DAVIESS COUNTY

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

DAVIESS COUNTY
COFFEY
GALLATIN
JAMESON
JAMESPORT
PATTONSBURG
NORTH DAVIESS COUNTY R-III
PATTONSBURG R-II
WINSTON R-VI

Daviess County Hazard Mitigation Planning Committee

Jurisdictional Representatives

Name	Title	Department	Jurisdiction
Jim Ruse	Presiding Commissioner	County Government	Daviess County
David Cox	Commissioner	County Government	Daviess County
Wayne Uthe	Commissioner	County Government	Daviess County
Callie Heckenback	City Employee/School Employee	City Government / School District	Village of Jameson / North Daviess R-III
Derek Brady	Superintendent	School District	Gallatin R-V
Bill Pottorff	Superintendent	School District	Pattonsburg R-II
Karen Shepherd	City Employee/Fire District	City Government/ Fire District	City of Pattonsburg/ Pattonsburg Rescue & Fire
Kayli Burrell	Superintendent	School District	Winston R-VI
Ralph Ray	Mayor	City Government	City of Coffey
Genee Bontrager	City Clerk	City Government	City of Jamesport
Macon Schweizer	City Employee	City Government	City of Gallatin
Brandon Bob	Fire District Representative	Fire District	Jamesport Fire Department
David Roll	Daviess County EMD	County Emergency	Daviess County

Stakeholder Representatives

Name	Title	Jurisdiction/Agency/Organization
Callie Heckenback	City Employee/School Employee	City of Jameson/ North Daviess R-III
Lisa McGhee	Administrator	Pattonsburg Clinic/Harrison County Community Hospital
Derek Brady	Superintendent	Gallatin R-V
James Ruse	Presiding Commissioner	Daviess County Government
David Cox	Commissioner	Daviess County Government
Wayne Uthe	Commissioner	Daviess County government
Anthony Gromiger	Citizen/ Board Member	Viking Valley Association
Bill Pottorff	Superintendent	Pattonsburg R-II
David Roll	Daviess County EMD	Daviess County Government
Deanna Lewis	Director	Daviess County Senior Center
Zack Morrison	Employee	PWSD #3
Doug Hamilton	Gallatin Fire District & Jameson Fire District	Gallatin Fire District & Jameson Fire District
Travis Toney	Water District Employee	PWSD #2
Maxwell Floyd	Water District Employee	PWSD #2
Diane Hulett	Water District Employee	PWSD #3
Jon Mullen	Volunteer Fire	K.A.W Fire Protection District
Karen Shepherd	City Employee	City of Pattonsburg/Pattonsburg Fire & Rescue
Kayli Burrell	Superintendent	Winston R-VI School District
Ralph Ray	Mayor	City of Coffey
Jon Mullen	KAW Fire District Employee	KAW Fire District
Genee Bontrager	City Clerk	City of Jamesport
Tanner Hunter	KAW Fire District Employee	KAW Fire District
Macon Schweizer	Deputy City Clerk	City of Gallatin
Brandon Bob	Fire District Employee	Jamesport Fire Department

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EXECUTIVE SUMMARY

The purpose of hazard mitigation is to reduce or eliminate long-term risk to people and property from hazards. Daviess County and participating jurisdictions and school/special districts developed this multi-jurisdictional local hazard mitigation plan update to reduce future losses from hazard events to the County and its communities and school/special districts. This plan is an update of the previous plan that was approved by FEMA on March 30, 2021. The plan and the update were prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 to result in eligibility for the Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance Grant Programs.

The Daviess County Multi-Hazard Mitigation Plan is a multi-jurisdictional plan that covers the following jurisdictions that participated in the planning process:

- Unincorporated Daviess County
- City of Coffey
- City of Gallatin
- Village of Jameson
- City of Jamesport
- City of Pattonsburg

- Gallatin R-V
- North Daviess County R-III
- Pattonsburg R-II
- Winston R-VI

School District Tri-County R-VII, The City of Altamont, the Village of Lock Springs, and the Village of Winston were invited to participate in the planning process. These jurisdictions did not send a representative to any scheduled meeting, return the questionnaire, or adopt the plan. Since they did not meet any of the requirements to be a participant in the plan they will be ineligible for hazard mitigation assistance grants. When the future five-year update is developed for this plan, these jurisdictions will be invited again to participate.

Daviess County and the entities listed above followed a plan update process using a methodology in accordance with FEMA guidance, which began with the formation of a Mitigation Planning Committee (MPC) comprised of representatives from Daviess County and participating jurisdictions. The MPC updated the risk assessment that identified and profiled hazards that pose a risk to Daviess County and analyzed jurisdictional vulnerability to these hazards. The MPC also examined the capabilities in place to mitigate the hazard damages, with emphasis on changes that have occurred since the previously approved plan was adopted. The MPC determined that the planning area is vulnerable to several hazards that are identified, profiled, and analyzed in this plan. Riverine and flash flooding, winter storms, severe thunderstorms (hail, lightning, high winds), and tornados are among the hazards that historically have had a significant impact.

Instructional Note: Planners should verify that goals are identical throughout the plan by cross-check with Section 4.1 and Chapter 1, Step 6. (Reference PRT C3-a)

Final plans should also follow AP/APA/MLA stylebooks for formatting.

Based upon the risk assessment, the MPC updated goals for reducing risk from hazards. The goals are listed below:

- Goal 1: Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes, severe thunderstorms including high winds, hail, and lightning.
- Goal 2: Minimize property damage due to flooding, levee failure, and dam failure; including high hazard potential dams (HHPD).
- Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures, and wildfire.
- Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather.
- Goal 5: Minimize injuries and property damage due to seismic and/or geological events.

To advance the identified goals, the MPC developed recommended mitigation actions, as summarized in the table on the following pages. The MPC developed an implementation plan for each action, which identifies priority level, background information, ideas for implementation, responsible agency, timeline, cost estimate, potential funding sources, and more. These additional details are provided in Chapter 4.

Table I. Mitigation Action Matrix

#	Action	Jurisdiction	Priority	Goals Addressed	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
1.1	Replace undersized culvert on Little Creek at Park Avenue.	City A	High	1	Flooding	✓		✓

PREREQUISITES

44 CFR requirement 201.6(c)(5): The local hazard mitigation plan shall include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan. For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted.

This plan has been reviewed by and adopted with resolutions or other documentation of adoption by all participating jurisdictions and schools/special districts. The documentation of each adoption is included in Appendix D, and a model resolution is included on the following page.

The jurisdictions listed in the Executive Summary participated in the development of this plan and have adopted the multi-jurisdictional plan.

Model Resolution

(*LOCAL GOVERNING BODY/SCHOOL DISTRICT*), Missouri RESOLUTION NO. _____

A RESOLUTION OF THE (*LOCAL GOVERNING BODY /SCHOOL DISTRICT*) ADOPTING THE (*PLAN NAME*)

WHEREAS the (local governing body/school district) recognizes the threat that natural hazards pose to people and property within (local government); and

WHEREAS the (*local government/school district*) has prepared a multi-hazard mitigation plan, hereby known as (*title and date of mitigation plan*) in accordance with federal laws, including the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; and the National Dam Safety Program Act, as amended; and

WHEREAS (*title and date of mitigation plan*) identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in (*local government/school district*) from the impacts of future hazards and disasters; and

WHEREAS adoption by the (*local governing body/school district*) demonstrates its commitment to hazard mitigation and achieving the goals outlined in the *Plan*.

NOW THEREFORE, BE IT RESOLVED BY THE (*LOCAL GOVERNMENT/SCHOOL DISTRICT*), in the State of Missouri, THAT:

Section 1. In accordance with (*local rule for adopting resolutions*), the (*local governing body/school district*) adopts the (title and date of mitigation plan). While content related to (*local government/school district*) may require revisions to meet the plan approval requirements, changes occurring after adoption will not require (*local government/school district*) to re-adopt any further iterations of the plan. Subsequent plan updates following the approval period for this plan will require separate adoption resolutions.

ADOPTED by a vote of_____in favor and__against, and__abstaining, this_____day of _____,_____.

By (Sig): _____
Print name: _____

ATTEST:
By (Sig.): _____
Print name: _____

APPROVED AS TO FORM:
By (Sig.): _____
Print name: _____

1 INTRODUCTION AND PLANNING PROCESS

1.1 PURPOSE

Hazard mitigation is defined as “any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards”. While natural hazards will continue to occur and at their worst will result in death and destruction of both property and infrastructure, this plan was undertaken to minimize the impact that these hazards will have on the people and property of Daviess County. Daviess County and the participating jurisdictions and school districts developed this multi-jurisdictional local hazard mitigation plan update to reduce future losses from inevitable hazardous events.

The jurisdictions participating in this plan are the unincorporated areas of Daviess County, the jurisdictions participating in this plan understand that adopting the plan is a prerequisite for mitigation grant eligibility and understand that failure to adopt this plan will make them ineligible for mitigation grants.

The following legislation gives FEMA authority to require these plans: Robert T Stafford Disaster and Emergency Act (Public Law 93-288) as amended by the Disaster Mitigation Act of 2000 (Public Law 106-390), The implementing regulations set forth by the Interim Final Rule published in the *Federal Register* on February 26, 2002, (44 CFR §201.6) and finalized on October 31, 2007.

The following publications from FEMA were used as guidance in the development of this hazard mitigation plan for Daviess County. FEMA’s Local Mitigation Planning Handbook, May 2023, FEMA’s Local Mitigation Plan Review Guide, October 1, 2011, and the Local Mitigation Planning Policy Guide April 19, 2023. The previous Daviess County Hazard Mitigation Plan, which was approved on 3/30/2021, was also used in the development of this update.

1.2 BACKGROUND AND SCOPE

The Daviess County Hazard Mitigation Plan is the update of a plan that was approved March 30, 2021. Hazard Mitigation Plans must be renewed every five years and then must be adopted by the participating jurisdictions within the plan. Both the plan and the update were prepared pursuant to the requirements of the Disaster Mitigation Act of 2000. This plan once completed and adopted will result in eligibility for the Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance Grant Programs.

The following local governments and school districts participated in both the original plan as well as the plan updates. This will allow them to adopt the plan and secure eligibility for Hazard Mitigation Grant Funding.

- Daviess County
- The City of Coffey
- The City of Gallatin
- The Village of Jameson
- The City of Jamesport
- The City of Pattonsburg
- North Daviess County R-III
- Pattonsburg R-II
- Tri-County R-VII
- Winston R-VI

Daviess County and the participating entities listed above developed a Multi-Jurisdictional Hazard Mitigation Plan that was approved by FEMA in March of 2021 (hereafter referred to as the 2021 Hazard Mitigation Plan). This current planning effort serves to update that previously approved plan.

The information that is contained in the Daviess County Hazard Mitigation Plan will be used to help guide and coordinate mitigation activities for local land use policy and decisions in the future.

1.3 PLAN ORGANIZATION

This latest (2026) updated version of the Daviess County Hazard Mitigation Plan involved review, evaluation, and amendment of the existing plan. It addresses the same natural hazards that were addressed in the original plan, with changes outlined in the table below (See Table 1.1 below). Following is a breakdown of the organization of the 2026 Daviess County Hazard Mitigation Plan Update.

- Chapter 1: Introduction and Planning Process
  This section of the plan provides an introduction to the multi-jurisdictional planning process and a detailed look at the participation of the local jurisdictions and school districts. It also detailed the purpose of local hazard mitigation planning and outlined the requirements enacted by the Federal Emergency Management Agency.
- Chapter 2: Planning Area Profile and Capabilities
  This section of the plan provides general background information and demographic statistics for Daviess County and its various jurisdictions as well as the disaster response and recovery capabilities found in the county. This section identifies key personnel, organizational leaders, and outlines existing emergency plans. Additionally, it provides a brief assessment of each municipality's readiness regarding hazard mitigation.
- Chapter 3: Risk Assessment
  This section of the plan, the risk assessment, identifies and explores the types of natural hazards that pose a risk to the county, and the likelihood that each hazard will occur. It provides a profile of identified hazards and explains the impact to the County

and the various jurisdictions should such hazards occur.

- Chapter 4: Mitigation Strategy
  This section of the plan presents the multi-jurisdiction mitigation strategies in response to the risk assessment. This chapter outlines the overall goals to reduce a disaster's impact, specific objectives toward achieving those goals, and implementation plans for the county to complete.
- Chapter 5: Plan Implementation and Maintenance
  The final chapter outlines the Hazard Mitigation Plan maintenance procedures.
- Appendix A: Sources
- Appendix B: Planning Documentation & Invitations
- Appendix C: Questionnaires, Surveys, Public Comment, and STAPLEE Worksheets
- Appendix D: List of Critical Facilities (Redacted from Public View)
- Appendix E: Resolutions of Adoptions, Floodplain Ordinances, Dam Inspection Report

The following table (Table 1.1) below identifies significant changes in the 2025 update of the Hazard Mitigation Plan for Chariton County.

Table 1.1. Changes Made in Plan Update

Plan Section	Summary of Updates
Executive Summary	• Added Mitigation Action Matrix Table • Revised the executive summary and resolution to match order of template • Updated goals from previous plan to better reflect hazards mitigated by current proposed actions
Chapter 1 - Introduction and Planning Process	• Updated members of the Mitigation Planning Committee (MPC) and participating jurisdictions formally adopted the MPC.
Chapter 2 - Planning Area Profile and Capabilities	• Changes include updating maps, identifying most current state plan, and updating demographic data using 2020 Census and American Community Survey Information • inviting neighboring jurisdictions to participate. • Updated charts, graphs, tables, maps, and other information where necessary
Chapter 3 - Risk Assessment	• Combined extreme heat and extreme cold into one hazard: extreme temperatures. • Updated section with current Census information, agricultural summary, and confirming that current data is correct. • Incorporated information from the current 2023 Missouri State Hazard Mitigation Plan. • Previous events updated for each hazard
Chapter 4 - Mitigation Strategy	• 2020 mitigation goals and strategies reviewed by planning committee and updated • The mitigation category of each action was added to the action worksheets

Chapter 5 - Plan Implementation and Maintenance	• Updated the MPC meeting for evaluating and updating the plan to annually

1.4 PLANNING PROCESS

44 CFR Requirement 201.6(c)(1): [The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

Daviess County, Missouri contracted with Green Hills Regional Planning Commission (GHRPC) to facilitate and coordinate the update of the multi-jurisdictional, local hazard mitigation plan. In fulfillment of the role, GHRPC:

- Assisted in establishing a Mitigation Planning Committee (MPC) as defined by the Disaster Mitigation Act (DMA),
- Assessed whether there was adherence to the process set forth in the previously approved plan for maintenance (example, did the MPC meet regularly as specified in the previously approved plan), and explain how adherence occurred, and/or why it did not occur,
- Ensured the updated plan meets the DMA requirements as established by federal regulations and follows the most current planning guidance of the Federal Emergency Management Agency (FEMA),
- Facilitated the entire plan development process,
- Identified the data that MPC participants could provide and conduct the research and documentation necessary to augment that data,
- Assisted in soliciting public input,
- Produced the draft and final plan update in a FEMA-approvable document and coordinated with the Missouri State Emergency Management Agency (SEMA) and (FEMA) plan reviews.

This plan was developed after the release of *FEMA's Local Mitigation Planning Policy Guide, Effective April 19, 2023*.

