AGENDA

Jefferson County Hazard Mitigation Plan Steering Committee Meeting

October 24, 2024, 11:00a.m.

Jefferson County Emergency Management Office 107 E Washington St. Jefferson, WI 53549

OR

Virtual log in: Microsoft Teams Join the meeting now

Meeting ID: 224 779 583 142 Passcode: Jeqpno

- 1. Introductions
- 2. Certification of compliance with open meetings law
- 3. Public comment (Members of the public who wish to address the committee on specific agenda items must register their request at this time; there will be a two (2) minute limit)
- 4. Approval of Minutes from September 30, 2024
- 5. Discussion on Survey and Results
- 6. Review selected parts of plan to confirm/revise
- 7. Upcoming committee tasks
- 8. Timeline for Hazard Mitigation Plan completion
- 9. Feedback and questions
- 10. Set date and time for next meeting- *if needed*
- 11. Adjourn



Jefferson County Emergency Management Natural Hazards Mitigation Plan Steering Committee Minutes

Date: September 30, 2024

- I. Call to Order: Meeting called to order at 6:03 p.m. by Tracy Hameau, Jefferson County Emergency Management Director.
- **II. Roll Call and Introductions:** Tracy Hameau, Tracy Neuhauser, Chief Ben Patterson, Chief Tanya Reynen, Todd Lindert, Sabrina Ojibway, Brian Udovich, Laura Payne, Tim Schwecke, Drake Daley
- **III.** Certification of Compliance with open meetings law: Meeting in compliance with open meeting laws.
- **IV.** Approval of the agenda: The agenda was approved as presented.
- V. Public Comment: None
- VI. Project Description: Tim Schwecke, Civitek LLC, provided an overview of what the Natural Hazards Mitigation Plan is and how Jefferson County Emergency Management is in the process of updating their plan. The Jefferson County Hazard Mitigation plan is updated every five years.
- VII. Steering Committee discussion and possible action on forming a Steering Committee: County Emergency Management Director Hameau discussed during this initial meeting that if you would like be on the Steering committee, please acknowledge. Steering committee roles were discussed and committee was formed.
 - a) **Steering Committee members:** Tracy Hameau, Tracy Neuhauser, Brian Udovich, Laura Payne, Benjamin Patterson, Steve Schroeder, Drake Daley, Tanya Reynen, Todd Lindert, Sabrina Ojibway
- VIII. Project Timeline: Discussed history of the Hazard Mitigation Plans and when new plan will be completed.
 - **IX. Upcoming Committee tasks:** Tim Schwecke confirms the priorities of the Jefferson County Hazard Mitigation Steering Committee.
 - X. Feedback and Questions: None



Jefferson County Emergency Management Natural Hazards Mitigation Plan Steering Committee Minutes

- **XI. Proposed next meeting date:** October 17, 2024. Meeting to be held virtually and in person at Jefferson County Emergency Management Emergency Operations Center (EOC).
- **XII.** Discussion on potential items for the next meeting agenda: Hazard Mitigation Materials for the second meeting will be sent out with Calendar invite for review. Hazard Mitigation Plan Survey to be sent out and completed prior to next meeting.
- XIII. Adjourn: A motion made by Tracy Hameau to adjourn at 7:00 p.m., was seconded by Tracy Neuhauser. *Motion carried.*

















NATURAL HAZARDS ASSESSMENT

1. CHAPTER OVERVIEW

This chapter evaluates the natural hazards that have or could occur in the county. Initially, 15 hazards were identified. They were prioritized and two of the hazards were dropped from future consideration. The remaining 13 hazards are described in detail. After describing the nature of the hazard, the frequency of occurrence is documented along with its effect on critical facilities, various population groups, and economic sectors. Estimates of economic loss are included when there is enough empirical data to do so.

2. HAZARD IDENTIFICATION

As part of an initial screening process, the working group used the methodology developed by Wisconsin Emergency Management¹ to evaluate natural hazards in Jefferson County to determine which warrant the most attention. For each hazard, the members used a group consensus process to assign a numeric value to the 10 factors listed in Table 5-1.

Table 5-1. Natural Hazard Assessment Criteria

Factor	Description
Historical Hazard Frequency	Frequency of past occurrences
Anticipated Hazard Probability	Probability of the hazard occurring again
Historical Health and Public Safety	Degree of past hazard events causing injuries, sickness, and/or deaths
Residential Damage	Degree of past hazard events causing damages to homes
Business Damage	Degree of past hazard events causing damages to businesses
Public Costs	Amount of local, state, and federal funds expended on past hazard recovery activities
Magnitude of Population at Risk	Amount of the area's population still vulnerable to injury, sickness, and/or death
Magnitude of Homes at Risk	Amount of homes still vulnerable to damage
Magnitude of Businesses at Risk	Amount of businesses still vulnerable to damage or interruption of business trade
Magnitude of Public Infrastructure at Risk	Amount of infrastructure that is susceptible to damages

Source: Resource Guide to All Hazards Mitigation Planning in Wisconsin, 2003. Wisconsin Emergency Management

Table 5-2 shows the results of that exercise. The three highest ranked natural hazards are riverine flooding, tornadoes, and thunderstorms. Given the distance to a known fault line, earthquakes were judged to be of little concern. In addition, given the topography and soils in the county, land failures, including subsidence and mass movement, were judged to be of little concern. Both of these were removed from further consideration in this plan.



Chapter Contents

- 1. Chapter Overview
- 2. Hazard Identification
- 3. History of Weather-Related Events
- 4. Presidential Declarations
- 5. Dam Failure
- 6. Flooding
- 7. Ice Shoves
- 8. Fog
- 9. Tornado / High Winds
- 10. Hailstorms
- 11. Thunderstorms
- 12. Winter Storms
- 13. Extreme Temperature
- 14. Drought
- 15. Wildland Fire
- 16. Summary of Risk by Jurisdiction
- 17. Summary of Damage Estimates

¹ Resource Guide to All Hazards Mitigation Planning In Wisconsin, 2003. Wisconsin Emergency Management

	1	2	3	4	5	6	7	8	9	10	11
	Historical Hazard Frequency	Anticipated Hazard Probability	Historical Health and Public Safety	Residential Damage	Business Damage	Public Costs	Magnitude of Population at Risk	Magnitude of Homes at Risk	Magnitude of Businesses at Risk	Magnitude of Infrastructure at Risk	
Natural Hazard	(1,2,3)	(1,2,3)	(1,2,3)	(1,2,3)	(1,2,3)	(1,2,3)	(1,2,3)	(1,2,3)	(1,2,3)	(1,2,3)	Overall Score
Flooding – riverine	3	3	3	3	2	3	1	2	2	2	24
Tornado / high winds	2	2	2	3	3	2	2	2	2	2	22
Storms - thunderstorm	3	3	1	2	2	2	2	2	2	1	20
Storms – snow **	3	3	3	1	1	2	3	1	2	1	20
Extreme temperature **	2	2	3	1	1	1	2	2	1	1	16
Storms – hail **	2	2	1	2	2	2	1	1	1	1	15
Drought	1	1	1	1	2	2	1	1	2	1	13
Fog	2	2	1	1	1	1	1	1	1	1	12
Wildland fire	1	1	1	1	1	2	1	1	1	2	12
Ice shoves	2	1	1	1	1	1	1	1	1	1	11
Dam failure	1	1	1	1	1	1	1	1	1	1	10
Flooding – storm water	1	1	1	1	1	1	1	1	1	1	10
Land failure	1	1	1	1	1	1	1	1	1	1	10
Earthquake**	1	1	1	1	1	1	1	1	1	1	10

Table 5-2. Comparative Analysis of Natural Hazards; Jefferson County: 2025

Notes: This matrix is based on a qualitative assessment and is intended to identify those hazards posing the greatest concern.

A low, medium, or high numerical rating of 1, 2, or 3, respectively, is assigned to each criterion and then the ratings for each hazard are totaled.

** The ratings for these hazards are based on occurrences in the surrounding subregion.

Column 1 refers to the frequency of past occurrences.

Column 2 refers to the probability of the hazard occurring again.

Column 3 refers to the degree of past hazard events causing injuries, sickness, and/or deaths.

Column 4 refers to the degree of past hazard events causing damages to homes.

Column 5 refers to the degree of past hazard events causing damages to businesses.

Column 6 refers to the amount of local, state, and federal funds expended on past hazard recovery activities.

Column 7 refers to the amount of the area's population still vulnerable to injury, sickness, and/or death.

Column 8 refers to the amount of homes still vulnerable to damage.

Column 9 refers to the amount of businesses still vulnerable to damage or interruption of business trade.

Column 10 refers to the amount of infrastructure that is susceptible to damages.

Column 11 is the raw score for the hazard.

In reviewing these natural hazards, it became evident that they are quite variable (Table 5-3). Some of the hazards are characteristically localized occurrences, while others could potentially cover all of Jefferson County and the surrounding region. Further, some hazards occur with little advance warning and others can be forecasted with some degree of accuracy. Some hazards have the potential to occur often, while others occur infrequently.

Natural Hazard	Extent	Amount of Advance Warning	Recurrence Interval
Dam Failure	Localized	None to weeks	[1]
Flooding – Riverine	Localized	One day	100 [2]
Flooding – Stormwater	Localized	One day	100 [2]
Ice Shoves	Localized	One day	5
Fog	Localized to countywide	One day	0.5
Tornado/High Wind	Localized	Hours	1
Hail Storms	Localized	Hours	1
Thunderstorm	Localized	One day	0.5
Snow Storms	Countywide	Several days	1
Extreme Temperature - heat	Countywide	Several days	10
Extreme Temperature – cold	Countywide	Several days	3
Drought - short-lived	Countywide	Several months	10
Drought - long-lived	Countywide	Year	75
Wildland fire - 25 acres or more	Localized	None	100
Wildland fire - less than 25 acres	Localized	None	10

Table 5-3. Nature of Natural Hazards; Jefferson County

Notes: 1. It is not possible to define a recurrence interval for this type of hazard 2. Based on a 100-year flood

Table 5-4 lists each of the hazards and identifies whether they will have an impact on the critical facilities identified in this plan, noncritical buildings and structures, special populations, the general population, and broadly defined economic sectors.

Table 5-4. General Effects of Natural Hazards on Facilities, Population Groups, and Economic Sectors; Jefferson County: 2025

			Flooding -				Tornado/High			Snow	Extromo		
Critical Facility		Dam Failure	Riverine	Stormwater	Ice Shoves	Fog	Wind	Hail Storms	Thunderstorm	Storms	Temperature	Drought	Wildland Fire
Facility with Hazardous Materials		-	D	-	-	-	D	-	-	-	-	-	-
Infrastructure	Bridge	D	D	-	-	-	-	-	-	-	-	-	-
	Dam	D	D	-	-	-	-	-	-	-	-	-	-
	Communication Tower	-	-	-	-	-	D	-	-	-	-	-	-
	Electric Facility – Power Plant	-	-	-	-	-	D	-	-	-	-	-	-
	Electric Facility – Substation	-	-	-	-	-	D	-	-	-	-	-	-
	Natural Gas Facility	-	-	-	-	-	D	-	-	-	-	-	-
	Petroleum Pipeline	-	-	-	-	-	-	-	-	-	-	-	-
	Public-Use Airport	-	-	-	-	I	D	I.	I	I	-	-	-
	Telephone Facility	-	-	-	-	-	D	-	-	-	-	-	-
	Utility Offices/Yard	-	-	-	-	-	D	-	-	-	-	-	-
	Water Facility [1]	-	-	-	-	-	D	-	-	-	-	I.	-
	Wastewater Facility	-	-	-	-	-	D	-	-	-	-	-	-
Government Facility	Community Center	-	-	-	-	-	D	D	-	-	-	-	-
	Library	-	-	-	-	-	D	D	-	-	-	-	-
	Municipal Garage	-	-	-	-	-	D	D	-	-	-	-	-
	Municipal Office and Other	-	-	-	-	-	D	D	-	-	-	-	-
	Post Office	-	-	-	-	-	D	D	-	-	-	-	-
	Senior Center	-	-	-	-	-	D	D	-	-	-	-	-
Health Care Facility	Health Care Clinic	-	-	-	-	-	D	D	-	-	-	-	-
	Hospital	-	-	-	-	-	D	D	-	-	-	-	-
Public Safety Facility	EMS Facility	-	-	-	-	-	D	D	-	-	-	-	-
	Fire Station	-	-	-	-	-	D	D	-	-	-	-	-
	National Guard Facility	-	-	-	-	-	D	D	-	-	-	-	-
	Police Station	-	-	-	-	-	D	D	-	-	-	-	-
School	K-12	-	-	-	-	-	D	D	-	-	-	-	-
	Secondary	-	-	-	-	-	D	D	-	-	-	-	-
Special Care Facility - Residential	Adult Family Home	-	-	-	-	-	D	D	-	-	-	-	-
	Community Based Residential Facility	-	-	-	-	-	D	D	-	-	-	-	-
	Nursing Home	-	-	-	-	-	D	D	-	-	-	-	-
	Residential Care Apartment Complex	-	-	-	-	-	D	D	-	-	-	-	-
Special Care Facility - Nonresidential	Adult Day Care	-	-	-	-	-	D	D	-	-	-	-	-
	Group Day Care	-	-	-	-	-	D	D	-	-	-	-	-
Vulnerable Housing	Mobile Home Park	-	-	-	-	-	D	D	-	-	-	-	-
	Campground	-	-	-	-	-	D	D	-	-	-	-	-
Noncritical Buildings/Structures		-	-	-	-	-	D	D	-	-	-	-	-
Concrete Rublic							1				1	1	
Elderly and Poople with Disabilities		-	-	-	-	-	I	-	-	-	1	I	-
		-	-	-	-	-	-	-	-	-	י ר	-	-
11011161622		-	-	-	-	-	-	-	U	U	U	-	-
Economic Sector													
Agriculture		-	D	D	-	-	-	D	I	-	I	D	-
Commercial		-	-	-	-	-	-	-	-	-	-	I	-
Industrial		-	-	-	-	-	-	-	-	-	-	-	-
Transportation		-	-	-	I	-	-	-	-	-	-	-	-

Notes: 1. Types of facilities included in this category include wells, towers, and treatment plants

Key: - No or minimal effect; I - Indirect Effect; D - Direct Effect

3. HISTORY OF WEATHER-RELATED EVENTS

Table 5-5 presents a summary of documented weather-related events that have affected Jefferson County since 1950 (See Appendix G for a list of all events). Strong winds associated with a thunderstorm occur with the highest frequency— on average 3.6 times a year. At about 1.8 times a year, hail is the second most common weather-related event. Winter storms are the third most common weather-related event. Flooding has a recurrence interval of 0.5 per year.

Out of all of the weather-related events, tornadoes have caused the highest number of deaths and injuries. Extreme cold caused one death. Lightening caused 7 injuries and 1 death. High winds caused 2 injuries, and thunderstorm winds caused 9 injuries. Floods and winter storms each caused one injury.

Flooding over the years has caused by far the most damage to property and crops (\$173.2 million). At \$13.53 million, hail caused the second highest amount of economic impact.

Type of Event	Number of Events	Direct Deaths	Direct Injuries	Property Damage (\$)	Crop Damage (\$)
Drought	18	0	0	0	300K
Dust Devil	1	0	0	0	0
Extreme Heat	4	0	0	0	0
Cold/Wind Chill	25	1	0	2K	0
Extreme Cold/Wind Chill	2	0	0	0	0
Flood	18	0	0	\$3.587M	\$28.512M
Flood – Flash	15	0	1	104.38M	36.775M
Fog	72	0	0	10K	0
Funnel Cloud	12	0	0	0	0
Hail	135	0	0	13.53M	200K
Heavy Rain	11	0	0	3K	0
High Wind	13	0	2	1.098M	200K
Lightning	23	1	7	0.971	0
Strong Wind	34	0	0	135K	0
Thunderstorm Winds	265	0	9	4.239M	352K
Tornado	33	3	36	10.748M	21K
Winter Storms	41	0	0	10K	0
Winter Weather	96	0	0	50K	0
Winter - Blizzard	6	0	0	0	0
Winter – Heavy Snow	5	0	0	0	0
Winter – Ice Storm	3	0	0	30K	0
Total	786	6	65	138.781M	66.36M

Table 5-5. Summary of Weather-Related Events Affecting Jefferson County: 1950– 2018

Source: National Climatic Data Center database accessed on December 10, 2018

http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms



Exhibit 5-1. Summary of Weather-Related Events, Jefferson County: 2018 - 2023

https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=55%2CWISCONSIN

4. PRESIDENTIAL DECLARATIONS

Since 1965, there have been 38 major disaster declarations issued for Wisconsin, 6 emergency declarations, and one fire management assistance declaration. Jefferson County was included in seven disaster declarations and three emergency declarations.

Major Disaster Declaration A major disaster declaration was issued for Jefferson County in 1973, 1976, 1991, 1993, 2004, 2007, 2008, and 2020 (Table 5-6). Most recently, Jefferson County was one of 30 counties under a disaster declaration (FEMA-1768-DR) for severe storms, tornadoes, and flooding. In that instance, both individual assistance and public assistance grants were made to help local communities respond to severe storms and flooding. Disaster declarations were issued in 2004 and 2007 for severe storms and flooding. In 1993, Jefferson County received \$1,453,507 in state and federal aid. However, the total flood damage suffered is believed to exceed several million dollars.

Emergency Declaration There have been three emergency declarations. In 2008, Jefferson County was one of 11 counties affected by a significant snow

event. In 2005, an emergency declaration was issued for all 72 counties in the state as part of the nationwide response to Hurricane Katrina. In 1976, Jefferson County was one of 66 counties covered by an emergency declaration for drought. In 2020, an emergency declaration was issued for all 72 counties in the state as part of the nationwide response to Covid-19 Pandemic.

Fire Management Assistance Declaration No fire management assistance declarations have been issued for Jefferson County (and it is unlikely that one would be issued given the nature of that category of declaration).

			Number by Type o	of Counties f Assistance
Major Disaster	Year	Description	Public	Individual
FEMA-376-DR	1973	Severe storms, flooding	35	35
FEMA-496-DR	1976	Severe storms, icing, wind, flooding	22	22
FEMA-912-DR	1991	Hail, severe storms	5	0
FEMA-994-DR	1993	Flooding, severe storm, tornado	40	47
FEMA-1526-DR	2004	Severe storms and flooding	12	12
FEMA-1719-DR	2007	Severe storms and flooding	-	14
FEMA-1768-DR	2008	Severe storms, tornadoes, and	30	30
		flooding		
FEMA-4520-DR	2020	Covid-19 Pandemic	72	72
Emergency Declaration				
FEMA-3014-EM	1976	Drought	66	66
FEMA-3249-EM	2005	Hurricane Katrina evacuation	72	0
FEMA-3285-EM	2008	Snow	11	0
FEMA-3454-EM	2020	Covid-19	72	0
Fire Management Assistance				
None	-	-	-	-

 Table 5-6.
 Presidential Disaster Declarations, Jefferson County: 1965–2018

Source: Federal Emergency Management Agency (<u>http://www.fema.gov/news/disasters_state.feam?id=55</u>) and Wisconsin Emergency Management

Denied Applications for Presidential Disaster Declaration On four occasions, the county's application for a presidential disaster declaration has been denied (Table 5-7).

Table 5-7. Denied Applications for Presidential Disaster Declarations, Jefferson County: 1965–2018

Year	Number of Counties Included	Description
1977	6	Tornado
1996	15	Flooding
1998	16	High winds, severe storms
2000	11	Snow

Source: Wisconsin Emergency Management and Jefferson County Emergency Management

Jefferson County Hazard Mitigation Plan Survey 2024

Your Name:	
Your Position/Title:	-
Name of City, Village, Town:	

1. Which plans has your organization adopted?

Plan	Yes	Νο	Unsure
Comprehensive Plan			
Capital Improvement Plan (CIP)			
Economic Development Plan			
Housing Plan or Study			
Operations Plan			
Continuity of Operations Plan			
Transportation Plan			
Stormwater Management Plan			
Disaster Recovery Plan			
Watershed Restoration Plan			
Parks/Outdoor Recreation Plan			
Sustainability, Energy, and/or Climate Plan			
Farmland Preservation Plan			
Land & Water Conservation Plan			
List any other recent plans:			

2. Which ordinances has your community adopted?

Ordinance	Yes	No	Unsure
General Zoning Ordinance			
Floodplain Zoning Ordinance, if City or Village			
Shoreland Zoning Ordinance, if City or Village			
Shoreland-Wetland Zoning Ordinance, if City or Village			
Building Codes/Uniform Dwelling Code			
Farmland Preservation Zoning, if Town			
Historic Preservation Ordinances, if City or Village			
List other ordinances:			

3. Which personnel and technical resources does your organization have? Include in-house staff and contracted external resources.

Resource	Yes	No	Unsure
Designated Emergency Management Manager			
Planner or engineer trained in land development			
Planner or engineer trained in construction			
Planner or engineer trained in natural hazards			
Public Works			
Building inspector			
Floodplain Manager/Administrator, if City or Village			
GIS Technician			
Grant writer/administrator			
Warning systems/services			
Mutual Aid Agreements			
Maintenance Programs (tree trimming, stormwater infrastructure maintenance, etc.)			
List any other available resources:			

4. Which financial resources does your organization have?

Resource	Yes	No	Unsure
Capital Improvements Project Funding			
Authority to levy taxes for special purposes			
Stormwater Utility Fees			
Community Development Block Grant			
Revenue from utilities			
Impact fees for new development			
Tax Incremental Financing (TIF)			
List any other resources:			

5. Which outreach/engagement capabilities does your organization have to implement hazard mitigation strategies?

Strategy	Yes	No	Unsure
Staff with hazard mitigation training to attend community events			
Ongoing education programs (first aid, disaster preparedness, safety training, etc.)			
Nonprofit organizations that assist vulnerable populations			
Nonprofit organizations involved in environmental protection			
Municipal website			
Municipal or utility newsletter			
Emergency notification apps			
List other available strategies:			

6. Rate the categories discussed in questions 2 through 6 by how effectively your organization can implement hazard mitigation projects and strategies:

Category	Low	Moderate	High
Planning			
Ordinances/Zoning			
Personnel/Technical Resources			
Financial Resources			
Outreach/Engagement			

7. What improvements do you think are needed to more effectively manage natural hazards and disaster response for each category:

Category	Improvements Needed
Planning	
Ordinances/Zoning	
Personnel/ Technical Resources	
Financial Resources	
Outreach/ Engagement	

8. What are the top three needs to improve your community's capacity to implement hazard mitigation projects and strategies?

1.		
2.		
3.		

Road Name	Road Segment (From/To) or General Location	Year(s)

9. List any roads in your jurisdiction that have been flooded in the last 5 years:

Thank you for taking the time to complete this survey. It's most appreciated.

Please return this survey by October 4, 2024:

Tracy Hameau, Emergency Management Director Jefferson County 107 E. Washington Jefferson, WI 54549

thameau@jeffersoncountywi.gov