also incur significant costs associated with salvage and restoration following a large forest fire event.

Forests have a natural life cycle. Humans can interrupt this cycle by introducing new species or diseases, encouraging certain growth patterns, or through timber harvest practices. Characteristics such as dense stands of unmanaged pine plantation or creating large piles of slash can increase wildfire risks. Creating brush piles and allowing for the accumulation of dead plant litter in home ignition zones or along roadways also increases wildfire risks. Forest management practices can increase wildfire risks or help to mitigate the ignition or spread of wildfires.

Figure 19 provides a county-wide assessment of surface fuels for Clark County. This map identifies the types of surface fuels, but does not indicate the likelihood of fires in these areas. Understanding fuel types and reviewing this map in tandem with others helps to prioritize areas of concern.

Figure 19. Clark County Surface Fuels



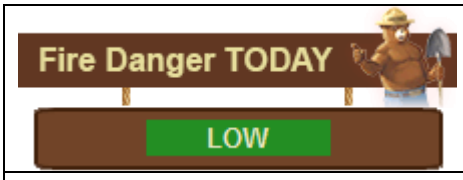
Key takeaways from the above map include:

- Agriculture (24%), burnable cornfields (14%), and small downed logs (12%) are the most common surface fuel types within Clark County.
- Concentrations of agricultural surface fuels and downed logs increase the risk of larger wildfires. This finding is reflected in several maps throughout the full report. Specifically, burnable cornfields increase the flame length, rate of spread, and heat unit per area. Fire breaks, removing fuel sources (e.g., downed trees) and other fire suppression efforts built into the landscape may help mitigate the ability of a wildfire to spread.

Hazard Extent (Potential Intensities)

Table 13 lists the fire danger rating classifications as defined by the U.S. Forest Service. The "Adjective Ratings" as a public information description of the relative severity of the current fire danger situation in a general area. Since 1974, five rating levels have been used to describe danger levels.[18] The Wisconsin Department of Natural Resources uses these same categories to help describe the wildfire risk throughout the State. The Extreme rating is also known as a Red Flag warning.

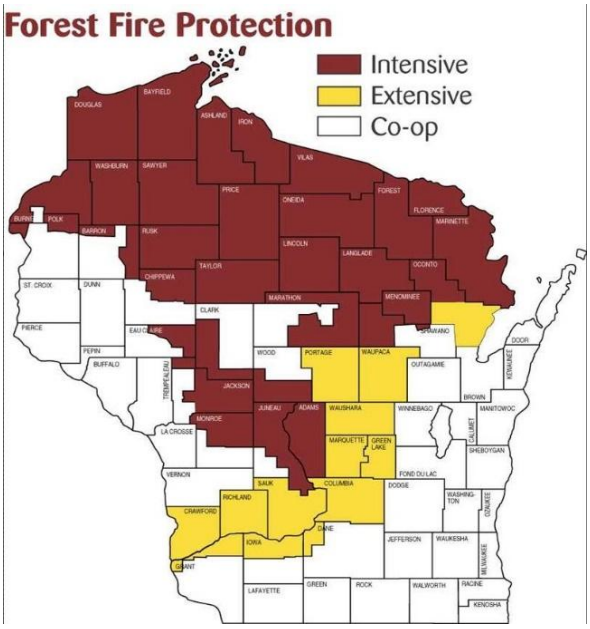
Table 13. U.S. Forest Service Fire Danger Adjective Ratings

	**Low (L, Dark Green) -** Fuels do not ignite readily from small firebrands although a more intense heat source, such as lightning, may start fires in duff or punky wood. Fires in open cured grasslands may bum freely a few hours after rain, but woods fires spread slowly by creeping or smoldering, and burn in irregular fingers. There is little danger of spotting.
	**Moderate (M, Light Green or Blue) -** Fires can start from most accidental causes, but with the exception of lightning fires in some areas, the number of starts is generally low. Fires in open cured grasslands will burn briskly and spread rapidly on windy days. Timber fires spread slowly to moderately fast. The average fire is of moderate intensity, although heavy concentrations of fuel, especially draped fuel, may burn hot. Short-distance spotting may occur, but is not persistent. Fires are not likely to become serious and control is relatively easy.
	**High (H, Yellow) -** All fine dead fuels ignite readily and fires start easily from most causes. Unattended brush and campfires are likely to escape. Fires spread rapidly and short-distance spotting is common. High-intensity burning may develop on slopes or in concentrations of fine fuels. Fires may become serious and their control difficult unless they are attacked successfully while small.
	**Very High (VH, Orange) -** Fires start easily from all causes and, immediately after ignition, spread rapidly and increase quickly in intensity. Spot fires are a constant danger. Fires burning in light fuels may quickly develop high intensity characteristics such as long-distance spotting and fire whirlwinds when they burn into heavier fuels.
	**Extreme (E, Red) -** Fires start quickly, spread furiously, and burn intensely. All fires are potentially serious. Development into high intensity burning will usually be faster and occur from smaller fires than in the very high fire danger class. Direct attack is rarely possible and may be dangerous except immediately after ignition. Fires that develop headway in heavy slash or in conifer stands may be unmanageable while the extreme burning condition lasts. Under these conditions the only effective and safe control action is on the flanks until the weather changes or the fuel supply lessens.

[18] USDA Forest Service. *Understanding of the National Fire Danger Rating System.* https://www.fs.usda.gov/detail/r5/fire-aviation/?cid=FSEPRD604105

WDNR Fire Protection Areas

The western and southern edges of Clark County, comprising of about 40 percent of land, is in Intensive Fire Protection. The eastern and northern portions, or about 60 percent of the county's land, is in Cooperative Fire Protection. These are defined as follows:



Intensive Fire Protection areas are the most heavily forested and contain the most fire hazards and risks in the State. Limited assignment of skilled personnel, specialized equipment, and facilities provide for an adequate degree of forest fire prevention, detection, and suppression efficiency and effectiveness at a minimum cost. Wisconsin Department of Natural Resources (WDNR) equipment is designed to suppress fires that are beyond the capability of the local fire department. The WDNR, by statute, takes whatever action is necessary to suppress the fires. Fire detection is provided by WDNR aircraft, and there is a strong reliance on public reporting of fires. Burning permits are required whenever the ground is not snow-covered.

The intensive fire protection area for western Clark County falls under the WDNR Augusta Fire Response Unit and southern Clark County falls under the WDNR Pray Fire Response Unit. These WDNNR stations take the local lead in all WDNR wildfire prevention, education, and coordination efforts in the County. These efforts in the County have been primarily been educational in nature, such as wildfire danger signage and articles in local newspapers. Wildfire flyers have been included with tax mailings within the Intensive Protection Area and some door-to-door outreach has taken place, but funding and resources are limited. WDNR staff from the Augusta Ranger Station have attempted to visit all residents in one town each year, if staff time allows. Separate mailings were distributed about four years ago. As will be discussed, the towns of Foster and Levis have engaged in additional educational outreach through their community wildfire protection plan.

Cooperative Forest Fire Protection is aid and counsel from WDNR, upon request, to the town authorities who are legally responsible for forest fire prevention, detection, and suppression activities in territory outside boundaries of established intensive fire control areas. Town chairmen, by virtue of their office, are fire wardens. Costs of forest fire prevention and suppression incurred by a town chairman, acting in his capacity as town fire warden, are paid by the town. Burning permits are issued when the town board deems it necessary.

Local volunteer fire departments and the County Highway Department also play an important role in fighting forest fires. All fire departments in Clark County rely solely on volunteer personnel, so ongoing training is of vital importance. A Mutual Aid Box Alarm System (MABAS) is now in place in Clark County providing mutual aid support between fire departments, if needed, though not all departments currently participate, which is a source of frustration among some departments. While forest fire protection is adequate to suppress most forest fires in Clark County, ongoing wildland training is very important and there may be some equipment needs to improve communications, capability, and responder safety (e.g., radios, PPE).

Due to the high risks and vulnerabilities discussed here, the WDNR obtained U.S. Forest Service funding to assist the towns of Dewhurst and Levis in Clark County and the Town of Komensky in Jackson County to develop a community wildfire protection plan.[19] This planning effort included participation by local fire departments, Arbutus Lake Association, emergency management and forestry/parks offices from both counties, the Ho-Chunk Nation, and West Central Wisconsin Regional Planning Commission. Critical issues identified during this Planning effort include:

- lack of awareness of wildfire risks and past events in the broader region among property owners,
- many driveways and some roads, including within the County Forests, are inaccessible for larger response vehicles and heavy equipment due to widths, culvert sizing, lack of base course, high groundwater table, etc.,
- adequate defensible space within the home ignition zone are not maintained around many homes and structures, and
- wildfire mitigation and response preparedness should be integrated into other plans and training exercises.

In 2011, the Town of Foster engaged in a similar community wildfire protection planning effort. Due to elevated wildfire risks, the towns of Mead, Mentor, Dewhurst, and Butler may be candidates for future wildfire protection planning efforts.

Towns of Foster & Levis Community Wildfire Protection Plans (CWPP)

CWPPs set priorities for local wildfire risk reduction projects, giving the community priority consideration for related WDNR funding. Recognizing their high wildfire risk, the Town of Levis adopted a community wildfire protection plan in July 2010; and several projects recommended in the plan have been implemented, including community education efforts and driveway and home ignition assessment. This plan was updated in 2017.

In 2011, a community wildfire protection was developed for the Town of Foster, which recommended a variety of strategies such as a curbside chipping project, coordinating with Clark County regarding the management of slash from timber sales, public educational efforts such as signage and a calendar, and home ignition assessments.

Other Risk Factors

Ignition

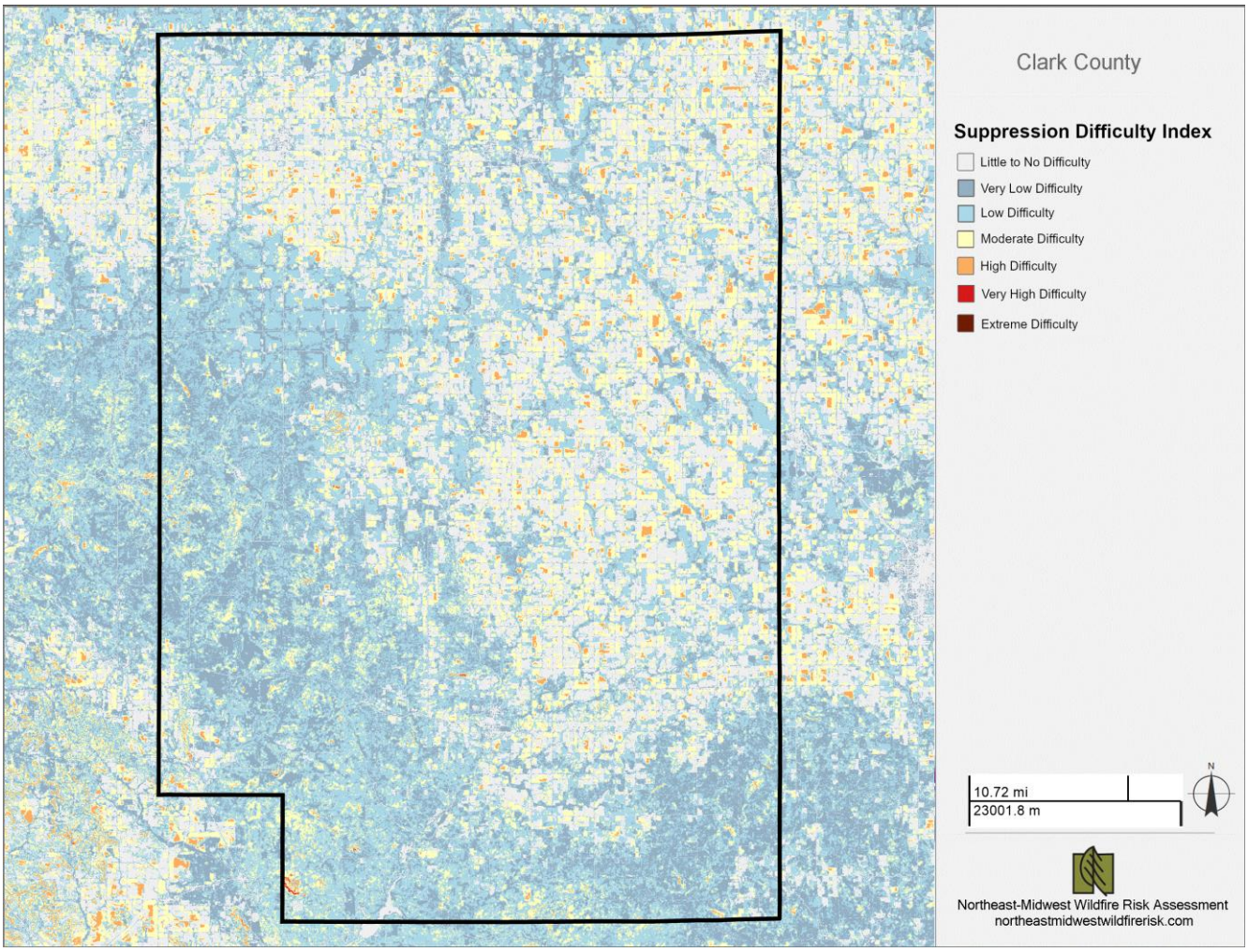
Most wildfires are caused by humans, whether accidental or deliberate, though there has been a slight increase recently in fires caused by lightning due in part to extended dry conditions. And areas of higher population within wildlands can be expected to have a higher risk of ignition.

Suppression Difficulty Index

Wildfire Suppression Difficulty Index (SDI) shown in **Figure 20** is a quantitative rating of relative difficulty in performing fire control work. SDI factors in topography, fuels, expected fire behavior under severe fire weather conditions, firefighter line production rates in various fuel types, and accessibility (distance from roads/trails) to assess relative suppression difficulty.

[19] At the completion of this planning effort, the Towns of Dewhurst and Komensky chose not to adopt the plan.

Figure 20. Clark County Suppression Difficulty Index



Key takeaways from the map include the following:

- Overall, most (82%) of Clark County has a little to low suppression difficulty.
- When reviewed against Figure 19 (surface fuels), there is a correlation between agricultural and grassland surface fuels and suppression difficulty.

Regional Trends & Events

Wildfires are not uncommon for Wisconsin and can occur at any time of the day and during any month of the year, though the peak fire season in Wisconsin is typically from March through November; and the season length and peak months varies from year-to-year. Land use, vegetation, amount of combustible materials present, and weather conditions (e.g., wind, low humidity, lack of precipitation) are the chief factors determining the number of fires and acres burned. Forest fires are more likely when vegetation is dry from a winter with little snow cover, followed by a spring and summer with sparse rainfall.

The most disastrous forest fire in Wisconsin history occurred on October 8, 1871, when more than 1.2 million acres were burned and the communities of Peshtigo and Brussels were obliterated. "All hell rode into town on the back of a wind" one survivor described. In about two hours' time, a swath of forest ten miles wide and 40

miles long was burned. Though overshadowed by the Great Chicago Fire of the same time period, the Peshtigo fire resulted in 1,152 people killed, 350 missing, and an estimated 3,000 people left homeless.

The April 1977 Five Mile Tower Fire, which started in northern Washburn County, burned 22 square miles at a rate of one mile every 41 minutes and destroyed 64 structures. The book "*Monster Fire at Minong—Wisconsin's Five Mile Tower Fire of 1977*" by Bill Matthias provides an excellent account of this project fire and its impacts on fire management in its aftermath.

In April 1980, more than 16,000 acres were burned and over 200 buildings were lost in the Ekdall Church and Oak Lake fires. The Ekdall Church fire originated less than 20 miles north of Polk County in the Grantsburg area. The fire started in oak scrub and timber slash, but embers then created spot fires in a nearby pine plantation. Within three hours time, the fire was consuming 1,000 to 1,600 acres an hour. Within eight hour's time, it had run nine miles and was 2.5 miles in width at its widest point.

The May 5, 2005, Cottonville wildfire began in northern Adams County; and 3,410 acres of grass, pine, and scrub oak burned quickly before the fire was contained eleven hours later. During the fire, over 100 people were evacuated. Nine year-round residences, 21 seasonal homes, and at least 60 outbuildings were completely destroyed. Lack of access (long, narrow driveways) and a lack of defensible spaces around buildings were significant contributing factors to the loss of these structures, offering important lessons to be learned.



The 2013 Germann Road fire consumed 7,499 acres and destroyed 104 structures (23 of them residences) in the Towns of Gordon and Highland in Douglas County and the Town of Barnes in Bayfield County. An estimated 350 structures were saved due to fire control efforts. The fire began around 2:45 p.m. on May 14, 2013, burning a swath nearly 10 miles long and a mile and a half wide before being declared 100 percent contained on May 15 at 9 p.m. The fire was started unintentionally from a logging crew harvesting timber on industrial timber lands.

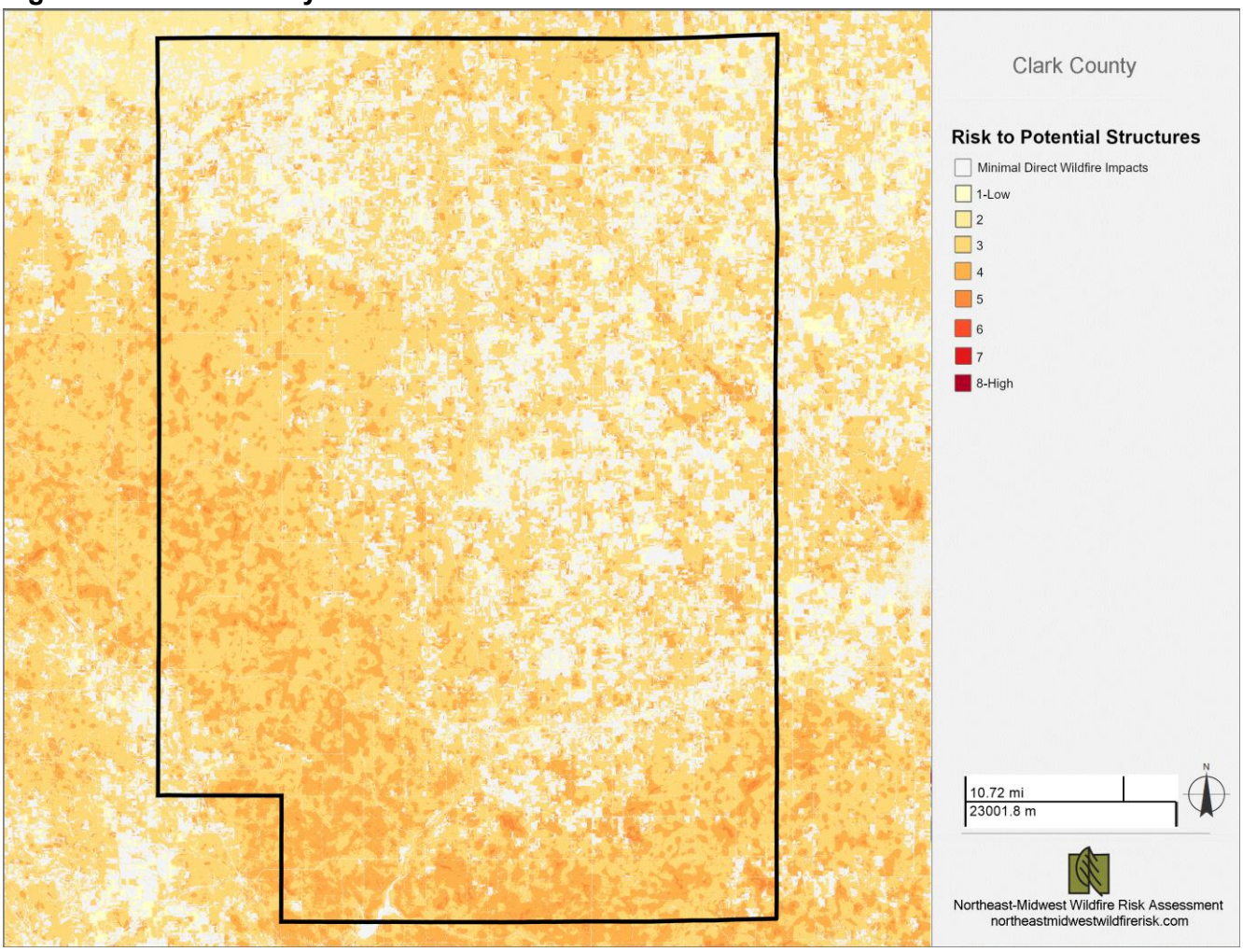
Wildfire potential is elevated during a drought. A total of 4,144 forest fires and wildfires occurred in Wisconsin during the drought year of 1976, with drought conditions continuing into 1977. Likewise, 1988 was one of the driest years on record, with a total of 3,242 fires occurring and 9,740 acres burned in Wisconsin.

Vulnerability Assessment

Vulnerability to Structures

Understanding wildfires' impact on the built environment will help the County assess where and how development should occur. As stated earlier in this section, the communities with the most reported fires have been some of the fastest growing as well. **Figure 21** identifies the expected risk to potential structures. It represents a measure that integrates wildfire likelihood and intensity with generalized consequences to a home. This map does not take existing homes into account; it is identifying the overall risk to structures.

Figure 21. Clark County Risk to Potential Structures



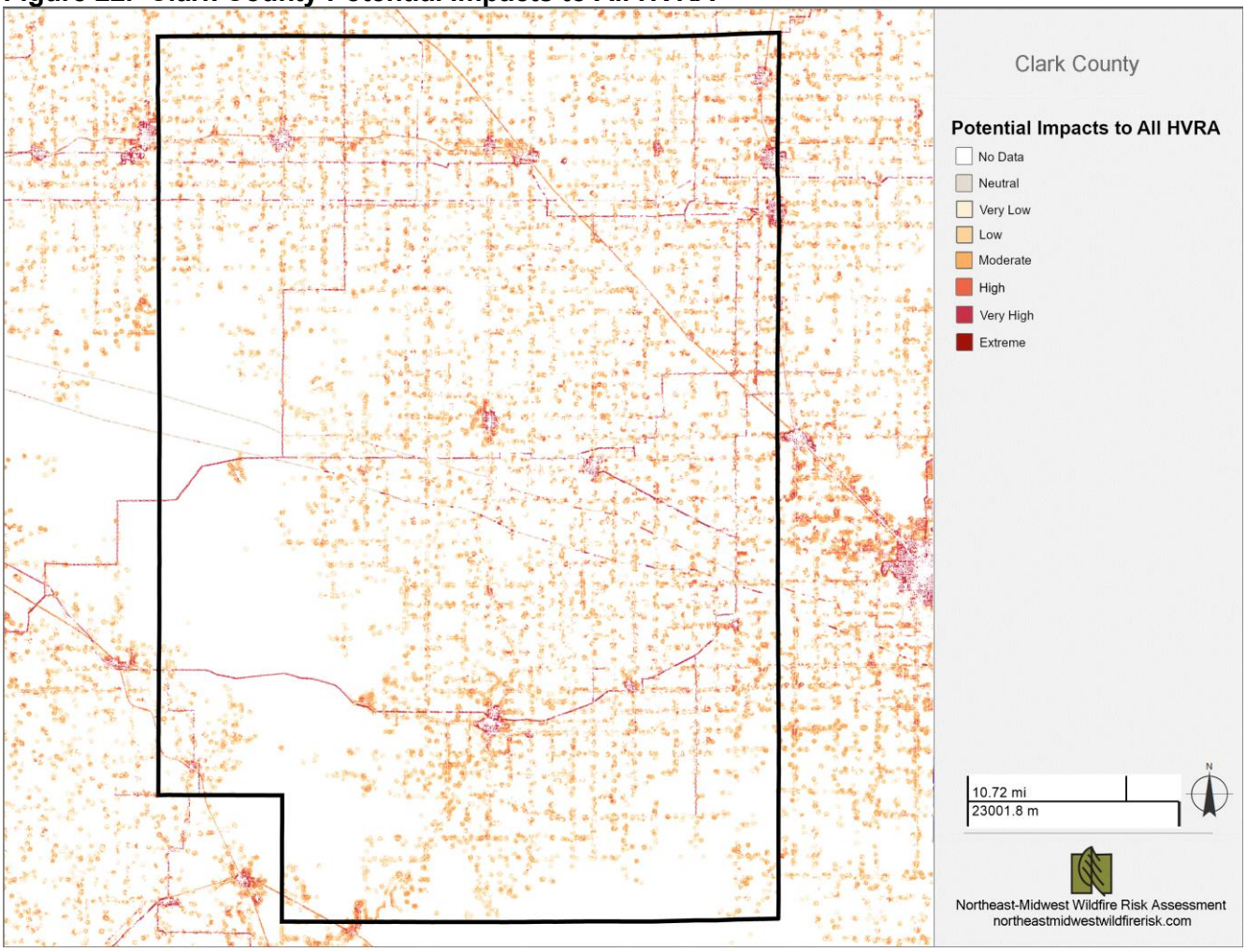
Key takeaways from the map include the following:

- No lands were rated higher than a 5. Approximately 64% of the County's land area was rated 3 or 4.
- Risk is distributed across the County, reflecting the need for fire services over a large area rather than in concentrated clusters.

Potential Impacts to All Highly Valued Resources or Assets (HVRA)

The Northeast-Midwest State Foresters Alliance identifies Highly Valued Resources or Assets (HVRA). These resources and assets include three categories: people and property, infrastructure, and cultural resources. The full Wildfire Risk Assessment report provides an impact assessment for each individual category. **Figure 22** is a consolidation of the three individual assessments. This map does not indicate the likelihood of a fire in a given area. If an area is labeled "very high" the impact a wildfire would cause to HVRA in that location would be very high, though the likelihood of a fire occurring there may be very low.

Figure 22. Clark County Potential Impacts to All HVRA



Key takeaways from the map include the following:

- Population centers rate high to extreme. This is to be expected given the density of people and property in these areas. These areas cover a very small percentage of Clark County's acreage. Although they are dispersed throughout the County, localized fire services can address a significant amount of the above risks within relatively small service areas.
- The County's rural development pattern can be seen clearly on the map. Low-density single-family homes and farmsteads dot the entirety of the County. Despite 83% of the County being classified as having "no data" or "neutral" impact, fire services must cover a large amount of territory to protect the entire community.

J. Long-Term Power Loss

To The information below is supplemental to the information contained within Section III.C.viii. of the *Clark County Hazard Mitigation Plan.*

Event History – Long-Term Power Outage

The risk of a long-term event is very real. For example, the March 1976 ice storm was one of the worst natural disasters to hit Wisconsin; Clark County was not one of the 22 counties which were part of this disaster declaration. Ice accumulations of up to five inches were reported, and high winds of 60 mph made the situation worse. Up to 100,000 people were without power at the height of this storm. Serious winter or ice storms in central Wisconsin also occurred in December 1904, February 1922, February 1936, and November 1943, though data on the impacts are limited.

In **January 1998**, an ice storm hit the Montreal area and left over four million residents without power. Some areas were without power for over three weeks. The January 2009 ice storm which hit Kentucky resulted in $616 million in damages, 36 fatalities, and 700,000 customers without power at its peak; 50,000 customers were still without power after two weeks, and it took 38 days for full restoration. Ice and heavy snow in the late fall when leaves are still on the trees can exacerbate outages as trees and branches collapse under the combined weight. This was the case during the Halloween 2011 nor'easter which broke many snowfall records in the northeastern U.S. and left approximately 1.7 million customers without power.

The threat of extended power loss is not limited to large, regional, and multi-state winter storms. Localized or shorter-term outages lasting a few hours can be deadly or destructive if not prepared. And while the focus of power loss is often on ice storms due to their widespread nature, other natural events can also result in a sizable loss of power. In fact, high winds and falling trees appear to be a more frequent cause of widespread loss of power in the region due to a natural hazard event. "The Big Wind" struck the Eau Claire area on July 15, 1980, with high winds and tornados causing great damage to property, trees, and power lines, as well as one death and numerous injuries. Power on the south side of Eau Claire would not be restored for five to seven days, with electric crews putting in 16-18 hours each day.[20]

In **July 1991**, a particularly violent and widespread straight-line wind (or derecho) lasted 17 hours and stretched from South Dakota to western Pennsylvania, including parts of Wisconsin. This event caused over $100 million in damage and resulted in power loss to nearly one million customers. Some west-central Wisconsin customers were without power for up to two weeks. A similar event in May 1998 blew through central Wisconsin resulting in at least $500 million damage and over two million people were without electrical power, some for over 10 days.

High winds in **October 2010** left about 44,000 Xcel Energy customers in the Upper Midwest without power at different times over a two-day stretch; about 300 customers lost power in the Eau Claire-Chippewa Falls area during this event. The 2011 Burnett County straight-line wind left some areas without power for about a week. On May 24, 2012, straight-line winds hit the Chippewa Valley leaving nearly 6,700 Xcel customers (about 5,200 of which were City of Eau Claire residents) without power. And in July 2016, severe thunderstorms left about 250,000 Xcel Energy customers in the Twin Cities metropolitan area without power.

High winds caused widespread outages in Chippewa County in **July 2019**; tornados as part of this storm front were reported in Polk, Barron, and Clark counties. Some trees up to 15 inches in diameter were uprooted. Some Chippewa County residents were without power for up to 48 hours. Trees and power lines fell upon and blocked some roadways; electric providers were very concerned that some people continued to drive by downed lines that

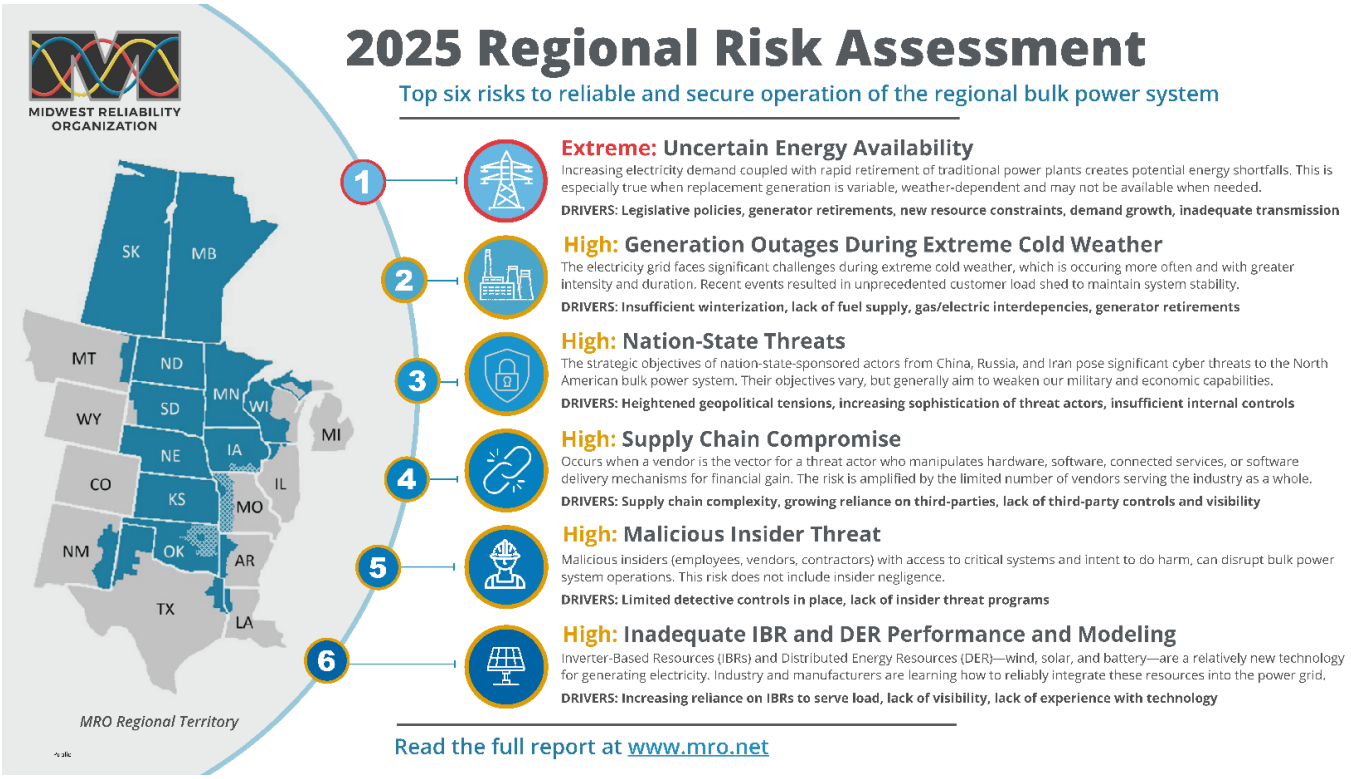
[20] Hoffland, Lukas. "Spearhead Echo: The Storm of 1980", LukasLight, Eau Claire, WI, 2005.

were still "hot". To restore power, Chippewa Electric Cooperative requested mutual aid assistance from other cooperatives through their R.O.P.E. system.

Vulnerability Assessment

Other Factors Influencing Future Losses

- **Development located in forested areas with overhead lines is particularly at risk of power loss.** Some of the greatest concentrations of these at-risk areas are lake properties. These concerns are not limited to the unincorporated towns. Residential neighborhoods with older trees or built within wooded areas of cities and villages are also vulnerable to outages.
- **Burying overhead lines is an effective mitigation action.** Electrical providers in the County have buried some electric lines in the most at-risk areas. And many of the local and municipal electric providers have a policy of moving towards all below-ground power lines through attrition and as part of annual work plans. The loss of power due to falling limbs has been further significantly mitigated through proactive, aggressive tree-trimming programs by the electric providers serving Clark County.
- **Improper use of generators.** During the Kentucky event, carbon monoxide from improper generator use was the largest cause of death. But it must be remembered that the potential impacts for Clark County could be much more severe—Kentucky's temperature warmed well above freezing following their ice storm. In comparison, Clark County's average winter temperatures could prove quite deadly should power be lost and transportation systems hindered for an extended time. This is discussed more in the winter storm risk and vulnerability assessment.
- The availability of **emergency power generators** for utilities, communications, centers/shelters, emergency operations, fuel sources, and critical facilities is crucial to mitigating the potential impacts of a LTPO event. Further, demands may be high on limited fuel sources for response vehicles, electric crews, and power generators.



- **Preparedness efforts.** Long-term power outage (LTPO) planning has been receiving increased attention in Wisconsin during the past decades. Realizing the seriousness of this threat, Clark County Emergency Management and WCWRPC took a lead role in coordinating regional-level workshops and tabletop exercises in 2010 on this topic. Based on these workshops and exercises, the following groups and critical facilities were identified as being especially vulnerable or important during a long-term power outage event.

Not unique to Clark County are the long-term challenges of increasing electrical demands, which could potentially be exacerbated by "climate migration" as people and industry (e.g., data centers) seek out cooler, non-coastal places to relocate. The Midwest Reliability Organization's *2025 Regional Risk Assessment* raises significant concerns regarding our region's electrical energy supply:

Related Preparedness and Response Actions

In short, a long-term, widespread power outage is one of the greatest natural hazard vulnerabilities facing the Clark County and the region. As the Kentucky experience shows, total costs in response and damages can be in the tens of millions or greater. And significant threats to life and safety exist due to downed lines, fire, improper generator use, loss of access to medical treatments, extreme cold, and loss of food and other utilities.

Cooperation, communication, and planning with power providers and critical facilities are key to preparing for and mitigating the impacts of power loss. Based on discussions with representatives from Xcel Energy, Clark Electric Cooperative, and other area electric providers, the following should be considered:

- Involving utility providers in disaster event exercises and incident command system (ICS) training is very important. It is recommended that critical facilities drill their outage plans and provide the electric provider with 24/7 contact information. Advanced notice for such trainings and workshops is required due to the time commitments involved. In lieu of more formal exercises, even periodic, less formal "sitdowns" can be valuable, including the sharing of any "lessons learned" following an outage event.
- Communication between electric providers and utilities, emergency management personnel, service providers, and local communities can be vital during a LTPO event to help protect the safety of responders and residents. This includes notifying electric restoration crews of known road washouts, flooding areas, etc. For a major disaster, utilities may provide a liaison at the county or local Emergency Operations Center.
- Electric providers have a strong mutual aid network should it be needed, such as the Restoration of Power during an Emergency (ROPE) system for cooperatives. It is important to remember that during a large event, mutual aid support may come from communities throughout North America. Staging, logistics, tracking, and related administration for such efforts can be tremendous challenges.
- During a disaster or power outage, some electric providers can "ping meters" to help identify areas with outages, possible downed power lines, etc. Clark Electric Cooperative is installing new meters to allow such remote monitoring.
- Some utilities and electric providers maintain lists of critical clients or medical accounts (e.g., oxygen) that will be given a preference for power restoration, but the availability of this service varies by provider.
- Electric providers and utilities have a key public informational role during an outage. In addition to working with media and social media (Facebook), most providers, have power outage web pages with up-to-date power outage information or maps.
- It is important that emergency response and public-sector road crews understand the risks of working near downed power lines and how power is restored.

- More public education may be needed on safety issues during a power outage, avoiding downed power lines, how to get information during an outage (e.g., media, websites, mobile apps), and how power is restored.
- To assist in such educational efforts, the Clark Electric Cooperative has a high voltage demonstration unit that it takes to schools, highway departments, emergency response agencies, etc. on a rotating basis or as requested. The Cooperative expressed interest in partnering with Clark County to pursue additional mitigation funding for additional educational and capacity building activities involving municipalities, emergency responses agencies, and schools related to storm events and power outages, such as electrical safety, generator availability/use, emergency fueling, and general preparedness.

The following websites of area electric providers is a great place to start:

https://www.xcelenergy.com/outages_and_emergencies

https://www.cecoop.com/content/outagessafety

The lessons learned from the recent LTPO workshops and exercises have been integrated into a state-level report, which is available at the WEM website. The recommendations of the State report were considered during this hazard mitigation planning effort and, when appropriate, have been integrated into the mitigation strategies found later in this document.

Space Weather Events: Solar Flares and Geomagnetic Storms

Defining the Hazard

Solar flares are intense bursts of electromagnetic radiation (X-rays) that erupt from an active region of the Sun and can potentially reach Earth in less than 20 minutes. As shown in the table below, solar flare intensities are categorized based on their strength (X-ray brightness) with each progressive class on the scale 10 times the strength of the previous class. **M- and X-class solar flares have the potential to impact radio communications but are less likely to impact the electrical grid.**

Solar Flares Intensity Scale		
Scale	***Severity Descriptor***	***Effects***
X	Extreme	Can trigger radio global blackouts and transmission issues
M	Severe	Can cause brief radio blackouts at poles and minor radiation storms imposing danger to astronauts
C	Strong	C-class and smaller flares are weak and do not noticeably affect Earth, SID monitoring will only detect strongest C-class flares
B	Moderate	Too weak to affect Earth and/or be detected with SID monitoring
A	Minor	Too weak to affect Earth and/or be detected with SID monitoring

Source: X-Class: A Guide to Solar Flares (NASA, 2011), https://svs.gsfc.nasa.gov/10109

Geomagnetic Storms can disturb and compress the Earth's magnetic field. Geomagnetic storms are typically caused by high-speed solar winds and **Coronal Mass Ejections (CMEs)**, which may be triggered by a large solar flare event. **CMEs** are giant clouds of particles and magnetic fields (like a gas bubble) hurled into space that can reach Earth in15 hours to several days. **NASA utilizes the scale below categorize Geomagnetic Storms and their impacts to communications and the electrical grid.**

Category		Effect	Physical Measure	Average Frequency (1 cycle = 11 years)
Scale/Descriptor		Duration of event will influence severity of effects	K_p values* determined every 3 hours	Number of storm events when K_p level was met; (number of storm days)
G5	Extreme	**Power systems:** widespread voltage control problems and protective system problems can occur, some grid systems may experience complete collapse or blackouts. Transformers may experience damage. **Spacecraft operations:** may experience extensive surface charging, problems with orientation, uplink/downlink and tracking satellites. **Other sytems:** pipeline currents can reach hundreds of amps, HF (high frequency) radio propagation may be impossible in many areas for 1-2 days, satellite navigation may be degraded for days, low-frequency radio navigation can be out for hours, and aurora seen as low as Florida and southern Texas (typically 40° geomagnetic lat.)	Kp = 9	4 per cycle (4 days per cycle)
G4	Severe	**Power systems:** possible widespread voltage control problems and some protective systems will mistakenly trip out key assets from the grid. **Spacecraft operations:** may experience surface charging and tracking problems, corrections may be needed for orientation problems. **Other sytems:** induced pipeline currents affect preventive measures, HF radio propagation sporadic, satellite navigation degraded for hours, low-frequency radio navigation disrupted, and aurora has been seen as low as Alabama and northern California (typically 45° geomagnetic lat.).	Kp = 8, including a 9	100 per cycle (60 days per cycle)
G3	Strong	**Power systems:** voltage corrections may be required, false alarms triggered on some protection devices. **Spacecraft operations:** surface charging may occur on satellite components, drag may increase on low-Earth-orbit satellites, and corrections may be needed for orientation problems. **Other sytems:** intermittent satellite navigation and low-frequency radio navigation problems may occur, HF radio may be intermittent, and aurora has been seen as low as Illinois and Oregon (typically 50° geomagnetic lat.).	$K_p = 7$	200 per cycle (130 days per cycle)
G2	Moderate	**Power systems:** high-latitude power systems may experience voltage alarms, long-duration storms may cause transformer damage. **Spacecraft operations:** corrective actions to orientation may be required by ground control; possible changes in drag affect orbit predictions. **Other sytems:** HF radio propagation can fade at hjgher latitudes, and aurora has been seen as low as New York and Idaho /typically 55° geomagnetic lat.).	Kp = 6	600 per cycle (360 days per cycle)
G1	Minor	**Power systems:** weak power grid fluctuations can occur. **Spacecraft operations:** minor impact on satellite operations possible. **Other sytems:** migratory animals are affected at this and higher levels; aurora is commonly visible at high latitudes (northern Michigan & Maine).	$K_p = 5$	1700 per cycle (900 days per cycle)

Source: NOAA, https://www.swpc.noaa.gov/noaa-scales-explanation, (December 2023).

Event History

According to NOAA and NASA, the most significant and impactful space weather events are as follows:

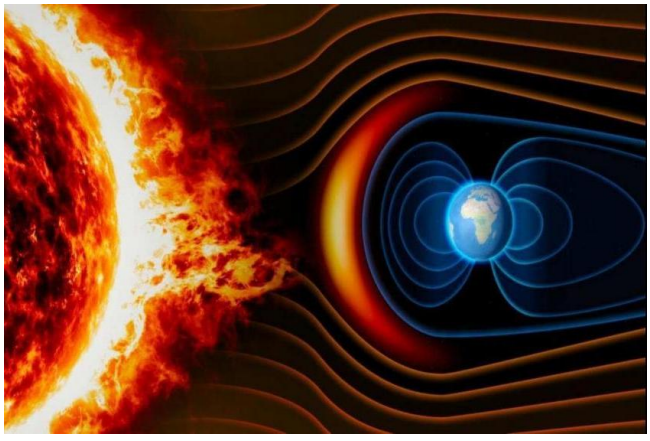
- **September 2, 1859 (The Carrington Event)** - Largest geomagnetic storm recorded impacting expanses of Europe and North America. Telegraph systems were disrupted or down entirely, equipment malfunctioned and caught fire, and aurora displays were visible as south as the Caribbean.
- **May 23, 1967** - A major solar flare produced strong X-ray and radio waves resulting in radio blackouts, global communication disruptions, and power outages.
- **August 4, 1972 -** A powerful solar flare triggered a series of solar storms and a coronal mass ejection (CME) the following day. The CME led to global radio communication and power systems disruptions, power outages in northeastern United States and Canada, and damage to several satellites.
- **March 9-11, 1989** – A CME eruption caused a severe geomagnetic storm that reached Earth four days later, leading to a sequence of power outages, satellite and radio communication disruptions, temporary satellite shutdowns, and permanent damage to electronics. Over six-million Canadians were without power for nine hours and effects were present in the upper Midwest, northeast, and mid-Atlantic regions of the United States.
- **October 28-November 4, 2003 ("Halloween Storms") –** A CME on Oct. 28 created sixth most powerful geomagnetic storm in 70 years, resulting in a 30-hour outage of the Federal Aviation System.
- **May 7-11, 2024** - Several intense solar flares and at least seven coronal mass ejections (CMEs) erupted, disrupting technology and resulting in a $500 million impact on the agricultural industry where GPS systems for tilling, irrigation, and planting are necessary.[1] The multiple CMEs created the first extreme geomagnetic storm intensity (G5) since 2003.

Hazard Probability

Solar activity typically operates within the Sun's 11-year solar cycle, with an increased potential for solar flares and geomagnetic storms when closest to the solar maximum. According to NASA and NOAA, the current solar cycle (Solar Cycle 25) began in December 2019 and reached its maximum in October 2024. However, the current cycle, Solar Cycle 25, is expected to a fairly weak cycle with similar strength to that of its former cycle. Despite some regularity with solar cycles, experts cannot make longer-term predictions when a specific flare will occur. The previous Geomagnetic Storm table provides an average frequency of storm events for each solar cycle by category (intensity). Solar flares can occur several times a day when near the solar maximum.

Hazard Vulnerabilities

Solar flares and resultant geomagnetic storms have the potential to impact various aspects of society due to dependence on the operation of satellites, aircrafts, communication networks, navigation systems, and electric power grid. Storm severities and their specific implications regarding power systems, spacecraft operations, and other systems are outlined in the previous Geomagnetic Storms table.



Preparation and Mitigation

To prevent and mitigate the effects space weather can have on our daily and essential functions, it is imperative that warning systems are utilized to provide sufficient notice to the community. A summary of local and critical facilities vulnerable to space weather events should be easily accessible. In addition, critical facilities should implement backup power and communication systems. This is especially vital for power grids and communication networks for emergency response.

K. CYBER-ATTACK

The information below is supplemental to the information contained within Section III.C.ix. of the *Clark County Hazard Mitigation Plan.*

Defining the Hazard - Cyberattack

National Security Presidential Directive 54/Homeland Security Presidential Directive 23 (NSPD-54/HSPD23) defines **cyberspace** as the interdependent network of information technology infrastructures, and includes the Internet, telecommunications networks, computer systems, and embedded processors and controllers in critical industries. Common usage of the term also refers to the virtual environment of information and interaction between people.[21] Cyberattack is a malicious attack for a variety of potential reasons within or through cyberspace.

In most cases a cyberattack can be characterized as either being carried out for financial gain, for theft of information, or to further a social or political agenda. An attack for financial gain may directly target financial institutions such as banks or credits unions. An attack may also be directed at a specific business or organization for theft of information. Social or political agenda attacks typically try to gain access to sensitive material that can then be shared publicly to embarrass the target or other political advantage.

Hazard Location

There are no geographic boundaries or locations within Clark County uniquely affected by cyberattacks. All Clark County jurisdictions are equally at risk of experiencing a cyberattack event.

Hazard Extent (Potential Intensities)

Not surprisingly, the frequency of events decreases as the priority categories increase. Below is the distribution of FFY2022 Incidents reported the CISA's Threat Hunting unit:[22]

Partner	Baseline 0-29	Minimal 30-49	Low 50-59	Medium 60-74	High 75-84	Severe 85-94	Emergency 95-100	Total Tickets
Private Sector	53	46	10	4	0	0	0	**113**
State, Local, Tribal, and Territorial	22	16	9	2	0	0	0	**49**
Government Facilities	208	250	41	1	0	0	0	**500**
Totals	**283**	**312**	**60**	**7**	**0**	**0**	**0**	**662**

Event History - Cyberattack

National & State Trends

Threats to cyberspace, or cyberattacks, pose one of the most serious economic and national security challenges of the 21st Century for the United States. The December 2008 report by the Commission on Cybersecurity for the 44th Presidency states: "America's failure to protect cyberspace is one of the most urgent national security

[21] Cyberspace Policy Review, Assuring a Trusted and Resilient Information and Communications Infrastructure, U.S. White House.

[22] U.S. Cybersecurity & Infrastructure Security Agency. Theat Hunting – Fiscal Year 2023 Report to Congress. July 13, 2023.

problems facing the new administration."[23] In a 2017 survey of U.S. executives, cyberattacks was ranked as #2, misuse of technologies #3, and data fraud/theft #5 among the top global risks for doing business in the United States within the next ten years.[24] For perspective, terrorism ranked #1, natural catastrophes #6, and extreme weather events #10.

There are a growing number of cyber threat actors, such as terrorists and international criminal groups, that are targeting U.S. critical infrastructure and government. These actors have the ability to compromise, steal, change, or completely destroy information.[25] As the Director of National Intelligence (DNI) recently testified before Congress, "the growing connectivity between information systems, the Internet, and other infrastructures creates opportunities for attackers to disrupt telecommunications, electrical power, energy pipelines, refineries, financial networks, and other critical infrastructures."[26]

Some recent notable attacks include:

July 2023 – Langlade County, WI issued an emergency declaration after experiencing a catastrophic software failure due to a LockBit ransomware attack. Among the impacts, all phone lines were non-functioning and 911 calls were re-routed. The attackers also threatened to leak all stolen data. This attack shows that even smaller organizations and governments can be a target for hackers, even to large, advanced groups like LockBit.

August 2023 – Hospital Sisters Health System and Prevea Health experienced cyberattacks that caused system-wide outages, temporarily impacted hospital communications, and took weeks to fully recover from. In Spring 2024, the Ascension health care system experienced a ransomware attack with data breach.

September 2023 – Rock County, WI experienced a ransomware attack in their Human Services Department. The attack targeted email systems and managed to obtain limited data. The attacker requested $1.9 million in ransom, but no payments were made.

October 2023 – Kwik Trip identified a cyberattack on their systems, which disrupted the company's internal systems and loyalty program. This is an example of a cyberattack largely based elsewhere having regional or even worldwide implications as all Kwik Trip locations were impacted.

November 2023 – Cyberattacks impacted multiple U.S.-based water and wastewater systems through internet-accessible devices in the systems' hardware. The attack had the potential to impact energy, food, and healthcare industries as they use the same equipment, identifying a significant vulnerability to essential service providers. These municipal utilities attacks occurred across the U.S., including in smaller communities, when international hackers who exploited a certain piece of equipment to shut down remote monitoring and water pressure regulating equipment.

October 2024 – The City of Sheboygan experienced a network security breach and some data may have been exposed, though it appears that no services were impacted. As of January 2025, the City was still dealing with

[23]CSIS Commission on Cybersecurity for the 44th Presidency, Securing Cyberspace for the 44th Presidency, December 2008.

[24] World Economic Forum. http://reports.weforum.org/global-risks-2018/global-risks-of-highest-concern-for-doing-business-2018/#country/USA

[25] Director of National Intelligence, Annual Threat Assessment of the Intelligence Community for the Senate Armed Services Committee, Statement for the Record, March 10, 2009.

[26] Director of National Intelligence, Annual Threat Assessment of the Intelligence Community for the Senate Armed Services Committee, Statement for the Record, March 10, 2009.

this situation and the City's has spent over $400,000 on upgrading their cybersecurity systems. Rock County was also attacked in 2024 when perpetrators targeted employee e-mails.

January 2025 – A cloud-based software provider (PowerSchool) that is used by school districts across Wisconsin announced that it had experienced a data breach that may have exposed data about students and school staff.

Vulnerability Assessment - Cyberattack

The growing sophistication of cyberattacks could cause serious problems, such as:



- **Failure of critical infrastructures**. The CIA reports malicious activities against information technology systems have caused the disruption of electric power capabilities in many regions overseas, including a case that resulted in a multi-City power outage.[27] In today's world, broadband technology is a path of attack to utilities and communications. And given that infrastructure often shares systems and grids across large areas, the vulnerability from a single attack is increased.
- **Exploiting global financial services**. In November 2008, payment processors at an international bank were compromised, permitting fraudulent transactions at more than 130 automated teller machines in 49 cities within a 30-minute period.[28] In another case, a U.S. retailer in 2007 experienced data breaches and loss of personally identifiable information that compromised 45 million credit and debit cards.[29]
- **Systemic loss of U.S. economic value.** Industry estimates of losses from intellectual property to data theft in 2008 range as high as $1 trillion.[30]

Projected Loss Estimates

The Federal Bureau of Investigation's Internet Crime Complaint Center's 2023 Internet Crime Report provides some estimates on the financial impacts as a result of cyberattacks.

- $12.5 billion dollars were lost to cyber crime, a 22% increase in losses suffered, compared to 2022. Business Email Compromise and Investment scams were the costliest crimes, accounting for more than 50 percent of losses.
- The age cohort of 60+ had the largest number of victims and losses.
- Wisconsin ranks 23rd overall in number of victims per state (7,683) and 29th overall in victim losses ($92,084,459).

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[27] www.sans.org/newsletters/newsbites/newsbites.php?vol=10&issue=5, CIA presentation, SANS SCADA Security Summit, January 16, 2008.

[28] www.bankinfosecurity.com/article.php?art_id=1197, February 5, 2009.

[29] www.infoworld.com/d/security-central/retailer-tjx/reports-massive-data-breach-952, January 17, 2007.

[30] 16 www.mcafee.com/us/about/press/corporate/2009/20090129_063500_j.html. See also http://resources.mcafee.com/content/NAUnsecuredEconomiesReport, McAfee, "Unsecured Economies: Protecting Vital Information", January 2009. Projection based on survey by Purdue's Center for Education and Research in Information Assurance and Security.

- The average victim in Wisconsin lost $11,985.48. This is below the national average of $14,197.80 per victim.
- Wisconsin's financial loss average has increased by almost 227% since 2020.

Cyberattack Preparedness and Mitigation

National Level of Preparedness

The Cybersecurity & Infrastructure Security Administration (CISA) has wide range of preparedness and response resources. Nearly every business or organization can fit within the Federal definition of critical infrastructure to receive their support. Two tools in particular are a great starting point with assistance through CISA's State office:

- Cyber Resilience Review - An assessment to evaluate an organization's cybersecurity resilience and practices. This can be self-administered or facilitated.
- Cybersecurity Infrastructure Survey - A 2.5-4 hour structured assessment of essential cybersecurity practices focusing on protective measures and threat scenarios, with an on-line dashboard of comparative results.



Additional resources are available through CISA's national team, but may require up to a 2-year wait, including cyberstorm exercises, phishing campaign assessment, vulnerability scanning, and remote penetration testing. CISA's "Shields Up" campaign is driven by the elevated cybersecurity risks as a result of the Ukraine conflict. CISA also has an on-line catalog of educational tools and videos. And attacks/incidents can also be reported to CISA, which shares such data with the FBI. The CISA office for the Wisconsin district is available to assist businesses with navigating through these many resources and programs.

The Department of Homeland Security National Cyber Security Division has a program called the Control Systems Security Program (CSSP), which works to reduce industrial control system risks within and across all critical infrastructure and key resource sectors by coordinating efforts among Federal, state, local, and tribal governments as well as industrial control systems owners, operators, and vendors.[31] The program coordinates activities to reduce the likelihood of a successful cyberattack and attempts to reduce the severity of impacts from a successful cyberattack against critical infrastructure control systems through risk-mitigation activities. Further, the Department of Homeland Security's United States Cyber Emergency Readiness Team (US-CERT) strives to improve the nation's cybersecurity, coordinate information sharing, and manage cyberattack risks.[32] US-CERT partners with private and public sector critical infrastructure owners and operators to enhance cybersecurity. Cyber-security assessment tools are available through US-CERT and businesses that provide critical infrastructure may be eligible for additional audit and planning support. Given that cyberattack threats are escalating, new programs and resources are continuing to become available. For example, in January 2024 the Department of Energy announced grant funding to support the research, development, and demonstration (RD&D) of next generation tools to protect clean energy delivery infrastructure from cyberattacks.

[31] http://www.us-cert.gov/control_systems/

[32] http://www.us-cert.gov/about-us/

State of Wisconsin Level of Preparedness

The State of Wisconsin's Cyber Incident Annex "discusses policies, organizations, actions, and responsibilities for a coordinated, multidisciplinary, broad-based approach to prepare for, respond to, and recover from cyber-related incidents."[33] The Annex describes the framework for Wisconsin State Agencies to support local units of government during a cyber incident response. This support is coordinated with State and Federal agencies. Wisconsin is a home rule state and "the role of any state agency, including the Department of Military Affairs and the division, in an emergency declared under this chapter, is to assist local units of government and local law enforcement agencies in responding to a disaster or the imminent threat of a disaster."[34]

The Wisconsin Statewide Intelligence Center (Fusion Center) provides a variety of resources to businesses and organizations, including hosting the Statewide Cyber Response Team to assist businesses and organizations if they experience a cyberattack. The make-up of the Team will vary depending on the nature of the attack and type of organization and there is strong collaboration between the FBI, CISA, and Fusion Center team members. Regional-level cyber-response teams have also been established should a local government or business require support due to a significant data breach.

The State of Wisconsin Department of Administration, Division of Enterprise Technology's Office of Security also provides information to Wisconsin residents, educators, and businesses on cyber risks and ways to stay protected online.

Clark County Government Preparedness

How an entity responds to a cyberattack can limit or increase its liabilities. Basic measures, such as keeping computer operating systems and virus/firewall software update, can go far to avoiding many threats. However, even with the best email filters, some spam and cyber threats will still get through. Employees are an integral part of a cybersecurity system and are often the last line of defense. Train employees to recognize suspicious emails, web sites, billings, and other identity theft threats. Red flags include differences in shipping, billing, and return addresses; similar (but slightly different) business names and web links; and many large orders from a new customer. If uncertain, follow-up with phone calls, web searches, etc. should be performed.

It can be valuable to have a cyber-security and response plan with a technical team and a separate executive team, with clear roles and responsibilities for each. Regular exercising of the plan will minimize stress and allow increasing focus on decisions, rather than the process and procedures. Such exercises can include a cyberattack vulnerability assessment, including evaluating employee awareness through fake phishing. An organization's cyber-security and/or continuity plans should also include how data will be backed-up off-site or in the cloud, how this data is to be recovered following an event, and whether the recovery location meet the organization's technology needs. Some industries, such as health care and utility providers, have their unique risks, data-security rules, and cyber-security and response support networks.

In short, the risk and sophistication of cyberattack continues to grow and the level of protection and preparedness among the communities and businesses in Clark County varies significantly. Most municipalities interviewed during the Plan update process back-up their digital data off-site or "in the cloud." Cybersecurity actions, such as off-site or cloud data back-up, also mitigate risks associated with fires, tornado, flooding, equipment failure, accidental data deletion, etc.

[33] Cyber Incident Annex—State of Wisconsin, http://emergencymanagement.wi.gov/planning/WERP/Annex%20Cyber%20Terrorism%20Incident%20RD.pdf, June 30, 2010.

[34] Ibid.

Mitigation Strategies

How an entity responds to a cyberattack can limit or increase its liabilities. It can be valuable to have a cyber-response plan with a technical team and a separate executive team, with clear roles and responsibilities for each. Regular exercising of the plan will minimize stress and allow increasing focus on decisions, rather than the process and procedures.

County IT staff from across west-central Wisconsin are consistent in encouraging everyone to do the fundamentals to help strengthen cybersecurity at work and at home:

- perform regular back-up of important data
- have strong passwords and use multi-factor authentication
- educate employees and family members on phishing; consider mock phishing testing
- have good end-point protection; keep the firewall on and set virus/malware software to automatically update
- migrating to the most current version of Windows and ensure that the Windows operating system is automatically updated
- have a plan should an attack occur or data be exposed

There are additional actions and policies that can be taken to reduce cyberattack risks as discussed at April 2011, May 2017, and June 2022 Disaster Ready Chippewa Valley cyber-security workshops, such as:

- use of hardware firewalls and how web servers are managed
- use multi-factor authentication
- IDS/IPS real-time monitoring in both directions
- data and password encryption, including encrypted tunnels for transport
- password policies and procedures
- policies for the use of computer equipment, Internet, and downloading
- segregation of certain duties
- safeguarding and proper disposal of old equipment, including copiers
- safeguarding and proper disposal of paper reports
- training of staff in risks, guidelines, and security measures
- know what is covered under insurance in term of cyberattack damages and liabilities
- request assistance from law enforcement, State, and Federal government when needed
- if an employee is leaving your firm, especially if disgruntled, it is important to cut them off immediately from access to your systems in order to help prevent insider threats or the theft of intellectual property.
- if you are victim of a cyberattack, immediately contact your financial institution to monitor or request a freeze or recall of funds. Also monitor for irregularities with payroll deposits. And file a complaint with the FBI's Internet Crime Complaint Center (www.ic3.gov). If notified immediately, the FBI may be able assist with freezing funds. In certain instances, the FBI may also open an investigation.
- the FBI issues flash messages, private industry notifications, and advisories, including alerts for specific industries.

Even with the best email filters, some spam and cyber threats will still get through. Employees are an integral part of your cybersecurity system and the last line of defense. Train employees to recognize suspicious emails, web sites, billings, and other identity theft threats. Warning flags include: differences in shipping, billing, and return addresses; similar (but slightly different) business names and web links; and many large orders from new customers. If uncertain, follow-up with phone calls, web searches, etc.

Continuity planning is also important, though most local governments in Clark County have not developed such plans. Continuity planning is the identification of strategies for the preservation and/or restoration of critical business functions during or following a disaster or other disruption of service. Not only should data be frequently backed-up off site, but organizations should consider how this data is to be recovered following an event and, should disaster strike, does the recovery location meet the organization's technology needs. Larger municipalities may need a secondary data and operations center and/or a back-up server. These systems should be tested regularly. The business continuity planning template available at the Disaster Ready Chippewa Valley website (www.disasterreadychippewavalley.org) includes a section on data protection, storage, and recovery which may be helpful. Local governments should obtain technical assistance in addressing their risks, if needed. One opportunity is the State & Local Cybersecurity Grant Program, which was established in 2021 to address cybersecurity risks and threats to information systems owned or operated by, or on behalf of, state, local, or tribal governments.

NATIONAL SECURITY AGENCY
CYBERSECURITY INFORMATION

NSA'S Top Ten Cybersecurity Mitigation Strategies

NSA's Top Ten Mitigation Strategies counter a broad range of exploitation techniques used by Advanced Persistent Threat (APT) actors. NSA's mitigations set priorities for enterprise organizations to minimize mission impact. The mitigations also build upon the NIST Cybersecurity Framework functions to manage cybersecurity risk and promote a defense-in-depth security posture. The mitigation strategies are ranked by effectiveness against known APT tactics. Additional strategies and best practices will be required to mitigate the occurrence of new tactics.

The cybersecurity functions are keyed as: **Identify, Protect, Detect, Respond, Recover**

1. Update and Upgrade Software Immediately

Identify, Protect

Apply all available software updates, automate the process to the extent possible, and use an update service provided directly from the vendor. Automation is necessary because threat actors study patches and create exploits, often soon after a patch is released. These "N-day" exploits can be as damaging as a zero-day. Vendor updates must also be authentic; updates are typically signed and delivered over protected links to assure the integrity of the content. Without rapid and thorough patch application, threat actors can operate inside a defender's patch cycle.

2. Defend Privileges and Accounts

Identify, Protect

Assign privileges based on risk exposure and as required to maintain operations. Use a Privileged Access Management (PAM) solution to automate credential management and fine-grained access control. Another way to manage privilege is through tiered administrative access in which each higher tier provides additional access, but is limited to fewer personnel. Create procedures to securely reset credentials (e.g., passwords, tokens, tickets). Privileged accounts and services must be controlled because threat actors continue to target administrator credentials to access high-value assets, and to move laterally through the network.

3. Enforce Signed Software Execution Policies

Protect, Detect

Use a modern operating system that enforces signed software execution policies for scripts, executables, device drivers, and system firmware. Maintain a list of trusted certificates to prevent and detect the use and injection of illegitimate executables. Execution policies, when used in conjunction with a secure boot capability, can assure system integrity. Application Whitelisting should be used with signed software execution policies to provide greater control. Allowing unsigned software enables threat actors to gain a foothold and establish persistence through embedded malicious code.

4. Exercise a System Recovery Plan

Identify, Respond, Recover

Create, review, and exercise a system recovery plan to ensure the restoration of data as part of a comprehensive disaster recovery strategy. The plan must protect critical data, configurations, and logs to ensure continuity of operations due to unexpected events. For additional protection, backups should be encrypted, stored offsite, offline when possible, and support complete recovery and reconstitution of systems and devices. Perform periodic testing and evaluate the backup plan. Update the plan as necessary to accommodate the ever-changing network environment. A recovery plan is a necessary mitigation for natural disasters as well as malicious threats including ransomware.

5. Actively Manage Systems and Configurations

Identify, Protect

Take inventory of network devices and software. Remove unwanted, unneeded or unexpected hardware and software from the network. Starting from a known baseline reduces the attack surface and establishes control of the operational environment. Thereafter, actively manage devices, applications, operating systems, and security configurations. Active enterprise management ensures that systems can adapt to dynamic threat environments while scaling and streamlining administrative operations.

CYBERSECURITY INFORMATION

6. Continuously Hunt for Network Intrusions

■ Detect, ■ Respond, ■ Recover

Take proactive steps to detect, contain, and remove any malicious presence within the network. Enterprise organizations should assume that a compromise has taken place and use dedicated teams to continuously seek out, contain, and remove threat actors within the network. Passive detection mechanisms, such as logs, Security Information and Event Management (SIEM) products, Endpoint Detection and Response (EDR) solutions, and other data analytic capabilities are invaluable tools to find malicious or anomalous behaviors. Active pursuits should also include hunt operations and penetration testing using well documented incident response procedures to address any discovered breaches in security. Establishing proactive steps will transition the organization beyond basic detection methods, enabling real-time threat detection and remediation using a continuous monitoring and mitigation strategy.

7. Leverage Modern Hardware Security Features

■ Identify, ■ Protect

Use hardware security features like Unified Extensible Firmware Interface (UEFI) Secure Boot, Trusted Platform Module (TPM), and hardware virtualization. Schedule older devices for a hardware refresh. Modern hardware features increase the integrity of the boot process, provide system attestation, and support features for high-risk application containment. Using a modern operating system on outdated hardware results in a reduced ability to protect the system, critical data, and user credentials from threat actors.

8. Segregate Networks Using Application-Aware Defenses

■ Protect, ■ Detect

Segregate critical networks and services. Deploy application-aware network defenses to block improperly formed traffic and restrict content, according to policy and legal authorizations. Traditional intrusion detection based on known-bad signatures is quickly decreasing in effectiveness due to encryption and obfuscation techniques. Threat actors hide malicious actions and remove data over common protocols, making the need for sophisticated, application-aware defensive mechanisms critical for modern network defenses.

9. Integrate Threat Reputation Services

■ Protect, ■ Detect

Leverage multi-sourced threat reputation services for files, DNS, URLs, IPs, and email addresses. Reputation services assist in the detection and prevention of malicious events and allow for rapid global responses to threats, a reduction of exposure from known threats, and provide access to a much larger threat analysis and tipping capability than an organization can provide on its own. Emerging threats, whether targeted or global campaigns, occur faster than most organizations can handle, resulting in poor coverage of new threats. Multi-source reputation and information sharing services can provide a more timely and effective security posture against dynamic threat actors.

10. Transition to Multi-Factor Authentication

■ Identify, ■ Protect

Prioritize protection for accounts with elevated privileges, remote access, and/or used on high value assets. Physical token-based authentication systems should be used to supplement knowledge-based factors such as passwords and PINs. Organizations should migrate away from single factor authentication, such as password-based systems, which are subject to poor user choices and susceptible to credential theft, forgery, and reuse across multiple systems.

Disclaimer of Warranties and Endorsement

The information and opinions contained in this document are provided "as is" and without any warranties or guarantees. Reference herein to any specific commercial products, process, or service by trade name, trademark, manufacturer, or otherwise, does not constitute or imply its endorsement, recommendation, or favoring by the United States Government, and this guidance shall not be used for advertising or product endorsement purposes.

Contact Information

Client Requirements and General Cybersecurity Inquiries
Cybersecurity Requirements Center (CRC), 410-854-4200, email: Cybersecurity_Requests@nsa.gov

L. HAZARDOUS MATERIALS SPILLS

The information below is supplemental to the information contained within Section III.C.x. of the *Clark County Hazard Mitigation Plan.*

Defining the Hazard – Hazardous Materials Spills

Below are many of the Federal definitions related to hazardous materials.

Hazardous Materials – The National Fire Protection Association (NFPA) 704 Standard is widely used to classify hazardous materials, which it generally defines as "**a chemical or substance that is classified as a physical hazard material or a health hazard material, whether the chemical or substance is in usable or waste condition**." The United States Department of Transportation (DOT) uses the term "hazardous materials" which covers eight hazard classes, some of which have subcategories called classifications, and a ninth class covering other regulated materials (ORM). The DOT includes in its regulations hazardous substances and hazardous wastes, both of which are regulated by the Environmental Protection Agency (EPA), if their inherent properties would not otherwise be covered.

Hazardous Substances - The EPA uses the term "hazardous substance" for the chemicals which, if released into the environment above a certain amount, must be reported and, depending on the threat to the environment, Federal involvement in handling the incident can be authorized. A list of the hazardous substances is published in 40 CFR Part 302, Table 302.4.

Extremely Hazardous Substances - The EPA uses the term "extremely hazardous substance" for the chemicals which must be reported to the appropriate authorities if released above the threshold reporting quantity. Each substance has a threshold reporting quantity. The list of extremely hazardous substances is identified in Title III of Superfund Amendments and Reauthorization Act (SARA) of 1986 (40 CFR Part 355).

Toxic Chemicals - The EPA uses the term "toxic chemical" for chemicals whose total emissions or releases must be reported annually by owners and operators of certain facilities that manufacture, process, or otherwise use a listed toxic chemical. The list of toxic chemicals is identified in Title III of SARA.

Hazardous Wastes - The EPA uses the term "hazardous wastes" for chemicals that are regulated under the Resource, Conservation and Recovery Act (40 CFR Part 261.33). Hazardous wastes in transportation are regulated by the DOT (49 CFR Parts 170 - 179).

Hazardous Chemicals - The United States Occupational Safety and Health Administration (OSHA) uses the term "hazardous chemical" to denote any chemical which is a physical hazard or a health hazard. Hazardous chemicals cover a broader group of chemicals than the other chemical lists. There is no list of hazardous chemicals, but they are any substance for which OSHA requires a facility to maintain a Material Safety Data Sheet.

Hazardous Substances - OSHA uses the term "hazardous substance" in 29 CFR Part 1910.120, which resulted from Title I of SARA and covers emergency response. OSHA uses the term differently than EPA. Hazardous substances, as used by OSHA, cover every chemical regulated by both DOT and EPA. [35]

A solid waste may be a "listed hazardous waste" if it appears in one or more U.S. Environmental Protection Agency tables that list hazardous wastes. Other solid wastes are "characteristic hazardous wastes" because they exhibit any of the four hazardous-waste characteristics: corrosiveness, reactivity, toxicity, or ability to ignite. If the waste is hazardous, then it must be managed in compliance with the applicable sections of NR 600-685, Wisconsin Administrative Code (DNR Pub SW-232).

[35] Ingham County Emergency Planning Committee, Hazardous Materials Page, http://www.orcbs.msu.edu/AWARE/pamphlets/hazwaste/HazMatdef.html, as of Feb 2004.

State & Regional Events & Trends

State and regional hazardous materials spill events and trends are summarized here to provide insight into the potential risks for Clark County. Though current data is not readily available, in the past nearly 58 percent of all spills in Wisconsin are petroleum-related; and 49 percent of all spills occur at industrial-related facilities, automotive-related facilities, or on the roadways.[36] Spills at private properties account for nearly twelve percent of all spills. More than fourteen percent of spills each year in Wisconsin are contained and/or recovered before they impact the environment. Surface water spills account for more than fifteen percent, while spills to groundwater occur more than seven percent of the time. The vast majority of reported hazardous materials incidents in Wisconsin result from the loading, unloading, and transportation of hazardous materials.

Based on 2014 and 2016 Wisconsin DNR data, Wisconsin averages almost 1,000 hazardous substance spills every year, with more populated areas experiencing more spills. About one-half of all spills in Wisconsin are petroleum-related; and about one-third of spills occur on roadways. Spills at private properties account for about 12% of all spills and commercial properties account for around another 12%. About 5-10% of spills occur at farms. About one-third of spills each year in Wisconsin are contained and/or recovered before they impact the environment. The remaining spills can impact the environment or become a public health concern through the contamination of air, soil, and water. Spills to surface water or storm sewers account for 15-20% percent, while spills to groundwater occur 5-10% of the time. A majority of reported hazardous materials incidents in Wisconsin result from the loading, unloading, and transportation of hazardous materials. [37]

State & Regional Trends – Hazardous Materials Spills on Transportation Facilities

Recent, detailed information on transportation-related Haz Mat spills was not readily available, but it is expected that past trends are continuing. From 1971 to 2016, Wisconsin had a total of 10,958 reported hazardous materials transportation incidents. This total is comprised of 10,498 highway incidents (95.8%), 266 rail incidents (2.4%), 188 air incidents (1.7%), 2 other incidents (>0.1%), and 0 water incidents (0.0%). The total cost for all reported incidents is approximately $57 million dollars. These incidents included 175 involving a crash or derailment, 68 causing or contributing to personal injury, 59 causing or contributing to an evacuation, 38 closing a major transportation arterial or facility, and seven causing or contributing to a fatality.



Source: National Transportation Safety Board Report, CHI 96 FR 010, Derailment/Hazardous Material Release, Wisconsin Central, LTD, Weyauwega, Wisconsin, August 16, 1997.

Approximately half of the above reported costs ($26.6 million) were from the 1996 Weyauwega Train Derailment. In March 1996, a train consisting of two locomotive units, 68 loaded freight cars and 13 empty freight cars derailed at Weyauwega, Wisconsin. The train included sixteen cars with hazardous materials—seven cars of liquid petroleum gas, seven cars of propane, and two cars of sodium hydroxide. A fire engulfed many of the cars themselves as well as an adjacent feed mill. About 3,155 residents were immediately evacuated, with approximately 2,300 residents evacuated for sixteen days due to the fire and leaking chemicals. Two U.S. highways were also closed as well as several county highways. Additional issues arose when numerous residents illegally began to re-enter the evacuation area to retrieve pets left behind.

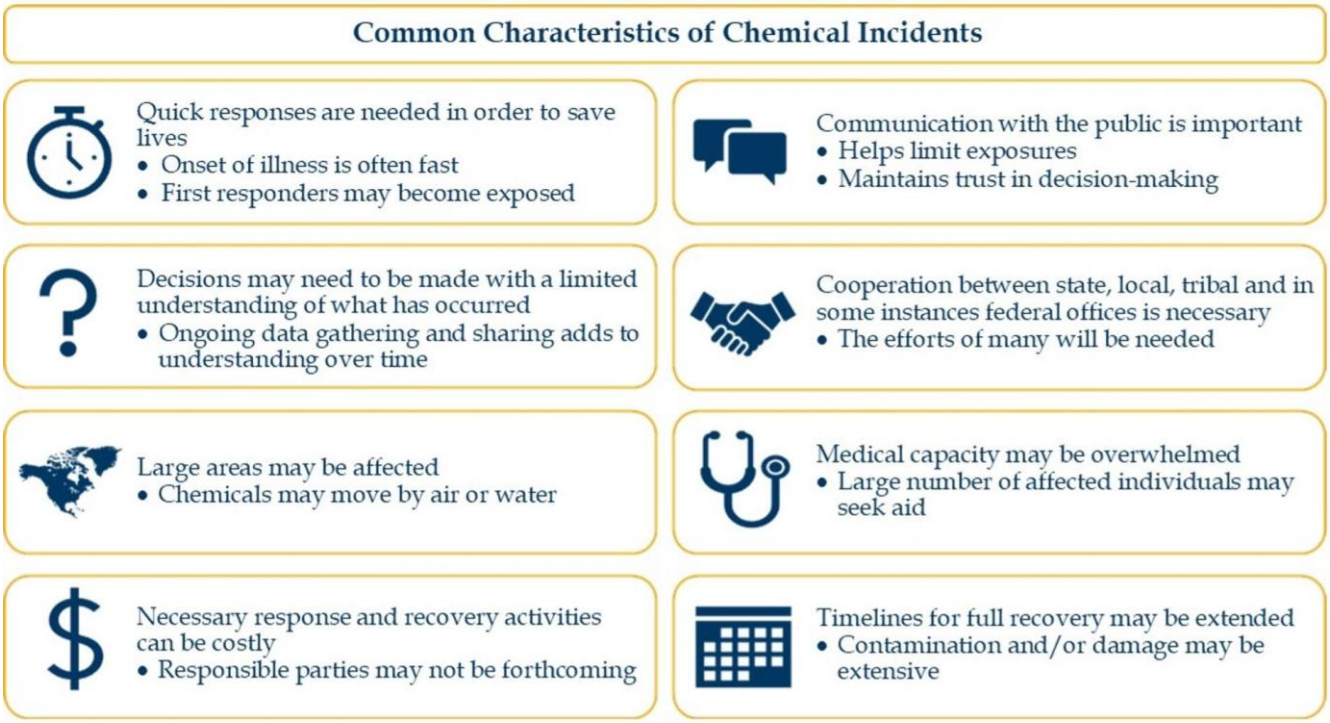
Sometimes, hazardous materials spills can be the result of natural hazard events. For instance, on June 7, 1980, a Chicago & Northwestern train derailed in Chippewa County due to a flash flood which washed out the tracks.

[36] Wisconsin Department of Natural Resources. "Hazardous Substance Spills in Wisconsin". July 2014.
[37] Wisconsin Department of Natural Resources. "Hazardous Substance Spills in Wisconsin", July 2014 and August 2016.

Three cars of #6 fuel oil were torn open, and 86,000 gallons spilled. Containment dikes were built and most of the oil was recovered.

Vulnerability Assessment

Hazardous substances and materials can have a wide variety of harmful impacts to people, property, and the environment. These substances can be in solid, liquid, gaseous, or semi-solid form, which can often be difficult to detect or contain if a release does occur. Impacts may be immediate, as in the case of fire, explosion, or physical harm to bystanders (e.g., fire, inhalation, chemical burns, radioactivity). And some impacts can be longer term, such as degraded water quality, illness among wildlife, corrosion, or increases in health problems (e.g., cancer, birth defects). The magnitude of the vulnerability zone and potential for fire or explosion also varies by substance type (e.g., gas vs. solid) and by environmental conditions (e.g., wind speeds, access to surface or groundwater, temperature). In extreme cases, contamination of buildings and soils can be at such levels as to make a property unusable or uninhabitable for lengthy periods. Evacuation of nearby residents may be needed. Recovery and clean-up costs can also vary widely depending on the type of hazardous material, amount released, and conditions at the site (e.g., soil type, temperature).



Areas of Concern

EHS and Tier Two Facilities

Tier-Two facility reports are submitted annually, by law (SARA Title III), for any facility that is required to prepare or have available a Material Safety Data Sheet (MSDS) for a hazardous chemical present at the facility. EHS (Extremely Hazardous Substances) facilities store and/or use one of over 300 chemicals with extremely toxic properties identified within Title III of SARA. In addition to the MSDS reporting requirements, EHS facilities must cooperate with Clark County Emergency Management and the Local Emergency Planning Committee (LEPC) to develop an emergency response plan.

The MSDS must identify any hazardous chemical present at the facility at or above 10,000 pounds at any given time or for each extremely hazardous substance (EHS) at or above 500 points (or the threshold planning quality,

whichever is less) at any given time. There are a number of exemptions from these reporting requirements, including retail gas stations, hazardous wastes regulated under the Resource Conservation and Recovery Act, substances used in routine agricultural operations by the end-user, tobacco products, wood products, food products regulated by the Food & Drug Administration, and hospitals.

It is important to note that these facilities are not limited to industry, but include some public water and wastewater treatment facilities. These facilities have no known unique, inherent characteristics (e.g., location, type of construction) that make them any more vulnerable to the natural hazards covered within this Plan when compared to other facilities, and thus were not individually analyzed. However, the hazardous nature of the chemicals and substances used or stored at these locations can pose unique vulnerabilities to local residents and the environment.

Manure Storage and Animal Waste Management Facilities

A study of 300 reported manure incidents in Wisconsin showed that forty percent of manure incidents from 2005 to 2009 occurred on the main farmstead, such as the storage pit overtopping or a line break. About thirty percent of manure spills occurred during transportation between the storage facility and application site. Another thirty percent occurred during or after land application, such as movement following a rain event. The study also stated that there is increasing awareness of risks from snowmelt- and precipitation-driven runoff, which appears to have decreased manure applications on frozen soil. Forty-three percent of the incidents had a surface water impact, though manure released to road ditches was included in this category. Four percent of the incidents in this study resulted in a fish kill.



To discourage spreading in high-risk areas, the Wisconsin DNR provides maps online to landowners showing nutrient management restrictions, winter spreading risk areas, and "safe" manure stacking areas. WDNR also manages the web-based Runoff Risk Advisory Forecast that identifies the daily runoff risk by subwatershed. The Wisconsin Department of Natural Resource (WDNR) has regulatory authority related to nutrient management and water quality and operates a Spill Hotline that dispatches the local Conservation Warden should an event occur. The larger concentrated animal feeding operations are required to have a nutrient management plan and obtain State wastewater discharge permits from Wisconsin DNR prior to operation. The National Resource Conservation Service, Wisconsin Department of Agriculture, Trade, & Consumer Protection (WI DATCP), and UW-Extension provide additional education and support programs regarding nutrient and animal waste management.

Multi-County Commodity Flow Studies

During the planning process, areas and neighborhoods adjacent to the County's rail lines and major highways were the most frequently mentioned risk. In 2012, a *Multi-County Commodity Flow Study* was completed by Five Bugle Training & Consulting, LLC to attempt to provide insight into the types of hazardous materials moving through the region. This study included Chippewa, Clark, Eau Claire, and St. Croix counties.

As part of the study, 48 hours were spent observing hazmat placards at five locations on Highway 29, two locations on Highway 10, and one location on each of Highways 95, 98, and 27, typically at intersections with other arterial

highways. Based on placards, 27 different types of EPCRA Tier Two hazardous materials were identified as being transported via these highways during the study period. The study suggests that the "majority of hazardous materials being transported…is either not placarded or not listed in the Tier II report" being provided to County Emergency Management. The transport of hazardous materials by rail in the County was not included in the study.

The study also included a fire department survey that showed that all of the departments had a percentage of their personnel trained at the haz mat awareness level. The typical department trains six hours or less a year on haz mat response, with over half never having trained with the regional haz mat response team. The vast majority would like to see additional training made available to them. The study concludes with various recommendations, some of which have been integrated into this Plan. The detailed results of this study are not published here for reasons of security.

An update to the commodity flow study is nearing completion and included the following findings:

- Training – Fire departments reported a wide-range of training, with the most common number of dedicated training hours being 2-6 hours, covering primarily the Awareness and Operations level.
- Equipment – Fire Departments generally carry absorbent materials and/or mats, spill kits, multi-gas meters, Tyvek suits, containment pools, and self-contained breathing apparatus (SCBAs). Some carry additional equipment. The Chippewa Falls & Eau Claire Fire Departments have the highest level of equipment given that they, together, make up the Regional Type I Response Team.
- 5-10% of commercial truck traffic was carrying hazardous materials
- 44% of observed materials during the study were not found on the Tier II report and are potentially unfamiliar to first responders.
- Approximately 17% of chemicals observed were labeled generically

The February 2024 initial draft recommended:

- Review and assess preparedness measures, including training records and response capabilities.
- Schedule a minimum of annual training appropriate to each fire department, including reviewing chemical properties and types of vehicles transporting HazMat.
- Inventory HazMat response equipment
- Collaborate to ensure that local decontamination equipment and procedures are in place.

Some local stakeholders expressed concern over the limitations of the commodity flow survey since it is a "point in time" visual analysis of placards, which offers limited information, skepticism regarding the compliance with placarding, and the limited information on what is being transported via railroads. For information regarding a specific train, an AskRail application was launched in 2014 for emergency responders to query railcar contents.

Other Factors Influencing Future Losses

Clark County is growing. As growth occurs, there is an increase in the potential number of contamination sources. And, as the number of industries increases, there is an increase in the general use of hazardous materials in the County for domestic, institutional, and commercial purposes. Traffic volumes are also rising, which increases the potential for accidents involving vehicles carrying hazardous materials. Further, as additional private wells are installed, more residents are potentially vulnerable to groundwater contamination.

Mitigation, preparedness, and response can decrease future losses. Strategies include maintaining or upgrading Haz Mat storage equipment and related security as well as maintaining and implementing facility, emergency response, and other Haz Mat plans, with related training and exercises. All fire departments have had some training at the operations level for hazardous materials response.

As needed, the West Central Wisconsin Regional Response Team, based in the Chippewa Falls and the Eau Claire fire departments, can be contacted for additional reconnaissance and research support. This Type I team can also be requested to respond to the most serious of spills and releases requiring the highest level of skin and respiratory protective gear. This includes all chemical, biological, or radiological emergencies requiring vapor-tight Level A gear with self-contained breathing apparatus. Additional support from the Menomonie Fire Department Type III team may also be available. For larger events, a State-level response team is available with support from a variety of agencies including Wisconsin DNR, Wisconsin Emergency Management, and even Federal support. Rail lines, utilities, and larger industries often have their own, internal Haz Mat response teams trained and equipped to various leaves.

M. ACTIVE THREATS

The information below is supplemental to the information contained within Section III.C.xi. of the *Clark County Hazard Mitigation Plan.*

Defining the Hazard—Active Threats

The U.S. Department of Homeland Security defines **active shooter** as "a person or persons actively engaged in killing or attempting to kill people in a confined and populated area." In most cases, active shooters use a firearm, though they may be using other weapons as well (e.g., explosives, knife), and there is no pattern or method to their selection of victims.

An active shooter incident at a work site can be a type of workplace violence. According to OSHA, **workplace violence** is any act or threat of physical violence, harassment, intimidation, or other threatening disruptive behavior that occurs at the work site. It ranges from threats and verbal abuse to physical assaults and, in the case of an active shooter, even homicide. It can affect and involve employees, clients, customers and visitors. An active shooter incident at an educational institution is a workplace violent event that often referred to as targeted school violence.

Targeted school violence is defined by the U.S. Department of Education as "any incident where a current student or recent former student attacked someone at his or her school with lethal means (e.g. a gun or knife); and, where the student attacker purposely chose his or her school as the location of the attack."[38] The Safe School Initiative examined incidents of "targeted violence" in school settings where the school was deliberately selected as the location for the attack and was not simply a random site of opportunity. The term "targeted violence" evolved from the Secret Service's five-year study of the behavior of individuals who have carried out, or attempted, lethal attacks on public officials or prominent individuals. For purposes of this report, targeted school violence will include any incidents of targeted violence, as described above, brought forth by anyone whether or not connected with the targeted school and may not be limited to active shooter threats.

According to the Federal Emergency Management Agency (FEMA), **Civil Disturbance** is defined as a civil unrest activity such as a demonstration, riot, or strike that disrupts a community and requires intervention to maintain public safety. Civil disturbances, like riots, interfere with the normal functioning of a community, can disrupt critical services, and require the actions of law enforcement, emergency services, and/or the military to restore peace. While the vast majority of protest is peaceful, the right of citizens to protest must be balanced against the rights of non-protesting citizens to conduct their own business. Despite the peaceful nature of most protest and

[38] Combating Targeted School Violence: Inside & Outside Attackers, 2007.

civil disobedience, such events are disruptive, can be costly for local governments, and have the potential to degenerate into violence resulting in property damage, injury, and death.

According to OSHA, workplace violence typically falls into one of the following four categories. However, the perpetrator's primary purpose of workplace violence events may not be to harm large numbers of people:

Type I: Criminal Intent. The perpetrator(s) has no legitimate relationship to the business or victims, but the violence is incidental to another crime, such as robbery or terrorism. The vast majority of workplace homicides (85%) are Type I. A workplace may be at a higher risk of Type I violence if the business handles cash or drugs.

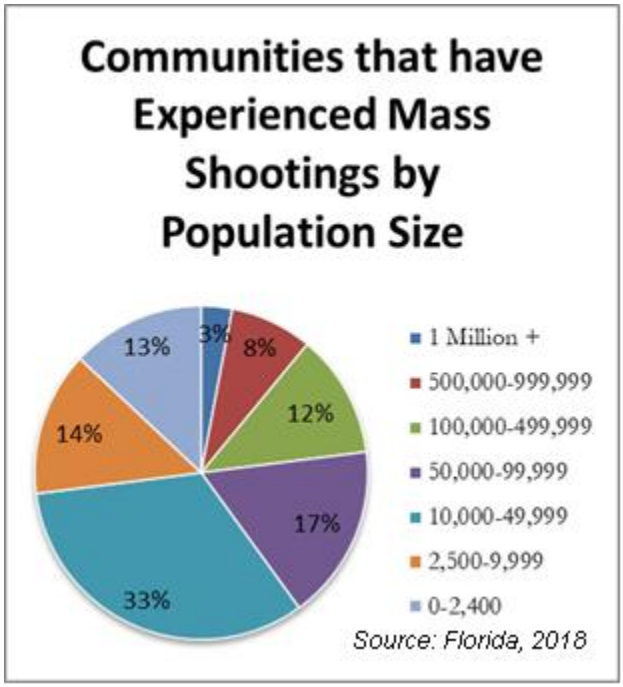
Type II: Customer/Client. The violent person(s) has a legitimate relationship with the business, such as a customer, client, patient, student, or inmate. A large portion of the Type II incidents occur in the health care and social services industry, and the victims are often patient caregivers. Less than five percent of all workplace homicides are Type II, though this category accounts for the majority of nonfatal workplace violence incidents.

Type III: Worker-on-Worker. The perpetrator(s) is an employee or past employee that targets another existing or past employee. Type III incidents account for approximately seven percent of all workplace homicides. An employer that is downsizing or reducing their workforce may have a heightened risk of this category.

Type IV: Personal Relationship. The perpetrator(s) usually does not have a relationship with the business but has a personal relationship with the primary intended victim(s). This category includes domestic violence in the workplace and accounts for about five percent of all workplace homicides. Prevention of this type of violence can be very difficult in workplaces that are accessible to the public during business hours, such as retail establishments. A disgruntled partner may not know where their former lover now lives, but they likely knows where he/she works.

Hazard Location

Using Stanford University's data base on Mass Shootings, Patrick Alder at the Martin Prosperity Institute analyzed demographic data of the communities where mass shootings happened from 1971 to 2016.[39] The database included 307 mass shootings in 223 places, occurring between 1971 and 2016. Alder's conclusions were that mass shootings were experienced by communities of all sizes, income levels, and racial diversities.



Although mass shootings were spread across communities of different sizes, a plurality of mass shootings, 33 percent of the total 307 mass shootings, happened in communities of 10,000 to 49,000 people. According to 2015 census data, communities of this size comprised 11.7 percent of incorporated municipal governments in the United States, or 2,281 municipal governments total. This means that 4.4 percent of municipalities of this size (101 total) have experienced a mass shooting. At the same time, 27 percent

[39] Boone, a. (2018, March 1). *Where Do Mass Shootings Take Place?* Retrieved March 3, 2018, from City Lab: https://www.citylab.com/life/2018/03/where-do-mass-shootings-take-place/554555/

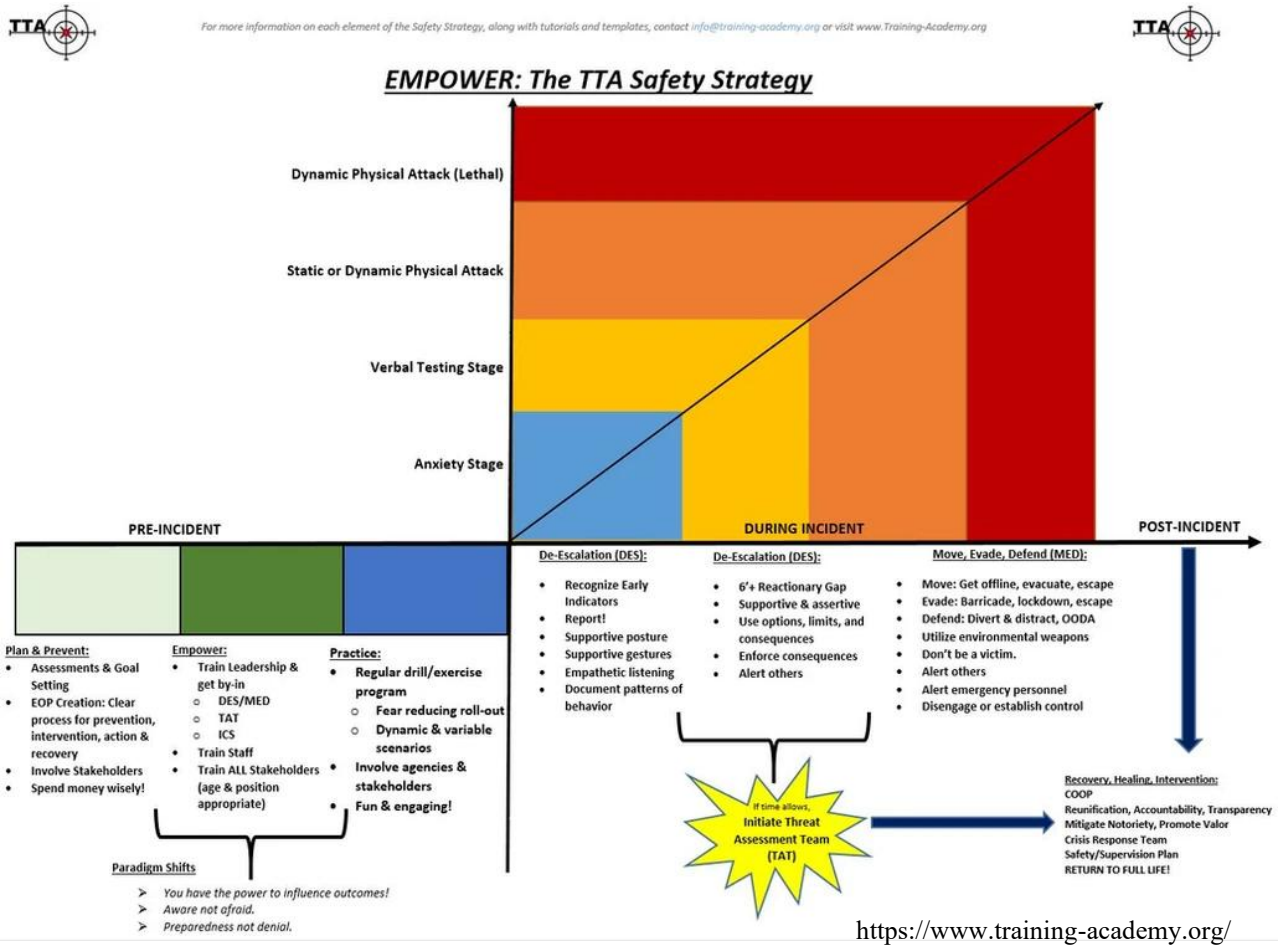
of mass shootings (83 total) took place in communities of less than 10,000 people. There are 16,470 incorporated places of this size and .5 percent have experienced mass shootings from 1971 to 2016.

Three percent of mass shootings have taken place in cities with populations of more than one million people. The cities of Chicago, Illinois, Los Angeles, California, and Phoenix Arizona have each seen five mass shootings. Killeen, Texas, with a population of 127,921 in 2010, has experienced four mass shootings, including Luby's Shooting in 1990 and the Fort Hood Shooting in 2014.

Mass shootings happen in communities across the spectrum of economic circumstances. Only six percent of mass shootings occurred in communities that had mean household incomes of less than $40,000. In general, mass shootings happened in middle class America. The mean household income for communities which had experienced mass shootings was $65,900 while the United Sates mean household income was $77,866. Seven percent of mass shootings took place in communities with average household incomes of $130,000 or more. Mass shootings occurred in the least racially diverse communities in America as well as in the most racially diverse communities. However, only 24 percent of mass shootings happened in white-minority communities. 76 percent of mass shootings were experienced in communities with majority white populations.

Hazard Extent (Potential Intensities)

The intensity of active threat events are largely measured by the number of individuals impacted (i.e., killed, injured, otherwise threatened). The Tactical Training Academy, a private agency providing workplace safety training & consulting, has created the following escalation and control management matrix for evaluating the evolution of an active threat event and related actions:



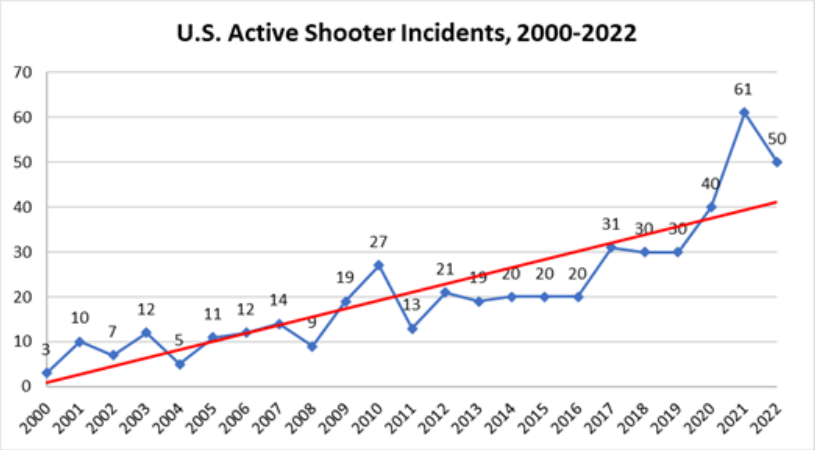
https://www.training-academy.org/

Event History - Active Threats

National Trends

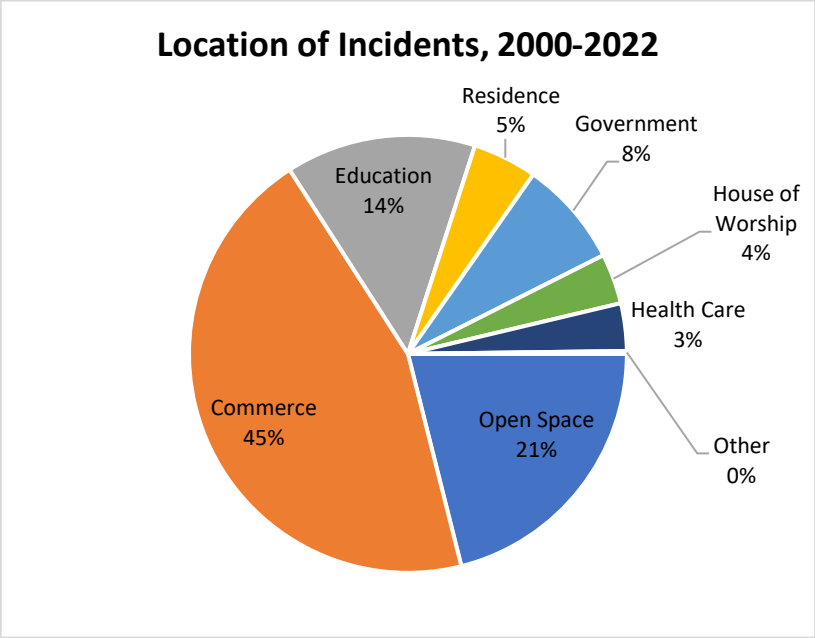
Active Shooter Trends: The Federal Bureau of Investigation identified 484 active shooter incidents in the United States between 2000 and 2022. The number of incidents will vary depending on one's definition of active shooter. For example, the FBI does not include gang or drug violence, or individuals who shoot family members in their own homes. Based on the FBI data, the frequency of active shooter events has clearly been increasing, with an average of 10 events per year from 2000 to 2009. Now almost tripled to 29 events per year from 2010 to 2022.

The largest majority of these 484 events (45%) occurred at commerce locations, such as retail stores, malls, non-profit organizations, and manufacturing plants. While not technically meeting the Federal active shooter definition of occurring in a "confined space," 102 of the incidents (21%) occurred in open spaces, such as on public roadways, in parking lots, or involving multiple locations.



Other notable facts regarding active shooter events in the United States from 2000 to 2022 are:

- While they can occur any day of the week, the largest percentage occurs on Saturdays.
- 95% of shooters are male.
- Motivation or intent can vary (e.g., close relationship, notoriety, upset at government, workplace revenue, religious affiliation, mental instability).
- Most shooters generally share one or more common characteristics that can be warning signs (e.g., depression, dramatic personality swings, makes threats, fascination with weapons).



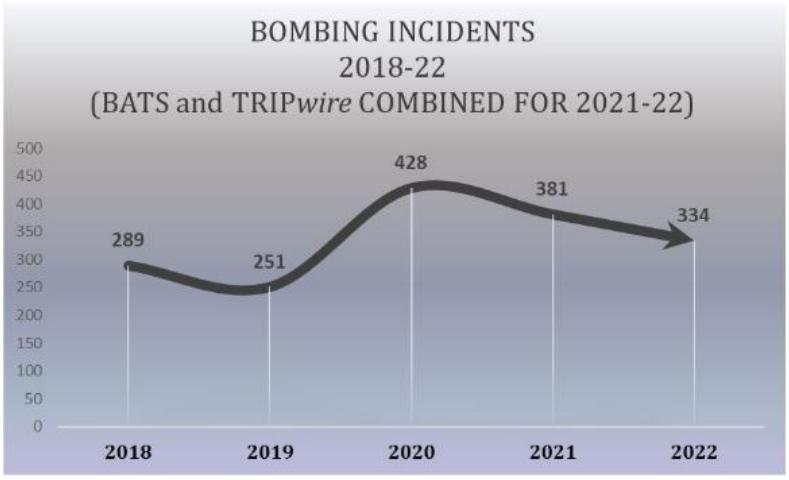
It is important to remember that very few organizations will experience an active shooter incident involving a shooting spree that wounds and kills multiple victims. However, a far greater number will experience other forms of workplace violence [e.g., threats, simple assaults (no weapon), aggravated assaults, robbery, intruder or trespassing, rape].

Explosive Incident Trends: The *2016* and *2022 Explosives Incident Report*, prepared by the United States Bomb Data Center, allows an examination of the long-term incident data reported in the *Bomb Arson Tracking System*

from 2012 to 2022.[40] Explosive incidents refer to bombings, accidental explosions ,and undetermined explosions. Additionally, the report inventories bomb recoveries, reports of suspicious packages, bomb threats, and hoaxes.

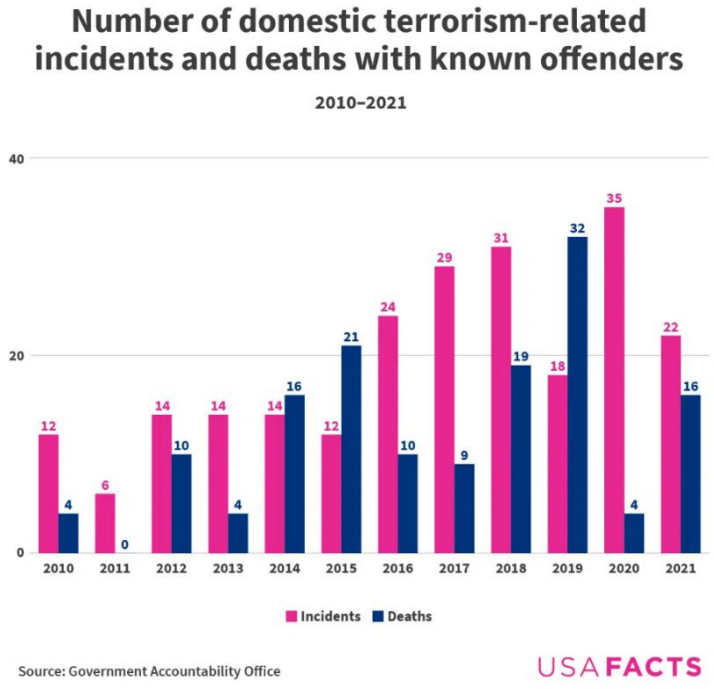
A comparison for the 2016 and 2022 *Explosive Incident Report* data yielded:

- Bombings were about one-third of all reported explosive incidents in the United States in 2022. The graph to the right from the 2022 *Explosive Incident Report* shows a spike in bombing incidents in 2020, which has been slowing increasing since then.



- Of the 2022 bombings, 50% were explosive (non-IED), 32% were IED, 4% were over-pressurized devices, and the remaining were other types or not specified.
- Only two of the 2022 bombings occurred in Wisconsin.
- Reported bomb threats more than tripled between 2020-2022 with a total combined number of 2,538 reported incidents. Assembly, education, and office/business locations were the top three targets of bomb threats during 2022. Educational institutions were, by far, the top threat target, with over half targeting high school/junior high/middle school facilities and about one-third targeting colleges or universities.
- The report did not provide injury and death data specific to bombings. From 2020-2022, there were 88 injuries and 24 fatalities reported each year on average for all explosion incidents. Of these, 7 of the injuries and 0.3 fatalities in an average year were to fire service or law enforcement personnel, while 16.7 injuries and 3 injuries a year were attributed to the suspects.

Terrorism and other Active Threats: Long-term trend data from a single governmental source on terrorism and other types of active threats is limited, and it is likely that some thwarted attacks have not been publicly announced. According to one database.[41] of 201 incidents between 2008 -2016, far-right extremists were behind 115 of the incidents (35% foiled) with nearly a third involving fatalities, while Islamist domestic terrorism resulted in 63 cases (76% foiled) and 13% involving fatalities. Left-wing ideologies, including ecoterrorism and animal rights, were relatively rare with 19 incidents. In recent years, we have also seen the growth of new threats, such as the use of a vehicle as a weapon (e.g., Berlin-December 2016, New York Times Square-May 2017, London Bridge-June 2017, Barcelona-August 2017,



[40] United Sates Bomb Data Center. *2016 and 2022 Explosives Incident Reports.*
[41] https://apps.revealnews.org/homegrown-terror/

New York-October 2017). Such data demonstrates the importance of remaining objective and alert to potential warning signs.

Prevention and Mitigation Alternatives

Due to the great variety in the type and sizes of these locations, there is no "one size fits all" solution to mitigating active shooter risks. It is advisable to take an "all threats" approach rather than focusing on a single type or profile of active threat. Preparedness and mitigation activities generally fall into one of the following categories.

Education and Awareness
Education is important to recognize that Clark County and Wisconsin are not immune to active shooter events and to increase public awareness of warning signs as well as what to expect and what do should an event occur. Without education and preparedness, initial reactions are often disbelief, denial, shock, or failure to act. It is also important for bystanders to know how to act once law enforcement arrives on the scene.

Planning and Exercises
Given that the related risks, vulnerabilities, opportunities, and regulatory requirements can vary greatly by location, most preparedness planning occurs at the business, facility, or school district level. Active shooter preparedness planning can encompass:

- preparedness actions (e.g., education, site assessment, security measures, public announcement systems, related employee assistance or mental health programming);
- incident mitigation and response planning and training (e.g., recognizing and reporting a potential threat, de-escalation and conflict resolution techniques, what do we do when the event occurs, regular exercises and training in ALICE techniques and any location-specific procedures, train-the-trainers efforts); and
- post-event actions (e.g., can be an all-hazards approach, employee/client counseling, legal team, public relations, business continuity).

Various guides and materials are available to assist with above, including materials for the general public and pertinent to most place of employment, with additional preparedness and response guides for specific types of businesses and facilities (e.g., health care, schools, retail establishments). The Disaster Ready Chippewa Valley (DRCV) website has a collection of active shooter and workplace violence guides, pamphlets, and weblinks from sources such as FEMA, OSHA, and others at: www.disasterreadychippewavalley.org

Wisconsin State Statute 118

Health and Safety Requirements for Schools

Wisconsin State Statute 118 requires that schools conduct drills in the proper method of evacuation or other appropriate action in case of a **school safety incident** at least twice a year. The public and private school safety drill shall be based on the school safety plan. A school safety plan shall be created with the active participation of appropriate parties and shall include general guidelines specifying procedures for emergency prevention and mitigation, preparedness, response, and recovery. The plan shall also specify the process for reviewing the methods for conducting drills required to comply with the plan.

The school board or governing body of the private school shall determine which persons are required to receive school safety plan training and the frequency of the training. The training shall be based upon the school district's or private school's prioritized needs, risks, and vulnerabilities. Each school board and the governing body of each private school shall review the school safety plan at least once every 3 years after the plan goes into effect.

Site Assessment, Security, and Control
Many of the above guides include ideas and recommendations for security hardening and other control measures. For example, OSHA's *Recommendations for Workplace Violence Prevention Programs for Late-Night Retail Establishments* includes security checklists and workplace control checklists (environmental, engineering, and administrative practices); this guide is available at the above link.

Employee/Client Assistance Programs and Policies
Preventing an incident is always preferred. A robust active shooter strategy for a place of business will include programming and policies regarding access or required referrals to mental health services, encouraging reporting of concerns or suspicious activity in an appropriate manner, tracking/monitoring systems, and other "pre-event" de-escalation techniques (e.g., dealing with a disgruntled client, employee firing). For schools, this includes policies and programming to discourage bullying.

Partnerships and Continued Coordination
Key to all of the above are effective partnerships and repetition. The excellent working relationships between local law enforcement and school administrative staff serve as a model for their entire community. Such training should be extended to other emergency responders, such as fire and EMS as well as any specialized roles (e.g., PIO, 9-1-1 communication, evacuation/sheltering, crowd control). It is important to nurture such relationships and create them before disaster strikes. And equally critical to response (and preventing panic) is repetition in training, exercises, and drills to ensure everyone knows their roles and how to respond.

N. Other Factors Influencing Losses

Each hazard assessment in Section III.C. discusses hazard event probabilities and, should the disaster occur, potential vulnerabilities or losses. While some factors influencing losses were previously discussed for each hazard, there following are three factors that are shared by most of the hazards of concern:

1. Population Growth, Demographic Changes, & New Development. Population growth and new development increases the exposure or vulnerability to all of the hazards (e.g., more chances of losses when a tornado strikes). For some hazards, more people or development increases the risk or probability (e.g., more potential for wildfire ignition or a haz mat spill). An aging population also increases vulnerabilities for extreme heat or power loss event. **Section II.C.** of the main plan document discusses these trends.
2. Long-Term Changes in Weather. Many of the natural hazards may increase in frequency and/or intensity due to longer-term changes in whether, but we are unable to confidently quantify the extent of these changes increase at this time. See **Section III.B.** main plan document for additional discussion on the related effects of such changes in weather patterns.
3. Preparedness & Mitigation. Potential losses can be reduced through mitigation actions, such as the warning systems, use of safe rooms, floodplain zoning enforces, burying of overhead utilities, and public education initiatives.

SUPPLEMENT 3. MITIGATION CAPABILITIES & STRATEGIES ASSESSMENT

A. CAPABILITIES ASSESSMENT TABLE

The focus of this subsection is on existing policies and programs related to natural hazards, partnerships, and all hazard mitigation and preparedness activities. This capabilities assessment is not comprehensive and evaluates Clark County as a whole. Each participating city, village, and educational institution completed an individualized capabilities assessment as part of their respective sub-plans that are provided in **Supplements 5 & 6**

Community Planning and Regulatory Activities				
Mitigation Action	**Yes**	**Some**	**No**	**Notes**
1. Mitigation planning has previously occurred in the County.	x			• County has previously adopted FEMA-approved mitigation plans in 2010, 2015, and 2019.
2. County and communities have incorporated mitigation strategies into their comprehensive plans.		x		• Varies by community, primarily limited to floodplain management and emergency services. • The County, some cities/villages, and most towns do not have comprehensive plans.
3. Construction standards mitigate natural and other hazard risks.		x		• All municipalities enforce State Uniform Dwelling & Commercial Building Codes; the County enforces for most communities. While these codes include standards appropriate for Wisconsin's weather (e.g., design wind & snow loads), State rules limit ability to include some additional mitigation-related standards.
4. Local zoning and subdivision controls mitigate natural and other hazard risks beyond floodplain zoning. (e.g., Are emergency plans or safe rooms required? Long cul-de-sacs avoided? Police or fire consulted during site plan review?)		x		• No County general/comprehensive zoning; seven towns have their own general zoning. County has a Forestry & Recreation Zoning Ordinance that applies to ten towns. Emergency planning/mitigation can potentially be addressed as part of conditional use permitting to extent allowed by State law. • County subdivision regulations apply to unincorporated towns. Includes some road design standards. Some towns may have their own subdivision ordinances. • See city/village subplans. • A formal process for consultation of police/fire during plan review not established in most cases.
5. Land information and GIS data is available to accurately delineate hazard risks.		x		• County GIS and land information coordinated through County Planning & Zoning Department. • Countywide GIS data for individual structures (e.g., # stories, value/structure, BFEs) not available for detailed hazard assessment.
6. Improvements or updates to emergency management or services mapping are needed.		x		• County has been proactive in emergency services mapping. No critical needs identified.
7. A Comprehensive Land Use Plan has been adopted to maintain healthy County Forest Lands and mitigate wildfire risks.	x			• Continuing. The County's 15-year plan is administered by the Forestry & Parks Department. The active management guided by this Plan includes best practices to reduce risks related to wildfire, invasive species, and plant diseases.

8. Driveway regulations or other actions are used to encourage adequate design and maintenance for access by emergency vehicles.		x		• Primarily enforced by city, village, or town; most have basic standards. County has basic standards for private roads/driveways for subdivisions or access to County highways. • A number of Fire Departments remain concerned with emergency vehicle access on some driveways due to width, height/tree canopy clearance, condition, or grades, especially in hilly, waterfront, and/or wooded areas.
9. Address signage standards have been adopted for consistency of placement, replacement with flag-style signs in towns, and standards for multiple homes on dead-end roads/drives.	x			• Clark County adopted an Emergency Response/Rural Address Ordinance in 2011, which includes two-sided, flag-style signs and placement standards. Private roads with multiple properties require sign(s) at intersection; town may require additional signs at driveways.
10. Community wildlife protection planning or related projects have occurred.	x			• CWPPs adopted by Town of Levis and Foster; related projects implemented, including debris sites, chipping, driveway/home ignition assessments, signage, and other educational outreach. Plans have been maintained through Action Plans, though Levis participation has waned.

Other community planning and regulatory activities or notes:

- BCEGS participation varies and many local officials were unaware of this program. As part of the 2026 Plan update, more attention on building codes and BCEGS was given, which increased awareness. However, the State of Wisconsin establishes the framework for building codes and limits some mitigation-related opportunities, since Wisconsin has not adopted the most current international code standards, which restricts local municipalities from achieving the highest BCEGS scores. It was not confirmed if Clark County is participating in the BCEGS.
- A large variety of Federal, State, and local rules and policies are in place regarding hazardous materials planning, use, and reporting. Additional rules, policies, and plans are in place regarding surface and groundwater quality, manure management, etc.
- See Supplements 5 & 6 of city/village and educational institution mitigation activities.
- Also see activities discussed in the "flood mitigation" table below.

Flood Mitigation

Mitigation Action	Yes	Some	No	Notes
1. Floodplain ordinances have been adopted and communities are NFIP participants good standing.		x		• County floodplain and shoreland zoning applies to all unincorporated towns. • Granton and Unity are NFIP-sanctioned (not participating). See flood assessment in Section III.C.iv.
2. Development is strongly discouraged in 100-year floodplains and dam shadows.	x			• Local floodplain zoning and comprehensive plans discourage floodplain development. • All permit applications reviewed to determine whether proposed building sites are reasonably safe from flooding. • County regulates dam shadows/failure areas for certain higher hazard dams.
3. Stormwater management planning and regulation occurs.	x			• State rules pertaining to stormwater management and construction site erosion controls are in place, including construction site erosion control measures under the uniform dwelling code (IHLR 20-25) and WDNR rules (NR 151, NR 216) • County and town culverts mapped; can add LiDAR data, then maintain. • Various stormwater plans and regulations exist at County and local city/village/town levels. See Supplement 5 for more specific city/village actions.

4. Stormwater system improvements have been completed.	x			• Ongoing. Significant improvements have been made by County and communities, especially to culverts and drainage systems along roadways. Some of the flooding "hotspots" identified in previous mitigation plans have been addressed as discussed in the flooding assessment of Section III.C.iv. • See Supplement 5 for the flooding-related discussions in the individual city and village subplans.
5. Flood acquisition, floodproofing, and/or flood elevation projects have been implemented.	x			• Many local parks are located in floodplain areas, but no recent flood mitigation projects identified, except for bank stabilization or revetment projects.
6. Dams offer flood control, dam shadows are mapped, and dams are in good repair.		x		• Some dams and other retention projects exist for flood control. Hydraulic shadows/failure areas not mapped for all large dams. Shadows mapped and regulated for Mead and Hatfield. See flood assessment in Section III for discussion of dam conditions. Currently, dams generally in good repair.
7. Flood monitoring systems are used.		x		• National Weather Service observes, predicts, and provides warnings. • In past, some interest in additional flood monitoring at or near dams, such as Mead Lake.
8. Flood emergency planning has occurred.	x			• Emergency action plans for large and high-risk dams on file at the County Emergency Management and Emergency Communications Center. • Emergency plans for County dams reviewed regularly, and updated as needed.
9. Public education regarding flood risks and insurance has occurred.	x			• Educational effort implemented in 2012, including travelling display, press releases, and town meetings. • More recently, largely limited to plan review and permitting processes for new development. Additional public education on NFIP insurance coverage (and what is not covered) may be valuable..
10 Communities participate in the NFIP Community Rating System.			x	• There are insufficient concentrations of floodplain structures to make CRS participation feasible; costs outweigh benefits.
11. Other special flood prevention or mitigation activities occur.		x		• None identified.

Other flood mitigation activities or notes:

- See Supplement 5 for city and village mitigation activities related to flooding.
- County Planning and Zoning Administrator serves NFIP Coordinator for Clark County; not formally appointed.
- The Clark County *Land & Water Resource Management Plan* includes discussion and recommendations on the importance of soil health, erosion control, stormwater management, and other best land use management practices that can protect water quality and mitigate the impacts of severe weather and climate trends, including flooding. Increasing awareness among the agricultural community that more resiliency is needed due to increasing heavy rain events and drought.

Other Physical Mitigation Projects

Mitigation Action	Yes	Some	No	Notes
1. Community safe rooms have been designated or constructed.	x			• FEMA mitigation grant funding has been used to construct community safe rooms in Town of Pine Valley, City of Neillsville, City of Greenwood, City of Loyal, Abbotsford High School, and Owen-Withee high school. Some other communities have designated storm shelters. See Supplements 5 & 6 for city/village, and public educational institution discussion.
2. Power lines have been buried in some areas prone to outages.	x			• Clark Electric has utilized FEMA mitigation grant funding to bury some lines in wooded areas. Otherwise continuing. See long-term power outage assessment in Section III.C..viii.
3. Regular tree trimming near power lines occurs.	x			• Electric providers do a good job of regular tree trimming near power lines.
4. Snow fencing, berming, crop rows, or other efforts are used for drifting in prone areas.	x			• Some snow fencing and "berming" of snow used by County Highway Department. • Some farmers participating in the WDOT program to leave rows of standing corn along drift-prone highways; participation has been low.
5. Special traffic calming, traffic controls, and/or notifications system have been installed on highways.		x		• No significant, permanent measures. County Highway has a trailer with incident signage, controls, etc., that can be dispatched, though response times can be lengthy due to County's size. Past mitigation plans suggested exploring additional trailer(s) to be located in different areas.
6. Emergency power generators have been obtained for critical facilities.		x		• Improving among public facilities but substantial needs still exist. See Supplements 5 & 6 for city/village, and public educational institution discussion.
7. Emergency fuel agreements have been executed for critical facilities.		x		• No formal inventory, but believed to be limited.
8. Convenient access to water supplies is available for fire protection.	x			• Good overall. Fire departments have convenient access to water supplies. Past interest by local fire department in a dry hydrant at Sherwood Lake. • See Supplement 5 for city and village discussion.
9. Warming or cooling centers have been designated.		x		• Addressed on a case-by-case basis. No formal list of warming and cooling centers or related agreements exists. • Libraries and municipal buildings often identified as possible places, though most lack generators. See Supplement 5 for city and village discussion. • Interest by some communities in including such centers as part of a safe room grant project.

Other physical mitigation projects or notes:

- See Supplement 5 for a summary of city and village mitigation activities related to the above.
- The County and many municipalities maintain capital improvement or road improvement plans that incorporate mitigation projects and emergency equipment/facilities. Streets, utility, culvert, and stormwater management projects are commonly included in such plans.
- County hosts bi-yearly Clean Sweep events for agricultural and household hazardous materials disposal.
- Some schools and other critical facilities have undertaken some security hardening measures in recent years, including at the Clark County Government Center/Courthouse, but no comprehensive preparedness assessment available.

Emergency Operations Planning and Training

Mitigation Action	Yes	Some	No	Notes
1. The County has an Emergency Operations Plan (EOP) with annexes for various hazard events. There is strong coordination between the County's EOP and Public Health Emergency Preparedness Plan (PHEPP).	x			• County EOP is reviewed and updated regularly. Includes key roles and responsibilities. EOC equipment/space upgrades are needed. Current space does not function well; explore alternative spaces. • PHEPP uses a flexible, all hazards approach. Certain components of this plan are being updated. • Continuing collaboration between EOP and PHEPP. PHEPP includes a communicable disease section and is discussed at length in Supplement 2.B. • County Emergency Management has developed a 3-year Integrated Preparedness Plan (IPP) that incorporates components of the Mitigation Plan.
2. The cities, villages, and towns have updated EOPs or emergency policies.		x		• Varies, but improved since 2020. It is believed that most cities and villages have plans, but some require updating, especially to contact info & roles. • 10 towns responded to the mitigation plan update questionnaire; 5 lacked up-to-date EOPs. • See Supplement 5 for city and village discussion.
3. The County and municipal EOPs are regularly exercised.		x		• Regular training organized by County Emergency Management, but not all municipalities regularly test their emergency plans; many have some type of drills. Various scenario training occurs involving related departments and stakeholders (e.g., Traffic Incident Management). • See Supplement 5 for city and village discussion.
4. The County EOC has been activated or exercised in the last 5 years.	x			• EOC has been tested as part of regular exercises and partially activated during recent storm events. • Partial activation in 2016 due to flooding. • Some County departments may not be familiar with their potential relationship to the EOC or role during a disaster and where staging for large hazard events would be located.
5. HazMat planning and training occurs and gear is available.		x		• County emergency response protocols in place. Regular training organized by County Emergency Management. • No local designated Haz Mat response team. Eau Claire/Chippewa is Type I Team, if assistance is needed. • Industrial facilities and hospitals doing a good job of on-site HazMat exercises and related monitoring. • Participated in recent Commodity Flow Study. See HazMat discussion in Section III.C.x.
6. Individuals identified in EOPs, including elected officials, have a minimal level of ICS training suggested for their roles.		x		• Minimum NIMS/ICS standards for non-emergency services encouraged in previous County EOP. Additional training required or suggested depending on role. Federal minimum standard is ICS 100,200, 700, & 800 for all response and support personnel. • Varies. Most emergency personnel and responders and many public works staff meet minimum standards. • Annual training on ICS 300 & 400 usually available in region. More training for elected officials and P.I.O./crisis communications suggested by some interviewed
7. Other stakeholder groups participate in exercises.		x		• Continued participation by other partners (e.g., different County departments, VOADs, health care/social services agencies, utilities), so they understand their roles during a

				disaster and strengthen their own plans, continues to be a comment received from stakeholders during the plan update.
8. The County and some municipalities have developed continuity of government plans.		x		• County has adopted a basic continuity of government plan. • Most municipalities do not have a COOP/COG plan, but most have off-site data back-up and some have other continuity components. • Disaster Ready Chippewa Valley has a basic continuity planning template that could be utilized.
9. Evacuation and access control planning has occurred.		x		• No significant concerns noted. Sheltering a component of the County Emergency Operations Plan. • State of Wisconsin (WEM) has been piloting a private-sector credentialing program.
10. Debris management sites have been designated.		x		• Largely limited to woody debris. • Municipalities encouraged to thinking about as part of 2026 Plan update; see subplans for status. Sites may be available for vegetation but have not been assessed for other debris. WDNR may be able to provide guidance.
11. Emergency planning and periodic exercises are required for large festivals, fairs, and gatherings.		x		• County lacks a large assembly ordinance but limited number of very large events. • Some basic security and emergency plans developed by individual Fairgrounds users; no exercises required.
12. Planning for pandemics has occurred.	x			• See communicable disease assessment in Supplement 2.B. for discussion on the Public Health Emergency Preparedness Plan.
13. Highway and public works department have adopted billing rates for equipment.		x		• County Highway Department has adopted WDOT rates. • Discussed with city and villages as part of the 2026 Plan update; see sub-plans for status.
14. Policies and training have been completed for volunteer management.		x		• Basic policies and protocols are part of County Emergency Operations Plan and Public Health Emergency Preparedness Plan. • Minimal related training has been completed.
15. Policies and training have been completed for active threats and workplace violence.	x			• County government conducts periodic active shooter training for all employees and as part of orientation for new hires. • Additional law enforcement training and response has occurred for general threats, including outreach to community organizations and businesses. • Basic security and emergency plans required by Fairgrounds users.
16. School Districts and post-secondary institutions have completed active threats training and have taken actions to mitigate risks.	x			• Varies by institution. All public schools have had some type of training. See Supplement 6.

Other emergency operations planning and training activities and notes:

- See Supplement 5 for a discussion of city and village emergency planning and training.
- Emergency management and hazard mitigation planning is often a low priority for communities, with the exception of maintaining basic fire, police, fire responder, and ambulance services. Local emergency response plans can quickly fall out of date due to turnover of local government officials and these plans (and associated maps, resident information, etc.) may not be readily available to local officials should a disaster occur. It is also fairly common that hazard mitigation and emergency response issues are not integrated into other local planning and regulatory efforts. Education and outreach to cities, villages, and towns on emergency management issues is an ongoing effort.
- Similarly, the turnover in elected officials necessitates continued, periodic outreach to local officials on resources, public safety agencies, mitigation issues, and recent events. The communities, local emergency services, and County emergency management

personnel should be commended for their emergency planning efforts. During the 2026 Plan update, it was noted that many local officials and key staff were participating in mitigation planning for the first time and others were retiring soon.

- Continuing to improve coordination between the County's Public Health Preparedness Plan and the County Emergency Operations Plan. Both have annexes for certain types of events, including the 15 core public health standard capabilities. See communicable disease subsection in Supplement 2.B.
- Wildland fire training administered through Wisconsin Dept. of Natural Resources, including regular refreshers for local fire departments and periodic larger, multi-agency exercises.
- Cyber-security preparedness has increased since 2020 Plan. County and many communities now have cyber-insurance. See cyber-security assessment in Section III.C.ix. for a discussion on related mitigation.

Emergency Notification and Communication Systems

Mitigation Action	Yes	Some	No	Notes
1. Emergency communications in the County is centralized.	x			• The Clark County Emergency 9-1-1 Communication Center serves all police, fire, and rescue calls countywide and enhanced 9-1-1 system in 2015.
2. Gaps or weaknesses in emergency communications and equipment have been addressed.	x			• Much improved compared to when narrowbanding was originally implemented, though some gaps in service exist, especially for cell phones and in hilly and rural areas. Some equipment compatibility issues and concern expressed over potentially overwhelming available channels. Many public works departments rely on cell phones, but inconsistent in approach. County Emergency Services Association maintains a mobile response center.
3. Outdoor storm sirens are used for notification of severe weather warnings. Any coverage, power, procedural, or educational concerns?	x			• Emergency alert sirens in County activated by County dispatch. See tornado assessment in Section III.C.i. • Limited interest in additional coverage in populated areas of unincorporated towns. See city and village subplans for siren and notification discussions. • Ongoing education important. Some of public do not understand warning sirens or expect that the sirens will be heard indoors.
4. NOAA All Hazard Radios or other notification equipment have been distributed.	x			• Distributed to seniors as part of a past FEMA mitigation grant. Some additional interest in a potential distribution project exists, but decreasing interest due to increased use of mobile technologies. Encourage Everbridge mass notification system sign-up as an alternative.
5. A reverse-911 or similar GIS-based notification system exists.	x			• Clark County has a Everbridge (Nixle-based) mass notification system.
6. Social media and the Internet is used for emergency notification and preparedness education.	x			• Helpful preparedness information available at the County Emergency Management webpage. Sheriff's Department Facebook page used to share emergency notification and preparedness information.
7. An active ARES/RACES group exists in the County.	x			• Formal role in County EOP emergency communications procedures with designated areas within the County EOC. ARES/RACES tower at Courthouse.
8. The County has an active Skywarn Storm Spotters program.	x			• Hosted by County E.M. with assistance from National Weather Service and ARES/RACES.
9. Railroad bridges, crossings, and sign posts have been mapped.			x	• Included in 2015 Mitigation Plan recommendations; consider as an alternative for the Plan update.

Other emergency notification and communications systems and notes:

- Great Rivers 2-1-1 is available as a public source of information during emergencies.
- Emergency Map Book updated in 2025-2026 to WDNR specifications.
- Continued exercising of the emergency radio communications system with emergency response partners, including public works and highway personnel, was recommended.

Other Educational, Outreach, and Preparedness Activities

Mitigation Action	Yes	Some	No	Notes
1. Public education occurs are part of severe weather awareness week and during other seasons.	x			• Largest outreach by County Emergency Management via press and community organizations during Tornado & Severe Weather Awareness Week in April as well as National Preparedness Month. • Additional press releases during times of elevated risk.
2. Outreach to seniors and special needs populations occurs.	x			• County ADRC works with County Emgy Mgmt and Public Health on preparedness-related outreach through the ADRC newsletters distributed monthly. • When clients join ADRC Nutrition Program, client intake/emgy contact info completed that can be valuable during a disaster event. • ADRC's meal sites and home-delivered meals are an excellent opportunity for outreach and communications. Meal sites can be a valuable resource during event recovery. • See Section III.C.viii. for a related discussion in the context of a long-term power outage.
3. Outreach and education to area businesses occurs.		x		• Involve some industry and critical facilities in exercises, depending on the scenario.
4. Outreach to the agricultural community occurs.	x			• Local UW-Extension staff, Farm Services Agency, NRCS, and County Land & Water Conservation work with area farmers to educate on the mitigation of various hazard threats (e.g. winter kill, drought, manure/chemical storage). • Cost sharing may be available for spill containment and conservation projects. See notes at the end of this subsection for Farm Service Agency risk management assistance programs.
5. Staff from FSA, NRCS, Co. Land Conservation, and UW-Extension meet periodically to discuss mitigation opportunities, education needs, and damage assessment procedures.		x		• Good cooperation on various agri-related topics, but no formal team established or regular meeting schedule specifically regarding emergency preparedness, mitigation, or disaster recovery. • "Team" is activated during times of disaster as needed with FSA or UW-Extension typically taking the primary lead with support from others as needed.
6. Soil health and shoreland best practices are promoted in the County to help mitigate flooding impacts.	x			• Increasing emphasis on such techniques and best practices by County, regional, and State staff with partners such as Extension and Watershed groups. • Addressed as part of County resource conservation plan and watershed plans. • County and State rules in place regarding manure management.
7. Educational efforts related to forest management and wildfire has occurred.		x		• For most areas, public education primarily limited to burning permits and fire danger signs. More intensive outreach in Towns of Levis and Foster, who have completed community wildfire protection plans.

Other educational, outreach and preparedness activities and notes:

- Educating elected officials on roles, responsibilities, and basic ICS is a challenge given turnover. Such education is not on a regular schedule. May be an opportunity to coordinate such with a regular review and, if needed, update of municipal emergency plans.
- ADRC has valuable resources during a disaster. Not only do their drivers and staff have relationships with seniors, but they also have access to meal sites with kitchens, ADA-equipped vehicles, and a large volunteer network. Including ADRC during training and exercises is an important opportunity.
- For agricultural losses, the USDA's Farmer Services Agency (FSA) offers Multi-Peril Crop Insurance and the Non-Insured Crop Disaster Assistance Program to assist with crop losses for reasons beyond a farmer's control. High crop insurance participation is required for certain USDA program eligibility, though concerns expressed over long-term sustainability of these insurance programs. On the livestock side, FSA has: (i) the Livestock Indemnity Program, which can allow for eligible producers to receive a per head payment on eligible livestock losses due to approved adverse weather events; (ii) the Emergency Livestock Assistance Program, which offers assistance with feed losses and additional feed expenses due to eligible adverse weather events; and (iii) the Livestock Forage Disaster Program, which is available in drought situations, but less commonly used in Wisconsin. Additional information on these and additional less commonly used programs are available at the FSA website.

Mutual Aid and Other Partnerships

Mitigation Action	Yes	Some	No	Notes
1. Mutual aid between local law enforcement agencies exists and meet regularly.		x		• Statewide law enforcement mutual aid is in place. Potentially explore local MOUs between County and city/village law enforcement regarding response to incidents in towns near incorporation boundaries.
2. Mutual aid between local fire departments and first responders exist and meet regularly.		x		• Countywide MABAS has not been adopted. Most departments use IAMResponding. Regular Clark County Emergency Services Association meetings. Inconsistencies between departments do contribute to some communications challenges.
3. Mutual aid between local public works & highway departments exist and meet regularly.		x		• A variety of mutual aid exists, but most of such agreements are informal (handshake rather than written). No countywide agreements. No formal, regular countywide meetings. • See Supplement 5 for city and village discussion.
4. Public health partnerships exist.	x			• Good communication between County Public Health and County Emergency Management. • County and local medical facilities also participate in the North Central Wisconsin Healthcare Readiness Coalition and the Western WI Public Health Readiness Consortium.
5. Public-private partnering occurs.		x		• Some businesses are represented on LEPC and participate in exercises. • Electric cooperative provides training for Fire Depts and other educational efforts.
6. Intergovernmental preparedness and mitigation planning occurs across county lines.	x			• Good intergovernmental relationships across county lines. • Regional WEM Office provides multi-county support. • Mitigation planning and other support also available through West Central Wisconsin Regional Planning Commission. • Also note partnerships in #4 above.
7. VOADS are active in the community and participate in preparedness planning and training.	x			• Very good relationships with local VOADs, including American Red Cross and Salvation Army. • Many VOADs are experiencing decreases in volunteer pools. Only 2 active Red Cross volunteers in Clark County; help would need to come from outside and extended support would be a challenge. • Red Cross coordinates recovery shelters and is on the LEPC.
8. Support is provided to area educational institutions for preparedness planning and training.	x			• Clark County Emergency Management, Public Health, and local municipalities have good working relationships with school districts and post-secondary institutions. • Technical colleges provide required training for local emergency responders.

Other mutual aid and partnership activities and notes:

- Housing authorities, community action programs, long-term care facilities, and houses of worship are important partners.
- Electric cooperatives can request mutual aid assistance through ROPE (Restoration of Power in an Emergency).
- Newer Federal CMS rule required additional emergency preparedness for health care providers receiving Medicare and Medicaid. Since the 2020 Plan, it is expected that all facilities are now in compliance with these requirements, but it may be valuable to review these plans with key resources to ensure that expectations are feasible.
- Some local volunteer EMS and Fire Departments expressed growing concerns with the ability to attract volunteers and have a sufficient number of volunteer responders available during daytime work hours. Increasing training requirements are also making it more difficult to attract and retain volunteer responders. Related, response times for EMS and fire can be significant (30+ minutes) in some rural areas, such as parts of the Town of Foster.

B. Progress on 2020 Mitigation Plan Recommendations

The following is a brief status update for the County-level mitigation projects requiring significant resources & high-priority actions recommended in the 2020 *Clark County Multi-Hazard Mitigation Plan.* As discussed in the 2020 Plan, the availability of resources and changing priorities affect implementation. The 2020 strategy list was comprehensive, and there was not an expectation that all strategies would be fully addressed within five years' time. The city/village and educational institution sub-plans in **Supplement 5** and **6** reviews mitigation activities for each participating community.

2020 Plan Strategy	Progress
Flood-Related Projects & High-Priority Strategies	
Continue to monitor, study, and address riverine flooding, stormwater and flash flooding, ice damming, road washout problem areas, and bank erosion hotspots in the County as discussed and identified in the flood assessment of the Hazard Mitigation Plan. Potential projects include, but are not limited to: creation/expansion of flood/stormwater storage areas, expanded flood storage through dredging, the installation or re-sizing of culverts, the creation or improvement of drainageways, bank stabilization, and the protection of natural drainage and retention areas. Explore innovative, nature-based, and low-impact solutions when feasible. (High Priority)	Improvements to roads and stormwater managements systems are continuing across the County and many hotspots identified in past plans have been addressed. New bridge at CTH M addresses a critical flooding concern. Clark County utilized FEMA grant funding in 2012 to mitigate a landslide threat. The Village of Colfax completed a more recent landslide stabilization project exacerbated by flooding that was identified as a need in the 2020 mitigation plan.
As opportunities arise, pursue hazard mitigation grant funding to acquire, relocate, or floodproof structures and properties with a flood history, most at risk of flood damage, and/or following a flood event in which significant damage occurs, if the landowner agrees to participate.	
Develop and maintain stormwater systems and strive for reliable emergency access on the 45 miles of dirt/sand County Forest and logging roads which are prone to washouts, require costly maintenance, and can become impassible following heavy rain events.	No significant flood-related projects; limited improvements as funding allows.
Continue to enforce County and local floodplain regulations to discourage future floodplain development and the storage of hazardous materials in floodplains, require dry land access for new structures, limit development in dam shadows, and maintain natural flood storage areas. (High Priority)	Ongoing. Not a lot of development pressure on flood fringe areas.
Continue to maintain dams and dam emergency action plans. Strive to complete G.I.S. mapping of hydraulic shadows for all large and high-hazard dams. Discourage development in the hydraulic shadows (dam failure floodplains) of dams. Encourage residents and businesses within or near dam shadows to sign-up for the Nixle emergency notification system.	Maintenance & planning for dams ongoing. The County regulates the hydraulic shadow of 5 dams under floodplain zoning. Many of the dam shadows are now available in GIS format but mapping of additional shadows not a priority. No related, targeted effort for Code Red to date.

2020 Plan Strategy	Progress
Severe Weather Projects & High-Priority Strategies	
Based on landowner and/or community interest, pursue grant funding to make cost-sharing available for the construction of safe rooms (storm shelters) at mobile home parks, schools, campgrounds/RV parks, slab-on-grade residential developments, and other areas and in communities where no existing shelter alternatives exist. Explore grant funding for a safe room at the County Fairground and other County parks as well as storm hardening projects, ADA accessibility improvements, and/or installation of remote unlock for existing public buildings used as storm shelters. (High Priority in some communities)	No related grant projects or new, targeted educational efforts pursued. Continuing interest expressed during 2026 Plan update.

Develop a list of area generator and emergency fuel suppliers for critical facilities and address gaps if needed. If funding opportunities become available, work with communities to pursue grant dollars for emergency power generators and/or connections/hook-ups for critical facilities, fuel suppliers, and emergency operations centers in Clark County. This may include portable generators, potentially shared between communities or departments, for utilities and emergency response.	More generators have been installed since last plan, but not part of a coordinated grant-related effort. New generators installed at Judicial Center and Menomonie communications tower.
Continue to work with local power providers to bury overhead electrical lines in areas prone to outages due to falling trees/limbs or high winds or for service to critical facilities. For areas prone to flooding, transformers or other such power infrastructure may require floodproofing, elevating, relocation, or other flood mitigation. Encourage periodic power loss tabletop exercises with local and regional partners.	Lines increasingly buried as part of new development or in areas prone to outages, but no mitigation grant-funded projects. About 45% of Clark Energy lines are now buried compared to about 30% in 2019.
Encourage households with persons having special needs that may be uniquely at risk during a power outage or disaster (e.g., oxygen, dialysis, seniors living alone) to develop an emergency contact plan. Encourage these households to sign-up for the Nixle system and to notify their electric provider to be added to their emergency contact lists. Encourage them to also notify their local EMS and/or Fire Department. (High Priority)	CodeRed is operating properly again. These topics covered as part of Emergency Management and ADRC preparedness course for seniors begun in 2025. More emphasis on defining how emPower data can be best utilized recommended.
Other Projects & High-Priority Strategies	
Continue Hazardous Materials Emergency Preparedness training. Regularly rotate HazMat exercises and training throughout Clark County with a focus on those chemicals commonly transported by rail or highways or at fixed facilities and pipelines within the local host community. Include law enforcement, EMS, railroads, pipeline companies, and schools in such training. Consider having EHS facilities give presentations on their hazardous materials, facilities, and plans at Emergency Services Association meetings. (High Priority)	Ongoing. Some training with Grassland. Continue to support such preparedness activities.
Maintain a general inventory of the training, equipment, and general capacity of response agencies in Clark County for hazardous materials-related events. Continue to work towards getting all fire department personnel trained to the operations level and for law enforcement/EMS personnel to be trained to the awareness level. Consider reaching out to schools regarding haz-mat response in their buildings. (High Priority)	No robust inventory or school outreach efforts. Minimal equipment and capabilities overall. Up to each individual department; change to "encourage". Grassland & Abbyland have trained staff.
Continue to encourage partnerships between communities and area fire departments to establish, support, and maintain a County Type 4 Haz Mat Response Team and/or explore other alternatives. (High Priority)	No action. Remove "Type 4 Team"; don't have equipment or resources for that level.
Conduct workplace security analysis of County and municipal facilities to explore opportunities to improve the physical security and identify sheltering/evacuation alternatives for workplace violence. Workplace adaptation and security hardening measures could include actions such as restricting access, doorway detectors, emergency buzzers/panic buttons, fish-eye mirrors and cameras, bolting items down, improved lighting (interior and exterior), bullet-resistant enclosures, and video surveillance systems. Target such measures to jobs and locations with the greatest risk of violence. (High Priority)	Evaluation and hardening at County Courthouse completed. Some hardening at some city/village offices (see subplans) and schools. Sheriff's Dept will discuss with other municipalities and private sector if requested. No formal de-escalation team but some officers have training.
Continue to encourage ALICE or similar active threat education and training for schools, government buildings, businesses, community organizations, and critical facilities. Provide businesses, critical facilities, and other meeting places checklists for workplace violence preparedness and prevention. (High Priority)	Continuing for County buildings and schools. No formal outreach efforts for other businesses and employers. Hospital and some businesses doing their own. Uncertain if evacuation & reunification plans are in place.

Encourage the creation of basic active threat response plans and the periodic drilling/update of these plans for critical facilities, group assemblies, and large businesses in the County. Conduct periodic active shooter exercises to test response plans, crowd control, situational awareness, and assess security hardening. Include all response agencies (law enforcement, fire, EMS, other) as part of these exercises so that roles and responsibilities are understood. (High Priority)	Grassland, schools, and some other larger businesses have plans and doors numbered, though no formal efforts noted. Sheriff's Dept and many local law enforcement offices will discuss and conduct facility tours, if requested.
For large businesses and critical facilities with significant numbers of employees and clients, encourage the numbering of interior and exterior doors (and windows if appropriate) and provide copies of floor plans with door numbers to local emergency responders and County 9-1-1 Emergency Communications. Designate a secure, web-based storage area for such plans at the County level. (High Priority)	
County Emergency Management should continue to maintain an up-to-date list of the status of local Emergency Operations Plans (EOPs) and work with local communities to practice/drill and update these plans regularly. Encourage local officials, public works personnel, and key municipal/county staff with an emergency operations or response role to have a minimum of Incident Command System (ICS) 100, 200, 700, and 800 training, with additional training for any specialized roles, such as Public Information Officer (PIO). Explore the potential creation of a countywide public works mutual aid agreement for activation following disaster events. (High Priority)	Continuing. Some progress since previous mitigation plan. Basic ICS training in 2024 for newly elected officials. Discourage fire chief as also serving as municipal emergency manager; will be stretched thin. Draft countywide public works agreement explored as part of Communities of Clark County.
Implement a NOAA all hazard radio project with a particular focus on distributing radios (or discount vouchers) to mobile home residents, resorts, campground as, seniors, and/or critical facilities, to include general public education on alert warning systems and radio use.	More emphasis on promoting the County's mobile mass notification system.
Encourage Clark County residents, businesses, and organizations to enroll their cell phone numbers for the County's Nixle mass notification system. Educate residents and critical facilities on the capabilities of Nixle and continue to explore its capabilities, including a potential vulnerable needs registry and voice capability for vision impaired. Explore obtaining Federal I-PAWS approval. (High Priority)	Ongoing. I-PAWS approval obtained Promote Nixle enrollment in plan update. Additional work needed to support Nixle/Everbridge multilingual capabilities.
Clark County Emergency Management will continue to provide periodic presentations to the Towns Association on basic roles/responsibilities of town officials, emergency operations planning, available resources, hazard event/damage reporting, burning permits, volunteer management, driveway access for emergency vehicles, emerging issues, and training opportunities. (High Priority)	Ongoing presentations focused on emergency operations planning and related responsibilities. Presentation on mitigation planning and related grants by WCWRPC.
Continue to work with emergency response partners to improve emergency communications coverage, interoperability, and mobile equipment. Ensure adequate channels are available and operations will not become overwhelmed during a large event. Review and update/ streamline the unit codes as needed (High Priority)	New County emergency radio system in 2018. Significantly improved since last plan. Ongoing and continuing.
Partner with communities, emergency services, and local organizations, to implement a bilingual disaster preparedness and emergency response outreach initiative for Clark County's Hispanic population. Include not only general education, but also materials to foster communication during an event and relationship building. (High Priority)	No formal initiative but ongoing outreach. Public Health has a contract interpreter. Spanish capabilities with Everbridge/Nixle is a challenge; continue to address this gap.

C. Evaluating Mitigation Strategy Alternatives

i. Evaluating & Prioritizing the Mitigation Alternatives

The Plan Update Steering Committee identified the following criteria for the evaluation and prioritization of the mitigation alternatives:

- For the hazards being addressed:
    - What is the severity of past and potential future impacts, most notably: (#1) loss of life/injuries, (#2) loss of housing or community lifelines/infrastructure; and (#3) economic losses
    - What is the event frequency or the probability of reoccurrence?
    - How much of the County is potentially at risk or will be impacted by the disaster event?
    - What is the potential duration of the disaster event? How long will communities be affected, services disrupted, etc?
- Population & Demographics. Does the strategy serve an at-risk population or community need?
- Effectiveness of the strategy
- Costs vs. benefits. What will be the most cost-effective solution?
- Are resources available to implement that alternative?
- Political/social consideration, community expectations, and balancing the costs with other local priorities.

The above criteria are recommended for use by all plan participants (i.e., cities, villages, educational institutions, electric cooperatives) in the selection and prioritization of their mitigation actions, though each unit of government may prioritize the metrics differently.

ii. Identifying & Selecting the Mitigation Actions

Identifying and evaluating the alternatives and selecting the mitigation strategies for inclusion in this plan was a multi-step process generally described here:

#1 A comprehensive range of alternatives to meet the plan's vision and goals were considered during the planning process. A variety of alternative mitigation strategies were included in the Mitigation Toolbox in the appendix of the County's 2020 Mitigation Plan. The alternatives in FEMA's *Mitigation Idea* resource guide from January 2013 were also considered.

#2 From this comprehensive list and suggestions identified during the planning process, a range of specific mitigation actions to address the current and future hazard vulnerabilities or to strengthen mitigation capacity were identified during the key stakeholder interviews, meetings, and surveys during the plan update process.

#3 County-Level Strategies.

a. Through discussions and a survey process, the Steering Committee analyzed and prioritized the County-level strategy alternatives using the previous criteria. More specifically, each Committee member was asked:
    - Is the strategy a high priority? What timeline do you recommend?
    - Is the strategy feasible or should it be excluded from the plan?
    - Analyze the priority based on the previous criteria; consider the costs vs. benefits.
    - Provide any additional suggestions, strategy wording or focus, resources, or responsibilities.

b. The results of the Steering Committee's analysis were then discussed with some key stakeholders as needed and reviewed by the Steering Committee meeting to finalize the recommendations and priorities. The final draft strategy recommendations, as part of the overall plan were available for comment by County staff, stakeholders, and the general public.

D. Recommended County-Level Preparedness Actions

As noted in Section V.C. of the main plan document, this subsection includes preparedness (non-mitigation) strategies that were identified during the planning process and prioritized by the Plan Update Steering Committee. **The following list of preparedness strategies is not comprehensive and, generally, does not include current plans, programs, and initiatives.** These are potential recommendations in addition to existing County plans and programs, such as the County's *Emergency Operations Plan* and the *Public Health Emergency Preparedness Plan* as well as the preparedness activities of many other public, private, and nonprofit partners.

Emphasis is given to the "High" priorities for implementations; priorities identified as "Medium" or "Low" are included as additional ideas. In some cases, priorities among communities or organizations may differ. For example, while soil health best management practices for agriculture have some ability to mitigate natural hazards such as flash flooding and drought, such practices have greater economic and water quality value.

Preparedness Strategy Alternatives	Priority
Planning	
1. With full participation by all departments, update the Clark County Continuity of Government Plan for essential services and critical business functions, including an "umbrella strategy" that ties individual departmental plans together. Include emergency operations plans for each County facility/site, including the Fairgrounds. Evaluate the infrastructure and capacities of back-up locations from which operations would be continued if Courthouse or primary offices were unavailable. Identify and develop a backup dispatch center.	**Very High**
2. Work with Clark County EDC to encourage local businesses and organizations to create preparedness and continuity of operations plans, including efforts to encourage employee preparedness at home. Disaster Ready Chippewa Valley may be able to provide presentations and materials.	Low
3. Advocate for regional workshops on strategies and available resources for replacing aging fire/EMS equipment and addressing volunteer staffing challenges.	High
4. County Emergency Management should continue to maintain a current status list of city, village, and town Emergency Operations Plans (EOPs) and encourage communities to practice or drill their EOPs regularly.	High
5. Encourage local officials, public works personnel, and key municipal/county staff with an emergency operations or response role as identified in local Emergency Operations Plans to have a minimum of Incident Command System (ICS) 100, 200, 700, and 800 training, with additional training for any specialized roles, such as Public Information Officer (PIO).	High
6. Encourage local units of government and emergency response agencies to: (1) adopt equipment billing rates or the WDOT rates; (2) ensure that existing mutual aid agreements contain necessary language to qualify for FEMA grant reimbursement; (3) engage local fire and law enforcement during community planning and site plan review; and (4) adopt written mutual aid agreements for public works support and/or consider a countywide public works mutual aid agreement.	Med
7. Review the County Emergency Operations Plan for opportunities to address the needs of individuals with household pets and service animals following a major disaster or emergency as	Med

required by the 2006 PETS Act. Distribute related guidance to municipalities for incorporation into their emergency plans.	
8. Conduct training/outreach that assesses the emergency and continuity plans of assisted living facilities, nursing homes, and group homes to share expectations and confirm feasibility.	Med
9. Review County emergency plans and regulations for communications, response, and the disposal of carcasses due to a mass animal casualty event. Identify potential locations of disposal or acceptable characteristics of such locations.	Low
10. Collaborate with communities to evaluate emergency and evacuation planning, sheltering, insurance, and security requirements for festivals and larger gathering and events, including for events at the County Fairgrounds.	Med
11. Involve law enforcement, Highway, and local public works personnel in an exercise that involves evacuation and traffic control.	High
12. Large wind or solar farm operations shall be required to prepare emergency response plans and implement other preparedness measures, including site security, emergency shutdown procedures, rapid-response damage assessment teams, training of local emergency responders, and crisis communication protocols with the County and local communities.	High
13. Integrate railroad mile posts, key bridges, and grade crossing identification numbers into the County Emergency Map Book, if such information is provided by railroads. Explain the importance and use of these additions to emergency services and dispatch personnel.	Med
Communications	
	Priority
1. Create pre-made templates and public messaging strategies for crisis communications by public information officer use.	Med
2. With various partners and community lifeline facilities, create a coordinated crisis communications infrastructure plan. Include an approach for large-scale public information sharing (i.e., how will County, local responders, etc. provide non-emergency information to the general public?). Conduct annual team training to test and strengthen the plan, including a long-term power outage scenario.	High
3. Continue to strengthen emergency communications infrastructure, coverage, and interoperability. Strive to maintain 911 Communications Center staffing so that levels are more in-line with National Emergency Number Association (NENA) standards.	High
4. Provide guidance to towns, camps, and lake groups that are interested in the installation of weather/emergency warning sirens. Explore grant and fundraising options. For areas with Amish, consider alternatives to a siren (e.g., solar-powered pole with warning light that alerts the community to reach out to an emergency contact).	Med
5. Promote participation in the local ARES/RACES (ham radio operators) group as needed, and continue to involve them during exercises and through crisis communications planning.	Med
6. Continue to work towards full participation in the Mutual Aid Box Alarm System (MABAS) by all fire departments in the County.	High
7. Encourage Clark County residents, businesses, and organizations to enroll their cell phone numbers for the County's Everbridge (formerly Nixle) mass notification system. Work collaboratively to educate residents and critical facilities on the capabilities of Everbridge and continue to explore its capabilities, including a potential vulnerable needs registry and voice capability for vision impaired.	High

8. Utilize Everbridge (or a clearly identified alternative approach) to improve emergency notification and communication among County departments and supervisors.	**Very High**
9. Explore the feasibility of creating emergency notification templates in the Spanish language for use with Everbridge.	High
10. Periodically have discussions among County departments regarding communication with the Plain community and opportunities to leverage existing relationships and share resources.	Med
Education & Outreach	
	Priority
1. Increase awareness of Wisconsin 211. Integrate 211 into emergency operations plans.	Med
2. Continue or enhance educational efforts to the general public on hazard risks, Everbridge, safe room/storm shelter availability, where to access power outage information, pet preparedness, emergency/disaster supplies kits, volunteer needs, etc. Continued education on the severe weather warnings and sirens especially needed. Conduct outreach in conjunction with Severe Weather Awareness Month, National Preparedness Month, Resource Expos, and other community events. It may be beneficial if key messaging is in multiple languages for some areas of the County.	High
3. Implement an educational initiative targeting campgrounds, resorts, RV parks, and mobile home parks to encourage emergency planning, use of notification systems, and consideration of potential mitigation grant funding for safe rooms.	Med
4. Encourage ADRC and Public Health clients to create a basic personal or household preparedness plan with emergency contact information.	Med
5. With County Emergency Management and electric provider support, continue to utilize the ADRC newsletter and community meal sites as key tools for outreach to seniors and special needs populations on preparedness education (e.g., risks, shelter availability, warning systems, cyber-security, electric provider sign-up lists, preparedness measures).	Med
6. Working with major employers, schools, and communities, increase public awareness of emergency- or disaster-related volunteer needs (e.g., firefighters, EMS, Red Cross Disaster Action Team, ADRC, shelters//center). Discuss conducting a coordinated volunteer-recruitment outreach drive.	High
7. In collaboration with Extension, establish an educational outreach program focused hazard awareness, preparedness, and mitigation for the agricultural community.	Med
8. Encourage households with persons having special needs that may be uniquely at risk during a power outage or disaster (e.g., oxygen, dialysis, seniors living alone) to develop an emergency contact plan. Encourage these households to notify their electric provider so they are on a critical client list	High
9. Clark County Emergency Management will continue to provide regular presentation(s) to the Clark County Unit of the Towns' Association and to cities and villages on available resources, mitigation grant opportunities, and hazard event reporting. Offer elected officials training every 2-4 years on NIMS/ICS, responsibilities, reporting, lessons learned, etc.	High
10. Collaborate with school districts and youth organizations to engage and educate younger residents on emergency management, preparedness, and mitigation topics. Promote the use of the Student Tools for Emergency Planning (STEP) curriculum.	Med
11. Continue collaboration between County Land Conservation, County Public Health, lake/watershed groups, and the agricultural community regarding monitoring, educational, and outreach efforts related to blue-green algae blooms, sedimentation, and invasive species, including related health risks and related best practices.	Low for Emgy Mgmt purposes

12. Through relationship building activities and frequent, shared communications, continue to support Public Health's outreach efforts to educate community members on communicable disease risks and vaccine safety.	Med
13. Collaborate with the County Housing Coalition to address the County's rural homelessness and sheltering needs during extreme heat and cold events.	Med
Training & Exercises	
	Priority
1. Increase awareness of incident command system (ICS) and public information officer (PIO) training opportunities for local government officials and school districts, including the relationship of such training to local emergency plans.	Med
2. Continue to provide training to cities, villages, and towns on emergency action planning, emergency declarations, and post-disaster procedures. Consider regular meetings (every 1-2 years) where municipalities and roads/public works departments can share lessons learned. Include education on debris management, volunteer management, and existing plans for critical facilities as well as clarifying relationships with VOADs and other support agencies.	High
3. Conduct a robust long-term power outage exercise (or exercise series) covering key logistical and critical needs, such as road clean-up, mutual aid and lodging for ROPE crews, public messaging, impacts to communications systems, coordination with road crews (e.g., snow removal, tree/debris clean-up), oxygen-dependent populations, shelter activation, and emergency fuel/generator availability. Prepare an after-action report with strategic priorities.	High
4. In partnership with technical colleges, OSHA, and Red Cross, support shared training for businesses, the public sector, and other employers to meet employment or operational requirements.	Low
5. Invite Volunteer Organizations Active in Disaster (VOADs), such as the Red Cross and Salvation Army, to be part of County emergency exercises and planning.	Med
6. Continue to conduct emergency and active threats exercises for County facilities and staff. Generally, County departments seek to clarify and better understand their potential roles during different emergency or disaster events, and some have resources and skills that are valuable to response and recovery that may not have been considered; inventory such resources and how such support can be requested if needed.	High
Community Support, Mass Care, & Sheltering	
	Priority
1. Create a comprehensive inventory of all emergency shelters and similar designated sites in the County (e.g., safe rooms, heating/cooling, Red Cross overnight, reunification, medical points of distribution), including basic resources (e.g., power generators, cots, kitchen, AEDs) and operational information (e.g., agreements, availability limitations, responsibilities, contacts). Prioritize actions to address any needs and gaps. Share appropriate shelter information with municipalities, Wisconsin 2-1-1, and partners.	High
2. Update, maintain, and share emergency shelter lists, with available basic resources (e.g., power generators, cots, kitchen, AEDs) and operational information (e.g., availability limitations, responsibilities, contacts) **for warming and cooling centers**. *(see related mitigation strategies)*	Med
3. Update, maintain, and share emergency shelter lists, with available basic resources (e.g., power generators, cots, kitchen, AEDs) and operational information (e.g., availability limitations, responsibilities, contacts) **for short-term and long-term shelters**.	High

4. With partners such as transit providers and ADRC, inventory and plan for emergency transportation/bussing and temporary sheltering options, especially for seniors and schools, should a large-scale evacuation be needed. Include pets and winter-time evacuation in such plans and policies. Test and refine the plan as part of a future exercise scenario and incorporate any lessons learned into the County's emergency operations plan.	Med
5. Exercise Public Health's volunteer reception center approach and explore implementation of the WEAVR volunteer management system. Engage in a discussion on family assistance center and reunification plans.	Low
Other Threat-Specific Preparedness Actions	
	Priority
1. Active Threats – Initiate a "see-something, say something" campaign that offers systems to report active threat concerns and increases public and private awareness and comfort in reporting such concerns.	High
2. Active Threats - Encourage the creation of basic active threat response plans and the periodic drilling/update of these plans for critical facilities, group assemblies, and large businesses in the County. Conduct periodic active shooter exercises to test response plans, crowd control, situational awareness, and assess security hardening. Include all response agencies (law enforcement, fire, EMS, other) as part of these exercises so that roles and responsibilities are understood.	**Very High**
3. Active Threats - For large businesses and critical facilities with significant numbers of employees and clients, encourage the numbering of interior and exterior doors (and windows if appropriate) and provide copies of floor plans with door numbers to local emergency responders and County 9-1-1 Emergency Communications. Designate a secure, web-based storage area for such plans at the County level.	High
4. Fuel Shortage - Assess needs, logistics, and supply chains regarding the availability of emergency fuel supply for essential services during regional fuel shortages. *(see related mitigation strategy)*	Med
5. Power Outage - Assess needs, logistics, and supply chains regarding the availability of generators/alternative power supply for essential services during a long-term power outage. *(see related mitigation strategy)*	Med
6. Wildfire - Clark County, municipalities, and fire departments in the Intensive Fire Protection areas should continue to advocate for and participate in WDNR wildland training, including a medium-scale exercise in the near future. Include the Ho-Chunk Nation. Develop any needed incident action plans/procedures and agreements as a result of these exercises.	Med
7. HazMat - Continue Hazardous Materials Emergency Preparedness training. Encourage continued local fire department participation in HazMat incident training coordinated by Clark County Emergency Management or local fire departments. • Regularly rotate HazMat exercises and training throughout Clark County with a particular focus on those chemicals commonly transported by rail or highways or at fixed facilities within the local host community. • Milk truck roll-overs have been relatively frequent; ensure all Fire Departments have strong capabilities to manage. • Consider training in more advanced HazMat response techniques and co-training with a contracted HazMat Team. • Include local industry, law enforcement, EMS, railroads, pipeline companies, Public Health, and other response agencies in training.	Med

• Consider an exercise involving school evacuation. • Include resources for river/lake spill events. Invite EHS facilities to give presentations on their hazardous materials, facilities, and plans at Emergency Services Association meetings.	
8. HazMat - Maintain a general inventory of the training, equipment, and general capacity of response agencies in Clark County for hazardous materials-related events. Continue to work towards getting all fire department personnel trained to the operations level and for law enforcement/EMS personnel to be trained to the awareness level. Consider reaching out to schools regarding haz-mat response in their buildings.	Med
9. HazMat – Work with local communities to increase public awareness and support of available "Clean Sweep" programs and other methods for the proper disposal of hazardous waste, including residential, business, agricultural, and pharmaceutical materials. Encourage State legislators to provide additional funding support for such programming.	Med
10. HazMat - Encourage partnerships between communities and area fire departments to establish and support alternatives to maintaining a cost-effective Haz Mat response network.	Med
11. Agriculture-Related – Conduct a meeting of potential agricultural disaster assessment team members (i.e., Emergency Management, FSA, NRCS, Extension, Land Conservation) to discuss emergency procedures, plans, responsibilities, and trends. Invite participation from Public Health (e.g., how is Public Health notified if a manure spill potentially impacts a well?). Monitor agricultural threats and activate the team when needed.	Low
12. Agriculture-Related – Support the continuation of UW-Extension's spill event field days for producers and agri-business. Encourage additional winter storage capacity when appropriate. Promote the WDNR Hotline in case of equipment rollovers, failure of a storage tank valve, or failure of a wall in a manure storage lagoon.	Med

SUPPLEMENT 4.
OTHER REFERENCE INFORMATION

A. STAKEHOLDER & PUBLIC INVOLVEMENT

Sections I.B. and I.C. of the Clark County Multi-Hazard Mitigation Plan provides a general overview of the planning process, which included the following activities to encourage community input and stakeholder involvement:

- **Steering Committee Meetings.** A wide variety of stakeholder organizations were invited to participate on the Steering Committee. See Committee participant list in Section I.B. of the main plan document.
- **Key Stakeholder Interviews.** The key stakeholder interviews obtained input from many local public and private stakeholders who are also community members. A series of key stakeholder interviews, including both public and private sectors, were performed by West Central Wisconsin Regional Planning Commission (WCWRPC) staff to further complement the issue and strategy identification process. This included inviting input from emergency managers from adjacent counties and WEM regional emergency management staff. In addition, a presentation on the 2026 Plan update was given to the Clark County Fire Chief's Association and a brief survey distributed to encourage additional input. Additional supporting data and information were provided by: Wisconsin Department of Natural Resources (WDNR) forestry staff and the regional Dam Safety Engineer; Clark Energy Cooperative; and various county and municipal departments. The list of these interviews is included on the following page.
- **City, Village, & Educational Institution Participation.** The engagement of the other (non-County) plan participants was discussed previously in Section I.C of the main plan document. It should be stressed that these municipal and school/university officials are community representatives who are well informed of local hazard risks and probabilities, and are well positioned to determine what mitigation actions are most appropriate and feasible for their respective communities and facilities.
- **Unincorporated Town Government Meeting and Input.** The project brochure and a brief, customized survey to each town to obtain local input on hazard "hotspots," vulnerabilities, and potential mitigation strategies. On April 27, 2026, a presentation on the planning effort was made to the Clark County Towns Association, which yielded good discussion and questions regarding mitigation grant funding.
- **Review of Local Plans.** Local comprehensive plans, ordinances, and other documents were reviewed, discussed, and considered when available and pertinent, keeping in mind that such planning mechanisms were created with public participation. When appropriate, guidance and clarification from these other documents and plans were integrated into this document.
- **Request for Public and Community Comments**. During previous mitigation planning efforts in Clark County, fewer individuals attended the public informational meetings on the draft plan; the costs of conducting these meetings greatly outweighed the benefits. For this plan update, a public informational press release was issued to newspapers and other media in Clark County announcing the purpose of the plan, the availability of a web-based version of the draft plan for download, and inviting comments. Copies of the press release were also e-mailed to all cities, villages, and towns. A copy of the public informational press release is included at the end of this section.
- **Plan Adoption.** Following conditional approval of the plan by Wisconsin Emergency Management, this multi-hazard mitigation plan was adopted via resolution by the Clark County Board and participating jurisdictions in duly called and noticed public meetings.

Clark County Multi-Hazard Mitigation Plan
Key Stakeholder Interview List

The following constitute the key stakeholders who were interviewed and provided input during the development of the draft plan; the # of attendees does not include WCWRPC staff. Municipalities, the Steering Committee, and other stakeholders also provided additional input during the review of the draft plan strategies and plan adoption process.

Interviewee	Title/Notes	Date
Plan Update Steering Committee	LEPC Meeting #1 – 6 participants	8/14/25
Plan Update Steering Committee	LEPC Meeting #2 – 7 participants	10/12/25
Plan Update Steering Committee	LEPC Meeting #3 – 9 participants	11/10/25
Plan Update Steering Committee	LEPC Meeting #4 (virtual) – 5 attendees	12/17/25
Plan Update Steering Committee	LEPC Meeting #5 – 11 participants	7/7/26
Village of Curtiss Meeting	1 attendee	8/21/25
Village of Dorchester Meeting	7 attendees	9/2/26
Village of Granton Meeting	2 attendees	10/29/25
Village of Withee Meeting	3 attendees	8/7/25
City of Abbotsford Meeting	1 attendee	8/13/25
City of Colby Meeting	3 attendees	8/13/25
City of Greenwood Meeting	2 attendees	12/2/25
City of Loyal Meeting	6 attendees	12/7/25
City of Neillsville Meeting	3 attendees	8/13/25
City of Owen Meeting	2 attendees	8/7/25
City of Thorp Meeting	4 attendees	8/7/25
Town's Association	every town sent a follow-up survey; presentation at WTA meeting	5/19/25
Public School Presentations, Surveys, & Sub-Plans	Presentations + completed sub-plans	varies
Clark Electric Cooperative	3 attendees	9/16/25
Clark County Fire Association	presentation (10/7/25) & distributed survey	10/7/25
County Public Health & Emergency Mgmt Discussion	3 attendees	8/21/25
Lynn McDonald & Lisa Waldhart	County ADRC	10/24/25
Derek Weyer	County Zoning Administrator	10/24/25
Carrie Morrell	County GIS Coordinator	10/24/25
Mitchell Weber	County IT director	12/2/25
Brittany Mews	County Health Department	10/24/25
James Hirsch	Chief Deputy, County Sheriff's Dept	11/24/25
Brian Duell	County Highway Commissioner	12/9/25
Jason Thornton	County Emergency Manager	various
Ryan Jarvis	WDNR Water Management (Dam Safety)	7/8/25; email exchange

Amy Penn	WDNR Wildland Urban Interface Specialist	Via phone
Jed Kaurich	WDNR Forester	Via phone
Adjacent County Emgy Mgmt offices and WEM	Emergency Management Directors of adjacent counties were contacted for input as well as Lisa Olson-McDonald at the Regional WEM Office	8/28/25

October 16, 2026

PUBLIC NOTICE

PLEASE TAKE NOTICE that Clark County Emergency Management is inviting comments and input from residents, businesses, area organizations, and communities regarding the draft *Clark County Multi-Hazard Mitigation Plan, 2026-2031* and any needed projects to reduce or eliminate hazard risks to residents and property.

Clark County has recently completed a draft update of the County's Multi-Hazard Mitigation Plan, which is a pre-requisite for certain FEMA grant funding. Hazard mitigation actions are essential to creating a disaster-resilient community and breaking the disaster cycle of damage, reconstruction, and repeated damage, thus saving taxpayer dollars. Past example mitigation grant projects within Clark County include community safe rooms (storm shelters), the voluntary buyout of floodprone properties, the distribution of weather radios, and burying power lines in areas prone to outages.

A copy of the draft plan is available for review at the County Emergency Management offices in Room 306 of the County Courthouse (517 Court Street, Neillsville) or is available for download at: https://www.wcwrpc.org/hazard-mitigation-planning

The public is invited to provide comment as the draft plan is finalized. Comments may be submitted online at: https://www.surveymonkey.com/r/ClarkHazMit through November 10, 2026. Any questions or written comments on the draft plan may also be directed to Jason Thornton, Clark County Emergency Management, at 715-231-2981.

_____
Jason Thornton
Clark County Emergency Management Coordinator

cc: News Media
Public Bulletin Board/County Clerk's Office

B. INCORPORATION OF RELATED PLANS, STUDIES, & DATA

This Supplement subsection is a companion of Section VI of the main document that discusses plan coordination. The 2026 Plan update includes information and incorporates recommendations from a wide variety of sources, not limited to the following primary sources:

- Section II and Supplement 1 includes statistics from the U.S. Census Bureau, U.S. Department of Agriculture's Agricultural Census, Wisconsin Department of Revenue tax assessment data, Wisconsin Department of Administration population estimates and projections, and economic data from Lightcast (formerly EMSI). The community profile contains a mix of 2020 and more recent American Community Survey (ACS) U.S. Census data. Though slightly outdated, the 2020 data is often used since the margins of error for ACS sampling can be sizable in less populated rural areas. West Central Wisconsin Regional Planning Commission (WCWRPC) also used EMSI Community Analyst and Lightcast subscription data services for some socio-economic data.
- The 2026 Plan update considered and incorporated a variety of new or updated State and Federal data tools, including but not limited to:
    - University of Wisconsin Area Deprivation Index: https://www.neighborhoodatlas.medicine.wisc.edu/
    - National Economic Resilience Data Explorer: https://www.anl.gov/dis/nerde-economic-development-district-dashboard
    - Wisconsin Initiative on Climate Change Impacts: https://wicci.wisc.edu/
    - NOAA Climate Mapping for Resilience and Adaptation: https://resilience.climate.gov/
    - WI DHS Climate Vulnerability Indices: https://www.dhs.wisconsin.gov/climate/wihvi.htm
    - FEMA National Risk Index: https://hazards.fema.gov/nri/
- Section III.C. and Supplement 2 relies heavily on NOAA National Climatic Data Center storm event data supplemented by interviews and local newspapers. This section also includes data and maps from the *State of Wisconsin Hazard Mitigation Plan* and the *State of Wisconsin Homeland Security Council THIRA & SPR* produced by Wisconsin Emergency Management.
- Section III.C. and Supplement 2 also includes references to a large variety of data sources and studies for the specific hazard types, largely from State and Federal sources, which are identified in the respective hazard assessment sections.
- The GIS maps and GIS-based analysis found in the Plan update were largely produced by WCWRPC with geo-referenced data primarily from Clark County and the Wisconsin Department of Natural Resources. The mapping work as part of the community profile and hazard assessment was performed using ESRI-based Geographic Information Systems, allowing greater manipulation and analysis from the use of a consistent base map. Maps included in this plan are for general planning purposes only and do not constitute legal documents or formal surveys. The community lifelines table and maps were compiled from a variety of sources; these sources are listed within the table in Section II.D.
- The County-level flood assessment methodology, completed by the Clark County GIS program, is further detailed in Supplement 2.G.
- The previous subsection includes the list of meetings and stakeholder interviews completed during the process. These interviews frequently yielded reports and additional data that were incorporated into this Plan, such as the Electric Cooperative providing updated outage data and Public Health providing information regarding contagious disease.
- Various sections of the Plan update, including the participant sub-plans, incorporate or reference municipal & County Emergency Operations Plans, County Land & Water Conservation Plan, the County

Aging Plan, and the County Public Health Emergency Preparedness Plan as well as various annexes, mutual aid agreements, and partnerships. Threat-specific plans are frequently referenced where applicable, such as Dam Flood Emergency Action Plans and ALICE training in schools. Comprehensive plans and local regulatory policies are also referenced (e.g., floodplain zoning, stormwater management, driveway regulations). Section III.C.iv. provides NFIP program participation information. The city and village sub-plans in Supplement 5 provide similar references to community-specific planning mechanisms, including NFIP program and floodplain management status.

C. SUMMARY OF PLAN CHANGES SINCE 2020 MITIGATION PLAN

The 2026 *Clark County Multi-Hazard Mitigation Plan* was a complete review and update of the 2020 Plan. Changes to the 2026 Plan update were also required to meet FEMA's latest mitigation planning guidance that went into effect in April 2023 and was further modified effective May 19, 2025, though the 2026 Plan met most requirements and some changes were largely semantic. This section highlights some of the major changes since the 2020 Plan by plan section, including a brief description of how the Plan Update Steering Committee reviewed and analyzed each section.

Section I. Introduction (including General Process & Approach)

- The project brochure was updated and distributed to encourage participation.
- Stakeholder and community interviews included review of the 2020 Plan recommendations.
- Town surveys were customized for each town and incorporated aspects of the 2020 Plan to encourage input.
- The previous subsection identifies some new data sources that were not available at the time of the previous plan update.
- Like the 2020 Plan, meetings were held with each city and village. **A major change in this plan was the creation of sub-plans for each city and village** (Supplement 5); this makes it easier for the communities to consider their respective risks, vulnerabilities, capabilities, and strategies. This should also make it easier to update the plan in the future.
- **New to this plan update was the invitation to public educational institutions to be full participants.** Participants participated in a web-based presentation and survey, then a sub-plan was created for each (Supplement 6).
- **The structure of the plan was significantly revamped to create a main plan document with key information and mitigation recommendations along with a plan supplement.** This makes the main document more user-friendly and keeps the focus on the most important aspects of the plan, while the supplement contains additional information that is required to meet FEMA planning guidelines. It is also anticipated that this approach will make it most efficient to update the mitigation plan in the future.
- Steering Committee Analysis & Review: The planning process, which is summarized in Section I, was the focus of the first Plan Update Steering Committee meetings, including a review of the process used during the 2020 plan and initial recommended changes for the plan update.

Section II. Community Profile

- Demographics and other data were updated. A new table-based and infographic format was incorporated for many key data points, which is easier to evaluate and will save time for future mitigation plan updates.
- G.I.S. data for critical facilities continues to be improved and the list of critical facilities was expanded and refocused on FEMA's new community lifelines.

- Steering Committee Analysis & Review: The highlights of the community profile were reviewed and discussed during the second Steering Committee meeting. Particular attention was given to related emergency management implications.

Section III. Assessment of Hazard Conditions

- Throughout this section, NCDC statistics, NFIP participation information, and other data were updated and, for many risks, further supplemented. This includes integrating data and maps available in the *State of Wisconsin Homeland Security Council THIRA & SPR*, which was updated January 2018. It also includes incorporating input from the Steering Committee, stakeholders, newspaper articles, and other plan participants.
- A more robust vulnerability assessment table aligned with key assets and community lifelines was included.
- The Steering Committee re-assessed the risks and vulnerabilities facing Clark County. Due to similar impacts/vulnerabilities, high winds were combined with tornadoes.
- Steering Committee Analysis & Review: An overview of hazard trends, issues, and mitigation opportunities were discussed by the Committee during their first and second meetings. Following the first meeting, committee members completed a survey assessing hazard risks and vulnerabilities. The survey results were discussed at the committee's second meeting. The analysis of the key results of the assessment and interview process was the focus of the Steering Committee's second meeting.

Section IV. Capabilities Assessment

- This section was amended to consider barriers to implementation and updated to reflect changes in mitigation activities and capabilities.
- Steering Committee Analysis & Review: Current mitigation activities and capabilities were discussed during interviews and the Committee's second and third meetings.

Section V. Mitigation Goals and Strategies

- The mitigation goals were updated as discussed in Section V.A. of the main plan document.
- Mitigation strategies were updated to reflect changes in priorities, which are discussed in this section. Some strategies also placed greater emphasis on nature-based solutions.
- After discussion with the Steering Committee, **mitigation and preparedness strategies are separated** in the 2026 Plan update with additional implementation guidance for the mitigation strategies.
- The plan coordination subsection was moved into Section V with a greater emphasis on describing how the mitigation plan can/will be integrated into other planning mechanisms.
- The mitigation grant resources list in Supplement 4.D. was updated.
- Steering Committee Analysis & Review: Plan goals were reviewed and discussed as part of the third Steering Committee meeting. Mitigation and preparedness strategy alternatives were discussed during the third and fourth Steering Committee meetings as well as identifying criteria on which to evaluate and prioritize strategy alternatives. A strategy alternatives survey was distributed to all Steering Committee members; the survey results yielded relative priority of the mitigation and preparedness alternatives and guided the selection of which strategies would be recommended in the final plan.

Section VI. Plan Adoption & Maintenance Process

- This section was amended to include more emphasis on public participation.
- Section VI.B.iii. identifies some potential changes for the next plan update.

- Steering Committee Analysis & Review: The plan adoption and maintenance process were discussed and determined by the Steering Committee during its third meeting. Committee members were challenged to identify opportunities to continue to engage the public during plan maintenance as well as future plan updates.

D. Potential Federal & State Grant Programs for Mitigation Projects

The following is a list of grant programs that are most commonly available for natural hazard mitigation in Wisconsin. This list was used when identifying potential grant sources for the mitigation projects identified in Section V. of this plan as well as the local community/school sub-plans. It is not intended to be comprehensive or all-encompassing, and grant programs, opportunities, and requirements frequently change. For instance, in Summer 2016, FEMA announced a new Swift Current funding initiative within the Flood Mitigation Assistance Program that is specifically designed to accelerate mitigation for National Flood Insurance Program-insured repetitive loss and severe repetitive loss properties that have been damaged by flood events.

In 2020, the U.S. Department of Energy issued a *Mitigation & Resilience Federal Funding Sources* document as part of the U.S. Climate Resilience Toolkit website. This 11-page document includes additional information on many of these federal programs referenced in this subsection as well as providing additional potential funding sources.

	Federal or State Agency & Grant Program	Contact Information	Eligible Activities	Eligibility & Cost Share	Other Notes	Application Deadline
1	Federal Emergency Management Agency, Hazard Mitigation Grant program (HGMP)	Wisconsin Emergency Management P.O. Box 7865 2400 Wright Street Street, Madison, WI 54707-7865	Flood proofing, acquisition and relocation of flood prone properties, elevation of flood prone properties, wind resistant or retrofit, storm water improvements, education and awareness, All Hazards Mitigation Planning efforts	Federal - 75% State - 12.5% Local - 12.5% 90/10 for economic disadvantaged rural communities	Local government must be in compliance with the National Flood Insurance Program to be eligible. Projects must be cost-effective, environmentally sound and solve a problem.	After a Presidential Disaster Declaration
2	Federal Emergency Management Agency, Building Resilient Infrastructure & Communities (BRIC) Program *(replaced PDM Program)*	Wisconsin Emergency Management P.O. Box 7865 2400 Wright Street Street, Madison, WI 54707-7865	Grants can be used for various mitigation projects, information dissemination, planning, technical assistance, etc.	Federal - 75% Local - 25% 90/10 for economic disadvantaged rural communities	Must have an approved hazard mitigation plan. In Spring 2025, FEMA announced that it would be replacing the BRIC program with an alternative mitigation approach; as of January 2026, an announcement on this alternative grant program has not been announced.	Typically, pre-applications due abt. Nov/Dec and application due abt. Jan/Feb
3	Federal Emergency Management Agency, Flood Mitigation Assistance (FMA) Program	Wisconsin Emergency Management P.O. Box 7865 2400 Wright Street Street, Madison, WI 54707-7865	Acquisition, relocation, elevation and flood-proofing of flood-prone insured properties, flood mitigation planning	Federal - 75% Local - 25% 90/10 for economic disadvantaged rural communities	Repetitive loss properties given a high priority. Must have an approved hazard mitigation plan.	Typically, pre-applications due abt. Nov/Dec and application due abt. Jan/Feb
4	Federal Emergency Management Agency, Public Assistance (PA) program	Wisconsin Emergency Management P.O. Box 7865 2400 Wright Street Street, Madison, WI 54707-7865	Repair of infrastructure damaged during a flood that results in a Presidential Disaster declaration. Cost effective mitigation measures may be eligible during the repair of damaged facilities	Federal - 75% State - 12.5% Local - 12.5%		After a Presidential Disaster Declaration
5	Economic Development Administration, Economic Adjustment Program (see CFDA 11.307)	United State Department of Commerce, Economic Development Administration, 111 North Canal Street, Suite 855, Chicago, IL 60606-7204 312-353-7148	Improvements and reconstruction of public facilities after a disaster or industry closing. Research studies designed to facilitate economic development.	Federal - 50%-70% Local - 30%-50%	Documenting economic distress, job impact and proposing a project that is consistent with a Comprehensive Economic Development Strategy are important funding selection criteria	Anytime
6	Economic Development Administration, Public Works and Development Facilities (see CFDA 11.300)	United State Department of Commerce, Economic Development Administration, 111 North Canal Street, Suite 855, Chicago, IL 60606-7204 312-353-7148	Water and sewer, industrial access roads, rail spurs, port improvements, technological and related infrastructure.	Federal - 50%-70% Local - 30%-50%	Documenting economic distress, job impact and proposing a project that is consistent with a Comprehensive Economic Development Strategy are important funding selection criteria	Anytime
7	Wisconsin Department of Commerce, Community Development Local Grant, Public Facilities Emergency Program	Wisconsin Department of Commerce, 201 West Washington Avenue, PO Box 7970, Madison, WI 53707-7970 608-266-8934	Repair of water, sewer, street, curb and gutter, police and fire stations	Federal - 75% Local - 25% Must be a LMI community or serve a vulnerable population	Available after a state and/or Presidential Disaster declaration. these funds can be used towards the local match to receive FEMA public assistance and HMGP funds	After a Disaster event
8	Wisconsin Department of Commerce, Community Development Block Grant, Public Facilities Program	Wisconsin Department of Commerce, 201 West Washington Avenue, PO Box 7970, Madison, WI 53707-7970 608-266-8934	Water, sewer, street, curb and gutter, libraries, fire stations and community centers	To receive maximum points $1.5 of local match to every $1 of state Community Development Block Grant Must be a LMI community or serve a vulnerable population	A community's economic distress score influences funding determination. These funds can be used as a local match to receive FEMA Public Assistance and HMGP funds.	Anytime
9	Wisconsin Department of Transportation (DOT), Flood Damage Aid	Wisconsin Department of Transportation, 4802 Sheboygan Avenue, Madison, WI 53707 608-267-5254	Replacement and improvement costs for major flood damage to a road or road structure under local jurisdiction. To help defray costs of repairing major flood damage to any pubic street, alley, or bridge not located on the State Trunk Highway System	State - 75% of replacement costs and 50% of improvement costs, reimbursed by local	Repairs or replacements can includes resign to prevent or reduce future flood damage. If Federal Disaster Aid is received, community is ineligible for State Federal Disaster Aid.	Applicant must submit final costs within 2 years following flood damage
10	Wisconsin Department of Transportation (DOT), Transportation Enhancement funds	Wisconsin Department of Transportation, 4802 Sheboygan Avenue, Madison, WI 53707 608-267-5254	Activities that "enhance" the surface transportation infrastructure "above and beyond" basic highway projects, can include: landscaping and scenic beautification, acquisition of scenic easements, and scenic or historic sites.	Federal - 80% Local - 20%	Can provide scenic vista and runoff areas, parking and landscaping along flood-prone riverways. Can acquire flood-prone areas along roads for green corridors. Food damage reduction potential is not the primary purpose of the program.	Even-numbered years. Application forms available in January. Must be submitted by April. Funds granted competitively.
11	Wisconsin Department of Commerce, Division of Housing and Community Development CDBG - Emergency Assistance Program	Wisconsin Department of Commerce, 201 West Washington Avenue, PO Box 7970, Madison, WI 53707-7970 608-267-3682	Assists local governments in response to a natural or manmade disaster. Can be used to address damage to housing, public infrastructure, businesses, community buildings, etc.	Varies, depending upon whether the community is already an entitlement community for CDBG funding.	Must give preference to households at or below 80% of the county median income.	After a disaster event.
12	Wisconsin Housing and Economic Development Agency Temporary Housing Grants	WHEDA 201 W. Washington Ave, Ste. 700 Madison WI, 53703 608-266-7884 800-334-6873	WHEDA has provided grant support to communities in the past following a disaster event for housing needs.	contact WHEDA for more information	contact WHEDA for more information	After a disaster event.
13	Wisconsin Department of Natural Resources, Surface Water Grants	Wisconsin Department of Natural Resources, 101 S. Webster Street, PO Box 7921, Madison, WI 53707-7921 608-266-7555	Cost-sharing grants for a variety of lake and river planning, education, analysis, protection, and restoration projects. Can potentially include some flooding- or bank-related and invasive species projects.	Varies by project type Most planning grants are 67% WDNR Most project/management grants are 75% WDNR	Varies by project type (i.e., $5,000 - $200,000) Local govt's and non-profit organizations may apply.	Pre-applications on Sept 15 and Full Applications on Nov 15
14	Wisconsin Department of Natural Resources, Knowles-Nelson Stewardship Fund	Wisconsin Department of Natural Resources, 101 S. Webster Street, PO Box 7921, Madison, WI 53707-7921 608-266-7555	Encompasses 6 sub-programs usually used for outdoor recreation activities. Can include land acquisition, natural/habitat enhancement, stream bank, & urban rivers projects.	State - 50% Local - 50% very competitive	Most projects must be part of an adopted outdoor recreation plan. Local governmental units may apply. Nonprofit conservation orgs are eligible for acquisition projects.	Various by sub-program
15	Wisconsin Department of Natural Resources, Municipal Flood Control Project	Wisconsin Department of Natural Resources, 101 S. Webster Street, PO Box 7921, Madison, WI 53707-7921	Acquisition, flood proofing, wetland-floodplain restoration, storm water projects, flood insurance studies, and floodplain mapping.	State - 70% Local - 30%	Maximum grant cannot exceed 20% of funding available. Cities, villages, towns, and metropolitan sewer districts are eligible.	March 15

		608-266-7555				
16	Wisconsin Emergency Management, Domestic Preparedness Equipment Grant Program	Wisconsin Emergency Management, 2400 Wright Street, Madison, WI 54707-7865 608-242-3232	Some equipment purchased for terrorism readiness may also have valuable emergency response use to mitigate impacts should an event occur.			January 15
17	Wisconsin Department of Natural Resources, Targeted Runoff Management (TRM) Grant Program	https://dnr.wisconsin.gov/aid/TargetedRunoff.html	Local governments can apply to fund efforts to reduce non-point source pollutant runoff	May be able to leverage with Wisconsin DOT funds.		April 15
18	U.S. Army Corp of Engineers Section 14-Emergency Streambank and Shoreline Protection	regional contact: Detroit District 477 Michigan Avenue Detroit, Michigan 48226 313-226-6764	Provide bank protection of highways, bridges, essential public works, and critical facilities endangered by flood-caused erosion.	Federal - 75% Local - 25%	Must meet U.S. Army Corps of Engineers economic feasibility and other criteria Maximum $500,000 per project.	
19	U.S. Army Corps of Engineers Section 22-Water Resources Planning Assistance to States	regional contact: Detroit District 477 Michigan Avenue Detroit, Michigan 48226 313-226-6764	This program can be used to obtain technical assistance from the Army Corps to study, analyze, and/or plan for a water-related challenge. The Corps will consider using some funds to sub-contract if needed.	Federal - 50% Local - 50%	Must meet U.S. Army Corps of Engineers economic feasibility and other criteria	
20	U.S. Army Corps of Engineers Section 205-Small Flood Control Projects (CFDA 12.106)	regional contact: Detroit District 477 Michigan Avenue Detroit, Michigan 48226 313-226-6764	Provision of specialized services through projects not specifically authorized by Congress.	First $100,000 is federally funded, with remainder split 50% Federal/50% Local.	Must meet U.S. Army Corps of Engineers economic feasibility and other criteria Maximum $7 million per project, though this may change.	
21	U.S. Army Corps of Engineers Section 208-Clearing Channels for Flood Prevention (CFDA 12.108)	regional contact: Detroit District 477 Michigan Avenue Detroit, Michigan 48226 313-226-6764	Provision of specialized services. Non-federal sponsor must provide all lands, easements, and rights-of-way.	Federal - 75% Local - 25%	Must meet U.S. Army Corps of Engineers economic feasibility and other criteria Maximum $500,000 per project.	
22	U.S. Department of Agriculture, Farm Service Agency contact local Farm Service Agency Emergency Conservation Program (ECP)		Perform emergency conservation measures to control wind erosion on farmlands and rehabilitate farmlands damaged by natural disasters; includes water conservation	Cost-sharing determined by County committees , following USDA guidelines.	Farm operator or landlord/owner in a disaster area or impacted by drought.	following a natural disaster event; eligibility determined by county FSA cmte
23	U.S. Department of Agriculture, Natural Resources Conservation Service, Watershed Protection and Flood Prevention	Wisconsin Natural Resources Conservation Service - NW Area 1304 N. Hillcrest Altoona, WI 54720 715-832-6547	Project grants and technical assistance to protect and utilize land and water resources in small watersheds. Emphasizes interdisciplinary planning teams.	Varies depending on nature of the project. Federal funding may be incorporated within other State Programs; check with WDNR.	Agricultural related enterprises must account for at least 20% of the total benefits.	
24	U.S. Department of Agriculture, Natural Resources Conservation Service, Emergency Watershed Protect - Floodplain Easement	Wisconsin Natural Resources Conservation Service - NW Area 1304 N. Hillcrest Altoona, WI 54720 715-832-6547	Purchase floodplain easements as an emergency measure in floodplain areas which are impaired or have a history of repetitive flooding	Easement compensation varies by site and location. NRCS pays 100% of restoration costs.	Voluntary program to restore floodplain functions. Easements are permanent. Easement compensation based on offer, rate cap, and area market.	Sign-up period is in March.
25	U.S. Department of Agriculture - Rural Development, Housing & Community Facilities Programs	Rural Development Business & Community Programs 4949 Kirschling Court Stevens Point, WI 54481 Phone: 715-345-7610	Has been used for a wide variety of projects, including early warning systems, sirens, fire equipment, EMS buildings, shelters, radios, etc. Additional USDA programs available for larger projects.	Varies by community size, local household incomes, and funding availability	Counties and small communities; must work with USDA Rural Development officials from project start. One of the few grant sources that may fund sirens and generators.	
26	Wisconsin Department of Natural Resources, Forest Fire Protection (FPP) Grant	FFP Grant Manager Department of Natural Resources P.O. Box 7921 Madison, WI 53707-7921 (608) 267-0848	Equipment, training, prevention materials, communication equipment, mapping/rural numbering systems, ATVs, dry hydrants	For individual fire depts: min. $750; max. $10,000 For County Fire Assoc: min. $5,000; max. $25,000	Fire departments and County Fire Associations	varies; usually May, June or July
27	U.S. Homeland Security Assistance to Firefighters Grant Program	U.S. Dept. of Homeland Security 800 K Street NW Washington DC 20472-3620 1-866-274-0960	For Fire Departments and EMS organizations to enhance fire-related capabilities.	Varies by population served, but 5% - 10% for small communities	Applicants serving less than 500,000 population may not receive over $1 mil in funding.	April or May
28	U.S. Department of Interior Rural Fire Assistance Outreach	U.S. Dept of Interior check up-to-date application materials for contact info.	Training, personal protective equipment, basic gear, limited communications equipment, basic tools, and other activities.	Minimum 10% local match	Max. award of $20,000 per fiscal year. Need to serve DOI lands.	April
29	U.S. Department of Homeland Security, Emergency Operations Centers (CFDA 97.052)	Department of Homeland Security 245 Murray Drive, SW. Washington, DC 20528 202-282-8000	Improve local capabilities to respond to emergencies and disasters	Phase 1 for assessment Phase 2 requires a 50% nonfederal cost share.	Local governments can be sub-grantees under the State.	
30	Federal Emergency Management Agency, Interoperable Communications Equipment (CFDA 97.055)	Contact Wisconsin Office of Emergency Communications to verify grant availability and details	Explore uses of equipment and technologies to increase the interoperability among fire services, law enforcement, and emergency medical services.	Funding is discretionary. Max. Federal share is $6 million. 25% nonfederal cost-share.	Local governments are nominated by the State to submit an application.	
31	U.S. Department of Transportation Promoting Resilient Operations for Transformative, Efficient, & Cost-Saving Transportation (PROTECT) Program	Uncertain of this	For planning and implementing projects to improve transportation resiliency, including vulnerability assessments, evacuation, or other infrastructure enhancement	Grant funding is discretionary. In 2023, $848m available. May also support cooperative agreements with U.S. DOT.	State, Tribal, and local units of government including MPOs and multi-jurisdictional groups.	Uncertain of this grant program status. 2025 deadline was in Feb.
32	Wisconsin Emergency Management Pre-Disaster Flood Resilience Grant Program	Wisconsin Emergency Management, 2400 Wright Street, Madison, WI 54707-7865 608-242-3232	Assessment & Infrastructure components to identify flood vulnerabilities, study options to improve resilience, restore hydrology/reduce risks & damages in flood-prone communities	2024 announcement is the first year of funding with $2 million available; future funding not guaranteed	Units of government; non-profits & consultants may apply on behalf of a govt unit with documentation of commitment	2024 deadline was Nov 30

SUPPLEMENT 5.
CITY & VILLAGE SUB-PLANS

VILLAGE OF CURTISS HAZARD MITIGATION SUB-PLAN

This sub-plan identifies past hazard events, risks, trends, capabilities, and strategies unique to or specific to the community and is part of the overall *Clark County Multi-Hazard Mitigation Plan*. The Clark County mitigation plan provides broader context and contains hazard assessments, capabilities, and strategies that are countywide or multi-jurisdictional.

Primary Contact:	Director of Public Works
Planning Meetings:	• Primary planning meeting with WCWRPC staff occurred on August 21st, 2025. • Village participated in a mitigation/preparedness capabilities assessment in September 2025. • Resolution adopting the Hazard Mitigation Plan and Sub-Plan will be approved by Village Council at a public meeting and included in Section VII of the main plan document.

Community Profile

This table provides a brief overview of key community characteristics, primarily from the 2020 U.S. Census, which are important to assessing capacities and vulnerabilities. For example, the entire population and all above-ground structures in the community are vulnerable to a tornado event, while mobile homes have an elevated vulnerability.

Population	292
Median Age	28 years
Uniquely vulnerable populations	Seniors; mobile home park residents; apartment residents; economic disadvantaged community
Assessed Improvements (2025)	Residential: $5,331,800; Commercial: $21,211,100; Manuf.: $2,858,100
# of Housing units	88
# of Mobile Homes	17
Notable Community Lifelines or Critical Facilities	See map at end of sub-plan.

Hazard Risk Assessment

This table describes past hazard events impacting the community and any unique vulnerabilities to each event. This assessment is supplemented by the risk assessment map included at the end of this Mitigation Sub-Plan for the community. Also see the Risk Assessment in Section III of the main text of the Clark County mitigation plan for general risks and vulnerabilities applicable to most or all communities.

Hazard	History & Past Impacts	Vulnerabilities & Potential Impacts
Tornado & High Winds	1905 tornado caused extensive damage. Tornado touchdown to north in 1970s, but no major events since. Most recently, very high winds in July 2019; tornado near Owen. High winds accompanied June 2024 and May 2025 tornados near Colby. Damages within Village largely limited to trees and some roofs.	Most homes have basements, except mobile home park and a few other homes. Not certain if mobile homes are anchored. Mobile home park may expand in future. New apartment complex with 56 units. Potential for camping at Park in future and a private campground proposed.

Hail & Lightning	No unique history noted. Lift station hit by lightning once and struck well field facilities 3 times in 2014, but equipment upgraded and no recent problems.	No unique concerns noted.
Winter Storm, Ice, & Extreme Cold	Drifting on State Highway and Plaza Drive. Water line breaks at trailer court; added shut-off valves to limit damage along with looped, deeper lines to help mitigate freeze-ups. Ice damming of culvert caused some road flooding in 2014. December 2023 winds and ice downed many branches with short-term power loss.	No unique concerns noted. Some Inflow & Infiltration into wastewater system from snow melt. See stormwater flooding.
Extreme Heat	No unique history noted.	No unique concerns noted.
Long-Term Power Outage	No long-term events. December 2023 ice and wind event resulted power less than 24 hours but some phone lines out for 2 weeks.	Village Hall lacks generator, which may be the EOC. New Fire Hall has generator, which could potentially serve as EOC. Fixed generators for wastewater plant and largest well. Portable for other utilities. Loss of power impacts Village utilities; industry (Abbyland) would shut down. Limited emergency fuel supply for public utilities and response.
Flooding – Riverine or Overbank	No 100-year floodplain.	No unique concerns noted by the community.
Flooding – Stormwater or Overland	No unique history noted.	Village is flat with slow, natural drainage. Heavy rains and large, fast snow melts can overwhelm natural systems and culverts. Some flooding along New Street north of Front Street in past, largely to streets and lawns. Drainage also an issue in trailer park, which contributes to sinking and heaving of services; some recent stormwater improvements have helped. Ongoing ditch/culvert maintenance and debris management needed. Continue to reassess stormwater management and retention pond needs as development occurs, especially near highway.
Dams	No dams. None.	Not applicable.
Drought	None.	Adequate water quantity for fire protection; capacity being increased. No concerns noted.
Wildfire	No significant events.	Elevated risk due to significant forest on the west side of the community. Limited development (wildland-urban interface) within this area at this time.
Hazardous Materials Spills	No significant events in the community.	Primary concerns are trucks on highway and at travel plaza. Ammonia at two fixed industrial sites would require a large evacuation area. Continued training recommended for Fire Dept; has some HazMat techs.
Active Threats	No incidents to date.	Large truck stop and industry are primary vulnerable locations. Large parties at restaurant have been a concern on occasion requiring law enforcement.
Cyber-Attack	No significant events impacting municipal facilities or services. Some email phishing attempts.	No unique concerns noted. IT contract with cloud back-up. Village mentioned increasing cyber-threats to public infrastructure in general.

Notable Trends or Changing Priorities

Have any hazard-related priorities changed since the previous mitigation plan?	Concerns with potential impacts of power loss due to increasing wind/tornado events. Increased community concern over the potential for HazMat spills.
Are there any other trends influencing these concerns, such as changes in development, demographics, or weather patterns/climate?	Increasing frequency and severity of heavy rain events, wind storms, and tornados.

Capabilities Assessment

The following is a general assessment of the community's resiliency and capabilities to mitigate, respond to, and recover from a disaster event. It also notes if mitigation or preparedness has been integrated into planning mechanisms. This assessment was completed by the community through the 2025 web-based survey, with some supplemental information from the community meeting and other sources (e.g., fire department survey, NFIP Community Status Book). The list of potential plans, policies, and other actions is not exhaustive, and it is not expected that the community has undertaken all actions listed or will undertake all actions in the future.

Planning Activities	
Community Emergency Operations or Response Plan (EOP)	No plan
Community Evacuation Plan and/or Exercises	No plan
Continuity of Government Plan	No plan
Comprehensive Plan	Adopted; does not incorporate mitigation or preparedness
Stormwater Management Plan	No formal, village-wide plan
Historic Preservation Plan or Ordinance	No plan
Capital Improvements Plan or Similar Budget	Adopted; does incorporate mitigation or preparedness
Involve Fire & Law Enforcement in planning & development plan review	Doing this as needed.
Special emergency notification procedures or preparedness plans for vulnerable populations	No
Policies, Codes, & Ordinances	
Building Codes	Adopted; does not incorporates mitigation or preparedness
Building Code Efficiency Grading Schedule	No policy or code
Zoning Ordinance	Adopted; does not incorporate mitigation or preparedness
Subdivision Ordinance	No policy or code
Site Plan Review Requirements	Adopted; does incorporate mitigation or preparedness
Floodplain Management	
Initial Flood Hazard Boundary Map:	Not applicable; no 100-year floodplain
Initial FIRM Identified:	
Current Effective FIRM Date:	
Date Community First Joined NFIP (Reg-Emer)	
NFIP Participation Status (and reason if not participating):	
Floodplain Regulations w/ NFIP standards:	
Designated position or committee for floodplain management, floodplain zoning, & NFIP compliance:	
Other ongoing floodplain management activities:	
Stormwater Management Ordinance	Unknown
Stormwater Utility	Unknown

Winter Emergency Policies	Adopted; does not incorporate mitigation or preparedness
Mitigation & Preparedness Actions for Facilities	
Debris Site identified for storm debris disposal (not just woody debris)	No
Emergency Operations Center designated with generator/back-up power	Partial;
Public Storm Shelter/Community Safe Room designated	Partial; Village Hall/former Fire Hall has been used as shelter, but not a great option. New fire hall not designed as a shelter, but could be used if doors are opened. If Village creates a campground, demand for shelter would increase.
Public Heating/Cooling Shelter designated with generator/back-up power	No formal shelter identified.
Storm/warning siren on back-up power	1 siren at Village Hall with battery back-up. Good coverage. Past problems with siren malfunctioning have been addressed.
Storm/warning siren that can be activated remotely	Siren activated by County dispatch based on NWS warnings. Some concern expressed that may be a "gap" in NWS coverage so siren may be activated after the storm has passed.
Active shooter/threat plans and/or security hardening for municipal buildings	Limited.
Other Mitigation & Preparedness Actions	
Review EOP at least annually	Needs to be updated
Individuals in EOP have ICS/NIMS training	No
Public Information Officer designated & trained	No
Municipal officials and staff participate in regular disaster or emergency response exercises	Limited.
Community-level efforts to improve hazard preparedness among residents	Some general information provided, but no formal initiative.
Adopted billing rates for public works labor & equipment use during emergencies	No; planning or considering implementation
Adopted mutual aid agreements for public works equipment/personnel support	Has a Rural Water mutual aid agreement for sewer and water utilities. "Handshake" agreement for support from Owen and Abbotsford if needed.
Adopted emergency contracting and purchasing policies	No
Cyber-security systems, off-site/cloud back-up, and recovery policies or plans for municipal records	Yes
Cyber-security systems and policies for municipal utilities	Yes
Municipal buildings/staff have NOAA All Hazards Radios or signed-up for Everbridge	No
Other Flood Mitigation projects or activities	One buyout of flood-prone building in past using mitigation grant dollars; now part of green space with culvert improvements. Stormwater drainage improvements completed in 2002. Ditch/culvert maintenance ongoing.
Municipal Dam-related planning or actions	No dam.
Barriers to mitigation or preparedness actions	Staff time; financial resources/budget

Mitigation Strategy Recommendations

The overall mitigation goal statements in Section V.A. of the Clark County mitigation plan are shared by all participating communities.

The community will strive to implement the following mitigation actions/projects as resources and funding allows, though priorities could change due to a variety of fiscal, technical, or other factors, including changes in hazard risks. Sections V of the Clark County mitigation plan includes additional mitigation and preparedness actions that are intergovernmental in nature and not specific to the community, but may suggest coordination and funding opportunities.

The following recommended actions/projects are specific to the community:

Action/Project	Priority & Timeline	Primary Responsible Party	Potential Resources
1. Explore the development of a community safe room (storm shelter) for mobile home park and, if created in the future, a municipal campground. If a generator and HVAC system are provided, consider using the safe room space as a heating/cooling shelter and emergency assembly location. For new safe room construction, consider the incorporation of nature-based stormwater management systems (e.g., rain barrels, rain garden) to mitigate site runoff.	Medium-to-Low; 3-5 years Timeline could change based on public demand for safe room or building projects.	Mobile Home park residents/ownership should express need; Village Council	FEMA Hazard Mitigation Grant Programs (BRIC & HMA) FEMA Technical Assistance or Advanced Assistance grant funding could be available to assist with exploring storm hardening options. WCWRPC and Wisconsin Emergency Management can provide grant-related guidance
2. Continue to monitor flooding within the community, especially in light of the increasing frequency of heavy rain events and growth. Explore mitigation actions, such as hydraulic analysis, additional flood retention, or, if buildings are impacted, considering structural mitigation projects such as floodproofing. In the interim, keep stormwater drainageways within the Village clear of debris and objections to prevent flooding. If needed, explore regulatory and enforcement options.	Medium-to-High; ongoing	Village Public Works; Village Plan Commission and Council	FEMA Flood Mitigation Assistance (FMA) or Wisconsin Pre-Disaster Flood Resilience Grant. FEMA grant funding may be feasible if larger project and can demonstrate that the benefits (i.e., addressing past or unavoidable losses) outweigh estimated project costs.

3. Update and annually review the Village's Emergency Operations Plan (EOP). Verify location of Village Emergency Operations Center (EOC) and storm sheltering opportunities for residents. Include basic evacuation protocols in case of HazMat spill. Partner with County Emergency Management, industry, Fire Department and law enforcement to exercise the EOP/EOC for HazMat spills and severe weather. Explore the potential installation of a special siren or other warning systems in case of a HazMat release or needed evacuation.	High; ongoing	Village Board or Safety Committee Fire Department	County Emergency Management can provide a template and guidance. Collaborate with industry for warning system improvements.
4. As opportunities allow, collaborate with County Emergency Management and other partners (e.g., Public Health, Red Cross, Electric Provider) to increase public participation in the County emergency notification system, awareness of emergency siren use and warning systems, and public preparedness in general.	Medium-to-High; ongoing	Village Board or Safety Committee	County Emergency Management & partners have educational materials Could implement annually during Severe Weather Awareness Week and/or Preparedness Month using social media, posters, utility bill inserts, etc.
5. Explore municipal micro-grid and emergency power options for public utilities and essential services in case of an extended power outage.	Medium-to-Low; 3-5+ years	Village Board & Public Works	May be eligible for a variety funding sources, including tax incremental financing, FEMA BRIC/HMGP, and USDA Rural Development-Public Facilities.

Sub-Plan Coordination and Integration

The previous Capabilities Assessment section identifies how this Mitigation Sub-plan has been integrated into or coordinated with other municipal plans or planning mechanisms. During the planning process, the following opportunities were identified to integrate the mitigation strategies into other community planning mechanisms:

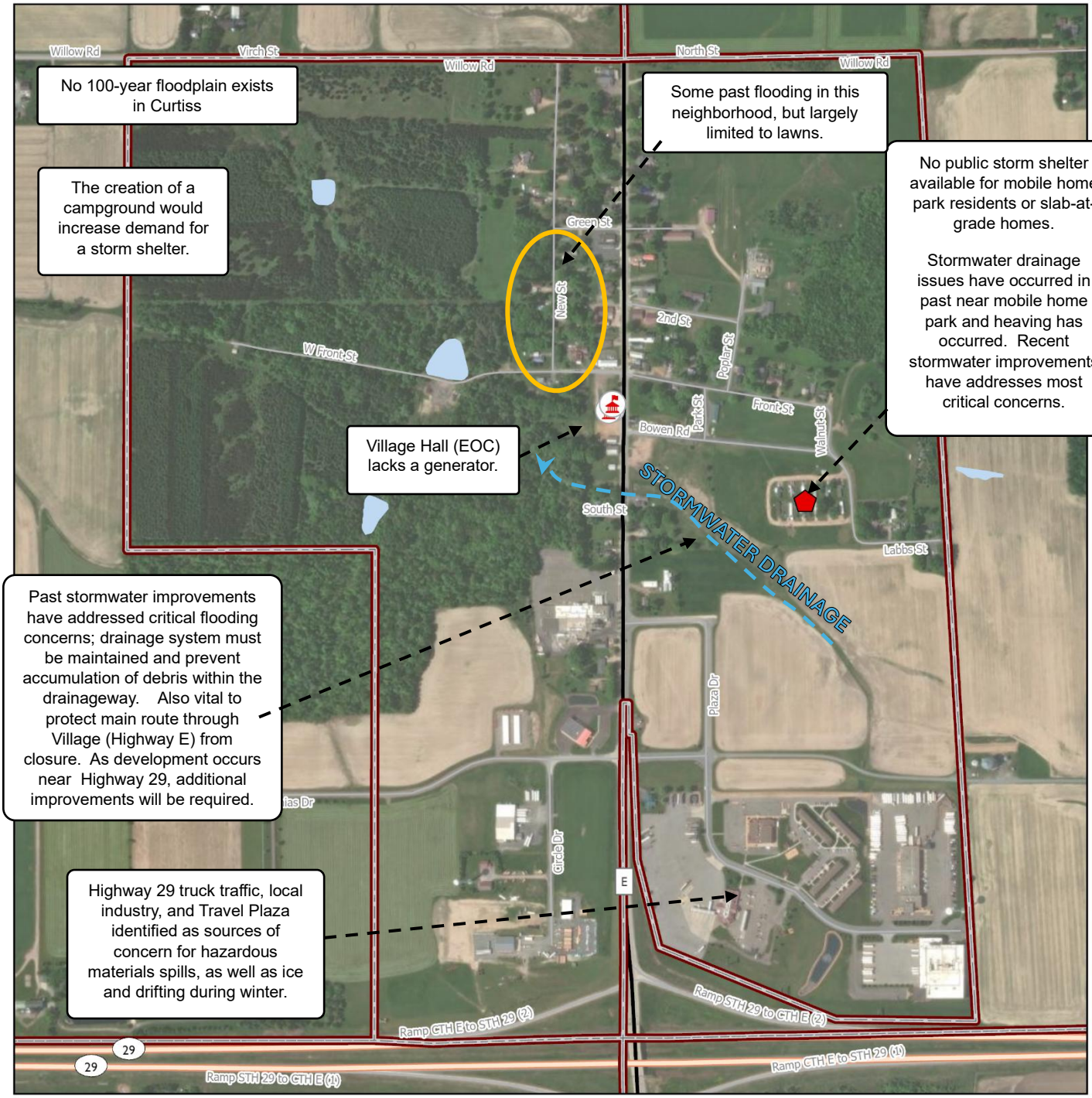
- The Village is expected to update its comprehensive plan in the future. This is an opportunity to integrate mitigation strategies, including obtaining public input on the need for additional community safe rooms.
- Should the Village decide to develop a campground in the future, a safe room could be integrated into the Village's outdoor recreation plan, park master plan, and capital budgets.
- The next section describes how this Sub-Plan will be maintained, including a periodic review of opportunities to strengthen the coordination and integration with other planning mechanisms.

Sub-Plan Adoption and Maintenance

Plan Adoption	Once updated, the community's governing body will adopt the County's overall hazard mitigation plan (and any future revisions/amendments) by resolution during a noticed public meeting in adherence with Wisconsin Open Meetings laws. This community-specific Hazard Mitigation Sub-Plan is an appendix of the County's overall plan. The community may modify and re-adopt its Sub-Plan by resolution during a noticed public meeting at any time at their discretion.
Plan Maintenance	During the second quarter of each year or following a declared disaster event, the primary mitigation plan contact will review this Mitigation Sub-Plan concurrently with (at the same time as) the annual review of the municipal Emergency Operations Plan. Other municipal and agency officials (e.g., public works, fire department, law enforcement) may be involved in this review or consulted as needed. The Mitigation Sub-Plan will be reviewed for: • Any significant changes in vulnerabilities, priorities, or trends, including to populations, structures, community lifelines, and weather/event patterns. • Any significant changes in capabilities or barriers to plan implementation. • Opportunities to strengthen plan coordination (i.e., integrate mitigation and preparedness into other community planning mechanisms). • Potential new mitigation and preparedness strategies, projects, or grant opportunities. • Any comments or discussion with the public, partners, or other stakeholders. If potential changes to the Sub-Plan are being considered, the planning contact will: 1. The community's planning contact will contact County Emergency Management and West Central Wisconsin Regional Planning Commission (WCWRPC) to discuss the proposed changes and any guidance regarding potential resources and next steps. The community may also request that the County consider changes to the County's overall mitigation plan. 2. Provide the suggested changes to the community's emergency planning committee, plan commission, or governing body for consideration. Should it be determined that a Mitigation Sub-Plan change is needed, the governing body will adopt the Sub-Plan as noted previously. Such changes will be limited to this community-specific Mitigation Sub-Plan. Changes to this Sub-Plan may be made in the future without County Board or other participant re-adoption of the County's overall mitigation plan.
Plan Updates	The community intends to be a full participant in five-year updates of the County's overall hazard mitigation plan, which will include reviewing and updating the information provided in this Mitigation Sub-Plan. Changes to Sub-Plan content may be necessitated by applicable mitigation rules and planning guidance in effect at that time.
Continued Public Participation	The community will provide opportunities for public participation throughout its mitigation planning processes, including: (1) all governing body or committee actions regarding the Sub-Plan shall be conducted in adherence with the Wisconsin Open Meetings rules; (2) public comments will be accepted on draft Sub-Plans and Sub-Plan changes prior to adoption; and (3) public input and ideas on potential risks, vulnerabilities, capabilities, or mitigation projects are welcomed and will be considered.

VILLAGE OF CURTISS - HAZARD ASSESSMENT

Clark County - 2026



Legend

- Municipal Boundaries
- 100-yr Floodplain
- Hospital
- School
- Mobile Home Park
- Assisted Living
- Government Building
- Storm Siren
- Dam w/High or Significant Hazard Rating

WEST CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION

0 0.1 0.2 0.4 Miles

Data Sources:
Clark County, WDHS, WDNR, WisDOT, WDOA, FEMA, WCWRPC.

N

VILLAGE OF DORCHESTER HAZARD MITIGATION SUB-PLAN

This sub-plan identifies past hazard events, risks, trends, capabilities, and strategies unique to or specific to the community and is part of the overall *Clark County Multi-Hazard Mitigation Plan*. The Clark County mitigation plan provides broader context and contains hazard assessments, capabilities, and strategies that are countywide or multi-jurisdictional.

Primary Contact:	Village Clerk
Planning Meetings:	• Primary planning meeting with WCWRPC staff occurred on September 2nd, 2026. • Village participated in a mitigation/preparedness capabilities assessment in September 2026. • Resolution adopting the Hazard Mitigation Plan and Sub-Plan will be approved by Village Board at a public meeting and included in Section VII of the main plan document.

Community Profile

This table provides a brief overview of key community characteristics, primarily from the 2020 U.S. Census, which are important to assessing capacity and vulnerabilities. For example, the entire population and all above-ground structures in the community are vulnerable to a tornado event, while mobile homes have an elevated vulnerability.

Population	849
Median Age	37.6 years
Underserved, disadvantaged, or uniquely vulnerable populations	Seniors; mobile home park residents; campground/park visitors; Economic disadvantaged community
Assessed Improvements (2025)	Residential: $30,695,400; Commercial: $8,585,800; Manuf.: $12,455,300
# of Housing units	378
# of Mobile Homes	13
Notable Community Lifelines or Critical Facilities	See map at end of sub-plan.

Hazard Risk Assessment

This table describes past hazard events impacting the community and any unique vulnerabilities to each event. This assessment is supplemented by the risk assessment map included at the end of this Mitigation Sub-Plan for the community. Also see the Risk Assessment in Section III of the main text of the Clark County mitigation plan for general risks and vulnerabilities applicable to most or all communities.

Hazard	History & Past Impacts	Vulnerabilities & Potential Impacts
Tornado & High Winds	Tornado impacted 1 mile to south in 1971, but no recent tornado events. High winds damaged a mini-storage facility about 2009. More recently, very high winds in July 2019; EF1 tornado near Owen. High winds accompanied June 2024 (EF0) and May 2025 (EF2) tornados near Colby. Damages within Village largely limited to trees and some roofs.	Mobile home park with about 28 sites; about 1/2 full. Many apartments and newer residential is slab-on-grade. Significant apartment construction within Village near Park and Municipal Hall that is also slab-on-grade. No shelter at campground.

Hail & Lightning	No unique history noted. Some recent hail damage.	No unique concerns noted.
Winter Storm, Ice, & Extreme Cold	Overall, nothing unique. About 3-4 water main breaks per year. Ice storm in December 2021 resulted in many downed trees and extended power loss.	No unique concerns noted.
Extreme Heat	No unique history noted.	Can contribute to HazMat-related risks.
Long-Term Power Outage	December 2021 ice storm with high winds resulted in parts of the Village losing power for about four days.	No unique vulnerabilities. No generator at Village Hall. Has generators at wastewater plant, liftstation, and wellhouse; portable for Village Shop.
Flooding – Riverine or Overbank	No overbank flooding issues noted.	No 100-year floodplain.
Flooding – Stormwater or Overland	Heavy snow melt (Spring 2019) and 3-5" rain has resulted in over-road flooding, culvert damage, limited basement flooding about once a decade. Multiple hotspots along CTH "A", with some of worst at 4th St; 4th St then drains south to creek, which can overwhelm stormwater system capacity.	No recent damage reported to structures; check valves have limited basement flooding. 4th Street was elevated about 2023, which has helped with some flooding. Some ice damming of culverts possible during spring melt.
Dams	No past dam failure events noted.	Past dam improvements resulted in a LOW rating. One home potentially in dam shadow.
Drought	No significant impacts within the Village from past droughts.	Good well capacity. No unique concerns noted.
Wildfire	No significant event.	No unique issues noted. Water supply for fire protection good. Dry hydrant at pond.
Hazardous Materials Spills	No significant events in the community.	Highway transport, anhydrous tanks, and industry are primary concerns. Evacuation could be a challenge; sheltering in place may be needed.
Active Threats	No significant events in the community.	No unique concerns noted.
Cyber-Attack	No incidents to date.	No unique concerns noted. Data backed up in the cloud and has cyber-insurance.

Notable Trends or Changing Priorities

Have any hazard-related priorities changed since the previous mitigation plan?	None noted. Some past stormwater issues have been addressed.
Are there any other trends influencing these concerns, such as changes in development, demographics, or weather patterns/climate?	Increasing frequency and severity of high wind and tornado events.

Capabilities Assessment

The following is a general assessment of the community's resiliency and capabilities to mitigate, respond to, and recover from a disaster event. It also notes if mitigation or preparedness has been integrated into planning mechanisms. This assessment was completed by the community through the 2025 web-based survey, with some supplemental information from the community meeting and other sources (e.g., fire department survey, NFIP Community Status Book). The list of potential plans, policies, and other actions is not exhaustive, and it is not expected that the community has undertaken all actions listed or will undertake all actions in the future.

Planning Activities	
Community Emergency Operations or Response Plan (EOP)	Adopted; incorporates mitigation or preparedness
Community Evacuation Plan and/or Exercises	Adopted; incorporates mitigation or preparedness
Continuity of Government Plan	Adopted; incorporates mitigation or preparedness
Comprehensive Plan	Outdated plan; will consider incorporating mitigation or preparedness when updating
Stormwater Management Plan	Adopted; incorporates mitigation or preparedness
Historic Preservation Plan or Ordinance	Adopted; incorporates mitigation or preparedness
Capital Improvements Plan or Similar Budget	Unknown
Involve Fire & Law Enforcement in planning & development plan review	Doing this as needed.
Special emergency notification procedures or preparedness plans for vulnerable populations	None noted
Policies, Codes, & Ordinances	
Building Codes	Adopted; incorporates mitigation or preparedness
Building Code Efficiency Grading Schedule	Unknown
Zoning Ordinance	Outdated policy; will consider incorporating mitigation or preparedness when updating
Subdivision Ordinance	Outdated policy; will consider incorporating mitigation or preparedness when updating
Site Plan Review Requirements	Unknown
Floodplain Management	
Initial Flood Hazard Boundary Map:	Not applicable; no 100-year floodplain
Initial FIRM Identified:	
Current Effective FIRM Date:	
Date Community First Joined NFIP (Reg-Emer)	
NFIP Participation Status (and reason if not participating):	
Floodplain Regulations w/ NFIP standards:	
Designated position or committee for floodplain management, floodplain zoning, & NFIP compliance:	
Other ongoing floodplain management activities:	None noted.
Stormwater Management Ordinance	Adopted; incorporates mitigation or preparedness
Stormwater Utility	Adopted; incorporates mitigation or preparedness. Addresses stormwater concerns as needed; no issues noted.
Winter Emergency Policies	Adopted; incorporates mitigation or preparedness
Mitigation & Preparedness Actions for Facilities	
Debris Site identified for storm debris disposal (not just woody debris)	Unknown
Emergency Operations Center designated with generator/back-up power	Yes

Public Storm Shelter/Community Safe Room designated	No formally designated public storm shelter/community safe room. Fire Hall may be an option. Explore potential of a safe room or hardening project to provide a shelter(s), especially for the campground and mobile home park.
Public Heating/Cooling Shelter designated with generator/back-up power	Yes
Storm/warning siren on back-up power	Yes
Storm/warning siren that can be activated remotely	Activated by County dispatch
Active shooter/threat plans and/or security hardening for municipal buildings	Unknown
Other Mitigation & Preparedness Actions	
Review EOP at least annually	Unknown
Individuals in EOP have ICS/NIMS training	Unknown
Public Information Officer designated & trained	Unknown
Municipal officials and staff participate in regular disaster or emergency response exercises	Unknown
Community-level efforts to improve hazard preparedness among residents	Unknown
Adopted billing rates for public works labor & equipment use during emergencies	No adopted billing rates for equipment
Adopted mutual aid agreements for public works equipment/personnel support	No formal public works mutual aid
Adopted emergency contracting and purchasing policies	Unknown
Cyber-security systems, off-site/cloud back-up, and recovery policies or plans for municipal records	Yes
Cyber-security systems and policies for municipal utilities	Yes
Municipal buildings/staff have NOAA All Hazards Radios or signed up for Everbridge	Unknown
Other Flood Mitigation projects or activities	No floodplain; none noted.
Municipal Dam-related planning or actions	Dam inspected; plans updated and repairs made in 2025.
Barriers to mitigation or preparedness actions	None noted
Other vulnerabilities:	ESL challenges on emergency notification and response systems given the area's significant Hispanic population
Other:	2 sirens with good coverage; police will go "door-to-door" in campground when needed. Multi-county dispatch/communications challenges continuing.

Mitigation Strategy Recommendations

The overall mitigation goal statements in Section V.A. of the Clark County mitigation plan are shared by all participating communities.

The community will strive to implement the following mitigation actions/projects as resources and funding allows, though priorities could change due to a variety of fiscal, technical, or other factors, including changes in hazard risks. Sections V. of the Clark County mitigation plan includes additional mitigation and preparedness actions that are intergovernmental in nature and not specific to the community, but may suggest coordination and funding opportunities.

The following recommended actions/projects are specific to the community:

Action/Project	Priority & Timeline	Primary Responsible Party	Potential Resources
1. Explore development of a community safe room (storm shelter) for mobile home park residents and/or park/campground users. If a generator and HVAC system are provided, consider using the safe room space as a heating/cooling shelter and emergency assembly location. For new safe room construction, consider the incorporation of nature-based stormwater management systems (e.g., rain barrels, rain garden) to mitigate site runoff.	Medium; 3-5 years Timeline could change based on public demand for safe room or building projects.	Village Board	FEMA Hazard Mitigation Grant Programs (BRIC & HMA) FEMA Technical Assistance or Advanced Assistance grant funding could be available to assist with exploring storm hardening options. WCWRPC and Wisconsin Emergency Management can provide grant-related guidance
2. Continue to monitor and address stormwater flooding in the Village, including maintaining the Village stormwater management plan and enforcing stormwater management regulations. Should repetitive flood losses be experienced, assess the feasibility of mitigation alternatives and update the Village's mitigation sub-plan if needed.	Moderate-to-High; ongoing	Village Public Works; Village Board	If repetitive flood losses are incurred in the future, especially to homes or structures, explore mitigation grant funding alternatives. FEMA Flood Mitigation Assistance (FMA) or Wisconsin Pre-Disaster Flood Resilience Grant.
3. Continue to update and annually review the Village's Emergency Operations Plan. Explore opportunities to address any gaps identified in the previous capabilities assessment.	High; ongoing	Village Safety/Emergency Planning Committee	County Emergency Management can provide a template and guidance.

4. Collaborate with Clark County Emergency Management to conduct a HazMat spill exercise with an evacuation component that includes local elected officials and participation from local industry, utilities, law enforcement, and County Highway Departments.	Medium-to-High	Village Safety/Emergency Planning Committee	County Emergency Management can provide guidance and potentially integrate into County's Integrated Preparedness Plan.
5. Consider adoption billing rates for public works labor and equipment use during emergencies.	Medium; 2-5 years	Village Clerk	WCWRPC has model resolution used by other communities that have adopted WDOT rates.
6. Maintain the Dorchester Dam and any required plans (e.g., inspection, operations, and maintenance plan, emergency action plan).	High; ongoing	Village Public Works	WDNR Dam Safety engineering staff WDNR Municipal Dam Grants
7. As opportunities allow, collaborate with County Emergency Management and other partners (e.g., Public Health, Red Cross, Electric Provider) to increase public participation in the County's emergency notification system, awareness of emergency siren use and warning systems, and public preparedness in general.	Medium-to-High; ongoing	Village Administrator (or designee); Fire Department	County Emergency Management & partners have educational materials Could implement annually during Severe Weather Awareness Week and/or Preparedness Month using social media, posters, utility bill inserts, etc.

Sub-Plan Coordination and Integration

The previous Capabilities Assessment section identifies how this Mitigation Sub-plan has been integrated into or coordinated with other municipal plans or planning mechanisms. During the planning process, the following opportunities were identified to integrate the mitigation strategies into other community planning mechanisms:

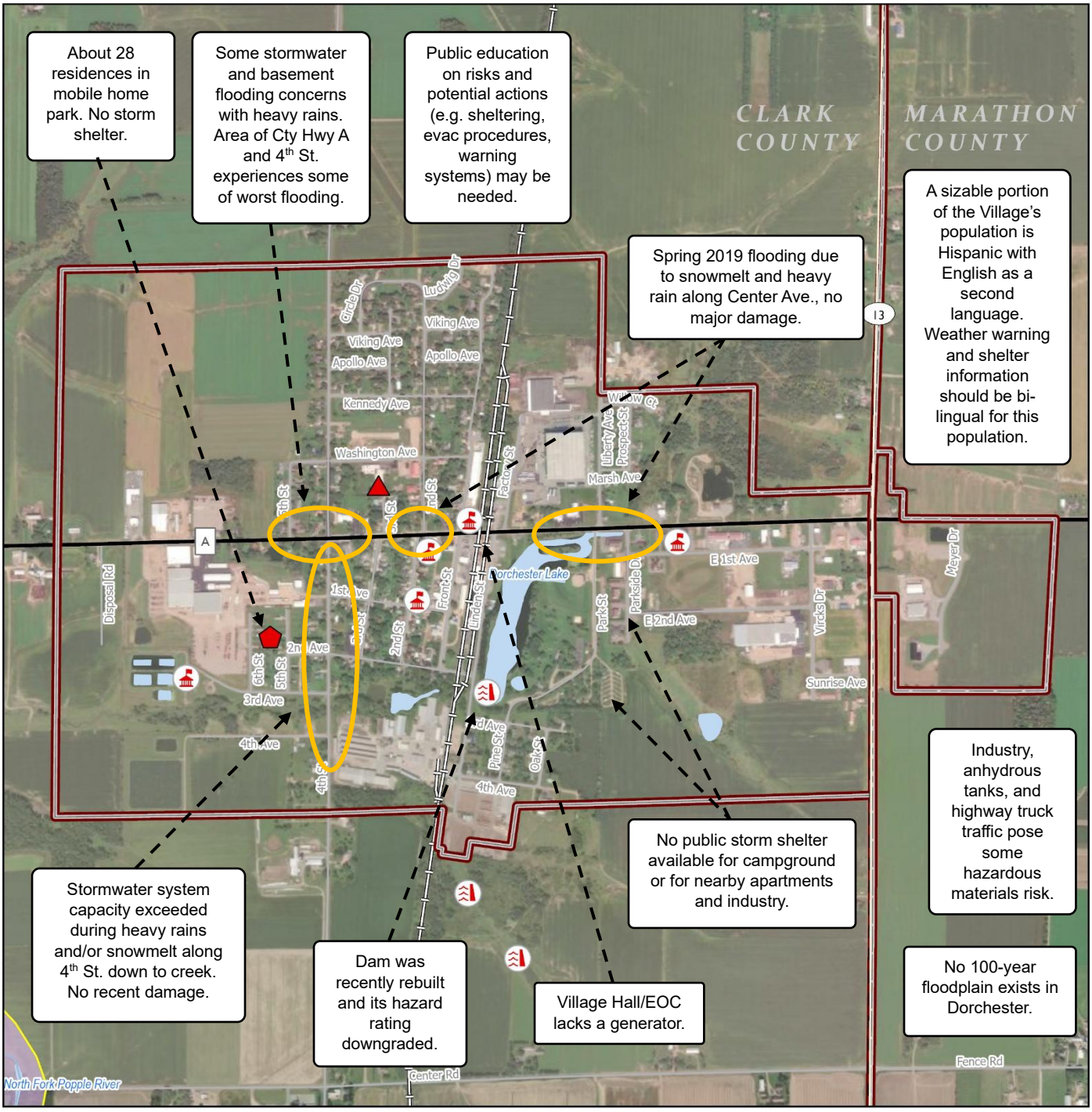
- The Village is expected to update its comprehensive plan in the future. This is an opportunity to integrate mitigation strategies, including obtaining public input on the need for additional community safe rooms.
- Integrate stormwater improvements into the Village's capital budget.
- The next section describes how this Sub-Plan will be maintained, including a periodic review of opportunities to strengthen the coordination and integration with other planning mechanisms.

Sub-Plan Adoption and Maintenance

Plan Adoption	Once updated, the community's governing body will adopt the County's overall hazard mitigation plan (and any future revisions/amendments) by resolution during a noticed public meeting in adherence with Wisconsin Open Meetings laws. This community-specific Hazard Mitigation Sub-Plan is an appendix of the County's overall plan. The community may modify and re-adopt its Sub-Plan by resolution during a noticed public meeting at any time at their discretion.
Plan Maintenance	During the second quarter of each year or following a declared disaster event, the primary mitigation plan contact will review this Mitigation Sub-Plan concurrently with (at the same time as) the annual review of the municipal Emergency Operations Plan. Other municipal and agency officials (e.g., public works, fire department, law enforcement) may be involved in this review or consulted as needed. The Mitigation Sub-Plan will be reviewed for: • Any significant changes in vulnerabilities, priorities, or trends, including to populations, structures, community lifelines, and weather/event patterns. • Any significant changes in capabilities or barriers to plan implementation. • Opportunities to strengthen plan coordination (i.e., integrate mitigation and preparedness into other community planning mechanisms). • Potential new mitigation and preparedness strategies, projects, or grant opportunities. • Any comments or discussion with the public, partners, or other stakeholders. If potential changes to the Sub-Plan are being considered, the planning contact will: 1. The community's planning contact will contact County Emergency Management and West Central Wisconsin Regional Planning Commission (WCWRPC) to discuss the proposed changes and any guidance regarding potential resources and next steps. The community may also request that the County consider changes to the County's overall mitigation plan. 2. Provide the suggested changes to the community's emergency planning committee, plan commission, or governing body for consideration. Should it be determined that a Mitigation Sub-Plan change is needed, the governing body will adopt the Sub-Plan as noted previously. Such changes will be limited to this community-specific Mitigation Sub-Plan. Changes to this Sub-Plan may be made in the future without County Board or other participant re-adoption of the County's overall mitigation plan.
Plan Updates	The community intends to be a full participant in five-year updates of the County's overall hazard mitigation plan, which will include reviewing and updating the information provided in this Mitigation Sub-Plan. Changes to Sub-Plan content may be necessitated by applicable mitigation rules and planning guidance in effect at that time.
Continued Public Participation	The community will provide opportunities for public participation throughout its mitigation planning processes, including: (1) all governing body or committee actions regarding the Sub-Plan shall be conducted in adherence with the Wisconsin Open Meetings rules; (2) public comments will be accepted on draft Sub-Plans and Sub-Plan changes prior to adoption; and (3) public input and ideas on potential risks, vulnerabilities, capabilities, or mitigation projects are welcomed and will be considered.

VILLAGE OF DORCHESTER - HAZARD ASSESSMENT

Clark County - 2026



Legend

- Municipal Boundaries
- 100-yr Floodplain
- Hospital
- School
- Mobile Home Park
- Assisted Living
- Government Building
- Storm Siren
- Dam w/High or Significant Hazard Rating

WEST CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION

0 0.2 0.4 0.8 Miles

Data Sources: Clark County, WDHS, WDNR, WisDOT, WDOA, FEMA, WCWRPC.

N

VILLAGE OF GRANTON HAZARD MITIGATION SUB-PLAN

This sub-plan identifies past hazard events, risks, trends, capabilities, and strategies unique to or specific to the community and is part of the overall *Clark County Multi-Hazard Mitigation Plan*. The Clark County mitigation plan provides broader context and contains hazard assessments, capabilities, and strategies that are countywide or multi-jurisdictional.

Primary Contact:	Village Clerk
Planning Meetings:	• Primary planning meeting with WCWRPC staff occurred on 10/29/2025. • Village participated in a mitigation/preparedness capabilities assessment in March 2026. • Resolution adopting the Hazard Mitigation Plan and Sub-Plan will be approved by Village Board at a public meeting and included in Section VII of the main plan document.

Community Profile

This table provides a brief overview of key community characteristics, primarily from the 2020 U.S. Census, which are important to assessing capacity and vulnerabilities. For example, the entire population and all above-ground structures in the community are vulnerable to a tornado event, while mobile homes have an elevated vulnerability.

Population	381
Median Age	36.5 years
Underserved, disadvantaged, or uniquely vulnerable populations	Seniors; campground/park visitors, Economic disadvantaged community
Assessed Improvements (2025)	Residential: $12,249,500; Commercial: $2,161,700; Manuf.: $0
# of Housing units	165
# of Mobile Homes	6
Notable Community Lifelines or Critical Facilities	See map at end of sub-plan.

Hazard Risk Assessment

This table describes past hazard events impacting the community and any unique vulnerabilities to each event. This assessment is supplemented by the risk assessment map included at the end of this Mitigation Sub-Plan for the community. Also see the Risk Assessment in Section III of the main text of the Clark County mitigation plan for general risks and vulnerabilities applicable to most or all communities.

Hazard	History & Past Impacts	Vulnerabilities & Potential Impacts
Tornado & High Winds	20-30 trees went down in 2013 tornado and straight-line wind storm.70mph wind in June 2018 took down about nine trees and resulted in some minor roof damage. Additional high wind and tornado events in the area (e.g., December 2021).	About 20 slab-on-grade homes plus some mobile homes; no mobile home parks. Park is greatest vulnerability. Hosts ball games and community events. 500+ attendees at Fall Fest Picnic at Park. 14 camping slots and plans to expand. Block bathroom and well house provide some protection, but limited capacity; well house typically locked. Concession building is not block/concrete construction.