The following table (**Table 1.2)** shows the MPC members and the entities they represent, along with their titles. Each of the following representatives participated directly in the development of the plan. They attended the meetings and actively participated in the development of the plan. The MPC was comprised of representatives from each jurisdiction on a voluntary basis rather than as an official act by any of the jurisdictions. Each member of the MPC was actively involved in the meetings and the decisions for the Hazard Mitigation Plan. These members were either present at the public meetings or met individually with the GHRPC staff member in charge of developing the plan. All jurisdictions met their responsibilities for the planning process by:

- Attending at least one meeting
- Completing the Data Questionnaire to the best of their ability
- Reviewing and returning the Action Worksheets
- Returning the Adoption Resolution (Found in Appendix E)

Table 1.2. Jurisdictional Representatives of Daviess County Mitigation Planning Committee

Name	Title	Department	Jurisdiction
Jim Ruse	Presiding Commissioner	County Government	Daviess County
David Cox	Commissioner	County Government	Daviess County
Wayne Uthe	Commissioner	County Government	Daviess County
Callie Heckenback	City Employee/School Employee	City Government / School District	Village of Jameson / North Daviess R-III
Derek Brady	Superintendent	School District	Gallatin R-V
Bill Pottorff	Superintendent	School District	Pattonsburg R-II
Karen Shepherd	City Employee/Fire District	City Government/ Fire District	City of Pattonsburg/ Pattonsburg Rescue & Fire
Kayli Burrell	Superintendent	School District	Winston R-VI
Ralph Ray	Mayor	City Government	City of Coffey
Genee Bontrager	City Clerk	City Government	City of Jamesport
Macon Schweizer	City Employee	City Government	City of Gallatin
Brandon Bob	Fire District Representative	Fire District	Jamesport Fire Department
David Roll	Daviess County EMD	County Emergency	Daviess County

Table 1.3. MPC Capability with Six Mitigation Categories

Community Department/Office	Preventive Measures	Structure and Infrastructure Projects		Natural Resource Protection	Public Information	Emergency Services
		Property Protection	Structural Flood Control Projects			
Daviess County Commission		✓	✓	✓		
Daviess County EMD	✓	✓			✓	✓
Village of Jameson		✓	✓	✓		
North Daviess R-III School District					✓	
Gallatin R-V School District					✓	
Pattonsburg R-II School District					✓	
Winston R-VI School District					✓	
City of Coffey	✓	✓		✓		
City of Jamesport	✓	✓		✓		
City of Gallatin	✓	✓		✓		
Jamesport Fire Department	✓				✓	✓
City of Pattonsburg		✓	✓	✓		
Pattonsburg Rescue & Fire	✓				✓	✓

Table 1.4. Participants of the Daviess County Hazard Mitigation Plan

Name	Title	Jurisdiction/Agency/Organization
Callie Heckenback	City Employee/School Employee	City of Jameson/ North Daviess R-III
Lisa McGhee	Administrator	Pattonsburg Clinic/Harrison County Community Hospital
Derek Brady	Superintendent	Gallatin R-V
James Ruse	Presiding Commissioner	Daviess County Government
David Cox	Commissioner	Daviess County Government
Wayne Uthe	Commissioner	Daviess County government
Anthony Gromiger	Citizen/ Board Member	Viking Valley Association
Bill Pottorff	Superintendent	Pattonsburg R-II
David Roll	Daviess County EMD	Daviess County Government
Deanna Lewis	Director	Daviess County Senior Center
Zack Morrison	Employee	PWSD #3
Doug Hamilton	Gallatin Fire District & Jameson Fire District	Gallatin Fire District & Jameson Fire District
Travis Toney	Water District Employee	PWSD #2
Maxwell Floyd	Water District Employee	PWSD #2
Diane Hulett	Water District Employee	PWSD #3
Jon Mullen	Volunteer Fire	K.A.W Fire Protection District
Karen Shepherd	City Employee	City of Pattonsburg/Pattonsburg Fire & Rescue
Kayli Burrell	Superintendent	Winston R-VI School District
Ralph Ray	Mayor	City of Coffey
Jon Mullen	KAW Fire District Employee	KAW Fire District
Genee Bontrager	City Clerk	City of Jamesport
Tanner Hunter	KAW Fire District Employee	KAW Fire District
Macon Schweizer	Deputy City Clerk	City of Gallatin
Brandon Bob	Fire District Employee	Jamesport Fire Department

1.4.1 Multi-Jurisdictional Participation

44 CFR Requirement §201.6(a)(3): Multi-jurisdictional plans may be accepted, as appropriate, as long as each jurisdiction has participated in the process and has officially adopted the plan.

The Disaster Mitigation Act requires that each jurisdiction participate in the planning process and officially adopt the plan. Minimum criteria for participation were determined at the planning meeting that each jurisdiction must attend one meeting to be considered a "participant." These plan participation requirements include:

- Designation of a representative to serve on the MPC;
- Participation in at least one meeting, including planning, MPC meetings, by either direct participation or authorized representation, or one-on-one with planning staff;
- Sufficient information to support plan development by completion and return of Data Collection Questionnaires and validating/correcting critical facility inventories;
- Provision of progress reports on mitigation actions from the previously approved plan and identified additional mitigation actions for the plan;
- Eliminate from further consideration those actions from the previously approved plan that were not implemented because they were impractical, inappropriate, not cost-effective, or were otherwise not feasible;

- Review and comment on plan drafts;
- Actively solicit input from the public, local officials, and other interested parties about the planning process and provide an opportunity for them to comment on the plan;
- Provide documentation to show time donated to the planning effort; and
- Formally adopt the mitigation plan.

Data for this plan was gathered in part through a series of meetings held within Daviess County. The planning process for the Daviess County Hazard Mitigation Plan began during the summer of 2025, with discussions involving elected officials, school districts, health and emergency service providers, community members, and other interested parties, and the planning committee was formed. (See Table 1.2 and Table 1.3)

Participants that were involved were asked to identify critical infrastructure, rank the likelihood of disaster occurrence, perform a susceptibility analysis based on these factors, and determine appropriate mitigation strategies for each individual disaster. This data was recorded and assimilated into this plan by GHRPC staff. The MPC membership showed a range of knowledge and abilities to address the mitigation categories shown in Table 1.4.

GHRPC staff and County officials engaged in extensive outreach. There were invitations sent throughout the county to churches, civic organizations, health departments, clinics, and various organizations throughout the county. Daviess County is a rural county with several small jurisdictions. These jurisdictions lack the resources to send paid staff members to meetings, and in some cases lack resources to attend virtual meetings. Additionally, the lack of available funding to provide local match for mitigation grant funding is an impediment to participation within some of the jurisdictions. GHRPC staff also engaged in repeated contact will all jurisdictions in the county, this included emails, phone calls, and in-person attempts to contact staff of jurisdictions within the county.

All documentation of the planning process, including outreach contacts, meeting sign-in sheets, social media postings, flyers, and meeting minutes can be found in Appendix B.

In accordance with Missouri's "sunshine law" (RSMo 610.010, 610.020, 610.023, and 610.024), the public was notified each time the plan was presented for review. Input from each public official (city and county) was solicited by email or mailing an explanatory letter with notice of the posted draft on the Green Hills Planning Commission's website. These were disbursed on a schedule that allowed officials sufficient time to review the draft prior to the next public County Commission or City Council meeting. Participation was solicited by letter or email from each of the following jurisdictions:

- Daviess County
- City of Altamont
- City of Coffey
- City of Gallatin
- Village of Jameson
- City of Jamesport
- Village of Lock Springs
- City of Pattonsburg
- Village of Winston
- Gallatin R-V
- North Daviess County R-III
- Pattonsburg R-II

- Winston R-VI

Finally, city and county officials were encouraged to invite others from any county, state, or federal agency as well as local businesses that had an interest in contributing to the planning process. Input from the public was solicited through reminders at public gatherings, press releases, letters to various businesses and community organizations, and a Public Survey. The surrounding jurisdictions were invited to review the county's plan draft via the GHRPC website. The plan draft was available for review for 30 days.

Table 1.5 below shows the representation of each participating jurisdiction at the planning meetings, the provision of responses to the Data Collection Questionnaire, and update or development of mitigation actions. Sign-in sheets and other documentation for participation are in Appendix B.

Table 1.5. Jurisdictional Participation in Planning Process

Jurisdiction	Meeting #1	Meeting #2	Meeting #3	Data Collection Questionnaire Response	Update/Develop Mitigation Actions
Daviess County	X		X	X	X
City of Coffey			X	X	X
City of Gallatin			X	X	X
Village of Jameson	X			X	
City of Jamesport			X	X	X
City of Pattonsburg		X	X	X	X
Gallatin R-V	X				
North Daviess R-III	X				
Pattonsburg R-II	X			X	
Winston R-VI		X		X	

1.4.2 The Planning Steps

The sources utilized for the plan and development process used the following: FEMA's Local Mitigation Planning Handbook (May 2023), Local Mitigation Plan Review Guide (October 1, 2011), Local Mitigation Planning Policy Guide (April 19, 2023), and Integrating Hazard Mitigation into Local Planning: Case Studies and Tools for Community Officials (March 1, 2013). The United States Census Bureau, the United States Geological Society, the United States Army Corps of Engineers, the Missouri Department of Natural Resources, the Missouri Department of Conservation, the Center for Agriculture, Resources and Environmental Systems at the University of Missouri-Columbia, Chariton County HAZUS data, the National Climatic Data Center, and the Missouri State Hazard Mitigation Plan provided additional information regarding severe thunderstorm and winter weather, wildfire, tornado, earthquake, and flood hazards effecting Chariton County. Other sources utilized for this plan are included in Section 3.

The development of this plan update followed the 10-step planning process adapted from FEMA's Community Rating System (CRS) and Flood Mitigation Assistance programs, so to ensure funding eligibility requirements for the Hazard Mitigation Grant Program, Building Resilient Infrastructure and Communities, Community Rating System, and Flood Mitigation Assistance Program.

Table 1.6. County Mitigation Plan Update Process

Community Rating System (CRS) Planning Steps (Activity 510)	Local Mitigation Planning Handbook (2023) Tasks (44 CFR Part 201)
Step 1. Organize	Task 1: Determine the Planning Area and Resources
	Task 2: Build the Planning Team 44 CFR 201.6(c)(1)
Step 2. Involve the public	Task 3: Create an Outreach Strategy 44 CFR 201.6(b)(1)
Step 3. Coordinate	Task 5: Review Community Capabilities 44 CFR 201.6(b)(2) & (3)
Step 4. Assess the hazard	Task 4: Conduct a Risk Assessment 44 CFR 201.6(c)(2)(i) 44 CFR 201.6(c)(2)(ii) & (iii)
Step 5. Assess the problem	
Step 6. Set goals	Task 6: Develop a Mitigation Strategy 44 CFR 201.6(c)(3)(i); 44 CFR 201.6(c)(3)(ii); and 44 CFR 201.6(c)(3)(iii)
Step 7. Review possible activities	
Step 8. Draft an action plan	
Step 9. Adopt the plan	Task 8: Review and Adopt the Plan
Step 10. Implement, evaluate, revise	Task 7: Keep the Plan Current
	Task 9: Create a Safe and Resilient Community 44 CFR 201.6(c)(4)

Step 1: Organize the Planning Team
(Handbook Tasks 1, 2, and 5)

- There were 3 initial "Meeting #1" held in Daviess County, and they were scheduled on three separate dates, two in person at the City of Gallatin, and one virtual as follows:
    - City of Gallatin; July 7th, 2025, in the Commissioner's Office 2nd floor 3:10pm-4:20pm.
    - (Virtual) Daviess County HMP; July 10th, 2025, 10:05am-10:48am.
    - City of Gallatin; July 23rd, 2025, in the Commissioner's Office 2nd floor 9-10am.
- The meeting in Gallatin on the 7th of July covered the basics of hazard mitigation planning, which needs updates every 5 years, and the requirements for HMGP Grants. The planning process was outlined, detailing 3 in person meetings and 3 virtual meetings. The requirement for the jurisdictions to participate is to fill out a questionnaire, attend at least one meeting, offer suggestions, develop actions, and adopt the plan. The meeting also covered how to reach out to GHRPC and identify hazards. They ended by opening the floor for additional questions.
- The Data Collection Questionnaire was distributed to attendees of the meeting.
- The virtual meeting discussed hazard mitigation planning and the existing plan, which needs updates every 5 years, and the requirements for HMGP Grants. The planning process involves 3 in person and 3 virtual meetings. To participate, jurisdictions must complete a questionnaire, attend at least one meeting, provide suggestions, develop

actions, and adopt the plan. An email was sent to virtual participants with the Data Collection Questionnaire, a link to the survey monkey public opinion survey for Daviess County, and a flyer to post on social media and in their offices noting meeting times and locations, location of virtual link, and QR code to survey was provided to all participants.

- GHRPC has been reaching out to potential stakeholders. The meeting ended with an open floor for any additional questions.
- The meeting in Gallatin on the 23rd of July covered the basics of hazard mitigation planning, which needs updates every 5 years, and the requirements for HMGP Grants. The planning process involves 3 in person meetings and 3 virtual meetings. To participate, jurisdictions need to complete a questionnaire, attend at least one meeting, provide suggestions, develop actions, and adopt a plan. The meeting ended with an open floor for any additional questions.
- There was one "Meeting #2" held in Daviess County as followed:
    - City of Altamont; July 31st, 2025, in the K.A.W Fire Station 10-11:30am.
- The virtual meeting on the 31st of July and the in-person meeting on July 29th focused on Daviess County's hazard mitigation plan.
- The attendees of both meeting were given a brief overview of what had been discussed at both Meeting #1s, specifically the purpose of the hazard mitigation plan, requirements for eligibility, and hazards identified in Daviess County.
- Attendees discussed and ranked regional hazards, identified vulnerable assets using a worksheet, and reviewed mitigation strategies including prevention, protection, mitigation, response, and recovery. The meeting included introductions, explanations of asset categories, and concluded with a Q&A before adjourning at 11:30am.
- There was an in-person and virtual Meeting #3 held on August 19, 2025, at 3PM in Altamont, Missouri at the KAW Fire Station and a virtual meeting on August 20, 2025, at 10:00AM. Notice of this meeting and a link was sent to all jurisdictions by email prior to the scheduled meeting. The virtual link for this meeting was also published on Green Hills Regional Planning Commission's website.
- At both Meeting #3s, a brief overview was given for both Meeting #1 and Meeting #2. The purpose of the hazard mitigation plan, the identified hazards, the outreach efforts, the results of the risk assessment, and potential vulnerable assets were discussed. Eligibility requirements for being a participant were discussed, and attendees were made aware that they must attend at least one meeting, return their jurisdictional questionnaire, and adopt the plan in order to be eligible for hazard mitigation assistance grants.
- Participants were encouraged to comment on the previous meetings and provide additional information if available.
- The focus of the Meeting #3, both in-person and virtual, was action prioritization. Attendees were given STAPLEE worksheets for each action in their jurisdiction. Once attendees completed STAPLEE worksheets for the actions, they were encouraged to discuss hazards that had not been mitigated, and new actions were discussed if desired.
- The following information about the public meetings and the location in the appendix of this plan can be found as follows:
    - The outreach efforts, including envelope scans and address labels; Facebook posts, meeting flyers, survey monkey QR code can be found in Appendix B.
    - Meeting information such as agendas, meeting minutes, and sign-in sheets, and other documentation relating to the planning process can be found in Appendix B.

    - Other products of the public meetings such as hazard identification, risk assessment products, and vulnerable asset identification worksheets can be found in Appendix B.
- The Data Collection Questionnaires, STAPLEE worksheets, Survey, and Survey Results can be found in Appendix C.
- Any public comments made during this period of planning or after plan was published on GHRPC's website on August 29, 2025, and until submission to SEMA on September 30, 2025, can be found in Appendix C.
- During the planning process, in addition to the public meetings, there were also numerous phone calls, emails, and in person conversations with jurisdictions to help with plan requirements, to answer questions, to encourage participation, and to confirm meeting times.

Table 1.7. Schedule of MPC Meetings

Meeting	Topic	Date
Planning Meeting #1	Outreach & Hazard Identification	July 7th, 10th, 23rd 2025
Planning Meeting #2	Risk Assessment & Mitigation Strategies	July 29th & 31st, 2025
Planning Meeting #3	Action Prioritization, Adopting the Plan, & Plan Maintenance	August 19th & 20th, 2025

Step 2: Plan for Public Involvement
(Handbook Task 3)

44 CFR Requirement 201.6(b): An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include: (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval.

- Prior to the kick-off meetings scheduled in Daviess County, the GHRPC staff produced social media posts with meeting times and locations, flyers for distribution throughout the county, and this information was sent to all jurisdictions which were encouraged to publish and display the information about the hazard mitigation plan and the meeting times. The meetings were also advertised on the GHRPC website and Facebook pages, and the Facebook post was also forwarded to all jurisdictions within Daviess County. (Copies of the Facebook post, flyer, and QR code for the public opinion survey can be found in Appendix B).
- Prior to the kick-off meeting scheduled in Daviess County invitation letters were sent out to all jurisdictions in the planning area, civic organizations, food pantries, churches, emergency services, and special districts. (Please see Appendix B for a complete list).
- Additionally, the neighboring communities, located outside of the county, but with populations and structures located within Daviess County were also invited to attend. (Please see Appendix B for a complete list of people and organizations invited to attend).
- All meetings, both in person and virtual, were public meetings and information about the meetings was distributed throughout the county. During the planning process, prior to the publication of the plan draft, there was opportunity for any citizen of Daviess County to

attend the meetings and/or make comment.

- The initial meetings for the Hazard Mitigation Plan for Daviess County were conducted in person with representatives from the County. At the Kick-off meeting in Gallatin, the FEMA requirements for public participation were mentioned. All people attending were asked to complete the survey and share with others located in the county. Printed flyers were distributed with information about upcoming meetings and a link to the public opinion survey.
- The Hazard Mitigation Committee also agreed to mention the upcoming meetings at their respective churches, civic organizations, meetings, and in passing when speaking with people from the community.
- The draft of the plan was made available to the public and members of the planning committee; there was a draft of the plan on the GHRPC website. The plan was made available for review from August 29, 2025, to September 30, 2025. The availability of this plan for public review was advertised on local social media pages and press releases were sent to news outlets in Daviess County.
- All available information about the public meetings, attendance, press releases, paperwork completed at meetings, public surveys, questionnaires, agendas, power point presentation, and all other available documentation can be found in the Appendices as follows:
    - Planning Documentation & Invitations: Appendix B
    - Press Release regarding public comment on the plan draft: Appendix B
    - Questionnaires & Completed Surveys: Appendix C
    - Action Plans/STAPLEE Worksheets: Appendix C
- Both at the public meetings, virtual and in-person, no public comment was made regarding the plan.
- In the public opinion survey, there was a comment about affordability and availability of emergency services in the planning area.
- During the publication of the plan draft there were no comments made prior to the submission of the plan to SEMA. (Reference PRT A3-a)

Step 3: Coordinate with Other Departments and Agencies and Incorporate Existing Information
(Handbook Task 2)

44 CFR Requirement 201.6(b): An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include: (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process. (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

In the interest of involving stakeholders throughout the planning area, the following organizations and businesses were invited to participate in the hazard mitigation planning process for Daviess County.

- Neighboring Communities:
    - City of Cameron, MO
    - City of Hamilton, MO

    - City of Gilman City, MO
    - City of Breckenridge, MO
- Local and regional agencies involved in hazard mitigation activities:
    - Gallatin Fire Protection District
    - Jameson Fire Protection District
    - Jamesport Volunteer Fire Department
    - K.A.W. Fire Protection District
    - Winston Fire Protection District
    - Viking Valley Fire Department
    - Big Creek Ambulance District
    - Daviess County Ambulance district
    - Sheriff of Daviess County
    - Gallatin Family Medicine Clinic
    - Pattonsburg Medical Clinic
    - Jamesport Outreach Clinic
- Agencies with the authority to regulate development:
    - Daviess County Emergency Management
    - City of Altamont
    - City of Coffey
    - City of Gallatin
    - Village of Jameson
    - City of Jamesport
    - Village of Lock Springs
    - City of Pattonsburg
    - Village of Winston
- Businesses & Academia
    - Gallatin R-V School District
    - North Daviess R-III School District
    - Pattonsburg R-II School District
    - Tri-County R-VII School District
    - Winston R-VI School District
    - Landmark Custom Metal Fabrication
    - MFA AgriService
    - Terry Implement Co
    - Jamesport Builders
    - Smithfield Grain
    - Rob’s Cycle
    - Dungy’s Market
    - Landes Oil & LP Gas
    - Farm Bureau Insurance
- Other private and non-profit interests:
    - Access II LLC.
    - Senior Citizens Center
    - Pattonsburg Senior Center

- Daviess County Nursing & Rehab
- Jamesport Community association
- Daviess County Food Bank
- Assembly of God of Gallatin
- Baptist Church of Jamesport
- Christian Church of Gallatin
- Adam-ondi-Ahman of Jameson
- United Methodist Church of Pattonsburg
- Faith View Ministries of Jamesport

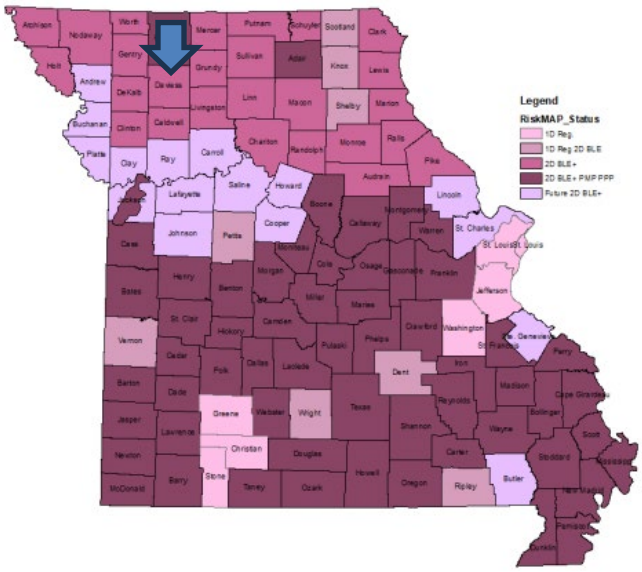
In addition to the invitations sent out to various stakeholders throughout the planning area, meeting notices were provided to all jurisdictions as well as flyers and social media posts that were used to promote the meetings. This information was also made available on GHRPCs website and Facebook page. A copy of the address labels, invitations, flyers, and social media posts can be found in Appendix B of the plan.

The draft of the Daviess County Hazard Mitigation Plan was published on Green Hills Regional Planning Commission's website on August 29, 2025. Contact information was provided to any individual that wanted to make a comment on the plan and the ability to make a comment was enabled on the GHRPC website.

Coordination with FEMA Risk MAP Project

- The most current RISK Map was downloaded from FEMA's website and was available at the 2nd planning meeting.
- The following figure (Figure 1.15) was taken from the Missouri State Hazard Mitigation Plan, 2023.

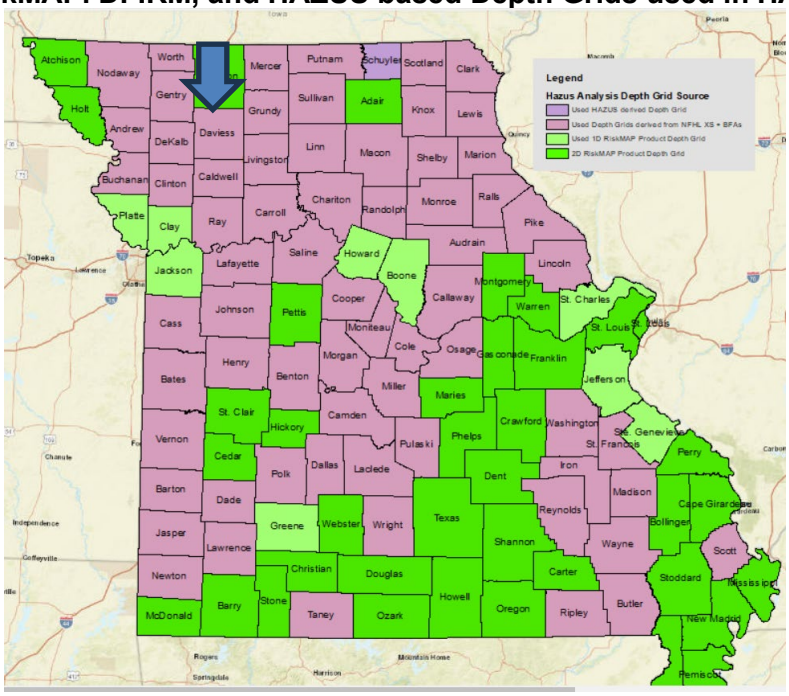
Figure 1.1. RiskMAP Study Status Map



The following figure indicates which analysis was performed per county. According to the Missouri

Hazard Mitigation Plan 2023, the analysis of Chariton County was conducted as follows. For counties with digital FIRMs, the regulatory special flood hazard area was utilized. Next, depth grids were generated using cross sections from the FIRM database and/or hydraulic models in combination with the terrain elevation data from which the DFIRM was derived.

Figure 1.1. RiskMAP. DFIRM, and HAZUS based Depth Grids used in HAZUS Analysis



Source: the Missouri Hazard Mitigation Plan 2023

Integration of Other Data, Reports, Studies, and Plans

- In order to complete the Daviess County Hazard Mitigation Plan the following sources were implemented: the 2023 Missouri State Hazard Mitigation Plan, Hazard Mitigation Plans from areas near the planning area, the University of Missouri Extension Reports, Flood Insurance Studies (FIS), Flood Insurance Rate Maps (FIRMs), State Department of Natural Resources (DNR) dam information, the National Inventory of Dams (NID), dam inspection reports, state fire reports, Wildland/Urban Interface and Intermix areas from the SILVIS Lab - Department of Forest Ecology and Management - University of Wisconsin, local comprehensive plans, economic development plans, capital improvement plans, US Department of Agriculture's (USDA) Risk Management Agency Crop Insurance Statistics, and local budgets.
- Relevant data from the above-mentioned sources was included in the plan where applicable. These sources were used to identify risks, previous losses, vulnerabilities, and provide additional information in the "risk assessment" for potential hazards. (See chapter 3) (Reference PRT A4-a).

Step 4: Assess the Hazard: Identify and Profile Hazards
(Handbook Task 4)

- To adequately assess the issues, resources available on the Internet, existing reports and plans, information provided by jurisdictions on the Data Questionnaires, and HAZUS Data was utilized to compile information about each identified hazard. Each of the hazards was revised to include the most recent location data, previous occurrences, probability of future occurrence, and magnitude/severity. Losses were estimated using a combination of resources, including HAZUS data and information available from local resources.
- During the 1st meeting, the jurisdictions determined which hazards were present in the county that would be included in the HMP for Daviess County.

Step 5: Assess the Problem: Identify Assets and Estimate Losses
(Handbook Task 4)

- In cases where vulnerability estimates were unavailable, data from the 2023 Missouri State Hazard Mitigation Plan was utilized as the best and most recent data available SEMA was also able to share some preliminary data from the 2023 State Plan update.
- The following information was used to determine the assets and estimate losses in Daviess County: census, GIS data, HAZUS, and the Data Collection Questionnaire.
- Losses were estimated using the Missouri State Hazard Mitigation Plan and available HAZUS data for Daviess County.
- At the 2nd meeting, the initial draft of the risk assessment was available, chapter 3 of the plan.
- The MPC performed a risk assessment using data from Chapter 3 of the plan. Jurisdictions attending the meeting were encouraged to identify vulnerabilities that may have been overlooked or that they concluded were important. See appendix B for the vulnerability assessment worksheets.

Step 6: Set Goals
(Handbook Task 6)

At the 2nd planning meeting the MPC reviewed the goals of the previously approved plan, they made the determination to update the goals to better address the specific hazards to the region and make implementation and planning more efficient. The goals can be found in Chapter 4 of the Daviess County Hazard Mitigation Plan. They were listed as follows:

- Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorms/high winds, hail, and lightning.
- Goal 2: Minimize property damage due to flooding, levee failure, and dam failure.
- Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures, and wildfire.
- Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather.
- Goal 5: Minimize injuries and property damage due to seismic and/or geological events.

Step 7: Review Possible Mitigation Actions and Activities
(Handbook Task 6)

- The 3rd Planning Meeting was when the MPC reviewed the mitigation strategy from the previously approved plan. Each jurisdiction was aware that they must have at least one

action plan for each hazard included in the plan.

- The jurisdictions determined which actions would be retained, modified, or deleted from the previous plan. The individual jurisdictions provided information on any progress made on the actions from the previous plan, and if they were still feasible.
- MPC members were encouraged to continue forward only those actions that substantively addressed long-terms risks identified in the risk assessment.
- The FEMA publication *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards (January 2013)* was made available to the planning committee. It was suggested that this would be a valuable resource in guiding the planning activities to mitigate hazards in the planning area.
- Participants were encouraged to focus on long-term mitigation solutions and consideration was given to the potential cost of each project in relation to the anticipated future cost savings.
- The Daviess County Hazard Mitigation Planning Committee utilized the STAPLEE method for evaluating the priority and effectiveness of each action.

Step 8: Draft an Action Plan
(Handbook Task 6)

The action worksheets, including the plan for implementation, submitted by each jurisdiction for the updated Mitigation Strategy are included in Chapter 4.

Step 9: Adopt the Plan
(Handbook Task 8)

Each jurisdiction is aware that they must adopt the plan prior to submission to SEMA. Each jurisdiction will document the adoption of the plan. This documentation can be found in Appendix E.

Step 10: Implement, Evaluate, and Revise the Plan
(Handbook Tasks 7 & 9)

At the 3rd planning meeting, where actions were scored and decided upon, the MPC along with the GHRPC Planner agreed to meet at least annually to determine if actions were ongoing or completed. It was determined that the Hazard Mitigation Committee would schedule annual meetings to discuss any needed updates, changes, or progress on the plan's actions. It was determined that at these meetings, any amendments that were needed in the plan would be discussed and undertaken if necessary. It was also determined that any jurisdiction would use this annual meeting to develop NOIs for SEMA if desired. There is more detailed information about the strategy for plan maintenance in Chapter 5 of the Daviess County Hazard Mitigation Plan.

3 RISK ASSESSMENT

44 CFR Requirement §201.6(c)(2): [The plan shall include] A risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.

The goal of the risk assessment is to estimate the potential loss in the planning area, including loss of life, personal injury, property damage, and economic loss, from a hazard event. The risk assessment process allows communities and school/special districts in the planning area to better understand their potential risk to the identified hazards. It will provide a framework for developing and prioritizing mitigation actions to reduce risk from future hazard events.

The Daviess County Multi-Jurisdiction Hazard Mitigation Plan Update was approved by FEMA on March 30, 2021, and will expire 5 years after that date, on March 30, 2026. This risk assessment is an update to the risk assessment previously prepared.

The risk assessment for Daviess County and participating jurisdictions followed the methodology described in the 2023 FEMA Local Mitigation Planning Policy Guide, which outlines the following risk assessment requirements:

1. Description of all natural hazards that can affect the participating jurisdictions.
2. Inclusion of information on location for each identified hazard.
3. Provision of the extent of the hazards that can affect the planning area.
4. Inclusion of information on previous hazard events for each hazard that affects the planning area.

This chapter is divided into four main parts:

1. **Section 3.1 Hazard Identification** identifies the hazards that threaten the planning area and provides a factual basis for elimination of hazards from further consideration;
2. **Section 3.2 Assets at Risk** provides the planning area's total exposure to natural hazards, considering critical facilities and other community assets at risk;
3. **Section 3.3 Land Use and Development** discusses development that has occurred since the last plan update and any increased or decreased risk that resulted. This section also discusses areas of planned future development and any implications on risk/vulnerability;
4. **Section 3.4 Hazard Profiles and Vulnerability Analysis** provides more detailed information about the hazards impacting the planning area. For each hazard, there are three sections:
    - Hazard Profile provides a general description and discusses the threat to the planning area, the geographic location at risk, potential Strength/Magnitude/Extent, previous occurrences of hazard events, probability of future occurrence, risk summary by jurisdiction, impact of future development on the risk.
    - Vulnerability Assessment further defines and quantifies populations, buildings, critical facilities, and other community/school or special district assets at risk to natural hazards.
    - Problem Statement briefly summarizes the problem and develops possible solutions.

3.1 HAZARD IDENTIFICATION

Requirement §201.6(c)(2)(i): [The risk assessment shall include a] description of the type…of all natural hazards that can affect the jurisdiction.

Natural hazards can be complex, occurring with a wide range of intensities. Some events are instantaneous and offer no window of warning, such as earthquakes. Some offer a short warning in which to alert the public to take actions, such as tornadoes or severe thunderstorms. Others occur less frequently and are typically more expensive, with some warning time to allow the public time to prepare for, such as flooding. The Daviess County Hazard Mitigation Planning Committee has determined that natural hazards will be the sole focus of the plan. To that purpose, man-made phenomena such as war, chemical contamination, and other man-made hazards will be excluded from the plan.

Happenings such as those listed below, which occur in a populated area, are referred to as hazardous events. It is not until significant property damage and loss of life result from a natural hazard that the phenomena are classified as a natural disaster.

3.1.1 Review of Existing Mitigation Plans

The MPC previously developed a multi-jurisdiction Hazard Mitigation Plan Update approved on March 30, 2021. Daviess County, Altamont, Coffey, Gallatin, Jameson, Jamesport, Lock Springs, Pattonsburg, Winston, Pattonsburg R-II, North Daviess R-III, Gallatin R-V, Winston R-VI, and Tri-County R-VII participated in the multi-jurisdictional county-wide plan. The 2021 Hazard Mitigation Plan was consulted in development of the risk assessment and information included and updated where appropriate.

The MPC decided to include natural hazards, as only natural hazards are required by federal regulation to be included. Human-caused and technological hazards were excluded from the plan as they are not required to comply with the Disaster Mitigation Act of 2000.

Levee failure was excluded from the mitigation planning process as there are no mapped levees nor associated levee protected areas within or immediately upstream of Daviess County.

3.1.2 Review of Disaster Declaration History

(Reference PRT B1-d).

Missouri State of Emergencies are Executive Orders (E.O.) signed by the Governor. For disasters, a State of Emergency could lead to a Federal Disaster Declaration. Since the last plan update, no non-federally declared events resulted in a significant event impacting the planning area

The following table contains the previous disaster declarations in Daviess County from 1965 to the present. The description of the event is included. The most common disasters that have affected the county are flooding, severe storms, and severe winter storms.

Table 3.1. FEMA Disaster Declarations that included Daviess County, Missouri, 1965-Present

Disaster Number	Description	Declaration Date Incident Period	Individual Assistance (IA) Public Assistance (PA)

203	Severe Storms & Flooding	7/27/1965	IA, PA
372	Heavy Rains, Tornadoes, & Flooding	4/19/1973	IA, PA
407	Severe Storms & Flooding	11/1/1973	IA, PA
995	Severe Storms & Flooding	6/10 – 10/25/1993	IA, PA
1054	Severe Storms, Tornadoes, Hail, Flooding	5/13 – 6/23/1995	IA, PA
1403	Severe Winter Ice Storm	1/29 – 2/13/2002	IA, PA
1524	Severe Storms, Tornadoes, and Flooding	5/18 – 5/31/2004	IA, PA
1631	Severe Storms, Tornadoes, and Flooding	3/8 – 3/13/2006	PA
1736	Severe Winter Storms	12/6 – 12/15/2007	PA
1773	Severe Storms and Flooding	6/1 – 8/13/2008	PA
3017	Drought	9/24/1976	PA
3232	Hurricane Katrina Evacuation	8/29 – 10/1/2005	PA
3281	Severe Winter Storms	12/8 – 12/15/2007	PA
3303	Severe Winter Storms	1/26 – 1/28/2009	PA
3317	Severe Winter Storms	1/31 – 2/5/2011	PA
3482	Covid-19	1/20/2020 – 5/11/2023	IA, PA
1708	Severe Storms & Flooding	5/5 – 5/18/2007	IA, PA
1934	Severe Storms, Flooding, & Tornadoes	6/12 – 7/31/2010	PA
4200	Severe Storms, Tornadoes, Straight-Line Winds, and Flooding	9/9 – 9/10/2014	PA
4238	Severe Storms, Tornadoes, Straight-Line Winds, and Flooding	5/15 – 7/27/2015	PA
4451	Severe Storms, Tornadoes, and Flooding	4/29/2019 – 7/6/2019	PA
4615	Severe Storm, Straight-line winds, Tornadoes, and Flooding	6/24/2021 – 7/1/2021	PA
4490	Covid-19 Pandemic	1/20/2020 – 5/11/2023	IA, PA

Source: Federal Emergency Management Agency, (1/2025)
https://www.fema.gov/data-visualization-summary-disaster-declarations-and-grants

3.1.3 Research Additional Sources

List the additional sources of data on locations and past impacts of hazards in the planning area:

- Missouri Hazard Mitigation Plans (2010, 2013, 2018, and 2023)
- Previously approved planning area Hazard Mitigation Plan (Date)
- Federal Emergency Management Agency (FEMA)
- Missouri Department of Natural Resources
- National Drought Mitigation Center Drought Reporter

- US Department of Agriculture's (USDA) Risk Management Agency Crop Insurance Statistics
- National Agricultural Statistics Service (Agriculture production/losses)
- Data Collection Questionnaires completed by each jurisdiction
- State of Missouri GIS data
- Environmental Protection Agency
- Flood Insurance Administration
- Hazards US (HAZUS)
- Missouri Department of Transportation
- Missouri Division of Fire Marshal Safety
- Missouri Public Service Commission
- National Fire Incident Reporting System (NFIRS)
- National Oceanic and Atmospheric Administration's (NOAA) National Centers for Environmental Information (NCEI);
- County and local Comprehensive Plans to the extent available
- County Emergency Management
- County Flood Insurance Rate Map, FEMA
- Flood Insurance Study, FEMA
- SILVIS Lab, Department of Forest Ecology and Management, University of Wisconsin
- U.S. Army Corps of Engineers
- U.S. Department of Transportation
- United States Geological Survey (USGS)
- Various articles and publications available on the internet (citations to the sources will be provided in the body of the plan)

Note that the only centralized source of data for many of the weather-related hazards is the National Oceanic and Atmospheric Administration's (NOAA) National Centers for Environmental Information (NCEI). Although it is usually the best and most current source, there are limitations to the data which should be noted. The NCEI documents the occurrence of storms and other significant weather phenomena having sufficient intensity to cause loss of life, injuries, significant property damage, and/or disruption to commerce. In addition, it is a partial record of other significant meteorological events, such as record maximum or minimum temperatures or precipitation that occur in connection with another event. Some information appearing in the NCEI may be provided by or gathered from sources outside the National Weather Service (NWS), such as the media, law enforcement and/or other government agencies, private companies, individuals, etc. An effort is made to use the best available information but because of time and resource constraints, information from these sources may be unverified by the NWS. Those using information from NCEI should be cautious as the NWS does not guarantee the accuracy or validity of the information.

The NCEI damage amounts are estimates received from a variety of sources, including those listed above in the Data Sources section. For damage amounts, the NWS makes a best guess using all available data at the time of the publication. Property and crop damage figures should be considered as a broad estimate. Damages reported are in dollar values as they existed at the time of the storm event. They do not represent current dollar values.

The database currently contains data from January 1950 to March 2014, as entered by the NWS. Due to changes in the data collection and processing procedures over time, there are unique periods of record available depending on the event type. The following timelines show the different

time spans for each period of unique data collection and processing procedures.

1. Tornado: From 1950 through 1954, only tornado events were recorded.
2. Tornado, Thunderstorm Wind and Hail: From 1955 through 1992, only tornado, thunderstorm wind and hail events were keyed from the paper publications into digital data. From 1993 to 1995, only tornado, thunderstorm wind and hail events have been extracted from the Unformatted Text Files.
3. All Event Types (48 from Directive 10-1605): From 1996 to present, 48 event types are recorded as defined in NWS Directive 10-1605.

Note that injuries and deaths caused by a storm event are reported on an area-wide basis. When reviewing a table resulting from an NCEI search by county, the death or injury listed in connection with that county search did not necessarily occur in that county.

3.1.4 Hazards Identified

List the hazards that significantly impact the planning area and were chosen for further analysis in alphabetical order. Explain that not all hazards impact every jurisdiction. Insert a table providing a summary of the jurisdictions impacted by each hazard. Explain the symbols used, such as the fact that an “x” indicates the jurisdiction is impacted by the hazard, and a "-" indicates the hazard is not applicable to that jurisdiction. If there are variations in the assessed hazard risk for hazards that usually are area-wide in risk, such as thunderstorms, include the rationale for that variation. Example: a community with a high percentage of housing comprised of mobile homes could be more at risk to damages from a tornado. This information could be conveyed using footnotes to explanations at the bottom of the page. the plan MUST include a rationale for any natural hazards commonly recognized to impact the planning area that have been omitted (Reference PRT B1-a). If there are hazards which do not impact a specific jurisdiction, this MUST be explicitly stated and rationalized here. If not, actions will need to be created to mitigate against all hazards for all jurisdictions. (Reference PRT B1-f, C4-b)

The table below lists the hazards that significantly impact the planning area and were chosen for further analysis in alphabetical order. Not all hazards impact every jurisdiction. The symbols used indicate whether or not a hazard impacts a particular jurisdiction. If the hazard does impact a jurisdiction this is marked with an “X” in the table below. If a hazard does not impact a jurisdiction this will be indicated by a “-“. Further, the rationale for excluding a particular hazard will be included in this section of the plan.

Levee Failure was omitted because there are no levees in the planning area and no areas of the planning area are in a levee protected location. Land Subsidence/Sinkholes were omitted because there are no known sinkholes in the planning area.

Table 3.2. Hazards Identified for Each Jurisdiction

Jurisdiction	Dam Failure	Drought	Earthquake	Extreme Temperatures	Flooding (River and Flash)	Severe Winter Weather	Thunderstorm/Lightning/ Hail/High Wind	Tornado	Wildfire
Daviess County	X	X	X	X	X	X	X	X	X
Village of Altamont		X	X	X	X	X	X	X	X
City of Coffey	-	X	X	X	X	X	X	X	X
City of Gallatin	-	X	X	X	X	X	X	X	X
Village of Jameson	-	X	X	X	X	X	X	X	X
City of Jamesport	-	X	X	X	X	X	X	X	X

City of Pattonsburg	-	X	X	X	X	X	X	X	X
Village of Winston	-	X	X	X	X	X	X	X	X
Pattonsburg R-II School District	-	-	-	-	-	X	X	X	X
North Daviess R-III School District	-	-	-	-	-	X	X	X	X
Gallatin R-V School District	-	-	-	-	-	X	X	X	X
Winston R-VI School District	-	-	-	-	-	X	X	X	X
Tri-County R-VII School District	-	-	-	-	-	X	X	X	X
Coffey Fire Protection District	-	-	-	-	-	-	-	-	X
Pattonsburg Rescue Fire Protection District	-	-	-	-	-	-	-	-	X

3.1.5 Multi-Jurisdictional Risk Assessment

For this multi-jurisdictional plan, the risks are assessed for each jurisdiction where they deviate from the risks facing the entire planning area. The planning area is fairly uniform, in terms of climate and topography, as well as building construction characteristics. Accordingly, the geographic areas of occurrence for weather-related hazards do not vary greatly across the planning area for most hazards. The cities of Gallatin and Pattonsburg are slightly more urbanized within the planning area and they have more assets that are vulnerable to the weather-related hazards and varied development trends impact the future vulnerability. Similarly, more rural areas have more assets (crops and livestock) that are vulnerable to animal/plan/crop disease. These differences are discussed in greater detail in the vulnerability sections of each hazard.

The hazards that vary across the planning area in terms of risk include dam failure, flash flood, grass or wildland fire, river flood, and sinkholes/land subsidence. These differences are detailed in each hazard profile under a separate heading.

3.2 ASSETS AT RISK

This section assesses the population, structures, critical facilities, infrastructure, and other important assets in the planning area that may be at risk to natural hazards. Table 3.3 shows the total population, building count, estimated value of buildings, estimated value of contents, and estimated total exposure by jurisdiction.

Any assets identified in this section MUST have actions considered and discussed in Chapter 4 – Risk Assessment. Actions do not necessarily need to be created, but consideration must be given to mitigating risk to these assets, and that consideration must be documented in the plan narrative.

3.2.1 Total Exposure of Population and Structures

This section assesses the planning area population, structures, critical facilities, and infrastructure, and other important assets that may be at risk from hazards. All structures within the planning area are visible on high resolution imagery and have been analyzed and classified. This offers the ability to display those structures by their type and purpose, which makes identifying critical infrastructure much easier. This was done on the last hazard mitigation plan for Daviess County. There have been no significant changes in the planning area since the last plan.

Unincorporated County and Incorporated Cities

In the following three tables, population data is based on 2022 Census Bureau data. Building counts and building exposure values are based on parcel data developed by the State of Missouri Geographic Information Systems (GIS) database. This data, organized by County, is available on Google Drive through the link provided in the previous section (3.2.1). Contents exposure values were calculated by factoring a multiplier to the building exposure values based on usage type. The multipliers were derived from the HAZUS and are defined below in **Table 3.3**. Land values have been purposely excluded from consideration because land remains following disasters, and subsequent market devaluations are frequently short term and difficult to quantify. Another reason for excluding land values is that state and federal disaster assistance programs generally do not address loss of land (other than crop insurance). It should be noted that the total valuation of buildings is based on county assessors' data which may not be current. In addition, government-owned properties are usually taxed differently or not at all, and so may not be an accurate representation of true value. Note that public school district assets and special districts assets are included in the

total exposure tables assets by community and county.

Table 3.3 shows the total population, building count, estimated value of buildings, estimated value of contents and estimated total exposure to parcels for the unincorporated county and each incorporated city. For multi-county communities, the population and building data may include data on assets located outside the planning area. **Table 3.4** that follows provides the building value exposures for the county and each city in the planning area broken down by usage type. Finally, **Table 3.5** provides the building count total for the county and each city in the planning area broken out by building usage types (residential, commercial, industrial, and agricultural).

Table 3.3. Maximum Population and Building Exposure by Jurisdiction

Jurisdiction	2022 Annual Population Estimate	Building Count	Building Exposure ($)	Contents Exposure ($)	Total Exposure ($)
Daviess County	8,418	11,722	$381,795	$225,134	$606,929
Altamont	156	179	$12,893	$6,899	$19,792
Coffey	126	128	$9,131	$4,815	$13,946
Gallatin	1,747	1189	$105,448	$57,260	$162,707
Jameson	136	122	$9,060	$4,579	$13,639
Jamesport	625	495	$44,604	$20,154	$64,758
Lock Springs	40	83	$4,728	$2,466	$7,194
Pattonsburg	276	144	$20,855	$7,207	$28,092
Winston	177	164	$20,916	$7,326	$28,242
Total	**11,701**	**14,226**	**$609,430**	**$335,840**	**$945,270**

Source: U.S. Bureau of the Census, Annual population estimates/ 5-Year American Community Survey 2022; Building Count and Building Exposure, Missouri GIS Database from SEMA Mitigation Management; Contents Exposure derived by applying multiplier to Building Exposure based on HAZUS 6.0 standard contents multipliers per usage type as follows: Residential (50%), Commercial (100%), Industrial (150%), Agricultural (100%). For purposes of these calculations, government, school, and utility were calculated at the commercial contents rate. All dollar values are in 1000's of dollars.

Table 3.4. Building Values/Exposure by Usage Type

Jurisdiction	Residential	Commercial	Industrial	Agricultural	Total
Daviess County	$309,805	$32,882	$24,658	$14,087	$381,432
Altamont	$11,860	$897	$0	$64	$12,821
Coffey	$8,535	$548	$0	$48	$9,131
Gallatin	$88,674	$8,968	$1,574	$216	$99,432
Jameson	$8,867	$0	$0	$48	$8,915
Jamesport	$33,142	$3,438	$0	$142	$36,722
Lock Springs	$4,434	$249	$0	$46	$4,729
Pattonsburg	$20,885	$698	$0	$10	$21,593
Winston	$20,916	$399	$0	$30	$21,345
Total	**$507,418**	**$48,079**	**$26,232**	**$14,691**	**$596,420**

Source: Missouri GIS Database, SEMA Mitigation Management Section All values are in thousands of dollars.

Table 3.5. Building Counts by Usage Type

Jurisdiction	Residential Counts	Commercial Counts	Industrial Counts	Agricultural Counts	Total

Daviess County	2,795	660	47	11,722	15,229
Altamont	107	18	0	53	179
Coffey	77	11	0	40	128
Gallatin	800	180	3	180	1185
Jameson	80	0	0	40	120
Lock Springs	40	5	0	38	83
Pattonsburg	107	14	0	8	129
Winston	125	8	0	25	158
Totals	**4,131**	**896**	**50**	**12,106**	**17,183**

Source: Missouri GIS Database, SEMA Mitigation Management Section; Public School Districts and Special Districts

Even though schools and special districts' total assets are included in the tables above, additional discussion is needed, based on the data that is available from the districts' completion of the Data Collection Questionnaire and district-maintained websites. The number of enrolled students at the participating public-school districts is provided in **Table 3.6** below. Additional information includes the number of buildings, building values (building exposure) and contents value (contents exposure). These numbers will represent the total enrollment and building count for the public-school districts regardless of the county in which they are located.

Table 3.6. Population and Building Exposure by Jurisdiction-Public School Districts

Public School District	Enrollment	Building Count	Building Exposure ($)	Contents Exposure ($)	Total Exposure ($)
Gallatin R-V	323	2			
North Daviess R-III	49	2			
Pattonsburg R-II	176	2			
Tri-County R-VII	73	2			
Winston R-VI	112	2			

Source: MCDS Portal | Missouri Department of Elementary and Secondary Education - MCDS (mo.gov), select the file for the most recent year called "20xx Building Enrollment PK-12", filter the spreadsheet by selecting only the public school districts in the planning area. The Building Exposure, Contents Exposure, and Total Exposure amounts come from the completed Data Collection Questionnaires from Public School Districts. In general, the school districts obtain this information from their insurance coverage amounts.

3.2.2 Critical and Essential Facilities and Infrastructure

This section will include information from the Data Collection Questionnaire and other sources concerning the vulnerability of participating jurisdictions' critical, essential, high potential loss, and transportation/lifeline facilities to identified hazards. Definitions of each of these types of facilities are provided below.

- Critical Facility: Those facilities that are essential in providing utility or direction either during the response to an emergency or during the recovery operation.
- Essential Facility: Those facilities that, if damaged, would have devastating impacts on disaster response and/or recovery.
- High Potential Loss Facilities: Those facilities that would have a high loss or impact on the community.
- Transportation and lifeline facilities: Those facilities and infrastructure critical to transportation, communications, and necessary utilities.

Table 3.7 includes a summary of the inventory of critical and essential facilities and infrastructure in the planning area. The list was compiled from the Data Collection Questionnaire as well as the following sources:

- 2023 Missouri State Hazard Mitigation Plan and Hazard Mitigation Viewer http://bit.ly/MoHazardMitigationPlanViewer2023
- Interviews with County Emergency Management Director and City and County Government Officials
- HAZUS contains an inventory of critical facilities that can be exported for each jurisdiction.

Table 3.7. Inventory of Critical/Essential Facilities and Infrastructure by Jurisdiction

Jurisdiction	Airport Facility	Bus Facility	Childcare Facility	Communications Tower	Electric Power Facility	Emergency Operations	Fire Service	Government	Housing	Shelters	Highway Bridge	Hospital/Health Care	Military	Natural Gas Facility	Nursing Homes	Police Station	Potable Water Facility	Rail	Sanitary Pump Stations	School Facilities	Stormwater Pump Stations	Tier II Chemical Facility	Wastewater Facility	TOTAL
Village of Altamont	-	-	-	1	1	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	**8**
City of Coffey	-	-	-	-	1	-	1	2	-	-	-	-	-	1	-	-	-	-	-	-	-	2	1	**8**
City of Gallatin	-	-	1	-	1	1	1	4	4	2	-	5	-	1	1	1	1	-	-	2	-	13	1	**41**
Village of Jameson	-	-	-	1	1	-	1	2	-	1	-	-	-	1	-	-	-	-	-	2	-	-	1	**10**
City of Jamesport	-	-	1	1	1	-	1	1	1	-	-	6	-	1	-	-	-	-	-	2	-	6	-	**21**
City of Pattonsburg	-	-	-	1	1	-	1	5	1	1	-	1	-	1	-	-	1	-	-	2	-	6	1	**22**
Village of Winston	-	-	-	1	1	-	1	2	-	-	-	-	-	-	-	-	-	-	-	2	-	2	1	**10**
Unincorp. Daviess County	2	-	-	8	1	-	-	3	-	-	52	1	-	-	-	1	-	-	-	7	-	1	-	**76**
Totals	**2**	**0**	**2**	**13**	**8**	**1**	**7**	**21**	**6**	**4**	**52**	**13**	**0**	**5**	**1**	**2**	**2**	**0**	**0**	**17**	**0**	**32**	**6**	**194**

Source: Missouri 2023 State Hazard Mitigation Plan and Hazard Mitigation Viewer; Data Collection Questionnaires; HAZUS, etc.

The term “scour critical” refers to one of the database elements in the National Bridge Inventory. This element is quantified using a “scour index”, which is a number indicating the vulnerability of a bridge to scour during a flood. Bridges with a scour index between 1 and 3 are considered “scour critical”, or a bridge with a foundation determined to be unstable for the observed or evaluated scour condition.

The following figures provide locations and conditions of the bridges in Daviess County. There are currently 5 bridges within the county that are considered scour critical.

Figure 3.1. Daviess County Bridges

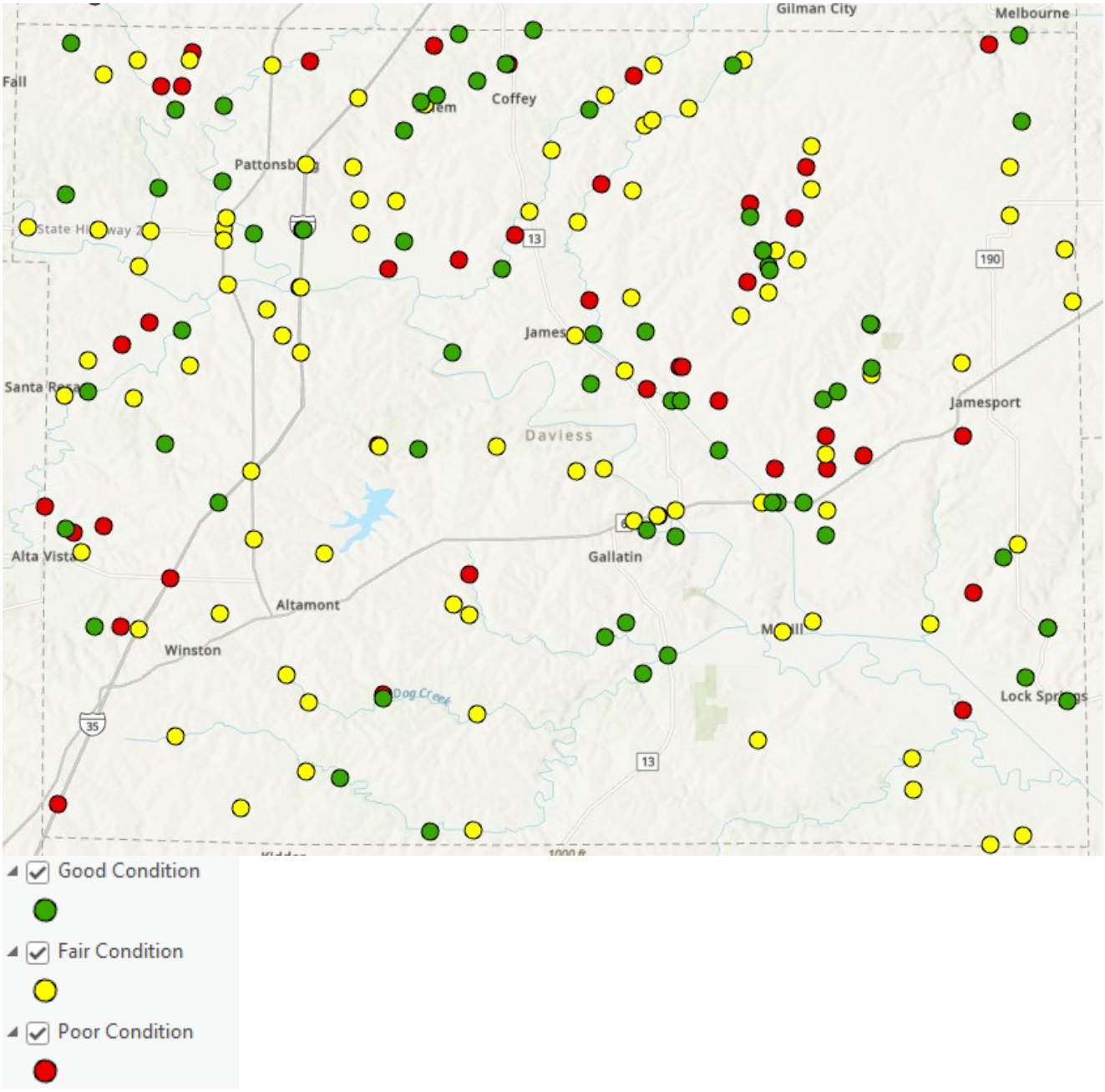
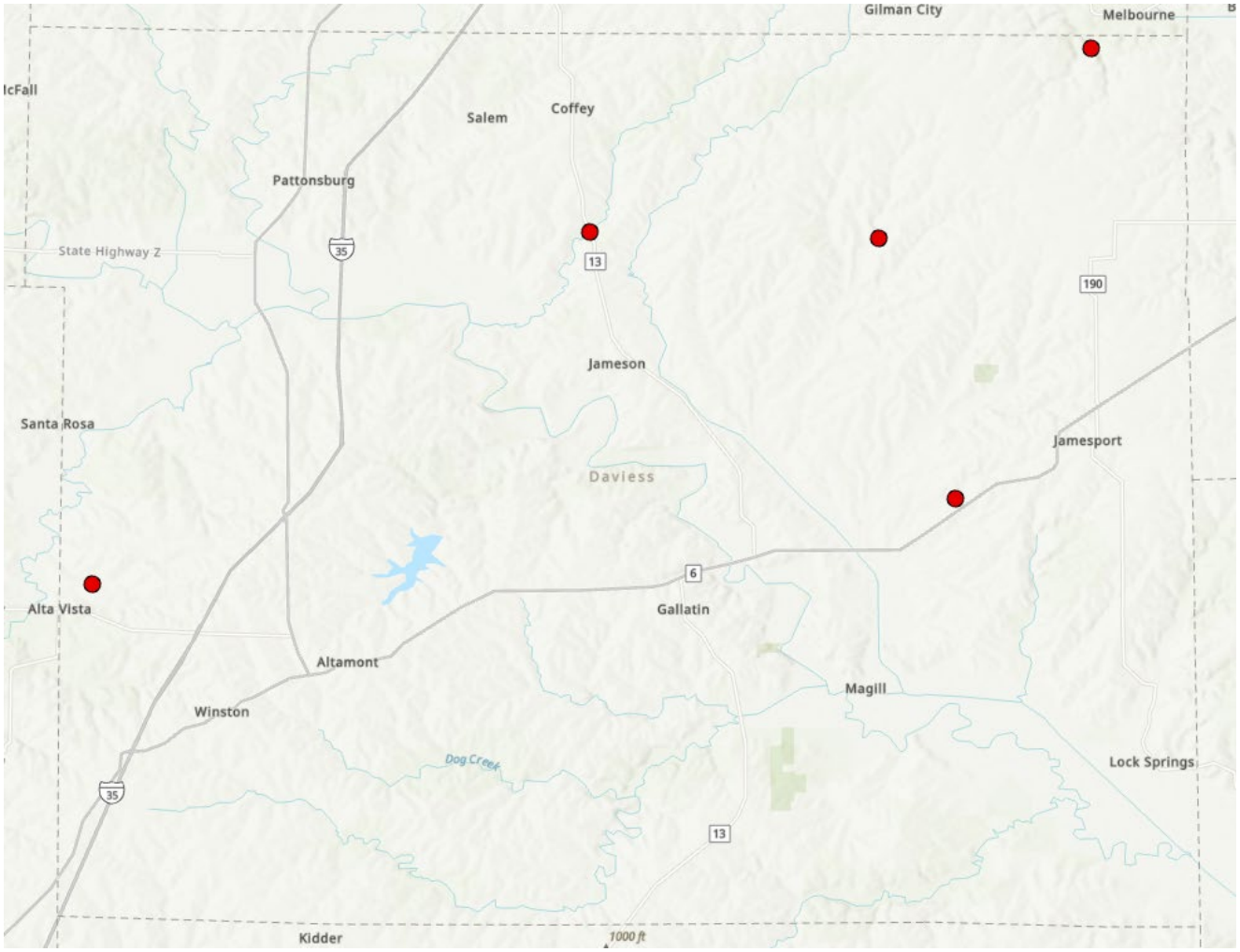


Figure 3.2. Daviess County Structurally Deficient Bridges (Scour Critical)



3.2.3 Other Assets

Assessing the vulnerability of the planning area to disaster also requires data on the natural, historic, cultural, and economic assets of the area. This information is important for many reasons.

- These types of resources warrant a greater degree of protection due to their unique and irreplaceable nature and contribution to the overall economy.
- Knowing about these resources in advance allows for consideration immediately following a hazard event, which is when the potential for damages is higher.
- The rules for reconstruction, restoration, rehabilitation, and/or replacement are often different for these types of designated resources.
- The presence of natural resources can reduce the impacts of future natural hazards, such as wetlands and riparian habitats which help absorb floodwaters.
- Losses to economic assets like these (e.g., major employers or primary economic sectors) could have severe impacts on a community and its ability to recover from disaster.

Threatened and Endangered Species: The US Fish and Wildlife Service provides a database of threatened and endangered species in the United States. **Table 3.8** shows Federally Threatened, Endangered, Proposed, and Candidate Species in Daviess County.

Table 3.8. Threatened and Endangered Species in Daviess County

Common Name	Scientific Name	Status
Mammals		
Gray Bat	Myotis Grisescens	Endangered
Indiana Bat	Myotis Sodalis	Endangered
Northern Long-eared Bat	Myotis Septentrionalis	Endangered
Tricolored Bat	Perimyotis Subflavus	Proposed Endangered
Fishes		
Pallid Sturgeon	Scaphirhynchus Albus	Endangered
Topeka Shiner	Notropis Topeka (=Tristis)	Endangered
Insects		
Monarch Butterfly	Danaus Plexippus	Candidate
Western Regal Fritillary	Argynnis Idalia Occudentalis	Proposed Threatened
Flowering Plants		
Eastern Prairie Fringed Orchid	Platanthera Leucophaea	Threatened
Mead's Milkweed	Asclepias Meadii	Threatened
Western Prairie Fringed Orchid	Platanthera Praeclara	Threatened

Source: U.S. Fish and Wildlife Service, Listed Species (fws.gov); https://ecos.fws.gov/ipac/

Natural Resources: The Missouri Department of Conservation (MDC) provides a database of lands the MDC owns, leases, or manages for public use. **Table 3.9** provides the names and locations of parks and conservation areas in Daviess County.

Table 3.9. Parks in Daviess County

Park / Conservation Area	Address	City
Gallatin Conservation Area	5 Miles south of Gallatin on HWY 13 and ½ miles E on Route M	Gallatin
Green Access	Three miles south of Pattonsburg on HWY 69	Pattonsburg
Holmes Bend Access	Two miles south of Gallatin on the Grand River	Gallatin
Jamesport Community Lake	One mile north of Jamesport on HWY 190, then two miles west on Route RA	Jamesport
Newman Memorial Access	Five miles east of Gallatin on HWY 6, then 6 ½ miles south on Route V, Access Road is on 300 St.	Gallatin
Savage Access	Two miles south of Pattonsburg on HWY 69, then west on Route Z 3 ½ miles, then north on 106th Street, 0.15 to area entrance	Pattonsburg
Wabash Crossing Access	One mile northeast of Gallatin on Highway 6, then north on 239th street for 0.16 mile to area entrance	Gallatin

Source: http://mdc7.mdc.mo.gov/applications/moatlas/AreaList.aspx?txtUserID=guest&txtAreaNm=s
The best source for park information is usually county and community websites.

Historic Resources: The National Register of Historic Places is the official list of registered cultural resources worthy of preservation. It was authorized under the National Historic Preservation Act of 1966 as part of a national program. The purpose of the program is to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources. The National Register is administered by the National Park Service under the Secretary of the Interior. Properties listed in the National Register include districts, sites, buildings, structures and

objects that are significant in American history, architecture, archeology, engineering, and culture.

Table 3.10. Daviess County Properties on the National Register of Historic Places

Property	Address	City	Date Listed
Daviess County Courthouse	Public Square	Gallatin	11/14/1980
Daviess County Rotary Jail & Sheriff's Residence	309 West Jackson	Gallatin	02/23/1990
A. Taylor Ray House	212 West Van Buren Street	Gallatin	04/12/1982

Source: Missouri Department of Natural Resources – Missouri National Register Listings by County http://dnr.mo.gov/shpo/mnrlist.htm

Economic Resources: The following table, **Table 3.11**, shows the major non-government employers in Daviess County.

Table 3.11. Major Non-Government Employers in Daviess County

Employer Name	Main Locations	Product or Service	Employees
Landmark	Gallatin, MO	Manufacturing	200+
Gallatin R-V School District	Gallatin, MO	Education	75
Gold Key	Gallatin, MO	Information Technology	35
McBee Farms	Gallatin, MO	Agriculture/Farming	30
Daviess-DeKalb Regional Jail	Pattonsburg, MO	Corrections	30
Trex Mart	Winston, MO	Retail/Convenience Store	28
Jamesport Concrete, LLC	Jamesport, MO	Construction	20+
Winston Speedway	Winston, MO	Racetrack	20+
Terry Implement	Gallatin, MO	Agricultural Equipment Sales	15+

Source: Data Collection Questionnaires; local Economic Development Commissions

Agriculture: Agriculture plays an important role in the economy of Daviess County. Employment in an agricultural pursuit comprises 30.9% of the total jobs in Daviess County. 19% of these jobs are in livestock, 8.4% are in crops, 1.0% in forestry, and 2.5% are classified as other. This information was obtained from the 2021 Missouri Economic Contribution of Agriculture and Forestry Study. The following table outlines the economic contribution of agriculture in Daviess County.

Table 3.12. Economic Contribution of Missouri Agriculture and Forestry for Daviess County

	Added Value (in $million)	Output (in $million)	Household Income (in $million)	Jobs
Daviess County	$81.7	$167.6	$68.8	1,382

Source: The 2021 Missouri Economic Contribution of Agriculture and Forestry Study

Table 3.13. Agriculture-Related Jobs in Daviess County

	Unpaid	1-4 Workers	5-9 Workers	10+ Workers
# of Farms	260	145	3	2
# of Workers	668	284	(D) Withheld	(D) Withheld

Source: Census of Agriculture 2017, County Data

The following table provides information about Daviess County and some surrounding counties for comparison.

Table 3.14. Daviess County and Surrounding Counties Farm Income, Average Acreage, and % Acreage Per County

County	Daviess	DeKalb	Gentry	Grundy	Harrison
Average Income per Farm	$62,577	$50,047	$100,758	$70,351	$65,930
Average Acreage per Farm	328	286	426	381	409
% Acreage per County in Farmland	88.9%	70.9%	85.2%	77.1%	87.2%

Source: Ag Census 2022; US Department of Agriculture

Figure 3.3. 2022 Census of Agriculture Information for Daviess County (pg. 1)

2022 CENSUS OF AGRICULTURE *County Profile*

Daviess County Missouri

Total and Per Farm Overview, 2022 and change since 2017

	2022	% change since 2017
Number of farms	976	-4
Land in farms (acres)	320,474	+5
Average size of farm (acres)	328	+9
Total	($)	
Market value of products sold	180,499,000	+38
Government payments	5,495,000	-22
Farm-related income	8,112,000	+25
Total farm production expenses	133,031,000	+16
Net cash farm income	61,075,000	+104
Per farm average	($)	
Market value of products sold	184,937	+43
Government payments [a]	11,214	+5
Farm-related income [a]	18,865	+37
Total farm production expenses	136,302	+21
Net cash farm income	62,577	+112

1 Percent of state agriculture sales

Share of Sales by Type (%)

Crops	68
Livestock, poultry, and products	32

Land in Farms by Use (acres)

Cropland	229,232
Pastureland	38,771
Woodland	33,382
Other	19,089

Acres irrigated: 1,293
(Z)% of land in farms

Land Use Practices (% of farms)

No till	22
Reduced till	11
Intensive till	14
Cover crop	10

Farms by Value of Sales

	Number	Percent of Total [b]
Less than $2,500	393	40
$2,500 to $4,999	59	6
$5,000 to $9,999	118	12
$10,000 to $24,999	82	8
$25,000 to $49,999	107	11
$50,000 to $99,999	49	5
$100,000 or more	168	17

Farms by Size

	Number	Percent of Total [b]
1 to 9 acres	23	2
10 to 49 acres	243	25
50 to 179 acres	372	38
180 to 499 acres	211	22
500 to 999 acres	66	7
1,000+ acres	61	6

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

Figure 3.4. 2022 Census of Agriculture Information for Daviess County (pg.2)

Daviess County
Missouri, 2022
Page 2

2022 CENSUS OF AGRICULTURE *County Profile*

Market Value of Agricultural Products Sold

	Sales ($1,000)	Rank in State [c]	Counties Producing Item	Rank in U.S. [c]	Counties Producing Item
Total	**180,499**	**29**	**114**	**925**	**3,078**
Crops	**122,813**	**19**	**114**	**693**	**3,074**
Grains, oilseeds, dry beans, dry peas	117,174	19	109	535	2,917
Tobacco	-	-	2	-	267
Cotton and cottonseed	-	-	7	-	647
Vegetables, melons, potatoes, sweet potatoes	1,286	8	112	776	2,831
Fruits, tree nuts, berries	129	57	112	1,445	2,711
Nursery, greenhouse, floriculture, sod	2,004	14	104	712	2,660
Cultivated Christmas trees, short rotation woody crops	33	8	36	433	1,274
Other crops and hay	2,186	50	114	1,367	3,035
Livestock, poultry, and products	**57,686**	**33**	**114**	**1,001**	**3,076**
Poultry and eggs	3,964	32	113	696	3,027
Cattle and calves	6,872	88	114	1,508	3,047
Milk from cows	24	57	84	908	1,770
Hogs and pigs	45,625	14	111	194	2,814
Sheep, goats, wool, mohair, milk	255	39	111	755	2,967
Horses, ponies, mules, burros, donkeys	735	2	113	391	2,907
Aquaculture	-	-	36	-	1,190
Other animals and animal products	211	10	106	685	2,909

Producers [d]	**1,769**
Sex	
Male	1,195
Female	574
Age	
<35	193
35 – 64	902
65 and older	674
Race	
American Indian/Alaska Native	4
Asian	-
Black or African American	-
Native Hawaiian/Pacific Islander	7
White	1,753
More than one race	5
Other characteristics	
Hispanic, Latino, Spanish origin	10
With military service	191
New and beginning farmers	457

Percent of farms that:

Have internet access	66
Farm organically	1
Sell directly to consumers	3
Hire farm labor	15
Are family farms	93

Top Crops in Acres [e]

Soybeans for beans	115,753
Corn for grain	38,031
Forage (hay/haylage), all	28,193
Wheat for grain, all	2,039
Sorghum for grain	1,015

Livestock Inventory (Dec 31, 2022)

Broilers and other meat-type chickens	238
Cattle and calves	16,180
Goats	476
Hogs and pigs	130,983
Horses and ponies	1,649
Layers	79,203
Pullets	(D)
Sheep and lambs	1,648
Turkeys	16

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

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

Source: 2017 Census of Agriculture

3.3 LAND USE AND DEVELOPMENT

3.3.1 Development Since Previous Plan Update

The population data listed in Table 3.15 below shows a significant and steady loss of population across most communities during the period between 2010 and 2022 estimates. The communities of Gallatin and Jamesport have seen some moderate growth since the 2010 Census.

Table 3.15. County Population Growth, 2010-2024

Jurisdiction	Total Population 2010	Total Population 2020	2022 Annual Population Estimate or ACS Population	2010 – 2024 # Change	2010 – 2020 % Change
Daviess County	8,433	8,430	8,418	-3	-0.035%
Village of Altamont	204	171	156	-33	-16%
City of Coffey	166	151	126	-15	-9%
City of Gallatin	1,786	1,821	1,747	+35	1.96%
Village of Jameson	133	73	136	-60	-73%
City of Jamesport	524	559	625	+35	6.8%
City of Pattonsburg	348	314	276	-34	-9.77%
Village of Winston	259	229	177	-30	-11.58%
Village of Lock Springs	57	40	40	-17	-29.82%
State of Missouri	5,988,927	6,154,913	6,177,957	+165,986	2.77%
United States	308,745,538	331,449,281	333,287,562	+22,703,743	7.35%

Source: U.S. Bureau of the Census, Decennial Census, Annual Population Estimates, American Community Survey 5-year Estimates; Population Statistics are for entire incorporated areas as reported by the Census bureau

Population growth or decline is generally accompanied by increases or decreases in the number of housing units. While most of Daviess County shows a declining population the City of Gallatin and the City of Jamesport have both reported an increase in population. The following table shows the change in numbers of housing units in the planning area.

Table 3.16. Change in Housing Units, 2010-2024

Jurisdiction	Housing Units 2010	Housing Units 2022	2010-2022 # Change	2000-2022 % Change
Daviess County	4,172	4,123	-49	-3.97%
Village of Altamont	151	91	-60	-39.74%
City of Coffey	79	70	-9	-11.39%
City of Gallatin	933	897	-36	-3.86%
Village of Jameson	95	46	-49	-51.58%
City of Jamesport	269	284	+15	5.58%
City of Pattonsburg	99	124	+25	25.25%
Village of Winston	126	101	-25	-19.84%

Source: U.S. Bureau of the Census, Decennial Census, American Community Survey 5-year Estimates; Population Statistics are for entire incorporated areas as reported by the U.S. Census Bureau

Vulnerability to hazards will be affected based on population and where new housing units have been built. Due to a lack of expected growth in population, vulnerability is not expected to increase. The lack of city and county building ordinances is appealing to residential builders, however, the county is rural and its location has not been a popular area for development. The rural area is mostly comprised of farmland and the value of the farmland exceeds the attraction for new residential development. However, vulnerability is a concern as the population ages in

rural Daviess County, since the farmers in the area are aging and land sales for anything other than agricultural uses is not on an upward trend.

3.3.2 Future Land Use and Development

Daviess County and the participating jurisdictions are in a very rural area of northern Missouri, and it is very difficult to attract new development due to the inability to attract new employers to the area.

3.4 HAZARD PROFILES, VULNERABILITY, AND PROBLEM STATEMENTS

Each hazard will be analyzed individually in a hazard profile. The profile will consist of a general hazard description, location, strength/magnitude/extent, previous events, future probability, a discussion of risk variations between jurisdictions, and how anticipated development could impact risk. At the end of each hazard profile will be a vulnerability assessment, followed by a summary problem statement.

Hazard Profiles

Requirement §201.6(c)(2)(i): [The risk assessment shall include a] description of the…location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.

Each hazard identified in Section 3.1.4 will be profiled individually in this section in alphabetical order. Probability of future occurrence will describe how development in hazard-prone areas has increased or decreased hazard vulnerability since the last plan update, if applicable.

The level of information presented in the profiles will vary by hazard based on the information available. With each update of this plan, new information will be incorporated to provide better evaluation and prioritization of the hazards that affect the planning area. Detailed profiles for each of the identified hazards and the impact of Climate Change" to Changing Future Conditions Considerations in all of the hazard profiles. Include information categorized as follows:

- **Hazard Description: This** section consists of a general description of the hazard and the types of impacts it may have on a community or school/special district.
- **Geographic Location:** This section describes the geographic areas in the planning area that are affected by the hazard. Where available, use maps to indicate the specific locations of the planning area that are vulnerable to the subject hazard. For some hazards, the entire planning area is at risk.
- **Strength/Magnitude/Extent:** This includes information about the strength, magnitude, and extent of a hazard. For some hazards, this is accomplished with a description of a value on an established scientific scale or measurement system, such as an EF2 tornado on the Enhanced Fujita Scale. This section should also include information on the typical or expected strength/magnitude/extent of the hazard in the planning area. Strength, magnitude, and extent can also include the speed of onset and the duration of hazard events. Describing the strength/magnitude/extent of a hazard is not the same as describing its potential impacts on a community. Strength/magnitude/extent defines the characteristics of the hazard regardless of the people and property it affects.
- **Previous Occurrences:** This section includes available information on historic incidents and their impacts. Historic event records form a solid basis for probability calculations.
- **Probability of Future Occurrence: The** frequency of recorded past events is used to estimate the likelihood of future occurrences. Probability can be determined by dividing the number of recorded events by the number of years of available data and multiplying by 100. This gives the percentage chance of the event happening in any given year. For events occurring more than once annually, the probability should be reported as 100% in any given year, with a statement of the average number of events annually. For hazards such as drought that may have gradual onset and extended duration, probability can be based on the number of months in drought in a given time-period and expressed as the probability for any given month to be in drought.

- **Changing Future Conditions:**

  In addition to the probability of future occurrence, changing future conditions should also be considered, including the effects of long-term changes in weather patterns and climate on the identified hazards.

Vulnerability Assessments

Requirement §201.6(c)(2)(ii) :[The risk assessment shall include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community.

Requirement §201.6(c)(2)(ii)(A): The plan should describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas.

Requirement §201.6(c)(2)(ii)(B):[The plan should describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(i)(A) of this section and a description of the methodology used to prepare the estimate.

Requirement §201.6(c)(2)(ii)(C): [The plan should describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

Requirement §201.6(c)(2)(ii): (As of October 1, 2008) [The risk assessment] must also address National Flood Insurance Program (NFIP) insured structures that have been repetitively damaged in floods.

Following the hazard profile for each hazard will be the vulnerability assessment. The vulnerability assessment further defines and quantifies populations, buildings, critical facilities, and other community assets at risk to damages from natural hazards. The vulnerability assessments should be based on the best available data. The vulnerability assessments can also be based on data that was collected for the 2023 State Hazard Mitigation Plan Update. With the 2023 Hazard Mitigation Plan Update, SEMA is pleased to provide online access to the risk assessment data and associated mapping for the 114 counties in the State, including the independent City of St. Louis. Through the web-based Missouri Hazard Mitigation Viewer, local planners or other interested parties can obtain all State Plan datasets. This effort removes from local mitigation planners a barrier to performing all the needed local risk assessments by providing the data developed during the 2023 State Plan Update.

The vulnerability assessments in the Daviess County plan will also be based on:

- Written descriptions of assets and risks provided by participating jurisdictions;
- Existing plans and reports;
- Personal interviews with planning committee members and other stakeholders; and
- Other sources as cited.

Within the Vulnerability Assessment, the following sub-headings will be addressed:

- **Vulnerability Overview:**

This section will provide a summary of each jurisdiction's vulnerability to the identified hazards. The overall summary of vulnerability identifies structures, systems, populations or other community assets as defined by the community that are susceptible to damage and loss for hazard events. (Reference PR TB1-e, B2-a)

- **Potential Losses to Existing Development:**

  This section will include the potential impacts of the hazard for each participating jurisdiction. This will include types and numbers of buildings, critical facilities, etc. Impact means the consequences and effect of the hazard on the jurisdiction and its assets. Assets are determined by the community and include, for example, people, structures, facilities, systems, capabilities, and/or activities that have value to the community. For example, impacts could be described by referencing historical disaster impacts and/or an estimate of potential future losses.

- **Previous and Future Development:**

  This section will include information on how changes in development have impacted the community's vulnerability to this hazard. In this section, there will be a description of how any changes that occurred in known hazard prone areas since the previous plan have increased or decreased.

- **Hazard Summary by Jurisdiction:**

  For hazard risks that vary by jurisdiction, this section will provide an overview of the variation and the factual basis for that variation.

Problem Statements

In each problem statement, the hazard analysis will conclude with a summary of the problems created by the hazard in the planning area, and possible ways to resolve those problems. This will include jurisdiction-specific information in those cases where the risk varies across the planning area. The focus of the problem statements sub-section is to synthesize the "problems" revealed through the risk assessment and then through the process of updating the mitigation strategy, develop mitigation actions that are aimed at "solving" the identified problems. Problem statements should be as specific as possible. Problems that are specific to jurisdictions or to specific assets or areas of the planning area that are problematic should be addressed. The goal of this is to prompt the development of specific mitigation actions that could be undertaken to potentially solve or lessen the effects of hazards.

3.4.1 Flooding (Riverine and Flash)

Hazard Profile

Hazard Description

A flood is partial or a complete inundation of normally dry land areas. Riverine flooding is defined as the overflow of rivers, streams, drains, and lakes due to excessive rainfall, rapid snowmelt, or ice. There are several types of riverine floods, including headwater, backwater, interior drainage, and flash flooding. Riverine flooding is defined as the overflow of rivers, streams, drains, and lakes due to excessive rainfall, rapid snowmelt or ice melt. The areas adjacent to rivers and stream banks that carry excess floodwater during rapid runoff are called floodplains. A floodplain is defined as the lowland and relatively flat area adjoining a river or stream. The terms "base flood" and "100- year flood" refer to the area in the floodplain that is subject to a one percent or greater chance of flooding in any given year. Floodplains are part of a larger entity called a basin, which is defined as all the land drained by a river and its branches.

Flooding caused by dam failure is discussed in Section 3.4.2. It will not be addressed in this section.

A flash flood occurs when water levels rise at an extremely fast rate as a result of intense rainfall over a brief period, sometimes combined with rapid snowmelt, ice jam release, frozen ground, saturated soil, or impermeable surfaces. Flash flooding can happen in Special Flood Hazard Areas (SFHAs) as delineated by the National Flood Insurance Program (NFIP) and can also happen in areas not associated with floodplains.

Ice jam flooding is a form of flash flooding that occurs when ice breaks up in moving waterways and then stacks on itself where channels narrow. This creates a natural dam, often causing flooding within minutes of dam formation.

In some cases, flooding may not be directly attributable to a river, stream, or lake overflowing its banks. Rather, it may simply be the combination of excessive rainfall or snowmelt, saturated ground, and inadequate drainage. With no place to go, the water will find the lowest elevations – areas that are often not in a floodplain. This type of flooding, often referred to as sheet flooding, is becoming increasingly prevalent as development outstrips the ability of the drainage infrastructure to properly carry and disburse the water flow.

Most flash flooding is caused by slow-moving thunderstorms or thunderstorms repeatedly moving over the same area. Flash flooding is a dangerous form of flooding which can reach full peak in only a few minutes. Rapid onset allows little or no time for protective measures. Flash flood water moves at very fast speeds and can move boulders, tear out trees, scour channels, destroy buildings, and obliterate bridges. Flash flooding can result in higher loss of life, both human and animal, than slower developing river and stream flooding.

In certain areas, aging storm sewer systems are not designed to carry the capacity currently needed to handle the increased storm runoff. Typically, the result is water backing into basements, which damages mechanical systems and can create serious public health and safety concerns. This combined with rainfall trends and rainfall extremes all demonstrate the high probability, yet generally unpredictable nature of flash flooding in the planning area.

Although flash floods are somewhat unpredictable, there are factors that can point to the likelihood of flash floods occurring. Weather surveillance radar is being used to improve monitoring capabilities of intense rainfall. This, along with knowledge of the watershed characteristics, modeling techniques, monitoring, and advanced warning systems has increased the warning time for flash floods.

Geographic Location

Riverine flooding is most likely to occur in Special Flood Hazard Areas (SFHAs). Flash flooding occurs in SFHAs and those locations in the planning area that are low-lying. They also occur in areas without adequate drainage to carry away the amount of water that falls during intense rainfall events.

Riverine flooding is most likely to occur in SFHAs. The following maps are from the most recent information from FEMA's National Flood Layer of Chariton County. The Key in **Figure 3.5** is the flood map key for all jurisdiction's flood maps.

Riverine flooding is most likely to occur in SFHAs (Special Flood Hazard Areas). The following figures show the Flooding Hazard area maps for each jurisdiction in the planning area. There are only a few areas that are at risk for Riverine Flooding which include the City of Gallatin, Village of Jameson, and the Village of Lock Springs.

Figure 3.5. Flood Map Key

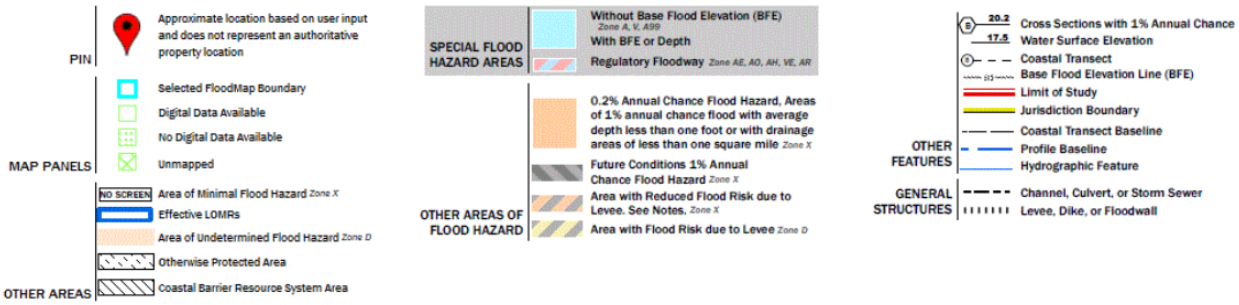


Figure 3.6. Daviess County Flood Hazard Layer

Source: FEMA's National Flood Hazard Layer (NFHL)Viewer; Daviess County is outlined in red

The following figures (Figure 3.7 through 3.13) are from FEMA's National Flood Hazard Layer (NFHL) Viewer.

Figure 3.7. Village of Altamont


Altamont, City of
City of Altamont
290963
29061C0250B
eff. 9/30/2015
Daviess County
Daviess County
Unincorporated Areas
290798

Figure 3.8. City of Coffey

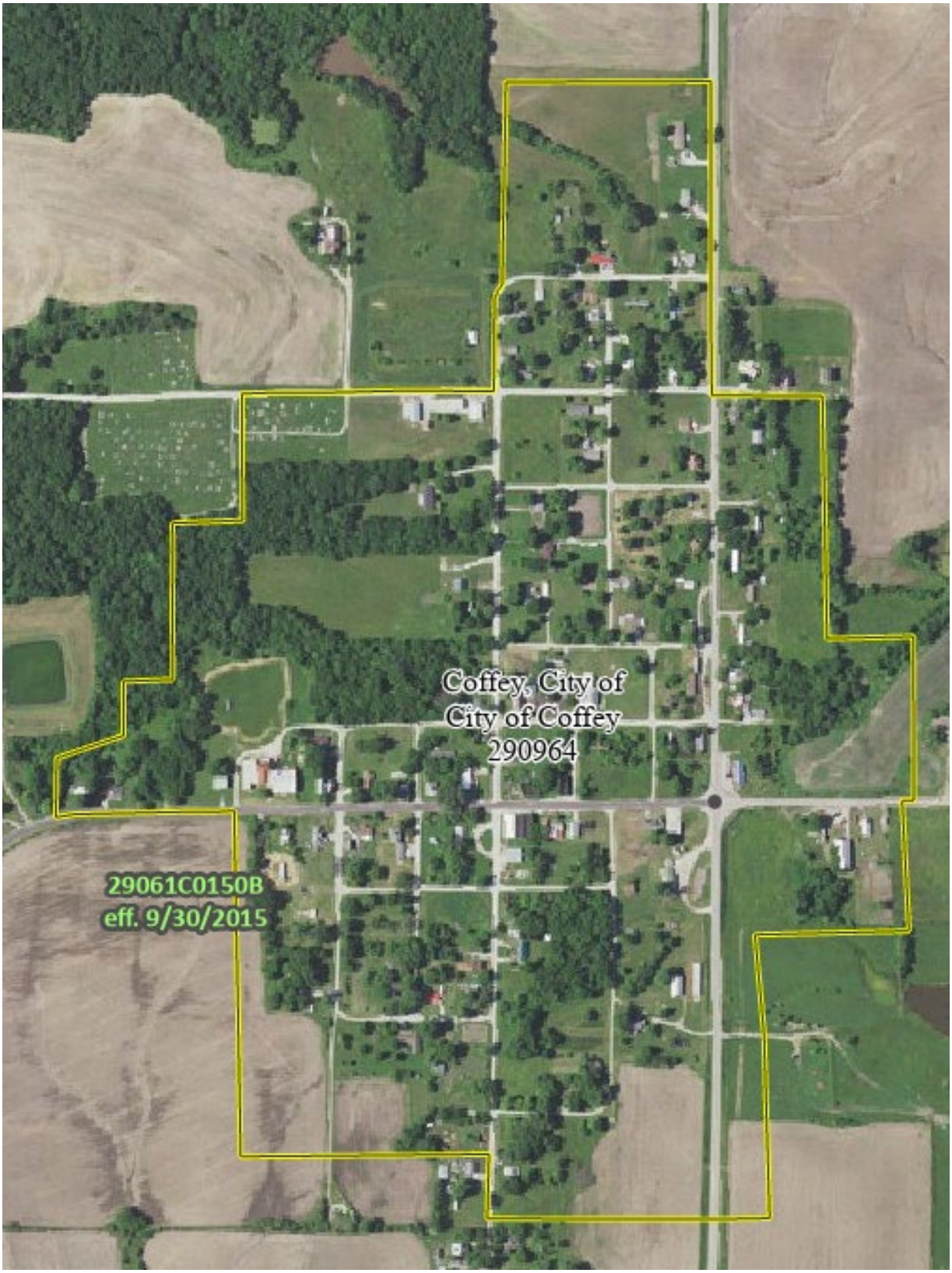


Figure 3.9. City of Gallatin

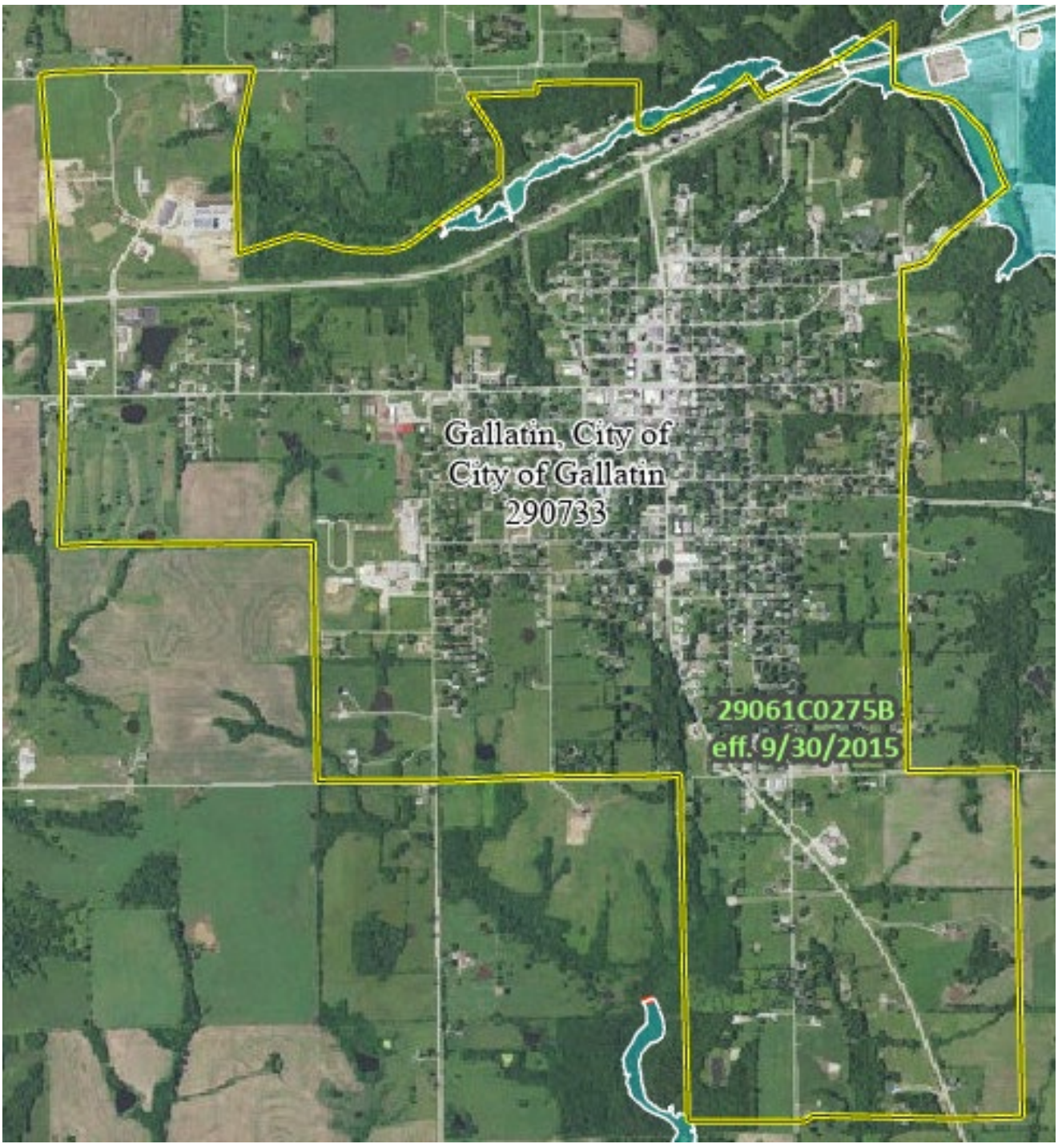


Figure 3.10. Village of Jameson

Figure 3.11. City of Jamesport

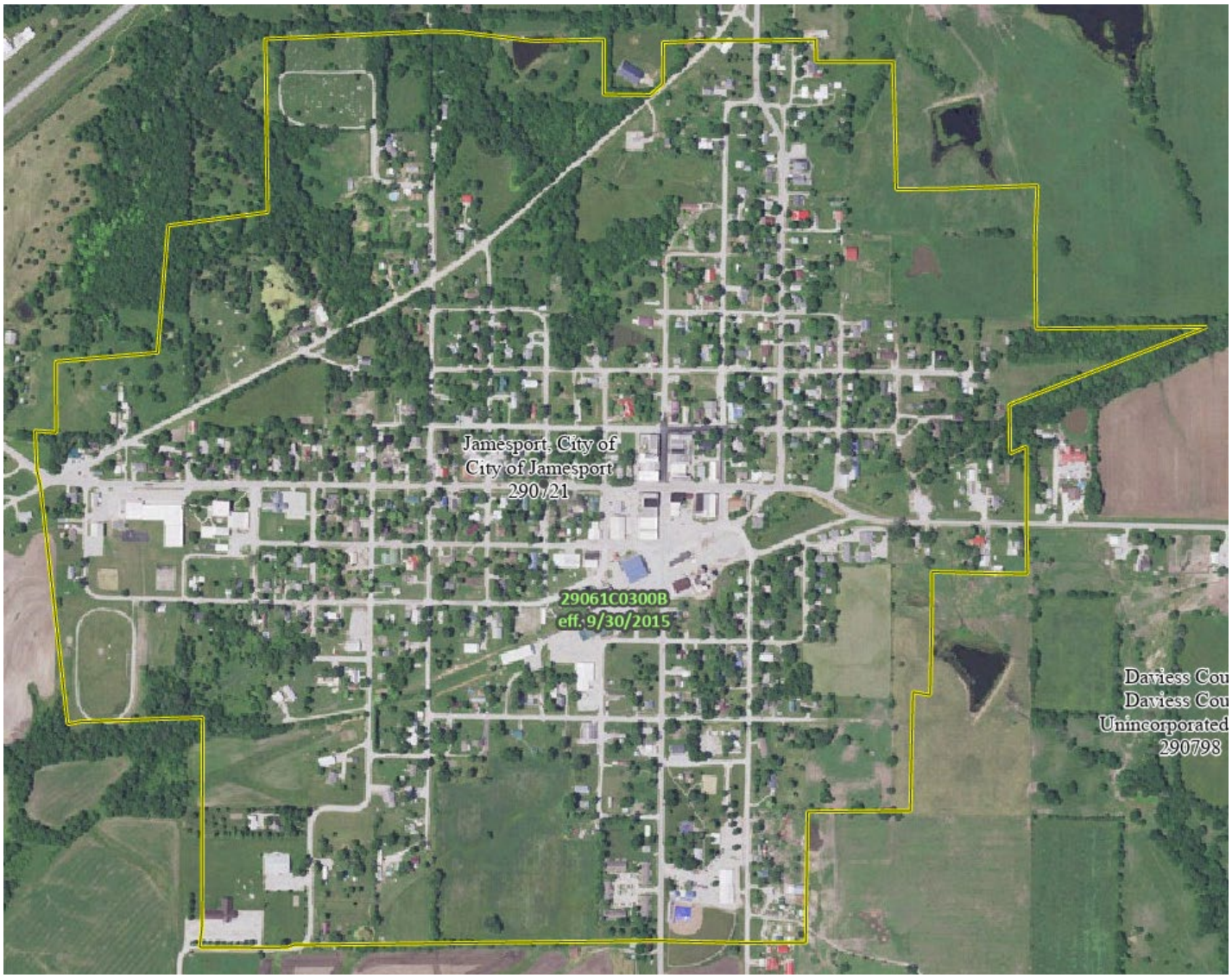


Figure 3.12. City of Pattonsburg

Figure 3.13. Village of Winston

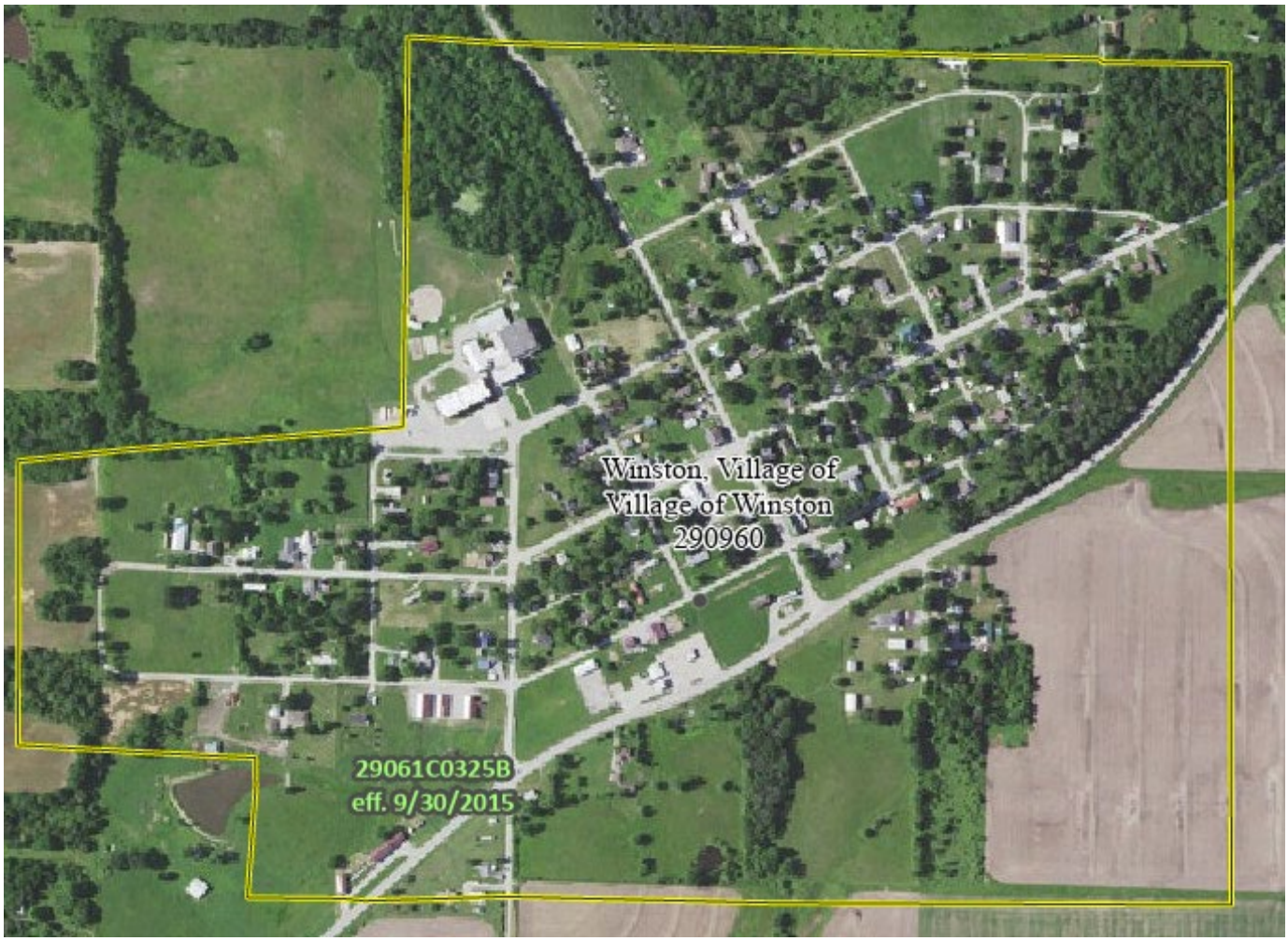


Table 3.17 shows the Daviess County flood event history per NCEI data. NCEI data includes events for flooding and for flash flooding. Those events without location-specific information are tabulated under "unspecified" locations in the table. This table shows a 20-year time frame for previous events within the planning area.

Table 3.17. Daviess County NCEI Flood Events by Location, 2004-2025

Location	# of Events
Unincorporated Daviess County	9
-Unincorporated Daviess County (unspecified)- 4 flood events	
-Unincorporated County (Carlow)- 2 flood events	
-Unincorporated County (Civil Bend)-1 flood events	
-Unincorporated County (Lock Springs)-1 flood events	
-Unincorporated County (Alta Vista)-1 flood events	
Village of Altamont	1
-Village of Altamont (unspecified) – 1 flood event	
City of Coffey	3
-City of Coffey (unspecified) – 3 flood events	
City of Gallatin	3
-City of Gallatin (unspecified) 3 flood events	
Village of Jameson	2
-Village of Jameson (unspecified) – 2 flood events	
City of Jamesport	1
-City of Jamesport (unspecified) – 1 flood event	

City of Pattonsburg	1
-City of Pattonsburg (unspecified) – 1 flood event	
Village of Winston	1
-Village of Winston (unspecified) – 1 flood event	
Total Flood Events in Daviess County	**21**

Source: National Centers for Environmental Information, 10/24/2024

Flash flooding occurs in SFHAs and those locations in the planning area that are low-lying. They also occur in areas without adequate drainage to carry away the amount of water that falls during intense rainfall events. The NCEI database was used to determine which jurisdictions are most prone to flash flooding during a 20-year time period. **Table 3.18** shows the number of flash flood events by location recorded in the NCEI database for the previous 20 years.

Table 3.18. Daviess County NCEI Flash Flood Events by Location, 2004-2025

Location	# of Events
Unincorporated Daviess County	7
-Unincorporated Daviess County (unspecified)- 0 flood events	
-Unincorporated County (Carlow)- 3 flood events	
-Unincorporated County (Lock Springs)- 4 flood events	
Village of Altamont	1
-Village of Altamont (unspecified)- 1 flood events	
City of Coffey	3
-City of Coffey (unspecified) – 3 flood events	
City of Gallatin	10
-City of Gallatin (unspecified)-10 flood events	
City of Jameson	2
-City of Jameson (unspecified)- 2 flood events	
Total Flash Flood Events in Daviess County	**23**

Source: National Centers for Environmental Information, 10/24/2024

Strength/Magnitude/Extent

Missouri has a long and active history of flooding over the past century, according to the 2023 State Hazard Mitigation Plan. Flooding along Missouri 's major rivers generally result in slow-moving disasters. River crest levels are forecast several days in advance, allowing communities to downstream sufficient time to take protective measures, such as sandbagging and evacuations. Nevertheless, floods exact a heavy toll in terms of human suffering and losses to public and private property. By contrast, flash flood events in recent years have caused a higher number of deaths and major property damage in many areas of Missouri.

According to the U.S. Geological Survey, two critical factors affect flooding due to rainfall: rainfall duration and rainfall intensity – the rate at which it rains. These factors contribute to a flood's height, water velocity and other properties that reveal its magnitude.

When roads and bridges are inundated by water, damage can occur as the water scours materials around bridge abutments and gravel roads. Floodwaters have been known to cause erosion undermining roadbeds. In some instances, steep slopes that are saturated with water may cause mud or rockslides onto roadways. These types of damage can cause costly repairs for state, county, and city road and bridge maintenance departments. When sewer back-up occurs, this can result in costly clean-up for home and business owners as well as preventing health hazard.

National Flood Insurance Program (NFIP) Participation

(Reference PRT A4-a). (Reference PRT B1-f).

Table 3.19. Community Participation in the National Flood Insurance Program in Daviess County and Ordinance and Enforcement Information 2025

Jurisdiction	Daviess County	Village of Altamont	City of Coffey	City of Gallatin	Village of Jameson	City of Jamesport	City of Pattonsburg	Village of Winston
Community ID	290798	290963	290964	290733	290965	290721	290116	290960
Status Date-Participating Since	3/25 1999	10/12 2006	10/12 2006	2/14 1976	10/12 2006	2/7 1975	9/18 1987	10/2 2006
NFIP Participant: Yes/No or Sanctioned	No	No	No	No	Sanctioned	No	Yes	No
Floodplain Ordinance in Place	N	N	N	N	N	N	Y	N
CRS Participant	N	N	N	N	N	N	N	N
Effective FIRM Date	9/30/15	9/30/15	9/30/15	9/30/15	9/30/15	9/30/15	NSFHA	9/30/15
Policies in Force	0	0	0	0	0	0	2	0
Insurance in Force ($)	0	0	0	0	0	0	0	0
Number Paid Losses	0	0	0	0	0	0	39	0
Total Losses Paid ($)	0	0	0	0	0	0	$593,699	0

Source: Information from the NFIP Community Status Book and from members of the Daviess County Hazard Mitigation Planning Committee

290116A PATTONSBURG, CITY OF DAVIESS COUNTY 05/10/74 09/18/87 (NSFHA) No 09/18/87
Only one community in Daviess County currently participates in the National Flood Insurance Program. **Table 3.19** provides details on NFIP participation for the communities in the planning area. **Table 3.20** provides information on the number of policies in force, amount of insurance in force, number of closed losses, and total payments for each jurisdiction in Daviess County.

Daviess County and the smaller jurisdictions within its borders historically have not participated in the Flood Insurance Protection Program. However, recent and more accurate flood mapping products produced by FEMA and the increasingly standard requirement of flood plain information for real estate transactions have caused renewed discussion within the county about NFIP participation. However, currently, the City of Pattonsburg is the only participant in the NFIP.

Daviess County has been part of twelve Major (Presidential) Disaster declarations, since 1953, ten of which have involved flooding.

The only jurisdiction that participates in the NFIP, Pattonsburg, has adopted Floodplain Ordinances that establish regulations for construction, development, and substantial improvements within floodplain areas. These regulations mandate the acquisition of floodplain development permits and elevation certificates to ensure that all projects comply with these standards. Records and documentation for all floodplain development is kept in adherence to FEMA regulations and the designated floodplain administrator maintains these records.

Substantial improvements/ substantial damage provisions are implemented after an event through the Floodplain Ordinance in Pattonsburg. The city of Pattonsburg has addressed the specific requirements of FEMA regarding substantial damage/substantial improvement provisions and development in SFHA. The Floodplain Ordinance of Pattonsburg can be found in Appendix E.

Table 3.20. NFIP Participation in Daviess County- Mapping Information

Community ID #	Community Name	Current Effective Map Date	Regular- Emergency Program Entry Date
290798	Daviess County	9/30/2015	3/25/1999
290963	Village of Altamont	9/30/2015	10/12/2006
290964	City of Coffey	3/30/2015	10/12/2006
290733	City of Gallatin	9/30/2015	2/14/1976
290965	Village of Jameson	9/30/2015	10/12/2006
290721	City of Jamesport	9/30/2015	2/7/1975
290116	City of Pattonsburg	9/30/2015	9/18/1987
290960	Village of Winston	9/30/2015	10/2/2006

Source: NFIP Community Status Book, 10/24/2024; PIVOT (information from STATE) Community Status Book | FEMA.gov; M= No elevation determined – all Zone A, C, and X: NSFHA = No Special Flood Hazard Area; E=Emergency Program

(Reference PRT C2-a)

Table 3.21. NFIP Policy and Claim Statistics as of Date

Community Name	Policies in Force	Insurance in Force	Closed Losses	Total Payments
City of Pattonsburg	0	0	2	$15,283.51

Source: NFIP Community Status Book, [February 2025]; PIVOT (information from STATE), Community Status Book | FEMA.gov *Closed Losses are those flood insurance claims that resulted in payment. Loss statistics are for the period from 9-18-2024 to 11/1/2024.

Repetitive Loss/Severe Repetitive Loss Properties

Repetitive Loss Properties are those properties with at least two flood insurance payments of $1,000 or more in a 10-year period. According to the Flood Insurance Administration, jurisdictions included in the planning area have a combined total of 1 repetitive loss properties. As of December 27, 2024, 0 properties have been mitigated, leaving 1 un-mitigated repetitive loss properties.

(Reference PRT B2-c).

Table 3.22. Daviess County Repetitive Loss Properties

Jurisdiction	# of Properties	Type of Property	# Mitigated	Building Payments	Content Payments	Total Payments	Average Payment	# of Losses
City of Pattonsburg	1	Residential	0	$11,657.05	$3,626.46	2	$7,641.76	2

Source: Flood Insurance Administration as of 1/28/2025

Severe Repetitive Loss (SRL): A SRL property is defined it as a single family property (consisting of one-to-four residences) that is covered under flood insurance by the NFIP; and has (1) incurred flood-related damage for which four or more separate claims payments have been paid under flood insurance coverage with the amount of each claim payment exceeding $5,000 and with cumulative amounts of such claims payments exceeding $20,000; or (2) for which at least two separate claims payments have been made with the cumulative amount of such claims exceeding the reported value of the property.

There are no Severe Repetitive Loss properties in Daviess County.

Previous Occurrences

The number of Flood-Related Presidential Declaration by County was obtained from the 2023 Missouri State Hazard Mitigation Plan. The following figure shows the number of such events per

county. Daviess County is indicated by an arrow, and according to the illustration Daviess County has had 11 such events.

Figure 3.14. Number of Flood-Related Presidential Declarations Per County

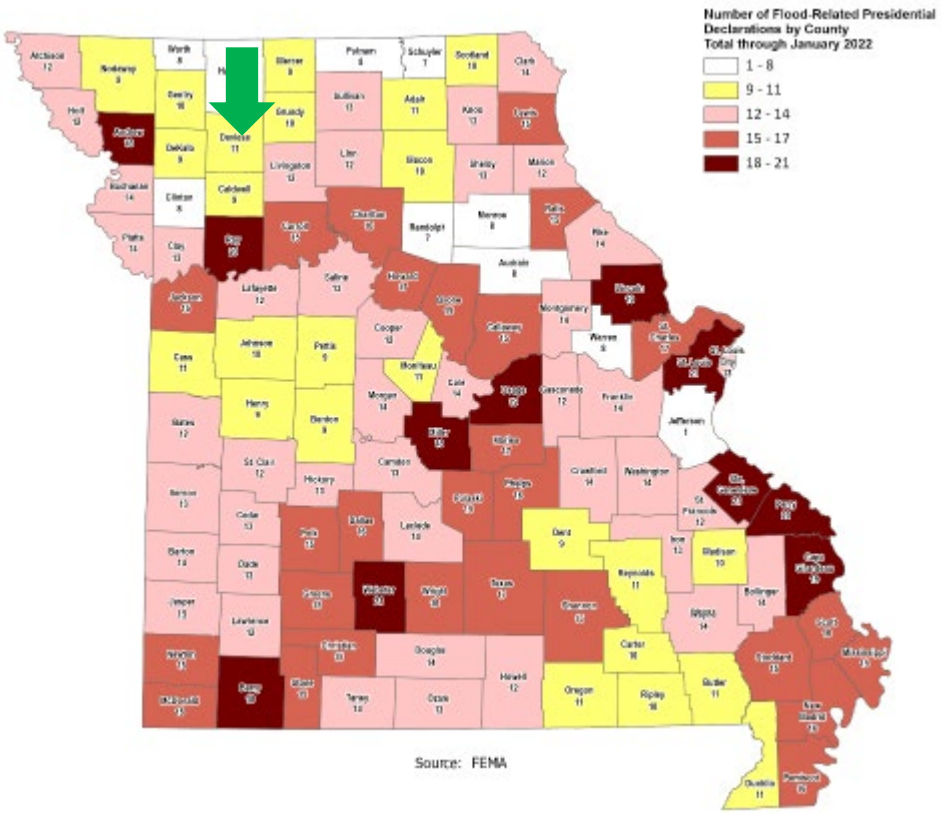


Table 3.23. NCEI Daviess County Flash Flood Events Summary, 2004 to 2024

Year	# of Events	# of Deaths	# of Injuries	Property Damages	Crop Damages
2004	2	0	0	0	0
2007	1	0	0	0	0
2008	7	0	0	$15,000	0
2009	2	0	0	0	0
2010	1	0	0	0	0
2012	1	0	0	0	0
2014	1	0	0	0	0
2015	1	0	0	0	0
2016	3	0	0	0	0
2019	2	0	0	0	0
2021	2	0	0	0	0

Source: NCEI, data accessed [12/11/2024]

Include relevant information from FEMA Data Visualization Tool, https://www.fema.gov/data-visualization-floods-data-visualization including previous Public Assistance provided to various jurisdictions in the planning area. Review of previous Public Assistance grants may reveal repetitive damage sites which should be considered for mitigation.

Table 3.24. NCEI Daviess County Riverine Flood Events Summary, 2003 - 2024

Year	# of Events	# of Deaths	# of Injuries	Property Damages	Crop Damages
2004	4	0	0	0	0
2007	2	0	0	0	$500,000
2008	5	0	0	0	0
2010	2	0	0	0	0
2011	1	0	0	0	0
2017	5	0	0	$10,000	0
2019	1	0	0	0	0
2021	1	0	0	0	0

Source: NCEI, December 11, 2024

The incidents summarized in the preceding two tables is included below, with the narrative provided for the flash flood and flood events in Daviess County.

Flash Flood Events with Narrative from NCEI Database

8/27/2004 – Lock Springs; V Highway and 190 Highway intersection had10 inches of water flowing across.
8/27/2004 – Lock Springs; Flooding continues at the intersection of V Highway and 190.
5/30/2007 – Gallatin; Seven inches of water, reported running over the intersection of Highway 6 and County Road O.
6/19/2008 – Gallatin; Highway 6 was closed due to water running over the roadway.
6/24/2008 – Gallatin; Heavy rains caused Highway 6 to be closed 3 miles east of Gallatin. The heavy rains also caused additional extensive flooding, to be observed on the Grand River.
6/24/2008 – Gallatin; A significant amount of water was reported on Route 6 and Route CC, in and around Gallatin.
6/24/2008 – Gallatin; Highway 13 was closed on the south side of Gallatin due to heavy flooding.
6/24/2008 – Gallatin; Highway 6 was closed near the Grand River due to waist deep water.
6/25/2008 – Gallatin; Highway 13, six miles south of Jameson, was closed due to six feet of water.
6/25/2008 – Carlow; The intersection of Highway 190 and Route V was under several feet of water.
6/7/2009 – Gallatin; Highway 13 at the intersection of Richardson Street was impassable due to high water.
8/17/2009 – Lock Springs; State Route M was reported closed near Lick Fork Creek due to flooding.
7/16/2010 – Carlow; Flowing water was reported up to 6 inches deep on Highway V.
5/4/2012 – Coffey; Highway B was closed due to rushing water.
9/9/2014 – Altamont; Highway 6 between Gallatin and Altamont had several inches of flowing water running across the roadway.
5/17/2015 – Coffey; Highway B at 230th Road flooded.
8/1/2016 – Lock Springs; Route M closed due to flooding near Lick Fork.
8/1/2016 – Jameson; Route UU was closed due to flooding near Big Muddy Creek.
6/22/2019 – Gallatin; Emergency Management reported water flowing over HWY 6.
8/29/2019 – Carlow; Water was over the roadway, causing a vehicle to stall. A passing motorist helped the person to safety.
6/20/2021 – Gallatin; Law enforcement reported water over several roads in Gallatin.
6/20/2021 – Jameson; There was reported water over several roads in Jameson.

Flood Events with Narrative from NCEI Database

5/6/2007 – Civil Bend; The Grand River near Pattonsburg crested at 34.27 ft, or 9.27 ft. above flood stage.
5/6/2007 – Gallatin; The Grand River near Gallatin crested at 40.47 feet, or 14.47 feet above flood stage.
3/2/2008 – Jameson; The Grand River at Gallatin crested at 30.21 feet, or 4.21 feet above flood

stage.
3/3/2008 – Pattonsburg; The Grand River near Pattonsburg crested at 27.55 feet, or 2.55 feet above flood stage.
4/18/2008 – Gallatin; The Grand River near Gallatin crested at 26.25 feet, or 0.25 feet above flood stage.
6/25/2008 – Jameson; Highway U was underwater one mile north of Highway P.
6/25/2008 – Gallatin; Highway K was reported under water, just north of the intersection with Highway 6.
6/4/2010 – Winston; Two to four inches of water was reported across area roads.
6/4/2010 – Altamont; Several inches of water were reported over area roads.
6/9/2011 – Coffey; Water of unknown depth was reported flowing over Highway B.
4/5/2017 – Carlow; State Route M was closed due to flooding by nearby creeks.
6/29/2017 – Coffey; A vehicle ran off the roadway along HWY B when it encountered flooded roadway. He crashed the vehicle but was rescued without injury.
7/13/2017 – Lock Springs; Missouri HWY 190 was flooded in both directions near Clear Creek. Route V near Clear Creek was also flooded in both directions.
7/13/2017 – Jamesport; Route K was flooded in both directions at Big Creek.
5/21/2019 – Carlow; State Highway M closed near Lock Springs.
6/25/2021 – Alta Vista; Water was over the road on Highway 6 near Alta Vista.

Probability of Future Occurrence

The probability of future flood events was calculated by the following formulas:

$$\boldsymbol{Probability\ of\ Flash\ Flood} = \frac{(23\ flash\ flood\ events)}{20\ years} = 1.15\ occurrences\ per\ year$$

The probability of a flash flood occurring in the planning area is 115% during any given year.

$$\boldsymbol{Probability\ of\ Flood} = \frac{21\ flood\ events}{20\ years} = 1.05\ occurrences\ per\ year$$

The probability of a flood event occurring in the planning area is 105% during any given year.

Changing Future Conditions Considerations

According to the 2023 Missouri State Hazard Mitigation Plan, if increased precipitation intensity continues, the frequency of floods in Daviess County is likely to increase as well. Over the last half century, average annual precipitation in most of the Midwest has increased by 5 to 10%. But rainfall during the four wettest days of the year has increased by approximately 3%, and the amount of water flowing in most streams during the worst flood of the year has increased by more than 20 percent.

There is a 66-100% probability that the frequency of heavy precipitation or the proportion of total rainfall from heavy falls will increase in the 21st century across the globe. More specifically, it is very likely with a 90 – 100% probability that most areas of the United States will exhibit an increase of at least 5% in the maximum 5-day precipitation by the last 21st century. As the number of heavy rain events increases, more flooding can be expected.

The expected increases in rainfall frequency and intensity are likely to put additional stress on natural hydrological systems and community stormwater systems. Heavier snowfalls in the winter will lead to intensified spring flooding, and groundwater levels will remain high even in non-floodplain areas. Such changes in climate patterns can lead to the development of compounding events that interact to

create extreme conditions. Flooding caused by high groundwater levels typically recedes more slowly than riverine flooding, slowing the response and recovery process. Groundwater-fed rivers and streams are also likely to experience heightened flooding when groundwater levels are high.

The environmental impacts of flooding include erosion, surface and groundwater contamination, and reduced water quality. The threat of more frequent flood events may thus be a concern, especially for more rural areas, which may experience increases in well contamination and road washouts.

Vulnerability

Vulnerability Overview

Flooding presents a danger to life and property, often resulting in injuries, and in some cases, fatalities. Floodwaters themselves can interact with hazardous materials. Hazardous materials stored in large containers could break loose or puncture as a result of flood activity. Examples are bulk propane tanks. When this happens, the evacuation of citizens is necessary.

Public health concerns may result from flooding, requiring disease and injury surveillance. Community sanitation to evaluate flood-affected food supplies may also be necessary. