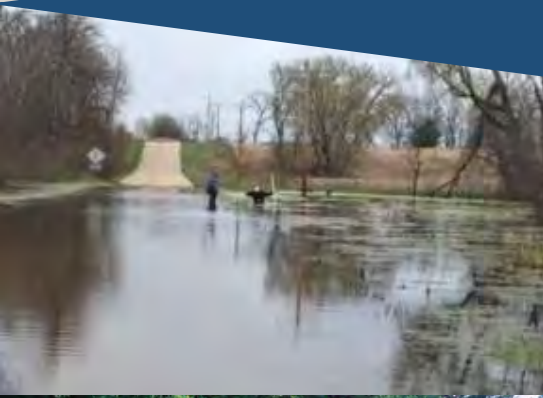


Adams County All Hazards Mitigation Plan 2026



ADAMS COUNTY ALL HAZARDS MITIGATION PLAN UPDATE

prepared for:

Adams County Emergency Management

by:

North Central Wisconsin Regional Planning Commission

adopted by Adams County Board on:

May 19, 2026

This update was prepared at the request and under the supervision of the Adams County Public Safety and Judiciary Committee and its Emergency Management Director by the North Central Wisconsin Regional Planning Commission (NCWRPC). For more information, contact:

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Introduction

Part I of the Adams County All Hazards Mitigation Plan (AHMP) Update describes and documents the process used to develop the plan update. This includes how it was prepared and who (committee, organizations, departments, staff, consultants, etc.) was involved in the update process. It also describes the local government involvement, the time period in which the update was prepared, and who to contact to answer questions and make recommendations for future amendments to the plan.

Legislative Requirement For Mitigation Planning

The development of the Adams County All Hazards Mitigation Plan Update is a response to federal regulations requiring the update of a local hazard mitigation plan every five years. The Disaster Mitigation Act of 2000 (DMA2K) amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), creating the framework for state, local (counties and incorporated municipalities), tribal and U.S. territorial governments to engage in hazard mitigation planning to receive certain types of non-emergency disaster assistance. Requirements and procedures to implement hazard mitigation planning provisions may be found in the Code of Federal Regulations, Stafford Act Title 44, Chapter 1, Part 201 (44 CFR Part 201).

Since the DMA2K, additional laws have been passed that help to shape hazard mitigation policy. These are codified in amendments to the Sandy Recovery Improvement Act (SRIA) of 2013, the National Flood Insurance Act of 1968, and the Water Infrastructure Improvements for the Nation (WIIN) Act of 2016.

The following grant programs have hazard mitigation plan adoption requirements: Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC), Flood Mitigation Assistance (FMA), and Rehabilitation of High Hazard Potential Dams Grant Program (HHPD).

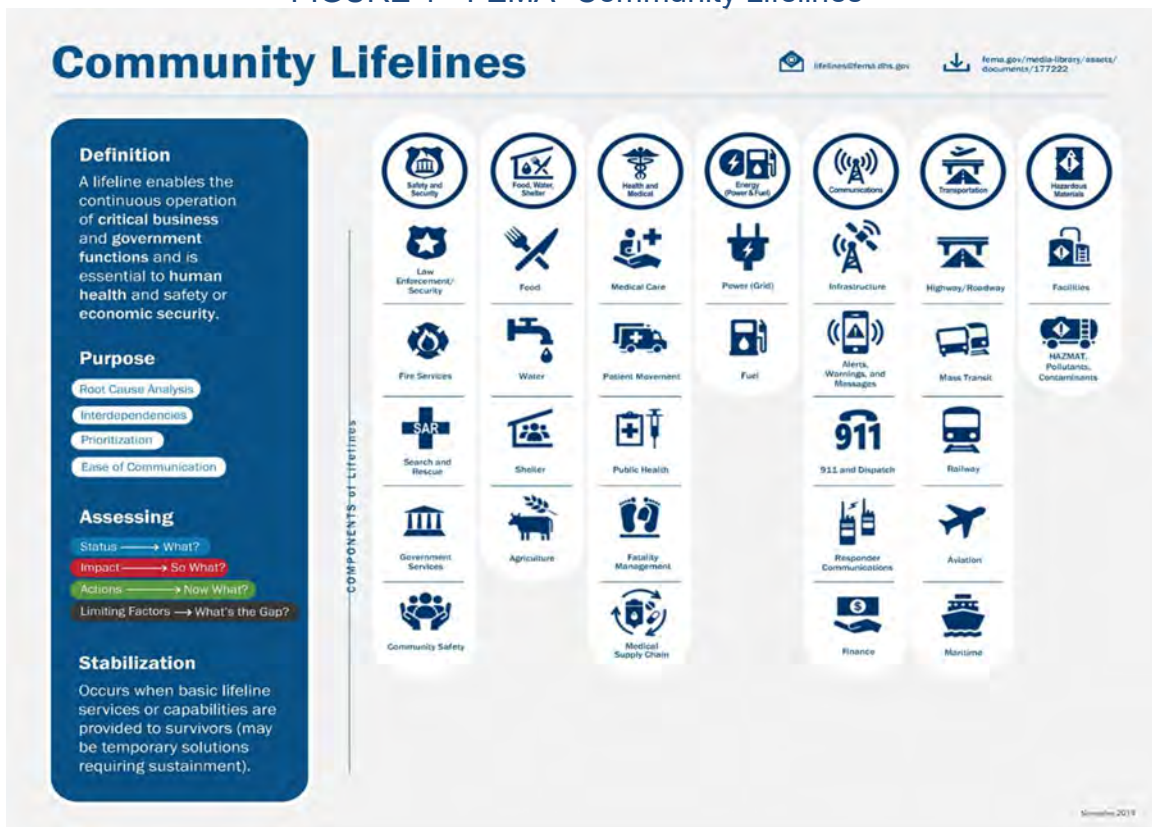
Local hazard mitigation plans form the foundation of a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction and repeat damage. The Federal Emergency Management Agency (FEMA) supports local mitigation planning to foster partnerships among all levels of government, to develop and strengthen non-governmental and private partnerships, to reduce the costs associated with disaster response and recovery by promoting mitigation activities, and to promote more disaster-resilient and sustainable communities.

Community resilience is the ability of a community to prepare for anticipated hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions. Activities such as disaster preparedness (which includes prevention, protection, mitigation, response and recovery) and reducing community stressors

(the underlying social, economic and environmental conditions that can weaken a community) are key steps to resilience.

"Community lifelines" (see Figure 1) are the infrastructure of resilience that enable the continuous operation of critical government and business functions and are essential to human health and safety or economic security. FEMA developed the community lifelines concept as a disaster response tool to highlight the priority areas of focus for initial incident stabilization. However, lifelines exist steady-state and enable all other aspects of society. As such, FEMA now incorporates community lifelines into all of its planning and reporting requirements including mitigation. Mitigation planning helps to understand risk to and vulnerability of lifelines, to prioritize mitigation investments, and to reduce the likelihood that lifelines will fail as a result of an incident.

FIGURE 1 - FEMA "Community Lifelines"



Source: FEMA.

The Stafford Act lays out requirements for local mitigation plans which are further clarified by FEMA policy guidance.

The Five Parts of an All Hazards Mitigation Plan Update

The Adams County All Hazards Mitigation Plan Update was categorized into five parts in order to address FEMA’s local mitigation plan requirements. The five parts are as followed:

- ✓ Part I: Update Planning Process
- ✓ Part II: Planning Area
- ✓ Part III: Risk Assessment
- ✓ Part IV: Mitigation Strategy
- ✓ Part V: Plan Maintenance Process and Adoption

Development of the All Hazards Mitigation Plan Update

The Adams County Emergency Management Department received a Planning Grant in late 2024 to develop an All Hazards Mitigation Plan Update through the Building Resilient Infrastructure and Communities (BRIC) Grant Program.

The North Central Wisconsin Regional Planning Commission (NCWRPC) finalized a work agreement with Adams County and began updating the All Hazards Mitigation Plan at the request of the County Emergency Management Director in January of 2025.

The update process included planning committee meetings as well as extensive involvement from the local units of government within Adams County and the counties surrounding Adams. A variety of local and regional agencies were involved in the development of the plan update at various stages, and extensive opportunity for public participation was provided including public informational meetings. All sections of the plan update report were reviewed by the planning team at subsequent meetings and revised as established in the design of the update process for this Plan.

The remainder of this chapter expands on and provides more detail on key aspects of the update development process.

Key Elements Of The Update To The 2020 Plan

The major enhancements to the Adams County All Hazards Mitigation Plan developed through this update are as follows:

- ✓ Review of Recommended Revisions - The final Crosswalk for the previous plan approval passed the plan with no recommended revisions.
- ✓ Review and update of planning area chapter - The planning area description and inventory was improved with additional information and updated statistics.
- ✓ Expanded hazard coverage – New hazards addressed in the Update include: epidemic/pandemic.

- ✓ Review and update of risk assessment - The risk assessment was updated with documentation on recent hazard events. The priority level of hazards facing the County was also reviewed and updated.
- ✓ High Hazard Dams - High hazard potential dams were specifically addressed in the risk assessment, as well as other areas of the Plan Update.
- ✓ Review and update of Mitigation Strategy - The mitigation strategies chapter begins with a complete progress report on the strategies from the 2020 plan, establishment of new set of strategies for next five-year cycle and an updated prioritization of projects.
- ✓ Community Lifelines – The concept of Community Lifelines is introduced into the Plan, see Chapter 1.
- ✓ New FEMA Plan Requirements – New FEMA plan requirements were addressed, including effects of development trends, participating capability assessment, and expanded NFIP requirements.

All Hazards Mitigation Plan Update Committee

The Adams County All Hazard Mitigation Plan Update was prepared under the guidance of an advisory committee that consisted of the current members of the County Public Safety and Judiciary Committee. Periodic meetings were held with the NCWRPC staff, the County Emergency Management Director (Jane Gervais), and the Committee to provide input on the types of hazards to be considered, appropriate mitigation strategies, and to review draft reports. Committee members are as follows:

- ❖ Rick Pease, Chair
- ❖ Robert Grabarski, Vice Chair
- ❖ Michael Baker
- ❖ Jay Churco
- ❖ Larry Borud

Local Government Involvement

There were a number of opportunities for the local units of government to become involved in the update process. All incorporated jurisdictions participated in the original plan as well as this update through one or more of these opportunities. In addition, unincorporated jurisdictions and school districts received a survey and may have participated in other opportunities during the process.

In February of 2025 a hazard mitigation issues survey was sent to each town chairperson and clerk, as well as each school district administrator, requesting which hazards are a concern, input on past and future mitigation measures, and

to document other information that could be incorporated into the All Hazards Mitigation Plan Update. Responses were received from 9 of 17 towns and 1 of 3 school districts. A significant amount of information was gleaned from these questionnaires and incorporated into the planning document.

Some of the primary issues identified in the survey results include the following:

- Fire Risk: extensive wooded areas – high fire danger pine/jack pine, significant wildfire fuel on ground, campgrounds – fire hazard
- Flooding: prone to flooding – numerous streams, low lying areas, bridge wash outs, roads impassable, dam failure risk, agricultural impacts
- Tornado / High Wind: extensive wooded areas - fallen trees blocking roadways or downing power lines, long term power outage, mobile home parks
- Winter Storm / Heavy Snow / Ice: downing powers lines, long term power outage
- Concern regarding wildfire risk to school facilities in the rural areas

The City of Adams was formally introduced to the update process at a separate meeting on October 13, 2025. The participants at this meeting provided information on hazards that have significance to the City, discussed critical facilities and provided mitigation strategy ideas for the plan update. Participants in this meeting included the following:

- | | |
|-----------------------|---------------------------------------|
| ❖ Justin Grooms | Mayor, City of Adams |
| ❖ Jerri Johnson | Deputy Clerk-Treasurer, City of Adams |
| ❖ Jane Gervais | Adams County Emergency Management |
| ❖ Christian Boulanger | NCWRPC Planner |

Discussion from this meeting indicated that the City's main concerns are tornados/high winds and major winter storms due to power outage threat and some flooding. They talked about vulnerabilities with an older population, assisted living and low-income housing. Hazardous materials are also a concern, and the City identified issues including: the fire department located next to a chemical facility and the railroad through the city, which can also hinder emergency response when crossings are blocked.

The City of Adams identified several asset properties lying outside its corporate limits. These include its wastewater treatment plant and some undeveloped parcels within the Village of Friendship. No extraordinary or unique risks were identified for these areas.

The Village of Friendship was formally introduced to the update process at a separate meeting on October 13, 2025. The participants at this meeting provided information on hazards that have significance to the area, discussed critical

facilities and provided mitigation strategy ideas for the plan update. Participants in this meeting included the following:

- ❖ Jerry Sonnenberg Village President, Village of Friendship
- ❖ Beth Schultz Public Works Director, Village of Friendship
- ❖ Rebecca Reuter Clerk, Village of Friendship
- ❖ Jane Gervais Adams County Emergency Management
- ❖ Christian Boulanger NCWRPC Planner

Discussion from this meeting indicated that the Village's main concerns are flooding including potential dam breach and severe storms (wind & ice) resulting in power outage. The Village cited areas near the lake as vulnerable to flooding, and the area behind the Health & Human Services building where water collects. There is also a flooding issue on Quincy Street that needs to be identified. The Village needs back up generators for its lift stations to maintain sewer operations in a power outage. The Village Hall serves as a shelter for the nearby hospital and nursing home.

The Village of Friendship identified no asset properties lying outside its corporate limits.

Neighboring Community Involvement

One of the requirements of the update process was to include neighboring communities. In previous plans, the NCWRPC experienced low attendance in response to invitations to county emergency management staff from surrounding counties. As a result, NCWRPC staff e-conferenced during the update process with staff from Columbia, Juneau, Marquette, Portage, Waushara and Wood counties. Ideas were exchanged about All Hazards Mitigation planning processes and strategies between the various counties.

Local and Regional Agency Involvement

Another requirement of the update process was to involve local and regional agencies that have a role in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia, and other private and non-private interests. To meet this objective, the NCWRPC invited a diverse group of stakeholders to discuss potential hazard mitigation strategies.

The meeting was held on October 21, 2025 at the Adams County Courthouse in Friendship. Agencies and organizations represented include the following:

- ❖ Alex Grubs WI Dept of Natural Resources
- ❖ Jane Gervais Adams County Emergency Management
- ❖ Eric Johnson Adams Columbia Electric Cooperative
- ❖ Cody Przybylski Adams County Public Health Officer
- ❖ Tammy Kingery Emplify Health by Gundersen
- ❖ Dustin Grant Director, Adams County Zoning & Land Conservation

- ❖ Michelle Orzech Oxford Federal Correctional Institution
- ❖ Kyla Brosh Oxford Federal Correctional Institution
- ❖ Darryl Landeau North Central WI Regional Planning Commission
- ❖ Mark Kane Rome Fire Department
- ❖ Zac Dzilconski Enbridge Pipeline Emergency Response
- ❖ Erin Kobylski Adams County Health & Human Services

A number of other agencies were invited but chose not to attend.

During the meeting, the Plan Update and its components were introduced to the attendees. Mitigation strategy ideas were solicited and a number of ideas were discussed at length with the group. Part IV of the Plan was revised based on the meeting.

During the meeting a number of issues were discussed. Meeting attendees brought up issues related to significant wildfire risk in the County. Wildfire fuel has built up across the county overtime with repeated flooding killing off areas of grass and tree stands and high wind events bringing down significant trees/branches. Compounding the issue is the depressed timber market reduces the financial incentive to clean up, and landowners can afford to do the removals. Once started the fires can spread quickly. Debris burning is the biggest concern, with many people, particularly weekend/seasonal residents and tourists, who don't understand burning restrictions. Another major fire, like the Cottonville Fire, would significantly tax the response and recovery resources across the County.

Another concern is the increase in facilities/venues that attract very large numbers of people – well beyond what local resources are equipped to handle, with the situation becoming even worse if more than one such site is affected at the same time. Similarly, the demand for new facilities like solar farms w/battery storage will challenge local resources. Local capacity is a major issue. The group also noted the challenges associated with accessing structures across rural parts of the County which can be exacerbated during a hazard event. Responders struggling with access can impact their effectiveness and reduce the number of structures that can be saved. Functional needs populations and the county's rural location challenges for accessing basic needs were also discussed, among other things.

Public Review Process and Update Adoption

Opportunities for public comment were provided to review the Plan Update during the drafting stage and prior to Plan Update approval. See APPENDIX A for copies of public meeting notices. Draft Plan elements were made available on the Internet during the update process. Links that open an email submission were provided for questions or comments. The final Plan document will remain on the Internet until the next draft update is posted for review. The public can continue to submit questions or comments at any time via the email link. (See Contact Information, below, for web addresses.)

County Public Safety & Judiciary Committee meetings are always open to the public (unless entering into legal closed session), and the public can bring questions or comments regarding this Plan Update to any regular meeting. Meeting schedules can be obtained by checking the County website, contacting the County Clerk's Office or the Emergency Management Director (see Contact Information, below).

A public informational meeting on the draft update was held at the Adams County Community Center on October 21, 2025. Notice was published in the local newspaper, however, no one from the public attended, and thus no public comments were received. In addition, no written comments were submitted.

The County Public Safety & Judiciary Committee will review the Plan Update prior to forwarding it to County Board for approval. Following these open, public meetings, the Update will be forwarded to the County Board for final adoption. The adopting resolution will be included in APPENDIX B along with details on any plan changes resulting from Committee and/or County Board action.

The City, Village, Towns and School Districts were asked to adopt the Plan Update for their jurisdictions at their own properly posted and open public meeting, see APPENDIX B for the local units' resolutions of adoption.

Incorporated Plans, Studies, Reports And Technical Data

Many plans, reports, and technical data sources were referenced and incorporated into the Adams County All Hazards Mitigation Plan Update. These sources include but are not necessarily limited to the following:

Wisconsin Department of Natural Resources, North Central Wisconsin Regional Planning Commission and Adams County geographic information system databases provided much of the base data for the mapping and analysis within the Plan Update. Statistical reports and data from the US Census and Wisconsin Departments of Administration, Revenue and Workforce Development were used for the demographic background in Part 2 of this Plan Update. Land use data in Part 2 was obtained from the Adams County Comprehensive Plan.

Wisconsin Department of Natural Resources Wetlands Inventory and Dams Database were used to identify and map wetlands and dams within the County in Parts 2 and 3. The WisDNR Dams Database provided information on high hazard potential dams within the County. FEMA DFIRM flood zone maps for Adams County provided the mapping of 100-year floodplain areas for flooding risk assessment in Part 3. The FEMA Community Status Book was also referenced.

NOAA National Climatic Data Center severe weather event data was used extensively for the risk assessment in Part 3. The wildfire section of the risk assessment was based on the Wisconsin Department of Natural Resources' fire occurrence database and statewide Communities At Risk (CAR) assessment.

A variety of other plans and studies were instrumental in developing the risk assessment in Part 3, including: the Community Wildfire Protection Plans for the Towns of Rome and Big Flats-Monroe , the Flood Insurance Study...for Adams County and Incorporated Areas, and the Hazardous Materials Commodity Flow Study for Adams County.

Other plans, reports, and documents were reviewed by staff during the planning process including but not limited to the State of Wisconsin Hazard Mitigation Plan; the Hazard Analysis for the State of Wisconsin, the Wisconsin Repetitive Loss Report, the Adams County Zoning Ordinance, the Adams County Land and Water Resource Management Plan, the Adams County Emergency Operations Plan, the North Central Wisconsin Pandemic Assessment and Future Response Plan and the North Central Wisconsin Regional COVID-19 Recovery Plan. Although these may not have been directly incorporated, the review provided valuable insight and direction to the update process.

Contact Information

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Go to:

<https://www.ncwrpc.org/adams-county-all-hazards-mitigation-plan-update-2025/>

www.co.adams.wi.us/departments/emergency-management

INTRODUCTION

Part 2 of the Adams County All-Hazard Mitigation Plan Update provides general geographical information on Adams County including demographic and economic characteristics. The general development patterns of the County are described in terms of current land use and future development trends.

In addition to developing an understanding of the planning area, this chapter represents the beginning stages of assessing vulnerability by inventorying the numbers, types and values of existing buildings, infrastructure and critical facilities within each participating jurisdiction in the planning area. This overall summary of each jurisdiction's vulnerability to hazards describes the potential impact on the community.

Land use and development trends are analyzed to project the number and type of potential future buildings, infrastructure and critical facilities within each jurisdiction so that mitigation options can be considered in future land use decisions.

The resulting information is an important element of the update process, since sound alternative mitigation strategies cannot be formulated and evaluated without an in-depth knowledge of the relevant conditions in the study area.

GENERAL GEOGRAPHY**LOCATION**

Adams County is located in central Wisconsin (See Map 1). The largest urban areas are the City of Adams and the Village of Friendship, which border each other and are located in the center of the County. The City of Wisconsin Dells is encroaching from the south into the southwest corner of the County but is covered under Columbia County's mitigation plan. The County is bounded on the north by Portage and Wood Counties, on the east by Marquette and Waushara, on the south by Columbia, and on the west by Juneau County.

Adams County lies 150 miles northwest of Milwaukee; 116 miles southwest of Green Bay; 87 miles east of La Crosse and 78 miles north of Madison. Major metropolitan areas outside of Wisconsin with transportation linkages to Adams County are Chicago, 219 miles southeast; Minneapolis-St. Paul, 202 miles northwest; and Duluth, 294 miles north.

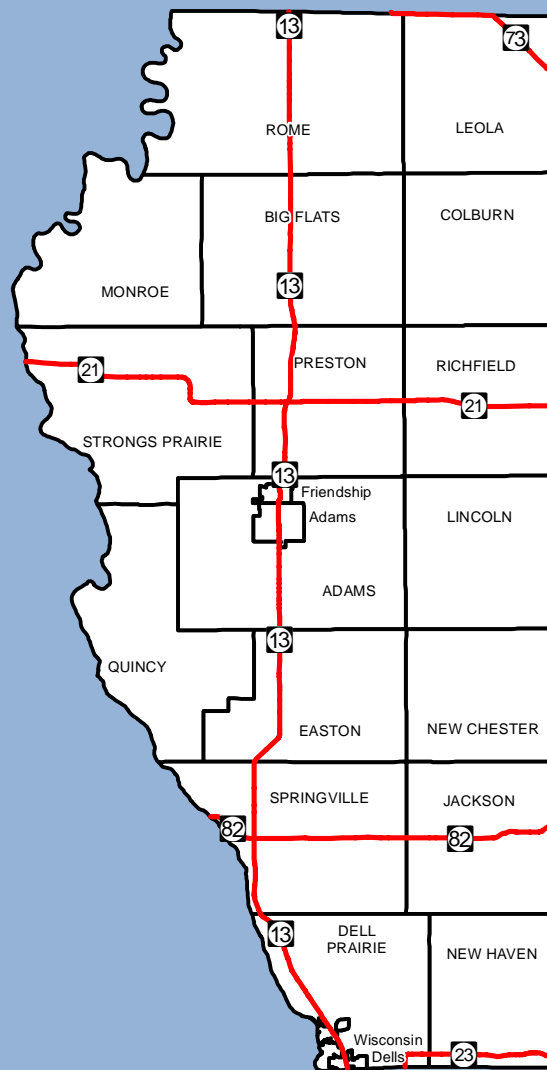
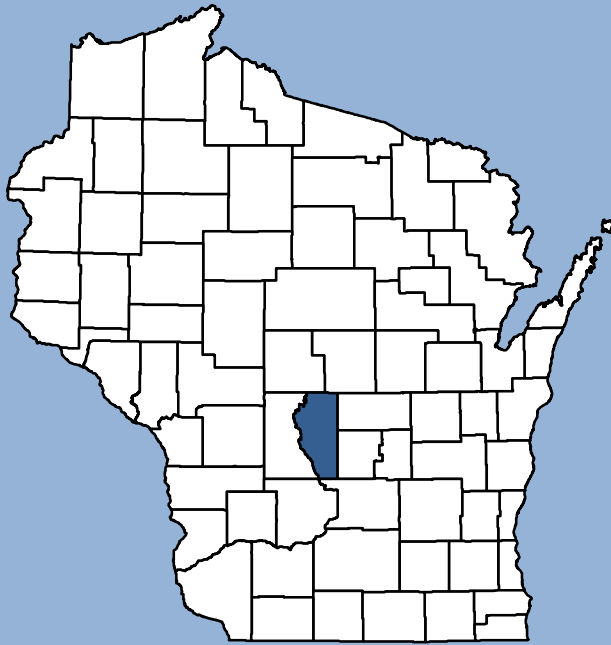
CIVIL DIVISIONS

There are 20 municipalities (17 towns, 1 village, and 2 cities) in the Adams County planning area. The Village of Friendship is the County Seat. These units of government provide the basic structure of the decision-making framework. Although not general-purpose units of governments, there are also 9 lake and/or sanitary districts. The County has a total surface area of 688 square miles, of which 6.2 % is water. The area and proportion of the County within each civil division is presented in Table 1. The County rectified some ambiguity in its boundaries with Juneau County due to the river and



flowages between them which may explain some variation in comparing data sets on land area.

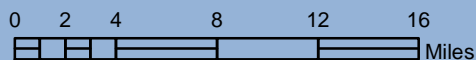
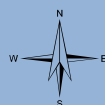
Table 1 Geographical Size by Civil Division				
	Area in square miles			
Municipality	Water area	Land area	Total area	Area as % of County
Adams city	0	2.94	2.94	0.43%
Adams town	0.31	50.09	50.4	7.33%
Big Flats town	0.16	47.89	48.05	6.98%
Colburn town	0.01	35.86	35.87	5.21%
Dell Prairie town	1.19	31.52	32.71	4.75%
Easton town	0.09	36.02	36.11	5.25%
Friendship village	0.04	0.90	0.94	0.14%
Jackson town	1.00	34.64	35.64	5.18%
Leola town	0.03	37.22	37.25	5.41%
Lincoln town	0.05	36.05	36.1	5.25%
Monroe town	16.56	21.87	38.43	5.59%
New Chester town	0.26	31.09	31.35	4.56%
New Haven town	1.25	29.12	30.37	4.41%
Preston town	0.49	35.33	35.82	5.21%
Quincy town	7.02	32.54	39.56	5.79%
Richfield town	0.01	35.54	35.55	5.17%
Rome town	8.11	54.11	62.22	9.04%
Springville town	0.97	43.71	44.68	6.49%
Strongs Prairie town	4.69	47.27	51.96	7.55%
Wisconsin Dells (part)	0.06	1.72	1.78	0.26%
Adams County	42.30	645.43	687.73	100.00%

Source: NCWRPC, 2025



Legend

-  Minor Civil Divisions
-  State Highways



Source: WIDNR, NCRWPC

This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only. NCRWPC is not responsible for any inaccuracies herein contained.



Prepared By:
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TOPOGRAPHY

Adams County is in the Wisconsin Central Plain, which is characterized by flat or gently undulating topography. Relief is generally low, and the county has extensive wetlands of various types. There are also occasional pinnacles and hills of sandstone such as Pilot Knob, Rabbit Mound, Friendship Mound and Roche-A-Cri Mound.

Roche-A-Cri Mound rises 300 feet above the surrounding plain to an elevation of 1,185 feet. Elevations along the Wisconsin River range from 850 feet in the southern part of the County to 950 feet in the northern part. The altitude of the outwash plain ranges from 1,000 to 1,100 feet.

The Johnstown moraine in southeastern Adams County divides the drainage between the Wisconsin and Fox Rivers. The principal drainage in Adams County is westward to the Wisconsin River. Little Roche-A-Cri Creek, Big Roche-A-Cri Creek and Fourteen Mile Creek are the major tributaries. Drainage east of the moraine is to the Fox River via Neenah Creek, Widow Green Creek, and other tributaries.

Streams in Adams County begin in outwash plains, which provide relatively large and constant amounts of ground water. Average regional runoff is about 9 inches per year. The Wisconsin River is regulated by dams and has a relatively constant flow. Floodplains in Adams County are small, and floods occur only during periods of exceptionally heavy rainfall.

CLIMATE

Adams County has a continental climate that is characterized by long, cold, snowy winters; warm summers; and springs and falls that are often short. From late fall through spring, the weather changes every few days because of air masses that are part of pressure systems moving eastward and northeastward over the northern states.

In winter, the average temperature is 20 degrees F., and the average daily minimum temperature is 11 degrees. The lowest temperature on record is -43 degrees, which occurred in 1951. The number of days at or below 0 degrees has varied from 9 in 1931 to 57 in 2008. In summer, the average temperature is 70 degrees, and the average daily temperature is 83 degrees. The highest recorded temperature is 114 degrees, which occurred in 1936. The number of days at or above 90 degrees has varied from 1 in 1951 to 53 in 1931.

Average total annual precipitation is 31.5 inches. Of this, about 70% usually falls in April through September. The heaviest 1-day rainfall on record was 7.67 inches on August 7, 1980. Thunderstorms occur on about 39 days each year. Hail falls on an average of two days a year. Average seasonal snowfall is 39.8 inches, with 97.4 inches (2007-8) being the greatest total on record.

DEMOGRAPHIC AND ECONOMIC PROFILE

POPULATION AND HOUSEHOLDS

The official 2024 population estimate for Adams County shows a population of 20,733 people for the County. This is a slight increase from the 2019 estimated population of 20,630 people. Since 2019, the population of Adams County has increased by 0.5% or by 103 people. Historically, Adams County had been among the fastest growing counties in the state going back to 1990, outpacing its neighbors, and only more recently being matched and surpassed (refer to Table 2).

Population concentrations and trends are important when prioritizing hazard mitigation strategies. Adams/Friendship is one of the most densely populated and developed areas in the County. Other areas of population concentrations are around Lakes Camelot, Sherwood, and Arrowhead in the Town of Rome; along Castle Rock Lake in the Town of Quincy; and the communities of Dellwood, Easton, Brooks, Grand Marsh, and Big Flats. Map 2 (below) shows areas of residential population concentrations in the County. Overall population density of the County is about 30.43 persons-per-square-mile and ranges from a high of approximately 784 in the Village of Friendship to a low of about 3.99 in the Town of Richfield.

Table 2 Population of Adjacent Counties					
County	2000	2019	2024	# Change	% Change
Adams	19,920	20,630	20,733	103	0.5%
Columbia	52,468	57,282	58,360	1,078	1.9%
Juneau	24,316	27,232	26,947	-285	-1.0%
Marquette	14,555	15,390	15,558	168	1.1%
Portage	67,182	71,680	72,139	459	0.6%
Waushara	23,066	24,517	24,550	33	0.1%
Wood	75,555	75,450	73,846	-1,604	-2.1%
Wisconsin	5,363,675	5,843,443	5,989,256	145,813	2.5%

Source: U.S. Census, 2000, WisDOA, 2019 and 2024 and NCWRPC, 2025

Between 2000 and 2023, most communities within Adams County have experienced an increase in their population base (refer to Table 3). The greatest amount of growth occurred in the Town of Big Flats with a 25% increase between 2000 and 2023. The Towns of Colburn, New Haven, and Strongs Prairie also had strong growth, increasing by over 20% during that time period.

Table 3 Population and Households of Minor Civil Divisions						
MINOR CIVIL DIVISION	2000 Population	2000 Households	2023 Population	2023 Households	'00-'23 % Population	'00-'23 % Households
Adams town	1,267	547	1,387	634	7.7%	15.9
Big Flats town	946	402	1,185	544	25.3%	35.3
Colburn town	181	83	278	108	24.4%	30.1
Dell Prairie town	1,415	553	1,604	665	13.36	20.3
Easton town	1,194	486	1,005	415	-15.83	-14.6
Jackson town	926	397	988	470	6.70	18.4
Leola town	265	107	298	142	12.45	32.7
Lincoln town	311	129	314	133	0.96	3.1
Monroe town	363	168	377	189	3.86	12.5
New Chester* town	2,141	371	1,342	371	-37.32	0.0
New Haven town	657	260	792	252	20.55	-3.1
Preston town	1,360	561	1,370	694	0.74	23.7
Quincy town	1,181	569	1,230	679	4.15	19.3
Richfield town	144	62	142	75	-1.39	21.0
Rome town	2,656	1,181	3,094	1,618	16.49	37.0
Springville town	1,167	487	1,301	570	11.48	17.0
Strongs Prairie town	1,115	502	1,340	624	20.18	24.3
Friendship village	781	257	737	305	-5.63	18.7
Adams city	1,831	769	2,144	863	17.09	12.2
Wisconsin Dells city (part)	19	9	0	0	-100.00	-100.0
Adams County Total	19,920	7,900	20,928	9,351	5.06	18.4

Source: U.S. Census, 2000, WisDOA, 2023 and NCWRPC *#s skewed by inc. of prison pop.

According to the American Community Survey, the median age in Adams County is about 55.5, in comparison to the State's median age of 40.1. The County has been identified as a retirement area resulting from being a vacation spot for many seasonal homeowners. The location of seasonal housing is a strong indicator in terms of retirement location. In Adams County, 38.4% of all housing units have been identified as seasonal/recreational, which is among the highest percentages in the State.

SEASONAL POPULATION

The impact of this seasonal population cannot be overlooked when planning for hazards. Table 4 shows potential seasonal residents by municipality estimated based on seasonal housing data presented in the 2023 American Community Survey. Determining when and for how long these seasonal residents will be in the County is problematic, but the numbers give some indication of what weekend or other peak period population levels might be.

Table 4 Estimated Seasonal Resident Population		
Municipality	Seasonal Housing Units	Estimated Seasonal Population
Adams town	173	375
Big Flats town	428	933
Colburn town	49	126
Dell Prairie town	132	318
Easton town	251	607
Jackson town	550	1,150
Leola town	95	200
Lincoln town	71	168
Monroe town	344	685
New Chester town	159	326
New Haven town	90	283
Preston town	377	743
Quincy town	1,045	1891
Richfield town	81	153
Rome town	1,539	2,939
Springville town	335	764
Strongs Prairie town	765	1,645
Adams city	38	92
Friendship village	8	17
Wisconsin Dells (part)	25	0
Adams County	6,555	14,159

Source: U.S. Census, 2023 and NCWRPC, 2023

Another component of the seasonal population includes short-term accommodations such as campgrounds or hotel-style lodging. The scope of this plan did not provide for a detailed inventory of accommodations, however, the Adams County Outdoor Recreation Plan identifies about 1,900 campsites within the County including 500 at Petenwell County Park in the Town of Monroe, 200 at Castle Rock County Park in the Town of Quincy, 41 at Roche-A-Cri State Park in the Town of Preston and 1,160 private sites in various campgrounds across the County.

In addition, the NCWRPC estimates that there are over 1000 resort/motel type rooms within the County including the 620 room (equivalents) Chula Vista Resort within the area annexed to the City of Wisconsin Dells, 160 units at Northern Bay in Strongs Prairie and 118 units at the Sand Valley Golf Resort.

EMPLOYMENT

The County's highly seasonal economy is reflected in the large share of workers in seasonal leisure and hospitality jobs. The leisure and hospitalities industries employ more than a quarter of total employment. Employment in the leisure and hospitality sector swells to cater to the waves of tourists that move through the County each year, as well as to the retirees relocating here. As a result, Adams has a higher concentration of food preparation and sales related occupations than the statewide average.

Table 5 Top Employers in Adams County			
Company	Product or Service	Size	Location
Chula Vista Inc.	Hotels and Motels	1000-4,999	C. Wisconsin Dells
Allied Cooperative	Other General Merchandise Retailers	250-499	C. of Adams
WestRock	Corrugated & solid fiber box mfg	250-499	C. of Adams
Villa Pines Living Ctr	Nursing care facilities	100-249	V. of Friendship
Gundersen Moundview Hospital and Clinics	General medical & surgical hospitals	100-249	V. of Friendship
County Market	Supermarkets and other grocery stores	50-99	C. of Adams
Lake Arrowhead	Civic and Social Organizations	100-249	T. of Rome
Adams-Columbia Electric Co-Op	Electric Power Distribution	50-99	V. of Friendship
Adams Middle School	Elementary and Secondary Schools	50-99	C. of Adams

Source: Wisconsin Department of Workforce Development, 2023

Accommodation and food services and drinking places together employ over 1,000 workers. Many of these jobs are seasonal or part-time. As resorts in the Wisconsin Dells area continue to expand, the accommodations sector within the County has added significant jobs. Chula Vista Resort has actually grown into the largest employer in Adams County, refer to Table 5.

The education and health sector are a significant source of jobs in the County, with Villa Pines and Gunderson Hospital being major employers. Manufacturing is also a major source of jobs in the County. Government and school districts are also significant employers.

Looking at the concentration of employment geographically shows the range of jobs spread across the County. However, the locations of major employers again become evident: the City of Adams has the highest concentration of jobs as the commercial center

of the County, Friendship has County government and New Chester the Federal prison, while Chula Vista is in Wisconsin Dells. Identifying locations of large employment is important when prioritizing hazard mitigation strategies.

In addition to the seasonal swells in employment, the number of people working in a given locality fluctuates on a daily basis. The average commute time for Adams County residents is 29 minutes. The county is a net exporter of labor. In other words, the County has fewer local jobs than residents who work. According to the County Comprehensive Plan, there are approximately 4,475 jobs within the County. About 2,003 of those jobs are held by residents of the County, while 2,472 jobs are filled by people commuting in from surrounding areas. At the same time, about 5,924 residents of the County travel to jobs located in other counties.

Agriculture is a major component of the economy in Adams County. There is significant agricultural employment in the area. The fact that a large portion of this employment is made up of migrant seasonal workers makes it difficult to quantify and track.

LAND USE/LAND COVER AND DEVELOPMENT PATTERNS

Land use is an important determinant in the potential impact a particular hazard may have, and in action which may be taken to mitigate the hazard impacts. An understanding of the amount, type, and spatial distribution of urban and rural land uses within the County is an important consideration in the development of a sound hazard mitigation plan.

Aerial photos were used to digitize land use into a Geographic Information System (GIS) coverage. Map 2 shows the land use and development concentrations in Adams County. Table 6 shows the acreage and percent of each classification.

FORESTRY AND AGRICULTURE

The dominant land uses in Adams County are forestry and agriculture. Land area in the County is approximately 58 percent forested, comprised of around 255,000 acres of woodland. Agricultural land covers another 26 percent of the county's land area. The main agricultural practices in the county are irrigated vegetables and dairy farming. Cranberry production has expanded in the County, particularly in the Town of Leola. Agriculture is scattered throughout the County but much of it is on the eastern side. According to the Wisconsin Agricultural Statistic Service, Adams County actually gained farmland during the 1980's and 1990's – something uncharacteristic compared to the majority of Wisconsin's counties. FSA crop statistics indicate this trend is continuing with active croplands increasing from 78,589 acres in 2014 to 79,603 in 2024.

Generalized Land Use Adams County		
Description	Acres	Percent
Agriculture*	115,861	26.3%
Commercial and Industrial	2,732	0.6%
Governmental / Institutional	854	0.2%
Residential	19,683	4.5%
Outdoor Recreation	2,699	0.6%
Transportation	15,026	3.4%
Utility	20	0.0%
Water	27,931	6.3%
Woodlands	255,426	58.0%
Total Acres	440,232	100.0%

Source: NCWRPC Inventory 2021, *Broadly Includes farm areas in addition to active cropland: cranberry, open field & grasslands and other lands.

RESIDENTIAL DEVELOPMENT

Land in residential development makes up 4.5 percent of the total county area. Residential concentrations are scattered throughout the county (see “Population and Households” above). Much of the scattered rural development is related to direct recreational demand as various types of housing have clustered along streams and lakes.

There are a number of mobile home parks in the county. According to the U.S. Census, there were 3,252 mobile homes in 2023. This is about 19 percent of housing units for the County compared to about 3 percent for the entire state. This is significant due to their vulnerability to natural hazards, especially tornados. Map 8 displays the mobile home concentrations within the County.




COMMERCIAL AND INDUSTRIAL DEVELOPMENT

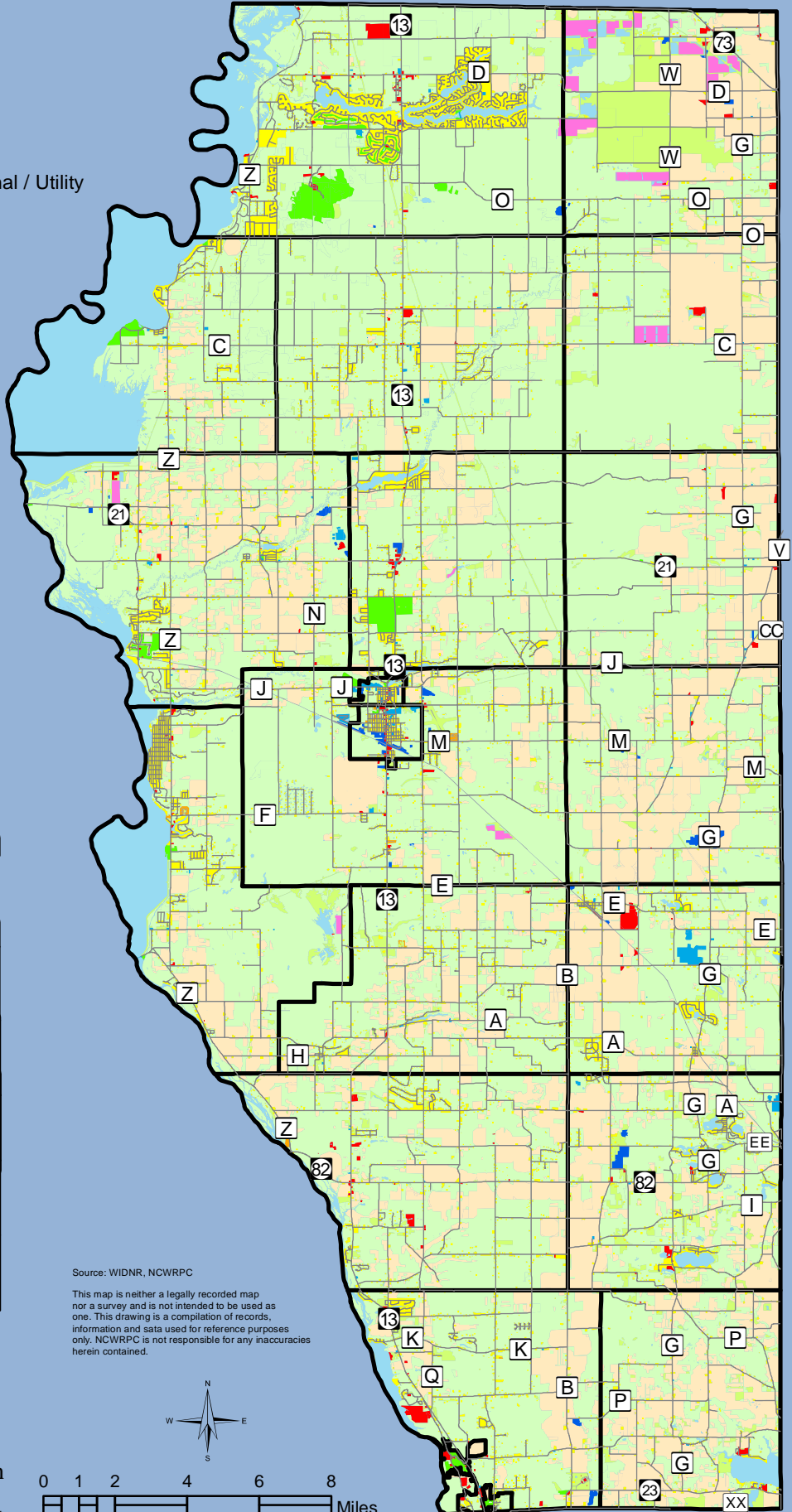
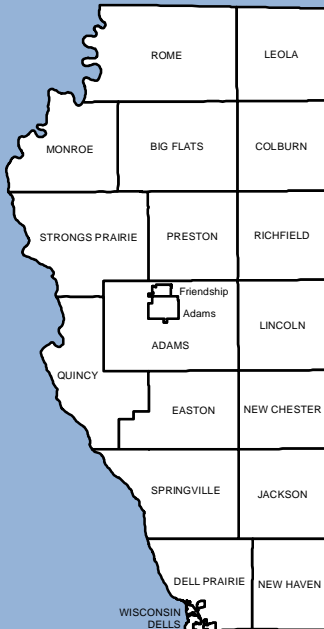
Commercial and industrial development makes up only about 0.6 percent of the total area of the County. Land use for commercial and industrial development is also scattered throughout the county. There are four designated industrial parks in Adams County. They are in the City of Adams, Village of Friendship, Town of Preston, and Town of Rome. Other industrial sites are located in the towns of Jackson and Lincoln. Commercial activity is located in the City of Adams and Friendship where it serves as a sub-regional service center supported by the surrounding agri-business and tourist industry. Commercial activity in the unincorporated areas is primarily dominated by private commercial recreation.

SURFACE WATER

The majority of the land in the County is part of the Central and Upper Wisconsin River Basins. Five main watersheds make up the two Wisconsin River basins in Adams County – Fourteen Mile Creek, Big Roche A Cri, Little Roche A Cri, Duck and Plainville Creeks, and Neenah Creek (see Map 3). The Johnstown terminal moraine in southeastern Adams County forms the drainage divide between the Wisconsin and Upper Fox River Basins. Neenah Creek is the main watershed in Adams County for Upper Fox Basin.

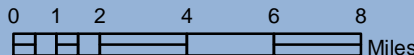
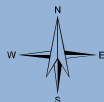
Legend

-  Minor Civil Divisions
-  Agriculture
-  Commercial
-  Cranberry Bog
-  Governmental / Institutional / Utility
-  Industrial / Quarry
-  Multi-Family
-  Open Lands
-  Outdoor Recreation
-  Residential
-  Transportation
-  Water
-  Woodlands



Source: WIDNR, NCWRPC

This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only. NCWRPC is not responsible for any inaccuracies herein contained.



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Within the watersheds, there are 73 interior streams covering 234.5 linear miles and 450 surface acres (see Map 3), but 12 (of 26) named streams and 27 (of 47) unnamed streams possessing 31 percent of the total stream frontage have average widths of less than 10 feet, making them relatively undesirable for development. However, all the streams, like the lakes, are important in the hydrological and ecological regime and should be protected by shoreland zoning and physical protective measures.

Streams in Adams County, except the Wisconsin River, have their headwaters in outwash plains, which contribute relatively large and constant amounts of groundwater base flow to the streams. Regional average runoff in Adams County is about nine inches/0.7 cfs per square mile of drainage basin. The Wisconsin River is well regulated and has a relatively constant flow.

The total surface water area of lakes and streams in Adams County exceeds 25,000 acres. Petenwell and Castle Rock flowages, the 2nd and 5th largest lakes in the state, cover 16,295 acres together. Unlike most counties in the west central part of the state, Adams County has 7 natural lakes, all located on the east side of the moraine, in the Towns of Jackson and New Chester. All the other lakes in the county are impoundments (man-made lakes). Most of these are located west of the moraine. The 48 interior lakes add 2,439 acres, of which 22 have surface areas of less than 5 acres. Twenty-nine lakes have maximum depths of less than 10 feet.



Castle Rock Lake

Several are subject to winter fishkill because of their shallowness. The two flowages and the 22 named lakes provide the bulk of the County's high quality lake resources. Of the 26 unnamed lakes, the largest is 12.5 acres, only one is over ten feet deep, and 17 have no fishery. Named lakes have a total of about 71 miles of shoreline, and unnamed lakes add another 7.

Lake Sherwood, Lake Camelot, and Lake Arrowhead Dams are located in the Town of Rome, see Map 4. These lakes were designed for recreational and economic purposes related to property development. They were formed by artificially constructing earthen dams made of native soil material across the river valleys. In 1967, Lake Sherwood was the first of the three dams created by damming Fourteen Mile and Spring Branch creeks. Lake Camelot was created in 1969 by damming Spring Branch Creek near the end of the upper arm of Lake Sherwood and Fourteen Mile Creek near the end of the lower arm. A channel between the two diverts part of the flow of Fourteen Mile Creek to the upper part of Lake Camelot to reduce stagnation problems that could have arisen from low flow in Spring Branch Creek and the resultant slow replacement of water in the lake. The Lake Arrowhead Dam was the last of the dams constructed in 1978 over Fourteen Mile Creek and is located approximately 2.7 miles west of State Highway 13. Nine of the dams in

the county are owned by Adams County and managed by the Adams County Land & Water Conservation Department.

Floodplains and wetlands are important subsidiary components to the surface water system as described below.

Floodplain

The primary value of floodplains is their role in natural flood control. Flood plains represent areas where excess water can be accommodated whether through drainage by streams or through storage by wetlands and other natural detention/retention areas. Specific areas that will be inundated will depend upon the amount of water, the distance and speed that water travels, and the topography of the area. If uninterrupted by development, the areas shown on a map as floodplains should be able to handle the severest (regional) flood, i.e. those that have a probability of occurring once every one hundred years.

There is a value in preserving and protecting these natural flood control areas from encroachment. First, by preventing development in the floodplain, the cost of building dikes, levies, or other man-made flood control devices will be saved. Second, for each structure that is constructed in a flood-prone area, that flood-prone area expands, potentially subjecting other structures originally built outside the delineated flood hazard area to the risk of flooding. Each new structure (or modification to existing) placed in the flood plain puts more life and property in danger.

Counties, cities, and villages are required to adopt reasonable and effective floodplain zoning ordinances. The requirement is found in section 87.30 of the Wisconsin Statutes and Chapter NR 116 of the Wisconsin Administrative Code. Floodplain zoning is designed to protect individuals, private property, and public investments from flood damage.

Floodplain zoning maps identify areas where major floods occur. Regulations prohibit development in the floodway, the most dangerous flood area. In other flood areas, the flood fringe, development that is built above flood levels and otherwise flood-protected is allowed if it is in accordance with local ordinances. For regulatory purposes, a floodplain is generally defined as land where there is a 1% chance of flooding in any year (also known as the 100-year floodplain).

In order to participate in the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program (NFIP), the County, City of Adams, and Village of Friendship have each completed a Flood Insurance Study and a Flood Insurance Rate Map (FIRM) that encompasses Adams County, see Table 7 for summary of NFIP status. This FIRM delineates the "A" Zones including the floodway and flood fringe which are those areas inundated by the 100-year flood within the County. Adams County has updated its FIRM to digital standards. The digital FIRMs are referred to as DFIRM. The NCWRPC downloaded the DFIRM from FEMA's website for use in this plan. Although unofficial, the digital files indicate there are 19,016 acres floodplain in Adams County, or 4.6 percent of

the land area. Map 4 shows the approximate floodplains in Adams County. Floodplains in Adams are small and typically flood only during periods of exceptionally heavy rainfall.

Table 7 FEMA Community Status Book Report Communities Participating in the National Flood Insurance Program Wisconsin - Adams County				
Community	Initial FHBM	Initial FIRM	Current Map	Program Entry
Adams County	02/20/76	11/16/90	06/17/08	11/16/90
City of Adams	05/14/76	09/01/88	NSFHA*	09/06/88
Village of Friendship	05/03/74	11/16/90	06/17/08	11/16/90
*No special flood hazard area - all zone C.				

Source: FEMA, 2025

Currently, there is only one repetitive loss structure, those with multiple flood insurance claims, in Adams County. This property is a single-family residence. Details are not provided here to preserve personal privacy.

Adams County has also chosen to participate in the Community Rating System (CRS), which is a voluntary program that provides incentives for floodplain management activities that exceed minimum requirements for NFIP. Adams County has qualified for a Class 7 rating in the CRS which results in a 15% discount for flood insurance premiums in special flood hazard areas and 5% in non-special flood hazard areas.

Table 8 summaries NFIP compliance efforts for Adams County and the participating incorporated municipalities.

Third generation flood mapping is now underway across the country. Known as Risk MAP or Risk Mapping, Assessment and Planning, this process is being coordinated by the Department of Natural Resources in Wisconsin. Adams County was included in an evaluation process (discovery) between 2020 and 2023 for future Risk Mapping, however, a project has not been scheduled at the time of this writing.

The Biggert-Waters Flood Insurance Reform Act was signed into law in July, 2012. This act implemented significant reforms to the structure of flood insurance under the National Flood Insurance Program (NFIP). Then, on March 21, 2014, President Obama signed the Homeowner Flood Insurance Affordability Act of 2014 (HFIAA) into law amending the NFIP further. These new laws impact the various elements of the NFIP, including Insurance, Flood Mapping, Mitigation, and Floodplain management.

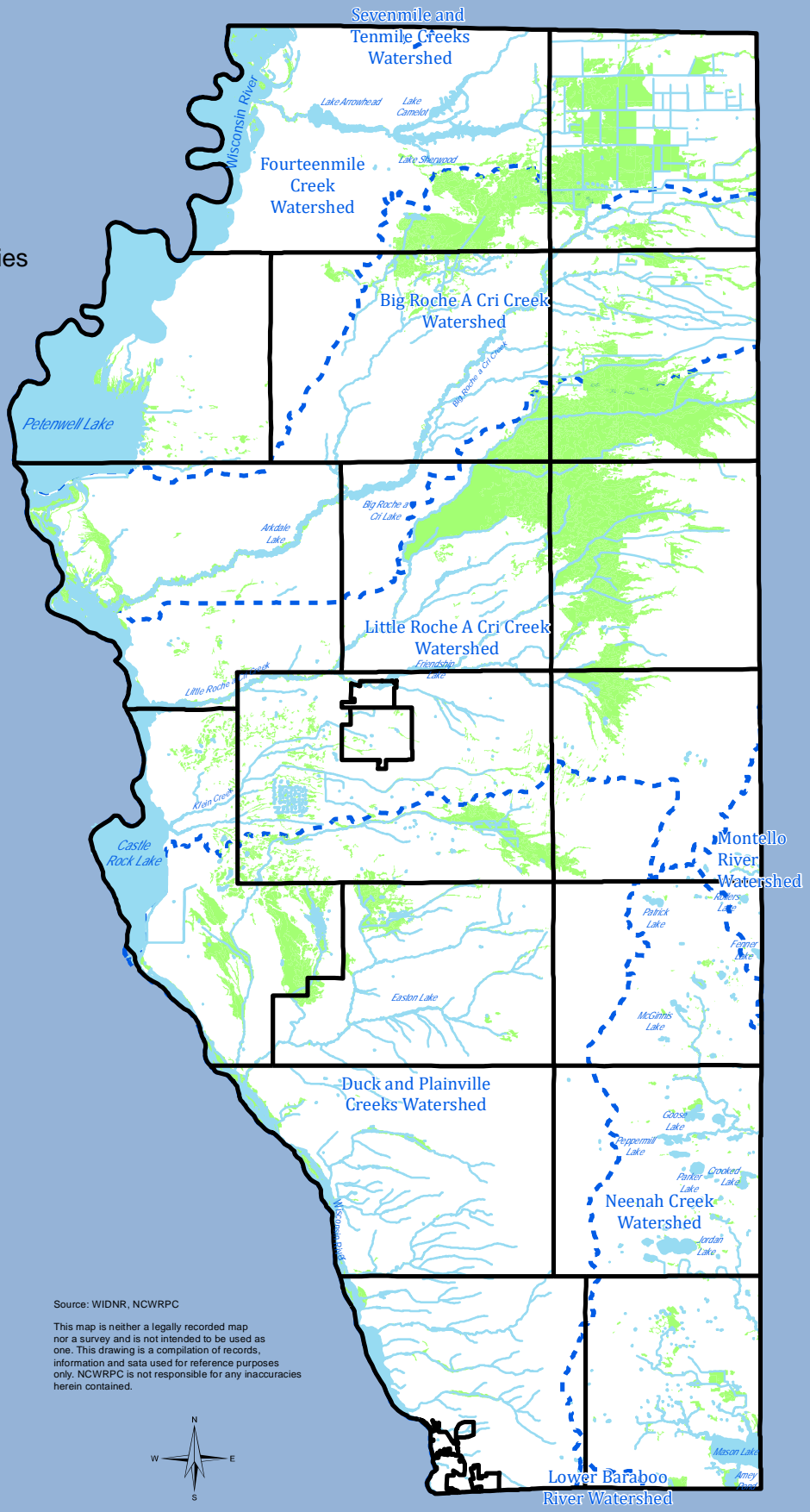
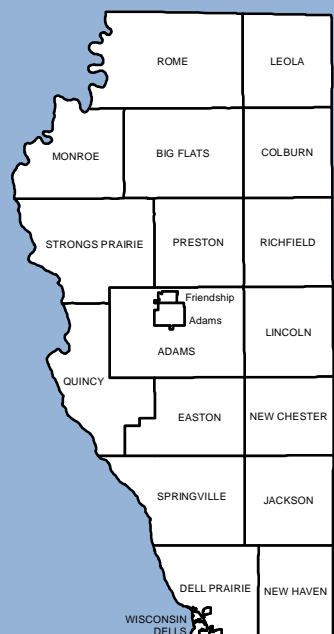
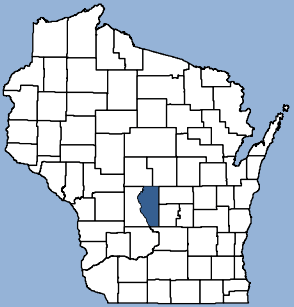
TABLE 8 Compliance with NFIP Requirements – Participating Jurisdictions			
	Adams County	City of Adams	Village of Friendship
NFIP Status	Participating	Participating	Participating
Adoption of Minimum NFIP Criteria	Adams County has adopted floodplain zoning provisions and associated DFIRMs which incorporate all of the minimum FEMA and WDNR requirements for floodplain management.	City of Adams has no special flood hazard area to apply flood plain zoning.	Floodplain zoning adopted based on State Model.
Adoption of Latest FIRM	6/17/08	No Special Flood Hazard Area	6/17/08
Implementation and Enforcement of floodplain regulations	Director of Zoning & Land Conservation administers Adams County Zoning Code including floodplain regulations.	City has no mapped floodplains to enforce floodplain regulations.	Contract Zoning Administrator does enforcement of floodplain regulations.
Designated Agency for NFIP Compliance	Zoning & Land Conservation Department / Director of Zoning & Land Conservation	Clerk-Treasurer’s Office / City Clerk	Clerk-Treasurer’s Office / Village Clerk
Implementation of Substantial Damage Provisions of Ordinance	County Code Administrator inspects all damaged floodplain structures to determine if substantial damage has occurred after an event.	City has no mapped floodplains to apply substantial damage provisions.	Contract Zoning Administrator inspects all damaged flood plain structures to determine if substantial damage has occurred after an event.
Floodplain Management Efforts that Contribute to Continued Compliance with NFIP	Comprehensive Land Use Planning and Permitting to keep development from encroaching on floodplains. Enforcement of the County Floodplain Ordinance. Update ordinance as required in conjunction with WDNR state statutes. Participation in Community Rating System (CRS) program.	City has no mapped floodplains to apply management.	Enforcement of Floodplain Ordinance. / Update ordinance as required in conjunction with WDNR.
Reasons for Nonparticipation	N/A	N/A	N/A

Source: NCWRPC interviews and correspondence with local zoning officials, 2025.

Adams County, Wisconsin Surface Water & Watersheds Map 3

Legend

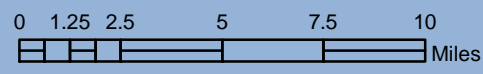
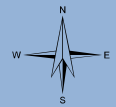
-  Minor Civil Divisions
-  Water
-  Wetlands
-  Watershed Boundaries



Source: WIDNR, NCWRPC
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HFIAA repeals and modifies certain provisions of the Biggert-Waters Flood Insurance Reform Act, and makes additional program changes to other aspects of the program not covered by that Act. Many provisions of the Biggert-Waters Flood Insurance Reform Act remain and are still being implemented. The new law lowers the recent rate increases on some policies, prevents some future rate increases, and implements a surcharge on all policyholders. The Act also repeals certain rate increases that have already gone into effect and provides for refunds to those policyholders. Both of these laws are important to local floodplain managers and planners because rate structure increases may increase interest of policy holders that own floodprone properties in alternatives to mitigate both flood risk and flood insurance costs for those properties.

Wetlands

Wetlands perform many indispensable roles in the function of the hydrologic cycle and local ecological systems. In terms of hazard mitigation, they act as water storage devices in times of high water. Like sponges, wetlands absorb excess water and release it back into the watershed slowly, preventing flooding and minimizing flood damage. As more impermeable surfaces are developed, this excess capacity for water runoff storage becomes increasingly important.

The DNR has also identified the location of wetlands on their WISCLAND database. According to this, Adams County has approximately 48,348 acres, or 11 percent of its total area. Map 3 shows these wetland areas in Adams County. There are concentrations of wetlands in Adams County including Leola Marsh Wildlife Area, Colburn Wildlife Area, and the Quincy Bluff and Wetland Natural Area. Additional wetlands are associated with the floodplains discussed above, however, smaller wetlands are scattered throughout the County.

Eradication of wetlands can occur through the use of fill material. This can destroy the hydrological function of the site and open the area to improper development. The Wisconsin Department of Natural Resources (DNR) has promulgated minimum standards for managing wetlands.

OTHER LAND COVER/USES

Recreational lands including parks and outdoor sports facilities total about 2,699 acres or 0.6 percent of the county land area. Other lands may have recreational aspects, particularly woodlands. Governmental, public and institutional lands total about 854 acres or about 0.2% of the County land area. The transportation category is primarily the roadway travel corridors for federal, state, county and local highways and roads. Sometimes overlooked, transportation land use can be significant. In Adams County, surface transportation facilities consume about 15,000 acres of land or about 3.4 percent of total land area. Note that this is more than four times as much land area as is used for commercial, industrial and institutional uses in the County.

FUTURE GROWTH AND DEVELOPMENT IN ADAMS COUNTY

Adams County's population has increased 4.1% over the last 25 years for a net gain of 813 residents. The County's rate of growth has been declining from the very high rates observed during the previous decades. The County's rate of growth has historically been faster than state and national averages. For example, going back to the 1990s, the County's population increased 27% over the decade, compared to the state's growth of 10% over this same period. By 2049, Adams County will have grown to a population of about 21,583, a gain of 850 residents if the growth rate continues at the current long-term trend level. This equates to approximately 370 structures or about 15 per year.

From a net growth perspective, residential migration into Adams County has been solely responsible for all of its population growth because natural growth has been negative (more deaths than births). This growth pattern is reflective of an aging population and seasonal-to-permanent housing markets.

The Towns of Rome and Monroe in the northwest corner of the County should continue to see strong growth as the primary lakeshore/riverfront development areas of the County. The other riverfront towns including Strongs Prairie, Quincy, Springville and Dell Prairie will also likely see continued development due to the attraction of the river and other recreational amenities. In addition, the "northern" towns of Leola, Big Flats and Preston and the "southern" towns of Jackson and New Haven will continue to grow in part as "bedroom communities" to Wisconsin Rapids and Wisconsin Dells, respectively.

The City of Adams has seen some new homes being built, including some duplexes. Town of Jackson has seen some new construction along its lake front properties especially Jordan Lake. Town of Monroe has a couple of new subdivisions being developed, and Town of New Haven reports a few new homes built.

New commercial and industrial development is expected to be gradual over time, paralleling population growth. The most significant concentrations of this development will likely be in the Town of Rome, City of Adams and Town of Dell Prairie. A notable area of new development is the Sand Valley Golf Resort and residential development in the Town of Rome. In the City of Adams, some new commercial development has occurred including a new discount retail chain store. A new campground is being planned in Town of Big Flats.

Development of new infrastructure or public facilities remains somewhat restricted due to constraints on local government budgets. However, some needed projects do eventually move forward. For example, the Towns of Jackson and Leola have built new town halls to replace aging facilities. The Town of Monroe has converted a donated church building into a visitor center. New facilities being planned include a new salt/sand storage shed in Town of Jackson, a new town shop with storm shelter in Town of Leola, and a new brush drop-off site in Town of Dell Prairie. In the City of Adams has constructed a new PFAS treatment facility and a new training center for the fire department, while Mid-State

Technical College has completed some campus remodeling projects. Adams County has done some additional remodeling of the Courthouse.

The majority of population growth will occur in the towns, which, with the exception of Rome, do not provide extensive services, and budget constraints will curtail local governments' ability to develop new facilities and result in a tendency to make do with existing infrastructure and delay expansion plans. Any new buildings and facilities, including new housing units, will be subject to each hazard addressed in this Plan. Even best efforts to keep new building out of flood plain and dam shadow areas cannot guarantee new construction will be exempt from flooding due to the nature of flooding within the County.

The County's population is generally older, with the median age in Adams at 55.5, in comparison to the State's median age of 40.1. Over the next few decades, the residential base will become even older, aging much more quickly than the state as a whole. In fact, the number of persons 65 and older will likely exceed 36 percent of the population by 2050. This will have implications affecting the demand for emergency services.

IMPACT OF CHANGES IN POPULATION, LAND USE AND DEVELOPMENT

The dynamics of a given community's population, how land use changes over time and how local development trends affect population and land use have implications for emergency services and hazard mitigation. The Hazard Mitigation Planning Committee identified the following impacts from its assessment of the changes in population, land use and development trends within Adams County and the participating incorporated municipalities:

- Increases in new housing and other development can increase the vulnerability and risk to hazards. For example, growth and development can increase the risk of flooding by increasing stormwater runoff, disrupting natural drainage systems and reducing flood storage.
- Increases in population and/or housing also result in increasing demand for emergency services, which is a particular challenge during tight governmental budgetary conditions, as has been persistent in Wisconsin for some time now.
- With the majority of the County being sparsely populated rural areas, both costs to provide services and response times increase. In addition, communications and mitigating potential impacts are often more challenging (e.g., warning systems and public storm shelters).
- Adams County's population is aging. Demands for senior services in the County will only increase, including for emergency response. The aging population poses unique challenges for emergency preparedness and response services, such as sheltering in place and evacuation strategies. Seniors who reside in remote, rural areas may need special attention during a hazard event (e.g., transportation for dialysis during a winter storm, access to medicine or other medical needs).
- There is geographic variability across the County. Emergency service needs, mitigation priorities, and local resources will vary by community and area. Many

residents have access to resources, tools, equipment, and friends or family that enable them to “weather the storm,” clean up storm damage, and offer support to their neighbors and community.

- Although the number has been declining, there remains a significant number of mobile homes in the County, which are more vulnerable during certain types of storm events.
- Adams County’s many farming and agricultural operations have unique hazard risks and vulnerabilities that must be considered, prepared for, and mitigated, if possible. The large amount of forested land and shoreland development, with associated outdoor recreational uses and seasonal homes, also have unique risks and challenges.
- Manufacturing continues to be a significant part of the County’s economy, particularly in the City of Adams and Village of Friendship as well as Towns of Preston, Rome, Jackson and Lincoln, but does have inherent hazard risks and vulnerabilities, such as large-span buildings, concentrations of employees, or extreme operating parameters (temps, pressures, etc.).

PUBLIC FACILITIES AND SERVICES

TRANSPORTATION

The transportation system of Adams County provides the basis for the movement of goods and people through the County. An efficient transportation system is essential to the sound social and economic development of the County and the Region. The analysis of transportation routes should be considered in the possible event of a disaster (See Map 5).

The principal highway serving the County is north-south, State Trunk Highway (STH) 13 which bisects the County through Adams/Friendship. STHs 21 and 82 provide the main east-west routes, and State highways 23 and 73 also serve the County. These highways link the County with neighboring communities and are vital to the County’s tourism and recreation-based economy.

Networks of county trunk highways collect traffic from rural land uses. These county highways serve an important role in linking the area’s agricultural and timber resources to the County’s major highways and population centers. Local roads provide access to local development, farming and forest areas, as well as to the County’s lake areas.

The Wisconsin Department of Transportation maintains 7 bridges on state highways within the County. Adams County itself owns another 10 bridges on various County highways. Local roads have 21 bridges belonging to various towns. There is also one rail bridge in the Town of New Chester.

Adams County Health & Human Services coordinates transit service for elderly and disabled in the County. Vans and mini-buses provide work routes, a weekly grocery run,

a monthly food pantry run and serve nutrition sites. A volunteer driver network is also available.

The Union Pacific Railroad also serves Adams County. The rail line arcs east-west with a yard at City of Adams. There are approximately seven through trains per day on this line.

The “Adams County Legion Field” airport located east of the City serves the area. It is a basic utility airport designed for aircraft under 12,500 pounds and 49 feet in wingspan. There are 5 other landing strips within the County.

UTILITIES

Utility systems are important in hazard mitigation planning because of the dependency on water, wastewater treatment, gas service, electricity, and communications. Because of this reliance and vulnerability to hazards, utility systems must be identified for this Plan, see Map 6.

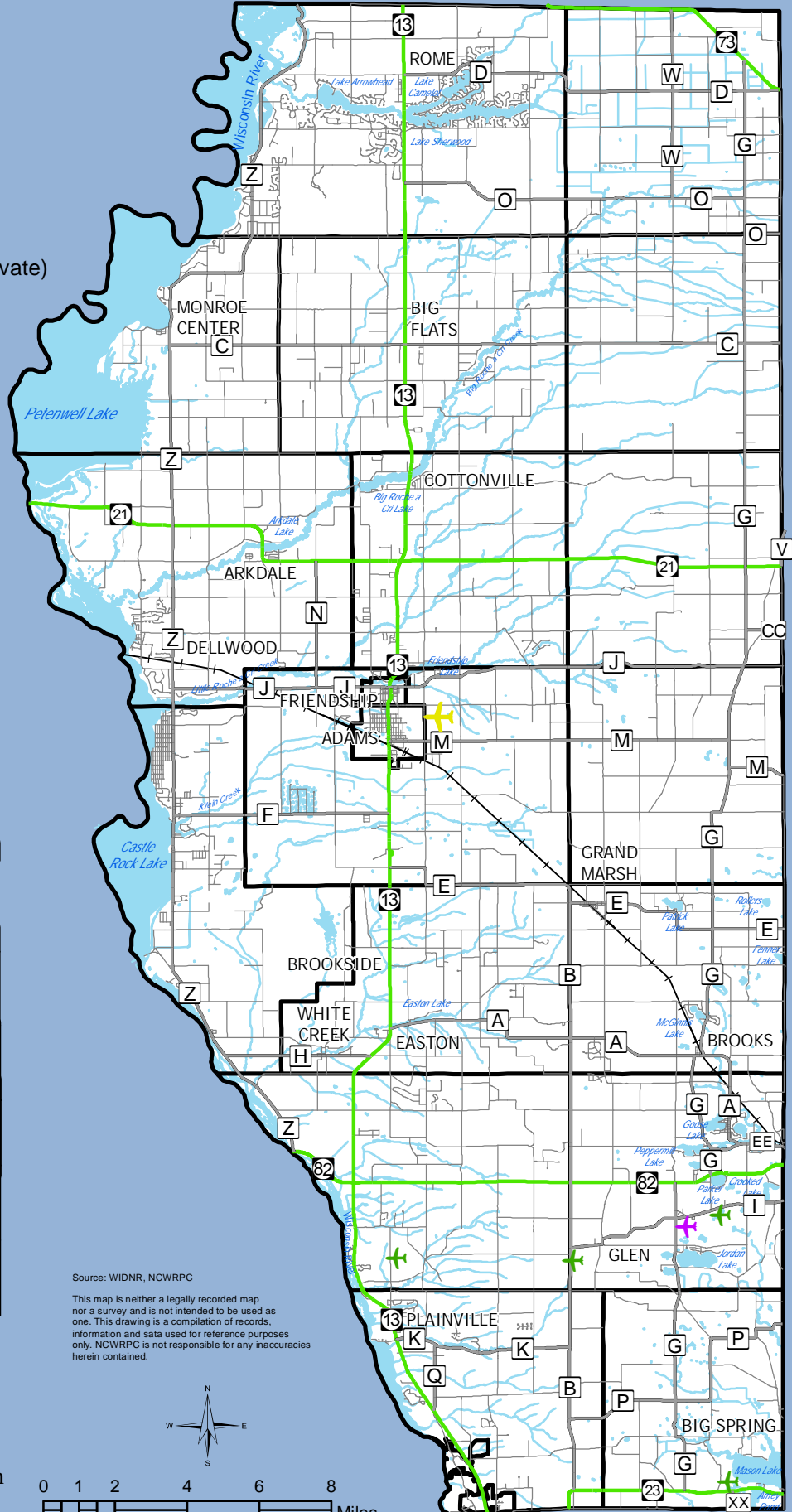
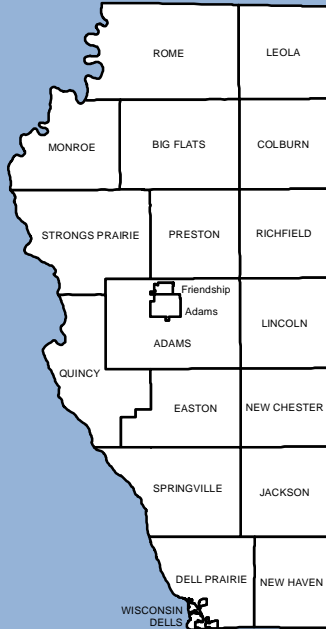
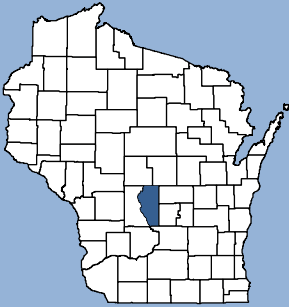
Water: The protection of the public water supply facilities from potential contamination from hazards such as flooding is a consideration for hazard mitigation planning. The City of Adams provides municipal water supplies for domestic and commercial use within the City as well as the Village of Friendship, while the Oxford Federal Correctional Institution supplies water for their inmates. The Rome Water Utility also provides a water supply system to customers around Lake Camelot.

The protection of the wastewater facilities is an important consideration for hazard mitigation planning because of its potential to contaminate nearby waterbodies in the event of high water. Also of concern during periods of flooding is the threat of damage to infrastructure and associated facilities. A municipal wastewater treatment facility serves the Adams-Friendship area. This utility is located on the west side of Friendship along the Little Roche a Cri Creek but outside the floodplain area. A private wastewater treatment facility serves the Easton Lake District. It is located in the Town of Easton along Campbell Creek. Another is located in Dell Prairie. These are of concern because of their locations within a designated floodplain.

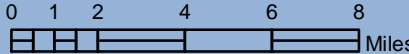
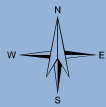
Electric: The Adams-Columbia Electric Cooperative serves the largest part of the County. The Waushara Electric Cooperative serves part of the northeast quarter of the County while Alliant Energy serves the Adams-Friendship area and parts of the Towns of Dell Prairie and Leola. Pioneer Power and Light serves most of New Chester. There are several high-voltage transmission lines traversing the County. One line runs along the Wisconsin River to the north from the crossing at WI-21; one is located near the River from the Wisconsin Dells to the Town of Springville; and another cuts across the center of the County from the Town of Quincy eastward to the Town of Lincoln.

Legend

-  Minor Civil Divisions
-  State Highways
-  County Highways
-  Local Roads
-  Small General Aviation
-  Paved Landing Strip (Private)
-  Grass Strip (Private)
-  Railroad
-  Water

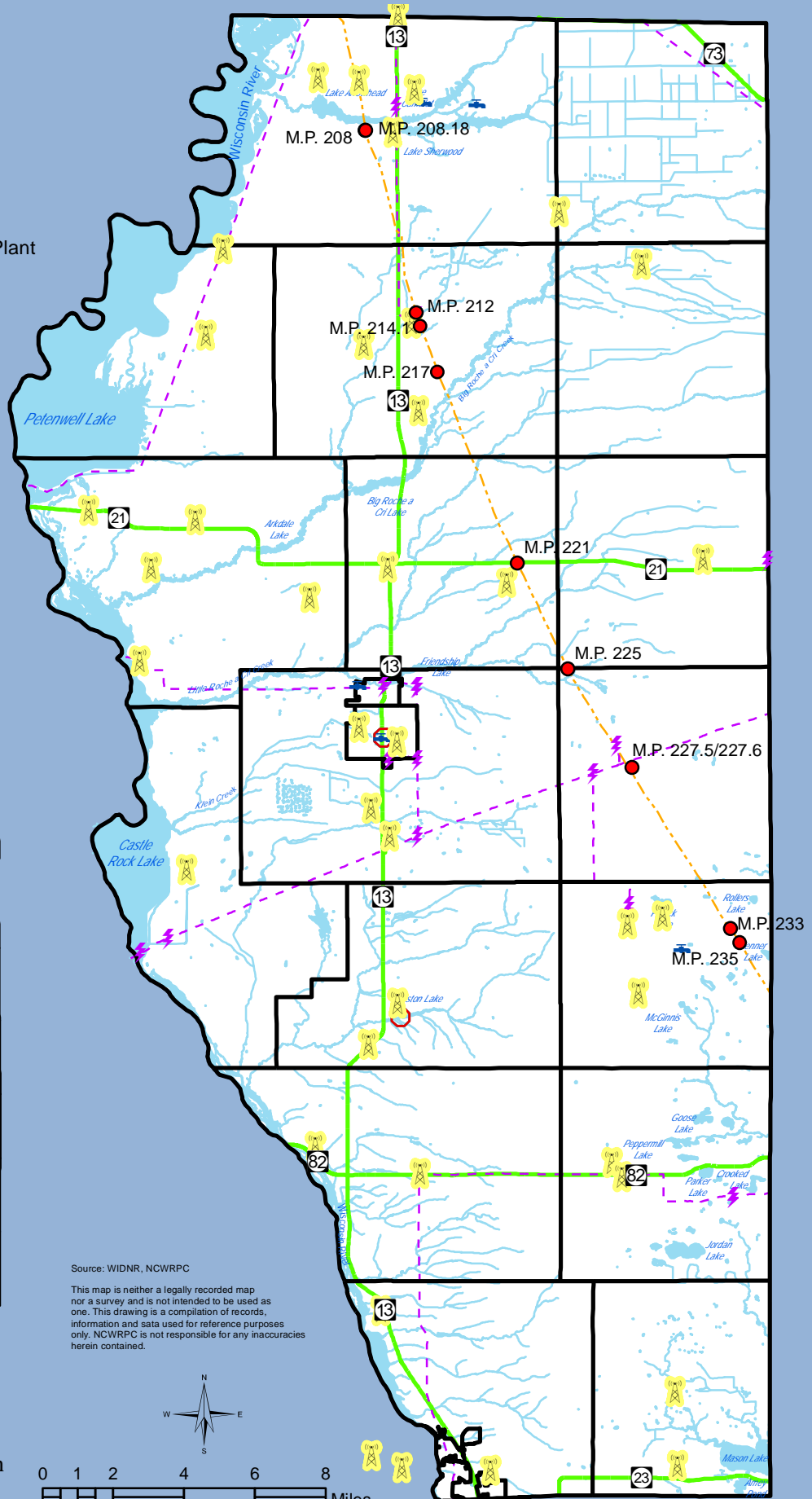
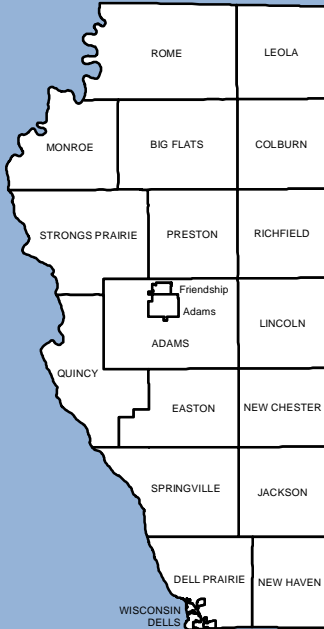
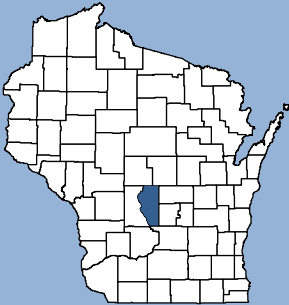


Source: WIDNR, NCRWPC
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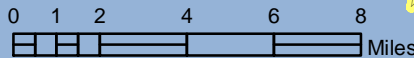
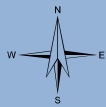
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- Pipeline Values
-  Communication Towers
-  Substations
-  Public Water Supply
-  Waste Water Treatment Plant
-  Minor Civil Divisions
-  Pipeline
-  High Voltage Powerline
-  State Highways
-  Water



Source: WIDNR, NCWRPC

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Prepared By:
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 715-849-5510 staff@ncwrpc.org - www.ncwrpc.org

Natural Gas: The Wisconsin Gas Company distributes natural gas in the Adams-Friendship area and at the Federal Correctional Institution at Brooks. The remainder of the community depends upon LP gas from local suppliers. An oil pipeline crosses the county diagonally from the Town of Rome to the Town of New Chester.

Telecommunications: There are four telephone providers in the County – Wood County, Union, Verizon, and Marquette-Adams. Internet Dial-up service is available throughout the County. Some areas on the edge of the County have Integrated Service Digital Network (ISDN), an international digital standard for providing more bandwidth to consumers by adding a third data channel to standard copper twisted pair cables that can increase bandwidth to 144Kbps. Digital subscriber line (DSL) makes efficient use of copper wire using special equipment to provide broadband access on existing phone lines. Delivery of DSL service is dependent on the length of the customer’s loop from the central office (depending on the technology used this can range from 10,000 to 18,000 feet). This distance can be extended by installation of an access multiplexer at an intervening point along the line.

There are several cell towers located in Adams County. Wireless, broadband service is provided in the Adams-Friendship area by the Marquette-Adams Telephone Cooperative. This service is available throughout the urbanized area from an antenna located in the City industrial park on a line-of-sight basis. Known internet service providers in the County include Bertram, Bug Tussel, Charter, Frontier, Solarus, Union Telephone Company, TDS, and Telecom. Wireless telephone coverage is intermittent in parts of the County. Cable TV service is available from Charter Communications in both the City and Village as well as in the Town of Rome from Wisconsin Rapids and in Dell Prairie from Wisconsin Dells.

EMERGENCY SERVICES AND FACILITIES

The type and location of public emergency services are an important consideration in hazard mitigation planning, because of the potential direct involvement of such facilities in certain hazard situations. The location of fire stations, police departments, and ambulance services in Adams County are shown on Map 7. Adams County operates the 911-call center providing dispatch for virtually all of the emergency services discussed below.

Sheriff/Police: The Wisconsin State Patrol, the Adams County Sheriff’s Office, the City of Adams Police Department, and the Town of Rome Police Department are the four law enforcement agencies that operate within Adams County. The State Patrol has statewide jurisdiction on all public roads but operates mainly on State and U.S. numbered highways as a matter of general practice. The County Sheriff provides general law enforcement services throughout the County and by contract to the Village of Friendship. The Adams’ police force and the Town of Rome’s police force serve their respective communities.

Historically, the rural and sparsely settled areas of Adams County have needed minimal police service. However, recent development and increasing population has multiplied law enforcement problems and increased demand for law enforcement services. Adams

County has recognized this demand and added manpower and increased law enforcement expenditures.

Fire: Fire protection services in Adams County are provided by volunteer fire departments in a complex pattern with mutual aid assistance agreements between Towns. There are five fire departments located in Adams County that serve the local units of government: Rome, Big Flats, Quincy, Adams and New Chester. Five municipalities rely on the Adams County Fire District while five municipalities along the eastern and southern borders rely on fire departments located outside the county – Coloma, Hancock, Plainfield, Oxford and Kilbourn.

The City of Adams, and much of the central and western area of the County, receives service from the Adams Volunteer Fire District. The department maintains a station in the City of Adams and one in Arkdale. The Adams Fire Department covers a large area, including all of the City of Adams, the Village of Friendship and the Towns of Adams, Easton, Strongs Prairie, Preston, and Springville north of WI-82. This area has an ISO rating of seven (the level of fire protection on a one-to-ten scale where one is the highest rating) for properties within five miles of a station. For the areas of the City where fire hydrants exist, the ISO rating is four. A good ISO rating can have a positive impact on fire insurance premiums.

The Adams County Fire District and the various rural fire departments all continue to grow as needed based on the demands of the communities they serve. All existing departments are meeting the needs of the county. Each of these volunteer organizations annually reviews local needs and makes adjustments regarding staffing, equipment and facilities. These departments also coordinate with the County Emergency Management Department for various fire and other hazardous related issues.

In addition, the State of Wisconsin Department of Natural Resources (DNR) maintains a ranger station, located in the City of Adams, responsible for wildland fire suppression throughout the county. The DNR utilizes mutual aid agreements with all of the local and surrounding fire departments.

EMS: There are multiple ambulance service providers in the County. Various service agreements are in place to provide ambulance service in the County. These arrangements change regularly. Currently, a majority of the County is covered by LifeStar EMS. Waushara County covers the Town of Leola. Marquette County ambulance covers the Town of Jackson and part of the Town New Chester. Town of Rome has its own EMS department. Kilbourn provides service to the Towns of Dell Prairie, Springville, and New Haven.

Red Cross: The American Red Cross maintains agreements with the owner/operators of various facilities around the County to act as shelters in the event of an emergency. Schools and churches are the most common shelter facilities. Adams County is part of a larger chapter of the American Red Cross with 17 other counties. The chapter's

administrative office is located in Madison, but a volunteer disaster action team is maintained locally.

CRITICAL COMMUNITY FACILITIES

In addition to emergency service facilities, other community facilities are also important in hazard mitigation planning. Government administration buildings serve as the headquarters that link to resources in helping solve potential problems. Hospitals and ambulance services are very important for knowing where injured residents have to be transported and as to how many people each hospital can handle if a hazard would breakout.

Gundersen Moundview Hospital in the Village of Friendship is a 25-bed acute care facility with associated clinics.



Adams County Courthouse
















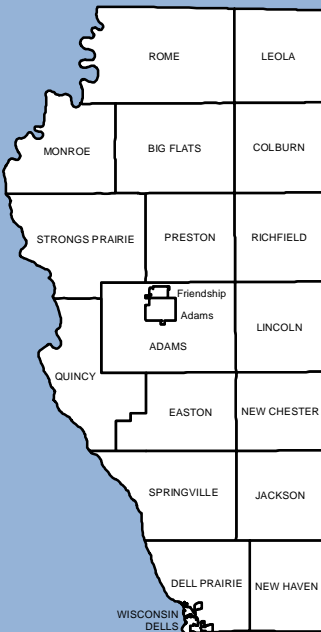
Clinic in City of Adams

Aspirus Health also has a clinic in the City of Adams. Villa Pines Living Center in Friendship is the primary nursing home within the County. Nursing homes are vulnerable, because of the high level of assistance needed with the residents that live there. The schools are another facility that are important, since hundreds of the county’s children are there for most of the year. Map 7 shows the location of selected types of critical community facilities within Adams County.

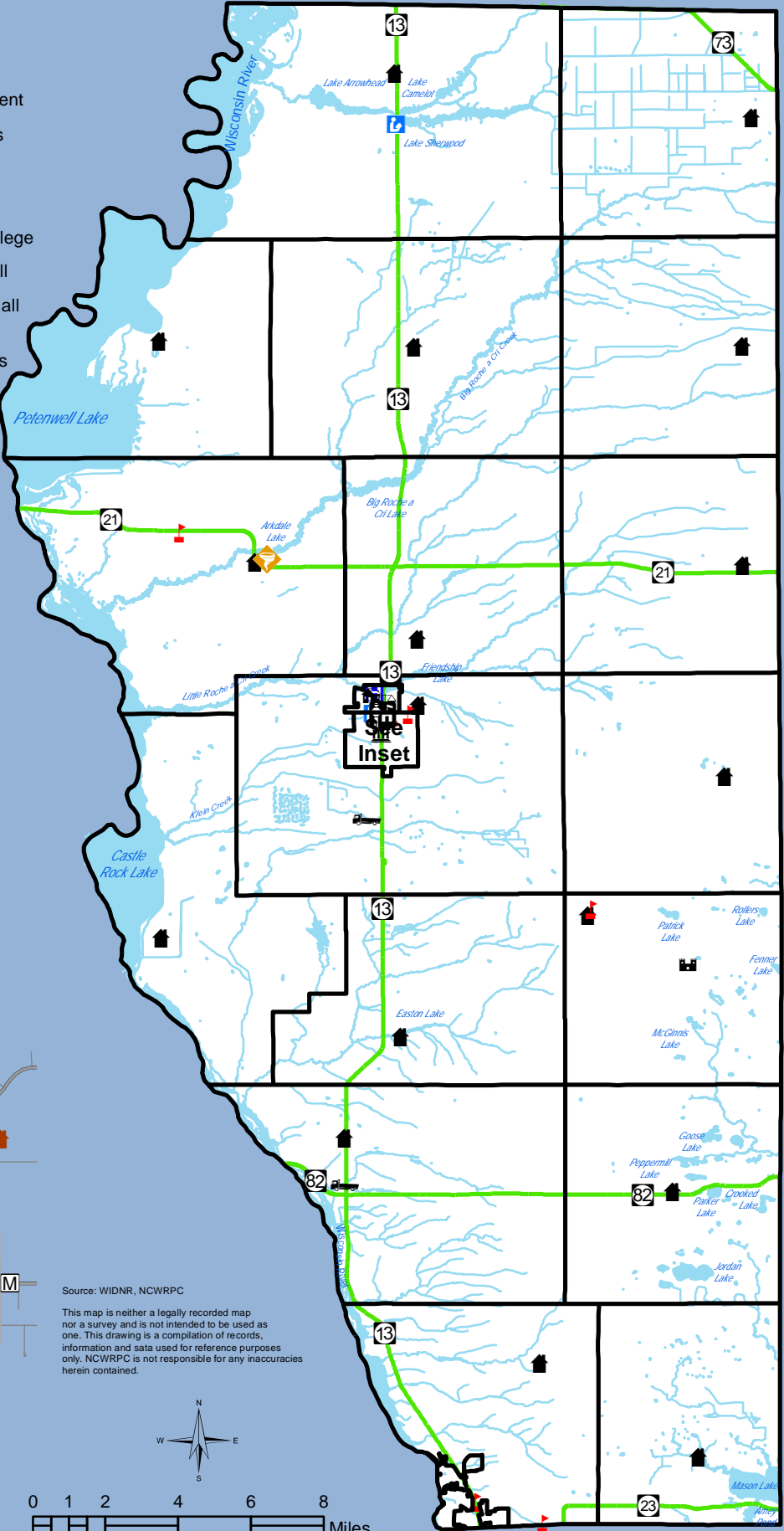
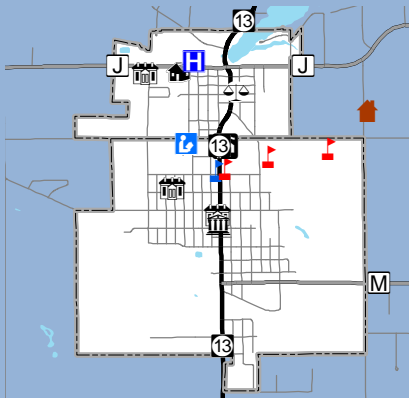
Adams County, Wisconsin Critical Community Facilities Map 7

Legend

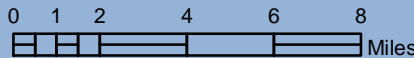
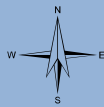
-  Minor Civil Divisions
-  Tornado Shelter
-  City Hall
-  Correctional Facility
-  Courthouse
-  DNR Ranger Station
-  Highway Department
-  Hospitals
-  Library
-  Schools
-  Tech College
-  Town Hall
-  Village Hall
-  State Highways
-  Water



Adams - Friendship Inset



Source: WIDNR, NCWRPC
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INVENTORY & VALUE OF STRUCTURES & PROPERTY IN ADAMS COUNTY

The value of the real estate and personal property in a community reflects the upper end of the potential for property damages in each community. The annual equalized value of each municipality represents the Department of Revenue estimate of market value (Agricultural land is included at Use Value) of all taxable property. Property tax levies of jurisdictions are apportioned to each municipality on the basis of equalized value. Table 9 lists each municipality's total equalized values for real estate, personal property, and all property and the percentage each municipality represents of the county total.

Table 9 Equalized Value by Municipality (2024)					
	Improvement Value	Land Value	Personal Property*	Total	% of Total
Adams city	\$91,707,900	\$14,810,100	\$2,929,900	\$111,524,200	2.7%
Wisconsin Dells (part)	\$83,859,400	\$13,363,500	\$2,140,600	\$99,363,500	2.4%
Adams town	\$131,072,100	\$71,678,600	\$1,724,800	\$204,508,500	4.9%
Big Flats town	\$91,894,000	\$72,072,700	\$720,400	\$164,687,100	3.9%
Colburn town	\$53,937,400	\$25,359,700	\$790,000	\$81,532,100	1.9%
Dell Prairie town	\$191,990,900	\$89,280,800	\$1,098,000	\$282,369,700	6.7%
Easton town	\$83,034,400	\$54,448,500	\$156,500	\$137,639,400	3.3%
Jackson town	\$171,261,500	\$116,216,500	\$259,800	\$287,737,800	6.9%
Leola town	\$34,786,700	\$20,477,500	\$182,300	\$55,446,500	1.3%
Lincoln town	\$34,161,600	\$26,893,100	\$98,300	\$61,153,000	1.5%
Monroe town	\$96,091,400	\$51,972,100	\$745,600	\$148,809,100	3.6%
New Chester town	\$91,953,700	\$44,617,600	\$654,500	\$137,240,200	3.3%
New Haven town	\$57,283,200	\$34,488,600	\$84,100	\$91,855,900	2.2%
Preston town	\$154,620,900	\$95,627,100	\$600,900	\$250,906,800	6.0%
Quincy town	\$192,921,400	\$129,423,500	\$1,890,600	\$324,235,500	7.7%
Richfield town	\$27,419,000	\$19,307,100	\$91,500	\$46,817,600	1.1%
Rome town	\$867,815,900	\$511,363,900	\$2,917,100	\$1,382,105,400	33.0%
Springville town	\$123,166,800	\$64,296,500	\$952,100	\$188,415,400	4.5%
Strongs Prairie town	\$217,767,100	\$122,527,700	\$1,224,500	\$341,519,300	8.2%
Friendship village	\$33,092,800	\$7,860,500	\$810,900	\$42,528,700	1.0%
Adams County	\$2,621,178,000	\$1,550,051,500	14,191,000	\$4,186,979,300	100.0%

Source: WisDOR, 2023

*Personal Property is non-manufacturing personal property

The valuation of property in a community reflects the potential for property damages across the community. However, only taxable properties are included in this valuation. Tax exempt government properties are not included. With Adams County owning many critical facilities that are needed in times of disaster, the potential for damages to these structures could be devastating for the county. In Table 10, the county owned critical

facilities are listed with the general location they are in and the value of the facilities. Estimates for local government facilities are given in Tables 11 - 13.

Table 10 Value of County Owned Properties		
Name	Value*	Location
Courthouse / Sheriff	\$29,188,500	Friendship village
Fairgrounds	\$3,551,300	Friendship village
County Storage	\$1,055,600	Friendship village
Solid Waste Main Facility	\$4,322,100	Strongs Prairie
Social Services	\$3,729,600	Friendship village
Airport	\$501,700	Adams town
Industrial Park	\$330,400	Jackson town
Highway Department	\$7,657,800	Adams town
Highway Dept. Satellites	\$853,000	Various Locations
Community Center	\$5,008,100	Adams city
HHS Practical Cents Store	\$1,629,200	Adams city
Parks	\$8,644,975	Various locations
Total	\$66,472,275	Above Locations

*=Includes insured buildings, contents, and property in the open.

Source: Statement of Values Local Government Property Insurance, 2024.

Table 11 Value of City Owned Properties	
Property	Value*
Municipal Building	\$3,245,326
City Garage	\$1,586,100
Pump Station	\$917,000
Treatment Plant	\$7,586,300
Pavilion	\$399,700
3 Well Houses	\$1,675,400
2 Water Towers	\$3,350,100
4 Lift Stations	\$1,130,500
Misc Other	\$1,181,200
Total	\$21,071,626

*includes insured building contents and property in the open.

Source: Statement of Values Local Gov. Property Insurance, 2024.

Table 12 Value of Village Owned Properties	
Property	Value*
Village Hall	\$1,516,989
Public Works Building	\$1,068,596
Beach Park Restrooms	\$144,889
Park Restrooms and Lift Station	\$88,944
Other Misc.	\$248,016
Total	\$3,067,434

**includes insured building contents and property in the open.
Source: Statement of Values Local Gov. Property Insurance, 2024.*

Table 13: Value of Town Owned Properties		
Municipality	Property	Value*
Adams town	Town Hall/Sand Shed	\$1,180,629
Big Flats town	Town Hall/Fire Dept	\$1,132,560
Colburn town	Town Hall/Garage	\$198,198
Dell Prairie town	Town Hall	\$99,099
Easton town	Town Hall	\$99,099
Jackson town	Town Hall	\$454,900
	Equipment Shed	\$181,100
	Town Building	\$167,700
Leola town	Town Hall	\$92,779
Lincoln town	Town Hall/Garage	\$196,782
Monroe town	Town Hall/Garage/Salt Shed	\$1,098,063
	Park Shelter	\$67,632
	Storage Building	\$65,000
New Chester town	Town Hall/Fire Department	\$1,013,625
New Haven town	Town Hall	\$203,577
Preston town	Town Hall/Garage	\$169,884
Quincy town	Town Hall/Garage/Fire Dept.	\$970,970.00
Richfield town	Town Hall	\$142,251
Rome town	Town Properties – Multiple Locations	\$10,806,716
Springville town	Town Hall	\$377,979
Strongs Prairie town	Town Hall/Fire Dept	\$699,297

**includes insured building contents and property in the open
Source: Local Government Insurance Policy Declarations and NCWRPC Estimates, 2025*



Town of Rome Brush Fire Unit

INTRODUCTION

Analyzing the hazards in a community is an important and critical step in the mitigation planning process. Before mitigation strategies can be determined, a risk assessment must be made. Part III of Adams County All-Hazards Mitigation Plan Update will focus on the following:

- Identification of the types of natural hazards that may affect Adams County; and
- An analysis of the hazards identified as pertinent to Adams County.

The Hazard Analysis will consist of:

- Background Information;
- History of previous occurrences of hazard events;
- An assessment of the County’s vulnerability to future events; and
- An estimate of future probability and potential losses from the hazard.

HAZARD IDENTIFICATION

The process of identifying those hazards that should be specifically addressed in the Adams County All-Hazards Mitigation Plan Update was based on consideration of a number of factors. The process included a review of past hazard events to determine the probability of future occurrences and threat to human safety and property damage.

Worksheets from the Wisconsin Guide to All-Hazards Mitigation Planning were used by the planning team to evaluate and rank the listing of possible hazards to help identify which hazards should be included in the Plan Update according to threat to human safety and possible damage to property. The ranking was compared against the ranking from the previous mitigation plan update. Pandemic was added to the Plan in response to the COVID-19 pandemic.

The resulting priority ranking of hazards accepted by the Committee through this report is as follows:

1. Flood/Dam Failure
2. Tornado
3. Wildfire
4. Winter Storms/Extreme Cold
5. Hazardous Materials Incidents
6. Severe Thunderstorms/High Wind/Lightning/Hail
7. Drought/Extreme Heat
8. Epidemic/Pandemic

The committee noted that wildfire risk may be a growing concern due to conditions over the last several years having resulted in a build-up of wildfire-fuels making wildfire more likely. They also noted the county is seeing more high wind damage.

Although fog can be an issue, it is not covered directly in this Plan due to a lack of ways to effectively mitigate it. Low magnitude earthquakes do occur occasionally in Wisconsin; however, none have exceeded a magnitude of 3.9, which would have vibrations similar to the passing of a semi-truck, therefore, earthquakes are not covered in this plan. Adams County does not have avalanche, coastal hazard, hurricane, tsunami or volcano issues and conditions for landslides, subsidence or expansive soil problems are not significant in the County.

This Plan Update focuses on natural hazards that have or could cause disasters that can be mitigated on a local level. Hazards that are considered "technological" or "manmade" include things like transportation incidents, structure fire, hazardous material incidents, civil disturbances, mass casualty events, war, criminal activity and terrorism (including active shooter, biological, chemical, explosive and nuclear attack). Current mitigation planning regulations do not require inclusion of technological or manmade hazards, so they are not dealt with directly in this Plan. This is in part to maintain the manageability of the mitigation planning activity and to reduce redundancies. Due to Homeland Security requirements, counties already plan and prepare for many of these types of events, so they are not included in this planning process to avoid duplication.

Some events that may under certain conditions be considered technological or manmade hazards in and of themselves such as supply disruption (including fuel shortage), power outage, computer failure, communications disruption, and municipal water contamination or water system failure, are more commonly consequences of a hazard event, at least in central Wisconsin. As such, they are dealt with indirectly in this Plan as they relate to an addressed hazard. For example, heavy snow/ice, high wind or tornadoes often result in power outages.

WEATHER VARIABILITY & HAZARD RISK ASSESSMENT

While the assessment of hazard risk is largely based on past weather events and existing development trends, projecting future risks and vulnerabilities is also subject to the influence of possible large-scale, longer-term variability in weather patterns. This section explores how the area's weather is changing and how weather variability may impact the probability and severity of natural hazards.

There is ongoing debate over the existence, causes, severity, and impacts of weather variability. According to the National Academy of Sciences, the Earth's surface temperature has risen by about 1 degree Fahrenheit in the past century, with acceleration during the past two decades. There is strong evidence that most of the variability over the last 50 years is attributable to human activities. Increasing global temperatures are expected to raise sea levels and impact local weather conditions such as precipitation levels. Changing regional weather could alter forests, crop yields, and water supplies. It could also affect human health,

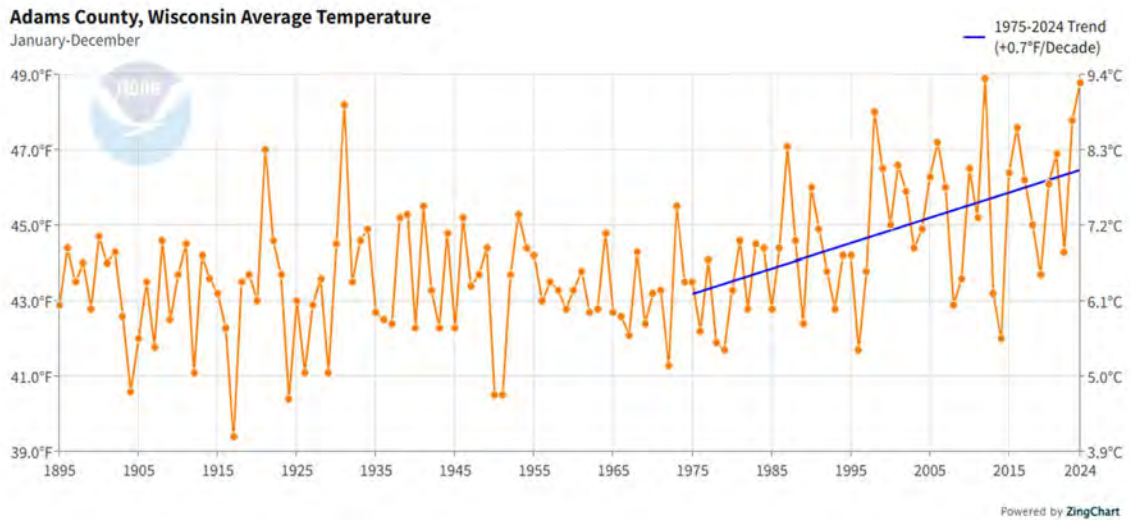
animals, and many types of ecosystems. Most of the United States is expected to warm, although sulfates may limit warming in some areas. Scientists currently are unable to determine which parts of the United States will become wetter or drier, but there is likely to be an overall trend toward increased precipitation and evaporation, more intense rainstorms, and drier soils.

Regardless of the debate over the causes of weather variability, there is clear evidence that Wisconsin's weather is indeed changing. A 2003 report on weather in the Great Lakes Region, published by the Union of Concerned Scientists and the Ecological Society of America, projected that by 2050, summers in Wisconsin may resemble those in Illinois overall, in terms of temperature and rainfall. By 2100, the summer weather might generally resemble that of current-day Arkansas, and the winter may feel much like current-day Iowa.

To further document this weather variability and explore its impacts on our State, a Wisconsin initiative known as WICCI was formed as a collaborative effort of the University of Wisconsin and the Wisconsin Department of Natural Resources. The following are some of the key trends being experienced in Wisconsin according to their analysis (www.wicci.wisc.edu):

1. **RISING TEMPERATURES** - Average temperatures are rising and are projected to continue to rise. Between 1975 and 2024, the annual average temperature in Adams County increased by about 3.1 degrees Fahrenheit. By 2055, annual average temperatures are projected to increase by up to six degrees across the County from the 1985 annual average temperature. More extreme heat events are also projected. The number of days projected to be 90° F or greater will increase by around 24 days in Adams County by 2055.
2. **MORE PRECIPITATION** – Adams County is experiencing more annual precipitation and is expected to get wetter in the future, but there is significant seasonal and geographic variation in the precipitation. The data shows that the annual average precipitation has increased across most of the County over the past fifty years by about 5.8 inches.
3. **HEAVIER PRECIPITATION EVENTS** - Heavy precipitation events appear to be increasing in frequency. In the past, the region experienced heavy precipitation events of two or more inches about ten times per decade (once each year). The County, including its municipalities, is projected to experience around 5 additional heavy precipitation events per decade by 2055.

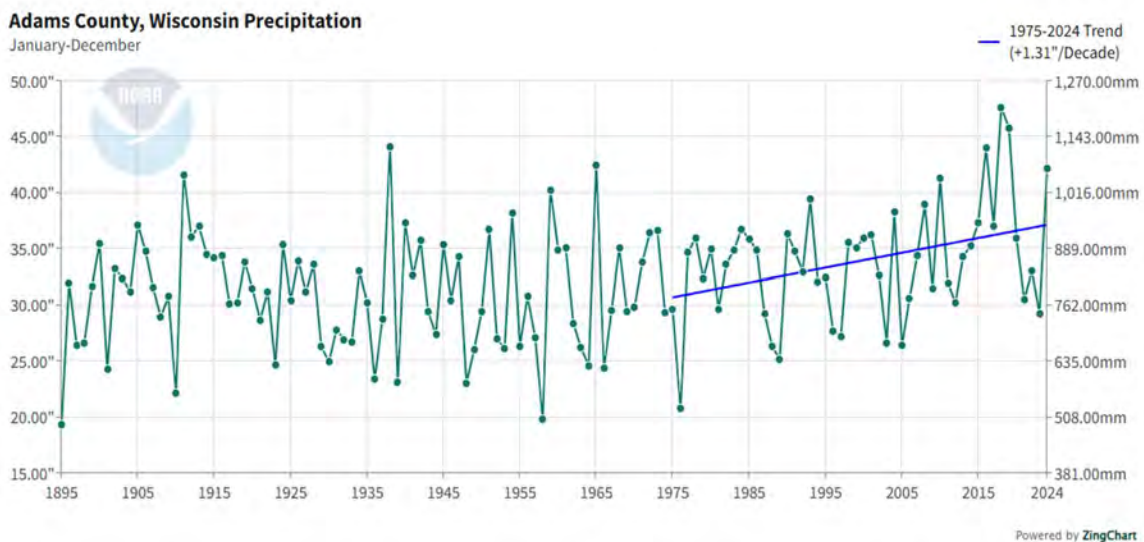
Adams County Annual Average Temperature, 1895-2024, with 50-Year Trendline



Some potential outcomes from these trends in Adams County may include the following:

- Wildfires are expected to be more frequent and burn more acres.
- Increased likelihood of droughts.
- Warmer winters reduce snowpack and accelerate snowmelt.
- Invasive species and forest pests will benefit from weather variability.
- Warmer winters, wetter springs, and extreme weather events are making agricultural production in Wisconsin less competitive and overwhelming conservation practices to keep soil in place and protect water quality.
- More freeze/thaw cycles, posing issues for existing infrastructure.
- More flooding.
- More frequent and severe weather events.

Adams County Average Annual Precipitation, 1895-2024, with 50-Year Trendline



HAZARD ANALYSIS

The hazard analysis for each hazard included in this plan update is broken down into four components, as follows:

1. Background on Hazard - The next step after identifying a hazard is to define the hazard and give some general background behind it. This can include the occurrence of the hazard within the County or State. This section may also give some indication of the risk to public health and safety and to personal and public property.

2. History of Hazard - Past experience of disasters is an indication of the potential for future disasters for which Adams County would be vulnerable. A review of past occurrences for each identified hazard in Adams County was completed.

Some disasters have had damages that exceeded the capabilities of local communities and state agencies. Federal assistance is then requested. Federal assistance may be offered through a variety of programs. Assistance may be directed to agricultural producers, individuals and families, businesses, or local governments. There have been 14 natural disasters in Adams where Presidential Declaration was requested since 1971. They include the following:

- 1973 Flood – Disaster Declaration Approved
- 1976 Drought - Disaster Declaration Approved
- 1993 Flood - Disaster Declaration Approved
- 1994 Tornados - Disaster Declaration Denied
- 2000 Severe Storms/Flooding - Disaster Declaration Approved
- 2001 Severe Storms/Flooding - Disaster Declaration Approved
- 2002 Severe Storms/Flooding - Disaster Declaration Approved
- 2004 Severe Storms/Flooding/Tornado - Disaster Dec. Approved
- 2005 Cottonville Wildfire - State Disaster Fund
- 2008 Flood – Disaster Declaration Approved
- 2011 Tornados - State Disaster Fund
- 2016 Severe Storms/Flooding - Disaster Declaration Approved
- 2018 Severe Storms/Winds/Flooding - Disaster Declaration Approved
- 2020 Wisconsin COVID-19 Pandemic - Disaster Declaration Approved

It should be noted that this significantly underestimates the number of hazards that have occurred in Adams County. Almost every year, there are significant weather events or disasters that cause thousands of dollars in damage for which no Federal disaster assistance is requested. Major indicators of hazard severity are the deaths, injuries, and economic losses resulting from natural hazards and disasters.

The National Oceanic and Atmospheric Administration (NOAA) and National Climatic Data Center (NCDC) publish the National Weather Service (NWS) data describing recorded weather events and resulting deaths, injuries, and damages. From January 1, 1950 to December 31, 2024, NCDC reported 456 severe weather events for Adams County.

Note that since the earlier NCDC data is somewhat incomplete, this report focuses on the 10-year period from 2015 to 2024 for hazard analysis purposes. Other sources of data are used to supplement the NCDC data. These sources included other plans and reports, documents from the Adams County Emergency Management Department, past local newspaper articles, the Wisconsin Department of Natural Resources (DNR), Wisconsin Emergency Management (WEM), and the National Weather Service.

3. Vulnerability Assessment For Hazard - For each hazard identified, a summary of the impact that may be felt by the community is given. When possible, existing buildings, infrastructures, and critical facilities located in the hazard areas are identified. Critical facilities are community buildings that are especially important to the health and welfare of the population following hazard events. Examples of such facilities include hospitals, police & fire stations, town halls, and shelters.

Because this is a multi-jurisdictional plan, FEMA requires that the plan assess each jurisdiction's risks where they vary from the risks facing the entire planning area. This section of the plan will identify variations in vulnerability for specific municipalities where they occur.

4. Future Probability and Potential Dollar Losses from Hazard - The historic data and vulnerability assessment for each hazard is used to project the potential future probability of that hazard occurring in the County and the potential damage in dollars that might be reasonably expected. This section sets the benchmark to mitigate for each hazard.

HAZARD ANALYSIS: TORNADOS

Background on Tornado Hazard:

A tornado is a relatively short-lived storm 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, but some tornados may have winds in excess of 300 miles per hour.

A tornado path averages four miles, but may reach up to 300 miles in length. Widths average 300 to 400 yards, but severe tornados have cut swaths a mile or more in width, or have formed groups of two or three funnels traveling together.

On average, tornados move between 25 and 45 miles per hour, but speeds over land of up to 70 miles per hour have been recorded. Tornados rarely last more than a couple of minutes in a single location or more than 15 to 20 minutes in a ten-mile area.

Table 14: Tornado Wind and Damage Scale		
Tornado Scale	Wind Speeds	Damage
EF0	65 to 85 MPH	Some damage to chimneys, TV antennas, roof shingles, trees, and windows.
EF1	86 to 110 MPH	Automobiles overturned, carports destroyed, trees uprooted
EF2	111 to 135 MPH	Roofs blown off homes, sheds and outbuildings demolished, mobile homes overturned.
EF3	136 to 165 MPH	Exterior walls and roofs blown off homes. Metal buildings collapsed or are severely damaged. Forests and farmland flattened.
EF4	166 to 200 MPH	Few walls, if any, standing in well-built homes. Large steel and concrete missiles thrown far distances.
EF5	OVER 200 MPH	Homes leveled with all debris removed. Schools, motels, and other larger structures have considerable damage with exterior walls and roofs gone. Top stories demolished

Source: National Weather Service

Tornados are classified into six intensity categories, EF0-EF5. This scale is an updated or "enhanced" version of the Fujita Tornado Scale (or "F Scale"). The scale estimates wind speeds within tornados based upon the damage done to buildings and structures. It is used by the National Weather Service in investigating tornados and by engineers in correlating building design and construction standards against anticipated damage caused by different wind speeds.

Wisconsin lies along the northern edge of the nation's maximum frequency belt for tornados, known as "Tornado Alley". Tornado Alley extends northeast from Oklahoma into Iowa and then across to Michigan and Ohio. Winter, spring and fall tornados are more likely to occur in southern Wisconsin than in northern counties.

Tornados have occurred in Wisconsin every month of the year with the first ever February tornado occurring in 2024.

History of Tornados in Adams County:

Adams County has not had a documented tornado since 2011 when two tornados touched down on the same day. The 2011 tornados along with 25 other historic tornados are reported in Table 15. On April 10, 2011, the National Weather Service confirmed that a second tornado formed near County Highway G and Buttercup Avenue to the north of where the Arkdale - Cottonville tornado had dissipated. EF1 damage was noted to homes and trees, along Buttercup Avenue as the tornado tracked into Waushara County. Several center-post irrigation systems were destroyed along with some roof damage to homes and downed power lines. Damage estimates for this tornado were approximately \$426,000.

That was the second of two tornados affecting Adams County when a cold front pushed east into Wisconsin during the late afternoon and evening hours of April 10th. Severe thunderstorms developed along the cold front and produced very large hail and three tornadoes over portions of western and central Wisconsin. The hail ranged from quarter to tennis ball size and caused extensive damage to siding and cars in the southern portions of the City of La Crosse. Damage estimates from insurance companies and contractors in the area were between 20 and 30 million dollars from the one hail storm. National Weather Service storm survey teams confirmed two EF1 tornadoes and an EF2 tornado in Juneau and Adams counties.

The Arkdale-Cottonville tornado was the National Weather Service confirmed EF2 tornado, which tracked from about three miles west of Arkdale toward County Highway G. This tornado caused extensive damage to barns, trees, power lines and houses two miles west of Arkdale. A cement silo was also knocked over. The tornado crossed Highway 21 north of Arkdale hitting nearby homes, irrigation systems and hundreds of trees. Winds were estimated around 125 mph. Several more farms, homes, and trees were hit as the tornado continued toward the south side of Big Roche A Cri Lake near Cottonville. Several cars and mobile homes were flipped or heavily damaged. A lake association building on the southwest side of Big Roche A Cri Lake was completely destroyed and numerous center-pivot irrigation systems were twisted or destroyed across the county.

By this time the tornado had grown to nearly a half mile wide. It crossed Highway 13 at Cottonville and gradually began to weaken, hitting more seasonal homes, trees and roof tops. It dissipated south of the Colburn Wildlife Area. Damage estimates for this tornado were about \$3.3 million with 7 homes and 3 businesses destroyed. The 2011 tornado event did not qualify for a disaster declaration, but the State of Wisconsin opened its State Disaster Fund.

A funnel cloud was reported on July 4, 2009 just west of Big Flats. A funnel cloud was also observed in Clark County, but neither touched down.

Table 15		Reported Tornadoes in Adams County						
Date	Time CST	Location	Other Counties Affected	Length (miles)	Width (yards)	Deaths*	Injuries*	F-EF Scale
4/10/11	1730	Colburn	Waushara	3.86	100	0	0	EF1
4/10/11	1712	Strongs Prairie (Arkdale) - Preston (Cottonville) - Richfield	None	17.1	800	0	0	EF2
6/7/08	1357	New Haven	Marquette	3	50	0	0	EF0
8/18/05	1641	Springville	None	1	30	0	0	F1
6/23/04	1855	Quincy, Easton, New Chester	Juneau	17	50	0	11	F1
8/27/94	2210	Plainville 1SE	None	0.1	25	0	0	F0
8/27/94	2041-2057	Monroe Center 2SE	None	10.5	850	2	22	F3
6/8/93	1635	Adams 8E	None	0.5	25	0	0	F0
6/8/93	1630	Adams 7ESE	None	2	75	0	0	F0
6/8/93	1552	Rome 1SE	None	1.5	75	0	0	F0
6/8/93	1548	Rome 2.5W	None	1	50	0	0	F0
6/8/93	1330	Brooks 1N	None	1.5	75	0	0	F0
8/29/92	1900	Big Flats 3.5E	None	5	100	0	0	F1
5/24/89	1730	Adams 5W	None	0.5	50	0	0	F0
7/10/84	1551-1553	Castle Rock	None	4	500	0	0	F2
4/27/84	1410	Brooks 3S	None	2	220	0	0	F1
7/3/83	1900	Lake Mason	None	0.1	10	0	0	F0
7/3/83	1845	Plainville	None	0.1	12	0	0	F0
7/3/83	1803	Dellwood	None	6	50	0	0	F1
7/19/80	2345	T.Quincy & T. Adams	None	2	?	0	0	F2
5/18/79	1645	Southeast Adams Co.	None	0.1	35	0	0	F1
4/17/75	2145	Leola	None	0.3	20	0	0	F0
6/9/74	1430	Highway 73 & CTH 1	None	?	?	0	0	F1
5/18/71	1640	Adams-Friendship to Hancock	Waushara	15.9	100	0	5	F1
5/8/64	1815	Lyndon Station 3NW to Adams	Juneau	23.5	150	0	0	F2
6/25/34	2330	Briggsville	None	1.5	880	0	0	?
10/3/03	1600	Rome 5E	Portage	22	200	5	40	F4

Source: **Storm Data, Significant Tornadoes 1680-1991** by Thomas Grazulis, **WI Tornado Database 1950-2000** Geographic Techniques Report ST-WTDB01, NCDC database and Adams County EM. * Injuries and Deaths are for the entire tornado track.

On June 7, 2008 an EF0 tornado hit the Town of New Haven about 2.5 miles north of Briggsville before crossing into Marquette County and strengthening to EF1. Power lines and trees were downed and some homes received minor damage. Adams County estimated about \$75,000 in damages. A warm front extending east

to west across the Upper Mississippi River Valley was the focus for a significant severe weather event on June 7. A total of four tornados were confirmed, while numerous reports of wind damage and large hail were received from law enforcement officials and storm spotters across the state. Significant flooding was also associated with this event.

A tornado briefly touched down near the intersection of Hwy 82 and 13 in the Town of Springville on August 18, 2005. One of six tornados that affected southwest Wisconsin, this tornado was part of an all-time one-day record of 27 tornados hitting the state. Mobile homes were damaged, along with nearby trees and the roof of a home under construction. Damages were estimated at about \$5,000.

A line of thunderstorms that moved out of Minnesota produced wind damage, hail, flooding and several tornados in June of 2004. A Presidential Disaster Declaration was issued as a result. One tornado formed in eastern Juneau County, about 2 miles west of Castle Rock Dam. That tornado moved east-northeast across Castle Rock Lake and into western Adams County. It tracked near or along Edgewood Avenue with extensive tree damage in the Quincy Bluff area, including the ranger lookout tower there. Hundreds of trees were blown down from strong winds in excess of 90 mph at times. The tornado tracked east to areas just north of Edgewood Drive crossing Highway 13 approximately 5 miles south of Adams/Friendship. Downburst winds on the south side of the storm demolished at least 8 mobile homes in Edgewood Estates that were oriented north-south and took the full brunt of the crosswind. Most of the Town of Easton had extensive damage with hundreds of trees down. It continued to move east-southeast before lifting shortly before the Adams-Marquette County line about 3 miles southeast of Grand Marsh around 7:55 pm. A broad area of straight-line wind damage was found south of this tornado track with widespread tree damage occurring up to 1 mile south of the track. The tornado path was approximately 17 to 18 miles in length. The tornado was rated an F1 with estimated winds in the 73 to 112 mph range.



2004 Tornado Damage

Adams County reported that 11 people were injured, including 2 that required airlifting to UW-Madison Hospital. A total of 16 homes were destroyed along with 41 having major damage and another 67 with minor damage. Governmental expenses exceeded \$500,000. Private sector damage was estimated at about \$6.5 million primarily agricultural including entire farms and many irrigation systems and other equipment as well as crops.

In August of 1994, a F3 tornado tore a 13-mile long, ¼ wide swath through Adams County. Two people were killed and 22 people injured by this tornado. Damage was estimated at \$4.5 million with 24 homes, a tavern, a potato warehouse, and numerous outbuildings destroyed. Eight homes suffered major damage, and 160 were reported to have light to moderate damage, primarily in the Town of Big Flats.

In addition, the Big Flats Fire Department and town hall were destroyed, as well as a thrift shop. Seventy cows were crushed to death in one barn as the walls blew out and the upper floor, filled with 16,000 bales of hay and roof collapsed. Presidential Disaster Declaration was not issued for this event.

The largest and deadliest tornado recorded in Adams County occurred a century ago in 1903 in the Town of Rome. A large F4 tornado apparently formed over northern Adams County and then moved east-northeast passing 1.5 miles south of Bancroft in Portage County. The tornado was up to a half mile wide but most of the damage was in Portage County. Five people were killed and forty were injured by this tornado.

Only the 1994 and 1903 tornadoes have caused deaths, however several others have caused significant damages. The July 10, 1984, F2 tornado that touched down in the Dellwood subdivision near Castle Rock Lake hit 59 homes and destroyed 14. More than 2,000 trees were downed.

Tornado Vulnerability Assessment:

Though Adams County is mostly a rural county, there are concentrations of population scattered throughout. Subdivisions, rural unincorporated communities, and the Adams/Friendship area can be regarded as more vulnerable because these areas pose more of a threat to human safety and property damage in more concentrated areas. Map 8 illustrates these areas within the County.

Mobile homes are of significant concern in assessing the hazard risks from tornados. In general, it is much easier for a tornado to damage and destroy a mobile home than standard constructed houses and buildings. Since 19 percent of Adams County’s housing units are mobile homes, vulnerability to health and safety along with property damage is much greater. Research by the NWS shows that between 1985 and 1998, 40 % of all deaths in the nation from tornados were in mobile homes, compared to 29 % in permanent homes, and 11 % in vehicles.

The 2023 American Community Survey reported there are 3,252 mobile homes in Adams County. While mobile homes are scattered throughout the County, many are concentrated in mobile home parks. Map 8 also displays the location of the mobile home parks with approximate number of units.

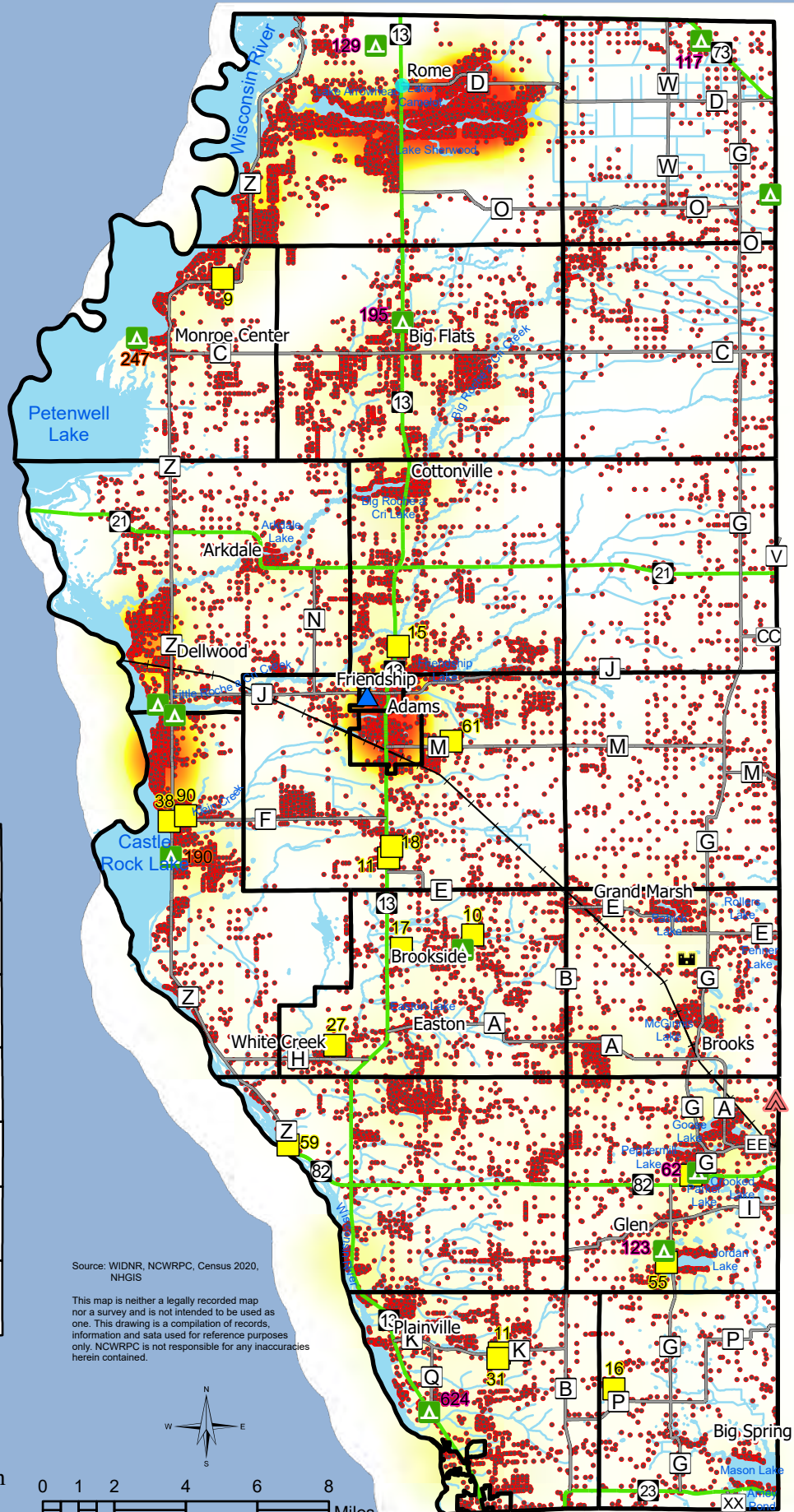
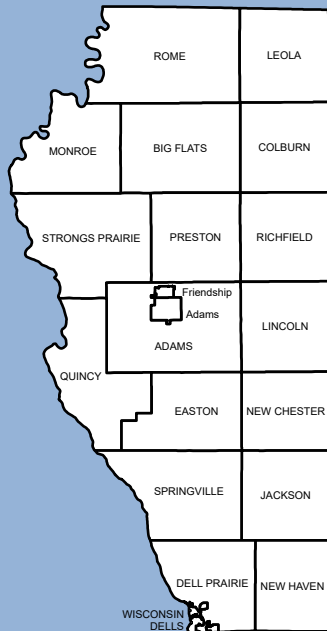
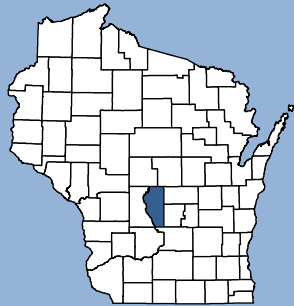


Foster Trailer Park Tornado Damage

In addition to mobile homes, there are many other areas vulnerable to tornados such as campgrounds. Like mobile homes parks, campgrounds are of concern in the County because often times there is a concentration of people in them and there is little shelter provided. Map 8 also shows the location of campgrounds in the County.

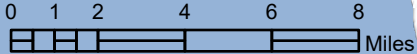
Legend

-  State Highways
-  County Highways
-  Railroad
-  County Campgrounds
-  Boy Scout Summer Camp
-  Correctional Facility
-  Mobile Home Parks
-  Nursing Home
-  Water
-  Parcel Improvements
-  Low Density
-  High Density
-  Minor Civil Divisions



Source: WIDNR, NCRWPC, Census 2020, NHGIS

This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only. NCRWPC is not responsible for any inaccuracies herein contained.



The following is a list of things that may be affected by a tornado. Much of this list can be referenced in Part II.

- Community facilities – hospitals, schools, "prisons/jails"
- Public Service - police and fire departments
- Utilities - power lines, telephone lines, radio communication
- Transportation – debris clean-up
- Residential – nursing homes, mobile home/parks, garages, trees and limbs, siding, windows
- Businesses – signs, windows, siding, billboards
- Agricultural - buildings, crops, livestock

Based on review of the historic events of tornados, there are no specific areas in the county that have unusual risks. The events are relatively uniform and a countywide concern. However, during the City Planning Meeting for this Plan Update, the City of Adams identified tornados (severe winds) as a major vulnerability concern due to the potential for power outage and resulting impact on municipal services and residents. The Adams-Friendship Area School District also indicated that tornados are a major concern due previously impacting the school district. According to town mitigation survey results for this Plan, the Towns of Adams, Big Flats, Jackson, Leola, Monroe, and Quincy indicated that tornados are a top vulnerability concern due to power outage and road blockage.

Future Probability and Potential Dollar Losses – Tornados:

The lack of tornado activity since 2011 may indicate a declining trend in tornado frequency. However, if we expand the analysis window for frequency of past events due to the unique position tornados hold in the disaster hierarchy, we might project that Adams County can expect a tornado about once every 5 years on average. This equates to a probability of 0.2 or about a 20 percent chance in a given year. Table 16 indicates the probability of tornados of a specific magnitude. There was a trend of a major damaging tornado event (over \$2 million in damages) every 10 years: 1984, 1994, 2004 until 2011 when the Arkdale-Cottonville EF2 came early.

Historic data is used to estimate potential future dollar losses due to tornadoes. Estimated damage resulting from various tornados in Adams County range from \$0 to \$7 million. On average, Adams County might expect damages of \$1 million per tornado based data between 2005 and 2011. However, going back to 1971, only four of these 24 historic tornados resulted in damages exceeding \$1 million, three others had \$250,000+, and the rest were \$25,000 or less. Over the next ten-year period, tornado losses in Adams County could approach \$2 million.

Table 16 Probability of Intensity for any given Tornado in Adams County						
Tornado Scale	F/EF0	F/EF1	F/EF2	F/EF3	F/EF4	F/EF5
Number of Reported Tornados*	11	9	3	1	0	0
Probability of Occurrence	46%	37%	12%	4%	<1.0%	<1.0%

*Source: Nat'l Weather Service & NCWRPC – *Based on historical data from 1971 to 2011.*

Weather variability can be expected to lead to more frequent, higher intensity tornados. This will affect more people over a wider area of the County, and the resulting damage will be higher.

HAZARD ANALYSIS: WINTER STORMS / EXTREME COLD

Background on Winter Storms/Extreme Cold Hazard:

A variety of weather phenomena and conditions can occur during winter storms. For clarification, the following are National Weather Service approved descriptions of winter storm elements:

Heavy snowfall – the accumulation of six or more inches of snow in a 12-hour period or eight or more inches in a 24-hour period.

Blizzard – the occurrence of sustained wind speeds in excess of 35 miles per hour accompanied by heavy snowfall or large amounts of blowing or drifting snow.

Ice Storm – an occurrence where rain falls from warmer upper layers of the atmosphere to the colder ground, freezing upon contact with the ground and exposed objects near the ground.

Freezing drizzle/freezing rain – the effect of drizzle or rain freezing upon impact on objects that have a temperature of 32 degrees Fahrenheit or below.

Sleet – solid grains or pellets of ice formed by the freezing of raindrops or the refreezing of largely melted snowflakes. This ice does not cling to surfaces.

Wind chill – an apparent temperature that describes the combined effect of wind and low air temperatures on exposed skin.

Winter storms can vary in size and strength and include heavy snowfall, blizzards, ice storms, freezing drizzle/freezing rain, sleet, wind chill, and blowing and drifting snow conditions. Extremely cold temperatures accompanied by strong winds can result in wind chills that cause bodily injury such as frostbite and death.

True blizzards are rare in Wisconsin. They are more likely to occur in the northwestern part of the state than in south-central Wisconsin, even though heavy snowfalls are more frequent in the southeast. However, blizzard-like conditions often exist during heavy snowstorms when gusty winds cause the severe blowing and drifting of snow. Heavy snow and ice storms have been part of nearly every winter in Adams County.

Dangerously cold conditions can be the result of the combination of cold temperatures and high winds. The combination of cold temperatures and high wind creates a perceived temperature known as "wind chill". Wind chill is the

apparent temperature that describes the combined effect of wind and air temperatures on exposed skin. When wind blows across the skin, it removes the insulating layer of warm air adjacent to the skin. When all factors are the same, the faster the wind blows the greater the heat loss, which results in a colder feeling. 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.

The National Weather Service issues wind chill advisories when wind chill readings of -20 to -34 degrees are expected. Wind chill warnings are issued when wind chill values are expected at or below -35 degrees. Extreme cold events are most likely during the months of December through February.

History of Winter Storms/Extreme Cold in Adams County:

The NCDC has reported 32 major winter events for Adams County between 2015 and 2024. All of these events contained some form of cold, snow, sleet, freezing rain, or ice conditions.

Most recently, on December 19, 2024, a potent winter system brought heavy snow amounts as high as 5 to 8 inches in a narrow band near the Interstate 90 corridor beginning in the morning hours and continuing through the overnight. Snowfall amounts ranged from 4 to 8 inches across Adams County as a result of this winter system. The highest storm total snow accumulation in the county occurred 3 miles south of Brooks where 8.0 was measured.

Another notable event began on December 22, 2022, when a storm brought an extended period of hazardous winter weather to western Wisconsin ahead of the Christmas holiday. Periods of snow fell from December 21st into the 23rd. The combination of arctic air and wind gusts of 25 to 40 mph created wind chills of 20 to 35 below zero across Adams County. The lowest calculated wind chill was -38 near Grand Marsh.

On February 10, 2013, the NCDC reported one person was killed in a two vehicle accident on State Highway 82 in the Township of Jackson. The accident occurred as a result of icy roads from freezing rain that was occurring at the time.

Blizzard conditions present some of the most severe winter weather the County can face. While no blizzards were reported over the period of analysis, 2015 - 2024, there have been 4 blizzard reports by NCDC, occurring in 2007, 2008, 2010 and 2012.

A strong area of low pressure moved out of the Central Plains into Illinois and the Great Lakes region on December 19th and 20th of 2012. As this storm moved by, it produced a period of blizzard conditions during the morning and afternoon of the 20th as sustained north winds of 25 to 35 mph with higher gusts created poor visibility from falling and blowing snow. Impacts from the blizzard included closed roads, trapped vehicles, power outages, region wide school closings on the 20th

with some schools remaining closed on the 21st or started 2 hours late. The Governor issued an executive order declaring a state of emergency before the storm hit. This placed the state emergency management, National Guard, State Patrol and other state and county agencies on high alert.

The accumulating snow started in southwest Wisconsin during the middle of the evening on the 19th, reaching central Wisconsin in the early morning hours of the 20th. Accumulations reached winter storm criteria of 6 inches between midnight and 7 a.m. on the 20th. Two bands of heavy snow, with accumulations of 10 or more inches, occurred. The first was from Grant County northeast through Richland County into the southern sections of Adams and Juneau Counties. Within Adams County, the highest reported snow total was 11.0 inches in the Town of Adams. The second band was across northern Buffalo and Trempealeau Counties into northwest Jackson and southwest Clark Counties. The highest reported snow total in the southern band was 14.5 inches in Grant County with 15.0 inches in the northern band in Trempealeau County. National Guard troops were used to help rescue stranded drivers.

In December 2010, a powerful low pressure system tracked across the Upper Midwest and Great Lakes region during the evening hours of December 10th into the morning hours of December 12th. This storm brought heavy snow and blizzard conditions across portions of western and central Wisconsin. December 12 makes the single day snowfall record in Adams County of 14.4 inches. Total snowfall amounts of 19.9 inches were measured at Friendship. In addition to the heavy snow, sustained wind speeds of 25 to 30 miles per hour with gusts up to 50 miles per hour caused whiteout conditions, widespread road closures, stranded motorists and power outages.

The winter of 2007-2008 was one of the worst on record for Adams County with 97.4 inches setting a seasonal snowfall record. The NCDL had nine heavy snow/winter storm reports including blizzard conditions on February 17, 2008 which resulted in 11.2 inches of snow at Friendship.

On December 20-21, 2004, the northern 1/3 of the County sustained a power outage due to a winter storm. A power substation in Wood County failed leaving 5,100 customers in the Towns of Big Flats and Rome without power with temperatures below zero. Most had power restored in about a day, but 700 were without power for two days. Critical facilities affected by the outage included the Town of Rome Police and Fire Stations. This event required opening of the County EOC, Red Cross and Salvation Army shelter operations and door-to-door notification/transportation for elderly.

In February of 2001, Adams County was hit by consecutive ice storms. The first period of freezing rain produced a widespread coating of 1/4 to 1/2 inch of ice, which was followed by 1 to 3 inches of snow accumulation. This caused hazardous traveling conditions, but law enforcement officials reported only minor accidents.

The second period of freezing rain affected southwest and central Wisconsin. Even though glazing was widespread, with ice accumulations of 1/4 inch, law enforcement officials reported only minor automobile accidents.

Arctic cold outbreaks are common in the upper Midwest and sub-zero readings occur 22 times per winter on average. Occasionally strong northwest winds will combine with cold outbreaks to create dangerous wind chill conditions. The coldest temperatures are usually in December through February with average lows in the single digits and record lows colder than -25 degrees. The all-time record low in Adams County is -43 degrees (actual) set in 1951. The NCEP reports 5 extreme cold events between 2015 and 2024.

Most recently, a winter storm event through the middle of January 2024 ushered in an arctic airmass with bitter cold. A 20 to 30 degree drop in minimum temperatures from January 13th through January 14th brought minimum temperatures of 5 to 25 degrees below zero from western into central Wisconsin. These bitterly cold temperatures lingered into the morning of January 15th. While sustained winds largely remained calm, occasional gusts up to 10 mph at times resulted in wind chill temperatures of 20 to 35 degrees below zero.

On December 24, 2020, a western Wisconsin woman died in northern Adams County as a result of hypothermia. Local officials found the woman's car submerged up to the roof in a water filled ditch. The woman escaped from the car but with soaking wet clothes and temperatures in the single digits above zero, hypothermia quickly set in and her body was found two days after the accident just a few hundred yards from the crash site.

With arctic air in place over western Wisconsin, air temperatures dropped into the 20s below zero from January 29 into January 31, 2019. A few sites recorded temperatures in the 30s below zero on the morning of the 30th with several sites falling into the 30s and 40s below zero on the morning of the 31st. When combined with wind speeds of 5 to 25 mph, wind chills of 35 to 60 below were common. The Governor of Wisconsin declared a state of emergency because of the cold weather. Most western Wisconsin schools were closed from January 28th through the 31st. The U.S. Post Office suspended delivery operations across all of western Wisconsin on January 30th and 31st. Wind chills of 35 to 55 below zero were common across Adams County from the evening of January 29th into the morning of the 31st.

A cold spell hit the region to start the year in January of 2010 with temperatures below zero for several days and extremely low wind chills at times. It was the coldest first few days of a January since 1979 and one of the coldest starts to the New Year in history with average temperatures just above zero. Wind chills were well below -30 on January 2nd. The year prior, an arctic cold front over southern Canada moved southeast into the Ohio River valley in the evening hours of January 14, 2009. This brought bitterly cold temperatures and wind chills across

portions of southwest and central Wisconsin in the evening hours of the 14th through the morning hours of the 16th. Wind chill values ranged from -33F in Jackson county to -42F in Grant county. Although unofficial, the lowest wind chill value of -43F was observed at Friendship in the morning hours on January 15th.

The wind chill at Friendship hit -44 degrees on January 30, 2008. An arctic cold front moved across southwest and central Wisconsin on January 29. Very cold temperatures and strong northwest winds combined to produce dangerously cold wind chill values between 30 below and 45 below during the night and mainly into the morning hours of January 30.

Winter Storms / Extreme Cold Vulnerability Assessment:

Winter storms and extreme cold present serious threats to the health and safety of affected citizens and can result in significant damage to property. Heavy snow or accumulated ice can cause the structural collapse of buildings, down power lines, motor vehicle accidents or isolate people from assistance or services.

The following is a list of things that may be adversely affected by a winter storm. Much of these community assets can be referenced in Part II.

- Infrastructure – operation of emergency services, operation of public facilities and schools
- Utilities – down power and telephone lines
- Transportation – automobile accidents, roadway plowing, salting/sanding
- Residential – roofs
- Businesses – commerce
- Agricultural - livestock

Based on review of the historic events of winter storms and extreme cold, there are no specific areas in the county that have unusual risks. Winter storms cover a broad area and are a region-wide concern. However, during the City/Village Planning Meeting for this Plan Update, the City of Adams and Village of Friendship both identified winter snows and, in particular, ice storms as a major vulnerability concern due to the potential for power outage and resulting impact on municipal services and the population itself (heating, food & water safety). The Towns of Adams, Big Flats, Jackson (ice storms), Leola, Monroe, and Quincy (ice storms) identified winter storm/ cold events as top concerns in their mitigation survey results for this Plan.

The extreme cold weather can affect the entire county. The risk to public health includes the chance of getting frostbite and hypothermia, and motor vehicle accidents. Everyone is at risk for becoming injured in extreme cold weather, either because of a frail body or because of travel in a motor vehicle.

Future Probability & Potential Dollar Losses – Winter Storms/Extreme Cold:

Based on historical frequency, Adams County can expect 2.7 significant winter storms per year on average. In other words, the probability is 1.0 or a 100% chance in a given year. For extreme cold temperatures, based on historical frequency, Adams County can expect an occurrence about every 2 years, on average, for a probability of 0.20 or a 20% chance in a given year.

Estimating potential future losses for winter storms is difficult. Damages and losses are typically widespread. Auto accidents and additional snow removal time are typical impacts of winter storms, and such claims are not aggregated or tracked for monetary damage. About 189 annual motor vehicle accidents occur with snow/ice/slush road conditions, and produce about 71 injuries and 1.4 deaths annually. Winter storms do have the potential to be extremely destructive, particularly in the case of ice storms. Potential future losses per incident might range from \$5,000 to \$2 million based on experiences from other counties.

Weather variability can be expected to lead to more frequent, more powerful winter storm events and occurrences of severe cold. Heavier, more frequent winter storms will increase the frequency of power outages, structural collapse and transportation impacts.

HAZARD ANALYSIS: FLOODING/DAM FAILURE**Background on Flood Hazard:**

There are a variety of classifications for flooding including coastal, dam or levee failure, flash, lake, riverine, stormwater and urban/small stream. Adams County has the potential for all these types except coastal. The following descriptions of the types of flooding are compiled from various FEMA and other notable hazard planning sources:

Coastal – Different from other types of flooding which relate to movement of water through a watershed, coastal flooding is due to the effect of severe storm systems on tides resulting in a storm surge. Primarily known as an ocean-based event, the Great Lakes coastal areas can also be affected.

Dam or levee Failure – More of a technology related hazard than a natural hazard, various factors can result in the failure of the structural technology that is a dam, thus causing flooding of areas downstream of the dam often similar in effect to flash flooding.

Flash – Involves a rapid rise in water level moving at high velocity with large amounts of debris which can lead to damage including tearing out of trees, undermining buildings and bridges, and scouring new channels. Dam failure, ice jams and obstruction of the waterway can also lead to flash flooding. Urban /built-up areas are increasingly subject to flash flooding due to removal of vegetation,

covering of ground with impermeable surfaces and construction of drainage systems.

Lake – Prolonged wet weather patterns can induce water-level rises that threaten lakeshore areas.

Riverine – Also known as overbank flooding, this is the most common type of flooding event. The amount of flooding is a function of the size and topography of the watershed, the regional climate, soil and land use characteristics. In steep valleys, flooding is usually rapid and deep, but of short duration, while flooding in flat areas is typically slow, relatively shallow, and may last for long periods.

The cause of flooding in rivers is typically prolonged periods of rainfall from weather systems covering large areas. These systems may saturate the ground and overload the streams and reservoirs in the smaller sub-basins that drain into larger rivers. Annual spring floods are typically due to the melting of snowpack.

Stormwater – Water from storm event that exceeds the capacity of local drainage systems, either man-made or natural, can result in flooding. Inadequate storm sewers and drainage systems are often the primary factors resulting in this type of flooding.

Urban and Small Stream – Locally heavy rainfall can lead to flooding in smaller rivers and streams. Streams through urban or built-up areas are more susceptible due to increased surface runoff and constricted stream channels.

Major floods in Adams County tend to occur in the spring when melting snow adds to normal runoff and in summer or early fall after intense rainfalls. Flooding occurs in the spring due to snowmelt and frozen soil. This build up continues until the river or stream overflows its banks, for as long as a week or two and then slowly recedes inch by inch. The timing and location of this type of flooding is fairly predictable and allows ample time for evacuation of people and protection of property.



Adams County Highway Washout

Flooding is a significant hazard in Adams County, particularly because it borders the Wisconsin River. As described in Part II, there are approximately 235 miles of streams in Adams County within five main watersheds. Four are part of the Wisconsin River Basin, while the Neenah Creek Watershed is part of the Upper Fox River Basin.

Floodplains exist along the Wisconsin River and the tributaries that feed into it. These floodplains are narrow along tributaries and lakes but extensive throughout

the County. Floodplains are described in Part II and shown on Map 4 of this plan. The Federal Emergency Management Agency (FEMA) identifies these floodplains on Digital Flood Insurance Rate Maps (DFIRMs) as downloaded by the NCWRPC from FEMA's website.

There are 52 dams in Adams County (See Map 4 and Table 17). These dams serve many useful purposes, including agricultural uses, providing recreational areas, electrical power generation, erosion control, water level control and flood control. According to the DNR, Adams County has 18 large dams (including Castle Rock and Petenwell Dam), which have a structural height of over 6 feet and impounds 50 acre-feet or more. The other 34 are regarded as small or unknown dams. The Wisconsin DNR regulates all dams on waterways to some degree; however the small dams are not stringently regulated for safety purposes. The federal government has jurisdiction over large dams that produce hydroelectricity. Castle Rock and Petenwell Dams are the major producers of hydroelectricity in Adams County. Friendship and Big Roche-A-Cri also produce electricity.

A dam can fail for a number of reasons such as excessive rainfall or melting snow. It can also be the result of poor construction or maintenance, flood damage, weakening caused by burrowing animals or vegetation, surface erosion, vandalism or a combination of these. Dam failure can happen with little warning resulting in loss of life and significant property damage in an extensive area downstream of the dam.

The WDNR assigns hazard ratings to large dams within the state. When assigning hazard ratings, two factors are considered: existing land use and land use controls (zoning) downstream of the dam. Dams are classified into three categories that identify the potential hazard to life and property downstream should the dam fail. A high hazard indicates that a failure would most probably result in the loss of life. A significant hazard indicates a failure could result in appreciable property damage. A low hazard exists where failure would result in only minimal property damage and loss of life is unlikely. For Adams County, there are five dams that have a high hazard rating: Castle Rock, Camelot, Horner (Fawn Lake), Roche-a-Cri, and Petenwell. Friendship and Sherwood have a significant rating, while the rest are rated low.



Friendship Dam

History of Flooding in Adam County:

Flooding is a significant hazard of concern in Adams County, being a principal cause of damage in nine Presidential Disaster Declarations that included Adams County since 1971. The most recent declaration as of this plan occurred in 2018. NCDL has reported 14 flood events for Adams County over the study period between 2015 and 2024.

Table 17		Dams in Adams County				
DAM NAME	DAM SIZE TYPE	MILES NEXT CITY IS DOWN FROM DAM	NAME OF NEXT CITY DOWN FROM DAM	HAZARD RATING	UPDATED EAP YEAR	
CASTLE ROCK	LARGE	19	WISCONSIN DELLS	HIGH	2023	
LAKE CAMELOT	LARGE	0	LAKE SHERWOOD SUBDIV	HIGH	2003	
LAKE PETENWELL	LARGE	1	DELLWOOD SUBDIVISION	HIGH	2019	
PEPPERMILL LAKE (Coddington)	LARGE	4	OXFORD	LOW	2010	
SHERWOOD	LARGE	0	LAKE SHERWOOD SUBDIV	SIGNIFICANT	2003	
ARKDALE	LARGE	0	ARKDALE	LOW	2000	
COOL CREEK 1 (Bingham Cr 1 Cecil Brown Etux)	SMALL	35	WISCONSIN DELLS	LOW		
CARTER CREEK (Spitek)	LARGE	0	NONE	LOW		
EASTON	LARGE	0	EASTON , CTH A	LOW	2010	
FARREY (McGinnis Lake)	LARGE	2	BROOKS	LOW	2010	
FEDLER	LARGE	0	NONE	LOW	2018	
FRIENDSHIP	LARGE	0	FRIENDSHIP	SIGNIFICANT	2020	
HORNER (Fawn Lake)	LARGE	0	NONE	HIGH	2017	
LAKE ARROWHEAD	LARGE	0	ROME	LOW	2003	
LANDIS, CHARLES	SMALL	9	FRIENDSHIP	LOW		
LAVERNE NEWBY (White Creek)	SMALL	1	WHITE CREEK	LOW		
LEOLA 15 (Possible Abandoned?)	LARGE	17	NEW ROME	LOW	2014	
LEOLA 19	SMALL	15	NEW ROME	LOW		
LEOLA 8	SMALL	12	NEW ROME	LOW		
LEOLA 2	SMALL	17	NEW ROME	LOW		
LEOLA 12	SMALL	15	NEW ROME	LOW		
LEOLA 7	SMALL	13	NEW ROME	LOW		
LEOLA 6	SMALL	12	NEW ROME	LOW		
LEOLA 5	SMALL	13	NEW ROME	LOW		
LEOLA 3	SMALL	15	NEW ROME	LOW		
LEOLA 14	SMALL	16	NEW ROME	LOW		
LEOLA 16	SMALL	18	NEW ROME	LOW		
LEOLA 17	SMALL	14	NEW ROME	LOW		
LEOLA 18	SMALL	14	NEW ROME	LOW		
LEOLA 20	SMALL	16	NEW ROME	LOW		
LEOLA 22	SMALL	17	NEW ROME	LOW		
LEOLA 23	SMALL	15	NEW ROME	LOW		
LEOLA 24	SMALL	16	NEW ROME	LOW		
NORTHERN DAM OR #9 (White Creek)	LARGE			LOW	2014	
ROCHE-A-CRI/COTTONVILLE (Big Flats)	LARGE	4	ARKDALE	HIGH	2004	
SCHWAHN	LARGE	0	NONE	LOW	2018	
WALKER, HARRY	LARGE	9	PLAINFIELD	LOW		
COOL CREEK 2 (Bingham Cr 2 Cecil Brown Etux)	SMALL					
EVANS, ORVEL	SMALL					

Table 17 Continued	Dams In Adams County				
HENNING, H.A.(?)	SMALL				
RAMSTEIN (Henry Reeves, Etux)	SMALL				
HOLM, HAROLD	SMALL				
HYLER, DONALD	SMALL				
MANTEUFEL (John Kish & Ed Kubacki)	SMALL				
KOHL, KARL	SMALL				
RANDORF, CLAYTON	SMALL				
RICHARD E BIERI (Joe Lake)	SMALL				
SCIEPKO, JOSEPH	SMALL				
SUS, EDWARD	SMALL				
BOEHM DAM	SMALL			LOW	
PIERCE DAM	SMALL				
VAN ERT DAM	SMALL				
<i>Source: DNR on-line database & NCWRPC, 2024.</i>					

The most recent flooding event occurred on August 1, 2024 when law enforcement reported flooding along Highway G in Adams County. During the afternoon and evening hours on August 1st, a slow moving cluster of thunderstorms brought heavy rainfall across Adams County. This resulted in localized roadway flooding.

In August of 2020, several rounds of thunderstorms with heavy rain occurred across portions of western Wisconsin during the early morning of August 28th. These storms were centered along and north of Interstate 94 from Monroe County southeast through Adams County. Rainfall amounts of 3 to 5 inches were common causing numerous roads to be closed with some washouts occurring. The highest reported rainfall total was 9.54 inches in New Lisbon (Juneau County). The heavy rain caused runoff and some flash flooding to occur across the southern portions of Adams County. Water covered roads north of Plainville and south of White Creek. Some roads were washed out near Plainville. Property damages of at least \$9,000 and crop damages of \$45,000 were reported.

In March of 2019, daytime temperatures warmed well into the 40s with some locations reaching the 50s from the 10th through the 15th. These warm temperatures caused a rapid melt of the existing snowpack that averaged between 12 and 18 inches. The runoff from this snowmelt caused extensive flooding to occur across most of western Wisconsin, including along numerous streams across Adams County. Most county highways, and many local roads, were impacted by water with numerous closures. Some homes had water in the basements or first floor. Almost 20 homes sustained minor damage with 5 homes and businesses sustaining major damage. At least two drivers unknowingly drove into washouts on county roads. A county-wide state of emergency was declared, and the Governor declared a statewide state of emergency because of the flooding. Damage estimates for Adams County were reported at \$750,000.

In August of 2018, a line of severe thunderstorms moved across western Wisconsin during the evening of the 27th causing significant damage from high winds and flooding. The storms became oriented in an east to west line and dumped copious amounts of rain from southern La Crosse County and northern Vernon County east across the southern sections of Monroe, Juneau and Adams Counties. Runoff from heavy rains produced flash flooding across the southern sections of Adams County. County Highway G was closed because of flooding along Big Spring Creek and water was over County Highway H near White Creek. Additional township roads were closed or had water over them. The eastbound Amtrak Empire Builder had to be halted near Tomah because of a washout on the rail line near Mauston (Juneau County). Rainfall totals of 6 to 10 inches were common in this heavy rain band with the highest reported total being 9.98 inches near Westby (Vernon County). The Governor declared a state of emergency for the entire state. A federal disaster declaration was made for Adams and six other counties. Damage estimates for Adams County were reported at \$780,000 with at least \$25,000 in crop damage. Statewide damages from this event exceeded \$107 million.

In 2016, flooding occurred as several rounds of thunderstorms with heavy rain moved across southwest Wisconsin from the morning of September 21st into the morning of the 22nd. Runoff from the heavy rain caused flood waters from Big Spring Creek to washout a section of County Highway G northwest of Big Spring. Flood waters from Big Spring Creek also covered County Highway P near Big Spring. Flooding elsewhere in the county damaged three homes. The rain resulted in flash flooding across portions of Adams, Clark, Crawford, La Crosse, Monroe, Richland, Vernon and Trempealeau Counties. The Governor declared a state of emergency for Adams, Clark, Crawford, Jackson, La Crosse, Monroe, Richland, Trempealeau and Vernon Counties, and a federal disaster declaration was subsequently made for Adams and seven other counties. Damage estimates for Adams County were reported at \$116,000.

In June 2008 another disaster declaration included most of southern Wisconsin. Heavy rain resulted in flooding that caused numerous road and culvert washouts throughout the southern half of Adams County. Crop losses and water damage to homes and outbuildings including mold problems were significant. Public sector damages exceeded \$400,000, and individual losses have exceeded \$300,000. High wind including a tornado in the Town of New Haven was also associated with this event.

In 2004, severe storms resulted in flooding and a disaster declaration for central and southern Wisconsin including Adams County. Wind damage, including several tornadoes, and hail were also associated with this event. Flash flooding occurred after 3 to 6 inches of rain fell within two hours. High water conditions persisted for some time after the initial flood. Several roads were impassable. Approximately 40 homes were damaged along with a number of government

facilities throughout the County. NCDC reported property damages of \$125,000 and crop damages of \$25,000.

In 2002, at least 15 inches of rain fell in northern Adams County on June 21 and 22. The disaster declaration covered eight Wisconsin counties including Adams. Numerous roads were reported closed due to flooding. The risk of a dam failure was issued for areas along Lake Arrowhead, Lake Sherwood and Lake Camelot drainages. Runoff filled lakes to the point of nearly breaching the levees and embankments. Water had to be released into the drainage system to prevent levee and dike failures. In some locations, the water flooded homes and businesses, washed out roads, bridges and culverts, and damaged crops. Estimated damage by NCDC to Adams County was about \$577,000. The Town of Big Flats suffered major damage to roads, resulting in more than \$195,000 in repair costs.

Severe storms again resulted in flooding (and disaster declaration) in 2001 and 2000.

The Flood of 1993 was one of the worst flood events experienced by Adams County, the state, and entire Midwest. The flooding in Adams County was a result of several compounding factors including heavy rains and flooding in the fall of 1992, above average amounts of precipitation in the Spring of 1993, and unusually heavy amounts of rain onto already saturated ground from early June throughout July. Fortunately, before the flood peaks arrived on the Wisconsin River in Adams County, the Petenwell and Castle Rock Reservoirs were drawn down. This created additional storage capacity that helped ease flow and lowered discharges downstream.

East of the Wisconsin River in the County, there was substantial flooding reported near the border of the City of Adams and the Village of Friendship. The Health and Social Services Building, DNR Offices, Jr. High School, and numerous homes all experienced flooding and water damage. Standing water plagued the area for months afterward. Adams County received approximately \$792,562 in disaster disbursements. The major impacts from flooding were to agriculture lands and public roadway washouts. Nearly 50 percent of financial aid disbursements were for agriculture where wet croplands prevented normal farming operations and stunted or killed crops. Twenty percent of the funds were for public relief. High groundwater eroded road bases and caused excessive runoff that washed out culverts and embankments or stripped gravel surfaces off of town roads. In the private sector, the three most common problems were groundwater in basements, failing septic systems, and polluted wells.

Major flooding also occurred in 1973, affecting a large portion of the county with flooding along the entire length of the Mississippi River resulting in a disaster declaration. Flood crest at Wisconsin Dells was 20.7 feet compared to 18.2 feet

in 1993. Other notable flooding includes 1967 and 1965 with crests measured at Wisconsin Dells of 19.2 and 19.0 feet respectively.

Prior to the construction of the reservoirs at Petenwell and Castle Rock, large-magnitude floods were recorded on the Wisconsin River in September 1911, July 1912, September 1938 and September 1941. A maximum discharge of 72,200 cubic feet per second (cfs) was recorded on September 14, 1938, on the Wisconsin River near Wisconsin Dells just south of the Adams County line.

Adams County has not experienced a dam failure with any loss of life or substantial property damage. However, there have been notable incidences of threatened failure. The Town of Rome avoided dam blowouts with the help of many volunteer sandbaggers during the June 2002 flooding when the Lake Camelot dam came within an inch of failure; Lake Arrowhead dam came within seven inches of failure; and Sherwood was about four inches away from failure.

In 2006, the Tri-Lakes dams were again threatening failure. The Kingsway Dam on Upper Lake Camelot is the uppermost dam in a series of dams. Failure of this dam could ultimately lead to failure of 3 other dams downstream and close State Highway 13 as well as various County and local roads. Rapid draw down of the lakes prevented the dam failure and allowed repair of a failing drain system.

In 2007, a bowed and leaking stop log at the base of the Easton Lake Dam required draw down and emergency repair. The dam was built in the 1860s to form a 24-acre millpond. During the repairs, other issues were revealed, and full replacement of the dam was subsequently planned.

Flood Vulnerability Assessment:

Flood events in the County have caused substantial property and infrastructure damage in the past and have the potential to cause future damage, since a significant number of structures still exist in the floodplain. Looking at past events, the following have been significantly impacted by flooding:

- Infrastructure – flooded public facilities and schools
- Utilities - down electric lines/poles/transformers, telephone lines, lost radio communication
- Roadways – washouts, inundated roadways, debris clean-up
- Residential structures – flooded basements, damaged septic systems
- Businesses – loss of commerce
- Agriculture - inundated cropland

To assess the vulnerability of the Adams County area to flooding hazards, basic inventory data described in Part II must be analyzed. For this purpose, consideration should be given to structures (specifically critical facilities), infrastructure, and cropland.

One of the first reports to reference in assessing vulnerability to structures during flooding is the State of Wisconsin Repetitive Loss Report. This Report provides the status of repetitive loss structures by community. Repetitive loss structure means a structure covered under an NFIP flood insurance policy that (1) has incurred flood-related damage on two occasions, in which the cost of repair, on average, equaled or exceeded 25% of the value of the structure at the time of each such flood event; and (2) at the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage (44 CFR § 77.2(i)). Severe repetitive loss structure means a structure that is covered under an NFIP flood insurance policy and has incurred flood-related damage (1) for which four or more separate claims have been made under flood insurance coverage, with the amount of each claim (including building and contents payments) exceeding \$5,000 and with the cumulative amount of such claims payments exceeding \$20,000; or (2) for which at least two separate flood insurance claims payments (building payments only) have been made, with cumulative amount of such claims exceeding the value of the insured structure (44 CFR § 77.2(j)).

The information is used as a floodplain management tool and to supplement information provided by communities for flood mitigation grants administered by WEM. According to the report, there is only one repetitive loss structure in Adams County. This property is a single-family residence. Details are not provided here to preserve personal privacy.

Structures within floodplains were also analyzed, see methodology outlined below. The floodplain boundaries within Adams County are shown on Map 4. Table 18 shows the number of structures in each municipality identified as "vulnerable to flooding" according to proximity to floodplains. There were a total of 678 structures identified in the designated floodplain boundaries, see Map 9.

Methodology – Structures within Floodplains:

1. *NCWRPC downloaded the DFIRM floodplain maps from the FEMA website into a GIS coverage for the County.*
2. *A primary building point cover was digitized from current digital aerial photography of the floodplain areas.*
3. *The floodplain coverage was then combined with the building point coverage to identify those structures within the floodplain boundary.*
4. *Total structures with the floodplain were then tabulated by municipality.*
5. *Land records data was used to determine the total value for the identified vulnerable structures by municipality.*

Flooding in Adams County is often felt beyond the floodplain boundaries due to factors such as topography and high groundwater. The drainage (surface runoff) network in the County is poorly defined. During periods of extended rainfall and/or

snowmelt, a general condition of flooding exists throughout the communities. During this time, basements and roadways suffer considerable damage.

Table 18 2024 Improvement Values for Structures in Floodplains in Adams County		
Municipality	Number	Total Value
Adams town	3	\$364,000
Big Flats town	20	\$1,347,700
Colburn town	1	\$n/a
Dell Prairie town	54	\$6,186,100
Easton town	76	\$4,313,000
Jackson town	21	\$2,168,900
Leola town	16	\$1,115,800
Lincoln town	0	\$0
Monroe town	5	\$492,200
New Chester town	1	\$n/a
New Haven town	76	\$9,235,900
Preston town	58	\$8,079,600
Quincy town	102	\$11,859,100
Richfield town	2	\$209,900
Rome town	190	\$24,749,500
Springville town	35	\$2,603,800
Strongs Prairie town	15	\$1,666,800
Friendship village	3	\$240,000
Wisconsin Dells (part)	n/a	n/a
Adams city	0	\$0
Adams County	678	\$74,843,600

Source: Adams County Land Records and NCWRPC, 2024

In addition to structural damage from flooding, there would be significant damage to public roadways, particularly to roadway surfaces, culverts and bridges. Flooding would inundate or close roadways due to washouts from a period of a few days up to as much as three months. Such interruptions in the County transportation network cause travel delays through detours. Businesses are often impacted by this restriction in access.

Businesses can be forced to close due to septic system problems and other issues resulting from flooding and the high water table. Tourism is an important industry in the County and several campgrounds, lodges, and restaurants may be affected by flooding.

The agriculture industry is a sector that can face substantial losses during a flood. Flood conditions can leave farmers with the following economic setbacks:

- Delayed planting (reduced growing season)
- Prevention of fields from being seeded
- Seed and agricultural chemicals washing out of fields
- Rotting of plants due to excess moisture
- Areas where planted crops left in the fields due to excessive moisture
- Crops not reaching full maturity or stunted growth
- Requirements by farmers to expend higher amounts of money on additional soil amendments
- Lower quality (nutritional value) of harvestable crops as a feed source.

Reductions in quantity can result in loss of revenues from cash crops and increased expenses for purchasing the needed livestock feed from outside sources. Additionally, reductions in crop quality result in lower prices received for cash crops and increased amounts spent for nutritional supplements to animal feed, which need to be added even in much of the purchased feed.

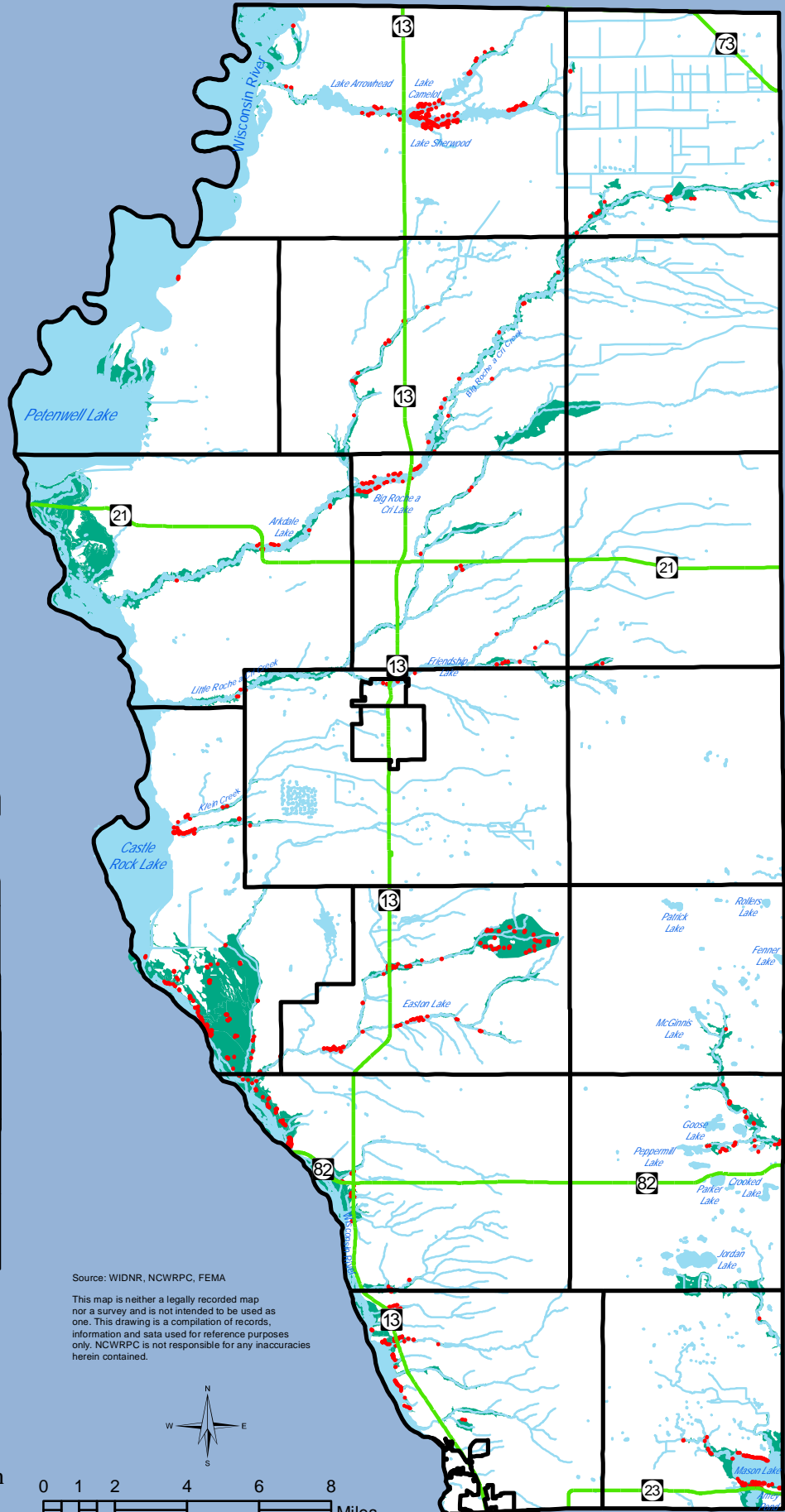
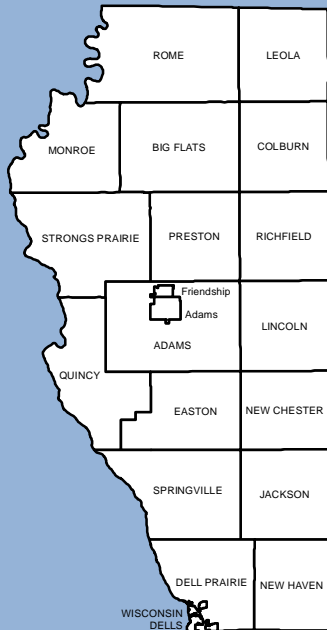
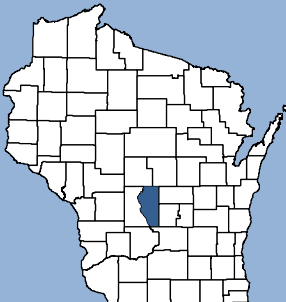
Economic losses to farmers can generate a ripple effect on the local community as well. Reduction in farm income will curtail the farmers' ability to purchase new equipment and make other improvements. Farmers will have less money to spend at farm dealers, farm supplies, building/hardware suppliers, fertilizer, feed and seed dealers, and other agribusiness and retail establishments. The State itself will have reduced tax revenues. Farmers will have less money to save and invest, and suffer still more increases in debt load.

The forest products industry is affected similarly to agriculture. Forestlands become too wet for logging operations and many waterlogged tree plantations suffer high mortality rates. Mill inventories become very low, resulting in increased prices for consumers.

The areas considered to have a higher risk for impact from flooding include those communities with structures in floodplains as shown in Map 9. In addition, the Village of Friendship identified flooding and the potential for a dam breach as a primary concern during their mitigation planning meeting. The City of Adams also indicated that flooding in some areas is a concern. The Towns of Adams, Big Flats, Dell Prairie, Jackson, Leola, Monroe, New Haven, Quincy, and Richfield identified flood vulnerability as a concern citing issues such as numerous streams, low-lying areas, road washout or overtopping, agricultural impacts and dam failure

Legend

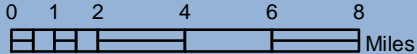
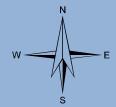
-  Minor Civil Divisions
-  State Highways
-  Structures in Floodplain
-  Water
-  Floodplain



Source: WIDNR, NCRWPC, FEMA
 This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only. NCRWPC is not responsible for any inaccuracies herein contained.

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North Central Wisconsin Regional Planning Commission

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Future Probability and Potential Dollar Losses – Flood:

Based on the historical data presented here (frequency of past events), Adams County can expect 1.4 significant flood events per year on average. This equates to a probability of 1.0 or about a 100 percent chance in a given year.

Due to the significant number of dams and particularly large dams with high hazard ratings, dam failure is an important hazard event to plan for in Adams County. However, based on past experience, the actual probability of a major dam failure is very low. Considering the near failure of the Lake Camelot Dam in 2002 in conjunction with historic flood frequency data, probability of dam failure might be estimated at (less than) 0.05 or 5 percent chance in a given year, although this is not completely accurate, since failure of the dam was avoided by human intervention. The Easton Lake Dam and Kingsway Dam incidents in 2006 and 2007 may be an indicator that age and structural condition dams in the County may be pushing the probability of dam failure.

Historic data is again used to estimate potential future dollar losses due to flood. On average, Adams County might expect property and crop losses of \$123,000 on average, per flood occurrence based on the study period of 2015 to 2024. Over the next ten-year period, flood losses in Adams County could approach \$2 million. However, there is always the chance that a more significant flood will occur like 2018 or even 1993 with greater potential for damage.

Weather variability can be expected to lead to more annual precipitation with more frequent and heavier high precipitation events. This will lead to more flooding and the potential for dam failure. Flood damage will affect more people over a wider area of the County, and resulting damages will be higher.

HAZARD ANALYSIS: WILDFIRE**Background on Wildfire Hazard:**

A wildfire is any instance of uncontrolled, wild, or running fires occurring on forest, marsh, field, cutover, or other lands. Sometimes referred to as forest fires, wildfires can occur at any time the ground is not completely snow covered. The season length and peak months may vary appreciably from year to year. Land use, vegetation, amount of combustible materials present and weather conditions such as wind, low humidity and lack of precipitation are the chief factors for fire season length.

History of Wildfire in Adams County:

The Wisconsin DNR maintains a database of wildfire data which represents the most comprehensive source of information for analyzing fire trends in an area such as Adams County. This data is now accessible through its Internet based Wildfire Dashboard. Between 2015 and 2024, there was an average of 48 fires that have

burned 38 acres, annually. The typical fire in Adams County burns less than an acre.

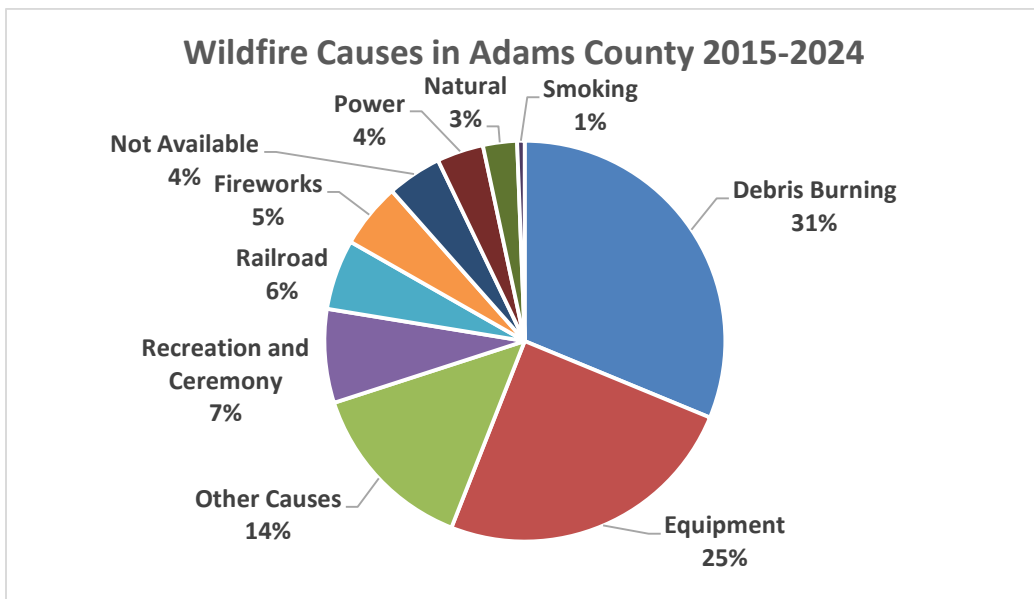
April is the leading month for fire in Adams with 24% of the total number of fires between 2015 and 2024. During this time frame, wildfires have occurred in each month of the year in Adams.

The Town of Adams experienced the most fires between 2015 and 2024 with 53, Besides the cities and village which have low wildfire occurrences (1 - 3), the Town of Colburn had the fewest fires with 9 over that period. The Town of Lincoln had the least area burned, with only 1.48 acres affected.



Cottonville Fire, 2005

The chart below breaks down the causes of wildfire within Adams County between 2015 and 2024 as classified by the WDNR. The principal cause of wildfire in Adams County and Wisconsin is debris burning, which resulted in 149 or 31% of wildfires within the County. Equipment is the next leading category at 25% and includes vehicle, motor and other machinery related causes except railroad. Other causes include a variety of factors such as power lines, structure fires, and improper ash disposal. Smoking resulted in less than 1% of wildfires. Natural causes, like lightning, were responsible for only 13 of the fires, or around 3%.



Source: WDNR

In 2005, Adams County experienced one of the largest wildfires in Wisconsin history. Known as the Cottonville Fire, the fire began on May 5 when debris burning in a fire pit got out of control. Approximately 3,410 acres were burned in the Towns of Big Flats, Colburn and Preston covering an area 1.5 miles wide and 7 miles long. Weather conditions were ideal for fire: warm and windy with very low humidity. Part of "sand country", Adams County's dominant vegetation is grass, pine and scrub oak, which are all known to burn quickly and intensely. Fire spread quickly to the tops of the pine trees.

Losses included 9 primary homes, 21 seasonal homes, and 60 outbuildings. Damage was sustained to 15 other homes. Evacuation of 200 residents was required. Firefighting efforts were massive with 5 aircraft (1 from Minnesota DNR), 200 WDNR personnel from across the state, 30 volunteer fire departments and law enforcement from State Patrol, Adams, LaCrosse and Vernon County Sheriffs and Onalaska Police. The fire took 11 hours to bring under control and several days for mop-up. The courts set restitution at over \$1.4 million indicating the level of damages. A disaster declaration was not made, but the State opened up the Wisconsin Disaster Fund.

According to the National Climatic Data Center's database, a small wildfire occurred May 6, 2020 east of Cottonville in the Town of Richfield. The burned remains of a person were found, with the cause of death determined to be cardiac arrest due to extreme stress or exertion related to the fire. The fire consumed about 3 acres and was started by burning debris. Damage estimate was reported at \$3,000.

The NCDC also reported that very dry conditions and strong winds across portions of central Wisconsin caused a controlled burn of grass clippings in a wooded area to quickly become out of control in Adams County on April 17, 2009. The wildfire burned approximately 106 acres and destroyed several vehicles, outbuildings, personal property, permanent and seasonal residences. One person was injured and damages were estimated at about \$500,000.

The database also reported a wildfire, fanned by gusty winds, charred 158 acres of red pine in the Town of Rome during the early morning of April 13, 1998. The fire necessitated the evacuation of some nearby residences. Nobody was injured and no homes were lost, but there was an estimated property value loss of \$80,000.

Wildfire Vulnerability Assessment:

Adams County has 255,426 acres of forestland, or 58 percent of the total land area, scattered throughout the County. The potential for property damage from fire increases each year as more recreational and retirement homes are developed on wooded land.

The trend toward introducing more human development into fire prone areas has brought about the term wildland urban interface or WUI. The WUI identifies areas where structures and human development meet or intermingle with undeveloped wildlands. It is within these areas where wildfire poses the greatest risk to human lives and property.

The WDNR has completed a statewide evaluation of fire risk, referred to as the CAR or Communities At Risk assessment. This assessment uses extensive DNR geo-databases to analyze and map hazardous woodland fuel types and the degree of the intermixing of development with wildlands. The maps identify the level of risk for each community on a scale of very high, high, moderate, or low, and also have a community of concern designation. Virtually all of Adams County is rated very high or high except for Leola and Colburn, which are designated as communities of concern. See Map 10.

WDNR reports on the Cottonville Fire indicate that the loss of buildings was due, in part, to a lack of access (long, narrow driveways) and a lack of defensible space (free of fuels that can transmit fire to the structure and allow firefighters to safely operate).

Campgrounds are also a concern because of campfires. Adams County has several campgrounds with more being proposed. Locations of the campgrounds are shown on Map 8.

Future Probability and Potential Dollar Losses – Wildfire:

Wildfires are relatively common occurrences in Adams County. Over the 10-year period of analysis, there has been an average of 48 fires per year in the County. In other words, the probability is 1.0 or 100% chance of wildfire each year. However, these fires are typically contained rapidly and remain small, so that each has a minimal impact. The probability of a fire becoming more substantial, like Cottonville, might be estimated at (less than) 5% per year or 0.05.

Because of the relatively small impact of typical individual fires in the County, loss data is not tracked. This makes it difficult to develop an estimate of potential future dollar losses. However, with 48 fires per year, the County should expect some fires to "get out of hand" and likely approach or exceed the \$1.4 million in damages of the Cottonville Fire.

Weather variability can be expected to lead to an increase in wildfire occurrences and the conditions for any given fire to get out of control. Rising average annual temperatures will exacerbate drought conditions contributing to wildfire risk.

HAZARD ANALYSIS: DROUGHT / EXTREME HEAT**Background on Drought / Extreme Heat Hazard:**

A drought is an extended period of unusually dry weather, which may be accompanied by extreme heat (temperatures which are 10 or more degrees above the normal high temperature for the period). There are basically two types of drought in Wisconsin: agricultural and hydrologic. Agricultural drought is a dry period of sufficient length and intensity that markedly reduces crop yields. Hydrologic drought is a dry period of sufficient length and intensity to affect lake and stream levels and the height of the groundwater table. These two types of drought may, but do not necessarily, occur at the same time.

Droughts, both agricultural and hydrologic, are relatively common in the state. Small droughts of shortened duration have occurred at an interval of about every ten years since the 1930's.

Extended periods of warm, humid weather can create significant risks for people, particularly the elderly who may lack air conditioning or proper insulation or ventilation in their homes. Animals are also at risk during extended periods of heat and humidity. The National Weather Service issues a Heat Advisory when the Heat Index ranges from 105 to 114 degrees daytime and remains at or above 80 degrees at night, during a 24-hour period. The heat index combines the effects of heat and humidity to better reflect the risk of warm weather to people and animals. When heat and humidity combine to reduce the amount of evaporation of sweat from the body, outdoor activity becomes dangerous even for those in good shape. The index measures the apparent temperature in the shade. People exposed to the sun would experience an even higher apparent temperature. A heat index of 105 is considered dangerous and prolonged exposure can result in heat stroke, exhaustion and cramps. People should be reminded to use extreme caution when the heat index is between 95 and 105. A heat index of 95 occurs when the temperature is 90 degrees and the relative humidity is 50 percent.

History of Drought / Extreme Heat in Adams County:

Between 2015 and 2024, Adams County experienced 2 drought periods, in 2022 and 2023-24.

Beginning in early 2023, ongoing drier than normal conditions resulted in drought in Adams County, including 7 consecutive weeks of extreme drought. By September of 2023, limited rainfall resulted in 50% below normal topsoil moisture. The extended abnormally dry conditions decreased water levels along the Wisconsin River to well below normal, marooning and killing many mussels along its banks. Due to this drought, the United States Department of Agriculture (USDA) had declared Adams County as a natural disaster area. Severe drought persisted across the southern half of Adams County through December as a result of monthly precipitation totals at 2 inches below normal and anomalously warm temperatures. Drought conditions continued through the first five months of 2024.

Prior to the current study period, much of the State of Wisconsin, including Adams County, was under drought conditions between 2004 and 2013. At one point, the Governor had declared a state of emergency to get assistance to the state's agricultural sectors. The extended dry conditions posed serious challenges for farmers from drought stressed crops to issues providing feed for livestock.

Beginning in 2013, improved rainfall across the Midwest gradually relieved the drought in Wisconsin. Nationally, however, what is being tagged as the 2012-2013 North American Drought had affected over 80% of the U.S. as well as parts of Canada and Mexico, and drought continued to affect parts of the country into 2015. This drought is on track to exceed the 1988-89 drought, which also affected Wisconsin/Adams County, as the costliest natural disaster in U.S. history.

Adams County experienced the 1988-1989 drought with the rest of the Midwest. It was characterized not only by below level precipitation, but also persistent dry air and above normal temperatures. Stream flow measuring stations in the state indicated a recurrence interval of between 75 and 100 years. The drought occurred early in the growing season and resulted in a 30-60% crop loss, with agricultural losses set at \$1.3 billion for the state. No statistics were available for the amount of crops lost in Adams County, but 52 percent of the state's 81,000 farms were estimated to have losses of 50 percent or more, with 14 percent estimated having losses of 70 percent or more. Some rural wells went dry, and water conservation was instituted in the rural areas

The drought of 1976-1977 was most severe in a wide band stretching from north to south across the state. Stream flow measuring stations recorded recurrence intervals from 10 to 30 years. Agricultural losses during this drought were set at \$624 million. Adams County was one of 64 counties that were declared federal drought areas and deemed eligible for assistance under the Disaster Relief Act.

According to the National Weather Service, Adams County has been affected by a number of heat waves over the years, however, no fatalities were documented. The warmest temperature (actual) on record in Adams County was 114 degrees F set on July 13, 1936.

The NCEM database has three listings for extreme heat events during the study period of 2015 to 2024. The most recent was on August 26, 2024. After a relatively mild summer, a period of excessive heat impacted much of the region prompting air temperatures to reach well above 90 degrees during the afternoon on August 26th. This combined with dewpoints as high as 80 degrees in some locations allowed for heat indices to climb above 110 degrees on August 26th. These warm air temperatures and high humidity allowed the maximum heat index to reach between 105 to 110 degrees on August 26th across Adams County.

Western Wisconsin sweltered under two days of excessive heat in the middle of July 2019. Heat indices topped out between 100 and 110 on July 18th and 105 and 120 on July 19th. Air temperatures during this heat wave generally topped out around 90 while dew points climbed into the lower 80s. Heat indices of 105 to 115 were common across Adams County on July 19th.

Two days of excessive heat across western Wisconsin yielded heat indices between 105 and 115 on both June 29 and 30 in 2018, although the high heat indices were more widespread on the 29th. Air temperatures in the upper 80s to middle 90s with dew points in the middle 70s combined to create the excessive heat. The highest calculated heat index in Adams County was 111 at the Mesonet station in Friendship.

Five people died from the effects of a long duration heatwave that gripped western Wisconsin from July 2nd through July 7th, 2012. The nearest fatality occurred in Juneau County. Numerous people were also treated for heat related illnesses. The highest apparent temperatures during the heatwave ranged from 100 to 110 each day. Other impacts from the heat included stimulating algae growth on area waterways which depleted oxygen levels leading to fish kills. Milk production was down during the heat as well, as cows started drinking more water and ate less feed leading to the drop. Campgrounds also reported a downturn in business as potential campers remained at home and numerous roads buckled and had to be repaired.

Other notable occurrences include 2011 and 2001. Warm and humid air invaded western Wisconsin on July 17, 2011 and remained in place for the next three days. Two people perished as a result of the excessive heat and at least eight other were treated for heat related illnesses (outside Adams). During this stretch, afternoon heat indices routinely topped out between 110 and 120. Little relief occurred at night, as overnight lows remained in the 70s. Most of the counties across western Wisconsin opened cooling centers. In 2001, the high temperature hit 90 degrees or higher for 9 consecutive days from July 31 to August 10. High humidity pushed the heat indices to 105-115. These dangerous levels lead to two deaths, although outside of Adams County.

Drought / Extreme Heat Vulnerability Assessment:

Droughts can have a dramatic effect on Adams County. The County has about 116,000 acres of farmland or 26% of its land area dedicated to farming. With agriculture being a critical sector of the County's economy, droughts have disastrous effects. Even small droughts of limited duration can significantly reduce crop growth and yields, adversely affecting farm income. More substantial events can decimate croplands and result in total loss, hurting the local economy.

There are a number of high capacity wells in the County, mostly for crop irrigation. Irrigation can withdraw significant amounts of groundwater. The Central Wisconsin

Groundwater Data Center reports that 95 percent of all groundwater withdrawal was used for irrigation in Adams County.

Irrigation can draw water that otherwise would naturally go to aquifers or surface waters. Drought can exacerbate the problem when high withdrawal rates versus little precipitation deplete waterbodies and aquifer supplies, therefore decreasing drinking water supplies, drying streams, and hindering aquatic and terrestrial wildlife. During severe droughts, some wells - mainly private wells - will go dry.

Another significant area of impact from drought includes the tourism sector of the economy. As lake levels go down, there is less tourism seen in the county. Recent drought conditions have left lake levels down and many boat launches cannot be used.

Droughts can trigger other natural and man-made hazards as well. They greatly increase the risk of forest fires and wildfires because of extreme dryness. In addition, the loss of vegetation in the absence of sufficient water can result in flooding, even from average rainfall, following drought conditions.

The following is a list of things that may be adversely affected by a drought. Much of these community assets can be referenced in Part II.

- Infrastructure – municipal water supplies
- Surface water – groundwater reserves, recreation, and wildlife
- Forests
- Agricultural - crops, livestock

The areas most susceptible to drought conditions would be agricultural towns. Agricultural land is scattered throughout the County, but largely in the Towns of Colburn, Easton, Jackson, Leola, Lincoln, Monroe, New Chester, New Haven, Richfield, Springville, and Strongs Prairie. In the mitigation survey for this Plan, the Town of Leola identified drought as a top vulnerability concern due to the increased risk of wildfire in heavily wooded areas.

According to the Wisconsin Emergency Management, excessive heat has become the most deadly hazard in Wisconsin in recent times. Extreme heat can happen anywhere within Adams County affecting everyone, however the elderly and young are the ones with the highest risk of getting heat related injuries, which can lead to death. Ways to prevent injuries include wearing light-colored clothing, drinking plenty of water, slowing down, and not staying in the sun for too long.

Future Probability and Potential Dollar Losses – Drought/Extreme Heat:

Based on the historic data presented here (frequency of past events), Adams County can expect droughty conditions every five years on average which is a probability of 0.2 or a 20 percent chance in a given year. Significant severe drought is somewhat less common, affecting Wisconsin once about every 15 years.

Drought is another hazard that lacks good loss figures at the county level. However, a look at aggregate data for two major droughts can give some indication of potential impact. The two major droughts in Wisconsin resulted in losses of \$9.6 million (1976-77) to \$18 million (1987-88) per county on average.

Normally, central Wisconsin is known for its cold winters, however, extreme heat waves will affect Adams County in the future. Adams County can expect a heat wave once every 3.3 years or a 33 percent chance in a given year based on the historic data presented.

Weather variability can be expected to lead to rising average annual temperatures. The increased heat will fuel more extreme weather of all types, including excessive heat which is already one of the deadliest hazards in Wisconsin. Drought conditions will become more frequent and persistent.

HAZARD ANALYSIS: SEVERE THUNDERSTORM / HIGH WIND / LIGHTNING / HAIL

Background on Severe Thunderstorm Hazard:

The National Weather Service definition of a severe thunderstorm is a thunderstorm event that produces any of the following: downbursts with winds of 58 miles per hour or greater (often with gusts of 74 miles per hour or greater), hail 1 inch (recently increased from $\frac{3}{4}$ inch) in diameter or greater or a tornado. Strong winds, hail, and lightning will be addressed in this section, however tornados will be referenced as a separate hazard.

Lightning results from discharge of energy between positive and negative areas separated by rising and falling air within a thunderstorm. This discharge heats the surrounding air to 50,000 degrees. Hail results as the warm rising air cools, forming ice crystals which are held by the updrafts until accumulating enough weight to fall. The hail size depends on strength of the updrafts keeping it up.

Thunderstorms frequency is measured in terms of the incidence of thunderstorm days or days on which thunderstorms are observed. Wisconsin averages between 30 and 50 thunderstorm days per year depending on location. A given county may experience ten or more thunderstorm days per year. The southwestern area of the state normally has more thunderstorms than the rest of the state.

History of Severe Thunderstorms in Adams County:

The NCDC has reported 32 severe storm events for Adams County between 2015 and 2024. These storms typically contain some form of heavy rain, strong winds, and lightning. About 13 significant hail events, typically related to a severe thunderstorm, were listed during this time period. There were also two notable lightning incidents identified.

The most recent event, during the study period, occurred on July 13, 2024, when during the afternoon and evening hours, storms of various modes moved across portions of western Wisconsin producing both large hail and damaging wind gusts. As storms progressed eastward, they developed into a line and continued to produce wind damage as they moved into central Wisconsin. Numerous trees were reported down in the Lake Arrowhead and Lake Sherwood subdivisions, and about \$15,000 in crop damage was noted by the NCDC.

On July 28, 2023, areas of severe storms from Minnesota and Iowa continued to intensify as they progressed into central Wisconsin during the early evening hours with widespread damaging wind gusts and hail. Damage reports from Adams county included fallen mature trees and power outages in Town of Monroe, multiple fallen trees in Town of Strongs Prairie along State Highway 21, and large tree limbs down in Town of Dell Prairie. Damage estimates were \$145,000 in property damage and \$8,000 in crop damage.

Severe storms moved across western Wisconsin on August 28, 2018. These storms produced damaging winds, large hail and heavy rain. This rainfall aggravated ongoing flooding and caused some new flooding to occur. Thousands of trees were blown down or snapped across southern Adams County in a 3 to 4 mile wide area that started just south of the State Highways 13 and 82 intersection and continued east across Springville and Jackson to the Marquette County line east of Jordan Lake. Houses were damaged by trees that landed on them and boats were dislodged from docks and floated out into Jordan Lake. In Adams County, the only hail reported was quarter-sized south of Brooks. Because of the flooding, the Governor declared a state of emergency for the entire state. A federal disaster declaration was also made for Adams, Crawford, Juneau, La Crosse, Monroe, Richland and Vernon counties. Damage estimates exceeded \$6 million.

On July 6, 2017, severe thunderstorms with very large hail moved across portions of western Wisconsin during the late afternoon and evening. Hail ranged in size up to 3.5 inches in diameter for the event. Quarter sized hail generally fell across Adams County, however, hail reached half-dollar size in the Big Flats area and caused around \$1.5 million in crop damages. Power poles and trees were blown down near Brooks.

Thunderstorms developed during the afternoon of June 15th, 2016 ahead of a cold front. As these storms moved across central Wisconsin, they dropped large hail and produced some damaging winds. The largest hail size reported was egg sized south of Big Flats. An estimated 70 mph wind gust was reported near Monroe Center which blew down several trees and damaged homes. Several trees were blown down near Petenwell Lake. Power lines were also taken down by the storm. NCDC damage estimate was \$25,000.



Wind Damage - Com. Tower

On September 2, 2011, severe thunderstorms produced damaging winds during the morning hours across portions of southwest and central Wisconsin. Numerous trees and power lines were down from La Crosse eastward to Adams County. Over 10,000 residents lost power and schools were either delayed or closed in these areas. Trees and power lines were blown down across portions of Adams County blocking roadways and falling on top of homes and cars. Several six inch diameter trees were blown down near Castle Rock Park. Four miles north of Friendship, a tree fell on a vehicle on State Highway 21 at the entrance of Roche-A-Cri State Park. The Town of Preston was hit the hardest. NCDRC damage estimate was \$42,000.

On October 26, 2010, a low pressure system deepened over northern Minnesota and set the Wisconsin state record for the lowest recorded barometric pressure. This system was responsible for high winds across portions of southwest and central Wisconsin in the morning hours of October 26th and the daytime hours of the 27th. Several trees were blown down across the county, including the areas around Dellwood, County Highway Z, and Arkdale. Some sporadic fires were started from trees falling onto power lines causing power outages. Sporadic damage to roofs and buildings also occurred. A few vehicle collisions also occurred with downed trees. Two pine trees, nearly seventy feet tall, blew down in Friendship. One of the pine trees landed on a parked pick-up truck partially crushing the cab.

The most recent hail incident occurred on May 6, 2024, when scattered storms produced large hail and heavy rainfall across portions of western Wisconsin. Hail of $\frac{3}{4}$ inch diameter was reported near Petenwell Lake. Damage estimate for Adams County was \$28,000 in crop damage.

The most notable hail incident during the study period was the July 6, 2017 storm, described above, which resulted in hail up to about 1.25 inches in Adams County and crop damages attributed to the hail of around \$1.5 million.

On September 20, 2017 a line of thunderstorms developed across portions of western and central Wisconsin. Some of these storms produced hail up to golf ball sized (1.5 inch) near the south end of Lake Petenwell in Adams County. In June of 2016, egg-sized (2 inch) hail fell in Big Flats, see above.

On June 28, 2019 thunderstorms rolled across western Wisconsin during the early morning hours. Lightning from one of the storms struck a parked boat near Lake Camelot east of Rome and the resulting fire destroyed the boat and damaged some trees. Damage estimate was \$10,000.

A complex of thunderstorms developed during the evening hours of July 12, 2015 over Minnesota. As these storms move southeast during the early morning hours of the 13th, they strengthened over central Wisconsin and started producing

damaging winds up to 62 mph which blew down trees in Arkdale and Petenwell County Park. A house located near Lake Camelot sustained significant fire and water damage from a fire started by a lightning strike. The lightning strike also damaged the phone lines of a neighboring house. NCDRC damage estimate was \$20,000.

Severe Thunderstorm Vulnerability Assessment:

The National Weather Service can forecast and track a line of thunderstorms that may be likely to produce severe high winds, hail, and lightning but where these related hazards form or touch down and how powerful they might be, remains unpredictable. The distribution of thunderstorms and related hazard events have been widely scattered throughout the county.

Many thunderstorm events (without tornados) have caused substantial property and infrastructure damage and have the potential to cause future damage. In order to assess the vulnerability of the Adams County area to thunderstorms and related storm hazards, a review of the past events indicate significant impacts to:

- Infrastructure – hospitals, schools, street signs, police and fire departments
- Utilities - electric lines/poles/transformers, telephone lines, radio communication
- Transportation – debris clean-up
- Residential - mobile homes, garages, trees and limbs, siding, windows
- Businesses – signs, windows, siding, billboards
- Agricultural - buildings, crops, livestock
- Vehicles – campers, boats, windshields, body, paint

Based on a review of the historical patterns of thunderstorms associated with high wind, hail, or lightning, there are no specific municipalities that have unusual risks. The events are relatively uniform and a countywide concern. However, during the City/Village Planning Meeting for this Plan Update, both the City of Adams and the Village of Friendship identified severe thunderstorm winds (high straight-line winds) as a major vulnerability concern due to the potential for trees & power lines down and resulting roads blocked & power outage. Mitigation survey results for this Plan show that the Towns of Adam, Big Flats, Dell Prairie, Jackson, Leola, and Quincy have the effects of high winds as a top vulnerability concern, while the Towns of Monroe and New Haven indicated severe thunderstorms in general. Town of Leola also indicated hail as a concern (crop & public/private property damage) as well as lightning (cause of past wildfires).

Future Probability and Potential Dollar Losses - Severe Thunderstorms:

Based on historical frequency, Adams County can expect 3.2 thunderstorm events per year on average. In other words, the probability is 1.0 or a 100% chance of multiple storms in a given year. The probability of a thunderstorm with damaging hail in Adams County is also at 1.0 or 100% chance with about 1.3 incidents in a given year. For notable lightning events there is about a 20% chance in a year.

According to the NCDC data, historic thunderstorm events with associated high wind and reported damages ranged from \$1,000 to \$6 million in property damage and \$15,000 in reported crop damage with an overall average of about \$202,500 per incident. There were no reported property damage figures for historic thunderstorm events with associated hail, however reported crop damage ranged from \$28,000 to \$1.2 million with an overall average of about \$112,000 per incident. Historic thunderstorm events with associated lightning that reported property damage averaged \$15,000. Losses in Adams County associated with severe thunderstorms could approach \$8 million the next ten-year period.

Weather variability can be expected to lead to more frequent, higher intensity severe thunderstorms and resultant high winds, hail and lightning. This will affect more people over a wider area of the County, and the resulting damage will be higher.

HAZARD ANALYSIS: HAZARDOUS MATERIALS INCIDENTS

Background on Hazardous Materials Incidents Hazard:

A hazardous materials incident occurs with the uncontrolled release or threatened release of hazardous materials from a fixed site or during transport that may impact public health and safety and/or the environment.

Under the Emergency Planning and Community Right to Know Act (EPCRA), a hazardous material is defined as any chemical that is a physical hazard or health hazard [defined at 29 CFR 1910.1200(c)] for which the Occupational Health and Safety Administration (OSHA) requires a facility to maintain a Material Safety Data Sheet (MSDS). Under EPCRA there is no specific list of hazardous materials. An extremely hazardous substance (EHS) is defined as one of 356 substances on the United States Environmental Protection Agency list of extremely hazardous substances, identified at 40 CFR Part 355.

Wisconsin Emergency Management / State Emergency Response Commission (WEM/SERC) is responsible for implementing EPCRA, also known as the Superfund Amendments and Reauthorization Act (SARA) of 1986, at the state and local levels. WEM/SERC has designated that each of the 72 counties in Wisconsin have Local Emergency Planning Committees (LEPCs) that are set up in accordance with the federal legislation and who are responsible for implementation of EPCRA at the county level. WEM/SERC further designated that the county emergency management director shall be a member of the LEPC to ensure continuity and coordination of emergency response planning.

WEM/SERC is also responsible for administering the Emergency Planning Grant that provides funding on a formula basis to county LEPCs for local planning and program administration and the Equipment Grant which provides matching funding for computer equipment and hazardous materials response equipment.

Each Wisconsin county is designated as an emergency planning district and has a Local Emergency Planning Committee (LEPC) to administer the local program. LEPC membership includes local elected officials, members of emergency response agencies (fire, law enforcement, EMS, health, etc.), and representatives for transportation, public works, the media, community groups, environmental groups, and owners/operators of facilities.

LEPCs are responsible for receiving and maintaining filings of facility submissions. They also maintain a county-wide emergency response plan, develop and maintain facilities' off-site emergency response plans and the county's hazard analysis for both fixed facilities and transportation. LEPCs assess the county hazmat response resources and equipment, respond to public requests for information under "community right-to-know" law, and conduct hazmat training and exercises. Wisconsin has annual exercise requirements and the LEPC attempts to involve facilities, response agencies, and other local officials in the exercises.

The county-wide emergency response plan includes: the county hazard analysis summary, a list of facilities storing hazardous materials, identification of transportation routes for extremely hazardous substances (EHS), procedures for notification or releases, response to releases, procedures for sheltering and evacuation, and a schedule for training and exercising.

WEM/SERC provide oversight of the State Hazardous Materials Response Teams under Wis. Stat. 323.13 (2) (a), which states "the division shall contract with no more than 9 regional emergency response teams". Each regional emergency response team shall assist in the emergency response to level A releases in a region of this state designated by the division. The division shall contract with at least one regional emergency response team in each area designated. Currently WEM/SERC has designated six regional hazmat teams: Northwest, Northeast, East Central, Southeast, Southwest and West Central.

Several counties have Hazardous Materials Response Teams. These county teams respond to chemical incidents that exceed the capabilities of local fire departments but do not require the specialized training or equipment of the Regional teams. County teams may also provide assistance to surrounding counties. Adams County does not have its own team but contracts with the Juneau County Team for this coverage.



HazMat Team Training

History of Hazardous Materials Incidents in Adams County:

There have not been any major reported hazardous material problems involving fixed facilities, roadways, railways, or pipelines. Hazardous materials incidents have occurred, but on a relatively small scale. They still, however, can cause

considerable property damage and can have a high risk in terms of loss of human life or injury. The WDNR Bureau for Remediation and Redevelopment Tracking System or BRRTS maintains a listing of contaminated properties online. The BRRTS database identifies 46 environmental spills in Adams County between 2015 and 2024. All of these spill sites have been cleaned and closed at this time.

Vulnerability Assessment:

In 2023, Adams County participated in the Southwest Wisconsin Regional Commodity Flow Study for hazardous materials moving through the county. That Study inventoried the risk factors that make hazardous materials incidents a keen concern in Adams County, which are reviewed below:

Fixed Facilities

The Commodity Flow Study identified 8 facilities within the County meeting reporting the requirements for one or more of the most common extremely hazardous substances. These are sites that have hazardous substances present at any one time in amounts equal to or exceeding the chemical-specific threshold planning quantity (TPQ). These substances include sulfuric acid, ammonia, paraquat dichloride and terbufos.

Highway

Trucks carry the bulk of hazardous materials to and through the County. Regular shipments of gasoline, propane, acid and other substances are delivered across Wisconsin. Every roadway in the County is a potential route for hazardous material transport, but major transportation routes are State Highways 13, 21, and 82 (see Map 5).

The 2023 study did not have a traffic monitoring location within Adams County, however, the previous 2013 Commodity Flow Study monitored traffic at key locations within Adams and counted trucks with hazardous warning placards. The locations of the intersections and the total number of trucks with hazardous materials are seen in Table 19.

Table 19 Number of Trucks Carrying Hazardous Materials at Intersections in County	
Intersection	# of Trucks
State Hwys. 13 & 21	34
State Hwy. 13 & UP RR Intersection	7
State Hwys. 13 & 82	27
<i>Source: Richland & Adams Co. Commodity Flow Study, 2013.</i>	

Railroad

The Union Pacific Railroad – another mode for the transportation of hazardous material, has about 24 miles of track to Adams County (see Map 5) with a rail yard located on the south side of the City of Adams. Although trucks transport most of the hazardous materials in the state and the U.S., rail can carry significantly larger loads of hazardous materials. The 2013 Commodity Flow Study identified the hazardous materials being transported by rail through Adams County. Table 20 lists the top five with percent of total.

Table 20 Top Hazardous Commodities Carried on Rail In Adams County by %	
Material	% of total
Molten Sulfur	33.41
Elevated Temp. Liquid NOS	19.40
Sulfuric Acid	13.66
Hydrochloric Acid	12.55
Ferric Chloride Solution	3.48
<i>Source: Richland & Adams Co. Commodity Flow Study, 2013.</i>	

That study cited 4,100 rail car loads of hazardous materials moved through the County in 2012 with the average number of hazardous cars at about 11 per day. Methanol was identified as another hazardous commodity moving by train through the County. Methanol is toxic and highly flammable.

Pipeline

Enbridge Pipeline Company provides pipeline to move petroleum through the County (see Map 6). It runs 31 miles from the northern part of the county to the eastern part. Approximately 1.5 million barrels per day move through this pipeline. There had not been a major incident with the pipeline within Adams County, but the DNR database shows some significant spills such as in July 2012 when a crack in the pipeline allowed about 1,700 barrels of crude oil to spill in the Town of Lincoln. Total property damage was listed at \$10.5 million. An example of a major incident is the leak of 176,000 gallons of crude oil in Rusk County in 2007. Groundwater contamination was the primary consequence of that spill.

There are also natural gas sub-transmission lines entering the County from the east.

A hazardous materials incident can have far reaching impacts, however, those communities which are traversed by major highways, rail or pipeline are susceptible to a higher risk, refer to Maps 5 and 6. In the results from the mitigation planning survey for this plan update, the Town of Richfield identified hazardous

materials incidents on major highways, such as State Highway 21, as a major vulnerability issue.

Future Probability & Potential Dollar Loss – Hazardous Materials Incidents:

Based on the historic data presented here (frequency of past events), Adams County can expect about 4.6 minor hazardous material releases each year on average, which is a probability of 1.0 or a 100 percent chance in a given year.

There is insufficient data to determine the probability of a major incident. However, with the number of verified trucks carrying hazardous materials, a major industrial railway and a petroleum pipeline moving through the County, the chances appear to be significant for a catastrophic hazardous materials incident occurring at some point in Adams County.

As with the probability, there is limited historic data to base an estimate of potential dollar losses from HazMat incidents. However, based on occurrences statewide, damages range from \$100 to \$10.5 million per incident. The higher end of the range is not impossible in Adams County.

The effect of weather variability on hazardous materials incidents is unknown at this time.

HAZARD ANALYSIS: EPIDEMIC / PANDEMIC**Background On Epidemic / Pandemic Hazard**

Communicable diseases, sometimes called infectious diseases, are illnesses caused by organisms such as bacteria, viruses, fungi and parasites. Sometimes the illness is not due to the organism itself, but rather a toxin that the organism produces after it has been introduced into a human host. Communicable diseases may be transmitted (spread) either by: one infected person to another, from an animal to a human, or from some inanimate object (doorknobs, table tops, etc.) to an individual. Some communicable diseases can be spread in more than one way.

Pandemic Influenza is a global disease outbreak. An outbreak occurs when a new influenza virus emerges for which people have little or no immunity, and for which there is no vaccine. The disease spreads easily from person to person, causes serious illness or death, and can sweep across the county and around the world in a very short time frame.

History of Epidemic / Pandemic in Adams County

COVID-19 is a disease caused by a new virus strain that began spreading in people in December 2019. On March 11, 2020, the COVID-19 outbreak was characterized as a pandemic by the World Health Organization. Then on April 4, 2020, a Presidential Disaster Declaration was signed for the pandemic in the United States. Over the next three years, the pandemic was dynamic and constantly changing with cases surging in waves coinciding with new variants of

the virus. However, On May 11, 2023, the federal government ended the Public Health Emergency in the U.S. as much of the population had returned to life as normal. A low level of COVID-19 virus activity remained in the community, and there were still concerns about surges or new variants. As of the end of the public health emergency, the U.S. Center for Disease Control has reported that there have been approximately 103,910,034 cases of COVID-19 in the United States alone with a death toll now exceeding 1 million at 1,135,343.

Virus pandemics are naturally occurring events. Global outbreaks have occurred four times in the last century, in 1918, 1957, 1968 and 2009. The greatest loss occurred in 1918 when the Spanish Flu (H1N1) killed an estimated 20-40 million people worldwide between 1918 and 1919. The mortality rate in the United States was 550,000. The Asian Flu (H2N2) occurred from 1957 to 1958 with a mortality rate of 70,000 in the United States. The Hong Kong Flu (H3N2) occurred from 1968 to 1969 with a mortality rate of 34,000 in the United States.

2009 saw the rise of a new variant of the H1N1 virus, popularly referred to as the Swine Flu. Lab confirmed deaths from Swine Flu total about 14,000 worldwide with 3,400 deaths in the United States. However, most experts now agree that the actual death toll attributable to the 2009 Swine Flu is 10 to 15 times the confirmed number. Spread of H1N1 flu occurs in the same way that seasonal flu spreads. Flu viruses are spread mainly from person to person through close range coughing or sneezing by people with influenza. As a result of preparation and mitigation strategies such as vaccinations and public education, the threat of a full blown H1N1 pandemic in the U.S. has receded. The possibility for a pandemic, though, still exists.

A previous pandemic flu threat that still looms is the avian flu. Birds can contract avian flu and pass it along to humans. Some strains of the avian flu are more virulent than others. Public health experts continue to be alert to the risk of a possible re-emergence of an epidemic of avian flu among people primarily in Asia. In 2003, people who had been in very close contact with infected birds (for example, people who lived with chickens in their houses or worked with them) contracted a virulent form of avian flu, and there were at least three human fatalities. More recently, since 2020 avian flu has been infecting thousands of wild birds and is causing outbreaks in domestic poultry populations which have spread to some dairy cattle herds. This has led to one human death in the U.S. in 2024. Thus far, the avian flu virus has not mutated to demonstrate easy transmission from person to person. However, were the virus to mutate in a highly virulent form and become easily transmissible from person to person, there would be significant potential for a pandemic that could disrupt all aspects of society and severely affect the economy.

The Adams County Health Department tracks communicable disease through a channel of communications at the local, state and regional levels between public health, private physicians, hospitals, and labs. This communication channel allows

for prompt investigation of possible outbreaks and unusual situations, and to implement control measures to minimize further transmission of disease to others.

In Adams County, there have been 5,880 total cases of COVID -19 resulting in 70 deaths as of the end of the public health emergency in May of 2023. For Wisconsin, total cases reached 2,014,524 with 16,485 deaths. By comparison, there were 13,511 confirmed or probable cases of the 2009 H1N1 from April 2009 to March 2010 with 1,320 hospitalized and 55 deaths for Wisconsin.

The next epidemic / pandemic situation may not be a "flu" but could be a developing "super bug" such as antibiotic resistant MRSA or some as yet unknown bacteria or virus.

Epidemic / Pandemic Vulnerability Assessment

Most communicable diseases are dealt with through traditional health department activities. The complexity and magnitude of a Pandemic Influenza outbreak would tax the normal capabilities of the medical service community and the Emergency Management Department would assist in all activities surrounding an event of this severity.

The possibility of a communicable disease epidemic or pandemic outbreak is equal across the County, but the ability to predict where and when an event will occur is very difficult. As COVID-19 has demonstrated, even an isolated little county in central Wisconsin cannot avoid the impacts of a global pandemic. Although Langlade County's overall case rate was slightly higher than the state average (35,385 per 100,000 versus 34,599), the COVID death rate in the County was double the state rate (568 per 100,000 versus 283).

Future Probability and Potential Dollar Losses – Epidemic / Pandemic

Post COVID-19 the future probability of a communicable disease / pandemic outbreak is difficult to determine. The probability would appear low, but the threat exists, and the impact of a widespread event is very severe as displayed by the effects of COVID-19. Significant economic disruption can occur due to loss of employee work time and costs of treating or preventing spread of the pathogen.

The probability of an outbreak might be calculated across a hundred year period. Based on the four major events identified here, the likelihood of an event occurring in any given year would be 4%.

Weather variability can influence epidemic/pandemic origins by altering ecosystems and influencing disease vectors. Rising temperatures and altered precipitation patterns can expand the geographic range of disease-carrying insects like mosquitoes, bringing diseases such as dengue and Zika to new regions. This environmental shift also forces animal populations to migrate, increasing their contact with humans and creating new opportunities for pathogen spillover.

INTRODUCTION

Hazard mitigation is any action taken to reduce or eliminate the long-term risk to human life and property damage from natural hazards. This chapter describes the mitigation goals and actions to be taken by Adams County and the local units of government within the county for each of the hazards identified in Part III – Risk Assessment. The intention is to reduce or avoid long-term vulnerability to the identified hazards.

Part IV of the Adams County All Hazards Mitigation Plan Update will discuss the following factors in establishing the multi-jurisdictional mitigation strategies:

- Benchmark Progress of Previous Plan 2020-2025
- Review of Mitigation Goals
- Prioritize Identified Mitigation Strategies
- Establish Mitigation Action Plan

PROGRESS REPORT 2020 - 2025

Table 21 identifies the completed, deleted or deferred mitigation actions from the previous update in 2020. For each action recommendation, a brief status report is provided which describes the progress made on that measure. If an item remains unchanged, a description is provided as to why no action has been taken and whether that item is deferred to the new plan.

The table also provides the new status of each recommendation with regard to the updated plan alongside the previous timeframe target for comparison. Many of the recommendations are on-going efforts and are carried over as such in the updated action plan. Some have had significant progress or have been deferred, but are recommended for further action with new target date or on-going status. If the recommendation has been completed with no further specific action anticipated within the next five-year planning period, it is shown as "completed" and will not appear in the updated action plan. In some cases, an incomplete action is not selected for various reasons (noted) and is shown as deleted. In a few cases, related recommendations are combined as indicated.

This progress report serves as a benchmark for progress in achieving the multi-jurisdictional mitigation goals of Adams County and the local jurisdictions that participated in the Plan Update.

TABLE 21 BENCHMARK FOR PROGRESS 2020 - 2025 PLAN			
2020-2025 Plan Measure	Progress Report	Original Status	New Status
Continue to promote the increased use of National Oceanic and Atmospheric Administration (NOAA) weather radios.	Regularly promotes NOAA alert radios including special events. Supports Storm Spotter training.	On-going (1)	On-going (1)
Continue to maintain Emergency Management Dept link from existing County web site.	Website regularly maintained with hazard information.	On-going (2)	On-going (2)
Maintain Co. Emergency Response Zone Atlas - update, reprint and distribute.	Completed. DNR is handling these atlases and moving to a more modern tech based application at this time.	2024 (3)	Completed (-)
Develop county-wide evac & sheltering plans including public education component...	Part of ESF in emergency response plans, but more work is needed – recommendation has been expanded.	2021 (4)	2028 (4)
Work toward development of county-wide early warning systems...	Some progress - County continues using Nixle system and is developing other technologies.	On-going (5)	On-going (5)
Develop action plans and training for areawide cooperation and coordination during major incidents...	Some progress – Limited resources has been identified as a factor driving ongoing need to cooperate countywide.	On-going (6)	On-going (6)
Warning sirens – Both city and village should look to replace aging warning sirens.	Village to maintain its warning sirens. City currently not in favor of replacing sirens at this time.	2024 (7)	On-going (7)
Assist municipalities with review and update of local emergency response plans.	County EM assists municipalities with their plans each year as needed.	On-going (8)	On-going (8)
Backup Power – City of Adams install generator at firestation...	City has installed back up power generator for fire station.	2021 (9)	Completed (-)
Backup Power – Limited generator capacity in the County...Install at critical facilities.	Some generators have been added, but additional back up power needs have been identified.	2022 (10)	2030 (10)
Improve county-wide emergency communications – add new encrypted channel to back-up primary frequencies...	Determined to be cost prohibitive. County has been working on alternative strategies.	2023 (11)	Deleted (-)
Identify buildings that will provide protection to the public in the event of a tornado warning.	Limited progress to date. Tied to recommendations 4 and 14.	2020 (12)	2027 (13)
Identify and construct tornado shelters in areas where deficient, campgrounds and areas where housing lacks basements, etc.	Limited progress to date. Previous grant applications for this recommendation have been denied. Continues to be identified as a need.	On-going (13)	On-going (14)
Require and promote construction standards and techniques (tornado/wind).	Ongoing enforcement of standards.	On-going (14)	On-going (15)

TABLE 21 <i>Continued</i>			
2020 - 2025 Plan Measure	Progress Report	Original Status	New Status
Establish shelters in the Towns of Big Flats, Jackson, Leola, New Haven and Quincy.	No progress to date.	2024 (15)	2030 (16)
Encourage the development of snow fences.	A number have been installed around the County but more are needed.	On-going (16)	On-going (17)
Promote winter hazards awareness, including home and travel safety measures.	County does winter awareness as needed.	On-going (17)	On-going (18)
Continue to provide outreach efforts to homeowners on protecting homes and structures from wildfires.	Wis DNR and county do wildfire outreach but is on-going issue and more is needed.	On-going (18)	On-going (19)
Provide ample training for volunteer fire fighters for larger fires.	Regular training and exercises being conducted cooperatively by the DNR, Adams County & local municipal FDs.	On-going (19)	On-going (20)
Support establishment of Firewise Communities across the County...	DNR and county implementing Firewise across county, but expanding Firewise programming was identified as a need.	On-going (20)	On-going (21)
Develop Wildfire Protection Plans in high risk Towns.	DNR implements wildfire protection plans in County as needed.	2023 (20)	Completed (-)
Promote heat hazard awareness...	County does heat awareness as needed.	On-going (22)	On-going (23)
Encourage farmers that irrigate to use irrigation scheduling programs and drop/misting systems.	Limited progress to date. Combined into new recommendation regarding drought mitigation planning.	On-going (23)	Combined (24)
County should be prepared on how to inform farmers during times of drought.	Limited progress to date. Combined into new recommendation regarding drought mitigation planning.	On-going (24)	Combined (24)
Inform farmers on purchasing crop insurance.	Limited progress to date. Combined into new recommendation regarding drought mitigation planning.	On-going (25)	Combined (24)
Mitigate impacts of flooding through acquisition / demolition of homes in the floodplain when flood damaged.	No progress to date. Budgetary concerns. Would be grant dependent.	As Needed (26)	As Needed (26)
Continue development of Emergency Action Plans (EAP) for all large dams...	EAPs continue to be maintained and updated for a number of dams in the County.	On-going (27)	On-going (27)
Conduct comprehensive flood / hydrology study for Town of Big Flats...	Not identified as a project need.	TBA (28)	Deleted (-)
Improve ditching and culverts long town roads...to better manage water and control flooding.	Some progress across towns, but more needed identified.	On-going (29)	On-going (29)
Conduct drainage study for City of Adams...	No progress to date. Add village study need identified.	2022 (30)	2028 (30)

<i>TABLE 21 Continued</i>			
<i>2020 - 2025 Plan Measure</i>	<i>Progress Report</i>	<i>Original Status</i>	<i>New Status</i>
County/City/Village continued compliance in the NFIP.	On-going efforts of the County, City and Village.	On-going (31)	On-going (31)
Do public education and information regarding dam function and operations.	No progress to date. Not identified a project need.	On-going (32)	Deleted (-)
Promote the planting of windbreaks to protect farmsteads, buildings & open fields from high winds.	A number of plantings have been installed around the County, but additional needs identified.	On-going (33)	On-going (33)
Enforce local building codes to improve structures' ability to withstand greater wind velocities.	Ongoing regulation of new buildings and renovations through UDC.	On-going (34)	On-going (34)
Promote public awareness of proven lightning safety guidelines to reduce risk.	County EM has articles published in the local newspaper and posted information on the County website.	On-going (35)	On-going (35)
Implement recommendations within Hazardous Materials Commodity Flow Study...	Limited progress to date. New study with new recommendations.	On-going (36)	On-going (36)
Do preplanning and training exercise for local fire depts to deal w/ special situations: hospital O2 tanks, COOP anhydrous ammonia, etc.	LEPC and County EM has organized training and exercises. Continuous or recurring effort is needed to keep up with changing technology and personnel.	2023 (37)	On-going (37)

LOCAL HAZARD MITIGATION GOALS

The mitigation strategy is based on a set of goals to reduce or avoid long-term vulnerabilities to the hazards identified in the Risk Assessment. The goals were established by the original Planning Committee during the development of the initial Plan. The Plan Update Committee reviewed the goals and made minor revisions to represent the current conditions desired to strive for through the mitigation efforts of the County and municipalities.

The mitigation goals for reducing or avoiding the long-term vulnerability of Adams County are as follows:

- Prepare residents and visitors of Adams County for hazard events and protect from the effects of such events to the extent possible.
- Lessen the impact floods have on people, property, and the environment.
- Prevent the loss of life and reduce the risk of property damage in downstream areas that result from a dam failure.
- Reduce long-term vulnerabilities from high hazard dams that pose a significant risk to the public.
- Minimize the threat to human life and property damage caused by severe storms and associated high wind, hail and lightning.
- Protect the health, safety, and welfare of county residents and visitors, along with mitigating future loss of property from tornados.
- Create safety awareness in citizens and travelers of Adams County to protect them during and after winter storm events or periods of extreme cold.
- Improve countywide preparedness for dealing with extended drought.
- Create safety awareness in citizens of Adams County to help protect themselves during extreme heat events.
- Protect the safety and property of residents and visitors from forest and wildfires.
- Protect people and natural resources from adverse effects of hazardous material incidents.
- Improve countywide preparedness for handling and recovering from an epidemic or pandemic event.

PRIORITIZATION OF STRATEGIES

The Plan Update Committee considered a number of factors in identifying and ranking proposed mitigation strategies. The matrix, below, describes the factors incorporated into the prioritization process. The resulting priority of each strategy is shown in the strategy summary Table 22.

Prioritization Factors for Adams County Mitigation Strategies

<i>Strategy Prioritization Factor</i>	<i>Description of Factor Considerations</i>
Priority of Hazard Type	The ranking of hazard types, tornado, flooding, etc., accounts for threat to human safety and possible property damage and was carried over to groups of strategies by hazard type. Strategies believed to benefit multiple hazards (listed under "All Hazards") were valued higher.
Ease of Implementation	Strategies where existing staff and resources are adequate were valued higher than those where additional resources are necessary. Consideration was also given to strategies that meet other countywide goals or incorporated as part of another county project. Project timing was also a consideration as to when funding such as grant applications might be available and when various activities could be scheduled.
Perceived Cost versus Potential Benefit	Although a detailed cost-benefit analysis was deemed beyond the scope of this study, the Committee weighed the perceived costs of each strategy against the potential benefit anticipated. Proposals that seemed economically unfeasible were rejected.
Multi-jurisdictional Application	Strategies benefiting multiple jurisdictions were valued more than those pertaining to fewer jurisdictions.

Members of the Update Committee scored each strategy based on these prioritization factors and assigned a high, medium or low rating to reflect their relative level of priority for that strategy. A 3-point weighted scale was used to average the scores into the overall high, medium or low priority for the County or local units as shown in Table 22.

MITIGATION ACTION PLAN

The mitigation strategies are organized by hazard beginning with some overall strategies that apply to a number of different hazards and are listed under the category, “all hazards”. For each hazard, a goal was established as to what the County intends to achieve by implementing the specific action strategies and is based on the risk assessment findings. Each action strategy is then briefly described and followed by a discussion of the jurisdictions/agencies that will pursue the action including the proposed lead jurisdiction/agency.

Each section of this part is broken down as follows:

Goal:

Broad, long-term mitigation goals to reduce or avoid vulnerabilities to the identified hazard are stated.

Action:

Each action strategy proposed to aid in achieving the overall goal for the identified hazard is described. A given action strategy may be comprised of a number of related sub-actions.

Participating Jurisdictions:

The proposed lead agency or lead jurisdiction is identified along with a listing of the other agencies or jurisdictions that the recommended action applies to. This does not preclude other agencies or jurisdictions from participating in the action.

The chapter concludes with a summary of the recommended mitigation strategies including priority level, shown in Table 22. This Table also contains project cost estimates where available, existing resources (authority, policies, programs, etc.) and potential time frames.

Hazard: All Hazards

Goal:

Prepare residents and visitors of Adams County for hazard events and protect from the effects of such events to the extent possible.

Action 1:

The County will continue to promote the increased use of National Oceanic and Atmospheric Administration (NOAA) weather radios. NOAA Weather Radio (NWR) is a nationwide network of radio stations broadcasting continuous weather information direct from a nearby National Weather Service office. NWR broadcasts National Weather Service warnings, watches, forecasts and other hazard information 24 hours a day. NWR

is not only for storms, but also for other hazards as well, making it a single source for comprehensive weather and emergency information. NWR also broadcasts warning and post-event information for all types of hazards--both natural and environmental (such as chemical releases or dam failures).

Participating Jurisdictions for Action 1:

Lead agency will be Adams County Emergency Management. Jurisdictions participating in this action will include: Adams County, City of Adams, Village of Friendship, all Towns, and all School Districts.

Action 2:

The County will continue to add and update information on an Emergency Management Department link off their existing County web site. The web page should contain information describing the types of hazards and how to respond to a hazard threat. The site should also contain information on ordinances pertaining to hazards (e.g., floodplain zoning), locations of shelters, and links to other sites with useful information on related matters such as burning permits and weather conditions.

Participating Jurisdictions for Action 2:

Lead agency will be Adams County Emergency Management. The only directly participating jurisdiction will be Adams County.

Action 3:

Brush clearing and tree cutting along rights-of-way to reduce downing of powerlines, blocking of roadways, wildfire fuels and wildfires jumping roads. These are major concerns of towns such as Jackson, Leola and Quincy among others. These issues were identified by towns in their mitigation issues survey results.

Participating Jurisdictions for Action 3:

Lead agencies will be the Towns of Jackson, Leola and Quincy. Jurisdictions participating in this action will include Adams County, City of Adams, Village of Friendship and all Towns, as needed.

Action 4:

Shelter and evacuation related concerns were again identified during the development of this All-Hazards Plan Update. To address these concerns, the County should work to develop a countywide disaster evacuation and shelter plan. One issue with shelters may stem from lack of knowledge regarding existence of shelters and procedures for activation / use. Public informational efforts are recommended.

Plans should include identification of available shelter options, procedures for activation & use, trailer park sheltering, event sheltering, power (see Action 10), heating/cooling & transportation needs and maintenance. This would also include public information and awareness and inter-agency coordination components including communication protocol to aid in incident management and dissemination of timely sheltering information to the

public. Sheltering and evacuation are an appendix (annex) component of the County's Emergency Operations Plan (EOP) as critical public health tasks.

Shelters vary by type and function. The sheltering plan should identify available shelters by function and determine where coverage is deficient. The purpose of a shelter is to protect people during a disaster event, to accommodate displaced people in the aftermath, or both. Existing facilities (schools, churches, public buildings, etc.) should be evaluated for suitability or locations determined for new structures. Mobile home parks, campgrounds and county parks within the county lack shelters and are a particular concern. Sheltering (and evacuation) needs for an incident occurring during a festival / event that attracts significant numbers of visitors must also be considered. Housing an influx of relief workers was also identified as an issue as area accommodations may be out of commission or quickly absorbed by others seeking refuge.

A community building (or buildings) often looked to is the local school. However, it is important to remember that school buildings can sustain significant damage or be destroyed as well. Officials should evaluate the most appropriate use for school buildings to meet the community's sheltering needs. Agreements would have to be put in place between the school district and the community / disaster relief agency. Schools often have a variety of useful resources that should be evaluated when planning for shelters, such as large prep kitchens and cold storage facilities. A recent trend in Wisconsin involves collaboration between local municipalities and school districts to supplement a school construction project with FEMA hazard mitigation grant funds to build part of the facility, such as the gymnasium, into a community tornado shelter.

It is also important to evaluate shelters for suitability for various types of hazards. For example, a shelter located within a floodplain may not be the best place to send people during a storm that could result in flooding. Adequate heat (and back-up source of energy to run it) is an important consideration when seeking to shelter people during a winter weather power outage. Cooling capability may be needed in an extreme heat event. Local sponsors should be identified to help maintain shelters and ensure they are open in times of need. Transportation options should also be considered especially for the elderly and those with disabilities. The transportation and subsequent shelter of persons with special medical or other needs are critical factors to address. Many patients will need to be moved in a timely fashion due to medical issues. Nursing homes should be prepared in advance with transportation and shelter options to handle their residents. Some nursing homes or assisted living facilities may not know what to do with their residents if their building is extensively damaged. In Village of Friendship, the Village Hall serves as a shelter for the nearby hospital and nursing home.

Individual local communities are responsible for their sheltering needs. The County can help plan and support sheltering functions, but local emergency operations plans should account for sheltering. A hardened storm shelter may not be feasible in every community, but communities are encouraged to develop a central location where residents can get information, assistance and some temporary relief in an emergency situation. This "relief center" concept could be implemented through necessary improvements to townhalls, fire

stations, community centers or other public facilities, including back-up power generators installed to provide residents power for charging as well as heating/cooling and water. These sites would serve as gathering points for resources and information.

Participating Jurisdictions for Action 4:

Lead agencies will be Adams County Emergency Management in conjunction with County Health. Jurisdictions participating in this action will include Adams County, City of Adams, Village of Friendship, all Towns and all School Districts. The American Red Cross Chapter should also be consulted.

Action 5:

Continue development of county-wide early warning and communication systems, including ATT First Net, Emergency Alert System (EAS) capabilities and expanded use of emerging technologies such as IPAWS. Currently, NOAA weather radio is the primary trigger for activating the EAS on commercial radio, television and cable systems. Local access to these types of warning systems could facilitate more timely notification of a hazard situation as well as the ability to tailor important information or instructions for the specific area.

The County should also work to expand use of the Nixle System. This is a subscriber based system that can be used to notify particular areas of the County via internet, email and/or cell phone text. Residents register and choose the type of information to receive such as: public safety notifications, weather alerts, school notifications, community news, etc. The service allows the users to determine the level of information they find important. The County could look at ways to better promote use of the Nixle system.

To be most effective, there needs to be a public awareness element to familiarize the citizenry with the systems being used and how they work.

Participating Jurisdictions for Action 5:

Lead agency will be Adams County Emergency Management. Jurisdictions participating in this action will include: Adams County, City of Adams, Village of Friendship, all Towns and all School Districts.

Action 6:

Develop action plans and training for areawide cooperation and coordination during major incidents. WEM has funding available for training and exercises. All communities, departments, agencies, etc. across the county should train and work together to overcome the limitations imposed by their individual resource constraints. Regular, on-going training is needed to address staffing turnover issues.

Work with energy companies, local government officials, and emergency responders to develop training on how the different energy systems function, what responders need to know and how the energy company can help in an emergency situation through early notification.

Address environmental health issues, such as: volunteer and responder safety issues (i.e. tetanus) and education on well testing follow-up, food safety in a LTPO situation, etc. Work with Health Department on the mass fatality management plan.

Address vulnerable populations particularly regarding communications and/or power outages. Identify and preplan for problem areas. For example, area power companies have information on customers in situations requiring power (ie O₂) which they can combine with areas they know are without power during an outage. County and local government officials/emergency responders should develop relationships with power company representatives to streamline access to this type of information when needed.

In Adams County there are many people living in remote areas and/or have limited communications. The County Aging Unit could assist by helping to educate the elderly and disabled in these situations with information they need to help themselves. The County should coordinate with organizations like the Salvation Army and/or Red Cross for their assistance with door to door sweeps during an event. Evacuation is another multi-faceted issue that needs preplanning, training, coordination and cooperation.

Other issues identified during the planning process include: access in rural areas, space for staging, fuel supplies for emergency vehicles during long term power outage or other extreme situation; individual municipalities within the County do not have adequate manpower and equipment to effectively deal with extreme or large scale events; and public awareness.

Participating Jurisdictions for Action 6:

Lead agency will be Adams County Emergency Management. Jurisdictions participating in this action will include: Adams County, City of Adams, Village of Friendship and all Towns.

Action 7:

Village of Friendship should continue to maintain its warning sirens, and plan for long-term replacement as needed.

Brooks and Grand Marsh also have warning sirens, so this recommendation would also apply to them as needed.

Participating Jurisdictions for Action 7:

Lead agency will be Village of Friendship. Participating jurisdictions will include the Village, Brooks and Grand Marsh.

Action 8:

Municipalities should review and update their local emergency response plans. The County Emergency Management Director provides assistance to local units of government in updating local emergency plans.

Each Town, as well as the City and Village, should develop, or update, its local emergency operations plan (EOP). An EOP helps the community determine the roles to be played by each emergency service, how communication channels will be utilized, lines of authority, and strategies or “game plans” for responding to different kinds of hazard situations. Wisconsin Emergency Management has plan templates that towns can use to fill in the blanks and begin formulating their own local EOP.

EOP’s should conform to the State and National Response Plans, which are organized by emergency support functions and incorporate the provisions of the National Incident Management System (NIMS). The NIMS is a comprehensive system that incorporates operations through the use of the Incident Command System (ICS) and application of standardized procedures and preparedness measures. It promotes development of cross-jurisdictional, statewide and interstate regional mechanisms for coordinating response and obtaining assistance during a large-scale or complex emergency incident.

Participating Jurisdictions for Action 8:

Lead agency will be Adams County Emergency Management. Jurisdictions participating in this action will include: Adams County, the City of Adams, Village of Friendship, and all Towns.

Action 9:

Install detection system at rail crossing in City of Adams to alert dispatch when blocked. This issue was identified by the City during the mitigation planning meeting for this plan.

Rail blockage alert systems use cameras, sensors and predictive analytics such as TRAINFO and Noema.tech's Railroad Crossing Monitoring System to provide real-time data on blocked crossings to 911 dispatchers. These systems notify dispatchers of train stoppages, allowing them to reroute emergency vehicles and reduce response times.

Key components include:

- Real-Time Monitoring: Systems use cameras and sensors to track train speed, location, and stoppage, often integrated into computer-aided display systems.
- Predictive Analytics: Technology can predict when a crossing will be blocked, allowing for proactive, rather than reactive, routing.
- Dispatcher Alerts: Systems provide live maps showing which crossings are clear or blocked, along with estimated wait times.
- Public/First Responder Alerts: Data can be pushed to responders and the general public via mobile applications (apps).
- Emergency Notification System (ENS): A mandatory Federal Railroad Administration sign at each grade crossing enables rapid, location-specific communication with railway dispatchers.

These systems reduce delays for emergency services by helping emergency vehicles avoid, or find alternatives to, blocked intersections.

Participating Jurisdictions for Action 9:

Lead agency will be the City of Adams. City of Adams will be the only directly participating jurisdiction. This recommendation could be adopted by any community with a rail crossing in its jurisdiction.

Action 10:

Install backup generators and/or wiring for portable connection to maintain operations at critical community facilities during power outage. Shelters and relief centers, EOC locations, town halls, city and village halls, police and fire stations, etc. should be considered for backup generators. Town halls often become a gathering point for response personnel and the public in an emergency situation, but many do not have generators to support response or relief functions in the event of a power outage.

Concerns were identified throughout this planning process about the potential for frequent short-duration or even long-term power outages from storms throughout the county. A number of communities are looking to emergency power generators to help keep up operations and provide relief for residents during a power outage. Critical facilities need operational power for communications, heating/cooling, water and sewer, refrigeration of food supplies and medicines, etc. to function effectively. Generators can be used for back-up power at critical facilities. The need for back-up generators in the event of a power outage at each facility should be examined. Back-up power systems need to be maintained to ensure operation in time of need.

The City has installed generators (or wiring for portables) at its fire department, wastewater treatment plant, and some of its wells and lift stations. However, the City public works facility is recommended for a generator to maintain operations of bay doors, radios/repeaters, etc. The Village should install the wiring for portable generator connection at its lift station(s).

Participating Jurisdictions for Action 10:

Lead agencies will be the City of Adams and Village of Friendship. Jurisdictions participating in this action will include: Adams County, the City, the Village, all Towns and all School Districts.

Action 11:

Identify critical powerlines vulnerable to downing and convert to underground lines (bury overhead powerlines). In its mitigation survey results, Town of Jackson identified power failure caused by wind damage and ice storms as a significant issue, and a resulting need to reduce overhead power lines exposure.

The Town of Jackson should work with electric utilities to identify critical sections of aerial power lines within the Town which are vulnerable to downing for conversion to underground lines. Burying overhead power lines reduces the risk of power outage.

Participating Jurisdictions for Action 11:

Lead agency will be the Town of Jackson. Jurisdictions participating in this action will include: Town of Jackson and others where overhead powerline exposure presents a significant risk of power outage.

Action 12:

Establish and develop a functional needs assistance list (registry) and procedures. The registry provides emergency responders with important information to ensure the safety of residents with special needs such as oxygen supply, ventilation, associated power requirements, critical medications, physical limitations, etc., as well as information like what type of heat source they have, if AC is available, etc. A GIS mapping component could be developed as well to assist with locating those in need and managing the response during a situation.

One area of concern identified during this planning process as needing to be addressed is the provision of aid and/or evacuation for elderly and other homebound in the event of a disaster / emergency. One of the reasons for this concern is the potential for power outages affecting the area. Maintaining a functional needs registry will help local officials make sure residences with critical power requirements have working generators to power ventilators or other important medical devices. Consideration must be given to nursing homes, assisted living, and other facilities where vulnerable populations are congregated.

Many communities maintain these types of registries in varying forms. A resident survey could be created and distributed via email and/or US Mail to gather the base information to build the registry. Once the initial registry is established consideration must be given to maintaining and updating the information. One option might be to develop an online interface for individuals to enter and submit their information. Privacy considerations must also be factored in.

Communities approach these registries in different ways. For example, Juneau County, Wisconsin states that “The purpose of the Functional Needs Evacuation Registry is to provide Emergency Responders in your municipality with important information from individuals who may require Evacuation Assistance during an emergency, such as tornado, flood, blizzard, power outage, or disease outbreak.” Juneau County has a downloadable form (see APPENDIX C) available on their website that people can fill in and mail back to enter the registry or update their registry information.

Participating Jurisdictions for Action 12:

Lead agencies will be Adams County Emergency Management and County Health. Jurisdictions participating in this action will include: Adams County, City of Adams, Village of Friendship and all Towns.

Hazard: Tornadoes

Goal:

Protect health, safety, and welfare of county residents and visitors, along with mitigating future loss of property from tornadoes.

Action 13:

The County and the local units of governments and school districts should identify buildings that will provide protection to the public in the event of a tornado or other hazard. There are a number of buildings in the County that can accommodate people during a tornado or other hazard. Part of this effort would be to work with building owners to reach an understanding on use of facilities as a shelter.

Participating Jurisdictions for Action 13:

Lead agency will be Adams County Emergency Management. Participating jurisdictions will include: Adams County, City of Adams, Village of Friendship, all Towns, including Adams, Big Flats, Colburn, Dell Prairie, Easton, Jackson, Leola, Lincoln, Monroe, New Chester, New Haven, Preston, Quincy, Richfield, Rome, Springville & Strongs Prairie, and all School Districts, including Adams-Friendship Area School District.

Action 14:

Upon identifying existing buildings that could provide protection, the County and its local units of governments and school districts should identify areas that remain deficient in tornado shelters such as campgrounds, mobile home parks, areas where homes lack basements, etc. Shelters should be planned and constructed in these areas. Structures available to the public during tornado warnings should be publicized by a number of sources such as area newspapers, signs, county maps, and the County web site.

A community building (or buildings) often looked to is the local school. However, it is important to remember that school buildings can sustain significant damage or be destroyed as well. Officials should evaluate the most appropriate use for school buildings to meet the community's sheltering needs. Agreements would have to be put in place between the school district and the community / disaster relief agency. Schools often have a variety of useful resources that should be evaluated when planning for shelters, such as large prep kitchens and cold storage facilities. A recent trend in Wisconsin involves collaboration between local municipalities and school districts to supplement a school construction project with FEMA hazard mitigation grant funds to build part of the facility, such as the gymnasium, into a community tornado shelter.

Funding for the construction of shelters may be available through the Wisconsin Department of Commerce's Committee Development Block Grant (CDBG). Adams County did apply for funding to build shelters but was not awarded. FEMA's hazard mitigation grants are another source of funding for shelters, community safe rooms and the like.

Participating Jurisdictions for Action 14:

Lead agency will be Adams County Emergency Management. Participating jurisdictions will include: Adams County, City of Adams, Village of Friendship, all Towns and all School Districts, including Adams-Friendship Area School District.

Action 15:

The County should require and promote construction standards and techniques for wind resistance. To strengthen public and private structures against severe wind damage, communities can require or encourage wind engineering measures and construction techniques that may include structural bracing, straps and clips, anchor bolts, laminated or impact-resistant glass, reinforced pedestrian and garage doors, window shutters, waterproof adhesive sealing strips, or interlocking roof shingles. Also, architectural design can make roofs less susceptible to uplift. See also Action 34.

Participating Jurisdictions for Action 15:

Lead agencies will be Adams County Planning & Zoning, City of Adams and Village of Friendship. Participating jurisdictions will include: Adams County, City, Village, and all Towns.

Action 16:

Establish shelter facilities in the Towns of Big Flats, Jackson, Leola, New Haven and Quincy. These towns identified a need for tornado / emergency shelter within the Town in the mitigation issues survey distributed as part of this plan. Locations indicated vary by town, however the town hall (property) or municipal building is a common site preference. New Haven identified Berry Ridge Mobile Home Park due to its susceptibility to a high wind / tornado event.

Participating Jurisdictions for Action 16:

Lead agencies will be the Towns of Big Flats, Jackson, Leola, New Haven and Quincy. These Towns will be the only directly participating jurisdictions for their areas. Other towns identifying a need for storm shelter could adopt this recommendation.

Hazard: Winter Storms / Extreme Cold**Goal:**

Create safety awareness in citizens and travelers of Adams County to protect them during and after winter storm events or periods of extreme cold.

Action 17:

The County should encourage the development of snow fences for public safety. Using snow fences or “living snow fences” (rows of trees or other vegetation) can limit blowing and drifting of snow over critical roadway segments. Assistance can be provided by the County Land and Water Conservation Department and NRCS to develop windbreaks. Windbreaks would be advantageous to the County Highway Department and towns to

prevent blowing and drifting on roadways. Stretches of STH 21 and CTH D were previously identified as critical locations for snow fence / wind break establishment.

Participating Jurisdictions for Action 17:

Lead agencies will be Adams County Land & Water Conservation and Highway Departments. Participating jurisdictions will include: Adams County, all Towns, including Adams, Big Flats, Colburn, Dell Prairie, Easton, Jackson, Leola, Lincoln, Monroe, New Chester, New Haven, Preston, Quincy, Richfield, Rome, Springville & Strongs Prairie, and all School Districts, including Adams-Friendship Area School District.

Action 18:

The County should promote winter hazards awareness, including home and travel safety measures, such as avoiding travel during winter storms. If travel cannot be avoided, stocking of vehicles with a shovel, sand, warm clothing, food, water, etc. should be encouraged. This effort should also include suggestions regarding checking on neighbors or others known to live alone or that may be at a disadvantage in fending for themselves. Other winter / extreme cold problems include freezing of septic systems and residential LP Gas (extreme cold).

Participating Jurisdictions for Action 18:

Lead agency will be Adams County Emergency Management. Participating jurisdictions will include: Adams County, City of Adams, Village of Friendship and all Towns.

Hazard: Wildfire / Forest Fire

Goal:

Protect the safety and property of residents and visitors from forest and wildfires.

Action 19:

The County and DNR should continue to make outreach efforts to homeowners on protecting their homes and structures from wildfires. Local communities should also assist these efforts. Since Adams County is mostly rural with many industrial woodland parcels, emphasis should be placed on building construction materials and establishing defensible areas around structures by managing vegetation and materials. Key actions include removing debris from roofs/gutters, using fire-resistant building materials, pruning trees 6–10 feet from the ground, and limiting flammable vegetation near structures. Home ignition zone assessments should be promoted. Outreach efforts can exist in the form of web sites, local newspaper articles, pamphlets to homeowners and should target high-risk spring conditions.

Distribution was identified as an issue with it being a struggle getting material out and in front of people to read. New and innovative methods for outreach must be regularly researched and deployed.

Another issue is reaching the significant tourist and seasonal resident population that comes and goes, particularly with the significant number of camping sites in the County. They often don't understand the wildfire risk and area burning restrictions. The practice of debris burning by these groups is a major concern.

Sending out information on maintaining driveways for fire access was also identified as an issue.

Participating Jurisdictions for Action 19:

Lead agencies will be Adams County Emergency Management with WDNR. Participating jurisdictions will include: Adams County and all Towns, including Adams, Big Flats, Colburn, Dell Prairie, Easton, Jackson, Leola, Lincoln, Monroe, New Chester, New Haven, Preston, Quincy, Richfield, Rome, Springville & Strongs Prairie.

Action 20:

Local fire departments should provide more training for responding to larger fires.

Participating Jurisdictions for Action 20:

Lead agencies will be the fire districts serving Adams County. Other participating jurisdictions will include: City of Adams, Village of Friendship and all Towns.

Action 21:

Support establishment of Firewise Communities across the County and expand Firewise programming. The national Firewise Communities program is a multi-agency program, which promotes partnerships between community leaders, homeowners, planners, developers and others to promote wildfire preparedness - before a fire starts. The Firewise approach emphasizes local community responsibility for designing and maintaining safe communities through land use planning, mitigation activities, collective decision-making and effective response.

Firewise Communities/USA is a project of the National Wildfire Coordinating Group's Wildland/Urban Interface Working Team and is the latest component of the Firewise program. According to the NWCG, the Firewise Communities concept "provides citizens with the knowledge necessary to maintain an acceptable level of fire readiness, while ensuring firefighters that they can use equipment more efficiently during a wildland fire emergency."

Becoming a Firewise Community involves a 7-step process.

- Step 1: Contact Firewise
- Step 2: Site visit with local Firewise Communities USA representatives
- Step 3: Community representatives create a multi-discipline Firewise board/committee
- Step 4: Assessment & evaluation
- Step 5: Create plan – Create agreed-upon, area-specific solutions to its WUI fire issues

- Step 6: Implement solutions – Local solutions are implemented following a schedule designed by the local Firewise board and WUI specialist.
- Step 7: Apply for recognition

Mitigation grants may be available to assist communities with hazardous fuels reduction, ie clean-up of excess woody debris from storm damage for example.

In the mitigation survey results for this Plan, the Towns of Big Flats and Leola indicated a need for expanded Firewise programming due to their high fire risk. For example, Big Flats currently does a brush clean-up once a year and is interested in increasing that to twice a year. Town of Leola noted continuing to talk to landowners about cleaning up dead trees on their properties. Other towns should undertake Firewise programming to reduce wildfire risk.

Participating Jurisdictions for Action 21:

Lead agencies will be the respective jurisdictions and WDNR. Jurisdictions participating in this action will include: all Towns.

Action 22:

Upgrade Adams Fire District capabilities and firefighting equipment. Replace aging firefighting vehicles and equipment in Town of Quincy. In its mitigation survey response for this Plan, the Adams-Friendship School District indicated it would like to see further investment in fire equipment upgrades, dozers and other fire restraining methods, including on-going investment in upgrading Adams Fire District capabilities. The Town of Quincy identified a need to replace its aging firefighting equipment and vehicles. Other communities identifying a need for firefighting equipment upgrades could adopt this recommendation.

Participating Jurisdictions for Action 22:

Lead agencies will be the Adams Fire District and Town of Quincy. Jurisdictions participating in this action will include: Adams Fire District, Town of Quincy, and Adams-Friendship School District.

Action 23:

Create brush drop-off site to help control wildfire fuels in the Town of Dell Prairie. This need was identified in the Town's results from the mitigation survey for this Plan. Other communities with a need to control/manage wildfire fuels could adopt this recommendation.

Participating Jurisdictions for Action 23:

Lead agency will be Town of Dell Prairie. The Town will be the only directly participating jurisdiction.

Hazard: Drought / Extreme Heat

Goal:

Improve countywide preparedness for dealing with extended drought.

Goal:

Create safety awareness in citizens of Adams County to help protect themselves during extreme heat events.

Action 24:

The County should promote heat hazards awareness, including home and travel safety measures. Include suggestions regarding checking on neighbors or others known to live alone or that may be at a disadvantage in fending for themselves.

Participating Jurisdictions for Action 24:

Lead agency will be Adams County Emergency Management. Participating jurisdictions will include: Adams County, City of Adams, Village of Friendship and all Towns, including Adams, Big Flats, Colburn, Dell Prairie, Easton, Jackson, Leola, Lincoln, Monroe, New Chester, New Haven, Preston, Quincy, Richfield, Rome, Springville & Strongs Prairie.

Action 25:

Develop a countywide drought mitigation plan to encourage multi-agency approaches to water conservation, drought prediction and stream and groundwater monitoring for ready implementation if needed. Rising average annual temperatures could drive more persistent drought. Droughts probably have the greatest impact on agricultural and tourism areas and given the significance of these sectors for the County’s economy, drought becomes an important hazard to prepare for. Even droughts of limited duration can reduce crop growth and yields, adversely affecting farm income. More substantial events can decimate croplands and result in total loss, negatively impacting both the individual producer and the local economy.

Some elements to touch on in the plan include the following. Outreach to farmers including information on feed or financial assistance and managing crops and livestock during drought conditions. Assisting farmers that irrigate with irrigation scheduling programs and drip or misting systems. Research-based programs can assist growers in determining frequency and amounts of irrigation throughout the growing season; it can be extremely helpful during a drought. Providing information on crop insurance to preserve economic stability for farmers during a drought.

Participating Jurisdictions for Action 25:

Lead agencies will be Adams County Land and Water Conservation and Adams County UW-Extension in conjunction with FSA. Participating jurisdictions will include: Adams County, City of Adams, Village of Friendship, all Towns and all School Districts, including Adams-Friendship School District.

Hazard: Flooding / Dam Failure

Goal:

Lessen the impact floods have on people, property, and the environment.

Goal:

Prevent the loss of life and reduce the risk of property damage in downstream areas that result from a dam failure.

Goal:

Reduce long-term vulnerabilities from high hazard dams that pose a significant risk to the public.

Please note: actions denoted with an asterisk (*) relate to compliance with the NFIP.

Action 26*:

To mitigate the long-term impacts of flooding, if evidence of recurring flooding is an issue with specific properties after a significant flood event, investigate, as a possible solution, the voluntary acquisition/removal of buildings in a floodplain with flood damage.

Property owners should be informed of their floodplain status and related insurance (NFIP) issues. A survey to gauge interest in buy-out and relocation of properties within the floodplain is recommended to help evaluate the potential options for capturing federal flood mitigation dollars.

Participating Jurisdictions for Action 26:

Lead agencies will be Adams County Planning & Zoning and Emergency Management, City of Adams and Village of Friendship. Participating jurisdictions will include: Adams County, City of Adams, Village of Friendship and all Towns, including Adams, Big Flats, Colburn, Dell Prairie, Easton, Jackson, Leola, Lincoln, Monroe, New Chester, New Haven, Preston, Quincy, Richfield, Rome, Springville & Strongs Prairie.

Action 27:

Continue to work with dam owners to review Emergency Action Plan (EAP) for each significant and high hazard dam within Adams County. FEMA guidelines for dam safety indicate that training and exercises are necessary to maintain operational readiness, timeliness and responsiveness. The status of training and levels of readiness should be evaluated in periodic simulated emergency exercises for response personnel and the dam owner.

The Adams County Land and Water Conservation Department (LWCD) has completed dam break analysis for all county owned dams. The County continues to maintain Emergency Action Plans (EAPs) based on the dam break analysis for each of these dams.

Emergency situations and/or dam failures are not common events. The EAP can become outdated, lose its effectiveness and no longer be workable if the plan is not practiced. Those involved may become unfamiliar with their roles and responsibilities, especially with the turnover of local officials. If the plan is not updated, the information contained in it may become outdated and useless.

There are five types of exercises, including: orientation seminar, drill, tabletop exercise, functional exercise and full-scale exercise. They range in complexity from simple to more complex, but it is not required that every exercise program include all five types.

Participating Jurisdictions for Action 27:

Lead agencies will be Adams County Land & Water Conservation and Emergency Management. Participating jurisdictions will include Adams County, City of Adams, Village of Friendship and all Towns that could be affected by a dam failure.

Action 28:

Construct retention pond(s) in the City of Adams to control stormwater and reduce flooding. During the planning meeting for this Plan, the City indicated that the utilization of retention ponds is something they have discussed to address occasional flooding. Ponds could be constructed to address specific areas or a part of a more comprehensive engineering strategy, see Recommendation 30.

Participating Jurisdictions for Action 28:

Lead agency will be City of Adams. The City will be the only directly participating jurisdiction.

Action 29:

Improve ditching and culverts along town roads in Big Flats, Leola, Quincy, and other towns as appropriate to better manage water and control flooding. Increase inspection ditches, culverts, creeks and streams can help identify problems with the drainage system before a flooding problem occurs.

This need comes from the town mitigation survey results with a number of towns citing being prone to flooding due to low lying areas, and/or numerous streams and wetlands. Flooded roads and bridge washouts were noted.

Towns of Big Flats and Leola indicated they have been doing inspection of culverts and ditches and need to continue those inspections. Towns of Adams, New Haven, and Quincy have replaced old and failing culverts and need to continue those replacements. New Haven has installed additional culverts and up-sized some existing ones to better handle water flow. Big Flats has even installed culverts on private property to help mitigate water issues. Town of Jackson elevated a segment of 2nd Avenue to mitigate future flood damage, and Dell Prairie has considered raising a section of Gem Ct that frequently overtops but the cost is an issue.

Participating Jurisdictions for Action 29:

Lead agencies will be Towns of Big Flats, Leola, and Quincy. Participating jurisdictions will include the Towns of Big Flats, Leola, Quincy, and others the need to manage water and control flooding.

Action 30:

Conduct drainage study for the City of Adams to determine best management practices for the City to manage stormwater to reduce flooding within the City. Conduct a drainage study for the Village of Friendship to evaluate Quincy Street flooding issues.

Participating Jurisdictions for Action 30:

Lead agencies will be City of Adams and Village of Friendship. Participating jurisdictions will include: the City and Village.

Action 31*:

Communities within Adams County currently participating in the National Flood Insurance Program (NFIP) should work to ensure continued compliance. Compliance primarily entails adopting and enforcing floodplain management regulations that meet minimum criteria. Adams County, the City of Adams and the Village of Friendship are in the program. All towns are included under the umbrella of the County through the state mandated county shoreland zoning.

Participating Jurisdictions for Action 31:

Lead agencies will be Adams County Zoning, the City of Adams and the Village of Friendship. The only directly participating jurisdictions are Adams County, City of Adams and the Village of Friendship.

Action 32:

Do shoreline embankment stabilization to reduce road and bridge washouts in the Town of Monroe. This is an on-going project need identified by Town of Monroe in its mitigation survey results for this Plan. Town of New Haven has also stabilized embankments with riprap.

Participating Jurisdictions for Action 32:

Lead agency will be the Town of Monroe. The only directly participating jurisdiction will be Town of Monroe.

Hazard: Severe Thunderstorms / Hail / Lightning / Wind**Goal:**

Minimize the threat to human life and property damage caused by severe storms and associated high wind, hail and lightning.

Action 33:

The County should continue to promote the planting of windbreaks to protect farmsteads, buildings, and open fields from high winds. Established trees and shrubs can slow wind on the downwind side of a windbreak for a distance of 10 times the height of the trees. The windbreaks can also reduce soil erosion, act as snow fences, provide wildlife food and cover, and offer a number of other benefits.

The Town of Leola has been encouraging planting of windbreaks on field edges to support wind management and identified the need to continue this effort in the results of its mitigation survey for this Plan.

There are a number of resources area landowners use to help install and pay for windbreaks. Both the Central Wisconsin Windshed Partnership and the County Land and Water Conservation Department provide assistance to help establish windbreaks. Windbreaks can also be established through the Conservation Reserve Program (CRP), Conservation Enhancement Reserve Program (CREP), Conservation Security Program (CSP), and Environmental Quality Incentive Program (EQIP) from the USDA Natural Resource Conservation Service (NRCS).

Participating Jurisdictions for Action 33:

Lead agencies will be Adams County Land & Water Conservation and Town of Leola. Adams County works cooperatively with NRCS on this activity. Participating Jurisdictions will include: Adams County, all Towns, including Adams, Big Flats, Colburn, Dell Prairie, Easton, Jackson, Leola, Lincoln, Monroe, New Chester, New Haven, Preston, Quincy, Richfield, Rome, Springville & Strongs Prairie and all School Districts, including Adams-Friendship School District.

Action 34:

Continue to enforce local building codes to improve new buildings and renovations ability to withstand greater wind velocities. The State of Wisconsin Uniform Dwelling Code (UDC) used by Adams County

A review of local building codes should be conducted to determine if revisions are needed to improve a structure's ability to withstand greater wind velocities and lightning. The building code provisions may include requirements for construction methods that employ cross-bracing, anchoring of walls to foundation, and anchoring roof rafters to walls (also mitigates tornado risk) and measures to provide wind protection and retrofits for vulnerable features (windows, garage doors, patio doors, double-wide entry doors, siding and bracing for walls and rafters. See FEMA guides on adequate and inexpensive wind mitigation measures when making changes to buildings codes. The National Fire Protection Association (NFPA) has standards for the installation of lightning protection systems that can be incorporated into building codes. See also Action 15.

Participating Jurisdictions for Action 34:

Lead agencies will be Adams County Planning & Zoning, City of Adams, Village of Friendship, and all Towns. Participating jurisdictions will include: Adams County, City, Village and all Towns.

Action 35:

Promote public awareness of proven lightning safety guidelines to reduce risk due to the wide array of outdoor recreation opportunities throughout the County. Such measures as constructing signs to inform people when to get out of the water or off a golf course when there is lightning can be taken.

Participating Jurisdictions for Action 35:

Lead agency will be Adams County Emergency Management. Participating jurisdictions will include: Adams County, City of Adams, Village of Friendship and all Towns.

Hazard: Hazardous Materials Incidents**Goal:**

Protect people and natural resources from adverse effects of hazardous material incidents.

Action 36:

Implement recommendations within the Regional Hazardous Materials Commodity Flow Study Report regarding preparation and planning to address the hazardous materials moving through Adams County.

The County should coordinate implementation of the recommendations within the Regional Hazardous Materials Commodity Flow Study Report regarding precautions and planning to address the presence of hazardous materials moving through Adams County. The Study notes that the hazardous materials being transported through the region are an ever-changing mix of various materials. However, the majority of chemicals observed during the study being transported in the highest volumes include flammable liquids (hydrocarbons), propane and corrosives which are well known in the response community and are within the capabilities of most hazardous materials response teams. The high-hazard and exotic chemicals that push the capabilities of response teams observed during the study are generally lower volume commodities, which keeps actual risk manageable.

The primary study recommendations are as follows:

- Emergency management agencies should review the report and use the data within to ensure that training, equipment, and capabilities align with the hazards present.
- Emergency management agencies should use the data in the report to continue to advocate for financial support in the form of grants and other reimbursement from regional, state, and federal sources to fund planning, preparedness, response, and recovery functions as they pertain to hazardous materials.
- Continue to advocate for hazardous materials awareness training for anyone tasked with responding to hazardous materials incidents. Fire-department-based

hazmat teams possess this training. It is less common for other responders such as law enforcement, emergency medical services, and public works. Awareness training is readily available and inexpensive.

- Continue the regional approach taken with this study and extend it to a regional approach to response and training as appropriate. Local and county hazmat teams should not only know who their regional state hazmat team is and how to contact them, but also should strive to plan and train with them.

Participating Jurisdictions for Action 36:

Lead agencies will be Adams County Emergency Management. Other participating jurisdictions will include: Adams County, City of Adams, Village of Friendship, all Towns and the fire districts serving the County.

Action 37:

Continue planning and training exercises for local emergency responders to deal with hazardous materials incidents. It is important to note that not only do fixed facilities pose a serious concern, but also the movement of these hazardous chemicals through the County via truck and train. The need for further development of action plans for these types of facilities/substances along with on-going training and exercises in responding to incidents involving them is needed. This includes multiple county departments, the City, the Village and virtually all towns due to the reach of rail and truck routes that may transport these materials.

Participating Jurisdictions for Action 37:

Lead agency will be Adams County Emergency Management. Other participating jurisdictions will include: Adams County, City of Adams, Village of Friendship, all Towns and the fire districts serving the County.

Hazard: Epidemic / Pandemic**Goal:**

Improve countywide preparedness for handling and recovering from an epidemic or pandemic event.

Action 38:

Develop a pandemic preparedness response and recovery plan based on lessons from the Covid-19 Pandemic. Integrate and optimize use of the Regional Health Care Coalition. Lessons or issues identified during the Covid Pandemic include, but are not limited to, the following:

- Funding for contact tracing
- Testing sites plan
- Vaccine distribution plan
- Mass vaccination plan
- Personal protective equipment stockpile

- Messaging and message consistency

Each jurisdiction should make its own pandemic preparedness plan that coordinates with the County and adjacent municipalities. This effort should address/include development of memorandums of understanding for intergovernmental coordination and cooperation for testing sites, vaccine distribution/mass vaccination, and supply/distribution of personal protective equipment. The process should include an information and education program to lay the groundwork regarding welfare of the community as a whole.

Participating Jurisdictions for Action 38:

Lead agency will be Adams County Health Department in conjunction with Emergency Management. Jurisdictions participating in this action will include Adams County, City of Adams, Village of Friendship, all Towns including, Adams, Big Flats, Colburn, Dell Prairie, Easton, Jackson, Leola, Lincoln, Monroe, New Chester, New Haven, Preston, Quincy, Richfield, Rome, Springville & Strongs Prairie, and all School Districts, including Adams-Friendship Area School District.

Action 39:

Work to implement the recommendations of the North Central Wisconsin Pandemic Assessment and Future Response Plan and the North Central Wisconsin Regional COVID-19 Recovery Plan. Both of these plans were prepared by the North Central Wisconsin Regional Planning Commission.

The purpose of the North Central Wisconsin Pandemic Assessment and Future Response Plan is to analyze various county and tribal response efforts related to the COVID-19 pandemic and to identify approaches to better address future pandemics. The overarching goal is to better prepare the region for future public health related disruptions.

The Regional Health Pandemic Assessment and Future Response Committee included a group of experts representing every county throughout the region. The committee included those directing county health departments and tribal health departments. In addition, coordinators from various agencies including those dealing with healthcare emergency readiness, seniors, persons with disabilities, and other specialty populations served on the committee. This group responded to a questionnaire and met virtually throughout the 2021 calendar year. During these meetings, the committee was able to analyze the response to the COVID-19 global pandemic and identify strengths and weaknesses. Through this process, recommendations were created to better respond to pandemics and similar health related disruptions in the future, as follows:

Recommendation 1: Meet Public Health Mission Objectives

1. Modernize and streamline data management and monitoring technology. Local public health relied on the state through the Wisconsin Electronic Disease Survey System (WEDSS). Managing this system was staff intensive. Infrastructural improvements are needed.
2. Continue to explore ways to improve metrics within rural communities.

3. Encourage specific state-level guidance related to recommendations for business, educational and municipal facilities best practices in real time during communicable disease threats.
4. Strengthen the department's collection and dissemination of information that connects determinants of health with health outcomes.

Recommendation 2: Build on Intergovernmental and Interagency Collaboration

1. Continue to forge robust partnerships among health agency department and staff.
2. Continue to improve and enhance internal and external communication.
3. Continue to investigate opportunities for horizontal collaboration (among local health departments) and vertical collaborations (at the federal, state, and local levels).
4. Continue create and enhance interagency partnerships to enhance local public health services.
5. Explore opportunities for larger public health departments to partner with smaller local health departments to share services, where and when this would allow a reduction in duplication and offer enhanced services to smaller departments.
6. Consider a regional approach to establish uniformity and consistency across county and tribal lines.

Recommendation 3: Advance Health Planning

1. Weave comprehensiveness into all aspects of health planning and policy.
2. Engage interested members of the community to be trusted partners on health planning concepts.
3. Continue to engage and include stakeholders with a focus on health into all regional and state initiatives. This could include community members and nontraditional partners associated with social determinants of health (SDOH) such as planners, law enforcement, schools, and community organizations.
4. Continue to prioritize health and meaningful community engagement.
5. Continue to ensure that outreach and educational efforts address social and structural determinants of health outcomes.

Recommendation 4: Invest in Public Health

1. Encourage federal and state investment in local public health foundational capabilities.
2. Encourage legislatures to actively protect public health authority at the state and local levels so that experts can continue to promote solutions that encourage economic growth, reduce inequities, and address chronic health conditions.
3. Increase per capita health funding in the State of Wisconsin.
4. Secure more sustained and flexible local public health funding.
5. Bolster recruitment and retention of employees to continue to attract and maintain a talented and diverse workforce.
6. Continue to provide those in leadership roles with training and resources they need to lead a strong and diversified public health department.
7. Explore dynamic staffing models that allow local health departments to expand staffing resources in response to communicable disease threats.

In the aftermath of disasters, the most important questions typically center around recovery, how to become less vulnerable to a disaster, and how to be better prepared to deal with a disaster event in the future. When attempting to find answers to these questions, it is clear that the COVID-19 pandemic has brought many issues and vulnerabilities to the forefront, as communities, businesses, residents, and the entire world-at large were not well-prepared to deal with the health emergencies and economic shocks that resulted from the pandemic.

The purpose of North Central Wisconsin Regional COVID-19 Recovery Plan is to guide economic stabilization, recovery, and resiliency efforts within the North Central Wisconsin Region in the face of the current pandemic as well as future events that cause economic shocks. The plan promotes activities that prevent, prepare for, and respond to the COVID-19 pandemic, and in particular, to the economic injury caused by the pandemic, within North Central Wisconsin.

The plan puts forth a set of strategies that will help the Region's local economies recover from and become more resilient to economic shocks by identifying best practices that help spur economic stabilization and recovery in the wake of economic shocks and that will help build local economic resilience. Helping local recovery and resiliency efforts will help the regional economy as a whole recover and grow back even stronger than before the disaster struck.

Participating Jurisdictions for Action 32:

Lead agency will be each respective jurisdiction. Participating jurisdictions will include: Adams County, the City of Adams, the Village of Friendship and all Towns.

Table 22 - Summary of Mitigation Strategies Adams County All Hazards Mitigation Plan Update

Mitigation Measures	Cost Estimate	Existing and Potential Resources to Implement	Responsible Units	Project** Timeframe	Priority Level
ALL HAZARDS					
1 Continue to promote the increased use of National Oceanic and Atmospheric Administration (NOAA) weather radios.	Staff Time	Dept Budget / Mitigation Grant	County EM Dept	On-going	High
2 Continue to maintain Emergency Management Department Page - linked from County web site.	Staff Time	Dept Budget	County EM Dept	On-going	High
3 Brush clearing and tree cutting along rights-of-way to reduce downing of powerlines, blocking of roadways, wildfire fuels and wildfires jumping roads.	Costs to be determined	General Funds / Local Road Aids	Towns of Jackson, Leola, Quincy & others where needed	On-going	Medium
4 Develop County-wide evacuation and shelter plans including relief centers concept, and public education component, needs of special populations and facilities such as campgrounds, elderly housing, etc.	\$25,000	General Funds Dept Budgets	County / City / Village / All Towns / All School Districts	2028	Medium
5 Continue development of county-wide advanced early warning systems including utilization of current & emerging technologies such as EAS and IPAWS. Expand utilization of the Nixie System. Include public education element.	Cost to be determined	General Funds Dept Budgets	County / City / Village / All Towns / All School Districts	On-going	Medium
6 Develop action plans and training for areawide cooperation and coordination during major incidents. Issues include: energy companies, health concerns, vulnerable populations, fuel supplies, equipment and manpower, staging, access in rural areas, large gatherings, public awareness, etc.	Costs to be determined	Dept Budgets	County / City / Village / All Towns	On-going	High
7 Village of Friendship should continue to maintain its warning sirens, and plan for long-term replacement as needed.	\$25,000 ea.	General Fund	Village of Friendship	On-going	Medium
8 Municipalities should review and update their local emergency response plans.	Staff Time	Dept Budgets	County EM Dept / City / Village / All Towns	On-going	Medium
9 Install detection system at rail crossing to alert dispatch when blocked.	\$50,000	General Fund	City of Adams	2030	Medium
10 Install back up generators and/or wiring for portable connection to maintain operations a critical community facilities during power outage.	\$25,000 ea.	General Funds / Mitigation Grants	City of Adams / Village of Friendship	2029	Medium
11 Identify critical power lines vulnerable to downing and convert to underground lines (bury overhead powerlines).	Costs to be determined	General Funds / Mitigation Grants	Town of Jackson & others were needed	2030	Medium
12 Establish and develop functional needs assistance list and procedures to provide emergency responders with important information to ensure safety of residents with special needs like oxygen, ventilation, other power dependent devices, medicines, physical limitations, etc.	Staff Time	Dept Budgets	County EM Dept / Co Health Dept / City / Village / All Towns	2029	Medium

Mitigation Measures	Cost Estimate	Existing and Potential Resources to Implement	Responsible Units	Project Timeframe	Priority Level
TORNADO					
13 Identify buildings that will provide protection to the public in the event of a tornado warning.	Staff Time	Dept. Budgets	County / City / Village / All Towns / All School Districts	2027	Medium
14 Identify and construct tornado shelters in areas where deficient: campgrounds, areas where homes lack basements, etc.	Cost to be determined	Mitigation Grants CDBG Program	County / City / Village / All Towns / All School	On-going	Medium
15 Require and promote construction standards and techniques for wind resistance.	Staff Time	Dept. Budgets	County P&Z Dept / City / Village / All Towns	On-going	Low
16 Establish emergency "tornado" shelters in the Towns of Big Flats, Jackson, Leola, New Haven and Quincy.	\$100,000 ea.	CDBG Program / Mitigation Grants / General Funds	Towns of Big Flats / Jackson / Leola / New Haven / Quincy	2030	Medium
WINTER STORMS / EXTREME COLD					
17 Encourage the development of snow fences.	Costs vary	NRCS funding programs	Co. Hwy Dept / Co. LWCD / All Towns / All School Districts	On-going	Low
18 Promote winter hazards awareness, including home and travel safety measures.	Staff Time	Dept. Budgets	County EM Dept / City / Village / All Towns	On-going	Medium
FOREST FIRE / WILDFIRE					
19 Continue to make outreach efforts to home owners on protecting homes and structures from wildfires.	Staff Time	Dept. Budgets	Co. EM Dept / WDNR / All Towns	On-going	Low
20 Provide ample training for volunteer fire fighters for larger fires.	Staff Time	Dept. Budgets	Local Fire Depts / City / Village / All Towns	On-going	High
21 Support establishment of Firewise Communities across the County and expand Firewise programming.	Cost to be determined	General Funds	All Towns / WDNR	On-going	Medium
22 Upgrade Adams Fire District capabilities and fire fighting equipment. Replace aging firefighting vehicles and equipment in Town of Quincy.	Cost to be determined	Local Budgets / Assistance to Firefighters Grant	Adams Fire District / Town of Quincy	2029	Medium
23 Create brush drop-off site to help control wildfire fuels in Town of Dell Prairie.	Cost to be determined	General Fund	Town of Dell Prairie	2028	Low
DROUGHT / EXTREME HEAT					
24 Promote heat hazards awareness, including protecting oneself and watching out for others.	Staff Time	Dept. Budgets	County EM Dept / City / Village / All Towns	On-going	Low
Mitigation Measures	Cost Estimate	Existing and Potential Resources to Implement	Responsible Units	Project Timeframe	Priority Level

25	Develop countywide drought mitigation plans.	Staff Time	Dept. Budgets	UW-Ext Dept / Co. LWCD / City / Village / All Towns / All School Districts	On-going	Low
FLOOD / DAM FAILURE						
26	If evidence of recurring flooding is an issue with specific properties after a significant flood event, investigate, as a possible solution, the voluntary acquisition / removal of buildings in a floodplain with flood damage.* (FEMA NFIP requirement)	Costs to be determined	Mitigation Grants / FMA	Co. EM Dept / Co. P&Z Dept / City / Village / All Towns	As needed	Low
27	Continue development of new / updated Emergency Action Plans (EAP) for all large dams, with priority on those w/ significant or high hazard rating. Identify rehabilitation needs of high hazard dams.	Costs to be determined	Dept. Budgets / NRCS Funding Programs / Rehab of High Hazard Potential Dams (HHPD) Program	Co. LWCD / Co. EM / City / Village / All Towns	On-going	High
28	Construct retention pond(s) in City of Adams to control stormwater and reduce flooding.	Costs to be determined	General Fund	City of Adams	2030	Low
29	Improve ditching and culverts along town roads in Big Flats, Leola, Quincy, and other towns as appropriate to better manage water and control flooding.	Cost to be determined	General Funds / Local Road Aids	Towns of Big Flats, Leola, Quincy & others where needed	On-going	Low
30	Conduct drainage study for the City of Adams to determine best management practices for City to manage stormwater to reduce flooding within City. Conduct a drainage study for Village of Friendship to evaluate Quincy Street flooding issues.	Cost to be determined	General Funds	City of Adams / Village of Friendship	2028	Low
31	County/City/Village continued compliance in the National Flood Insurance Program - NFIP.*	Staff Time	Dept. Budgets	County / City / Village	On-going	Medium
32	Do shoreline embankment stabilization to reduce road and bridge washouts in the Town of Monroe.	Cost to be determined	General Fund	Town of Monroe	On-going	Medium
SEVERE THUNDERSTORM / HAIL / LIGHTNING / WIND						
33	Promote the planting of windbreaks to protect farmsteads, buildings & open fields from high winds.	Staff Time	NRCS funding programs	Town of Leola / Co. LWCD / All Towns / All School Districts	On-going	Low
34	Enforce local building codes to improve structures' ability to withstand greater wind velocities.	Staff Time	Dept. Budget	County / City / Village / All Towns	On-going	Low
35	Promote public awareness of proven lightning safety guidelines to reduce risk.	Staff Time	Dept. Budget	County EM Dept / City / Village / All Towns	On-going	Medium
HAZARDOUS MATERIALS INCIDENTS						
36	Implement recommendations from the Regional (Hazardous Materials) Commodity Flow Report regarding preparation and planning to address the hazardous materials moving through Adams County.	Cost to be determined	General Fund and HMEP/ Mitigation Grants	County EM Dept / City / Village / All Towns	On-going	High

Mitigation Measures	Cost Estimate	Existing and Potential Resources to Implement	Responsible Units	Project Timeframe	Priority Level
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37	Continue planning and training exercises for local emergency responders to deal with hazardous materials incidents.	Cost to be determined	WEM Training Funds and HMEP	County / City / Village / All Towns	On-going	High
EPIDEMIC / PANDEMIC						
38	Develop a pandemic preparedness plan based on lessons from the Covid-19 Pandemic.			County Health & EM Depts / City / Village / All Towns / All School Districts	2027	Medium
39	Work to implement recommendations of the North Central WI Pandemic Assessment & Future Response Plan and the North Central WI Regional COVID-19 Recovery Plan.	Staff Time	Dept Budgets	County / City / Village / All Towns	On-going	Medium
<p>* Denotes actions related to compliance with NFIP.</p> <p>** Actual project implementation depends on funding and staff availability.</p>						

INTRODUCTION

Part V of the Adams County All Hazards Mitigation Plan Update describes the Update adoption, implementation, and evaluation & maintenance processes.

PLAN UPDATE ADOPTION

The adoption of the Adams County All Hazards Mitigation Plan Update lends itself to serve as a guiding document for all local government officials. It also certifies to program and grant administrators from the FEMA and WEM that the plan's recommendations have been properly considered and approved by the governing authority and the jurisdiction's citizens. Finally, it helps to ensure the continuity of mitigation programs and policies over time because elected officials, staff, and other community decision-makers can refer to the official document when making decisions about the community's future.

Before adoption of the Plan Update by participating jurisdictions, the Update must be sent to the state and federal level to verify that all FEMA requirements are met. Once a draft of the updated Plan has been completed, it is submitted to the State Hazard Mitigation Officer (SHMO) at the state level at WEM. Previous drafts of the Update have already been reviewed prior to this submittal. The SHMO will determine if the updated Plan meets requirements. Upon approval of the draft by WEM, the SHMO is responsible for showing the Update to the FEMA Region V Office for review.

Prior to final approval by WEM and FEMA, the Plan Update must be formally adopted by Adams County and its participating jurisdictions by resolution. Jurisdictions that do not adopt the Plan Update cannot apply for mitigation grant funds unless they opt to prepare, adopt, and submit their own plan. Adoption of the Plan Update gives the jurisdiction a legal basis to enact ordinances, policies, or programs to reduce hazard losses and to implement other mitigation actions.

All general purpose units of government (i.e. city, village, towns) and school districts within Adams County were offered one or more avenues to participate in the development of this Plan Update. Adoption of the Plan by a local unit of government certifies their participation. The Adams County Board has adopted this Update. Resolutions of adoption are contained in APPENDIX B.

PLAN UPDATE IMPLEMENTATION**Administrative Responsibilities**

Once the Plan Update has been approved, stakeholders must be informed. The County Emergency Management Director will distribute notice of availability to stakeholders. The County will also make the Plan Update available to the public by linking the report on the Internet.

Along with monitoring the progress of the action projects, the County Emergency Management Director and Public Safety & Judiciary Committee should also work to secure funding to implement the Plan Update. State and federal agencies, nonprofit organizations, and foundations continually make grants available. Emergency Management should research these grant opportunities to determine eligibility for the County and its local units of government.

When implementing this Plan Update, the County Public Safety & Judiciary Committee and staff team should consider innovative ways to involve active participation from nonprofit organizations, businesses, and citizens to implement the Plan Update. The relationship between these groups will result in greater exposure of the Plan Update and provide greater probability of implementation of the action projects listed.

The role of department administrators, elected officials, and local administrators are to ensure that adopted actions from Part IV are considered in their budgets. It is understood that projects may not be carried out as they are scheduled in Part IV due to budget constraints. However, since many of these action projects are considered an investment in safeguarding the public's health, safety, and property, they should be carefully considered as a priority.

Promote Success Of Identified Projects

Upon implementing a project covered by this Plan Update, it is important to promote the accomplishment to the stakeholders and to the communities. This will help inform people that the update is being implemented and is effective.

Community Disaster Resilience

There has been a growing movement in emergency management planning circles toward a "new" buzz word: resilience. There is a wide range of definitions for community resilience and what it entails, but in 2012 the National Academy of Sciences looked at the major federal agencies and independent organizations with work efforts related to resilience and determined that *"resilience is the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events. Enhanced resilience allows better anticipation of disasters and better planning to reduce disaster losses—rather than waiting for an event to occur and paying for it afterward."*

Many weather experts now expect severe weather events to become increasingly more frequent and intense. Recent events seem to corroborate this condition with multiple "short duration - high volume" rainfalls causing devastating flooding around the state in 2015, 2016, 2017 and 2018. Adams County has experienced much of this first hand along with many of its fellow counties with significant flooding during that time.

It is recommended that the County acknowledge these changing conditions and begin working toward an approach to incorporating a community resilience

component into its planning and operations. County could coordinate with the City of Adams and its other local units of government on resiliency efforts.

Incorporation Into Other Local Planning Mechanisms

FEMA requires a process by which the mitigation plan is incorporated into other planning mechanisms where appropriate. When undergoing any planning process, County departments, local units of government and/or any professional staff assisting them, typically review and incorporate any related pre-existing plans as a matter of course.

The most applicable planning process outside of the mitigation plan is the local comprehensive plan for each community. The County's current comprehensive plan was completed in 2019. The 2019 Comprehensive Plan incorporates the 2015 mitigation plan as outlined below with reference to the 2020 Update in process at the time. In addition, the local comprehensive plans for the City of Adams and Village of Friendship were updated in 2017 and 2018 respectively. Both of these processes also incorporated the 2015 hazard mitigation plan in a similar fashion as outlined below. The NCWRPC, the facilitator of the countywide hazard mitigation plan and updates, also assisted with the county, city and village local comprehensive plan updates and works to integrate both plans as part of its standard planning process. The next updates for these comprehensive plans are anticipated in 2027-2029 and will incorporate this new mitigation plan which will be in effect through 2030.

With regard to towns within Adams County, the NCWRPC has provided assistance to most of the towns with their comprehensive plans, incorporating the mitigation plan similar to the above. Many of the towns, including Adams, Colburn, Dell Prairie, Jackson, Monroe, New Chester, Preston and Richfield, maintain comp plans from the 2017-2019 countywide planning process. The NCWRPC will be coordinating another countywide effort to update all these plans through 2029 and integrate this new mitigation plan as outlined. The Towns of Lincoln, Springville and Strongs Prairie have older comp plans (2006-07), and the NCWRPC will bring them into the pending update effort and integrate this new mitigation plan as outlined. The Towns of Big Flats, Easton, Leola, New Haven, Rome and Quincy have more recent comprehensive plans completed between 2020 and 2023 which incorporate the 2020 mitigation plan. The next updates for these comp plans are anticipated in 2031-2033 and will incorporate the next new mitigation plan which would be anticipated in 2030-31.

The following outlines how the mitigation plan is incorporated into each of the nine elements of these county and local comprehensive plans:

- *Issues and Opportunities Element* – a summary of major hazards local government is vulnerable to, and what is proposed to be done to mitigate future losses from the hazards.
- *Housing Element* – an inventory of the properties that are in the floodplain boundaries, the location of mobile homes, recommendation on building

codes, shelter opportunities, and a survey of homeowners that may be interested in a voluntary buyout and relocation program.

- *Utilities and Community Facilities Element* – identify critical facilities such as shelter, schools, medical, water infrastructure, etc. and make recommendations on how to mitigate specific risks factors
- *Transportation Element* – identify any transportation routes or facilities that are more at risk during flooding, winter storms, or hazardous material spills.
- *Agricultural, Natural Resources, and Cultural Resources Element* – identify the floodplains and agricultural areas that area at risk to hazardous events. Incorporate recommendations on how to mitigate future losses to agricultural areas.
- *Economic Development Element* – describe the impact past hazards have had on County and municipal business.
- *Intergovernmental Cooperation Element* - identify intergovernmental police, fire, and rescue service sharing agreements that are in effect, or which may merit further investigation, consider cost-sharing and resource pooling on government services and facilities.
- *Land Use Element* - describe how flooding have impacted land uses and what is being done to mitigate negative land use impacts from flooding; map and identify hazard areas such as floodplains, hazardous materials areas, and soils with limitations.
- *Implementation Element* – have action plans from this Plan implemented into comprehensive plans.

Continuing Incorporation of Mitigation Plan into Other Local Planning Mechanisms

To ensure that the countywide mitigation plan (previous/current/updates moving forward) will continue to be incorporated into other planning mechanisms, the NCWRPC works with county and local officials and staff to schedule comprehensive plan updates. All of these updates have been identified for incorporation of the updated countywide All Hazards Mitigation Plan. County and Regional Planning Commission Staff will also work with county and local community planners to incorporate the mitigation plan into other future planning processes as appropriate.

JURISDICTION CAPABILITY ASSESSMENT

Adams County, the City of Adams, the Village of Friendship, and the Towns are relatively small communities in rural Wisconsin with limited resources and funding. However, they each have some capacity to support mitigation strategies. This section describes the existing authorities, policies, programs, funding and resources that the County and local jurisdictions have available to support hazard mitigation.

The County, City and Village each have professional staff available to implement and manage mitigation programs. Most directly, Adams County has an

Emergency Management Director whose responsibilities include mitigation. In addition, the County has a County Administrator and a number of departments including Sheriff, Health, Highway, GIS (mapping), Land and Water Conservation, and Planning & Zoning with expertise that can assist with mitigation. The City of Adams and Village of Friendship each have administrative, police, fire, public works, and zoning/building inspector staff that can assist with mitigation. Mitigation work is often made a part of the annual work plans for many of these departments/individuals.

Another way County and City/Village Staff support mitigation is through involvement in various local planning activities and implementation of projects resulting from those plans. In addition to this countywide All Hazards Mitigation Plan, the County, City and Village maintain comprehensive plans that guide development and facilities based on risk and hazard areas. Other County plans include the County Emergency Operations Plan and the Community Health Assessment and Improvement Plan. Adams and Friendship also maintain emergency operations plans, and some departments such as Public Works develop plans to mitigate potential hazards that may affect their water systems.

Adams County, the City of Adams and the Village of Friendship also have regulatory authority for programs that control development to minimize risk and avoid hazard areas. These regulatory authorities include the comprehensive planning law, zoning ordinances (including shoreland and floodplain regulations), subdivision and platting ordinances, and building codes.

Funding for mitigation programs comes primarily through taxing authority, annual County and municipal budgets, and Capital Improvements Programming. However, the County, City and Village often rely on federal and state grant programs for any significant expenditures.

With regard to towns in Adams County, with the exception of Rome which has expanded staff including a police department, capacity is very limited with small budgets and little or no staff. Towns are almost entirely dependent on grant funding or support from outside entities such as the County for any mitigation activities.

Ability to Expand and Improve Mitigation Capabilities

Adams County, the City of Adams and the Village of Friendship have been facing serious budget constraints for years, exacerbated by state-imposed levy limits. As a result, each of the communities is heavily dependent on grant funding. These conditions limit each jurisdiction's ability to expand or improve its mitigation capabilities. Being the smallest, the Village of Friendship has fewer staff to carry the load, and budget conditions restrict the ability of all three jurisdictions to increase staffing levels for mitigation activities.

Similarly, towns in Adams County face serious restrictions on expanding mitigation capabilities. One way they can do this is by working with others such as WDNR on Firewise programming or community wildfire protection plan development and implementation.

PLAN UPDATE EVALUATION AND MAINTENANCE

Planning is an ongoing process. Because of this, this document should grow and adapt in order to keep pace with growth and change of the County and its local jurisdictions. FEMA rules requires that local plans be evaluated and updated at least every five years to remain eligible for assistance.

The Plan will be monitored and evaluated on an annual basis as needed by Emergency Management. The Adams County Emergency Management Director will evaluate incoming information against the contents of the Plan to determine possible need for revisions; and bring that information to the County Public Safety and Judiciary Committee to discuss the evaluation and potential revisions to the Plan as needed. The Emergency Management Director is encouraged to consult/coordinate with the NCWRPC in the event of any revision.

Plan monitoring also includes evaluating and revising following disaster events to determine if the recommended actions are appropriate given the impact of the event. The risk assessment (Part III) should also be reviewed to see if any changes are necessary based on the pattern of disaster damages.

Full updates are required every five years. As a result, every fifth year, the review will be expanded to an overall plan update to meet FEMA requirements. All stakeholders and the public will again be involved in the update process. The County will conduct a survey and open comment meeting. This also provides an opportunity to inform on the progress of any projects.

The County Public Safety and Judiciary Committee and County Board must approve all changes and updates to the Plan.

Appendix A – Meeting Notices

NOTICE/AGENDA

Adams County Board of Supervisors Meeting

May 19, 2026 at 5:00 PM

Adams County Courthouse, Board Room A230, 401 Adams Street, Friendship, WI

Join Zoom Meeting

<https://us02web.zoom.us/j/87684336248?pwd=CkXkSgRraq3Oq8qjfcUdRv9lp14kCi.1>

Meeting ID: 876 8433 6248 Passcode: 469714

Members: 20 County Board of Supervisors / Liana Glavin, County Clerk

Committee of the Whole

1. Call meeting to Order
2. Was the meeting properly announced?
3. Roll Call
4. [Solid Waste and Leachate Treatment Program](#) (Presentation by [Tetra Tech](#))
5. Adjourn

COUNTY BOARD OF SUPERVISORS AGENDA

Immediately following the Committee of the Whole

- 1) Call to order by the chair
- 2) Was the meeting properly noticed?
- 3) Moment of Silence
- 4) Pledge of Allegiance
- 5) Roll Call
- 6) Consent Agenda;
 - a. Agenda
 - b. [April 28, 2026](#) County Board minutes
 - c. [Claims for Supervisor, Per Diem and Expenses](#)
- 7) Public Participation (see instructions below)
- 8) **Ordinances:**

[Ord.#5](#) Rezone multiple parcels (74.27 acres) from A-1 (35) Exclusive Agricultural District, A-1 (15) Exclusive Agricultural District with Farmland Preservation overlay, and R-1 Single-Family Residential District to A-1 (35) Exclusive Agricultural District and A-1 (15) Exclusive Agricultural District property located in the NW ¼ - NW ¼, property located in the NE¼-NW¼, property located in the NW¼- NW¼, SE¼-SW¼, SW¼-NW¼, being lot 1 CSM 4448, property located in the PT SW¼-NW ¼, and property located in the PT SE¼-NW¼, being the West 238.30 ft lot 1 CSM 784, all being in Section 9, Town 14 North, Range 6 East, Town of Dell Prairie, Adams County, WI. 1086 County Rd K.

Public Meeting: Meetings of the County Board and its Committees are public. A quorum of the County Board Supervisors and/or of the members of the County Board's Committees may be present.

Public Participation: It is important that individuals have an opportunity to address the County Board and its Committees as Public Participation. An individual who wishes to speak shall sign-up on the Public Participation sheet before the meeting is called to order. The sign-up sheet must contain their name and address, and indicate which agenda item they wish to speak about. Comments are limited to three (3) minutes, and must relate to an action item on the Agenda. No personal attacks are allowed, and comments must not be profane or vulgar. An individual who wishes to distribute written material during their allotted Public Participation time should bring 23 copies for County Board meetings and approximately 8 copies for Committee meetings. Written material that is distributed should not be read aloud. At County Board meetings, Public Participation is permitted only during the Public Participation portion of the Agenda. At Committee meetings, Public Participation is generally permitted during the portion of the Agenda to which the individual's comments relate. Department Heads and Employees may sign up for Public Participation. If they do not do so, they may only speak upon the invitation of the County Board or Committee Chairperson.

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Members: 20 County Board of Supervisors / Liana Glavin, County Clerk

[Ord.#6](#) Rezone a portion of a parcel (2.6 acres) from B-1 Rural Business District and A-3 Secondary Agricultural District to R-1 Large Lot Single-Family Residential District and a portion of the parcel from B-1 Rural Business District to A-3 Secondary Agricultural District property located in the SE¼-NW¼, EX PC LY SW of Town Road & EX CSM 3296, Section 13, Town 14 North, Range 7 East, Town of New Haven, Adams County, WI. 154 Gillette AVE.

[Ord.#7](#) Rezone a parcel from PR Planned Residential Community District to A-3 (15) Exclusive Agricultural District property located in the SE¼-SE¼, Section 25, Town 17 North, Range 6 East, Town of Adams, Adams County, WI. 2387 7th AVE.

[Ord.#8](#) Rezone a parcel from A-1 (35) Exclusive Agricultural District with Farmland Preservation overlay to A-1 (15) Exclusive Agricultural with Farmland Preservation overlay (29.84 acres) and A-3 Secondary Agricultural District (10 acres) on property located in the SE ¼ - SE ¼, Section 29, Town 18 North, Range 6 East, Town of Preston, Adams County, WI. 1102 Czech Ave.

[Ord.#9](#) Rezone a parcel from R-2 Rural Residential District to R-1 Large Lot Single-Family Residential District on property located in the NW¼-NE¼, Section 17, Town 14 North, Range 7 East, being lot 1 & 2 CSM 1154, Town of New Haven, Adams County, WI. 3810 5th DR.

[Ord.#10](#) Rezone a parcel from R-1 Single-Family Residential District to B-1 Rural Business District on property located in the PT SW¼-SW¼, Section 31, Town 14 North, Range 7 East, being lot 4 CSM 1240, Town of Dell Prairie, Adams County, WI. 4182 State Rd 23.

[Ord.#11](#) Ordinance Amending Enforcement of Tax Liens Ordinance No.06-2025

9) Resolutions:

[Res.#16](#) Resolution to recognize Sheldon Sundsmo for 21 years of service to Adams County

[Res.#17](#) Resolution to recognize Sue Anderson for 2 years of service to Adams County.

[Res.#18](#) Resolution to utilize Opioid Settlement Funds for First Responders Wellness Program

[Res.#19](#) Resolution to approve mining an additional 100,000 tons of materials from the Seven Sisters Quarry during calendar year 2026.

Public Meeting: Meetings of the County Board and its Committees are public. A quorum of the County Board Supervisors and/or of the members of the County Board's Committees may be present.

Public Participation: It is important that individuals have an opportunity to address the County Board and its Committees as Public Participation. An individual who wishes to speak shall sign-up on the Public Participation sheet before the meeting is called to order. The sign-up sheet must contain their name and address, and indicate which agenda item they wish to speak about. Comments are limited to three (3) minutes, and must relate to an action item on the Agenda. No personal attacks are allowed, and comments must not be profane or vulgar. An individual who wishes to distribute written material during their allotted Public Participation time should bring 23 copies for County Board meetings and approximately 8 copies for Committee meetings. Written material that is distributed should not be read aloud. At County Board meetings, Public Participation is permitted only during the Public Participation portion of the Agenda. At Committee meetings, Public Participation is generally permitted during the portion of the Agenda to which the individual's comments relate. Department Heads and Employees may sign up for Public Participation. If they do not do so, they may only speak upon the invitation of the County Board or Committee Chairperson.

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<https://us02web.zoom.us/j/87684336248?pwd=CkXkSgRraq3Oq8qjfcUdRv9lp14kCi.1>

Meeting ID: 876 8433 6248 Passcode: 469714

Members: 20 County Board of Supervisors / Liana Glavin, County Clerk

[Res.#20](#) Resolution to adopt Adams County All Hazards Mitigation Plan Update

[Res.#21](#) Resolution To Amend 2026 Adams County Solid Waste Fund Budget

[Res.#22](#) Initial Resolution Authorizing the Issuance of not to Exceed \$7,000,000

General Obligation Promissory Notes and Declaring Official Intent to Reimburse Expenditures from Proceeds of Such Notes For Water Treatment System Project

11) **Petition:**

[Pet.#1](#) Big Flats culvert aid petition (2027 budget item)

12) **Appointments, Reports and Presentations:**

- a. Appointment of Monica Arndt to the Health and Human Services Board as a Citizen Nurse
- b. [2025 Annual Report Clerk of Circuit Court's](#)
- c. [2025 Annual Report Sheriff's Office](#)
- d. [2025 Annual Report Health & Human Services](#)
- e. SAYL students presented with certificates

13) Set the next meeting date June 23, 2026 and future agenda items.

14) Adjournment

Public Meeting: Meetings of the County Board and its Committees are public. A quorum of the County Board Supervisors and/or of the members of the County Board's Committees may be present.

Public Participation: It is important that individuals have an opportunity to address the County Board and its Committees as Public Participation. An individual who wishes to speak shall sign-up on the Public Participation sheet before the meeting is called to order. The sign-up sheet must contain their name and address, and indicate which agenda item they wish to speak about. Comments are limited to three (3) minutes, and must relate to an action item on the Agenda. No personal attacks are allowed, and comments must not be profane or vulgar. An individual who wishes to distribute written material during their allotted Public Participation time should bring 23 copies for County Board meetings and approximately 8 copies for Committee meetings. Written material that is distributed should not be read aloud. At County Board meetings, Public Participation is permitted only during the Public Participation portion of the Agenda. At Committee meetings, Public Participation is generally permitted during the portion of the Agenda to which the individual's comments relate. Department Heads and Employees may sign up for Public Participation. If they do not do so, they may only speak upon the invitation of the County Board or Committee Chairperson.

MINUTES

Adams County: **Public Safety & Judiciary Committee**

May 14, 2026 | 2:00 PM

The meeting of the Public Safety & Judiciary Committee was called to order by Chair Jay Churco on May 14, 2026 at 2:00 PM. The meeting was properly noticed.

Attendance: Members present: Jay Churco, Mike Baker, Larry Borud, John Dolezal and Robert Them.

Others in Attendance: County Administrator; Cynthia Haggard, Clerk of Court; Miranda Christensen, Emergency Management Director; Jane Lentz-Gervais, North Central Wisconsin Regional Planning Commission Senior Planner; Darryl Landeau, Sheriff; Brent York, Child Support; Janet Leja, Finance Director; Kyle Patterson and Deputy County Clerk; Connie Perik.

Absent: Medical Examiner; Bethany Spaw and District Attorney; Rebecca Maki-Wallander

Agenda was approved on a motion by Borud, seconded by Baker. Motion carried by unanimous voice vote.

Minutes. The [March 11, 2026](#) minutes were approved on a motion by Baker, seconded by Borud. Motion carried by unanimous voice vote.

There was no Public Participation.

Clerk of Court; Miranda Christensen presented the [2025 Annual Report for the Clerk of Court's](#). Report approved on a motion by Baker, seconded by Borud. Motion carried by unanimous voice vote.

North Central Wisconsin Regional Planning Commission Senior Planner; Darryl Landeau presented the [Resolution to adopt Adams County All Hazards Mitigation Plan Update](#). Resolution approved on a motion by Borud, seconded by Baker. Motion carried by unanimous voice vote.

Sheriff; Brent York presented the [2025 Annual Report for the Sheriff's Office](#). Report approved on a motion by Baker, seconded by Dolezal. Motion carried by unanimous voice vote.

Monthly Reports: The following reports were presented: [Project Status](#), [District Attorney](#), [Clerk of Circuit Court](#), [Child Support](#), [Emergency Management](#), [Medical Examiner](#), [Register in Probate](#), and the [Sheriff](#).

The next meeting date: June 10, 2026 at 3:00 PM

Adjournment: The meeting adjourned at 2:39 PM.

After the meeting Sheriff Brent York gave the following people a Jail Tour: PS&J Chair District 1; Jay Churco, District 8; John Dolezal, District 14; Robert Them, and Deputy County Clerk; Connie Perik.

Respectfully submitted,

Connie Perik, Deputy County Clerk

THESE MINUTES HAVE NOT BEEN APPROVED BY THE COMMITTEE.

NOTICE/AGENDA

Adams County: **Public Safety & Judiciary Committee**

May 14, 2026 at 2:00 PM

Adams County Courthouse, Board Room A230, 401 Adams Street, Friendship, WI

Join Zoom Meeting

<https://us02web.zoom.us/j/84824014773?pwd=E1KwSxniGZ62W9pUgyEaAix3J42ZBb.1>

Meeting ID: 848 2401 4773 Passcode: 190650

Members: Jay Churco, Chair, Mike Baker, Vice Chair, Larry Borud, John Dolezal, Robert Them

1. Call to Order by the Chair;
2. Was the meeting properly noticed?
3. Roll Call;
4. Consent Agenda;
 - a. Agenda;
 - b. Minutes of [March 11, 2026](#)
5. Public Participation;
6. Discuss and/or act on:
 - a. [2025 Annual Report for the Clerk of Court's](#)
 - b. [Resolution to adopt Adams County All Hazards Mitigation Plan Update](#)
 - c. [2025 Annual Report for the Sheriff's Office](#)
7. Monthly Reports & Financials
 - a. [Project Status](#);
 - b. [Child Support](#);
 - c. [Clerk of Circuit Court](#);
 - d. Circuit Court;
 - e. [Medical Examiner](#);
 - f. [District Attorney](#);
 - g. [Emergency Management](#);
 - h. Office of the Family Court Commissioner;
 - i. [Register in Probate](#); and
 - j. [Sheriff](#).
8. Next meeting date and any approved agenda items
9. Jail Tour (Immediately following Adjournment)
10. Adjournment

Public Meeting: Meetings of the County Board and its Committees are public. A quorum of the County Board Supervisors and/or of the members of the County Board's Committees may be present.

Public Participation: It is important that individuals have an opportunity to address the County Board and its Committees as Public Participation. An individual who wishes to speak shall sign-up on the Public Participation sheet before the meeting is called to order. The sign-up sheet must contain their name and address, and indicate which agenda item they wish to speak about. Comments are limited to three (3) minutes, and must relate to an action item on the Agenda. No personal attacks are allowed, and comments must not be profane or vulgar. An individual who wishes to distribute written material during their allotted Public Participation time should bring 23 copies for County Board meetings and approximately 8 copies for Committee meetings. Written material that is distributed should not be read aloud. At County Board meetings, Public Participation is permitted only during the Public Participation portion of the Agenda. At Committee meetings, Public Participation is generally permitted during the portion of the Agenda to which the individual's comments relate. Department Heads and Employees may sign up for Public Participation. If they do not do so, they may only speak upon the invitation of the County Board or Committee Chairperson.

MINUTES

Adams County: **Public Safety & Judiciary Committee**

March 11, 2026 | 10:00 AM

The meeting of the Public Safety & Judiciary Committee was called to order by Chair Rick Pease on March 11, 2026 at 10:00 AM. The meeting was properly noticed. The Pledge of Allegiance was said.

Attendance: Members present: Rick Pease, Bob Grabarski, Jay Churco and Larry Borud. Online: Michael Baker

Others in Attendance: County Administrator; Cynthia Haggard, Clerk of Court; Miranda Christensen, Emergency Management Director; Jane Lentz-Gervais, Sheriff; Brent York, Chief Deputy; Kyle Johnson, Child Support; Janet Leja, Child Support; Kaylee Lemki, Medical Examiner; Bethany Spaw, District Attorney; Rebecca Maki-Wallander, Attorney; Jennifer Zima, and Deputy County Clerk; Connie Perik.

Online: North Central Wisconsin Regional Planning Commission Senior Planner; Darryl Landeau

Agenda was approved on a motion by Grabarski, seconded by Churco. Motion carried by unanimous voice vote.

Minutes. The [January 14, 2026](#) minutes were approved on a motion by Grabarski, seconded by Churco. Motion carried by unanimous voice vote.

There was no Public Participation.

NCWRPC Senior Planner; Darryl Landeau discussed the [All Hazard Mitigation Plan Update from North Central Wis. Regional Planning Commission](#)

Monthly Reports: The following reports were presented: [Project Status](#), [District Attorney](#), [Clerk of Courts](#), [Child Support](#), [Emergency Management](#), [Medical Examiner](#), and the [Sheriff's Office](#).

The next meeting date: To Be Determined.

Adjournment: The meeting adjourned at 10:28 AM.

Respectfully submitted,

Connie Perik, Deputy County Clerk

THESE MINUTES HAVE NOT BEEN APPROVED BY THE COMMITTEE.

AGENDA

Adams County: **Public Safety & Judiciary Committee**

March 11, 2026 / 10:00 AM

Adams County Courthouse, Room A230, 401 Adams Street, Friendship

Join Zoom Meeting

<https://us02web.zoom.us/j/84824014773?pwd=E1KwSxnjGZ62W9pUgyEaAix3J42ZBb.1>

Meeting ID: 848 2401 4773 Passcode: 190650

Members: Rick Pease; Chair, Bob Grabarski; Vice Chair, Michael Baker, Jay Churco, Larry Borud

1. Call to Order by the Chair;
2. Was the meeting properly noticed?
3. Pledge of Allegiance;
4. Roll Call;
5. Approve the agenda;
6. Approve minutes of [January 14, 2026](#)
7. Public Participation;
8. Discuss and/or act on:
 - a. All Hazard Mitigation Plan Update from North Central Wis. Regional Planning Commission
8. Reports:
 - a. [Project Status](#)
 - b. District Attorney
 - c. Clerk of Courts
 - d. Child Support
 - e. Emergency Management
 - f. Medical Examiner
 - g. Sheriff's Office
9. Next meeting date and any approved agenda items
10. Adjournment

Any person wishing to attend, who, because of a disability, requires special accommodation should contact the County Clerk's Office, at 608-339-4200 where they may call at least twenty-four (24) hours before the scheduled meeting time so appropriate arrangements can be made. This meeting is a public meeting. As such, all members or a majority of the members of the County Board may be in attendance. Public participation is limited to agenda items with a three (3) minute limitation.

Public Participation. It is important that individuals have an opportunity to address the County Board and the Committee at meetings as PUBLIC PARTICIPATION. Individuals shall sign their name, address, and indicate the agenda item on which he/she will be speaking at the time of the agenda item. The individual's name will be called when it is their turn to speak, on the related agenda item, at the time of the agenda item. State clearly and concisely the issue. Comments will be limited to a maximum of THREE (3) MINUTES, unless additional time is approved by the Chair, and must be an action item to the agenda. (If you have written material, please provide copies. It is not necessary to read an entire document.) Department heads and employees are entitled to speak at a meeting only upon the invitation of the Board Chair. NO PERSONAL ATTACKS are allowed and comments must not be profane or vulgar.

MINUTES

Adams County: **Public Safety & Judiciary Committee**

November 12, 2025 | 10:00 AM

The meeting of the Public Safety & Judiciary Committee was called to order by Chair Rick Pease on November 12, 2025 at 10:00 AM. The meeting was properly noticed. The Pledge of Allegiance was said.

Attendance: Members present: Rick Pease, Bob Grabarski, Michael Baker, Jay Churco, and Larry Borud.

Others in Attendance: County Administrator; Cynthia Haggard, Corporation Counsel; Nancy Thome, Finance Director; Kyle Patterson, Clerk of Court; Miranda Christensen, Medical Examiner; Bethany Spaw, Emergency Management Director; Jane Lentz-Gervais, Sheriff; Brent York, Chief Deputy; Kyle Johnson, Child Support; Janet Leja, North Central Wisconsin Regional Planning Commission Senior Planner; Darryl Landeau and Deputy County Clerk; Connie Perik.

Online: Melissa and Bill Pegler.

Agenda was approved on a motion by Baker, seconded by Borud. Motion carried by unanimous voice vote.

Minutes. The [October 8, 2025](#) minutes were approved on a motion by Grabarski, seconded by Churco. Motion carried by unanimous voice vote.

There was no Public Participation.

Finance Director; Kyle Patterson and Sheriff Brent York presented the [Inmate Food Service Proposals](#). Motion by Baker, seconded by Borud to accept Sheriff York's recommendation to go with the new Consolidated Food Service for the jail. Motion carried by a unanimous voice vote.

Emergency Management Director; Jane Lentz-Gervais introduced North Central Wisconsin Regional Planning Commission Senior Planner; Darryl Landeau presented the [All Hazards Mitigation Plan from North Central Wisconsin Regional Planning Commission](#) that included the current Hazard Priority Ranking. Motion by Grabarski, seconded by Borud to approve the Hazard Priority Ranking that was presented. Motion carried by a unanimous voice vote.

Monthly Reports: The following reports were presented: [Project Status](#), Clerk of Court; Miranda Christensen highlighted the Wisconsin Court System has established an Artificial Intelligence Committee and she has accepted the invitation to join. [District Attorney](#), [Clerk of Courts](#), [Child Support](#), [Emergency Management](#), [Medical Examiner](#), and the [Sheriff's Office](#). Sheriff York gave a verbal update on Three Bridges Programming.

The next meeting date: December 10, 2025 at 9:00 AM.

Adjournment: The meeting adjourned at 10:37 AM.

Respectfully submitted,

Connie Perik, Deputy County Clerk

THESE MINUTES HAVE BEEN APPROVED BY THE COMMITTEE.

AGENDA

Adams County: **Public Safety & Judiciary Committee**

November 12, 2025 / 10:00

AM

Adams County Courthouse, Room A230, 401 Adams Street, Friendship

Join Zoom Meeting

<https://us02web.zoom.us/j/84824014773?pwd=E1KwSxnjGZ62W9pUgyEaAix3J42ZBb.1>

Meeting ID: 848 2401 4773 Passcode: 190650

Members: Rick Pease; Chair, Bob Grabarski; Vice Chair, Michael Baker, Jay Churco, Larry Borud

1. Call to Order by the Chair;
2. Was the meeting properly noticed?
3. Pledge of Allegiance;
4. Roll Call;
5. Approve the agenda;
6. Approve minutes of [October 8, 2025](#)
7. Public Participation;
8. Discuss and/or act on:
 - a. [Inmate Food Service Proposals](#)
 - c. [Update on All Hazards Mitigation Plan from North Central Wisconsin Regional Planning Commission](#)
 - d. Hazard Ranking
9. Reports:
 - a. [Project Status](#)
 - b. [District Attorney](#)
 - c. [Clerk of Courts](#)
 - d. [Child Support](#)
 - e. [Emergency Management](#)
 - f. [Medical Examiner](#)
 - g. [Sheriff's Office](#)
10. Next meeting date and any approved agenda items
11. Adjournment

Any person wishing to attend, who, because of a disability, requires special accommodation should contact the County Clerk's Office, at 608-339-4200 where they may call at least twenty-four (24) hours before the scheduled meeting time so appropriate arrangements can be made. This meeting is a public meeting. As such, all members or a majority of the members of the County Board may be in attendance. Public participation is limited to agenda items with a three (3) minute limitation.

Public Participation. It is important that individuals have an opportunity to address the County Board and the Committee at meetings as PUBLIC PARTICIPATION. Individuals shall sign their name, address, and indicate the agenda item on which he/she will be speaking at the time of the agenda item. The individual's name will be called when it is their turn to speak, on the related agenda item, at the time of the agenda item. State clearly and concisely the issue. Comments will be limited to a maximum of THREE (3) MINUTES, unless additional time is approved by the Chair, and must be an action item to the agenda. (If you have written material, please provide copies. It is not necessary to read an entire document.) Department heads and employees are entitled to speak at a meeting only upon the invitation of the Board Chair. NO PERSONAL ATTACKS are allowed and comments must not be profane or vulgar.

10/21, HAZARD MITIGATION PLAN

Affidavit of Publication

STATE OF WISCONSIN} SS
COUNTY OF ADAMS}

Jennifer L. Klepper, being duly sworn, says:

That she is an authorized representative of the Adams-Friendship Times-Reporter, a weekly newspaper of general circulation, printed and published in Adams, Adams County, Wisconsin; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:

10/1/2025, 10/8/25

That said newspaper was regularly issued and circulated on those dates.

SIGNED:

Jennifer L. Klepper

Subscribed to sworn to me this 10/9/2025

A.L. Henning

A. L. Henning, Notary Public, State of Wisconsin.

My Commission Expires January 31, 2029

Printers Fee: \$ 54.50

See Monthly Statement for Cost _____
Received Payment X _____

102465 159153

NORTH CENTRAL WI REG PLANNING COMM

210 McCLELLAN ST STE 210
WAUSAU, WI 54403

**ADAMS COUNTY
ALL HAZARDS MITIGATION PLAN
PUBLIC INFORMATIONAL MEETING**

Notice is hereby given by the Adams County Emergency Management Department that there will be a public informational meeting at the Adams County Community Center - Room 145B in Adams, 569 N. Cedar St., Adams, WI on Tuesday, October 21, 2025 beginning at 5:30 p.m. to discuss the updating of the County's All Hazards Mitigation Plan.

The meeting will be an open house format and will provide information about natural hazards that can affect the County and the strategies being developed to mitigate against future losses and reduce public expenditure for response and recovery. For information on the Adams County Hazard Mitigation Plan visit <https://www.ncwrpc.org/adams-county-all-hazards-mitigation-plan-update-2025/> If you are unable to attend the meeting you may provide comments at staff@ncwrpc.org.

All interested parties are encouraged to attend. Please contact the Adams County Emergency Management Director, Jane Lentz-Gervais at jane.gervais@co.adams.wi.us for more information.

Publish: 10/1/25, 10/8/25 **WNAXLP**



Adams County All Hazards Mitigation Plan Update

Agency and Interest Group Meeting SIGN-IN

October 21, 2025 – 2:30 PM

	Name	Department/Organization	Email
1	Jane M. Lentz-Gervais	Adams Cty. Emergency Management	emmgmt@co.adams.wi.us
2	Alex Grubbs	Friendship DNR	alex.grubbs@wisconsin.gov
3	MARK KANE	Rome Fire	kane@romewi.gov
4	Eric D. Johnson	Adams-Columbia Electric Coop	ejohnson@acedwi.com
5	Zac Wilkonski	Enbridge - Emergency Response	zac.wilkonski@enbridge.com
6	Dustin Grant	Adams Cty Zoning	dustin.grant@co.adams.wi.us
7	Michelle Orzech	FCI Oxford	morzech@bop.gov
8	Kyle Brosh	FCI OXFORD	Kbrosh@bop.gov
9	Erin Kobylski	HHS-Adams County	erickobylski@co.adams.wi.us
10	ODY PRZYBYSKI	Public Health Officer	ody.przybyski@co.adams.wi.us
11	Tammy KINGERY	Emplify Health by Gundersen	Tkingery@Emplifyhealth.org
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NORTH CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION



210 McClellan Street, Suite 210, Wausau, Wisconsin 54403
Telephone: (715) 849-5510 Fax: (715) 849-5110
Web Page: www.ncwrpc.org Email: staff@ncwrpc.org

SERVING ADAMS, FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, ONEIDA, PORTAGE, VILAS AND WOOD COUNTIES

MEMORANDUM

TO: Government agencies, County department staff, and other private or non-profit organizations within Adams County
FROM: Darryl L. Landeau, AICP: Senior Planner *DLL*
DATE: September 22, 2025
RE: Adams Co. All-Hazards Mitigation Plan Update Interest Group Meeting Notice

Adams County has received a grant through the Federal Emergency Management Agency (FEMA) to complete an update of its All-Hazards Mitigation Plan to protect the health and safety of residents from the impacts of natural hazards and to minimize and prevent damages caused by these events. The North Central Wisconsin Regional Planning Commission (NCWRPC) is assisting Adams County with this plan.

As a requirement of the planning process, an opportunity must be provided to local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as business, academia and private and non-profit interests to be involved. To meet this requirement, a stakeholder / interest group meeting is scheduled for the following date and place:

When: Tuesday, October 21, 2025 at 2:30 p.m.
Where: Adams County Community Center – Room 145B
569 N. Cedar Street, Adams, WI

In addition to meeting FEMA requirements, this meeting will be a way to gather ideas on how to safeguard the residents and visitors of Adams County and protect property in the event of natural disasters. Since you live and/or do business in or around Adams County, your input in this process is very valuable.

Please call or email me if you have any questions regarding this meeting. My number is 715-849-5510 ext. 308, and my email is dlandeau@ncwrpc.org. Or, contact Jane Lentz-Gervais, the County's Emergency Management Director at 608-339-4248 or jane.gervais@co.adams.wi.us. I highly encourage at least one staff person from your department or agency with responsibilities relating to or potentially impacted by natural hazards / disaster to attend.

Thank you.

Rob Larsen, CEO
Allied Cooperative
P.O. Box 729
Adams, WI 53910

Colton Wolosek
Adams Co. Land Conservation
401 Adams St., Ste 4
Friendship, WI 53934

Adams County Parks
P.O. Box 196
Friendship, WI 53934

Adams Co. Chamber of Commerce
PO Box 295
Friendship, WI 53934

Daric Smith, Executive Director
Adams County EDC
P.O. Box 236
Friendship, WI 53934

Pat Wagner, Director
Adams Co. UW-Extension
569 N. Cedar Street, Suite 3
Adams, WI 53910

Adams County Housing Authority
PO Box 48
Adams, WI 53910

Cody Przybylski
Adams Co. Public Health Officer
108 E. North St.
Friendship, WI 53934

Karen Terry, Administrator
City of Wisconsin Dells
300 La Crosse St.
Wisconsin Dells, WI 53965

Tom Wermuth, Administrator
AF Area School District
201 W 6th Street
Friendship, WI 53934

Frank Perez-Guerra, Administrator
Gundersen Moundview Hospital
P.O. Box 40
Friendship, WI 53934

LifeStar Emergency Medical Serv.
279 S. 17th Avenue Ste B
West Bend, WI 53095

John West, Chair
Adams Co. Board
401 Adams St., Ste 9
Friendship, WI 53934

Cynthia Haggard, Administrator
Adams County
401 Adams St., Ste 10
Friendship, WI 53934

Pat Kotlowski, Commissioner
Adams Co. Hwy Dept.
1342 County Road F
Adams, WI 53910

Rodger Lauritzen
Adams Co. Fire District
399 E Ann Street
Adams, WI 53910

Chief Kim Schmidt
Big Flats Fire Department
1108 County Road C
Arkdale, WI 54613

Coloma Fire Department
ATTN: Fire Chief
383 N. Industrial Drive
Coloma, WI 54930

Hancock Fire Department
ATTN: Fire Chief
P.O. Box 199
Hancock, WI 54943-0199

Chief Duncan Waite
New Chester Fire Department
P.O. Box 64
Grand Marsh, WI 53936-0064

Chief Jason Zacharias
Oxford Fire Department
P.O. Box 221
Oxford, WI 53952

Plainfield Fire Department
ATTN: Fire Chief
P.O. Box 352
Plainfield, WI 54966-0352

Garin Gavinski
Chief, Quincy Fire Department
2599 County Road Z
Friendship, WI 53934

Chief Mark Kane
Rome Fire Department
1156 Alpine Drive
Nekoosa, WI 54457

Sara Niles, Administrator
Villa Pines Nursing Home
201 S Park St
Friendship WI 53934

Kilbourn Fire Department
ATTN: Fire Chief
712 Oak St.
Wisconsin Dells, WI 53965

Friendship Ranger Station
Dept. of Natural Resources
P.O. Box 100
Friendship, WI 53934

Sheriff Brent York
Adams Co. Sheriff's Office
401 Adams St., Ste 1
Friendship, WI 53934

Michael Kaminski
Chula Vista Resort
1000 Chula Vista Parkway
Wisconsin Dells WI 53965

FCI Oxford Federal Correctional Institution
ATTN: Emergency Preparedness
P.O. Box 500
Oxford, WI 53952

Donna Richards, Manager
Adams County ADRC
569 N. Cedar St., Suite 4
Adams, WI 53910

Kelly Oleson, Director
Adams County HHS
108 E. North St.
Friendship, WI 53934

Dustin Grant, Director
Adams County Planning & Zoning
401 Adams St., Ste 4
Friendship, WI 53934

Marquette Adams Telephone Co.
PO Box 45
Oxford WI 53952

Alliant Energy
338 E State St
Mauston WI 53948

Adams-Columbia Electric Coop
P.O. Box 70
Friendship, WI 53934

WE Energies
1921 8th St. S.
Wisconsin Rapids WI 54494

Enbridge Community Engagement
119 North 25th St., East
Superior, WI 54880

Enbridge/Lakehead Pipeline
4898 Young Rd
Vesper WI 54489

Adams County All Hazards Mitigation Plan Update

Village of Friendship Planning Meeting SIGN-IN

October 13, 2025 – 2:30 PM

	Name	Title	Department
1	Rebecca Reuter	Clerk	Office
2	Jenny Sonnenberg	President	Office
3	Beth Schultz	Public Works Director	Public Works
4	Jane Lentz-Gervais	Emergency Management Director	Emergency Management
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Adams County All Hazards Mitigation Plan Update

City of Adams Planning Meeting SIGN-IN

October 13, 2025 - 1:00 PM

	Name	Title	Department
1	Justin Adams	Mayor	City of Adams
2	Jane Lentz-Gervais	EM Director	Emergency Management
3	Serri Sohnsen	Deputy Clerk/Treasurer	
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MINUTES

Adams County: **Public Safety & Judiciary Committee**

June 11, 2025 | 9:00 AM

The meeting of the Public Safety & Judiciary Committee was called to order by Chair Rick Pease on June 11, 2025 at 9:00 AM. The meeting was properly noticed.

Attendance. Members present: Rick Pease, Bob Grabarski, Jay Churco, Larry Borud, and Michael Baker.

Others in Attendance. Cynthia Haggard, County Administrator, Kyle Patterson, Finance Director, Jane Lentz-Gervais, Emergency Management Director, Bethany Spaw, Medical Examiner, Sheriff Brent York, Chief Deputy Kyle Johnson, Darryl Landeau; AICP Senior Planner and Christian Boulanger both of North Central Wis Regional Planning Commission.

Agenda was approved on a motion by Baker, seconded by Borud. Motion carried by unanimous voice vote.

Minutes. The [April 9, 2025](#) minutes were approved by a unanimous voice vote on a motion by Grabarski, seconded by Churco.

There was no Public Participation.

Motion by Baker/Churco to recommend to the County Board the [Sheriff's Office 2024 Annual](#) report. Motion carried by unanimous voice vote.

Motion by Grabarski/Borud to approve the policy presented by Bethany Spaw, Medical Examiner for [Out-of-County Use of Medical Examiner Office Vehicles](#). Motion carried by unanimous voice vote.

The North Central Wis Regional Planning Commission, Darryl Landeau; AICP Senior Planner, presented the [County Mitigation Plan Update](#) and provided these handouts.

Monthly Reports: The following reports were presented: [Project Status](#), [District Attorney](#), [Clerk of Courts](#), [Child Support](#), [Emergency Management](#), [Medical Examiner](#) and the [Sheriff's Office](#). Sheriff Brent York gave a K-9 Program Update.

The next meeting date: July 9, 2025 at 9:00 AM and will include the Jail Tour.

Adjournment: The meeting adjourned at 9:42 AM.

Respectfully submitted, Liana Glavin, County Clerk

THESE MINUTES HAVE BEEN APPROVED BY THE COMMITTEE.

AGENDA

Adams County: **Public Safety & Judiciary Committee**

June 11, 2025 / 9:00 AM

Adams County Courthouse, Room A230, 401 Adams Street, Friendship

Join Zoom Meeting

<https://us02web.zoom.us/j/84824014773?pwd=E1KwSxnjGZ62W9pUgyEaAix3J42ZBb.1>

Meeting ID: 848 2401 4773 Passcode: 190650

Members: Rick Pease, Chair, Bob Grabarski, Vice Chair, Michael Baker, Jay Churco, Larry Borud

1. Call to Order by the Chair;
2. Was the meeting properly noticed?
3. Pledge of Allegiance;
4. Roll Call;
5. Approve the agenda;
6. Approve minutes of [April 9, 2025](#)
7. Public Participation;
8. Reports; [Sheriff's Office 2024 Annual](#)
9. Discuss and/or act on:
 - a. [Office Vehicle use Policy](#) (Medical Examiner)
 - b. County Mitigation Plan Update(North Central Wis. Regional Planning Commission) (Emergency Management)
10. Reports:
 - a. [Project Status](#)
 - b. [District Attorney](#)
 - c. [Clerk of Courts](#)
 - d. [Child Support](#)
 - e. [Emergency Management](#)
 - f. [Medical Examiner](#)
 - g. [Sheriff's Office](#)
 - K-9 Program Update
11. Next meeting date and any approved agenda items
12. Adjournment

Any person wishing to attend, who, because of a disability, requires special accommodation should contact the County Clerk's Office, at 608-339-4200 where they may call at least twenty-four (24) hours before the scheduled meeting time so appropriate arrangements can be made.

This is a public meeting. As such, all members or a majority of the members of the County Board may be in attendance. Public participation is limited to agenda items with a three (3) minute limitation.

Public Participation. It is important that individuals have an opportunity to address the County Board and the Committee at meetings as PUBLIC PARTICIPATION. Individuals shall sign their name, address, and indicate the agenda item on which he/she will be speaking at the time of the agenda item. The individual's name will be called when it is their turn to speak, on the related agenda item, at the time of the agenda item. State clearly and concisely the issue. Comments will be limited to a maximum of THREE (3) MINUTES, unless additional time is approved by the Chair, and must be an action item to the agenda. (If you have written material, please provide copies. It is not necessary to read an entire document.) Department heads and employees are entitled to speak at a meeting only upon the invitation of the Board Chair. NO PERSONAL ATTACKS are allowed and comments must not be profane or vulgar.

Appendix B – Resolutions of Plan Update Adoption

RESOLUTION # 20-2026

ADOPTING THE ADAMS COUNTY ALL HAZARDS MITIGATION PLAN UPDATE

WHEREAS, Adams County recognizes the threat that natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted all hazards mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, all hazard mitigation plans are required to be updated every 5-years; and

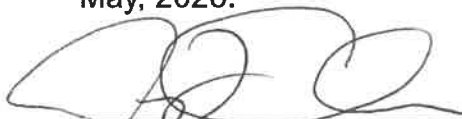
WHEREAS, the County of Adams adopted the last 5-year All Hazards Mitigation Plan Update on August 18, 2020; and

WHEREAS, Adams County participated jointly in the planning process with the other local units of government within the County to prepare an update to its All Hazards Mitigation Plan;

NOW, THEREFORE, BE IT RESOLVED, that the Adams County Board of Supervisors, hereby adopts the Adams County All Hazards Mitigation Plan Update as an official plan; and

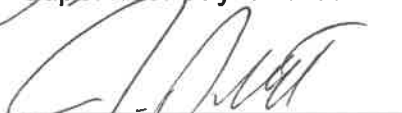
BE IT FURTHER RESOLVED, that the Adams County Emergency Management Department will submit, on behalf of the participating municipalities, the adopted All Hazards Mitigation Plan Update to Wisconsin Emergency Management and Federal Emergency Management Agency officials for final review and approval.

Recommended for adoption by the Public Safety & Judiciary Committee this 14th day of May, 2026.


Supervisor Jay Churco


Supervisor Mike Baker


Supervisor Larry Borud


Supervisor John Dolezal


Supervisor Robert Theim

Adopted: 0
Defeated: by the Adams County Board of Supervisors this 19th day of May, 2026.
Tabled:



County Board Chair, Rick Pease



County Clerk, Liana Glavin

X Reviewed by Corporation Counsel (NT 5/11/2026)
X Reviewed by County Administrator (CH 5/12/2026)

RESOLUTION # _____

ADOPTING THE ADAMS COUNTY ALL HAZARDS MITIGATION PLAN UPDATE

WHEREAS, the City of Adams recognizes the threat that natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted all hazards mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, all hazard mitigation plans are required to be updated every 5-years; and

WHEREAS, the City of Adams adopted the last update of the All Hazards Mitigation Plan on September 21, 2020; and

WHEREAS, the City of Adams participated jointly in the planning process with Adams County and the other local units of government within the County to prepare an update to the county-wide All Hazards Mitigation Plan;

NOW, THEREFORE, BE IT RESOLVED, that the City of Adams Common Council, hereby adopts the Adams County All Hazards Mitigation Plan Update as an official city plan; and

BE IT FURTHER RESOLVED, that the Adams County Emergency Management Department will submit, on behalf of the City of Adams, the adopted All Hazards Mitigation Plan Update to Wisconsin Emergency Management and Federal Emergency Management Agency officials for final review and approval.

PASSED:_____.

Certifying Official

RESOLUTION # _____

ADOPTING THE ADAMS COUNTY ALL HAZARDS MITIGATION PLAN UPDATE

WHEREAS, the Village of Friendship recognizes the threat that natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted all hazards mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, all hazard mitigation plans are required to be updated every 5-years; and

WHEREAS, the Village of Friendship adopted the last update of the All Hazards Mitigation Plan on September 14, 2020; and

WHEREAS, the Village of Friendship participated jointly in the planning process with Adams County and the other local units of government within the County to prepare an update to the county-wide All Hazards Mitigation Plan;

NOW, THEREFORE, BE IT RESOLVED, that the Village of Friendship Board of Trustees, hereby adopts the Adams County All Hazards Mitigation Plan Update as an official village plan; and

BE IT FURTHER RESOLVED, that the Adams County Emergency Management Department will submit, on behalf of the Village of Friendship, the adopted All Hazards Mitigation Plan Update to Wisconsin Emergency Management and Federal Emergency Management Agency officials for final review and approval.

PASSED:_____.

Certifying Official

RESOLUTION # _____

ADOPTING THE ADAMS COUNTY ALL HAZARDS MITIGATION PLAN UPDATE

WHEREAS, The Town of _____ recognizes the threat that natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted all hazards mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, all hazard mitigation plans are required to be updated every 5-years; and

WHEREAS, The Town of _____ participated jointly in the planning process with the other local units of government within the County to prepare an update to its All Hazards Mitigation Plan;

NOW, THEREFORE, BE IT RESOLVED, that the Town of _____ Board of Supervisors, hereby adopts the Adams County All Hazards Mitigation Plan Update as an official plan; and

BE IT FURTHER RESOLVED, that the Adams County Emergency Management Department will submit, on behalf of the participating municipalities, the adopted All Hazards Mitigation Plan Update to Wisconsin Emergency Management and Federal Emergency Management Agency officials for final review and approval.

PASSED:_____.

Certifying Official

Appendix C – Sample Functional Needs Form

Juneau County Functional Needs Evacuation Registry Application

The purpose of this "Functional Needs Evacuation Registry" is to provide emergency responders in your municipality with important information for individuals who may require assistance with **Evacuation, Emergency Notification, or Emergency Response** during an emergency, such as tornado, flood, blizzard, and power outage or disease outbreak.

Application Date _____ New Application Update Application

PERSONAL INFORMATION

Last Name	First Name, MI	Date of Birth	Sex
Street Address	City or Village		Zip Code
Township	Name of Subdivision, Mobile Home Park, Apartment Building, etc.		
Primary Phone	Alternate Phone	Primary Language	

EMERGENCY CONTACT INFORMATION

Last Name	First Name	Phone
Last Name	First Name	Phone

EVACUATION INFORMATION

Will you require <i>specialized</i> vehicle transportation to a shelter in an emergency	___yes	___no
If so, identify which vehicle types you can ride in.		
<input type="checkbox"/> bus or van with wheelchair lift <input type="checkbox"/> ambulance <input type="checkbox"/> bariatric transport		

FUNCTIONAL OR PHYSICAL NEEDS IMPACTING EVACUATION

	Wheelchair bound		Portable Oxygen or Oxygen Concentrator	Developmentally Disabled
	Bedridden		Ventilator	Socially Impaired
	Walker, canes, crutches		Suction	Psychologically Impaired
	Hearing Impaired		CPAP	Other:
	Visually Impaired		Necessary medications	Other:

ADDITIONAL INFORMATION

PREPARATION

The CODE RED community notification system will send me alerts concerning time-sensitive and/or emergency information that will impact my area, so I may start my personal emergency plan. () I choose to opt out.

AUTHORIZATION

I (or legal guardian) agree that my information will be added to the Functional Needs Registry. I give my municipality and Juneau County authorization to share this information with community emergency responders in the event of an emergency to facilitate an effective evacuation or emergency response. I grant emergency responders permission to enter my home during or following an emergency event or disaster situation if necessary to assist with my safety and welfare.

Applicant Signature	Date
Authorized Guardian Signature	Date

Mail completed form to: Juneau County Health Department, 200 Hickory St, Mauston, WI 53948.
For questions regarding this form or program, contact Mary Crowley, JCHD Preparedness Coordinator, at 608-847-9588.