Hail & Lightning	No unique history noted.	No unique concerns noted.
Winter Storm, Ice, & Extreme Cold	A few breaks of water lines are not uncommon, but not unique. A few roof collapses in past due to snow loads.	No unique vulnerabilities identified.
Extreme Heat	No unique history noted.	No unique concerns noted.
Long-Term Power Outage	During 2013 storm, parts of village lost power for 24 hours.	Well 5 and lift station have fixed generators. Portable for Well #4. Interest in additional generator(s) since most facilities without, especially at Village Hall/EOC, Fire Hall and wastewater plant.
Flooding – Riverine or Overbank	Annual spring flooding at park or after heavy rains. Also near bottom of bridge deck and well house, but no damage to date; water over bridge about two years ago. In September 2016 flooding, a vehicle was washed downstream and a man rescued after spending hours in the flood waters.	Park, some Village utilities, and road over bridge within or near 100-year floodplain..
Flooding – Stormwater or Overland	No unique history noted.	No issues noted.
Dams	No dams	Not applicable
Drought	No significant impacts within the Village from past droughts.	Good well capacity and can pull from pond if needed. .No unique concerns noted.
Wildfire	No significant events.	No unique concerns noted.
Hazardous Materials Spills	No significant events in the community.	Truck traffic on USH 10 and natural gas utility most significant concerns noted.
Active Threats	No significant events in the community.	Village Hall lacks security hardening. No other unique concerns noted.
Cyber-Attack	Village email compromise attack; pulled in resources to manage.	No unique concerns noted. IT consultant and cyber-insurance in place.

Notable Trends or Changing Priorities

Have any hazard-related priorities changed since the previous mitigation plan?	None noted.
Are there any other trends influencing these concerns, such as changes in development, demographics, or weather patterns/climate?	Increasing use of Park, including plans for expansion.

Capabilities Assessment

The following is a general assessment of the community's resiliency and capabilities to mitigate, respond to, and recover from a disaster event. It also notes if mitigation or preparedness has been integrated into planning mechanisms. This assessment was completed by the community through the 2025 web-based survey, with some supplemental information from the community meeting and other sources (e.g., fire department survey, NFIP Community Status Book). The list of potential plans, policies, and other actions is not exhaustive, and it is not expected that the community has undertaken all actions listed or will undertake all actions in the future.

Planning Activities	
Community Emergency Operations or Response Plan (EOP)	Recently reviewed and updated.
Community Evacuation Plan and/or Exercises	No
Continuity of Government Plan	No
Comprehensive Plan	No
Stormwater Management Plan	On a project or site-by-site basis.
Historic Preservation Plan or Ordinance	No
Capital Improvements Plan or Similar Budget	Budgets as necessary.
Involve Fire & Law Enforcement in planning & development plan review	Doing this as needed.
Special emergency notification procedures or preparedness plans for vulnerable populations	None noted.
Policies, Codes, & Ordinances	
Building Codes	Adopted; does not incorporate mitigation or preparedness
Building Code Efficiency Grading Schedule	No
Zoning Ordinance	No
Subdivision Ordinance	No
Site Plan Review Requirements	No
Floodplain Management	
Initial Flood Hazard Boundary Map:	08/30/1974
Initial FIRM Identified:	06/04/1976
Current Effective FIRM Date:	07/06/2010
Date Community First Joined NFIP (Reg-Emer)	-
NFIP Participation Status (and reason if not participating):	Non-Participant; sanctioned 08/30/1975
Floodplain Regulations w/ NFIP standards:	No
Designated position or committee for floodplain management, floodplain zoning, & NFIP compliance:	Plan Commission
Other ongoing floodplain management activities:	None noted. Has not adopted most recent floodplain maps.
Stormwater Management Ordinance	No
Stormwater Utility	No
Winter Emergency Policies	No
Mitigation & Preparedness Actions for Facilities	
Debris Site identified for storm debris disposal (not just woody debris)	No.
Emergency Operations Center designated with generator/back-up power	Village Hall but lacks generator.
Public Storm Shelter/Community Safe Room designated	No. Interest in identifying/establishing storm shelter or safe room, likely at Park.

Public Heating/Cooling Shelter designated with generator/back-up power	No. Library at school may serve as heating/cooling shelter if open.
Storm/warning siren on back-up power	Yes; backup power may not be available
Storm/warning siren that can be activated remotely	Activated by County Dispatch
Active shooter/threat plans and/or security hardening for municipal buildings	None.
Other Mitigation & Preparedness Actions	
Review EOP at least annually	Yes
Individuals in EOP have ICS/NIMS training	Some. Elected officials participated in training 3 years ago.
Public Information Officer designated & trained	No
Municipal officials and staff participate in regular disaster or emergency response exercises	Occasional
Community-level efforts to improve hazard preparedness among residents	No formal efforts. Encourage residents to sign-up for County notification system.
Adopted billing rates for public works labor & equipment use during emergencies	No; planning or considering implementation. Recommended to consider adoption of WisDOT billing rates for equipment.
Adopted mutual aid agreements for public works equipment/personnel support	No formal public works mutual aid agreement but does partner with adjacent towns if needed.
Adopted emergency contracting and purchasing policies	No
Cyber-security systems, off-site/cloud back-up, and recovery policies or plans for municipal records	Yes
Cyber-security systems and policies for municipal utilities	Yes
Municipal buildings/staff have NOAA All Hazards Radios or signed up for Everbridge	No
Other Flood Mitigation projects or activities	No
Municipal Dam-related planning or actions	No dam.
Barriers to mitigation or preparedness actions	Limited funding; some mitigation actions would be dependent on grant funding.

Mitigation Strategy Recommendations

The overall mitigation goal statements in Section V.A. of the Clark County mitigation plan are shared by all participating communities.

The community will strive to implement the following mitigation actions/projects as resources and funding allows, though priorities could change due to a variety of fiscal, technical, or other factors, including changes in hazard risks. Sections V of the Clark County mitigation plan includes additional mitigation and preparedness actions that are intergovernmental in nature and not specific to the community, but may suggest coordination and funding opportunities.

The following recommended actions/projects are specific to the community:

Action/Project	Priority & Timeline	Primary Responsible Party	Potential Resources
1. Explore designation or development of a community safe room (storm shelter) or hardening of restrooms/wellhouse at the Park or at the School. If a generator and HVAC system are provided, consider using the safe room space as a heating/cooling shelter and emergency assembly location. For new safe room construction, consider the incorporation of nature-based stormwater management systems (e.g., rain barrels, rain garden) to mitigate site runoff.	Medium; 3-5 years Timeline could change based on public demand for safe room or building projects.	Village Board, perhaps in concert with School District	FEMA Hazard Mitigation Grant Programs (BRIC & HMA) FEMA Technical Assistance or Advanced Assistance grant funding could be available to assist with exploring storm hardening options. WCWRPC and Wisconsin Emergency Management can provide grant-related guidance
2. As an alternative to Action #1 or as an interim solution or for additional capacity, explore storm shelter use agreements with the Lutheran Church and School. If agreements are executed: (i) consider installation of remote unlock if needed and (ii) annually inform residents of available and conduct a drill, potentially in concert with Severe Weather Awareness Week.	Medium-to-High; 2-4 years	Village Board	FEMA Hazard Mitigation Grant Programs (BRIC & HMA) may be available to assist with costs for remote unlock technology and hardware.

3. Continue to annually review and, as needed, update the Village's Emergency Operations Plan. Explore opportunities to address any gaps identified in the previous capabilities assessment. Consider additional security hardening options at Village Hall.	High; ongoing	Village Board	County Emergency Management can provide a template and guidance.
4. Evaluate the Village's non-participating status under the National Flood Insurance Program (NFIP) and its implications for the Village and landowners. Adoption of the latest floodplain maps and model ordinance would be required to remove the sanctioned status.	High; 1-3 years	Village Board	WDNR Floodplain Management program available for guidance
5. Continue to monitor flooding in the Village. Should serious threats or repetitive flood losses be experienced, assess the need for hydraulic studies and the feasibility of mitigation alternatives. Update the mitigation sub-plan if needed.	Medium-to-Low; ongoing	Village Board	Flood studies and mitigation projects are eligible for FEMA and State mitigation grant funding. Contact County Emergency Management or WCWRPC for more information.
6. Consider adoption billing rates for public works labor and equipment use during emergencies.	Medium; 2-5 years	Village Clerk	WCWRPC has model resolution used by other communities that have adopted WDOT rates.
7. As opportunities allow, collaborate with County Emergency Management and other partners (e.g., Public Health, Red Cross, Electric Provider) to increase public participation in County's emergency notification system, awareness of emergency siren use and warning systems, and public preparedness in general.	Medium-to-High; ongoing	Village Administrator (or designee); Fire Department	County Emergency Management & partners have educational materials Could implement annually during Severe Weather Awareness Week and/or Preparedness Month using social media, posters, utility bill inserts, etc.

Sub-Plan Coordination and Integration

The previous Capabilities Assessment section identifies how this Mitigation Sub-plan has been integrated into or coordinated with other municipal plans or planning mechanisms. During the planning process, the following opportunities were identified to integrate the mitigation strategies into other community planning mechanisms:

- The Village has integrated the need for a safe room into its Outdoor Recreation Plan.

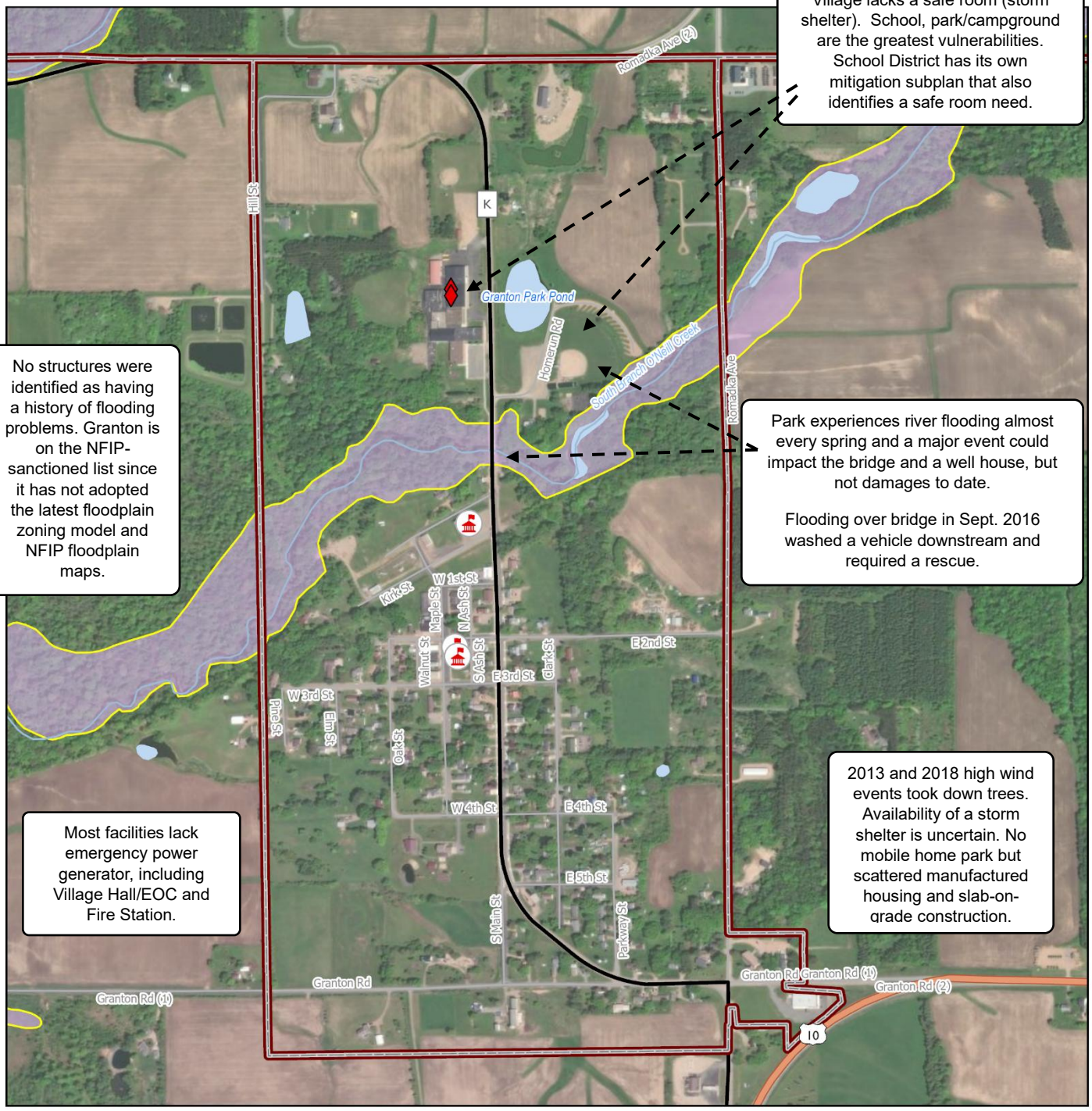
- Potentially coordinate safe room planning with the School District's capital planning.
- The Village's emergency operation's plan will be updated for consistency with the mitigation plan as needed.
- The next section describes how this Sub-Plan will be maintained, including a periodic review of opportunities to strengthen the coordination and integration with other planning mechanisms.

Sub-Plan Adoption and Maintenance

Plan Adoption	Once updated, the community's governing body will adopt the County's overall hazard mitigation plan (and any future revisions/amendments) by resolution during a noticed public meeting in adherence with Wisconsin Open Meetings laws. This community-specific Hazard Mitigation Sub-Plan is an appendix of the County's overall plan. The community may modify and re-adopt its Sub-Plan by resolution during a noticed public meeting at any time at their discretion.
Plan Maintenance	During the second quarter of each year or following a declared disaster event, the primary mitigation plan contact will review this Mitigation Sub-Plan concurrently with (at the same time as) the annual review of the municipal Emergency Operations Plan. Other municipal and agency officials (e.g., public works, fire department, law enforcement) may be involved in this review or consulted as needed. The Mitigation Sub-Plan will be reviewed for: • Any significant changes in vulnerabilities, priorities, or trends, including to populations, structures, community lifelines, and weather/event patterns. • Any significant changes in capabilities or barriers to plan implementation. • Opportunities to strengthen plan coordination (i.e., integrate mitigation and preparedness into other community planning mechanisms). • Potential new mitigation and preparedness strategies, projects, or grant opportunities. • Any comments or discussion with the public, partners, or other stakeholders. If potential changes to the Sub-Plan are being considered, the planning contact will: 1. The community's planning contact will contact County Emergency Management and West Central Wisconsin Regional Planning Commission (WCWRPC) to discuss the proposed changes and any guidance regarding potential resources and next steps. The community may also request that the County consider changes to the County's overall mitigation plan. 2. Provide the suggested changes to the community's emergency planning committee, plan commission, or governing body for consideration. Should it be determined that a Mitigation Sub-Plan change is needed, the governing body will adopt the Sub-Plan as noted previously. Such changes will be limited to this community-specific Mitigation Sub-Plan. Changes to this Sub-Plan may be made in the future without County Board or other participant re-adoption of the County's overall mitigation plan.
Plan Updates	The community intends to be a full participant in five-year updates of the County's overall hazard mitigation plan, which will include reviewing and updating the information provided in this Mitigation Sub-Plan. Changes to Sub-Plan content may be necessitated by applicable mitigation rules and planning guidance in effect at that time.
Continued Public Participation	The community will provide opportunities for public participation throughout its mitigation planning processes, including: (1) all governing body or committee actions regarding the Sub-Plan shall be conducted in adherence with the Wisconsin Open Meetings rules; (2) public comments will be accepted on draft Sub-Plans and Sub-Plan changes prior to adoption; and (3) public input and ideas on potential risks, vulnerabilities, capabilities, or mitigation projects are welcomed and will be considered.

VILLAGE OF GRANTON - HAZARD ASSESSMENT

Clark County - 2026



Village lacks a safe room (storm shelter). School, park/campground are the greatest vulnerabilities. School District has its own mitigation subplan that also identifies a safe room need.

No structures were identified as having a history of flooding problems. Granton is on the NFIP-sanctioned list since it has not adopted the latest floodplain zoning model and NFIP floodplain maps.

Park experiences river flooding almost every spring and a major event could impact the bridge and a well house, but not damages to date.

Flooding over bridge in Sept. 2016 washed a vehicle downstream and required a rescue.

2013 and 2018 high wind events took down trees. Availability of a storm shelter is uncertain. No mobile home park but scattered manufactured housing and slab-on-grade construction.

Most facilities lack emergency power generator, including Village Hall/EOC and Fire Station.

Legend

- Municipal Boundaries
- 100-yr Floodplain
- Hospital
- School
- Mobile Home Park
- Assisted Living
- Government Building
- Storm Siren
- Dam w/High or Significant Hazard Rating

WEST CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION

0 0.1 0.2 0.4 Miles

Data Sources: Clark County, WDHS, WDNR, WisDOT, WDOA, FEMA, WCWRPC.

N

VILLAGE OF WITHEE HAZARD MITIGATION SUB-PLAN

This sub-plan identifies past hazard events, risks, trends, capabilities, and strategies unique to or specific to the community and is part of the overall *Clark County Multi-Hazard Mitigation Plan*. The Clark County mitigation plan provides broader context and contains hazard assessments, capabilities, and strategies that are countywide or multi-jurisdictional.

Primary Contact:	Village Clerk/Treasurer
Planning Meetings:	• Primary planning meeting with WCWRPC staff occurred on 8/7/25. • Village participated in a mitigation/preparedness capabilities assessment in October 2025. • Resolution adopting the Hazard Mitigation Plan and Sub-Plan will be approved by Village Board at a public meeting and included in Section VII of the main plan document.

Community Profile

This table provides a brief overview of key community characteristics, primarily from the 2020 U.S. Census, which are important to assessing capacity and vulnerabilities. For example, the entire population and all above-ground structures in the community are vulnerable to a tornado event, while mobile homes have an elevated vulnerability.

Population	506
Median Age	43.5 years
Uniquely Vulnerable Populations	Seniors; mobile home park residents; park users
Assessed Improvements (2025)	Residential: $22,295,300; Commercial: $8,204,900; Manuf.: $3,090,600
# of Housing units	254
# of Mobile Homes	26
Notable Community Lifelines or Critical Facilities	See map at end of sub-plan.

Hazard Risk Assessment

This table describes past hazard events impacting the community and any unique vulnerabilities to each event. This assessment is supplemented by the risk assessment map included at the end of this Mitigation Sub-Plan for the community. Also see the Risk Assessment in Section III of the main text of the Clark County mitigation plan for general risks and vulnerabilities applicable to most or all communities.

Hazard	History & Past Impacts	Vulnerabilities & Potential Impacts
Tornado & High Winds	Tornado close by in 2013, July 2019 (EF1), December 2021 (EF1), and June 2024 (EF1). Very high winds in August 2023. Some wind damage to roofs, but mostly tree damage. Area power lines downed in Dec 2021, resulting in power loss for 48+ hours in some areas of Village.	Public storm shelter at nearby school, though most homes have basements. Multiple affordable housing facilities and some newer homes are slab-on-grade. Interest in a community safe room at Lions Park.
Hail & Lightning	Serious hail damage to roofs and vehicles in past, but none recently. Repetitive lightning strikes to control system at water plant.	No unique vulnerabilities identified.

Winter Storm, Ice, & Extreme Cold	No major water main breaks in 2013; had replaced quite a few lines and buried 8'-9' deep.	No unique concerns noted. Power loss most critical winter-related concern.
Extreme Heat	No unique history noted.	No unique concerns noted. Library available as a cooling shelter during open hours if needed.
Long-Term Power Outage	Area power lines downed in Dec 2021 tornado and high winds, resulting in power loss for 48+ hours in some areas of Village.	Generator needed for Village Hall and Shop. Fixed at water plant and a small portable for lift station. No long-term source of back-up fuel identified. Xcel has been proactive with tree-trimming to reduce outage potential.
Flooding – Riverine or Overbank	No river or floodplain, but some stormwater drainage problems due to flatness, including water in basements.	No unique concerns noted by the community.
Flooding – Stormwater or Overland	When 5+" and/or big spring thaw serious basement flooding is widespread. Some basement flooding about once per year; most homeowners prepared. Some infiltration of stormwater into wastewater system. Additional text below.	See map at end of sub-plan. Sump pumps used widely. Installation of two larger culverts may have helped mitigate some past flooding problems.
Dams	No dams.	Not applicable.
Drought	No significant impacts within the Village from past droughts.	Good well capacity; past water quantity concerns addressed.
Wildfire	No significant events or issues noted.	No unique concerns noted.
Hazardous Materials Spills	No significant events in the community.	Truck traffic on Highways "X", "T", and 29, plus railroad are primary concerns. LP tanks are a fixed concern.
Active Threats	No significant events in the community.	No unique vulnerabilities noted.
Cyber-Attack	No incidents to date.	No unique concerns noted. Data backed up in cloud.

Additional stormwater flooding history – In 2021, the Village explored potential FEMA mitigation grant dollars for stormwater improvements to address increasing extreme rainfall events that were overwhelming the primary ditch that runs through the community. At the time, 4-5 homes in the 400th blocks of 1st and 2nd Streets had been impacted, including garage and basement flooding, damage to furnaces, and wet sill plates, floor joists, etc. The homeowners did not save receipts but the Village estimated damages at $3,000 - $5,000 per resident. The lack of documentation, relatively low losses, and relatively low mitigation project costs (estimated at $5,000 - $7,500) made the pursuit of FEMA mitigation grant funding unfeasible; application and administrative costs could outweigh the estimated project costs.

Notable Trends or Changing Priorities

Have any hazard-related priorities changed since the previous mitigation plan?	Significant stormwater flooding challenges may be increasing with more extreme rain events. Longer trains (up to 3 miles) can block the two crossings within the Village for 30-45 minutes, which impacts emergency response and access to safe room in Owen.
Are there any other trends influencing these concerns, such as changes in development, demographics, or weather patterns/climate?	Increasing frequency and severity of severe weather systems including heavy rain and wind events (including tornados) and extreme temperatures. Climate may be influencing these trends, including extending the tornado season into the fall and winter months.

Capabilities Assessment

The following is a general assessment of the community's resiliency and capabilities to mitigate, respond to, and recover from a disaster event. It also notes if mitigation or preparedness has been integrated into planning mechanisms. This assessment was completed by the community through the 2023 web-based survey, with some supplemental information from the community meeting and other sources (e.g., fire department survey, NFIP Community Status Book). The list of potential plans, policies, and other actions is not exhaustive, and it is not expected that the community has undertaken all actions listed or will undertake all actions in the future.

Planning Activities	
Community Emergency Operations or Response Plan (EOP)	Adopted; incorporates mitigation or preparedness. Reviewed annually.
Community Evacuation Plan and/or Exercises	Unknown
Continuity of Government Plan	Unknown
Comprehensive Plan	Adopted; does not incorporate mitigation or preparedness
Stormwater Management Plan	Adopted; does not incorporate mitigation or preparedness
Historic Preservation Plan or Ordinance	Adopted; does not incorporate mitigation or preparedness
Capital Improvements Plan or Similar Budget	Adopted; does not incorporate mitigation or preparedness
Involve Fire & Law Enforcement in planning & development plan review	When needed.
Special emergency notification procedures or preparedness plans for vulnerable populations	None; has requested assistance with helping communicate with vulnerable populations.
Policies, Codes, & Ordinances	
Building Codes	Outdated policy; will consider implementing mitigation or preparedness in update
Building Code Efficiency Grading Schedule	Unknown
Zoning Ordinance	Adopted; does not incorporate mitigation or preparedness
Subdivision Ordinance	No policy/code
Site Plan Review Requirements	No policy/code
Floodplain Management	
Initial Flood Hazard Boundary Map:	-
Initial FIRM Identified:	-
Current Effective FIRM Date:	-
Date Community First Joined NFIP (Reg-Emer)	-
NFIP Participation Status (and reason if not participating):	-
Floodplain Regulations w/ NFIP standards:	-
Designated position or committee for floodplain management, floodplain zoning, & NFIP compliance:	No 100-year floodplain.
Other ongoing floodplain management activities:	-
Stormwater Management Ordinance	No policy/code. Past issues with stormwater infiltrating wastewater system have improved; ongoing efforts to continue improvement
Stormwater Utility	No policy/code
Winter Emergency Policies	Adopted; incorporates mitigation or preparedness
Mitigation & Preparedness Actions for Facilities	
Debris Site identified for storm debris disposal (not just woody debris)	No
Emergency Operations Center designated with generator/back-up power	Yes

Public Storm Shelter/Community Safe Room designated	No; storm shelter available in neighboring City of Owen. Interest in a safe room project, potentially at mobile home park and/or in the municipal park.
Public Heating/Cooling Shelter designated with generator/back-up power	No
Storm/warning siren on back-up power	Yes. Siren replaced in 2011; new control box in 2018. A second siren on north side of the Village may be needed in future, especially as the Village grows.
Storm/warning siren that can be activated remotely	Activated by County Dispatch. Concerns expressed over timeliness/consistency of past siren activation.
Active shooter/threat plans and/or security hardening for municipal buildings	Some limited hardening at Village Hall; would need to work with Library to determine a protocol for threats.
Other Mitigation & Preparedness Actions	
Review EOP at least annually	Yes
Individuals in EOP have ICS/NIMS training	Some; encourage ICS training for those in EOP. Past evacuation exercises for train derailment.
Public Information Officer designated & trained	No
Municipal officials and staff participate in regular disaster or emergency response exercises	No. Have AED training. Clerk has basic de-escalation training.
Community-level efforts to improve hazard preparedness among residents	Some messaging through Facebook and water bills. No formal initiative.
Adopted billing rates for public works labor & equipment use during emergencies	No; has adopted billing rates for equipment
Adopted mutual aid agreements for public works equipment/personnel support	No; does have "handshake" agreements with City of Owen and Village of Curtiss for public works support if needed. MABAS for Fire Department.
Adopted emergency contracting and purchasing policies	No
Cyber-security systems, off-site/cloud back-up, and recovery policies or plans for municipal records	Yes. Contracted with IT company. Cyber-insurance in place.
Cyber-security systems and policies for municipal utilities	Yes
Municipal buildings/staff have NOAA All Hazards Radios or signed up for Everbridge	No; interested in further NOAA Radio information or project, especially for senior population
Other Flood Mitigation projects or activities	Attempted to secure BRIC grant funding for stormwater system improvements but insufficient past damages documented to demonstrate that benefits outweigh costs.
Municipal Dam-related planning or actions	No dams
Barriers to mitigation or preparedness actions	Funding, need for emergency response training for Village and new Village President
Other vulnerabilities:	Elections require contingency plans should facilities or process be impacted by a hazard threat.
Other:	Supplies water to City of Owen; past water quantity concerns addressed. Improved communication with Xcel Energy is needed if power is being cut; impacts utilities and communication with liftstation tower/controls.

Mitigation Strategy Recommendations

The overall mitigation goal statements in Section V of the Clark County mitigation plan are shared by all participating communities.

The community will strive to implement the following mitigation actions/projects as resources and funding allows, though priorities could change due to a variety of fiscal, technical, or other factors, including changes in hazard risks. Section V of the Clark County mitigation plan includes additional mitigation and preparedness actions that are intergovernmental in nature and not specific to the community, but may suggest coordination and funding opportunities.

The following recommended actions/projects are specific to the community:

Action/Project	Priority & Timeline	Primary Responsible Party	Potential Resources
1. Continue to pursue flood mitigation and stormwater management actions, especially in light of increasing frequency of heavy rain events. As needed, update stormwater management plans and conduct additional hydraulic analysis. Integrate stormwater and flood mitigation projects into Village capital improvement budgets. To pursue FEMA mitigation grant support, must document sufficient public and private past and future certain damages. Support County Land Conservation efforts to promote best management practices to reduce runoff from lands to the north of the Village.	High; Ongoing	Village Public Works & Board Engage property owners in documenting flood-related damages, losses, and costs.	FEMA Flood Mitigation Assistance (FMA) or Wisconsin Pre-Disaster Flood Resilience Grant. FEMA grant funding may be feasible if larger project and can demonstrate that the benefits (i.e., addressing past or unavoidable losses) outweigh estimated project costs. County Land Conservation and NRCS for promoting best management practices on lands to north.
2. If lengthy railroad blockages of both Village intersections continue, encourage the Railroad to temporarily disconnect rail cars or provide another remedy. If needed, contact WI Office of the Commissioner of Railroads to investigate alternatives.	High; as needed	Village Boad	Railroad; Wisconsin Office of the Commissioner of Railroads
3. Explore designation or development of a community safe room (storm shelter) or storm hardening of existing structure at Lion's Park. If a generator and HVAC system are provided, consider using the safe room	Medium-to-Low; 3-5+ years Timeline could change based on public	Village Board	FEMA Hazard Mitigation Grant Programs (BRIC & HMA) FEMA Technical Assistance or Advanced Assistance grant funding could be available to assist with exploring storm hardening options.

space as a heating/cooling shelter and emergency assembly location. For new safe room construction, consider the incorporation of nature-based stormwater management systems (e.g., rain barrels, rain garden) to mitigate site runoff.	demand for safe room or building projects.		WCWRPC and Wisconsin Emergency Management can provide grant-related guidance
4. Update and annually review the Village's Emergency Operations Plan. Explore opportunities to address any gaps identified in the previous capabilities assessment. Collaborate with Library to discuss active threat protocols.	High; ongoing	Village Safety Team; collaborate with Library	Local fire and law enforcement. County Emergency Management can provide a template and guidance.
5. As opportunities allow, collaborate with County Emergency Management and other partners (e.g., Public Health, Red Cross, Electric Provider) to increase public participation in the County's emergency notification system, awareness of emergency siren use and warning systems, and public preparedness in general. Strive for improved communications with Xcel Energy during planned and unplanned outages.	Medium-to-High; ongoing	Village Safety Team	County Emergency Management & partners have educational materials. Xcel Energy. Could implement annually during Severe Weather Awareness Week and/or Preparedness Month using social media, posters, utility bill inserts, etc.

Sub-Plan Coordination and Integration

The previous Capabilities Assessment section identifies how this Mitigation Sub-plan has been integrated into or coordinated with other municipal plans or planning mechanisms. During the planning process, the following opportunities were identified to integrate the mitigation strategies into other community planning mechanisms:

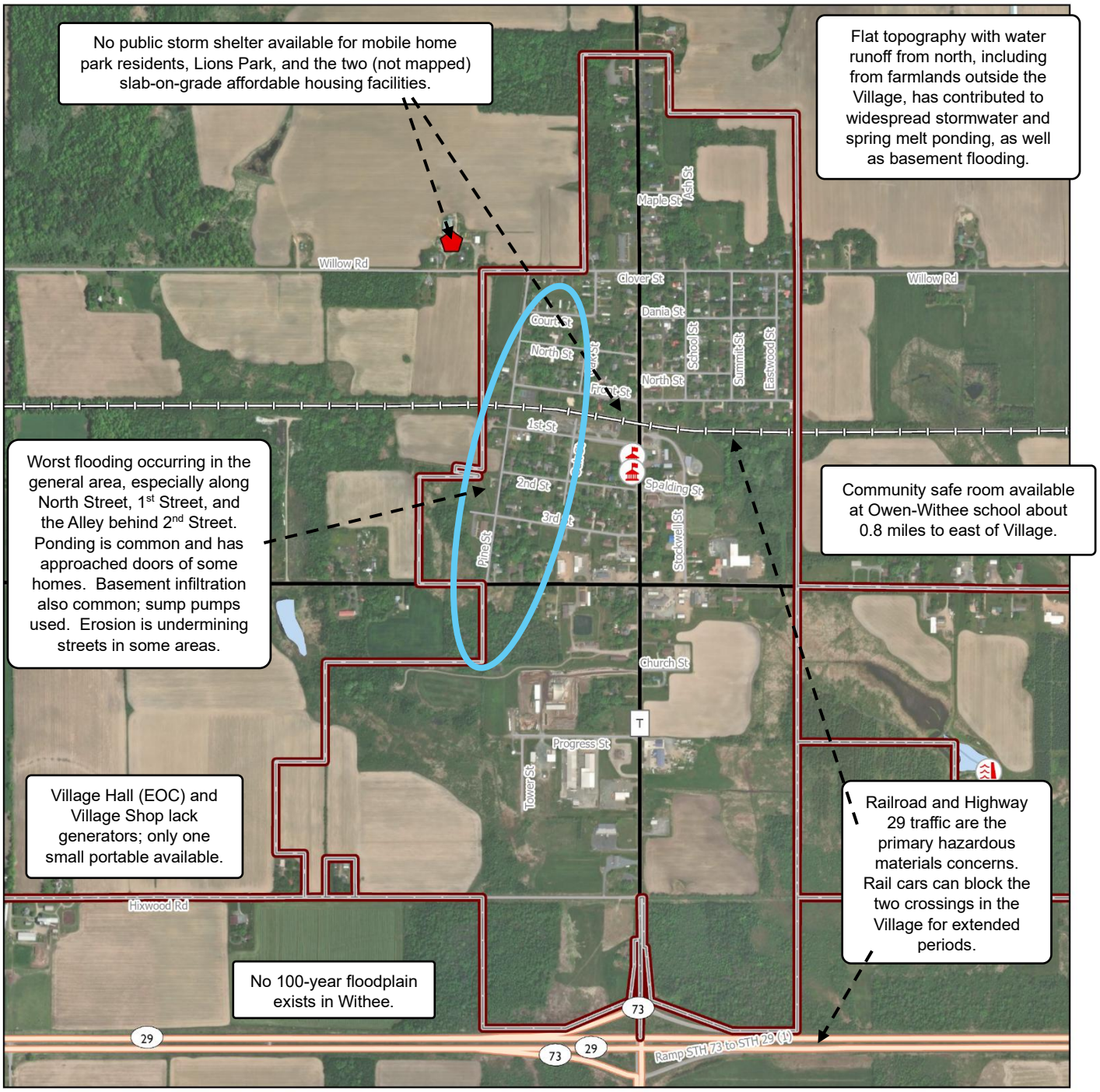
- The Village is expected to update its comprehensive plan in the future. This is an opportunity to integrate mitigation strategies, including obtaining public input on the need for additional community safe rooms.
- The capabilities assessment suggested a number of other plans may be outdated. Updates of these plans should consider the risks, capabilities, and recommendations in this mitigation plan.
- The desire for a safe room at Lion's Park could be integrated into the Village's outdoor recreation plan.
- The next section describes how this Sub-Plan will be maintained, including a periodic review of opportunities to strengthen the coordination and integration with other planning mechanisms.

Sub-Plan Adoption and Maintenance

Plan Adoption	Once updated, the community's governing body will adopt the County's overall hazard mitigation plan (and any future revisions/amendments) by resolution during a noticed public meeting in adherence with Wisconsin Open Meetings laws. This community-specific Hazard Mitigation Sub-Plan is an appendix of the County's overall plan. The community may modify and re-adopt its Sub-Plan by resolution during a noticed public meeting at any time at their discretion.
Plan Maintenance	During the second quarter of each year or following a declared disaster event, the primary mitigation plan contact will review this Mitigation Sub-Plan concurrently with (at the same time as) the annual review of the municipal Emergency Operations Plan. Other municipal and agency officials (e.g., public works, fire department, law enforcement) may be involved in this review or consulted as needed. The Mitigation Sub-Plan will be reviewed for: • Any significant changes in vulnerabilities, priorities, or trends, including to populations, structures, community lifelines, and weather/event patterns. • Any significant changes in capabilities or barriers to plan implementation. • Opportunities to strengthen plan coordination (i.e., integrate mitigation and preparedness into other community planning mechanisms). • Potential new mitigation and preparedness strategies, projects, or grant opportunities. • Any comments or discussion with the public, partners, or other stakeholders. If potential changes to the Sub-Plan are being considered, the planning contact will: 1. The community's planning contact will contact County Emergency Management and West Central Wisconsin Regional Planning Commission (WCWRPC) to discuss the proposed changes and any guidance regarding potential resources and next steps. The community may also request that the County consider changes to the County's overall mitigation plan. 2. Provide the suggested changes to the community's emergency planning committee, plan commission, or governing body for consideration. Should it be determined that a Mitigation Sub-Plan change is needed, the governing body will adopt the Sub-Plan as noted previously. Such changes will be limited to this community-specific Mitigation Sub-Plan. Changes to this Sub-Plan may be made in the future without County Board or other participant re-adoption of the County's overall mitigation plan.
Plan Updates	The community intends to be a full participant in five-year updates of the County's overall hazard mitigation plan, which will include reviewing and updating the information provided in this Mitigation Sub-Plan. Changes to Sub-Plan content may be necessitated by applicable mitigation rules and planning guidance in effect at that time.
Continued Public Participation	The community will provide opportunities for public participation throughout its mitigation planning processes, including: (1) all governing body or committee actions regarding the Sub-Plan shall be conducted in adherence with the Wisconsin Open Meetings rules; (2) public comments will be accepted on draft Sub-Plans and Sub-Plan changes prior to adoption; and (3) public input and ideas on potential risks, vulnerabilities, capabilities, or mitigation projects are welcomed and will be considered.

VILLAGE OF WITHEE - HAZARD ASSESSMENT

Clark County - 2026



Legend

- Municipal Boundaries
- 100-yr Floodplain
- Hospital
- School
- Mobile Home Park
- Assisted Living
- Government Building
- Storm Siren
- Dam w/High or Significant Hazard Rating

WEST CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION

0 0.17 0.35 0.7 Miles

Data Sources: Clark County, WDHS, WDNR, WisDOT, WDOA, FEMA, WCWRPC.

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CITY OF ABBOTSFORD HAZARD MITIGATION SUB-PLAN

This sub-plan identifies past hazard events, risks, trends, capabilities, and strategies unique to or specific to the community and is part of the overall *Clark County Multi-Hazard Mitigation Plan*. The Clark County mitigation plan provides broader context and contains hazard assessments, capabilities, and strategies that are countywide or multi-jurisdictional.

Primary Contact:	City Administrator
Planning Meetings:	• Primary planning meeting with WCWRPC staff occurred on August 13th, 2025. • City participated in a mitigation/preparedness capabilities assessment in September 2025. • Resolution adopting the Hazard Mitigation Plan and Sub-Plan will be approved by City Council at a public meeting and included in Section VII of the main plan document.

Community Profile

This table provides a brief overview of key community characteristics, primarily from the 2020 U.S. Census, which are important to assessing capacity and vulnerabilities. For example, the entire population and all above-ground structures in the community are vulnerable to a tornado event, while mobile homes have an elevated vulnerability.

Population	2,275
Median Age	37.0 years
Uniquely vulnerable populations	Seniors; mobile home park residents; large ESL population; Economic disadvantaged community
Assessed Improvements (2025)	Residential: $59,016 400; Commercial: $43,993,900; Manuf.: $2,790,500
# of Housing units	932
# of Mobile Homes	80
Notable Community Lifelines or Critical Facilities	See map at end of sub-plan.

Hazard Risk Assessment

This table describes past hazard events impacting the community and any unique vulnerabilities to each event. This assessment is supplemented by the risk assessment map included at the end of this Mitigation Sub-Plan for the community. Also see the Risk Assessment in Section III of the main text of the Clark County mitigation plan for general risks and vulnerabilities applicable to most or all communities.

Hazard	History & Past Impacts	Vulnerabilities & Potential Impacts
Tornado & High Winds	June 2002 tornado destroyed feed mill and other damage within City. More recently, very high winds in July 2019 with EF1 tornado near Owen. High winds accompanied Dec 2021 (EF2), June 2024 (EF0) and May 2025 (EF2) tornados that touched down in the Abby-Colby area. Within the City, significant tree and roof damage experienced from 2019-2025 storms with some power loss.	2 mobile homes parks within City and one nearby to north. Some assisted living facilities and numerous apartment complexes. Many newer homes are slab-on-grade. Safe room meeting FEMA standards now available at school made possible with mitigation grant funding. 2002 tornado increased community awareness of vulnerabilities and preparedness but many new residents since then.

Hail & Lightning	No unique history noted.	No unique concerns noted.
Winter Storm, Ice, & Extreme Cold	Some breaks at trailers not uncommon. 8' of frost in 2013 results in about 6 breaks, 70 days of continually running water, 1 main never thawed, and significant costs to community. Several main breaks in 2018-2019.	Water mains are buried deep to help prevent breakage. Laterals to mobile homes most at risk of breakage. Long-term power outage is the greatest winter storm concern. Highways can be dangerous or even impassible during severe winter weather.
Extreme Heat	No unique history noted.	No unique concerns noted. Library available as a cooling/warming shelter if open.
Long-Term Power Outage	No unique history of events. Some short-term (<24 hour) power loss from recent wind/tornado events.	Wastewater plant and two of three water plants have generators as well as Public Safety Building (Police/Fire/EOC). None at City Hall. One senior living facility has generator; others do not.
Flooding – Riverine or Overbank	A small area of the City has been mapped as 100-year floodplain.	No significant riverine flooding concerns noted.
Flooding – Stormwater or Overland	Many of the past problems with stormwater fixed, but line sizes inadequate for the heaviest rains (about once every 2-5 years) resulting in ponding in some areas. Occasional ice damming at culverts and storm sewer, but remedied promptly. Some wet basements in 2019.	Reconstruction of Linden Street in 2021 addressed the most significant stormwater management concern; past flooding had resulted in cars stalling, damage to a duplex, and floodwaters up to the doors of nearby buildings. Culvert and stormwater system jetting important to system maintenance.
Dams	No dam.	Not applicable.
Drought	No significant impacts within the City from past droughts.	No unique concerns noted. Longer periods of drought could create challenge; may need to institute water use restrictions.
Wildfire	No significant events.	Some residential in mixed forest, but not a high wildfire risk.
Hazardous Materials Spills	Past ammonia release at industry has fostered improved communication based on lessons learned.	Highways and two fixed facilities present highest risks. Continuing exercises very important.
Active Threats	No significant events in the community.	New City Municipal Offices provide some hardened protection vs. previous offices. School has a resource officer.
Cyber-Attack	No significant incidents.	No unique concerns noted. Data backed-up off-site, IT contractual support, and cyber-insurance in place.

Notable Trends or Changing Priorities

Have any hazard-related priorities changed since the previous mitigation plan?	Critical need for a community safe room address through a FEMA mitigation grant. Language/ESL is no longer as great as a barrier as it has been in the past, but City continues to provide messaging in multiple languages.
Are there any other trends influencing these concerns, such as changes in development, demographics, or weather patterns/climate?	Increasing frequency and severity of severe weather systems including downpours, wind events, tornados, and extreme temperatures. Diverse population.

Capabilities Assessment

The following is a general assessment of the community's resiliency and capabilities to mitigate, respond to, and recover from a disaster event. It also notes if mitigation or preparedness has been integrated into planning mechanisms. This assessment was completed by the community through the 2025 web-based survey, with some supplemental information from the community meeting and other sources (e.g., fire department survey, NFIP Community Status Book). The list of potential plans, policies, and other actions is not exhaustive, and it is not expected that the community has undertaken all actions listed or will undertake all actions in the future.

Planning Activities	
Community Emergency Operations or Response Plan (EOP)	Adopted; does incorporate mitigation or preparedness. Needs to be updated. More emergency services volunteers needed, especially emergency medical.
Community Evacuation Plan and/or Exercises	Adopted; does incorporate mitigation or preparedness
Continuity of Government Plan	Unsure
Comprehensive Plan	Updated and adopted; does incorporate mitigation or preparedness
Stormwater Management Plan	Adopted; does not incorporate unique mitigation or preparedness
Historic Preservation Plan or Ordinance	Outdated plan; will consider implementing mitigation or preparedness in update
Capital Improvements Plan or Similar Budget	Adopted; does not incorporate unique mitigation or preparedness
Involve Fire & Law Enforcement in planning & development plan review	No; planning or considering implementation
Special emergency notification procedures or preparedness plans for vulnerable populations	Unknown
Policies, Codes, & Ordinances	
Building Codes	Outdated policy; will consider mitigation or preparedness in update
Building Code Efficiency Grading Schedule	Unknown
Zoning Ordinance	Outdated policy; will consider mitigation or preparedness in update
Subdivision Ordinance	Outdated policy; will consider mitigation or preparedness in update
Site Plan Review Requirements	Outdated policy; will consider mitigation or preparedness in update
Floodplain Management	
Initial Flood Hazard Boundary Map:	-
Initial FIRM Identified:	07/06/2010
Current Effective FIRM Date:	07/22/2010
Date Community First Joined NFIP (Reg-Emer)	02/24/2012
NFIP Participation Status (and reason if not participating):	Participant
Floodplain Regulations w/ NFIP standards:	Adopted
Designated position or committee for floodplain management, floodplain zoning, & NFIP compliance:	Zoning Administrator; then Plan Commission
Other ongoing floodplain management activities:	None noted.
Stormwater Management Ordinance	Outdated policy; will consider mitigation or preparedness in update

Stormwater Utility	Outdated policy; will consider mitigation or preparedness in update
Winter Emergency Policies	Outdated policy; will consider mitigation or preparedness in update
Mitigation & Preparedness Actions for Facilities	
Debris Site identified for storm debris disposal (not just woody debris)	Yes
Emergency Operations Center designated with generator/back-up power	Yes; at Police/Fire Hall.
Public Storm Shelter/Community Safe Room designated	Safe room at School with 1,839-person capacity; has generator and remote door unlock. FEMA mitigation funding secured through City's participation in past mitigation plans and an agreement between the City and School District.
Public Heating/Cooling Shelter designated with generator/back-up power	Yes
Storm/warning siren on back-up power	Activated by County dispatch; 2 sirens with good coverage. May need additional as City grows.
Storm/warning siren that can be activated remotely	Activated by Clark County
Active shooter/threat plans and/or security hardening for municipal buildings	Unknown
Other Mitigation & Preparedness Actions	
Review EOP at least annually	Yes
Individuals in EOP have ICS/NIMS training	Yes
Public Information Officer designated & trained	Unsure
Municipal officials and staff participate in regular disaster or emergency response exercises	No; planning or considering implementation
Community-level efforts to improve hazard preparedness among residents	No; planning or considering implementation
Adopted billing rates for public works labor & equipment use during emergencies	Yes
Adopted mutual aid agreements for public works equipment/personnel support	Yes, with Dorchester and Colby.
Adopted emergency contracting and purchasing policies	Has billing rates for equipment.
Cyber-security systems, off-site/cloud back-up, and recovery policies or plans for municipal records	Yes; MABAS in place and strong public works cooperation
Cyber-security systems and policies for municipal utilities	Yes
Municipal buildings/staff have NOAA All Hazards Radios or signed-up for Everbridge	Unknown
Other Flood Mitigation projects or activities	Linden Street and culvert/stormwater improvements.
Municipal Dam-related planning or actions	No dam.
Barriers to mitigation or preparedness actions	Funding and staff time. Language barrier with many residents but has improved with time.
Other vulnerabilities:	Some low-income housing may not have basements. Greater ESL/bilingual education and awareness on emergency notification systems, disaster risks, appropriate action, etc., needed. Some past issues due to split counties regarding agreements, data, etc. Most significant emergency communication issue are gaps in the system and being addressed at the county level.

Mitigation Strategy Recommendations

The overall mitigation goal statements in Section V of the Clark County mitigation plan are shared by all participating communities.

The community will strive to implement the following mitigation actions/projects as resources and funding allows, though priorities could change due to a variety of fiscal, technical, or other factors, including changes in hazard risks. Sections V of the Clark County mitigation plan includes additional mitigation and preparedness actions that are intergovernmental in nature and not specific to the community, but may suggest coordination and funding opportunities.

The following recommended actions/projects are specific to the community:

Action/Project	Priority & Timeline	Primary Responsible Party	Potential Resources
1. Continue to monitor stormwater flooding and maintain the City's stormwater system in light of increasing heavy rain events. Periodically review and update the City's stormwater management plan and continue to enforce stormwater management regulations. Should repetitive flood losses be experienced, assess the feasibility of mitigation alternatives and update the City's mitigation sub-plan if needed.	Medium-to-High; Ongoing	City Public Works & City Administrator	Stormwater utility. If repetitive flood losses are incurred in the future, especially to homes or structures, work with landowners to document losses and explore mitigation grant funding alternatives for hydraulic studies or mitigation actions. FEMA Flood Mitigation Assistance (FMA) or Wisconsin Pre-Disaster Flood Resilience Grant.
2. Continue to annually review and update the City's Emergency Operations Plan (EOP). Explore opportunities to address any gaps identified in the previous capabilities assessment. Consider how the City will continue essential services should City Hall or other facilities or key staff not be available (e.g., continuity planning). With City elected officials participating, exercise the EOP using severe weather and HazMat spill scenarios. Such exercises may involve industry, multiple area municipalities, and other key partners.	High; 1-3 years	City Administrator to delegate responsibility as needed	County Emergency Management can provide a template and guidance.

3. As opportunities allow, collaborate with County Emergency Management and other partners (e.g., Public Health, Red Cross, Electric Provider) to increase public participation in the County's emergency notification system, awareness of emergency siren use and warning systems, and public preparedness in general. Collaborate with partners as needed for bilingual messaging.	Medium-to-High; ongoing	City Administrator (or designee)	County Emergency Management & partners have educational materials Could implement annually during Severe Weather Awareness Week and/or Preparedness Month using social media, posters, utility bill inserts, etc.

Sub-Plan Coordination and Integration

The previous Capabilities Assessment section identifies how this Mitigation Sub-plan has been integrated into or coordinated with other municipal plans or planning mechanisms. During the planning process, the following opportunities were identified to integrate the mitigation strategies into other community planning mechanisms:

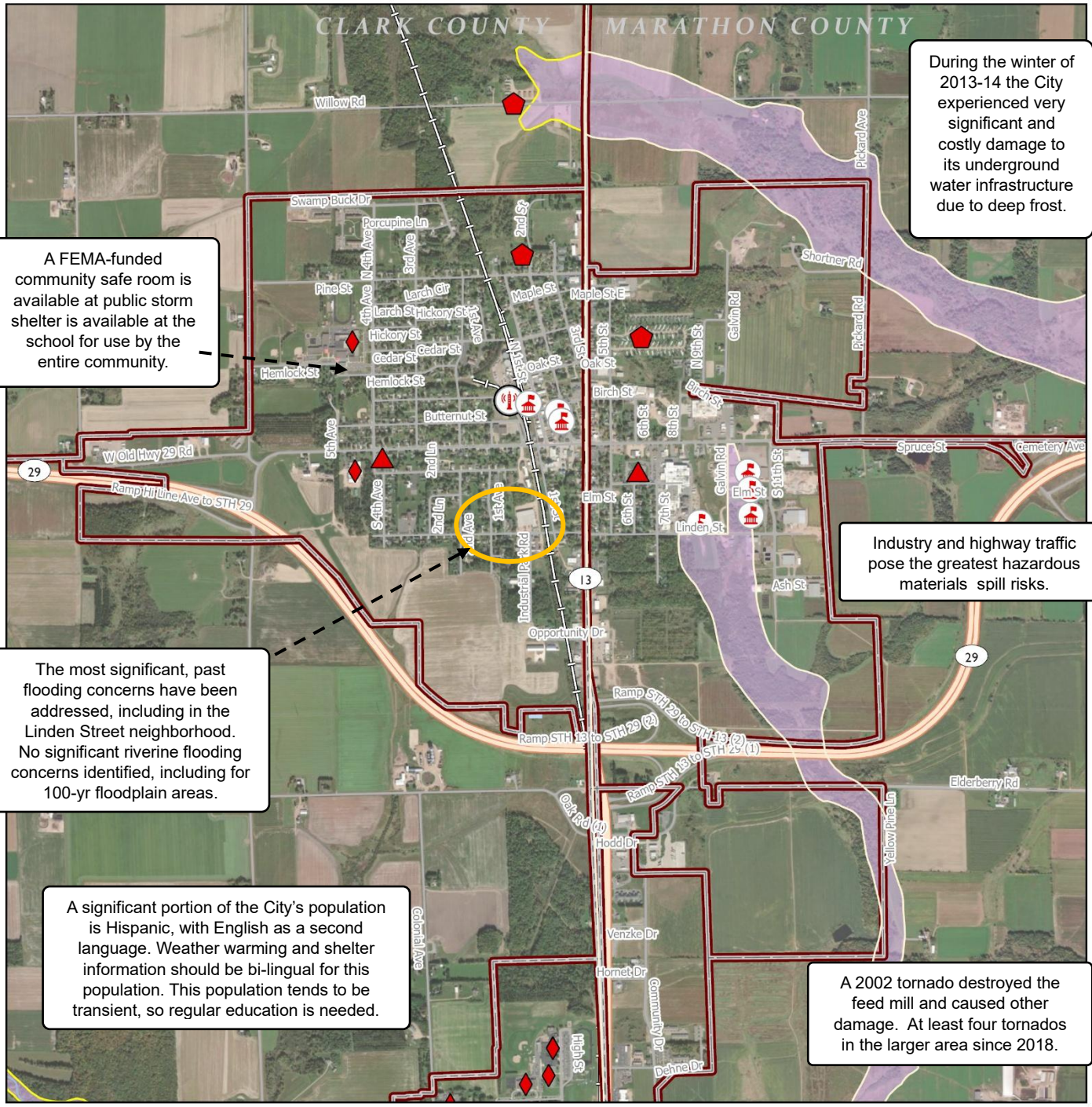
- The City has integrated mitigation strategies into its Comprehensive Plan.
- The capabilities assessment identifies a number of outdated ordinances and plans. Preparedness and mitigation alternatives can be considered when updating these policies.
- Stormwater management improvements are integrated into the City's capital improvements plan.
- The next section describes how this Sub-Plan will be maintained, including a periodic review of opportunities to strengthen the coordination and integration with other planning mechanisms.

Sub-Plan Adoption and Maintenance

Plan Adoption	Once updated, the community's governing body will adopt the County's overall hazard mitigation plan (and any future revisions/amendments) by resolution during a noticed public meeting in adherence with Wisconsin Open Meetings laws. This community-specific Hazard Mitigation Sub-Plan is an appendix of the County's overall plan. The community may modify and re-adopt its Sub-Plan by resolution during a noticed public meeting at any time at their discretion.
Plan Maintenance	During the second quarter of each year or following a declared disaster event, the primary mitigation plan contact will review this Mitigation Sub-Plan concurrently with (at the same time as) the annual review of the municipal Emergency Operations Plan. Other municipal and agency officials (e.g., public works, fire department, law enforcement) may be involved in this review or consulted as needed. The Mitigation Sub-Plan will be reviewed for: • Any significant changes in vulnerabilities, priorities, or trends, including to populations, structures, community lifelines, and weather/event patterns. • Any significant changes in capabilities or barriers to plan implementation. • Opportunities to strengthen plan coordination (i.e., integrate mitigation and preparedness into other community planning mechanisms). • Potential new mitigation and preparedness strategies, projects, or grant opportunities. • Any comments or discussion with the public, partners, or other stakeholders. If potential changes to the Sub-Plan are being considered, the planning contact will: 1. The community's planning contact will contact County Emergency Management and West Central Wisconsin Regional Planning Commission (WCWRPC) to discuss the proposed changes and any guidance regarding potential resources and next steps. The community may also request that the County consider changes to the County's overall mitigation plan. 2. Provide the suggested changes to the community's emergency planning committee, plan commission, or governing body for consideration. Should it be determined that a Mitigation Sub-Plan change is needed, the governing body will adopt the Sub-Plan as noted previously. Such changes will be limited to this community-specific Mitigation Sub-Plan. Changes to this Sub-Plan may be made in the future without County Board or other participant re-adoption of the County's overall mitigation plan.
Plan Updates	The community intends to be a full participant in five-year updates of the County's overall hazard mitigation plan, which will include reviewing and updating the information provided in this Mitigation Sub-Plan. Changes to Sub-Plan content may be necessitated by applicable mitigation rules and planning guidance in effect at that time.
Continued Public Participation	The community will provide opportunities for public participation throughout its mitigation planning processes, including: (1) all governing body or committee actions regarding the Sub-Plan shall be conducted in adherence with the Wisconsin Open Meetings rules; (2) public comments will be accepted on draft Sub-Plans and Sub-Plan changes prior to adoption; and (3) public input and ideas on potential risks, vulnerabilities, capabilities, or mitigation projects are welcomed and will be considered.

CITY OF ABBOTSFORD - HAZARD ASSESSMENT

Clark County - 2026



During the winter of 2013-14 the City experienced very significant and costly damage to its underground water infrastructure due to deep frost.

A FEMA-funded community safe room is available at public storm shelter is available at the school for use by the entire community.

Industry and highway traffic pose the greatest hazardous materials spill risks.

The most significant, past flooding concerns have been addressed, including in the Linden Street neighborhood. No significant riverine flooding concerns identified, including for 100-yr floodplain areas.

A significant portion of the City's population is Hispanic, with English as a second language. Weather warming and shelter information should be bi-lingual for this population. This population tends to be transient, so regular education is needed.

A 2002 tornado destroyed the feed mill and caused other damage. At least four tornados in the larger area since 2018.

Legend

- Municipal Boundaries
- 100-yr Floodplain
- Hospital
- School
- Mobile Home Park
- Assisted Living
- Government Building
- Storm Siren
- Dam w/High or Significant Hazard Rating

WEST CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION

0 0.33 0.65 1.3 Miles

Data Sources: Clark County, WDHS, WDNR, WisDOT, WDOA, FEMA, WCWRPC.

N

CITY OF COLBY HAZARD MITIGATION SUB-PLAN

This sub-plan identifies past hazard events, risks, trends, capabilities, and strategies unique to or specific to the community and is part of the overall *Clark County Multi-Hazard Mitigation Plan*. The Clark County mitigation plan provides broader context and contains hazard assessments, capabilities, and strategies that are countywide or multi-jurisdictional.

Primary Contact:	Director of Public Works
Planning Meetings:	• Primary planning meeting with WCWRPC staff occurred on August 13th, 2025. • City participated in a mitigation/preparedness capabilities assessment in September 2025. • Resolution adopting the Hazard Mitigation Plan and Sub-Plan will be approved by City Council at a public meeting and included in Section VII of the main plan document.

Community Profile

This table provides a brief overview of key community characteristics, primarily from the 2020 U.S. Census, which are important to assessing capacity and vulnerabilities. For example, the entire population and all above-ground structures in the community are vulnerable to a tornado event, while mobile homes have an elevated vulnerability.

Population	1,952
Median Age	38.6 years
Uniquely vulnerable populations	Seniors and assisted living facilities; mobile home park residents; park visitors; Economic disadvantaged community
Assessed Improvements (2025)	Residential: $69,367,300; Commercial: $4,133,700; Manuf.: $3,723,000
# of Housing units	834
# of Mobile Homes	27
Notable Community Lifelines or Critical Facilities	See map at end of sub-plan.

Hazard Risk Assessment

This table describes past hazard events impacting the community and any unique vulnerabilities to each event. This assessment is supplemented by the risk assessment map included at the end of this Mitigation Sub-Plan for the community. Also see the Risk Assessment in Section III of the main text of the Clark County mitigation plan for general risks and vulnerabilities applicable to most or all communities.

Hazard	History & Past Impacts	Vulnerabilities & Potential Impacts
Tornado & High Winds	2002 disaster declaration for tornado and/or high winds; significant clean-up. More recently, very high winds in July 2019 with EF1 tornado near Owen. High winds accompanied Dec 2021 (EF2), June 2024 (EF0) and May 2025 (EF2) tornados, which all resulted in tree and roof damage in the City. The 2021 event also damaged a number garages, an industry (PCA), and buildings at the ballpark. The 2024 event	Limited slab-on-grade construction; some newer duplex and two mobile home parks. Nursing home and assisted living facility. Unsure if residents aware of storm shelter availability at City Hall or if mobile home park owners let their residents know; low use of City Hall in past.

	took a similar path and resulted in damage to the cost storage business, two garages, and snapped light poles. The 2025 tornado also downed trees, which damaged homes and garages.	
Hail & Lightning	2010 storm and May 2025 tornado event included hail damage to roofs. The 2025 storm also resulted in hail damage at auto dealership. Some lightning strikes to utilities; City SCADA system has resistors.	No unique vulnerabilities noted.
Winter Storm, Ice, & Extreme Cold	1-2 water line breaks in a typical year. Some additional breaks including main along 4th Street during 2013-14 Polar Vortex. Ice build-up on structures has damaged roofs.	No unique vulnerabilities noted. Long-term power loss greatest concern. No demand or activation of a warming shelter to date.
Extreme Heat	No unique history noted.	Some concern with vulnerable populations. No warming shelter demand or activation; City Hall would be used but lacks generator.
Long-Term Power Outage	May 2025 tornado snapped 16+ poles in nearby town resulting in outage within portions of City for about 2.5 days. Other recent high wind/tornado events resulted in power losses for 12-24 hours for some residents and businesses.	Xcel improved electrical transmission line redundancy in 2025. Some need for generators at critical facilities, potentially including senior living. Fire Hall is EOC and lacks a fixed generator. None a City Hall, which is also a storm shelter. Fixed available for all but one well, wastewater plant, and east-side liftstation. Portable available for south liftstation and other well.
Flooding – Riverine or Overbank	No unique history noted.	No unique concerns noted by the community.
Flooding – Stormwater or Overland	Stormwater flooding of ballfield/park area between Monroe and Spence Streets closes nearby street(s) 1-2 times in a typical year. Water backs-up onto Main Street during extreme rainfall events. No structural damages to date.	Flows from the northeast thru a natural drainageway south. New box culvert planned for 2027 but may need to monitor and explore additional actions (e.g., stream restoration/dredging project) in future.
Dams	No dams	Not applicable
Drought	No significant impacts within the City from past droughts.	No unique concerns noted. Good well capacity.
Wildfire	No significant events.	No unique issues or concerns noted.
Hazardous Materials Spills	No significant events in the community.	Highway 13/29 noted as most significant concern. Some limited concerns with fixed facilities and potentially rail if re-established.
Active Threats	No significant events in the community.	School collaborates with police and fire. Some hardening of City Hall entrance.
Cyber-Attack	Virus-related incident occurred; bank prevented a potential breach.	No unique concerns noted; data backed-up off-site.

Notable Trends or Changing Priorities

Have any hazard-related priorities changed since the previous mitigation plan?	Given recent tornados, increased interest in providing a hardened safe room/storm shelter.
Are there any other trends influencing these concerns, such as changes in development, demographics, or weather patterns/climate?	Increasing frequency and severity of severe weather systems including downpours, wind events and tornados.

Capabilities Assessment

The following is a general assessment of the community's resiliency and capabilities to mitigate, respond to, and recover from a disaster event. It also notes if mitigation or preparedness has been integrated into planning mechanisms. This assessment was completed by the community through the 2023 web-based survey, with some supplemental information from the community meeting and other sources (e.g., fire department survey, NFIP Community Status Book). The list of potential plans, policies, and other actions is not exhaustive, and it is not expected that the community has undertaken all actions listed or will undertake all actions in the future.

Planning Activities	
Community Emergency Operations or Response Plan (EOP)	Adopted; does not incorporate mitigation or preparedness. Needs to be reviewed and updated.
Community Evacuation Plan and/or Exercises	Fire Department conducts evacuation drills with nursing home and assisted living facility.
Continuity of Government Plan	Unknown
Comprehensive Plan	Adopted; does not incorporate mitigation or preparedness
Stormwater Management Plan	Adopted; does not incorporate mitigation or preparedness
Historic Preservation Plan or Ordinance	No plan
Capital Improvements Plan or Similar Budget	Adopted; does not incorporate mitigation or preparedness
Involve Fire & Law Enforcement in planning & development plan review	Yes
Special emergency notification procedures or preparedness plans for vulnerable populations	No plan
Policies, Codes, & Ordinances	
Building Codes	Adopted; does not incorporate mitigation or preparedness
Building Code Efficiency Grading Schedule	Unknown
Zoning Ordinance	Adopted; does not incorporate mitigation or preparedness
Subdivision Ordinance	Adopted; does not incorporate mitigation or preparedness
Site Plan Review Requirements	Adopted; does not incorporate mitigation or preparedness
Floodplain Management	
Initial Flood Hazard Boundary Map:	05/31/1974
Initial FIRM Identified:	09/18/1985
Current Effective FIRM Date:	07/22/2010
Date Community First Joined NFIP (Reg-Emer)	09/18/1985
NFIP Participation Status (and reason if not participating):	Participant
Floodplain Regulations w/ NFIP standards:	Adopted; floodplain ordinance updated about 2023
Designated position or committee for floodplain management, floodplain zoning, & NFIP compliance:	Zoning Administrator; then Plan Commission
Other ongoing floodplain management activities:	Handled on a site-by-site basis as needed or integrate into capital improvements plan

Stormwater Management Ordinance	Adopted; does not incorporate mitigation or preparedness
Stormwater Utility	No
Winter Emergency Policies	No
Mitigation & Preparedness Actions for Facilities	
Debris Site identified for storm debris disposal (not just woody debris)	No
Emergency Operations Center designated with generator/back-up power	No; indicated need for backup generator at City Hall storm shelter
Public Storm Shelter/Community Safe Room designated	Yes; City Hall basement but does not provide ADA/handicap accessibility and is some distance from mobile home park. Potential need for additional on-site shelter.
Public Heating/Cooling Shelter designated with generator/back-up power	Yes
Storm/warning siren on back-up power	Yes; 2 sirens. Additional coverage on northside by high school may be needed.
Storm/warning siren that can be activated remotely	Activated by County dispatch.
Active shooter/threat plans and/or security hardening for municipal buildings	No
Other Mitigation & Preparedness Actions	
Review EOP at least annually	No; requires review and update.
Individuals in EOP have ICS/NIMS training	No
Public Information Officer designated & trained	No
Municipal officials and staff participate in regular disaster or emergency response exercises	No
Community-level efforts to improve hazard preparedness among residents	No
Adopted billing rates for public works labor & equipment use during emergencies	Yes
Adopted mutual aid agreements for public works equipment/personnel support	Yes, includes public works mutual aid; Consolidated services with Abbotsford.
Adopted emergency contracting and purchasing policies	No
Cyber-security systems, off-site/cloud back-up, and recovery policies or plans for municipal records	Yes
Cyber-security systems and policies for municipal utilities	No
Municipal buildings/staff have NOAA All Hazards Radios or signed-up for Everbridge	No
Other Flood Mitigation projects or activities	No
Municipal Dam-related planning or actions	No dams
Barriers to mitigation or preparedness actions	Budget restraints
Other vulnerabilities:	ESL communication challenges similar to Abbotsford. Important that Clark and Marathon counties regularly discuss dispatch and emergency communications systems.

Mitigation Strategy Recommendations

The overall mitigation goal statements in Section V.A. of the Clark County mitigation plan are shared by all participating communities.

The community will strive to implement the following mitigation actions/projects as resources and funding allows, though priorities could change due to a variety of fiscal, technical, or other factors, including changes in hazard risks. Sections V of the Clark County mitigation plan includes additional mitigation and preparedness actions that are intergovernmental in nature and not specific to the community, but may suggest coordination and funding opportunities.

The following recommended actions/projects are specific to the community:

Action/Project	Priority & Timeline	Primary Responsible Party	Potential Resources
1. Explore development or hardening of a community safe room (storm shelter), which may include one or more of the following: • Storm hardening, remote unlock, and ADA improvements at the City Hall. • Development a new safe room near the mobile home park and City ballfields • Collaborating with the School District for the construction of a public safe room as part of future school improvements. If a generator and HVAC system are provided, consider using the safe room space as a heating/cooling shelter and emergency assembly location. For new safe room construction, consider the incorporation of nature-based stormwater management systems (e.g., rain barrels, rain garden) to mitigate site runoff.	Medium-to-High; 3-5 years Timeline could change based on public demand for safe room or building projects.	City Council	FEMA Hazard Mitigation Grant Programs (BRIC & HMA) FEMA Technical Assistance or Advanced Assistance grant funding could be available to assist with exploring storm hardening options. WCWRPC and Wisconsin Emergency Management can provide grant-related guidance

2. Continue to maintain and implement the City's Stormwater Management Plan. Should extreme rainfall events result in damage to structures, document damages and explore mitigation alternatives.	Medium-to-High; ongoing	City Public Works; City Plan Commission and Council	For special flood studies and mitigation actions, consider FEMA Flood Mitigation Assistance (FMA) or Wisconsin Pre-Disaster Flood Resilience Grant. FEMA grant funding may be feasible if larger project and can demonstrate that the benefits (i.e., addressing past or unavoidable losses) outweigh estimated project costs.
3. Update and annually review the City's Emergency Operations Plan (EOP). Collaborate with the School District, Police, and Fire to exercise the EOP, including an evacuation scenario.	High; ongoing	City Safe / Emergency Planning Team	County Emergency Management can provide a template and guidance.
4. As opportunities allow, collaborate with County Emergency Management and other partners (e.g., Public Health, Red Cross, Electric Provider) to increase public participation in the County emergency notification system, awareness of emergency siren use and warning systems, and public preparedness in general. Messaging should be in English and Spanish. As part of this outreach, increase public awareness of City Hall availability during high wind/tornado warnings.	High; ongoing	City Clerk (or designee); Fire Department	County Emergency Management & partners have educational materials Could implement annually during Severe Weather Awareness Week and/or Preparedness Month using social media, posters, utility bill inserts, etc.
5. Continue to strengthen cyber-attack preparedness and business continuity.	Medium	City Clerk working with City Council and IT team	Various resources include League of Wisconsin Municipalities Cyber-grant program and cyber-insurance, and the Cybersecurity and Infrastructure Security Agency (CISA).

Sub-Plan Coordination and Integration

The previous Capabilities Assessment section identifies how this Mitigation Sub-plan has been integrated into or coordinated with other municipal plans or planning mechanisms. During the planning process, the following opportunities were identified to integrate the mitigation strategies into other community planning mechanisms:

- The City integrated mitigation strategies into its recent comprehensive plan update.
- Continue to integrate stormwater management improvements into the City's capital budget.

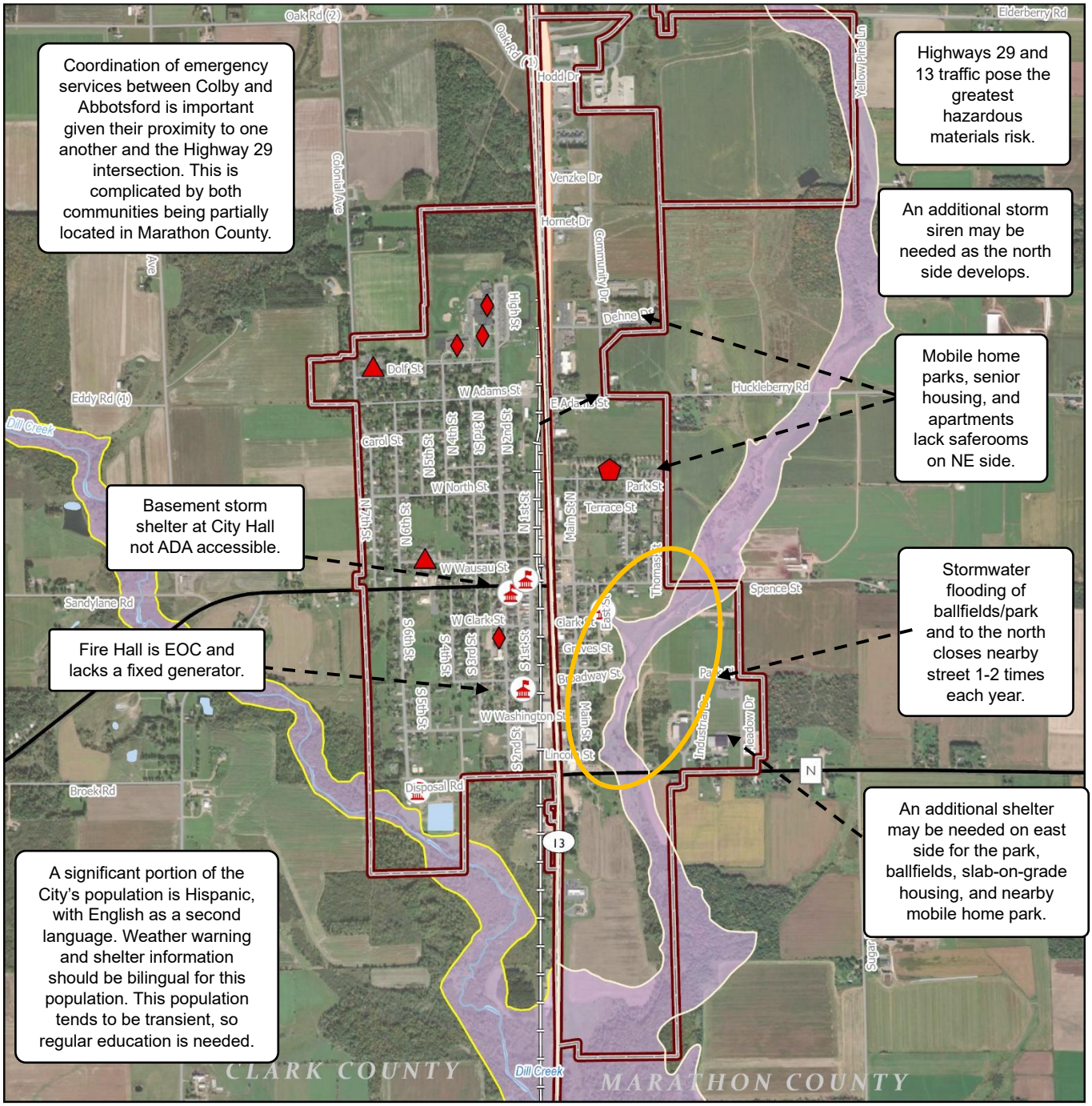
- The City has adopted multiple plans and ordinances and should continue to consider preparedness and mitigation strategies as part of future updates.
- The Colby School District's mitigation plan contemplates the development of a community safe room, which provides for a partnership opportunity with the City.
- The next section describes how this Sub-Plan will be maintained, including a periodic review of opportunities to strengthen the coordination and integration with other planning mechanisms.

Sub-Plan Adoption and Maintenance

Plan Adoption	Once updated, the community's governing body will adopt the County's overall hazard mitigation plan (and any future revisions/amendments) by resolution during a noticed public meeting in adherence with Wisconsin Open Meetings laws. This community-specific Hazard Mitigation Sub-Plan is an appendix of the County's overall plan. The community may modify and re-adopt its Sub-Plan by resolution during a noticed public meeting at any time at their discretion.
Plan Maintenance	During the second quarter of each year or following a declared disaster event, the primary mitigation plan contact will review this Mitigation Sub-Plan concurrently with (at the same time as) the annual review of the municipal Emergency Operations Plan. Other municipal and agency officials (e.g., public works, fire department, law enforcement) may be involved in this review or consulted as needed. The Mitigation Sub-Plan will be reviewed for: • Any significant changes in vulnerabilities, priorities, or trends, including to populations, structures, community lifelines, and weather/event patterns. • Any significant changes in capabilities or barriers to plan implementation. • Opportunities to strengthen plan coordination (i.e., integrate mitigation and preparedness into other community planning mechanisms). • Potential new mitigation and preparedness strategies, projects, or grant opportunities. • Any comments or discussion with the public, partners, or other stakeholders. If potential changes to the Sub-Plan are being considered, the planning contact will: 1. The community's planning contact will contact County Emergency Management and West Central Wisconsin Regional Planning Commission (WCWRPC) to discuss the proposed changes and any guidance regarding potential resources and next steps. The community may also request that the County consider changes to the County's overall mitigation plan. 2. Provide the suggested changes to the community's emergency planning committee, plan commission, or governing body for consideration. Should it be determined that a Mitigation Sub-Plan change is needed, the governing body will adopt the Sub-Plan as noted previously. Such changes will be limited to this community-specific Mitigation Sub-Plan. Changes to this Sub-Plan may be made in the future without County Board or other participant re-adoption of the County's overall mitigation plan.
Plan Updates	The community intends to be a full participant in five-year updates of the County's overall hazard mitigation plan, which will include reviewing and updating the information provided in this Mitigation Sub-Plan. Changes to Sub-Plan content may be necessitated by applicable mitigation rules and planning guidance in effect at that time.
Continued Public Participation	The community will provide opportunities for public participation throughout its mitigation planning processes, including: (1) all governing body or committee actions regarding the Sub-Plan shall be conducted in adherence with the Wisconsin Open Meetings rules; (2) public comments will be accepted on draft Sub-Plans and Sub-Plan changes prior to adoption; and (3) public input and ideas on potential risks, vulnerabilities, capabilities, or mitigation projects are welcomed and will be considered.

CITY OF COLBY - HAZARD ASSESSMENT

Clark County - 2026



CITY OF GREENWOOD HAZARD MITIGATION SUB-PLAN

This sub-plan identifies past hazard events, risks, trends, capabilities, and strategies unique to or specific to the community and is part of the overall *Clark County Multi-Hazard Mitigation Plan*. The Clark County mitigation plan provides broader context and contains hazard assessments, capabilities, and strategies that are countywide or multi-jurisdictional.

Primary Contact:	City Clerk/Treasurer
Planning Meetings:	• Primary planning meeting with WCWRPC staff occurred on August 13th, 2025. • City participated in a mitigation/preparedness capabilities assessment in December 2025. • Resolution adopting the Hazard Mitigation Plan and Sub-Plan will be approved by City Council at a public meeting and included in Section VII of the main plan document.

Community Profile

This table provides a brief overview of key community characteristics, primarily from the 2020 U.S. Census, which are important to assessing capacity and vulnerabilities. For example, the entire population and all above-ground structures in the community are vulnerable to a tornado event, while mobile homes have an elevated vulnerability.

Population	1,058
Median Age	43.8 years
Uniquely vulnerable populations	Seniors and assisted living facilities; mobile home park residents; ADS; economic disadvantaged community
Assessed Improvements (2025)	Residential: $49,709,900; Commercial: $15,498,500; Manuf.: $1,599,500
# of Housing units	520
# of Mobile Homes	56
Notable Community Lifelines or Critical Facilities	See map at end of sub-plan.

Hazard Risk Assessment

This table describes past hazard events impacting the community and any unique vulnerabilities to each event. This assessment is supplemented by the risk assessment map included at the end of this Mitigation Sub-Plan for the community. Also see the Risk Assessment in Section III of the main text of the Clark County mitigation plan for general risks and vulnerabilities applicable to most or all communities.

Hazard	History & Past Impacts	Vulnerabilities & Potential Impacts
Tornado & High Winds	While no significant, unique events prior to 2019, a large number of tornado and high wind events in the Greenwood area since. EF0 tornado in June 2024. EF1 tornados and high winds in September 2019, December 2021, May 2024, and May 2025. Most significant damages in City from Dec 2021 winds, with many trees/branches downed and roof damage; significant damage at the cemetery.	One mobile home park. Multiple assisted living facilities and some homes are slab-on-grade. County Park campground on north side of City and municipal park that hosts some larger events on south side. City uncertain what the severe weather protocols are for the County Park.

Hail & Lightning	Infrequent but continuing lightning strikes at wastewater treatment facility.	No unique issues noted.
Winter Storm, Ice, & Extreme Cold	2-3 water breaks in a typical winter but scattered. In 2013, had 30-50 service freeze-up, 200 ft on Main frozen, and sewer freeze-ups.	No unique concerns noted.
Extreme Heat	No unique history noted.	No unique concerns noted. No designated warming center, though churches have been used in past.
Long-Term Power Outage	About half of the City lost power as a result of the December 2021 winds/tornado and subsequent ice storm. Some areas were without power for a week. Churches were used a warming centers.	Fixed and portables are available for water and sewer facilities and systems. Need fixed or portable + connection at Maintenance Shop and at City Hall/Police/EOC. Fire, Clark Electric, and School have generators. May need fuel supply agreement.
Flooding – Riverine or Overbank	No NFIP claims or recent history. Sept 2010 was worst in 20+years and had no serious problems. Some flooding on Highway is rare.	No unique concerns noted by the community and no recent activities.
Flooding – Stormwater or Overland	Some flooding across STH 73 if heavy (4"+) rain in a short period.	No unique issues noted.
Dams	Very small, municipal dam on City's northeast side.	No concerns identified.
Drought	No significant impacts within the City from past droughts.	No unique concerns noted. Good well capacity.
Wildfire	No significant events.	No unique concerns noted; dry hydrant for pond desired for additional source of water for fire protection.
Hazardous Materials Spills	No significant events in the community.	Highway transport and one industry only concerns noted.
Active Threats	No significant events in the community.	Some active threat hardening (e.g., window, door unlock, camera) of new City Hall.
Cyber-Attack	No incidents to date.	No unique concerns noted. Cloud-based back-up, cyber-hygiene practices, and cyber-insurance in place.

Notable Trends or Changing Priorities

Have any hazard-related priorities changed since the previous mitigation plan?	Potential demand for safe rooms, heating/cooling centers, and power outage planning has increased.
Are there any other trends influencing these concerns, such as changes in development, demographics, or weather patterns/climate?	Increasing frequency and severity of extreme rainfall, high wind, tornado, and extreme heat events.

Capabilities Assessment

The following is a general assessment of the community's resiliency and capabilities to mitigate, respond to, and recover from a disaster event. It also notes if mitigation or preparedness has been integrated into planning mechanisms. This assessment was completed by the community through the 2025 web-based survey, with some supplemental information from the community meeting and other sources (e.g., fire department survey, NFIP Community Status Book). The list of potential plans, policies, and other actions is not exhaustive, and it is not expected that the community has undertaken all actions listed or will undertake all actions in the future.

Planning Activities	
Community Emergency Operations or Response Plan (EOP)	Adopted; incorporates mitigation or preparedness. Recently updated.
Community Evacuation Plan and/or Exercises	Adopted; does not incorporate mitigation or preparedness
Continuity of Government Plan	Some continuity planning as part of the EOP.
Comprehensive Plan	Adopted; does not incorporate mitigation or preparedness
Stormwater Management Plan	Adopted; does not incorporate mitigation or preparedness
Historic Preservation Plan or Ordinance	Adopted; does not incorporate mitigation or preparedness
Capital Improvements Plan or Similar Budget	Adopted; does not incorporate mitigation or preparedness
Involve Fire & Law Enforcement in planning & development plan review	Doing this as needed.
Special emergency notification procedures or preparedness plans for vulnerable populations	Safe room at ADS.
Policies, Codes, & Ordinances	
Building Codes	Unknown
Building Code Efficiency Grading Schedule	Unknown
Zoning Ordinance	Adopted; incorporates mitigation or preparedness
Subdivision Ordinance	Adopted; incorporates mitigation or preparedness
Site Plan Review Requirements	Adopted; incorporates mitigation or preparedness
Floodplain Management	
Initial Flood Hazard Boundary Map:	01/09/1974
Initial FIRM Identified:	09/04/1985
Current Effective FIRM Date:	07/06/2010
Date Community First Joined NFIP (Reg-Emer)	09/04/1985
NFIP Participation Status (and reason if not participating):	Participant
Floodplain Regulations w/ NFIP standards:	Adopted
Designated position or committee for floodplain management, floodplain zoning, & NFIP compliance:	Zoning Administrator; then Plan Commission
Other ongoing floodplain management activities:	Addresses stormwater as needed, typically in concert with street improvements
Stormwater Management Ordinance	Adopted; incorporates mitigation or preparedness
Stormwater Utility	Adopted; incorporates mitigation or preparedness
Winter Emergency Policies	Unknown
Mitigation & Preparedness Actions for Facilities	
Debris Site identified for storm debris disposal (not just woody debris)	Site for woody debris available.
Emergency Operations Center designated with generator/back-up power	Yes;

Public Storm Shelter/Community Safe Room designated	Mitigation grant funding for a small safe room at ADS; available to general public after hours. Bank basement also available as a storm shelter.
Public Heating/Cooling Shelter designated with generator/back-up power	Churches used in past as a warming shelter but City uncertain if any facilities formally designated.
Storm/warning siren on back-up power	Yes. Siren replaced in 2011 and motor replaced in 2023. Some public confusion with the different siren tones.
Storm/warning siren that can be activated remotely	Activated by County dispatch
Active shooter/threat plans and/or security hardening for municipal buildings	Yes
Other Mitigation & Preparedness Actions	
Review EOP at least annually	Yes
Individuals in EOP have ICS/NIMS training	Yes
Public Information Officer designated & trained	Yes
Municipal officials and staff participate in regular disaster or emergency response exercises	Partially;
Community-level efforts to improve hazard preparedness among residents	Yes
Adopted billing rates for public works labor & equipment use during emergencies	Limited.
Adopted mutual aid agreements for public works equipment/personnel support	Yes; Good mutual aid with Loyal but haven't conducted a joint exercise recently (since about 1999)
Adopted emergency contracting and purchasing policies	Unknown
Cyber-security systems, off-site/cloud back-up, and recovery policies or plans for municipal records	Yes
Cyber-security systems and policies for municipal utilities	Yes
Municipal buildings/staff have NOAA All Hazards Radios or signed-up for Everbridge	Yes
Other Flood Mitigation projects or activities	None noted
Municipal Dam-related planning or actions	Very small, low hazard dam poses no significant threats.
Barriers to mitigation or preparedness actions	Funding. Noted need for building code training for zoning staff and generator for City Hall.
Other vulnerabilities:	Some long dead-end roads in community could pose challenges for evacuation or access.
Other notes:	Can use utility billing system to push safety messaging and alert/notify phone numbers during an emergency.

Mitigation Strategy Recommendations

The overall mitigation goal statements in Section V of the Clark County mitigation plan are shared by all participating communities.

The community will strive to implement the following mitigation actions/projects as resources and funding allows, though priorities could change due to a variety of fiscal, technical, or other factors, including changes in hazard risks. Sections V of the Clark County mitigation plan includes additional mitigation and preparedness actions that are intergovernmental in nature and not specific to the community, but may suggest coordination and funding opportunities.

The following recommended actions/projects are specific to the community:

Action/Project	Priority & Timeline	Primary Responsible Party	Potential Resources
1. Explore development of a community safe room (storm shelter) for mobile home park, if park residents/ownership express a demand. If a generator and HVAC system are provided, consider using the safe room space as a heating/cooling shelter and/or emergency assembly location. For new safe room construction, consider the incorporation of nature-based stormwater management systems (e.g., rain barrels, rain garden) to mitigate site runoff.	Medium-to-Low; 4-5+ years Timeline could change based on public demand for safe room or building projects.	Residents should express need; City Council	FEMA Hazard Mitigation Grant Programs (BRIC & HMA) FEMA Technical Assistance or Advanced Assistance grant funding could be available to assist with exploring storm hardening options. WCWRPC and Wisconsin Emergency Management can provide grant-related guidance
2. Continue to annually review and update the City's Emergency Operations Plan (EOP). Integrate protocols for using phone numbers in the City's utility billing system for emergency notifications.	High; ongoing	City Clerk & City Emergency Planning Team	County Emergency Management can provide EOP template and guidance, including helping to coordinate exercises.
3. Collaborate with County Emergency Management, fire department, school district, utilities, and other partners to Exercise the Village's Emergency Operations Plan (EOP), including the roles of elected officials, public information officer responsibilities,	Medium-to-High; 2-3 years		

evacuation resources, and crisis communications.			
4. As opportunities allow, collaborate with County Emergency Management and other partners (e.g., Public Health, Red Cross, Electric Provider) to increase: (i) public participation in the County notification system, (ii) awareness of emergency siren use and warning systems (e.g., what do different tones mean), (iii) awareness of availability of the storm shelter at Bank, and (iv) public preparedness in general.	Medium-to-High; ongoing	City Clerk (or designee); Fire Department	County Emergency Management, Public Health, & partners have educational materials Could implement annually during Severe Weather Awareness Week and/or Preparedness Month using social media, posters, utility bill inserts, etc. Share messaging through the City's website and newsletter.
5. As funding allows, install emergency power generators at the City Hall/Police Dept./EOC and Maintenance Building.	Medium-to-Low; 3-5 years as funding allows	City Council & Public Works	Grant funding for generators is very difficult to obtain; more options if part of a larger project. See countywide generator-related recommendation.
6. Collaborate with County Public Health, Red Cross, and facilities/businesses in the City to identify heating and cooling centers if necessary.	Medium; 3-5 years	City Emergency Planning Team	County Public Health. Could be discussed as part of a long-term power outage exercise.

Sub-Plan Coordination and Integration

The previous Capabilities Assessment section identifies how this Mitigation Sub-plan has been integrated into or coordinated with other municipal plans or planning mechanisms. During the planning process, the following opportunities were identified to integrate the mitigation strategies into other community planning mechanisms:

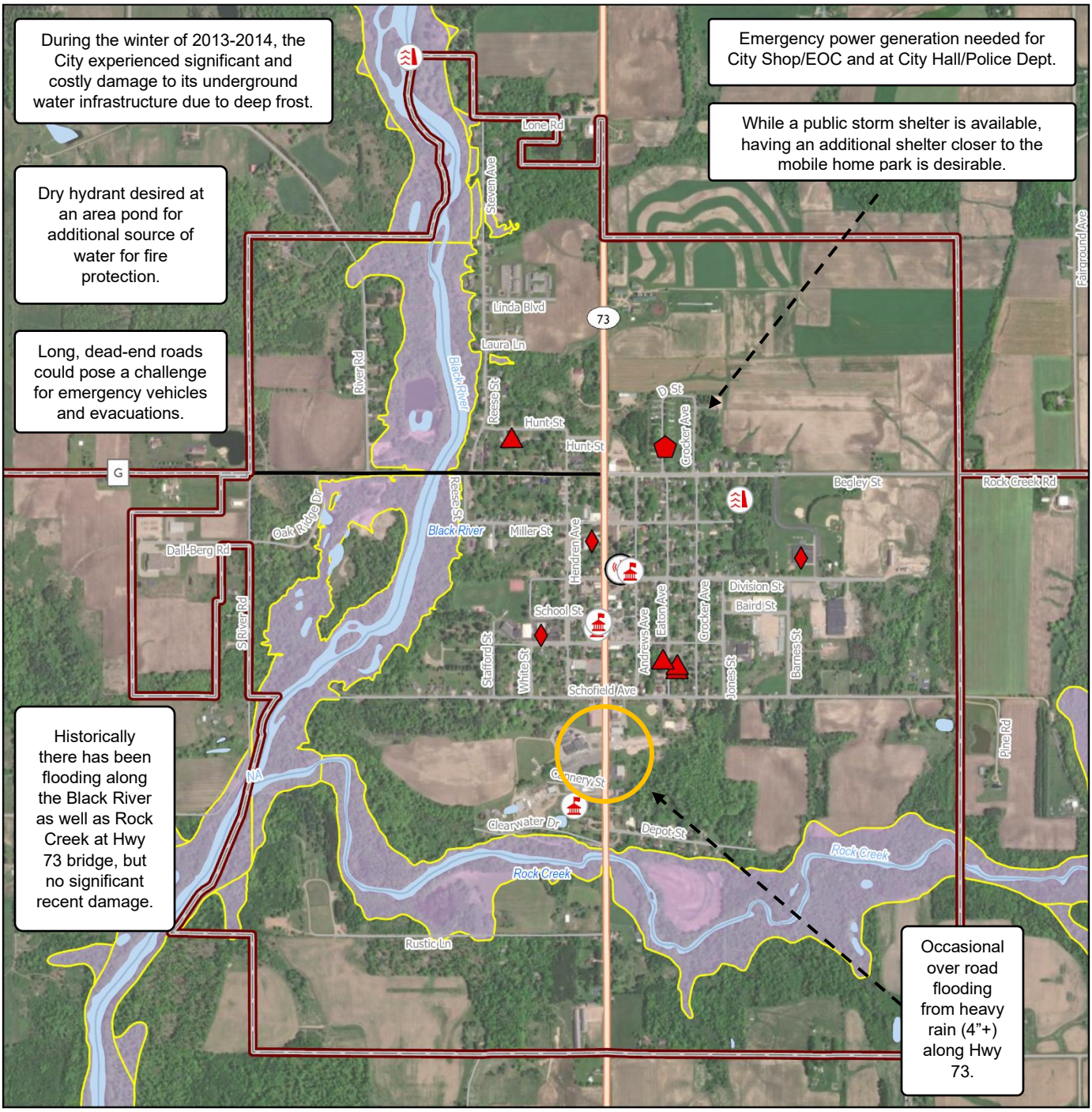
- The City is expected to update its comprehensive plan in the future. This is an opportunity to integrate mitigation strategies, including obtaining public input on the need for additional community safe rooms.
- The capabilities assessment suggested a number of other plans are outdated. Updates of these plans should consider the risks, capabilities, and recommendations in this mitigation plan.
- The next section describes how this Sub-Plan will be maintained, including a periodic review of opportunities to strengthen the coordination and integration with other planning mechanisms.

Sub-Plan Adoption and Maintenance

Plan Adoption	Once updated, the community's governing body will adopt the County's overall hazard mitigation plan (and any future revisions/amendments) by resolution during a noticed public meeting in adherence with Wisconsin Open Meetings laws. This community-specific Hazard Mitigation Sub-Plan is an appendix of the County's overall plan. The community may modify and re-adopt its Sub-Plan by resolution during a noticed public meeting at any time at their discretion.
Plan Maintenance	During the second quarter of each year or following a declared disaster event, the primary mitigation plan contact will review this Mitigation Sub-Plan concurrently with (at the same time as) the annual review of the municipal Emergency Operations Plan. Other municipal and agency officials (e.g., public works, fire department, law enforcement) may be involved in this review or consulted as needed. The Mitigation Sub-Plan will be reviewed for: • Any significant changes in vulnerabilities, priorities, or trends, including to populations, structures, community lifelines, and weather/event patterns. • Any significant changes in capabilities or barriers to plan implementation. • Opportunities to strengthen plan coordination (i.e., integrate mitigation and preparedness into other community planning mechanisms). • Potential new mitigation and preparedness strategies, projects, or grant opportunities. • Any comments or discussion with the public, partners, or other stakeholders. If potential changes to the Sub-Plan are being considered, the planning contact will: 1. The community's planning contact will contact County Emergency Management and West Central Wisconsin Regional Planning Commission (WCWRPC) to discuss the proposed changes and any guidance regarding potential resources and next steps. The community may also request that the County consider changes to the County's overall mitigation plan. 2. Provide the suggested changes to the community's emergency planning committee, plan commission, or governing body for consideration. Should it be determined that a Mitigation Sub-Plan change is needed, the governing body will adopt the Sub-Plan as noted previously. Such changes will be limited to this community-specific Mitigation Sub-Plan. Changes to this Sub-Plan may be made in the future without County Board or other participant re-adoption of the County's overall mitigation plan.
Plan Updates	The community intends to be a full participant in five-year updates of the County's overall hazard mitigation plan, which will include reviewing and updating the information provided in this Mitigation Sub-Plan. Changes to Sub-Plan content may be necessitated by applicable mitigation rules and planning guidance in effect at that time.
Continued Public Participation	The community will provide opportunities for public participation throughout its mitigation planning processes, including: (1) all governing body or committee actions regarding the Sub-Plan shall be conducted in adherence with the Wisconsin Open Meetings rules; (2) public comments will be accepted on draft Sub-Plans and Sub-Plan changes prior to adoption; and (3) public input and ideas on potential risks, vulnerabilities, capabilities, or mitigation projects are welcomed and will be considered.

CITY OF GREENWOOD - HAZARD ASSESSMENT

Clark County - 2026



Legend

- Municipal Boundaries
- 100-yr Floodplain
- Hospital
- School
- Mobile Home Park
- Assisted Living
- Government Building
- Storm Siren
- Dam w/High or Significant Hazard Rating

WCWRPC
WEST CENTRAL WISCONSIN
REGIONAL PLANNING COMMISSION

0 0.23 0.45 0.9 Miles

Data Sources:
Clark County, WDHS, WDNR, WisDOT, WDOA, FEMA, WCWRPC.

CITY OF LOYAL HAZARD MITIGATION SUB-PLAN

This sub-plan identifies past hazard events, risks, trends, capabilities, and strategies unique to or specific to the community and is part of the overall *Clark County Multi-Hazard Mitigation Plan*. The Clark County mitigation plan provides broader context and contains hazard assessments, capabilities, and strategies that are countywide or multi-jurisdictional.

Primary Contact:	City Clerk/Treasurer
Planning Meetings:	• Primary planning meeting with WCWRPC staff occurred on December 7th, 2025. • City participated in a mitigation/preparedness capabilities assessment in December 2025. • Resolution adopting the Hazard Mitigation Plan and Sub-Plan will be approved by City Council at a public meeting and included in Section VII of the main plan document.

Community Profile

This table provides a brief overview of key community characteristics, primarily from the 2020 U.S. Census, which are important to assessing capacity and vulnerabilities. For example, the entire population and all above-ground structures in the community are vulnerable to a tornado event, while mobile homes have an elevated vulnerability.

Population	1,203
Median Age	38.8 years
Uniquely vulnerable populations	Seniors and assisted living residents; mobile home park residents
Assessed Improvements (2025)	Residential: $47,453,900; Commercial: $21,306,200; Manuf.: $2,031,700
# of Housing units	591
# of Mobile Homes	36
Notable Community Lifelines or Critical Facilities	See map at end of sub-plan.

Hazard Risk Assessment

This table describes past hazard events impacting the community and any unique vulnerabilities to each event. This assessment is supplemented by the risk assessment map included at the end of this Mitigation Sub-Plan for the community. Also see the Risk Assessment in Section III of the main text of the Clark County mitigation plan for general risks and vulnerabilities applicable to most or all communities.

Hazard	History & Past Impacts	Vulnerabilities & Potential Impacts
Tornado & High Winds	High wind events, but no tornado touchdowns within City, primarily with tree and roof damage. Strong straight-line winds about 1990 and tornado 2 miles to south in 2006 and 1 mile to south in 2011. A large number of tornado and high wind events in the Loyal area since 2018. EF0 tornado in June 2024. EF1 tornados and high winds in September 2019, December 2021, May 2024, and May 2025. Also a high wind event in Spring 2023.	Most homes have basements. Apartments and assisted living on northwest side, not far from the school. Electric power lines vulnerable; outages have occurred.

Hail & Lightning	Lightning strikes to lift station, water tower, city shop, and bowling alley. Lightning resulted in fire at elderly apartments and one other building.	Unusually high number of damage-causing lightning strikes, but not recently.
Winter Storm, Ice, & Extreme Cold	Numerous frozen lines and breaks in winter of 2013-2014, including 40-50 laterals, 6 mains. Impacted fire protection.	Shallow mains result in breaking in some areas. Aerator added to water tower and water "dripping" by customers to help prevent freeze-ups. Power loss is most significant vulnerability.
Extreme Heat	No unique history noted.	No unique concerns noted. Library available as a cooling shelter when open.
Long-Term Power Outage	A few outages lasting 24+ hours. December 2021 tornado/winds took down power lines resulting in outages in the City. Most significant power loss event was the Spring 2023 event; parts of the City (about 20 homes and liftstation) lost power for 2-3 days and pond aerator was not operational.	Have a generator at fire station, main lift station and one for wells, plus portable. City Hall/EOC/Police Dept without annd senior housing likely without.
Flooding – Riverine or Overbank	Floodwaters have been close to topping the bridge downstream in past. Park and street shoulder damage in 2016 due to flooding; bank along pond washed out. One repetitive loss property in the City of Loyal has had multiple NFIP claims paid with the most recent in 1978, thought the total "payout" appears to be less than $10,000.	No buildings are Debris build-up under the Mill Street bridge can contribute to flooding problems.
Flooding – Stormwater or Overland	Stormwater improvements on northeast side about 1987 alleviated many problems. Some ponding in drainage area on NW side; ditch cleaning has helped. Past problems on SW side hopefully alleviated by 2012 improvements; periodic ditch maintenance in 2019.	See map at end of sub-plan for past problem areas. City monitors these areas but no unique concerns noted at this time.
Dams	No past failures of small, city-owned American Legion Dam.	American Legion Dam has estimated HIGH hazard rating due to development downstream. designed to allow floodwater to overtop the dam (and a downstream bridge) without damage. The dam is in good repair, though floodwaters have occasionally topped the bridge downstream and some bank erosion and street shoulder damage occurred in 2016.
Drought	No unique issues or events noted.	No issues noted; good water quantity. City has been replacing fire hydrants.
Wildfire	No significant events.	No unique concerns noted.
Hazardous Materials Spills	No recent, significant events in the community, though monitoring/cleaning up some old contaminated sites.	Primary concern with some fixed facilities. Limited training for responders. Unsure if adequate clean-up and containment materials are available; WEM survey underway. Increase hazmat awareness capacity for non-fire department responders (e.g., law enforcement, public works).
Active Threats	No significant events in the community. Bomb threats at school in past.	School and Police engage in ALICE training. Police Department works with City Staff on preparedness and discusses with businesses, churches, etc. if requested. Limited security hardening at City Hall.
Cyber-Attack	Phone system hacked in past.	No unique concerns noted. IT consultant utilized. Public Works limits remote access control of utilities.

Notable Trends or Changing Priorities

Have any hazard-related priorities changed since the previous mitigation plan?	None noted.
Are there any other trends influencing these concerns, such as changes in development, demographics, or weather patterns/climate?	Increasing frequency of tornado and strong wind events.

Capabilities Assessment

The following is a general assessment of the community's resiliency and capabilities to mitigate, respond to, and recover from a disaster event. It also notes if mitigation or preparedness has been integrated into planning mechanisms. This assessment was completed by the community through the 2025 web-based survey, with some supplemental information from the community meeting and other sources (e.g., fire department survey, NFIP Community Status Book). The list of potential plans, policies, and other actions is not exhaustive, and it is not expected that the community has undertaken all actions listed or will undertake all actions in the future.

Planning Activities	
Community Emergency Operations or Response Plan (EOP)	Updated and reviewed annually.
Community Evacuation Plan and/or Exercises	Adopted; does not incorporate mitigation or preparedness
Continuity of Government Plan	Unknown
Comprehensive Plan	Adopted; does not incorporate mitigation or preparedness
Stormwater Management Plan	Adopted; does not incorporate mitigation or preparedness
Historic Preservation Plan or Ordinance	Adopted; does not incorporate mitigation or preparedness
Capital Improvements Plan or Similar Budget	Adopted; does not incorporate mitigation or preparedness
Involve Fire & Law Enforcement in planning & development plan review	Doing this as needed.
Policies, Codes, & Ordinances	
Building Codes	Unknown
Building Code Efficiency Grading Schedule	Adopted; does not incorporate mitigation or preparedness
Zoning Ordinance	Adopted; does not incorporate mitigation or preparedness
Subdivision Ordinance	Unknown
Site Plan Review Requirements	Unknown
Floodplain Management	
Initial Flood Hazard Boundary Map:	05/17/1974
Initial FIRM Identified:	09/04/1985
Current Effective FIRM Date:	07/06/2010
Date Community First Joined NFIP (Reg-Emer)	09/04/1985
NFIP Participation Status	Participant
Floodplain Regulations w/ NFIP standards:	Adopted; updated about 2018.
Designated position or committee for floodplain management, floodplain zoning, & NFIP compliance:	Plan Commission
Other ongoing floodplain management activities:	Management of dam.
Stormwater Management Ordinance	Adopted; incorporates mitigation or preparedness
Stormwater Utility	Adopted; incorporates mitigation or preparedness
Winter Emergency Policies	Adopted; does not incorporate mitigation or preparedness
Mitigation & Preparedness Actions for Facilities	
Debris Site identified for storm debris disposal (not just woody debris)	No

Emergency Operations Center designated with generator/back-up power	Yes
Public Storm Shelter/Community Safe Room designated	No public storm shelter. School or Lutheran church may be available; revisit arrangements and agreements. Unsure if shelter agreements are formalized and shelter not advertised; residents unsure where to go. Accessibility concerns and not hardened. Better solution is to partner with School to construct a new safe room. Town & Country mobile home park has a FEMA-funded safe room for park residents. School District partnered with City to pursue FEMA mitigation grant funding in 2021 for construction of a community safe room at the gym but was unsuccessful. This was the very first grant cycle for FEMA's BRIC program and no projects were funded in Wisconsin (and larger region); BRIC's scoring criteria has since been modified so that relatively smaller projects are more competitive. Safe room projects are also more commonly funded under HMGP.
Public Heating/Cooling Shelter designated with generator/back-up power	Yes
Storm/warning siren on back-up power	Yes. Additional siren installed in 2011.
Storm/warning siren that can be activated remotely	Activated by County dispatch
Active shooter/threat plans and/or security hardening for municipal buildings	Planning and training occur but limited hardening.
Other Mitigation & Preparedness Actions	
Review EOP at least annually	Yes.
Individuals in EOP have ICS/NIMS training	Yes; noted desire to encourage basics ICS for elected officials.
Public Information Officer designated & trained	Unknown
Municipal officials and staff participate in regular disaster or emergency response exercises	Yes
Community-level efforts to improve hazard preparedness among residents	Some; no formal initiative.
Adopted billing rates for public works labor & equipment use during emergencies	No; sharing of equipment available if needed and will be adopting resolutions for equipment rates
Adopted mutual aid agreements for public works equipment/personnel support	Good relationship with other communities; 'handshake" mutual aid agreement
Adopted emergency contracting and purchasing policies	Yes
Cyber-security systems, off-site/cloud back-up, and recovery policies or plans for municipal records	Yes
Cyber-security systems and policies for municipal utilities	Yes
Municipal buildings/staff have NOAA All Hazards Radios or signed up for Everbridge	Unknown
Other Flood Mitigation projects or activities	Stormwater improvements completed in past have remedied most significant flooding problems
Municipal Dam-related planning or actions	IOM & EAP are up to date.
Barriers to mitigation or preparedness actions	Funding,
Other vulnerabilities:	City has two large mills but no ladder trucks.
Other:	Maintains 5-year capital improvement plan for projects. Uses digital message board for general announcements

Mitigation Strategy Recommendations

The overall mitigation goal statements in Section V.A. of the Clark County mitigation plan are shared by all participating communities. The community will strive to implement the following mitigation actions/projects as resources and funding allows, though priorities could change due to a variety of fiscal, technical, or other factors, including changes in hazard risks. Sections V of the Clark County mitigation plan includes additional mitigation and preparedness actions that are intergovernmental in nature and not specific to the community, but may suggest coordination and funding opportunities.

The following recommended actions/projects are specific to the community:

Action/Project	Priority & Timeline	Primary Responsible Party	Potential Resources
1. Collaborate with the School District and churches to explore designation or development of a community safe room (storm shelter). Review and update storm shelter agreements and protocols as needed. If a generator and HVAC system are provided, consider using the safe room space as a heating/cooling shelter, reunification site, and emergency assembly location. Collaborate with the mobile home park ownership to ensure that the Town & Country safe room is maintained and available in accordance with its operations and maintenance plan.	Medium; 3-5 years Timeline could change based on public demand for safe room or grant funding for new safe room construction.	City Council & School District Town & Country Mobile Home Park Ownership	If the School District no longer intends to construct a safe room, then City may explore other locations or attempt to update/secure storm shelter agreements at existing facilities. For safe room and storm hardening grant funding… FEMA Hazard Mitigation Grant Programs (BRIC & HMA) FEMA Technical Assistance or Advanced Assistance grant funding could be available to assist with exploring storm hardening options. WCWRPC and Wisconsin Emergency Management can provide grant-related guidance
5. Continue to maintain the American Legion Dam, including its IOM Plan and Emergency Action Plan. Prevent debris build-up at Mill Street bridge downstream.	High; ongoing	City Public Works	Plans, repairs, and improvements eligible for WDNR Municipal Dam Grant
4. As funding allows, install emergency power generator at the City Hall/Police Dept./EOC.	Med-to-High; as funding allows	City Public Works; City Council	Grant funding for generators is very difficult to obtain; more options if part of a larger project. See countywide generator-related recommendation.

4. Explore the creation of an urban forestry program to address older, dying trees and species susceptible to disease or insects that may be more vulnerable to high winds and ice.	Medium-to-Low; 3-5 years	City Council to discuss	WDNR Urban Forest Grants
2. Update and implement the City's Stormwater Management Plan. Keep stormwater drainageways within the City clear of debris and objections to prevent flooding. If needed, explore regulatory and enforcement options.	Medium-to-High; 1-3 years	City Public Works; City Plan Commission and Council	Regulatory/enforcement options would likely require legal counsel.
3. Update and annually review the City's Emergency Operations Plan (EOP). Encourage local official and key staff training in the Incident Command System. With participation of local elected officials and assistance of County Emergency Management, exercise the City's EOC through a HazMat spill and/or tornado/long-term power outage exercises.	High; ongoing	Fire Department	County Emergency Management can provide a template and guidance.
4. As opportunities allow, collaborate with County Emergency Management and other partners (e.g., Public Health, Red Cross, Electric Provider) to increase public participation in the County's emergency notification system, awareness of emergency siren use and warning systems, and public preparedness in general.	Medium-to-High; ongoing	City Administrator (or designee); Fire Department	County Emergency Management & partners have educational materials Could implement annually during Severe Weather Awareness Week and/or Preparedness Month using social media, posters, utility bill inserts, etc.

Sub-Plan Coordination and Integration

The previous Capabilities Assessment section identifies how this Mitigation Sub-plan has been integrated into or coordinated with other municipal plans or planning mechanisms. During the planning process, the following opportunities were identified to integrate the mitigation strategies into other community planning mechanisms:

- The City recently updated its comprehensive plan, which considered hazard mitigation strategies.
- The City will continue to integrate stormwater and dam projects into its capital improvements plan.
- Updates of the Emergency Operations Plan provide a good opportunity to identify training needs, discuss storm shelter availability, and prioritize public education outreach.

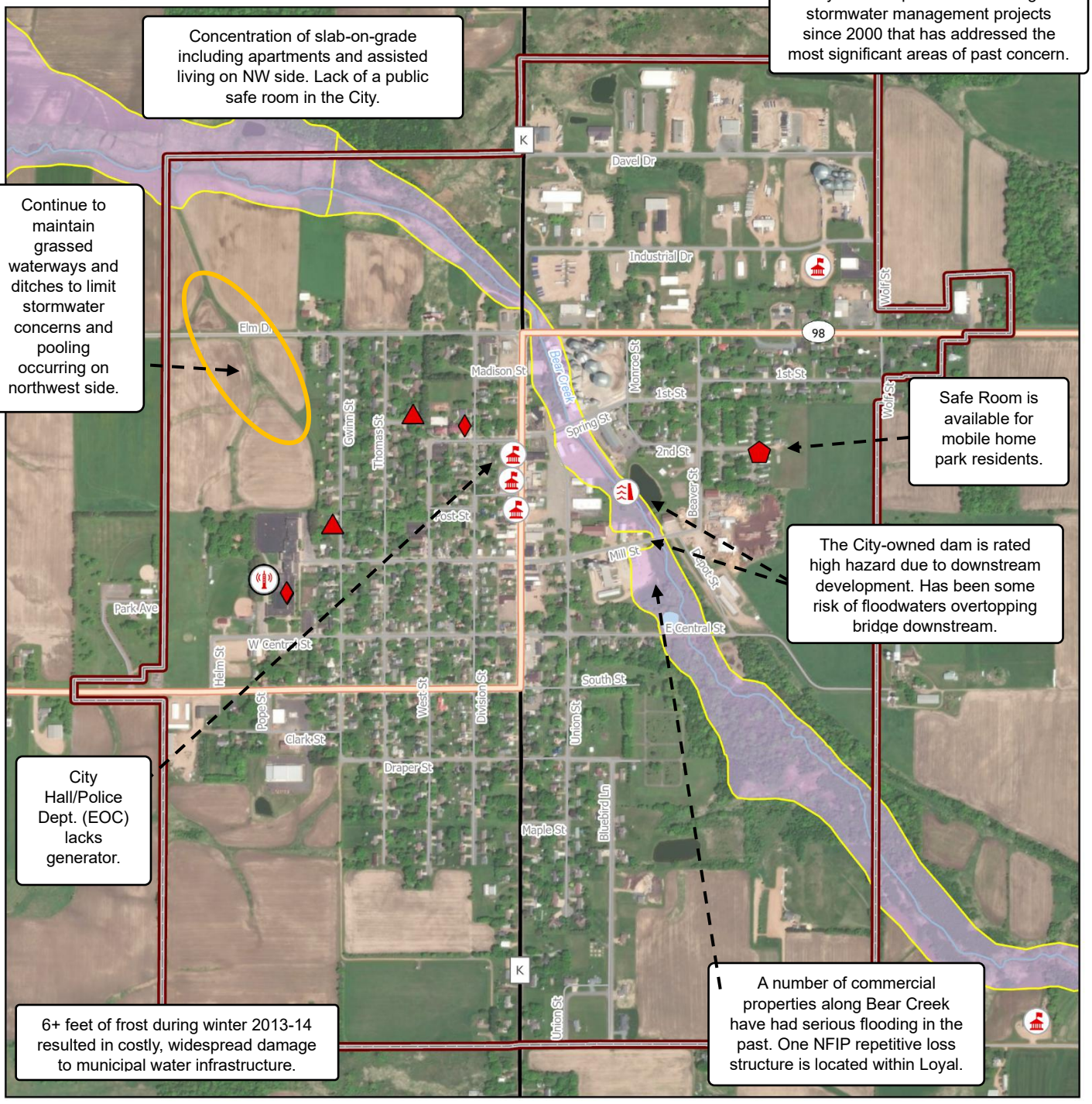
- The next section describes how this Sub-Plan will be maintained, including a periodic review of opportunities to strengthen the coordination and integration with other planning mechanisms.

Sub-Plan Adoption and Maintenance

Plan Adoption	Once updated, the community's governing body will adopt the County's overall hazard mitigation plan (and any future revisions/amendments) by resolution during a noticed public meeting in adherence with Wisconsin Open Meetings laws. This community-specific Hazard Mitigation Sub-Plan is an appendix of the County's overall plan. The community may modify and re-adopt its Sub-Plan by resolution during a noticed public meeting at any time at their discretion.
Plan Maintenance	During the second quarter of each year or following a declared disaster event, the primary mitigation plan contact will review this Mitigation Sub-Plan concurrently with (at the same time as) the annual review of the municipal Emergency Operations Plan. Other municipal and agency officials (e.g., public works, fire department, law enforcement) may be involved in this review or consulted as needed. The Mitigation Sub-Plan will be reviewed for: • Any significant changes in vulnerabilities, priorities, or trends, including to populations, structures, community lifelines, and weather/event patterns. • Any significant changes in capabilities or barriers to plan implementation. • Opportunities to strengthen plan coordination (i.e., integrate mitigation and preparedness into other community planning mechanisms). • Potential new mitigation and preparedness strategies, projects, or grant opportunities. • Any comments or discussion with the public, partners, or other stakeholders. If potential changes to the Sub-Plan are being considered, the planning contact will: 1. The community's planning contact will contact County Emergency Management and West Central Wisconsin Regional Planning Commission (WCWRPC) to discuss the proposed changes and any guidance regarding potential resources and next steps. The community may also request that the County consider changes to the County's overall mitigation plan. 2. Provide the suggested changes to the community's emergency planning committee, plan commission, or governing body for consideration. Should it be determined that a Mitigation Sub-Plan change is needed, the governing body will adopt the Sub-Plan as noted previously. Such changes will be limited to this community-specific Mitigation Sub-Plan. Changes to this Sub-Plan may be made in the future without County Board or other participant re-adoption of the County's overall mitigation plan.
Plan Updates	The community intends to be a full participant in five-year updates of the County's overall hazard mitigation plan, which will include reviewing and updating the information provided in this Mitigation Sub-Plan. Changes to Sub-Plan content may be necessitated by applicable mitigation rules and planning guidance in effect at that time.
Continued Public Participation	The community will provide opportunities for public participation throughout its mitigation planning processes, including: (1) all governing body or committee actions regarding the Sub-Plan shall be conducted in adherence with the Wisconsin Open Meetings rules; (2) public comments will be accepted on draft Sub-Plans and Sub-Plan changes prior to adoption; and (3) public input and ideas on potential risks, vulnerabilities, capabilities, or mitigation projects are welcomed and will be considered.

CITY OF LOYAL - HAZARD ASSESSMENT

Clark County - 2026



Legend

- Municipal Boundaries
- 100-yr Floodplain
- Hospital
- School
- Mobile Home Park
- Assisted Living
- Government Building
- Storm Siren
- Dam w/High or Significant Hazard Rating

WEST CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION

0 0.15 0.3 0.6 Miles

Data Sources:
Clark County, WDHS, WDNR, WisDOT, WDOA, FEMA, WCWRPC.

N

CITY OF NEILLSVILLE HAZARD MITIGATION SUB-PLAN

This sub-plan identifies past hazard events, risks, trends, capabilities, and strategies unique to or specific to the community and is part of the overall *Clark County Multi-Hazard Mitigation Plan*. The Clark County mitigation plan provides broader context and contains hazard assessments, capabilities, and strategies that are countywide or multi-jurisdictional.

Primary Contact:	City Administrator
Planning Meetings:	• Primary planning meeting with WCWRPC staff occurred on August 13th, 2025. • Resolution adopting the Hazard Mitigation Plan and Sub-Plan will be approved by City Council at a public meeting and included in Section VII of the main plan document.

Community Profile

This table provides a brief overview of key community characteristics, primarily from the 2020 U.S. Census, which are important to assessing capacity and vulnerabilities. For example, the entire population and all above-ground structures in the community are vulnerable to a tornado event, while mobile homes have an elevated vulnerability.

Population	2,384
Median Age	44.9 years
Uniquely vulnerable populations	Seniors; mobile home park residents; school students; economic disadvantaged community
Assessed Improvements (2025)	Residential: $81,091,400; Commercial: $36,846,900; Manuf.: $6,621,100
# of Housing units	1,222
# of Mobile Homes	6
Notable Community Lifelines or Critical Facilities	See map at end of sub-plan.

Hazard Risk Assessment

This table describes past hazard events impacting the community and any unique vulnerabilities to each event. This assessment is supplemented by the risk assessment map included at the end of this Mitigation Sub-Plan for the community. Also see the Risk Assessment in Section III of the main text of the Clark County mitigation plan for general risks and vulnerabilities applicable to most or all communities.

Hazard	History & Past Impacts	Vulnerabilities & Potential Impacts
Tornado & High Winds	No significant recent events impacting City, though increase in high wind and tornado events over past decade. Tornados in area in September 2019 (EF1), December 2021 (EF2), May 2024 (EF1), June 2024 (EF0), and May 2025 (EF1). Wind damage within the City primarily from falling trees/limbs and to roofs.	Most of mobile homes are tied down and safe room available for mobile home park residents. Some newer slab-on-grade and townhouses w/o safe rooms, but not located in a single area to make a shelter feasible. Limited, non-public camping at Fairgrounds. Large-span buildings at grade within business park.
Hail & Lightning	Lightning strikes at wastewater plant about once every 2-3 years results in damage.	No unique vulnerabilities noted.

Winter Storm, Ice, & Extreme Cold	Winter 2013-2014 included 8-10 main breaks and 15-20 lateral breaks that were due to a 6+ feet deep frost. 5-6 lateral breaks are not uncommon each winter.	"Dripping policy" used to prevent breaks; a handful of structures particularly vulnerable. Power outages the greatest winter-related concern.
Extreme Heat	No unique history noted.	No unique concerns noted. Library available as a cooling shelter if needed.
Long-Term Power Outage	No history of long-term outages of 3+ days.	Good tree trimming. The school and hospital have generators. None at City Hall/Police/EOC or at Fire Hall (potential EOC). Wastewater plant, 2 of 4 wells, and booster plant have fixed generators. Portable available for remaining public utility locations. Nursing care/senior living may have needs.
Flooding – Riverine or Overbank	No recent history on Black River Flooding on O'Neill Creek, especially in Grand Ave. and 8th St area, including 6 NFIP claims on 2 properties (both repetitive loss properties). Last serious flooding of O'Neill Creek in September 2016.	City has undertaken mitigation efforts along O'Neill Creek, including utilizing FEMA flood mitigation grant funding to acquire 1 repetitive loss and other floodprone properties that are now open space.
Flooding – Stormwater or Overland	3" to 5" of rain in a short period will result in widespread basement flooding and "pop" manhole covers, especially along 18th Street and Grand. Not in floodplain, so can be a surprise to homeowners, though a few have flood insurance. Some basement and building flooding along Goose Creek not uncommon and significant flooding about once a decade. Goose Creek drainageway is largely underground and runs under buildings; many residents likely does not know it exists. Some stormwater infiltration into wastewater system.	Basement flooding occurs throughout much of the community with scattered backflow and infiltration issues for wastewater system.
Dams	No modern history of dam failure impacting City of Neillsville.	Two small hazard dams are located are owned by the City—Neillsville Dam (O'Neill Creek) and Northside Park Dam (a small park impoundment). Neillsville Dam rebuilt in 2003. These are low-hazard dams with no significant concerns.
Drought	No significant impacts within the City from past droughts.	No unique concerns noted. Water quantity for fire protection has generally been adequate with no significant restrictions on water use; encourages greater conservation in drought periods or limited use if needed. Dry hydrant could be added at pond.
Wildfire	No significant events.	Forested area on west side of City along river; risks are elevated during drought periods. Town of Pine Valley rated by WDNR as "community-of-concern" for wildfire.
Hazardous Materials Spills	No significant events in the community.	Truck traffic on USH 10 & STH 73 largest concerns. Quarries near wellheads; maintain communications with quarry owners and town to protect. Participates in county-wide training.
Active Threats	No significant events in the community. Some threats at school but no incidents.	School is likely largest potential target. City Police collaborates with school on active threats training.
Cyber-Attack	No significant incidents to date. One local business was the target of a ransomware cyberattack.	City has IT technical support and cyber-insurance.

Notable Trends or Changing Priorities

Have any hazard-related priorities changed since the previous mitigation plan?	Potential increasing power outage potential. Increased active threat training and cyber-hygiene/security.
Are there any other trends influencing these concerns, such as changes in development, demographics, or weather patterns/climate?	Increasing frequency of high wind and tornado events. With changing weather patterns, increased potential for freezing rain events.

Capabilities Assessment

The following is a general assessment of the community's resiliency and capabilities to mitigate, respond to, and recover from a disaster event. It also notes if mitigation or preparedness has been integrated into planning mechanisms. This assessment was completed by the community through the 2025 web-based survey, with some supplemental information from the community meeting and other sources (e.g., fire department survey, NFIP Community Status Book). The list of potential plans, policies, and other actions is not exhaustive, and it is not expected that the community has undertaken all actions listed or will undertake all actions in the future.

Planning Activities	
Community Emergency Operations or Response Plan (EOP)	Adopted; does not incorporate mitigation or preparedness
Community Evacuation Plan and/or Exercises	Limited to school and assisted living facilities
Continuity of Government Plan	No
Comprehensive Plan	Updated and incorporates the mitigation plan.
Stormwater Management Plan	General plan as well as project-specific planning.
Historic Preservation Plan or Ordinance	No
Capital Improvements Plan or Similar Budget	Maintains a capital improvements plan with stormwater management projects.
Involve Fire & Law Enforcement in planning & development plan review	Doing this as needed.
Special emergency notification procedures or preparedness plans for vulnerable populations	For school and assisted living facilities
Policies, Codes, & Ordinances	
Building Codes	Adopted; does not incorporate mitigation or preparedness
Building Code Efficiency Grading Schedule	Yes
Zoning Ordinance	Adopted; does not incorporate mitigation or preparedness
Subdivision Ordinance	Adopted; does not incorporate mitigation or preparedness
Site Plan Review Requirements	As part of conditional use permitting
Floodplain Management	
Initial Flood Hazard Boundary Map:	01/16/1974
Initial FIRM Identified:	07/17/1978
Current Effective FIRM Date:	07/06/2010
Date Community First Joined NFIP (Reg-Emer)	07/17/1978
NFIP Participation Status (and reason if not participating):	Participant
Floodplain Regulations w/ NFIP standards:	Recently updated
Designated position or committee for floodplain management, floodplain zoning, & NFIP compliance:	City Public Works Director; then Plan Commission
Other ongoing floodplain management activities:	City has used FEMA mitigation grant funding for the acquisition of floodprone properties

Stormwater Management Ordinance	Adopted
Stormwater Utility	No
Winter Emergency Policies	Adopted for parking & snow removal.
Mitigation & Preparedness Actions for Facilities	
Debris Site identified for storm debris disposal (not just woody debris)	Limited to woody debris
Emergency Operations Center designated with generator/back-up power	No.
Public Storm Shelter/Community Safe Room designated	Only for mobile home park. School or courthouse available for general public if opened but not advertised for such. Explore potential use, hardening if needed, and remote unlock. Fairgrounds also lacks storm shelter or safe room.
Public Heating/Cooling Shelter designated with generator/back-up power	No formal designation.
Storm/warning siren on back-up power	3 sirens with good coverage. Older but with newer electronics. No battery backup.
Storm/warning siren that can be activated remotely	Activated by County dispatch
Active shooter/threat plans and/or security hardening for municipal buildings and school	Good ALERT training. School has increased security and working with City Police on ALICE training; dispatch has school floor plans, which have been digitized for emergency vehicles. County has tactical response training. Very limited hardening at City Hall. More funding may be needed for related PPE and exercises. Law enforcement outreach has also occurred to businesses and churches.
Other Mitigation & Preparedness Actions	
Review EOP at least annually	Update needed.
Individuals in EOP have ICS/NIMS training	Some, but not all
Public Information Officer designated & trained	No; planning or considering implementation
Municipal officials and staff participate in regular disaster or emergency response exercises	No; planning or considering implementation
Community-level efforts to improve hazard preparedness among residents	No formal community-wide preparedness initiatives. Some messaging through social media.
Adopted billing rates for public works labor & equipment use during emergencies	Have adopted WisDOT equipment billing rates.
Adopted mutual aid agreements for public works equipment/personnel support	Participates in exercises & mutual aid for emergency services. MABAS adopted by Fire Department. "Handshake agreement" for public works.
Adopted emergency contracting and purchasing policies	No; planning or considering implementation
Cyber-security systems, off-site/cloud back-up, and recovery policies or plans for municipal records	Yes
Cyber-security systems and policies for municipal utilities	Yes
Municipal buildings/staff have NOAA All Hazards Radios or signed up for Everbridge	Not all
Other Flood Mitigation projects or activities	Acquired multiple flood-prone properties with FEMA mitigation dollars, including 1 repetitive structure loss
Municipal Dam-related planning or actions	Neillsville Dam rebuilt in 2003 and in good condition; no related issues.
Barriers to mitigation or preparedness actions	Limited funding and staff time; some mitigation actions would be dependent on grant funding.
Other:	Public Works radio coverage gaps. Explore agreement with County to allow law enforcement response beyond City limits.

Mitigation Strategy Recommendations

The overall mitigation goal statements in Section V of the Clark County mitigation plan are shared by all participating communities. The community will strive to implement the following mitigation actions/projects as resources and funding allows, though priorities could change due to a variety of fiscal, technical, or other factors, including changes in hazard risks. Sections V of the Clark County mitigation plan includes additional mitigation and preparedness actions that are intergovernmental in nature and not specific to the community, but may suggest coordination and funding opportunities.

The following recommended actions/projects are specific to the community:

Action/Project	Priority & Timeline	Primary Responsible Party	Potential Resources
1. Explore designation or development of a community safe room (storm shelter). This could include on or more of the following: • Identifying, and potentially hardening, an existing building such as the Post Office. • Partnering with the County for a safe room at the Fairgrounds. • Partnering with the School District. • Exploring safe room options for industrial park employees. If a generator and HVAC system are provided, consider using the safe room space as a heating/cooling shelter and emergency assembly location. Collaborate with mobile home park ownership to ensure that the existing safe room is maintained and available in accordance with its operations and maintenance plan.	Medium; 3-5 years Timeline could change based on public demand for safe room or building projects.	Residents or industry should express need; City Council School District	FEMA Hazard Mitigation Grant Programs (BRIC & HMA) FEMA Technical Assistance or Advanced Assistance grant funding could be available to assist with exploring storm hardening options. WCWRPC and Wisconsin Emergency Management can provide grant-related guidance
2. As funding allows, install an emergency power generator at the City Hall and Police Dept/EOC.	Med-to-High; as funding allows	City Public Works; City Council	Grant funding for generators is very difficult to obtain; more options if part of a larger project. See countywide generator-related recommendation.
3. Continue to maintain the Neillsville Dam, including its IOM Plan and Emergency Action Plan.	High; ongoing	City Public Works	Plans, repairs, and improvements eligible for WDNR Municipal Dam Grant

4. Continue to monitor flooding within the community especially in light of the increasing frequency of heavy rain events and growth. Continue to update and implement the City's Stormwater Management Plan. Explore mitigation actions, such as hydraulic analysis, additional flood retention, or, if buildings are impacted, considering structural mitigation projects such as floodproofing.	Medium-to-High; ongoing	City Public Works; City Plan Commission and Council	For special flood studies and mitigation actions, consider FEMA Flood Mitigation Assistance (FMA) or Wisconsin Pre-Disaster Flood Resilience Grant. FEMA grant funding may be feasible if larger project and can demonstrate that the benefits (i.e., addressing past or unavoidable losses) outweigh estimated project costs.
5. Update and annually review the City's Emergency Operations Plan (EOP). City elected officials and key staff are encouraged to participate in basic ICS training and/or targeted training for elected officials. Conduct exercises (e.g. severe weather, active threat, power outage, HazMat spill) to test the EOP with an emphasis on crisis communication and coordination between partners.	High; ongoing	City Public Works; may delegate responsibility	County Emergency Management can provide a template and guidance.
6. Continue to strengthen active threat preparedness and resiliency in the community including: • Law enforcement collaboration with the school district on ALICE training. • Encourage security hardening of public and private places as deemed appropriate. • Encouraging preparedness planning and traffic control for the Fairgrounds and large gatherings • Conduct joint exercises with clarifying roles and expectations. • Collaborate to effectively address resource and training/skills needs.	High; Ongoing	City Police Department School District County Sheriff's Department	Through partnerships, a variety of resources are available to help address priorities. Utilize exercises to jointly identify needs and leverage local resources. Joint exercises and planning may also help identify efficiencies, equipment needs, mitigate liabilities, and lead to multi-agency procurement and agreements.
7. Collaborate with County Public Health to identify heating/cooling centers and related operational protocols. Consider former City Hall as a possible location.	Medium-to-Low; 2-5 years	City Clerk	County Public Works

8. As opportunities allow, collaborate with County Emergency Management and other partners (e.g., Public Health, Red Cross, Electric Provider) to increase public participation in the County's emergency notification system, awareness of emergency siren use and warning systems, and public preparedness in general. WCCI radio and Clark County Press have been important partners in distributing preparedness messaging.	Medium-to-High; ongoing	City Public Works (or designee); Fire Department	County Emergency Management & partners have educational materials Could implement annually during Severe Weather Awareness Week and/or Preparedness Month using social media, posters, utility bill inserts, etc.

Sub-Plan Coordination and Integration

The previous Capabilities Assessment section identifies how this Mitigation Sub-plan has been integrated into or coordinated with other municipal plans or planning mechanisms. During the planning process, the following opportunities were identified to integrate the mitigation strategies into other community planning mechanisms:

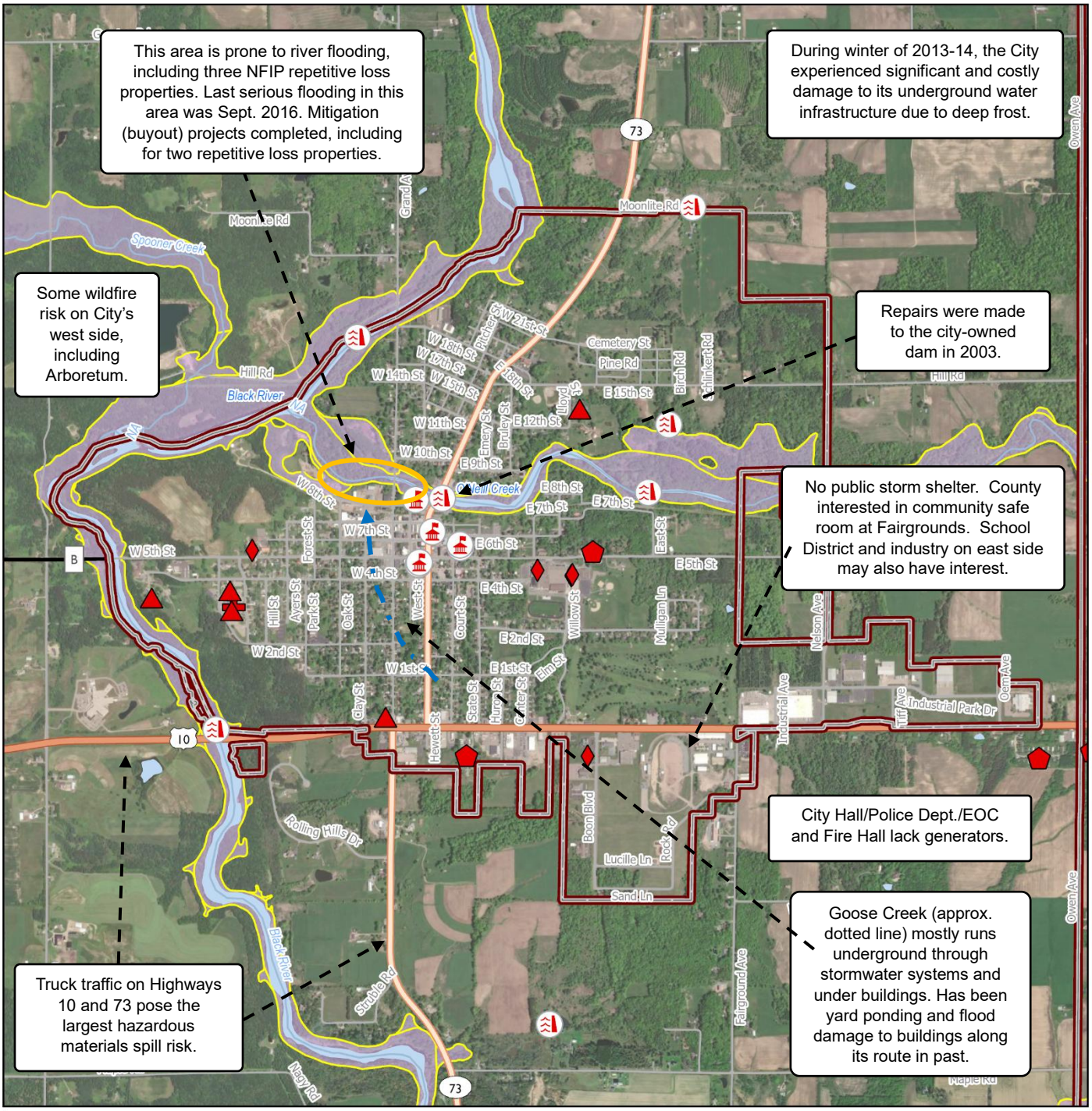
- The City has adopted a Comprehensive Plan that includes strong coordination with the mitigation plan. This sub-plan should be integrated with the next Comp Plan update.
- Needed stormwater improvements and physical mitigation actions should be integrated into the City's capital improvements plan. The City has also utilized tax incremental financing for some infrastructure projects in the past as well.
- The Neillsville School District's mitigation sub-plan also includes active shooter, safe room, and preparedness strategies that have been considered and benefit community resiliency overall.
- Collaborate with County Emergency Management to integrate training/exercises into the County Integrated Preparedness Plan.
- The next section describes how this Sub-Plan will be maintained, including a periodic review of opportunities to strengthen the coordination and integration with other planning mechanisms.

Sub-Plan Adoption and Maintenance

Plan Adoption	Once updated, the community's governing body will adopt the County's overall hazard mitigation plan (and any future revisions/amendments) by resolution during a noticed public meeting in adherence with Wisconsin Open Meetings laws. This community-specific Hazard Mitigation Sub-Plan is an appendix of the County's overall plan. The community may modify and re-adopt its Sub-Plan by resolution during a noticed public meeting at any time at their discretion.
Plan Maintenance	During the second quarter of each year or following a declared disaster event, the primary mitigation plan contact will review this Mitigation Sub-Plan concurrently with (at the same time as) the annual review of the municipal Emergency Operations Plan. Other municipal and agency officials (e.g., public works, fire department, law enforcement) may be involved in this review or consulted as needed. The Mitigation Sub-Plan will be reviewed for: • Any significant changes in vulnerabilities, priorities, or trends, including to populations, structures, community lifelines, and weather/event patterns. • Any significant changes in capabilities or barriers to plan implementation. • Opportunities to strengthen plan coordination (i.e., integrate mitigation and preparedness into other community planning mechanisms). • Potential new mitigation and preparedness strategies, projects, or grant opportunities. • Any comments or discussion with the public, partners, or other stakeholders. If potential changes to the Sub-Plan are being considered, the planning contact will: 1. The community's planning contact will contact County Emergency Management and West Central Wisconsin Regional Planning Commission (WCWRPC) to discuss the proposed changes and any guidance regarding potential resources and next steps. The community may also request that the County consider changes to the County's overall mitigation plan. 2. Provide the suggested changes to the community's emergency planning committee, plan commission, or governing body for consideration. Should it be determined that a Mitigation Sub-Plan change is needed, the governing body will adopt the Sub-Plan as noted previously. Such changes will be limited to this community-specific Mitigation Sub-Plan. Changes to this Sub-Plan may be made in the future without County Board or other participant re-adoption of the County's overall mitigation plan.
Plan Updates	The community intends to be a full participant in five-year updates of the County's overall hazard mitigation plan, which will include reviewing and updating the information provided in this Mitigation Sub-Plan. Changes to Sub-Plan content may be necessitated by applicable mitigation rules and planning guidance in effect at that time.
Continued Public Participation	The community will provide opportunities for public participation throughout its mitigation planning processes, including: (1) all governing body or committee actions regarding the Sub-Plan shall be conducted in adherence with the Wisconsin Open Meetings rules; (2) public comments will be accepted on draft Sub-Plans and Sub-Plan changes prior to adoption; and (3) public input and ideas on potential risks, vulnerabilities, capabilities, or mitigation projects are welcomed and will be considered.

CITY OF NEILLSVILLE - HAZARD ASSESSMENT

Clark County - 2026



Legend

- Municipal Boundaries
- 100-yr Floodplain
- Hospital
- School
- Mobile Home Park
- Assisted Living
- Government Building
- Storm Siren
- Dam w/High or Significant Hazard Rating

WEST CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION

0 0.33 0.65 1.3 Miles

Data Sources: Clark County, WDHS, WDNR, WisDOT, WDOA, FEMA, WCWRPC.

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CITY OF OWEN HAZARD MITIGATION SUB-PLAN

This sub-plan identifies past hazard events, risks, trends, capabilities, and strategies unique to or specific to the community and is part of the overall *Clark County Multi-Hazard Mitigation Plan*. The Clark County mitigation plan provides broader context and contains hazard assessments, capabilities, and strategies that are countywide or multi-jurisdictional.

Primary Contact:	Director of Public Works
Planning Meetings:	• Primary planning meeting with WCWRPC staff occurred on August 7th, 2025. • City participated in a mitigation/preparedness capabilities assessment in September 2025. • Resolution adopting the Hazard Mitigation Plan and Sub-Plan will be approved by City Council at a public meeting and included in Section VII of main plan document.

Community Profile

This table provides a brief overview of key community characteristics, primarily from the 2020 U.S. Census, which are important to assessing capacity and vulnerabilities. For example, the entire population and all above-ground structures in the community are vulnerable to a tornado event, while mobile homes have an elevated vulnerability.

Population	916
Median Age	45.6 years
Uniquely vulnerable populations	Seniors; mobile home park residents; campers; Economic disadvantaged community
Assessed Improvements (2024)	Residential: $42,527,700; Commercial: $22,376,000; Manuf.: $9,490,800
# of Housing units	460
# of Mobile Homes	26
Notable Community Lifelines or Critical Facilities	See map at end of sub-plan.

Hazard Risk Assessment

This table describes past hazard events impacting the community and any unique vulnerabilities to each event. This assessment is supplemented by the risk assessment map included at the end of this Mitigation Sub-Plan for the community. Also see the Risk Assessment in Section III of the main text of the Clark County mitigation plan for general risks and vulnerabilities applicable to most or all communities.

Hazard	History & Past Impacts	Vulnerabilities & Potential Impacts
Tornado & High Winds	Tornado close by in 2013, July 2019 (EF1), December 2021 (EF1), and June 2024 (EF1). Very high winds in August 2023. Some wind damage to roofs and siding, but mostly tree damage.	Two mobile home parks, some apartments, and other slab-on-grade homes (especially on City's east side) have higher risk. Camping at park with 12 slots. Safe room with generator available to public at school.
Hail & Lightning	Some past lightning strikes to communications tower/repeater and at water facilities. Lighting strike of liftstation in 2025 required computer replacement.	No unique concerns noted.

Winter Storm, Ice, & Extreme Cold	Some water main breaks w/ damage to streets along S. Harding St in past; more of an issue with laterals in older neighborhoods where not buried as deep. Some roof damage due to heavy snow loads in 2019.	Replacing mains as streets replaced. Mitigate by directing residents to "trickle" water if needed. Can be difficult to keep up with drifting on some area roads.
Extreme Heat	No unique history noted.	No unique concerns noted. No cooling shelter activated.
Long-Term Power Outage	Some areas of City lost power for about 24 hours in Dec 2021 and Aug 2023 wind/tornado events.	Wastewater plant and main liftstation have fixed generators. Portable available for well and smaller liftstations. Generator needed for Fire Hall and City Hall/Police/EOC. Additional portable generators for utilities needed.
Flooding – Riverine or Overbank	No significant structure damage since 1997. River rises in spring, though overflow has mitigated the worst. 3 NFIP claims in past. Restrooms at campground commonly flooded. Some water over road at bridge in past.	Sizable 100-year floodplain includes infrastructure and near some structures. No actionable concerns noted by the community at this time but continue to monitor given increasing frequency of heavy rain events. Significant concern with log jamming on Popple River under Highway 29 south of City; could damage highway bridge/overpass, be a danger to highway traffic, and result in the back-up for floodwaters within the City.
Flooding – Stormwater or Overland	Flood waters can go around dam on Mattson St. and flood the park due to heavy rains and/or frozen ground but hasn't occurred since about 2015. Stormwater drainage from north of Coleman St.; some past localized flooding. Some recent flooding in Clark Drive and dog park area. Ice damming can be a problem along "D" and "X" if big rain/melt and culverts frozen.	Primarily impacting roadways with some yard ponding and limited basement flooding in past.
Dams	Small, City-owned dam with a "significant" hazard rating. Owen Park Dam is managed for recreation and flood control. No significant dam failure events, though it has been overtopped on occasion in past. In June of 1980, the Popple River #1 Dam at Sportsman's Lake outside City spilled over and flooded parts of the City of Owen; repairs have addressed this threat.	Regularly inspected. New stop logs installed on west side in 2016; manually must be removed which is a safety concern under flood and/or icy conditions. Improved communication with dam owners upstream and downstream allows for more proactive opening of flood gates, thus reducing flood and dam damage potential.
Drought	No significant impacts within the City from past droughts.	Good well capacity. No unique concerns noted.
Wildfire	No significant events.	No unique issues noted.
Hazardous Materials Spills	No significant events in the community. Crude oil pipeline failed nearby in 2007 releasing about 50,000-60,000 gallons.	Railroad (including sweet crude oil), truck traffic on Highway 29, two fixed industries, and oil pipeline are largest concerns. Fire Department has Ops-level HazMat training.
Active Threats	No significant events in the community.	School and, to a lesser extent, City Hall likely the most significant vulnerable places. No unique concerns noted.
Cyber-Attack	No incidents to date.	No unique concerns noted.

Notable Trends or Changing Priorities

Have any hazard-related priorities changed since the previous mitigation plan?	Safe room at school addressed priority need in past mitigation plans. Improved dam-related communications. Monitoring changes in flooding risks.
Are there any other trends influencing these concerns, such as changes in development, demographics, or weather patterns/climate?	Increasing frequency and severity of high wind, tornado, and heavy rain events.

Capabilities Assessment

The following is a general assessment of the community's resiliency and capabilities to mitigate, respond to, and recover from a disaster event. It also notes if mitigation or preparedness has been integrated into planning mechanisms. This assessment was completed by the community through the 2023 web-based survey, with some supplemental information from the community meeting and other sources (e.g., fire department survey, NFIP Community Status Book). The list of potential plans, policies, and other actions is not exhaustive, and it is not expected that the community has undertaken all actions listed or will undertake all actions in the future.

Planning Activities	
Community Emergency Operations or Response Plan (EOP)	Adopted; does incorporate mitigation or preparedness
Community Evacuation Plan and/or Exercises	Adopted; does not incorporate mitigation or preparedness
Continuity of Government Plan	Adopted; does not incorporate mitigation or preparedness
Comprehensive Plan	No plan
Stormwater Management Plan	Adopted; does incorporate mitigation or preparedness
Historic Preservation Plan or Ordinance	Adopted; does incorporate mitigation or preparedness
Capital Improvements Plan or Similar Budget	No plan
Involve Fire & Law Enforcement in planning & development plan review	Yes
Policies, Codes, & Ordinances	
Building Codes	Adopted; does incorporate mitigation or preparedness
Building Code Efficiency Grading Schedule	Adopted; does incorporate mitigation or preparedness
Zoning Ordinance	Adopted; does incorporate mitigation or preparedness
Subdivision Ordinance	Adopted; does incorporate mitigation or preparedness
Site Plan Review Requirements	Adopted; does incorporate mitigation or preparedness. No formal role by fire/police, but engage as needed.
Floodplain Management	
Initial Flood Hazard Boundary Map:	01/16/1974
Initial FIRM Identified:	07/06/2010
Current Effective FIRM Date:	07/06/2010
Date Community First Joined NFIP (Reg-Emer)	07/06/2010
NFIP Participation Status (and reason if not participating):	Participant
Floodplain Regulations w/ NFIP standards:	Adopted
Designated position or committee for floodplain management, floodplain zoning, & NFIP compliance:	City Clerk; then Plan Commission
Other ongoing floodplain management activities:	Floodplain development is restricted. 1997 overflow channel project plus culvert resizing mitigated worse of historic flooding.
Stormwater Management Ordinance	Adopted; does incorporate mitigation or preparedness

Stormwater Utility	Adopted; does incorporate mitigation or preparedness
Winter Emergency Policies	Adopted; does incorporate mitigation or preparedness
Mitigation & Preparedness Actions for Facilities	
Debris Site identified for storm debris disposal (not just woody debris)	Yes; no household management site
Emergency Operations Center designated with generator/back-up power	Yes
Public Storm Shelter/Community Safe Room designated	FEMA mitigation grant funding acquired to construct public safe room at school with generator. No remote door unlock.
Public Heating/Cooling Shelter designated with generator/back-up power	Yes
Storm/warning siren on back-up power	Yes; added a siren with good coverage
Storm/warning siren that can be activated remotely	Activated by County dispatch
Active shooter/threat plans and/or security hardening for municipal buildings	No
Other Mitigation & Preparedness Actions	
Review EOP at least annually	No; needs to be updated
Individuals in EOP have ICS/NIMS training	Partial;
Public Information Officer designated & trained	No
Municipal officials and staff participate in regular disaster or emergency response exercises	No; does have evacuation exercises for train derailment
Community-level efforts to improve hazard preparedness among residents	No
Adopted billing rates for public works labor & equipment use during emergencies	Yes; none for equipment
Adopted mutual aid agreements for public works equipment/personnel support	Partial; “handshake” agreements for Public Works. MABAS for Fire Department.
Adopted emergency contracting and purchasing policies	No
Cyber-security systems, off-site/cloud back-up, and recovery policies or plans for municipal records	Yes. City has IT support, off-site back-up, and cyber-insurance.
Cyber-security systems and policies for municipal utilities	Yes
Municipal buildings/staff have NOAA All Hazards Radios or signed up for Everbridge	Partial; recommended to consider NOAA radio project for apartments and mobile home park residents.
Other Flood Mitigation projects or activities	Addressing site-by-site as needed. Considering retention pond with dry hydrant on north side.
Municipal Dam-related planning or actions	IOM and EAP is up to date. Established effective communications with other dam operators within the watershed, which has been very mutually beneficial.
Barriers to mitigation or preparedness actions	Incident Command and Disaster Response Trainings for City Clerk and Mayor
Other:	City suggested additional preparedness training/exercises, security in public buildings, and improvements in planning. Assistance would be needed with conducting community exercise. Cell used for public works.

Mitigation Strategy Recommendations

The overall mitigation goal statements in Section V.A. of the Clark County mitigation plan are shared by all participating communities. The community will strive to implement the following mitigation actions/projects as resources and funding allows, though priorities could change due to a variety of fiscal, technical, or other factors, including changes in hazard risks. Sections V of the Clark County mitigation plan includes additional mitigation and preparedness actions that are intergovernmental in nature and not specific to the community, but may suggest coordination and funding opportunities.

The following recommended actions/projects are specific to the community:

Action/Project	Priority & Timeline	Primary Responsible Party	Potential Resources
1. Continue to make community members aware of the availability of the community safe room and related rules/protocols. Encourage participation in family/business drills. Consider a NOAA All Hazard Weather Radio distribution project for seniors, apartment, and mobile home residents within the School District. At the community safe room, collaborate with School District and County Emergency Management to explore the addition of a remote door unlock that can be activated by County Dispatch.	Medium; annual public messaging suggested during Severe Weather Awareness Week 3-5 years for other actions	City Clerk working with School and County Emergency Management for annual messaging Unless a volunteer or other party is interested, City Council to delegate lead working with School District	These activities could be combined into a single FEMA mitigation grant application for FEMA Hazard Mitigation Grant Program (BRIC & HMA) funding. WCWRPC and Wisconsin Emergency Management can provide grant-related guidance
2. Continue to work with County Highway Department to encourage Wisconsin Department of Transportation to address (then maintain) debris accumulation and potential log jamming on the Popple River at the Highway 29 bridge south of the City.	High; Ongoing	City Public Works	Wisconsin Department of Transportation & County Highway Department
3. Continue to monitor flooding in the City, including maintaining the City's stormwater management plan and enforcing stormwater management regulations. Explore mitigation actions, such as hydraulic analysis, additional flood retention, or, if buildings are impacted, considering	Medium-to-High; ongoing	City Public Works; City Plan Commission and Council	For special flood studies and mitigation actions, consider FEMA Flood Mitigation Assistance (FMA) or Wisconsin Pre-Disaster Flood Resilience Grant. FEMA grant funding may be feasible if a larger project and can demonstrate that the benefits (i.e., addressing past or

structural mitigation projects such as floodproofing.			unavoidable losses) outweigh estimated project costs.
4. As funding allows, install emergency power generators at the Fire Hall and City Hall/Police Dept./EOC. Additional portable also needed for public utilities.	Med-to-High; as funding allows	City Public Works; City Council	Grant funding for generators is very difficult to obtain; more options if part of a larger project. See countywide generator-related recommendation.
5. Continue to maintain the Owen Park Dam, including its IOM Plan and Emergency Action Plan. Continue effective communication with dam owners upstream and downstream to mitigate flooding and dam damage potential within Owen and the larger watershed. Explore funding to automate dam gate operations.	High; ongoing Automating gates – Medium and 3-5+ years	City Public Works	Plans, repairs, and improvements eligible for WDNR Municipal Dam Grant
6. Continue to annually review and update the City's Emergency Operations Plan. Consider adoption of billing rates for City equipment that can be used during disaster response and recovery.	High; ongoing	City Emergency Planning team; City Council	County Emergency Management can provide a template and guidance. WCWRPC can provide model ordinance for adopting WDOT equipment billing rates.
7. As opportunities allow, collaborate with County Emergency Management and other partners (e.g., Public Health, Red Cross, Electric Provider) to increase public participation in the County's emergency notification system, awareness of emergency siren use and warning systems, safe room availability, and public preparedness in general.	Medium-to-High; ongoing	City Clerk (or designee); Fire Department	County Emergency Management & partners have educational materials Could implement annually during Severe Weather Awareness Week and/or Preparedness Month using social media, posters, utility bill inserts, etc.

Sub-Plan Coordination and Integration

The previous Capabilities Assessment section identifies how this Mitigation Sub-plan has been integrated into or coordinated with other municipal plans or planning mechanisms. During the planning process, the following opportunities were identified to integrate the mitigation strategies into other community planning mechanisms:

- The City is expected to update its comprehensive plan in the future. This is an opportunity to integrate mitigation strategies, including obtaining public input on the need for additional community safe rooms.
- Flood, stormwater, and dam projects should be integrated into the City's capital improvements budget plan.

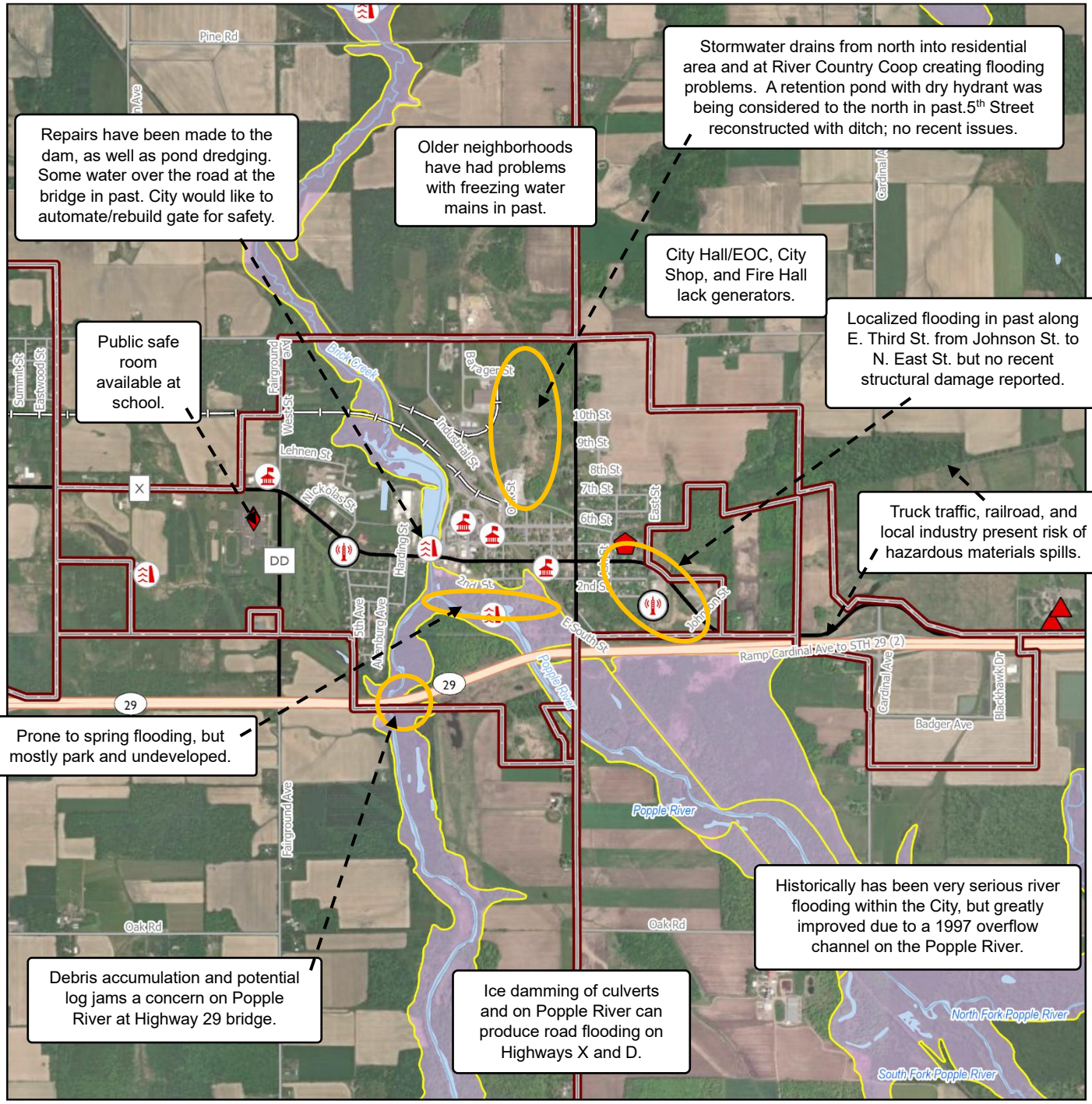
- Maintain the IOM Plan and EAPlan for the Owen Park Dam, including continued communication with other dams in the watershed.
- The next section describes how this Sub-Plan will be maintained, including a periodic review of opportunities to strengthen the coordination and integration with other planning mechanisms.

Sub-Plan Adoption and Maintenance

Plan Adoption	Once updated, the community's governing body will adopt the County's overall hazard mitigation plan (and any future revisions/amendments) by resolution during a noticed public meeting in adherence with Wisconsin Open Meetings laws. This community-specific Hazard Mitigation Sub-Plan is an appendix of the County's overall plan. The community may modify and re-adopt its Sub-Plan by resolution during a noticed public meeting at any time at their discretion.
Plan Maintenance	During the second quarter of each year or following a declared disaster event, the primary mitigation plan contact will review this Mitigation Sub-Plan concurrently with (at the same time as) the annual review of the municipal Emergency Operations Plan. Other municipal and agency officials (e.g., public works, fire department, law enforcement) may be involved in this review or consulted as needed. The Mitigation Sub-Plan will be reviewed for: • Any significant changes in vulnerabilities, priorities, or trends, including to populations, structures, community lifelines, and weather/event patterns. • Any significant changes in capabilities or barriers to plan implementation. • Opportunities to strengthen plan coordination (i.e., integrate mitigation and preparedness into other community planning mechanisms). • Potential new mitigation and preparedness strategies, projects, or grant opportunities. • Any comments or discussion with the public, partners, or other stakeholders. If potential changes to the Sub-Plan are being considered, the planning contact will: 1. The community's planning contact will contact County Emergency Management and West Central Wisconsin Regional Planning Commission (WCWRPC) to discuss the proposed changes and any guidance regarding potential resources and next steps. The community may also request that the County consider changes to the County's overall mitigation plan. ~~2.~~1. Provide the suggested changes to the community's emergency planning committee, plan commission, or governing body for consideration. Should it be determined that a Mitigation Sub-Plan change is needed, the governing body will adopt the Sub-Plan as noted previously. Such changes will be limited to this community-specific Mitigation Sub-Plan. Changes to this Sub-Plan may be made in the future without County Board or other participant re-adoption of the County's overall mitigation plan.
Plan Updates	The community intends to be a full participant in five-year updates of the County's overall hazard mitigation plan, which will include reviewing and updating the information provided in this Mitigation Sub-Plan. Changes to Sub-Plan content may be necessitated by applicable mitigation rules and planning guidance in effect at that time.
Continued Public Participation	The community will provide opportunities for public participation throughout its mitigation planning processes, including: (1) all governing body or committee actions regarding the Sub-Plan shall be conducted in adherence with the Wisconsin Open Meetings rules; (2) public comments will be accepted on draft Sub-Plans and Sub-Plan changes prior to adoption; and (3) public input and ideas on potential risks, vulnerabilities, capabilities, or mitigation projects are welcomed and will be considered.

CITY OF OWEN - HAZARD ASSESSMENT

Clark County - 2026



Legend

- Municipal Boundaries
- 100-yr Floodplain
- Hospital
- School
- Mobile Home Park
- Assisted Living
- Government Building
- Storm Siren
- Dam w/High or Significant Hazard Rating

WEST CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION

0 0.38 0.75 1.5 Miles

Data Sources: Clark County, WDHS, WDNR, WisDOT, WDOA, FEMA, WCWRPC.

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CITY OF THORP HAZARD MITIGATION SUB-PLAN

This sub-plan identifies past hazard events, risks, trends, capabilities, and strategies unique to or specific to the community and is part of the overall *Clark County Multi-Hazard Mitigation Plan*. The Clark County mitigation plan provides broader context and contains hazard assessments, capabilities, and strategies that are countywide or multi-jurisdictional.

Primary Contact:	City Clerk/Treasurer
Planning Meetings:	• Primary planning meeting with WCWRPC staff occurred on August 7th, 2025. • Resolution adopting the Hazard Mitigation Plan and Sub-Plan will be approved by City Council at a public meeting and included in Section VII of the main plan document.

Community Profile

This table provides a brief overview of key community characteristics, primarily from the 2020 U.S. Census, which are important to assessing capacity and vulnerabilities. For example, the entire population and all above-ground structures in the community are vulnerable to a tornado event, while mobile homes have an elevated vulnerability.

Population	1,795
Median Age	37.9 years
Uniquely vulnerable populations	Seniors and assisted living facilities; mobile home park residents; economic disadvantaged community
Assessed Improvements (2025)	Residential: $144,500; Commercial: $18,895,700; Manuf.: $0
# of Housing units	813
# of Mobile Homes	14
Notable Community Lifelines or Critical Facilities	See map at end of sub-plan.

Hazard Risk Assessment

This table describes past hazard events impacting the community and any unique vulnerabilities to each event. This assessment is supplemented by the risk assessment map included at the end of this Mitigation Sub-Plan for the community. Also see the Risk Assessment in Section III of the main text of the Clark County mitigation plan for general risks and vulnerabilities applicable to most or all communities.

Hazard	History & Past Impacts	Vulnerabilities & Potential Impacts
Tornado & High Winds	No unique history noted prior to 2019. Nearby tornados in July 2019 (EF0), June 2021 (EF0), and December 2021 (EF2). The Dec 2021 resulted in extensive tree damage, downed power lines, and damage to roofs and outbuildings. High wind events also caused tree, roof, and outbuilding damage in August 2022 (a camper was flipped over) and June 2024.	No public safe room. Most homes have basements. Vulnerabilities include: School. Two mobile home parks; limited slab-on-grade construction. Holland Cheese is uniquely vulnerable with visitors and livestock herd in large-span buildings.
Hail & Lightning	No unique history noted.	No unique concerns noted.

Winter Storm, Ice, & Extreme Cold	Until 2013-2014 winter, nothing unique; had 20-25 frozen services and 31 breaks on laterals. WWTP tank froze when heater went out.	Drifting on Cemetery St. City Hall and library has had some ice damming problems related to snow removal and melting off parking lot. Power outages are greatest winter-related vulnerabilities.
Extreme Heat	No unique history noted.	No unique concerns noted. Library available as a cooling center when open if needed.
Long-Term Power Outage	No large-scale, long-term outages prior to December 2021 storm and ice/winds that soon followed. The entire City lost power, with many not restored for 4 days and some for 6 days.	City Hall/EOC, Fire Dept, wastewater plant, water plant and all but two wells now have fixed generators; Has portable for most other utilities. Xcel conducts regular tree trimming.
Flooding – Riverine or Overbank	Some flooding about once every 10 years, but most is overland not riverine. NFIP claim from sewer back-up when sump not working. Annual flooding at/near City Hall.	Sump pumps adding water into WWTP; working to prevent and reduce.
Flooding – Stormwater or Overland	Over-the-road flooding 1-2 times per year due to heavy rains or snowmelt on Clark Street; in March 2019 impacted one business, but no major damage. In 2011, heavy rains resulted in street flooding over bridge at Adams Street and raised concerns about potential impacts to WWTP lagoons; no recent problems since culvert replaced. Spring ice-damming at some culverts not uncommon.	2004 stormwater management plan identified remedies for the most significant past problems; City has implemented most of the recommendations as funding allows, which has significantly reduced vulnerabilities. Stormwater infiltration into wastewater system being addressed as system/streets improved. No significant flooding concerns since 2019 even heavy rain events seems to have increased in frequency over past decade.
Dams	No dam	Not applicable
Drought	No significant impacts within the City from past droughts.	Good water quantity. Water conservation ordinance in place if temporary ban needed
Wildfire	No significant events.	No concerns noted.
Hazardous Materials Spills	No significant events in the community. Semi tanker truck was involved in accident.	No unique risks. Highway and rail are primary concerns. Some industry and fuel tanks.
Active Threats	No significant events in the community.	No unique vulnerabilities identified.
Cyber-Attack	No incidents to date.	No unique concerns noted; off-site back-up.

Notable Trends or Changing Priorities

Have any hazard-related priorities changed since the previous mitigation plan?	Need for a community safe room.
Are there any other trends influencing these concerns, such as changes in development, demographics, or weather patterns/climate?	Increasing frequency and severity of wind events and tornados.

Capabilities Assessment

The following is a general assessment of the community's resiliency and capabilities to mitigate, respond to, and recover from a disaster event. It also notes if mitigation or preparedness has been integrated into planning mechanisms. This assessment was completed by the community through the 2023 web-based survey, with some supplemental information from the community meeting and other sources (e.g., fire department survey, NFIP Community Status Book). The list of potential plans, policies, and other actions is not exhaustive, and it is not expected that the community has undertaken all actions listed or will undertake all actions in the future.

Planning Activities	
Community Emergency Operations or Response Plan (EOP)	Outdate; to be reviewed and updated
Community Evacuation Plan and/or Exercises	No
Continuity of Government Plan	No
Comprehensive Plan	Outdated, but includes floodplain management and references to mitigation plan
Stormwater Management Plan	Continuing to implement
Historic Preservation Plan or Ordinance	No
Capital Improvements Plan or Similar Budget	Maintains capital improvement plan for projets
Involve Fire & Law Enforcement in planning & development plan review	Doing this as needed.
Special emergency notification procedures or preparedness plans for vulnerable populations	None noted except at school.
Policies, Codes, & Ordinances	
Building Codes	Adopted; does not incorporates mitigation or preparedness
Building Code Efficiency Grading Schedule	Unknown
Zoning Ordinance	Adopted; limited mitigation or preparedness
Subdivision Ordinance	Adopted; some mitigation or preparedness
Site Plan Review Requirements	As part of zoning
Floodplain Management	
Initial Flood Hazard Boundary Map:	05/24/1974
Initial FIRM Identified:	08/15/1984
Current Effective FIRM Date:	07/06/2010
Date Community First Joined NFIP (Reg-Emer)	08/15/1984
NFIP Participation Status (and reason if not participating):	Participant
Floodplain Regulations w/ NFIP standards:	Adopted
Designated position or committee for floodplain management, floodplain zoning, & NFIP compliance:	Zoning Administrator; then Plan Commission
Other ongoing floodplain management activities:	Culvert improvements; encourage flood insurance for potentially floodprone properties. Past concerns expressed over the accuracy of NFIP floodplain maps.
Stormwater Management Ordinance	Continuing to enforce for new development
Stormwater Utility	No
Winter Emergency Policies	Adopted for parking & snow removal.
Mitigation & Preparedness Actions for Facilities	
Debris Site identified for storm debris disposal (not just woody debris)	None for non-woody debris
Emergency Operations Center designated with generator/back-up power	Yes

Public Storm Shelter/Community Safe Room designated	No; interested in identifying a safe room at the park on southside, which would be near mobile home park. Potentially explore for Keating Park as multi-use facility.
Public Heating/Cooling Shelter designated with generator/back-up power	City Hall has been opened as a warming center during power outage during winter weather.
Storm/warning siren on back-up power	Yes. 2 sirens with good coverage.
Storm/warning siren that can be activated remotely	Activated by County dispatch
Active shooter/threat plans and/or security hardening for municipal buildings	City Hall offers limited hardened protection; exploring more. Police trains with school.
Other Mitigation & Preparedness Actions	
Review EOP at least annually	Outdated; continuing to exercise plan is important
Individuals in EOP have ICS/NIMS training	Some; additional efforts being considered.
Public Information Officer designated & trained	No; planning or considering implementation
Municipal officials and staff participate in regular disaster or emergency response exercises	No; planning or considering implementation
Community-level efforts to improve hazard preparedness among residents	No formal initiatives. Some outreach each spring.
Adopted billing rates for public works labor & equipment use during emergencies	Exploring adoption of WisDOT equipment billing rates.
Adopted mutual aid agreements for public works equipment/personnel support	Formal mutual aid for water and wastewater support, otherwise “handshake” for public works mutual aid.
Adopted emergency contracting and purchasing policies	No; planning or considering implementation
Cyber-security systems, off-site/cloud back-up, and recovery policies or plans for municipal records	Yes. City has municipal cyber-insurance. Data backed-up in cloud.
Cyber-security systems and policies for municipal utilities	Yes
Municipal buildings/staff have NOAA All Hazards Radios or signed up for Everbridge	No
Other Flood Mitigation projects or activities	Continuing to address stormwater flooding concerns.
Municipal Dam-related planning or actions	Not applicable, no dam
Barriers to mitigation or preparedness actions	Funding and staff time; some mitigation actions would be dependent on grant funding.
Other:	More public education on siren needed (e.g., when is it triggered, what it means, what you should do). Fire Hall is medical point of distribution if needed.

Mitigation Strategy Recommendations

The overall mitigation goal statements in Section V.A. of the Clark County mitigation plan are shared by all participating communities. The community will strive to implement the following mitigation actions/projects as resources and funding allows, though priorities could change due to a variety of fiscal, technical, or other factors, including changes in hazard risks. Section V of the Clark County mitigation plan includes additional mitigation and preparedness actions that are intergovernmental in nature and not specific to the community, but may suggest coordination and funding opportunities.

The following recommended actions/projects are specific to the community:

Action/Project	Priority & Timeline	Primary Responsible Party	Potential Resources
1. Explore designation or development of a community safe room (storm shelter)), potentially as a multi-use facility at Keating Park. If a generator and HVAC system are provided, consider using the safe room space as a heating/cooling shelter and emergency assembly location. For new safe room construction, consider the incorporation of nature-based stormwater management systems (e.g., rain barrels, rain garden) to mitigate site runoff.	Medium; 3-5 years Timeline could change based on public demand for safe room or building projects.	Residents should express need; City Council	FEMA Hazard Mitigation Grant Programs (BRIC & HMA) FEMA Technical Assistance or Advanced Assistance grant funding could be available to assist with exploring storm hardening options. WCWRPC and Wisconsin Emergency Management can provide grant-related guidance
2. Continue to maintain and implement the City's Stormwater Management Plan and encourage landowners to consider flood insurance if located near 100-year floodplain or near floodprone areas. Collaborate with Clark County to improve accuracy of floodplain maps as opportunities allow. If repetitive flood losses are experienced or imminent, explore mitigation alternatives.	High; ongoing	City Public Works; City Plan Commission and Council	For special flood studies and mitigation actions, consider FEMA Flood Mitigation Assistance (FMA) or Wisconsin Pre-Disaster Flood Resilience Grant. FEMA grant funding may be feasible if larger project and can demonstrate that the benefits (i.e., addressing past or unavoidable losses) outweigh estimated project costs.
3. Consider adoption billing rates for public works labor and equipment use during emergencies.	Medium; 2-5 years	City Public Works	WCWRPC has model resolution used by other communities that have adopted WDOT rates.

4. Update and annually review the City's Emergency Operations Plan. City elected officials and key staff are encouraged to participate in basic ICS training and/or targeted training for elected officials. Conduct exercises (e.g. severe weather/power outage, HazMat spill) to test the EOP with an emphasis on crisis communication and coordination between partners. Involve emergency medical services as part of active threats training at School.	High; ongoing	City Emergency Planning Team; Law Enforcement & School	County Emergency Management can provide a template and guidance.
5. As opportunities allow, collaborate with County Emergency Management and other partners (e.g., Public Health, Red Cross, Electric Provider) to increase public participation in the County's emergency notification system, awareness of emergency siren use and warning systems, and public preparedness in general.	Medium-to-High; ongoing	City Emergency Planning Team; Fire Department	County Emergency Management & partners have educational materials Could implement annually during Severe Weather Awareness Week and/or Preparedness Month using social media, posters, utility bill inserts, etc.

Sub-Plan Coordination and Integration

The previous Capabilities Assessment section identifies how this Mitigation Sub-plan has been integrated into or coordinated with other municipal plans or planning mechanisms. During the planning process, the following opportunities were identified to integrate the mitigation strategies into other community planning mechanisms:

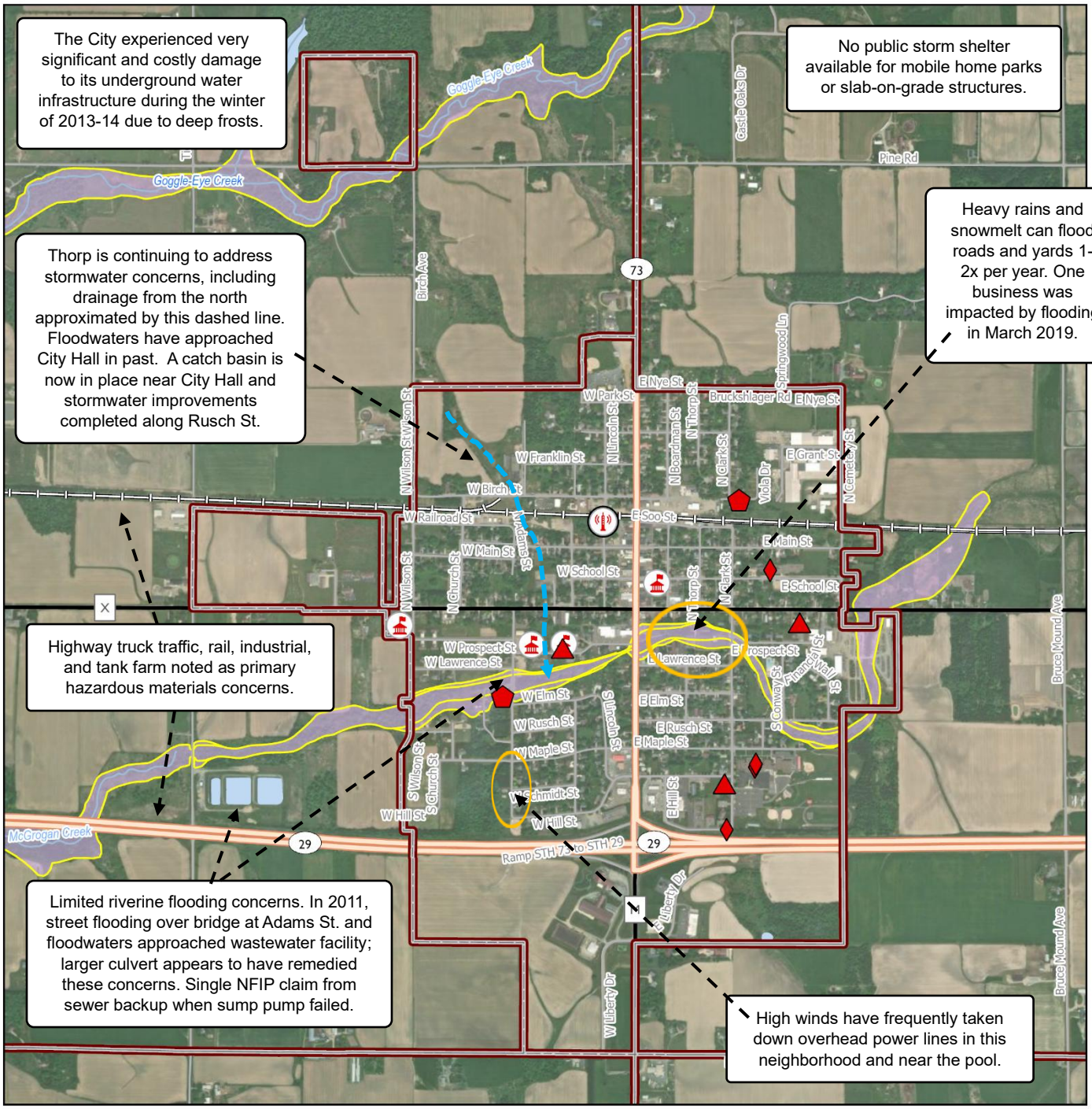
- The City is expected to update its Comprehensive Plan in the future. This is an opportunity to integrate mitigation strategies, including obtaining public input on the need for additional community safe rooms.
- The City will continue to address flooding projects as part of its Capital Improvements Plan.
- Collaborate with County Emergency Management to integrate training/exercises into the County Integrated Preparedness Plan.
- The capabilities assessment suggested a number of other plans are outdated. Updates of these plans should consider the risks, capabilities, and recommendations in this mitigation plan.
- The next section describes how this Sub-Plan will be maintained, including a periodic review of opportunities to strengthen the coordination and integration with other planning mechanisms.

Sub-Plan Adoption and Maintenance

Plan Adoption	Once updated, the community's governing body will adopt the County's overall hazard mitigation plan (and any future revisions/amendments) by resolution during a noticed public meeting in adherence with Wisconsin Open Meetings laws. This community-specific Hazard Mitigation Sub-Plan is an appendix of the County's overall plan. The community may modify and re-adopt its Sub-Plan by resolution during a noticed public meeting at any time at their discretion.
Plan Maintenance	During the second quarter of each year or following a declared disaster event, the primary mitigation plan contact will review this Mitigation Sub-Plan concurrently with (at the same time as) the annual review of the municipal Emergency Operations Plan. Other municipal and agency officials (e.g., public works, fire department, law enforcement) may be involved in this review or consulted as needed. The Mitigation Sub-Plan will be reviewed for: • Any significant changes in vulnerabilities, priorities, or trends, including to populations, structures, community lifelines, and weather/event patterns. • Any significant changes in capabilities or barriers to plan implementation. • Opportunities to strengthen plan coordination (i.e., integrate mitigation and preparedness into other community planning mechanisms). • Potential new mitigation and preparedness strategies, projects, or grant opportunities. • Any comments or discussion with the public, partners, or other stakeholders. If potential changes to the Sub-Plan are being considered, the planning contact will: 1. The community's planning contact will contact County Emergency Management and West Central Wisconsin Regional Planning Commission (WCWRPC) to discuss the proposed changes and any guidance regarding potential resources and next steps. The community may also request that the County consider changes to the County's overall mitigation plan. 2. Provide the suggested changes to the community's emergency planning committee, plan commission, or governing body for consideration. Should it be determined that a Mitigation Sub-Plan change is needed, the governing body will adopt the Sub-Plan as noted previously. Such changes will be limited to this community-specific Mitigation Sub-Plan. Changes to this Sub-Plan may be made in the future without County Board or other participant re-adoption of the County's overall mitigation plan.
Plan Updates	The community intends to be a full participant in five-year updates of the County's overall hazard mitigation plan, which will include reviewing and updating the information provided in this Mitigation Sub-Plan. Changes to Sub-Plan content may be necessitated by applicable mitigation rules and planning guidance in effect at that time.
Continued Public Participation	The community will provide opportunities for public participation throughout its mitigation planning processes, including: (1) all governing body or committee actions regarding the Sub-Plan shall be conducted in adherence with the Wisconsin Open Meetings rules; (2) public comments will be accepted on draft Sub-Plans and Sub-Plan changes prior to adoption; and (3) public input and ideas on potential risks, vulnerabilities, capabilities, or mitigation projects are welcomed and will be considered.

CITY OF THORP - HAZARD ASSESSMENT

Clark County - 2026



Legend

- Municipal Boundaries
- 100-yr Floodplain
- Hospital
- School
- Mobile Home Park
- Assisted Living
- Government Building
- Storm Siren
- Dam w/High or Significant Hazard Rating

WEST CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION

0 0.25 0.5 1 Miles

Data Sources: Clark County, WDHS, WDNR, WisDOT, WDOA, FEMA, WCWRPC.

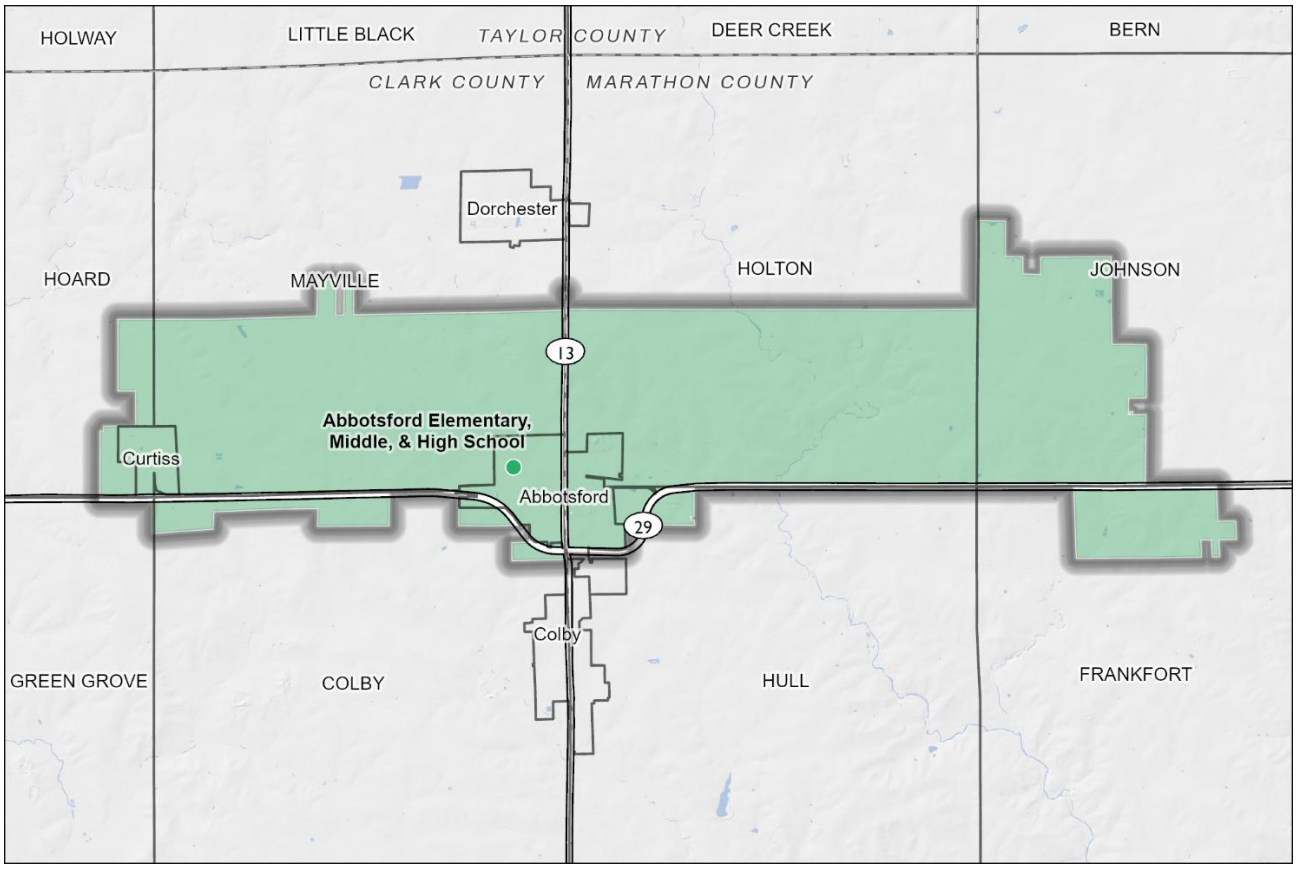
SUPPLEMENT 6.
PUBLIC EDUCATIONAL INSTITUTION SUB-PLANS

SCHOOL DISTRICT OF ABBOTSFORD HAZARD MITIGATION SUB-PLAN

Primary Contact:	Ryan Bargender, District Administrator
Planning Process:	• Hazard mitigation webinar conducted by WCWRPC in Summer 2025. • District completed a comprehensive hazard mitigation survey on August 5th, 2025. WCWRPC prepared the draft sub-plan based on the survey results. • District reviewed the draft sub-plan and provided additional input to WCWRPC on sub-plan and strategy alternatives as needed. • Resolution adopting the Hazard Mitigation Plan and Sub-Plan will be approved by School Board at a public meeting. Resolution is included in Section VI. of the main Mitigation Plan document.

School District Profile

Institution Type:	Public; K4 through 12 grades primary & secondary school		
Campus/Facility in Clark County	**Address**	**approx. 2023-2024 Enrollment**	**approx. 2023-2024 Staff**
Abbotsford Elementary	510 W Hemlock St, Abbotsford, WI	406	120
Abbotsford Middle / Senior High	307 N 4th Ave, Abbotsford, WI	401	



Hazard Threat Assessment

This table describes past hazard events impacting the District and any unique vulnerabilities to each event. This assessment is supplemented by the risk assessment map included at the end of this Mitigation Sub-Plan for the District. Also see the Risk Assessment in Section III of the main text of the Clark County mitigation plan for general risks and vulnerabilities applicable to most or all districts.

Hazard	History or Probability	Absenteeism	Vulnerability or Potential Impacts
Flooding – Riverine or Overbank	None	No Significant Impact	None
Flooding – Stormwater or Overland	None		None
Tornado	Low	No Significant Impact	Low
Thunderstorm, Lightning, High Winds & Hail	Low	No Significant Impact	Low
Winter Storms & Extreme Cold	Low	Limited Impact, 1-2 events for 1-2 days	None
Extreme Heat	Low	No Significant Impact	None
Drought	Low	No Significant Impact	None
Wildfire	Low	No Significant Impact	None
Cyber-Attack	Low	No Significant Impact	Moderate
Active Threat	Low	No Significant Impact	Low
Hazardous Materials Spill	Low	No Significant Impact	None
Landslides or Sinkholes	None	No Significant Impact	None
Pandemic or Infectious Disease	Low	Significant Impact, 1-2 events for 3+ days	Low
Long-Term Power Outage	Low	No Significant Impact	None

Hazard Analysis

Flooding	
1. Flood history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of flooding.	"Very minor"
2. Are any existing or planned school buildings or assets located within the 100-year floodplain?	No structures believed to be within or near the 100-year floodplain.
3. Facilities covered by flood the National Flood Insurance Program or other flood insurance.	None. Does not believe it is needed.
4. Existing or needed flood mitigation activities.	None identified.
Tornados, Thunderstorms, Winter Storms, & Extreme Temperatures	
5. Extreme weather event history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	High winds have caused damage to the District's greenhouse several years ago.
6. Facilities with storm shelters or safe rooms.	Yes. Community Safe Room constructed with assistance of FEMA mitigation grant funding.

7. Facilities serving as heating/cooling centers or other emergency/recovery shelters.	The District has agreements in place with the County for facilities to serve as warming / cooling centers. Also has an agreement with Red Cross to serve as an emergency recovery shelter.
8. Unique concerns, vulnerabilities, or resources/support needed to address future severe weather threats.	No concerns noted; District's FEMA storm shelter has a capacity of nearly 2,000 persons.
Active Threats	
9. Active threat history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	No credible threats or events have occurred.
10. Adopted protocols for training and response to active threats.	The District has adopted the Alert-Lockdown-Inform-Counter-Evacuate (ALICE) approach.
11. Concerns, strategies, resources, support, or training needed for the District or in partnership with others.	The District continually addresses and plans for Abbotsford Police Department. Planning and training for off-site reunification during events is on-going and remains a priority.
12. Emergency agencies with access to floor plans for the District's primary buildings.	Yes
13. Does local law enforcement have physical keys or access cards to the District's primary buildings?	Yes
14. Describe preparedness activities.	ALICE and reunification with families drills conducted each year.
Other Threats	
15. Wildfire history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	No significant events have occurred.
16. Hazardous material spill history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	Abbyland Foods had a chemical spill (ammonia leak) after hours in 2018; school bus had to be held back from coming in from a track meet.
17. Cybersecurity / cyber-attack history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	No events have occurred to date.
18. Zoonotic / infections disease history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	None noted aside from COVID
19. Other threat events or strategies of note.	None noted

Capabilities Assessment & Plan Coordination	
The following is a brief assessment of the District's resiliency and capability needs (or related recommendations) to mitigate, respond to, and recover from a disaster event. It also notes if mitigation or preparedness has been integrated into planning mechanisms.	
Capability Needs or Recommendations	
Equipment Needs	None noted
Training Needs	None noted
Collaboration Needs	
Communications/Outreach Needs	None noted
County Emergency Management Relationship	Very good. The District maintains regular communication with County Emergency Management staff and works closely with them.
Plan Coordination	
Key Plans & Training related to hazard mitigation	• ALICE drills and staff training annually • Severe weather drills annually • Monthly fire drills
Additional opportunities to integrate hazard mitigation plan recommendations into the above plans	The District has a Comprehensive Crisis Plan that includes all aspects and situations and will consider integrating it with this sub-plan.
Other:	The District is not familiar with Student Tools for Emergency Planning (STEP) Program and may use it in the future.

Mitigation Strategy Recommendations

The overall mitigation goal statements in Section VI. of the Clark County mitigation plan are shared by all participating communities and school districts. The previous assessment and analysis shows the School District has been very proactive in evaluating and preparing for hazard threats in collaboration with the City and other partners.

The District will strive to implement the following mitigation actions/projects as resources and funding allows, though priorities could change due to a variety of fiscal, technical, or other factors, including changes in hazard risks. Section VI of the Clark County mitigation plan includes additional mitigation projects and actions that are intergovernmental in nature and not specific to the District. The District will continue to collaborate with the City of Abbotsford, Clark County, area emergency response providers, Red Cross, and other partners to explore and implement such mitigation and preparedness actions to enhance the safety and disaster resiliency of the District and community.

The following recommended, key actions/projects are specific to the District:

Action/Project	Priority & Timeline	Primary Responsible Party	Potential Resources
1. Continue to collaborate with the Village, County, area law enforcement, and other partners to strengthen prevention/preparedness training and overall community preparedness. • Continue active shooter/threat and severe weather plans and exercises. • Potentially include a District representative as part of HazMat spill exercises. • Evaluate and refine evacuation and reunification plans as needed. • Evaluate crisis communications and public information officer capabilities and protocols. • Incident Command System, including relationship to public/County emergency operations center during an emergency/disaster event. Regularly review and update the District's Comprehensive Crisis Plan to address emerging threats, integrate community mitigation opportunities, and reflect on any lessons learned from exercises.	High; Ongoing	District Crisis Team	Local/County law enforcement; CESA and DPI; County Emergency Management; Railroad Also consider how Strategy #4 may influence these other plans.
2. Continue to collaborate with County Emergency Management, Red Cross, County Public Health, and local emergency response agencies to evaluate school facility availability, capacity, and policies for various public use during or following a disaster event (e.g., safe room, heating/cooling centers, emergency recovery shelters, reunification site, family assistance/reception centers, medical point of dispensing). Update District policies as necessary.	High; Ongoing	District Crisis Team, Red Cross, County Public Health	This strategy would be led by outside agencies. If pursuing mitigation grant funding for safe rooms or storm hardening, incorporate these other facility roles.

3. Explore the potential integration of the Student Tools for Emergency Planning (STEP) Program curriculum for fourth and fifth grade classes.	Medium; 3-5 years	School Board and/or District Administrator to discuss	Curriculum materials available at ReadyWisconsin website
4. Continue to monitor flooding threats and changes in nearby land uses that could exacerbate flooding and runoff. As part of stormwater management and new facility/grounds development plans, explore low-impact development design and nature-based solutions (e.g., rain gardens, rain barrels, bioswales) to limit runoff and ponding. Some actions could be explored as part of classroom activities.	Low; as needed	School Building/Grounds Staff Science/Environmental Education Teachers	While not a critical issue at this time, FEMA Flood Mitigation Assistance or WEM Flood Resilience program may be available to assist with flood mitigation actions if a history of repetitive losses can be demonstrated and the benefits outweigh costs for a preferred solution.

Sub-Plan Adoption and Maintenance

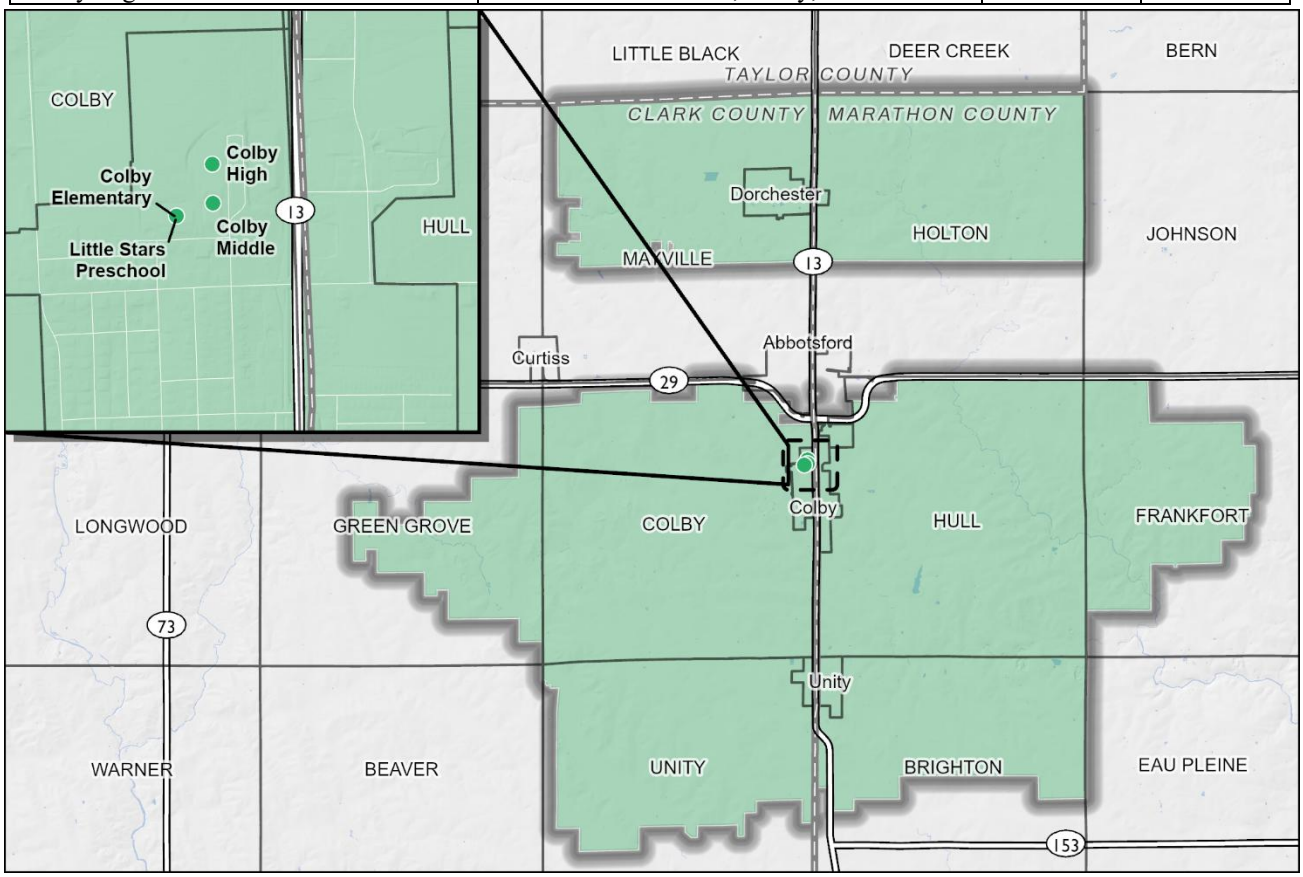
Plan Adoption	The School Board will adopt the County's overall hazard mitigation plan (and any future revisions/amendments specific to the District) by resolution during a noticed public meeting in adherence with Wisconsin Open Meetings laws. This school district-specific Hazard Mitigation Sub-Plan is an appendix of the County's overall plan. The District may modify and re-adopt its Sub-Plan by resolution during a noticed public meeting at any time at their discretion.
Plan Maintenance	Concurrent with the annual review of its other All Hazards Plans and protocols or following a declared disaster event impacting the District, District administration staff will review this Mitigation Sub-Plan and its recommendations. Other municipal and agency officials (e.g., public works, fire department, law enforcement) may be involved in this review or consulted as needed. The Mitigation Sub-Plan will be reviewed for: • Any significant changes in vulnerabilities, priorities, or trends, including to populations, structures, community lifelines, and weather/event patterns. • Any significant changes in capabilities or barriers to plan implementation. • Opportunities to strengthen plan coordination (i.e., integrate mitigation and preparedness into other community planning mechanisms). • Potential new mitigation and preparedness strategies, projects, or grant opportunities. • Any comments or discussion with the public, partners, or other stakeholders. If potential changes to the Sub-Plan are being considered, the planning contact will: 1. Contact County Emergency Management and West Central Wisconsin Regional Planning Commission (WCWRPC) to discuss the proposed changes and any guidance regarding potential resources and next steps. 2. Provide the suggested changes to the School Board or its committees for consideration. Should it be determined that a Mitigation Sub-Plan change is needed, the School Board will adopt the Sub-Plan as noted previously. Such changes will be limited to this district-specific Mitigation Sub-Plan. Changes to this Sub-Plan may be made in the future without County Board or other participant re-adoption of the County's overall mitigation plan.
Plan Updates	The District intends to be a full participant in five-year updates of the County's overall hazard mitigation plan, which will include reviewing and updating the information provided in this Mitigation Sub-Plan. Changes to Sub-Plan content may be necessitated by applicable mitigation rules and planning guidance in effect at that time.
Continued Public Participation	The District will provide opportunities for public participation throughout its mitigation planning processes, including: (1) School Board actions regarding the Sub-Plan shall be conducted in adherence with the Wisconsin Open Meetings rules; (2) public comments will be accepted on draft Sub-Plans and Sub-Plan changes prior to adoption; and (3) public input and ideas on potential risks, vulnerabilities, capabilities, or mitigation projects are welcomed and will be considered.

COLBY SCHOOL DISTRICT HAZARD MITIGATION SUB-PLAN

Primary Contact:	Patrick Galligan, Superintendent
Planning Process:	• Hazard mitigation webinar conducted by WCWRPC in Summer 2025. • District completed a comprehensive hazard mitigation survey on September 12, 2025. WCWRPC prepared the draft sub-plan based on the survey results. • District reviewed the draft sub-plan and provided additional input to WCWRPC on sub-plan and strategy alternatives as needed. • Resolution adopting the Hazard Mitigation Plan and Sub-Plan will be approved by School Board at a public meeting. Resolution included in Section VI. of the main Mitigation Plan document.

School District Profile

Institution Type:	Public; K4 through 12 grades primary & secondary school		
Campus/Facility in Clark County	**Address**	**approx. 2023-2024 Enrollment**	**approx. 2023-2024 Staff**
Colby Elementary	202 W Dolf St, Colby, WI	370	360
Colby Middle School	703 N 2nd St, Colby, WI	300	30
Colby High School	705 N 2nd St, Colby, WI	325	50



Hazard Threat Assessment

This table describes past hazard events impacting the District and any unique vulnerabilities to each event. This assessment is supplemented by the risk assessment map included at the end of this Mitigation Sub-Plan for the District. Also see the Risk Assessment in Section III of the main text of the Clark County mitigation plan for general risks and vulnerabilities applicable to most or all districts.

Hazard	History or Probability	Absenteeism	Vulnerability or Potential Impacts
Flooding – Riverine or Overbank	None	Limited Impact, 1-2 events for 1-2 days	None
Flooding – Stormwater or Overland	Low		None
Tornado	Low	Limited Impact, 1-2 events for 1-2 days	Low
Thunderstorm, Lightning, High Winds & Hail	Moderate	Limited Impact, 1-2 events for 1-2 days	Low
Winter Storms & Extreme Cold	Moderate	Limited Impact, 1-2 events for 1-2 days	Low
Extreme Heat	Low	No Significant Impact	None
Drought	Low	No Significant Impact	None
Wildfire	Low	No Significant Impact	None
Cyber-Attack	Low	No Significant Impact	Low
Active Threat	Low	No Significant Impact	Low
Hazardous Materials Spill	Low	No Significant Impact	Low
Landslides or Sinkholes	Low	No Significant Impact	None
Pandemic or Infectious Disease	Low	Significant Impact, 3+ events for 3+ days	Low
Long-Term Power Outage	Low	No Significant Impact	Low

Hazard Analysis

Flooding	
1. Flood history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of flooding.	No significant events have occurred and no vulnerabilities identified.
2. Are any existing or planned school buildings or assets located within the 100-year floodplain?	No
3. Facilities covered by flood the National Flood Insurance Program or other flood insurance.	Yes
4. Existing or needed flood mitigation activities.	None identified.

Tornados, Thunderstorms, Winter Storms, & Extreme Temperatures	
5. Extreme weather event history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	None identified.
6. Facilities with storm shelters or safe rooms.	No; District is interested in exploring grant funding for potential storm hardening.
7. Facilities serving as heating/cooling centers or other emergency/recovery shelters.	The District does not have agreements in place with the City of Colby or County to serve as a shelter, but is willing to consider such agreements.
8. Unique concerns, vulnerabilities, or resources/support needed to address future severe weather threats.	The District would like to incorporate safe room space into future facility additions.
Active Threats	
9. Active threat history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	No credible threats or events have occurred.
10. Adopted protocols for training and response to active threats.	The District has adopted Alert-Lockdown-Inform-Counter-Evacuate (ALICE) approach.
11. Concerns, strategies, resources, support, or training needed for the District or in partnership with others.	None noted; District is constructing more secure entrances at all school entrances with recent referendum approval.
12. Emergency agencies with access to floor plans for the District's primary buildings.	Yes
13. Does local law enforcement have physical keys or access cards to the District's primary buildings?	Yes
14. Describe preparedness activities.	District conducts ALICE training with staff and students, along with staff discussions and videos. District is enhancing school main entrances and intends to keep exterior doors locked during school day.
Other Threats	
15. Wildfire history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	No significant events have occurred.
16. Hazardous material spill history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	No events or concerns noted.
17. Cybersecurity / cyber-attack history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	No events or concerns noted.
18. Zoonotic / infections disease history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	No events or concerns noted.

19. Other threat events or strategies of note.	None noted.

Capabilities Assessment & Plan Coordination	
The following is a brief assessment of the District's resiliency and capability needs (or related recommendations) to mitigate, respond to, and recover from a disaster event. It also notes if mitigation or preparedness has been integrated into planning mechanisms.	
Capability Needs or Recommendations	
Equipment Needs	None noted.
Training Needs	
Collaboration Needs	
Communications/Outreach Needs	
County Emergency Management Relationship	No concerns noted.
Plan Coordination	
Key Plans & Training related to hazard mitigation	• ALICE training for students and staff • Fire Drills (monthly during school year) • Tornado Drills (annually) • First Aid/AED training for staff
Additional opportunities to integrate hazard mitigation plan recommendations into the above plans	Mitigation can be discussed as part of drills and other plan updates.
Other:	The District is familiar with Student Tools for Emergency Planning (STEP) Program and may use it in the future.

Mitigation Strategy Recommendations

The overall mitigation goal statements in Section VI. of the Clark County mitigation plan are shared by all participating communities and school districts. The previous assessment and analysis show the School District has been very proactive in evaluating and preparing for hazard threats in collaboration with the City and other partners.

The District will strive to implement the following mitigation actions/projects as resources and funding allows, though priorities could change due to a variety of fiscal, technical, or other factors, including changes in hazard risks. Section VI of the Clark County mitigation plan includes additional mitigation projects and actions that are intergovernmental in nature and not specific to the District. The District will continue to collaborate with the City of Colby, Clark County, area emergency response providers, Red Cross, and other partners to explore and implement such mitigation and preparedness actions to enhance the safety and disaster resiliency of the District and community.

The following recommended, key actions/projects are specific to the District:

Action/Project	Priority & Timeline	Primary Responsible Party	Potential Resources
1. Continue to collaborate with the Village, County, area law enforcement, and other partners to strengthen prevention/preparedness training and overall community preparedness. • Continue active shooter/threat and severe weather plans and exercises. • Include a District representative as part of rail/highway HazMat spill exercises. • Evaluate and refine evacuation and reunification plans as needed. • Evaluate crisis communications and public information officer capabilities and protocols. • Incident Command System, including relationship to public/County emergency operations center during an emergency/disaster event. Regularly update the District's Emergency Operations Plans and other plans/protocols to address emerging threats, integrate community mitigation opportunities, and reflect on any lessons learned from exercises.	High; Ongoing	District Safety Committee	Local/County law enforcement; CESA and DPI; County Emergency Management; Railroad Also consider how Strategy #4 may influence these other plans.
2. Continue security hardening of District entrances and facilities. Continue to share related plans, floor plans, etc. with local law enforcement and emergency responders.	High; Ongoing	School Buildings/Grounds staff & District Administrator	May be grants available to assist with some activities (e.g., WI DoJ School Safety Grants, Motorola School Safety Grants, FEMA Nonprofit Security Grant Program)
3. Continue to consider the potential integration of the Student Tools for Emergency Planning (STEP) Program curriculum for fourth and fifth grade classes.	Medium; 3-5 years	School Board and/or District Administrator to discuss	Curriculum materials available at ReadyWisconsin website

4. As part of future facility remodel, expansion/addition, or new gym, explore the development of a community safe room (storm shelter) for use by District students, staff, and visitors as well as area residents. Include a generator and heating/cooling as part of the project, which will also allow the space to be used as a heating/cooling, emergency shelter, reunification site, and/or public health emergency point of distribution.	High; 2-5 years or as facility expansions are considered	School Board; District Administrator	FEMA Hazard Mitigation Grant Programs WCWRPC and Wisconsin Emergency Management can provide grant-related guidance Note: As of Dec 2024, FEMA may fund generators for emergency lighting, etc., as part of safe room projects, but has considered full HVAC and insulation costs to be ineligible unless otherwise required by code.
5. Continue to collaborate with Red Cross, County Emergency Management, County Public Health and other partners to evaluate school facility availability, capacity, and policies for various public use during or following a disaster event (e.g., storm shelters/safe rooms, heating/cooling centers, emergency recovery shelters, reunification site, family assistance/reception centers, medical point of dispensing). Update District policies as necessary.	Medium-to-High; Ongoing	District Safety Committee, County Emergency Management and/or Public Health, Red Cross	This strategy may be led by outside agencies. If pursuing mitigation grant funding for safe rooms or storm hardening, incorporate these other facility roles.

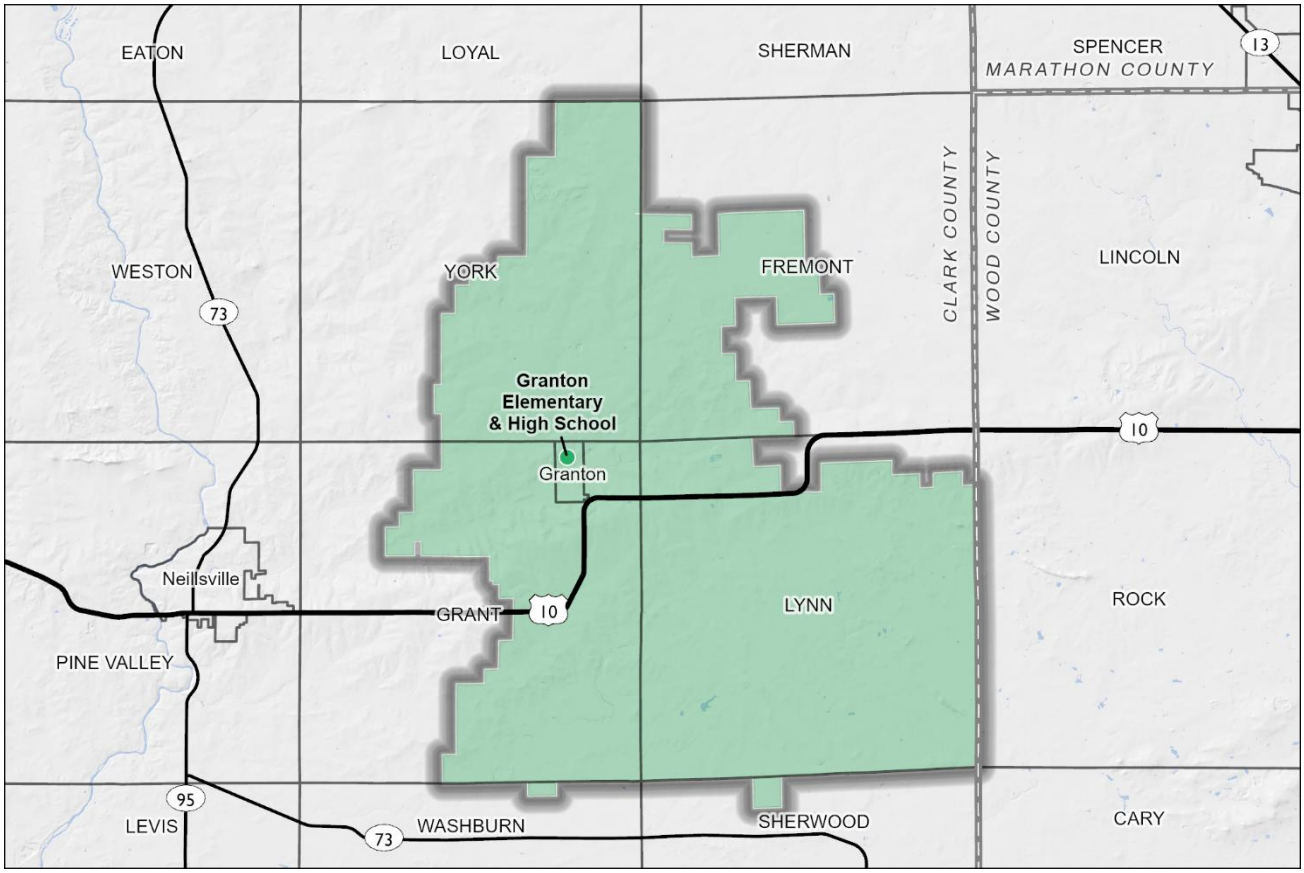
Sub-Plan Adoption and Maintenance

Plan Adoption	The School Board will adopt the County's overall hazard mitigation plan (and any future revisions/amendments specific to the District) by resolution during a noticed public meeting in adherence with Wisconsin Open Meetings laws. This school district-specific Hazard Mitigation Sub-Plan is an appendix of the County's overall plan. The District may modify and re-adopt its Sub-Plan by resolution during a noticed public meeting at any time at their discretion.
Plan Maintenance	Concurrent with the annual review of its other All Hazards Plans and protocols or following a declared disaster event impacting the District, District administration staff will review this Mitigation Sub-Plan and its recommendations. Other municipal and agency officials (e.g., public works, fire department, law enforcement) may be involved in this review or consulted as needed. The Mitigation Sub-Plan will be reviewed for: • Any significant changes in vulnerabilities, priorities, or trends, including to populations, structures, community lifelines, and weather/event patterns. • Any significant changes in capabilities or barriers to plan implementation. • Opportunities to strengthen plan coordination (i.e., integrate mitigation and preparedness into other community planning mechanisms). • Potential new mitigation and preparedness strategies, projects, or grant opportunities. • Any comments or discussion with the public, partners, or other stakeholders. If potential changes to the Sub-Plan are being considered, the planning contact will: 1. Contact County Emergency Management and West Central Wisconsin Regional Planning Commission (WCWRPC) to discuss the proposed changes and any guidance regarding potential resources and next steps. 2. Provide the suggested changes to the School Board or its committees for consideration. Should it be determined that a Mitigation Sub-Plan change is needed, the School Board will adopt the Sub-Plan as noted previously. Such changes will be limited to this district-specific Mitigation Sub-Plan. Changes to this Sub-Plan may be made in the future without County Board or other participant re-adoption of the County's overall mitigation plan.
Plan Updates	The District intends to be a full participant in five-year updates of the County's overall hazard mitigation plan, which will include reviewing and updating the information provided in this Mitigation Sub-Plan. Changes to Sub-Plan content may be necessitated by applicable mitigation rules and planning guidance in effect at that time.
Continued Public Participation	The District will provide opportunities for public participation throughout its mitigation planning processes, including: (1) School Board actions regarding the Sub-Plan shall be conducted in adherence with the Wisconsin Open Meetings rules; (2) public comments will be accepted on draft Sub-Plans and Sub-Plan changes prior to adoption; and (3) public input and ideas on potential risks, vulnerabilities, capabilities, or mitigation projects are welcomed and will be considered.

GRANTON AREA SCHOOL DISTRICT HAZARD MITIGATION SUB-PLAN

Primary Contact:	Nancy Popp, District Administrator
Planning Process:	• Hazard mitigation webinar conducted by WCWRPC in Summer 2025. • District completed a comprehensive hazard mitigation survey on July 29, 2025. WCWRPC prepared the draft sub-plan based on the survey results. • District reviewed the draft sub-plan and provided additional input to WCWRPC on sub-plan and strategy alternatives as needed. • Resolution adopting the Hazard Mitigation Plan and Sub-Plan will be approved by School Board at a public meeting. Resolution included in Section VI. of the main Mitigation Plan document.

School District Profile			
Institution Type:	Public; K4 through 12 grades primary & secondary school		
Campus/Facility in Clark County	**Address**	**approx. 2023-2024 Enrollment**	**approx. 2023-2024 Staff**
Granton Elementary	217 N Main St, Granton, WI	135	67
Granton High School	217 N Main St, Granton, WI	105	



Hazard Threat Assessment

This table describes past hazard events impacting the District and any unique vulnerabilities to each event. This assessment is supplemented by the risk assessment map included at the end of this Mitigation Sub-Plan for the District. Also see the Risk Assessment in Section III of the main text of the Clark County mitigation plan for general risks and vulnerabilities applicable to most or all districts.

Hazard	History or Probability	Absenteeism	Vulnerability or Potential Impacts
Flooding – Riverine or Overbank	Low	No Significant Impact	Low
Flooding – Stormwater or Overland	Low		Low
Tornado	Moderate	No Significant Impact	Moderate
Thunderstorm, Lightning, High Winds & Hail	Moderate	No Significant Impact	Moderate
Winter Storms & Extreme Cold	Moderate	Limited Impact, 1-2 events for 1-2 days	High
Extreme Heat	Moderate	Limited Impact, 1-2 events for 1-2 days	Moderate
Drought	Low	No Significant Impact	Low
Wildfire	None	No Significant Impact	None
Cyber-Attack	Low	No Significant Impact	Low
Active Threat	Low	No Significant Impact	Low
Hazardous Materials Spill	None	No Significant Impact	None
Landslides or Sinkholes	None	No Significant Impact	None
Pandemic or Infectious Disease	Low	Limited Impact, 1-2 events for 1-2 days	Low
Long-Term Power Outage	Low	No Significant Impact	None

Hazard Analysis

Flooding	
1. Flood history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of flooding.	No events have occurred and no vulnerabilities identified.
2. Are any existing or planned school buildings or assets located within the 100-year floodplain?	No structures believed to be within or near the 100-year floodplain.
3. Facilities covered by flood the National Flood Insurance Program or other flood insurance.	Unknown.
4. Existing or needed flood mitigation activities.	None identified.
Tornados, Thunderstorms, Winter Storms, & Extreme Temperatures	
5. Extreme weather event history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	Storms have caused power outages but facility has not sustained any damages.

6. Facilities with storm shelters or safe rooms.	No
7. Facilities serving as heating/cooling centers or other emergency/recovery shelters.	The District does not have agreements in place with the Village or County.
8. Unique concerns, vulnerabilities, or resources/support needed to address future severe weather threats.	None identified
Active Threats	
9. Active threat history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	No credible threats or events have occurred.
10. Adopted protocols for training and response to active threats.	The District has adopted Alert-Lockdown-Inform-Counter-Evacuate (ALICE) approach.
11. Concerns, strategies, resources, support, or training needed for the District or in partnership with others.	New staff come in almost each year making it difficult to ensure new staff have same training. Also identified issue of explaining ALICE training to parents and community members.
12. Emergency agencies with access to floor plans for the District's primary buildings.	Yes
13. Does local law enforcement have physical keys or access cards to the District's primary buildings?	Yes
14. Describe preparedness activities.	None identified
Other Threats	
15. Wildfire history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	None identified
16. Hazardous material spill history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	None identified
17. Cybersecurity / cyber-attack history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	None identified
18. Zoonotic / infections disease history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	None identified
19. Other threat events or strategies of note.	None identified

Capabilities Assessment & Plan Coordination	
The following is a brief assessment of the District's resiliency and capability needs (or related recommendations) to mitigate, respond to, and recover from a disaster event. It also notes if mitigation or preparedness has been integrated into planning mechanisms.	
Capability Needs or Recommendations	
Equipment Needs	More radios for staff to communicate during situations; also identified need for a couple secure devices for reunification center to access student records
Training Needs	Continued and more in-depth ALICE training.
Collaboration Needs	
Communications/Outreach Needs	None identified.
County Emergency Management Relationship	Village does not have own police force, making it difficult at times to meet emergency needs.
Plan Coordination	
Key Plans & Training related to hazard mitigation	• ALICE Training
Additional opportunities to integrate hazard mitigation plan recommendations into the above plans	Will update ALICE training annually
Other:	The District is not familiar with Student Tools for Emergency Planning (STEP) Program.

Mitigation Strategy Recommendations

The overall mitigation goal statements in Section VI. of the Clark County mitigation plan are shared by all participating communities and school districts. The previous assessment and analysis show the School District has been very proactive in evaluating and preparing for hazard threats in collaboration with the Village and other partners.

The District will strive to implement the following mitigation actions/projects as resources and funding allows, though priorities could change due to a variety of fiscal, technical, or other factors, including changes in hazard risks. Section VI of the Clark County mitigation plan includes additional mitigation projects and actions that are intergovernmental in nature and not specific to the District. The District will continue to collaborate with the Village of Granton, Clark County, area emergency response providers, Red Cross, and other partners to explore and implement such mitigation and preparedness actions to enhance the safety and disaster resiliency of the District and community.

The following recommended, key actions/projects are specific to the District:

Action/Project	Priority & Timeline	Primary Responsible Party	Potential Resources
1. Continue to collaborate with the Village, County, area law enforcement, and other partners to strengthen prevention/preparedness training and overall community preparedness. • Continue active shooter/threat and severe weather plans and exercises. • Evaluate and refine evacuation and reunification plans as needed. • Evaluate crisis communications and public information officer capabilities and protocols. Collaborate with partners to access needed equipment (e.g., radios, secure devices for reunification center). • Incident Command System, including relationship to public/County emergency operations center during an emergency/disaster event. Regularly update the District's Emergency Operations Plans and other plans/protocols to address emerging threats, integrate community mitigation opportunities, and reflect on any lessons learned from exercises.	High; Ongoing	District Safety Committee	Local/County law enforcement; CESA and DPI; County Emergency Management
2. Explore the potential integration of the Student Tools for Emergency Planning (STEP) Program curriculum for fourth and fifth grade classes.	Medium; 3-5 years	School Board and/or District Administrator to discuss	Curriculum materials available at ReadyWisconsin website

3. Continue to collaborate with County Emergency Management, Red Cross, County Public Health, and local emergency response agencies to evaluate school facility availability, capacity, and policies for various public use during or following a disaster event (e.g., storm shelters/safe rooms, heating/cooling centers, emergency recovery shelters, reunification site, family assistance/reception centers, medical point of dispensing). Update District policies as necessary.	Medium to High; ongoing	District Safety Committee, County Emergency Management, Red Cross, County Public Health	This strategy may be led by outside agencies. If pursuing mitigation grant funding for safe rooms or storm hardening in the future, incorporate these other facility roles.
4. As part of future facility remodel, expansion/addition, or new gym, explore the development of a community safe room (storm shelter) for use by District students, staff, and visitors. Include a generator and heating/cooling as part of the project, which will also allow the space to be used as a heating/cooling, emergency shelter, reunification site, and/or public health emergency point of distribution.	Not a priority at this time. Low; 5+ years or as facility expansions are considered	School Board; District Administrator	FEMA Hazard Mitigation Grant Programs WCWRPC and Wisconsin Emergency Management can provide grant-related guidance Note: As of Dec 2024, FEMA may fund generators for emergency lighting, etc., as part of safe room projects, but has considered full HVAC and insulation costs to be ineligible unless otherwise required by code.

Sub-Plan Adoption and Maintenance

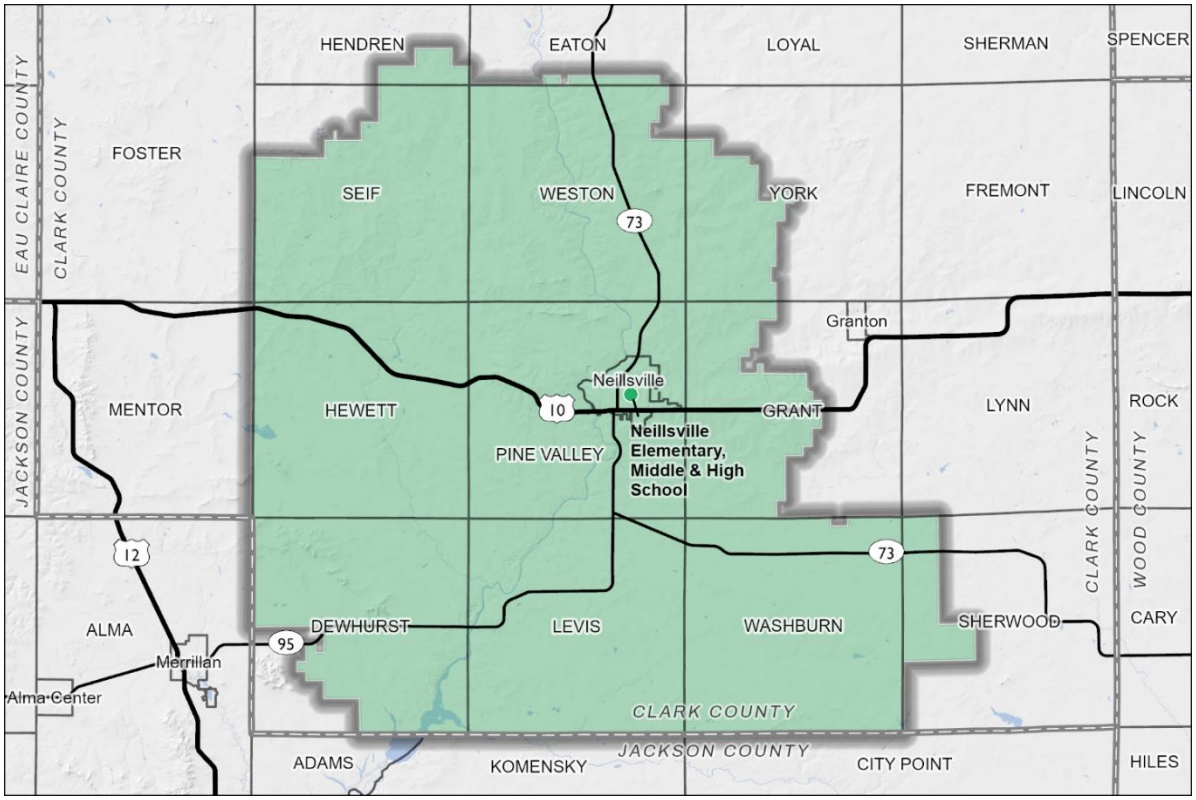
Plan Adoption	The School Board will adopt the County's overall hazard mitigation plan (and any future revisions/amendments specific to the District) by resolution during a noticed public meeting in adherence with Wisconsin Open Meetings laws. This school district-specific Hazard Mitigation Sub-Plan is an appendix of the County's overall plan. The District may modify and re-adopt its Sub-Plan by resolution during a noticed public meeting at any time at their discretion.
Plan Maintenance	Concurrent with the annual review of its other All Hazards Plans and protocols or following a declared disaster event impacting the District, District administration staff will review this Mitigation Sub-Plan and its recommendations. Other municipal and agency officials (e.g., public works, fire department, law enforcement) may be involved in this review or consulted as needed. The Mitigation Sub-Plan will be reviewed for: • Any significant changes in vulnerabilities, priorities, or trends, including to populations, structures, community lifelines, and weather/event patterns. • Any significant changes in capabilities or barriers to plan implementation. • Opportunities to strengthen plan coordination (i.e., integrate mitigation and preparedness into other community planning mechanisms). • Potential new mitigation and preparedness strategies, projects, or grant opportunities. • Any comments or discussion with the public, partners, or other stakeholders. If potential changes to the Sub-Plan are being considered, the planning contact will: 1. Contact County Emergency Management and West Central Wisconsin Regional Planning Commission (WCWRPC) to discuss the proposed changes and any guidance regarding potential resources and next steps. 2. Provide the suggested changes to the School Board or its committees for consideration. Should it be determined that a Mitigation Sub-Plan change is needed, the School Board will adopt the Sub-Plan as noted previously. Such changes will be limited to this district-specific Mitigation Sub-Plan. Changes to this Sub-Plan may be made in the future without County Board or other participant re-adoption of the County's overall mitigation plan.
Plan Updates	The District intends to be a full participant in five-year updates of the County's overall hazard mitigation plan, which will include reviewing and updating the information provided in this Mitigation Sub-Plan. Changes to Sub-Plan content may be necessitated by applicable mitigation rules and planning guidance in effect at that time.
Continued Public Participation	The District will provide opportunities for public participation throughout its mitigation planning processes, including: (1) School Board actions regarding the Sub-Plan shall be conducted in adherence with the Wisconsin Open Meetings rules; (2) public comments will be accepted on draft Sub-Plans and Sub-Plan changes prior to adoption; and (3) public input and ideas on potential risks, vulnerabilities, capabilities, or mitigation projects are welcomed and will be considered.

SCHOOL DISTRICT OF NEILLSVILLE
HAZARD MITIGATION SUB-PLAN

Primary Contact:	Corey Peterson, District Administrator
Planning Process:	• Hazard mitigation webinar conducted by WCWRPC in Summer 2025. • District completed a comprehensive hazard mitigation survey on September 8, 2025. WCWRPC prepared the draft sub-plan based on the survey results. • District reviewed the draft sub-plan and provided additional input to WCWRPC on sub-plan and strategy alternatives as needed. • Resolution adopting the Hazard Mitigation Plan and Sub-Plan will be approved by School Board at a public meeting. Resolution included in Section VI. of the main Mitigation Plan document.

School District Profile

Institution Type:	Public; K4 through 12 grades primary & secondary school		
Campus/Facility in Clark County	**Address**	**approx. 2023-2024 Enrollment**	**approx. 2023-2024 Staff**
Neillsville High School	614 E 5th St, Neillsville, WI	840	1,330
Neillsville Middle School	614 E 5th St, Neillsville, WI		
Neillsville Elementary School	614 E 5th St, Neillsville, WI		
School District Bus Garage	1201 E 15th St, Neillsville, WI	0	1



Hazard Threat Assessment

This table describes past hazard events impacting the District and any unique vulnerabilities to each event. This assessment is supplemented by the risk assessment map included at the end of this Mitigation Sub-Plan for the District. Also see the Risk Assessment in Section III of the main text of the Clark County mitigation plan for general risks and vulnerabilities applicable to most or all districts.

Hazard	History or Probability	Absenteeism	Vulnerability or Potential Impacts
Flooding – Riverine or Overbank	Low	No Significant Impact	None
Flooding – Stormwater or Overland	Low		None
Tornado	Low	No Significant Impact	Low
Thunderstorm, Lightning, High Winds & Hail	Low	Limited Impact, 1-2 events for 1-2 days	Low
Winter Storms & Extreme Cold	Moderate	Limited Impact, 3+ events for 1-2 days	Low
Extreme Heat	Moderate	Limited Impact, 1-2 events for 1-2 days	Low
Drought	Moderate	No Significant Impact	None
Wildfire	Low	No Significant Impact	None
Cyber-Attack	Moderate	No Significant Impact	Low
Active Threat	Low	No Significant Impact	Low
Hazardous Materials Spill	Low	No Significant Impact	Low
Landslides or Sinkholes	Low	No Significant Impact	Low
Pandemic or Infectious Disease	Low	Limited Impact, 3+events for 1-2 days	Low
Long-Term Power Outage	Low	No Significant Impact	Low

Hazard Analysis

Flooding	
1. Flood history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of flooding.	Flooding in auditorium due to heavy rains years ago.
2. Are any existing or planned school buildings or assets located within the 100-year floodplain?	Unknown
3. Facilities covered by flood the National Flood Insurance Program or other flood insurance.	Yes;
4. Existing or needed flood mitigation activities.	Currently working to mitigate past flooding issues with new drainage plans for front entrance area

Tornados, Thunderstorms, Winter Storms, & Extreme Temperatures	
5. Extreme weather event history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	None noted.
6. Facilities with storm shelters or safe rooms.	No
7. Facilities serving as heating/cooling centers or other emergency/recovery shelters.	The District has an agreement in place with the County to serve as a cooling/warming facility if needed. School facilities serve as warming / cooling centers. Also has an agreement with Red Cross to serve as an emergency recovery shelter.
8. Unique concerns, vulnerabilities, or resources/support needed to address future severe weather threats.	None noted.
Active Threats	
9. Active threat history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	No active threat events noted.
10. Adopted protocols for training and response to active threats.	The District has a crisis plan that adopts local practices; plan is currently under review.
11. Concerns, strategies, resources, support, or training needed for the District or in partnership with others.	The District continues to review the Crisis Handbook and is working to update with best practices.
12. Emergency agencies with access to floor plans for the District's primary buildings.	Being addressed.
13. Does local law enforcement have physical keys or access cards to the District's primary buildings?	Yes
14. Describe preparedness activities.	Working to review ALICE and other practices to determine best plan for staff and students; under review this year
Other Threats	
15. Wildfire history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	No significant events have occurred.
16. Hazardous material spill history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	No significant events have occurred.
17. Cybersecurity / cyber-attack history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	No significant events have occurred

18. Zoonotic / infections disease history, damage/impacts, repetitive losses, or concerns for District facilities and assets, including the nature/type of event.	None noted.
19. Other threat events or strategies of note.	None noted.

Capabilities Assessment & Plan Coordination

The following is a brief assessment of the District's resiliency and capability needs (or related recommendations) to mitigate, respond to, and recover from a disaster event. It also notes if mitigation or preparedness has been integrated into planning mechanisms.

Capability Needs or Recommendations	
Equipment Needs	AED kit, medical resources (safety vests, etc.)
Training Needs	AED/CPR and medical response trainings, County assistance agreements.
Collaboration Needs	
Communications/Outreach Needs	None noted
County Emergency Management Relationship	The District maintains regular communication with County Emergency Management staff and are always looking to engage in further connections and resources to assist in work together.
Plan Coordination	
Key Plans & Training related to hazard mitigation	• Crisis Plan • Traffic Safety Flow Pattern • Fire Drill • Lockdown Drill • Tornado Drill
Additional opportunities to integrate hazard mitigation plan recommendations into the above plans	As a Crisis Team, facilities, scheduled drills, and current safety trainings will be reviewed. Site review will be conducted to establish manners in which District can better align safety needs with best practices. Currently have been doing this with own safety flow pattern to begin year with a safer travel pattern.
Other:	Unsure if the District is familiar with Student Tools for Emergency Planning (STEP) Program and may use it in the future.

Mitigation Strategy Recommendations

The overall mitigation goal statements in Section VI. of the Clark County mitigation plan are shared by all participating communities and school districts. The previous assessment and analysis show the School District has been very proactive in evaluating and preparing for hazard threats in collaboration with the City and other partners.

The District will strive to implement the following mitigation actions/projects as resources and funding allows, though priorities could change due to a variety of fiscal, technical, or other factors, including changes in hazard risks. Section VI of the Clark County mitigation plan includes additional mitigation projects and actions that are intergovernmental in nature and not specific to the District. The District will continue to collaborate with the City of Neillsville, Clark County, area emergency response providers, Red Cross, and other partners to explore and implement such mitigation and preparedness actions to enhance the safety and disaster resiliency of the District and community.

The following recommended, key actions/projects are specific to the District:

Action/Project	Priority & Timeline	Primary Responsible Party	Potential Resources
1. Continue efforts to mitigate past flooding of School gymnasium with improved front entrance drains. As part of stormwater management and new facility/grounds development plans, explore low impact development design and nature-based solutions (e.g., rain gardens, bioswales) to limit runoff and ponding.	Med-to-High; 1-2 years	School Building/Grounds staff with engineering support if needed	While not a critical issue at this time, FEMA Flood Mitigation Assistance or WEM Flood Resilience program may be available to assist with flood mitigation actions if a history of repetitive losses can be demonstrated and the benefits outweigh costs for a preferred solution.
2. Continue to collaborate with local emergency services and other internal and external team members on emergency, preparedness, and continuity planning. • Continue active shooter/threat and severe weather plans and exercises. • Evaluate and refine evacuation and reunification plans as needed. • Evaluate crisis communications and public information officer capabilities and protocols. • Incident Command System, including relationship to public/County emergency operations center during an emergency/disaster event. Annually review all hazard plans and mitigation plan recommendations. Share plans with partners when appropriate.	High; ongoing	District Crisis Team; County Emergency Management; Local law enforcement and fire department	Resources and involved parties/team members vary based on the focus of the planning effort. County Emergency Management can be an important liaison, resource, and training partner.

3. Continue to collaborate with County Emergency Management, Red Cross, County Public Health, and local emergency response agencies to evaluate school facility availability, capacity, and policies for various public use during or following a disaster event (e.g., storm shelters/safe rooms, heating/cooling centers, emergency recovery shelters, reunification site, family assistance/reception centers, medical point of dispensing). Update District policies as necessary. Discuss with these partners opportunities to secure needed equipment and related training (e.g., AED/CPR, safety vests).	High; 1-3 years/ongoing	District Crisis Team, County Emergency Management, Red Cross, County Public Health	This strategy may be led by outside agencies. If pursuing mitigation grant funding for safe rooms or storm hardening in the future, incorporate these other facility roles.
4. Explore the potential integration of the Student Tools for Emergency Planning (STEP) Program curriculum for fourth and fifth grade classes.	Medium; 3-5 years	School Board and/or District Administrator & District Curriculum Advisor to discuss	Curriculum materials available at ReadyWisconsin website
5. As part of future facility remodel, expansion/addition, or new gym, explore the development of a community safe room (storm shelter) for use by District students, staff, and visitors as well as area residents. Include a generator and heating/cooling as part of the project, which will also allow the space to be used as a heating/cooling, emergency shelter, reunification site, and/or public health emergency point of distribution.	Not a priority at this time. Low; 5+ years or as facility expansions are considered	School Board; District Administrator	FEMA Hazard Mitigation Grant Programs WCWRPC and Wisconsin Emergency Management can provide grant-related guidance Note: As of Dec 2024, FEMA may fund generators for emergency lighting, etc., as part of safe room projects, but has considered full HVAC and insulation costs to be ineligible unless otherwise required by code.

Sub-Plan Adoption and Maintenance

Plan Adoption	The School Board will adopt the County's overall hazard mitigation plan (and any future revisions/amendments specific to the District) by resolution during a noticed public meeting in adherence with Wisconsin Open Meetings laws. This school district-specific Hazard Mitigation Sub-Plan is an appendix of the County's overall plan. The District may modify and re-adopt its Sub-Plan by resolution during a noticed public meeting at any time at their discretion.
Plan Maintenance	Concurrent with the annual review of its other All Hazards Plans and protocols or following a declared disaster event impacting the District, District administration staff will review this Mitigation Sub-Plan and its recommendations. Other municipal and agency officials (e.g., public works, fire department, law enforcement) may be involved in this review or consulted as needed. The Mitigation Sub-Plan will be reviewed for: • Any significant changes in vulnerabilities, priorities, or trends, including to populations, structures, community lifelines, and weather/event patterns. • Any significant changes in capabilities or barriers to plan implementation. • Opportunities to strengthen plan coordination (i.e., integrate mitigation and preparedness into other community planning mechanisms). • Potential new mitigation and preparedness strategies, projects, or grant opportunities. • Any comments or discussion with the public, partners, or other stakeholders. If potential changes to the Sub-Plan are being considered, the planning contact will: 1. Contact County Emergency Management and West Central Wisconsin Regional Planning Commission (WCWRPC) to discuss the proposed changes and any guidance regarding potential resources and next steps. 2. Provide the suggested changes to the School Board or its committees for consideration. Should it be determined that a Mitigation Sub-Plan change is needed, the School Board will adopt the Sub-Plan as noted previously. Such changes will be limited to this district-specific Mitigation Sub-Plan. Changes to this Sub-Plan may be made in the future without County Board or other participant re-adoption of the County's overall mitigation plan.
Plan Updates	The District intends to be a full participant in five-year updates of the County's overall hazard mitigation plan, which will include reviewing and updating the information provided in this Mitigation Sub-Plan. Changes to Sub-Plan content may be necessitated by applicable mitigation rules and planning guidance in effect at that time.
Continued Public Participation	The District will provide opportunities for public participation throughout its mitigation planning processes, including: (1) School Board actions regarding the Sub-Plan shall be conducted in adherence with the Wisconsin Open Meetings rules; (2) public comments will be accepted on draft Sub-Plans and Sub-Plan changes prior to adoption; and (3) public input and ideas on potential risks, vulnerabilities, capabilities, or mitigation projects are welcomed and will be considered.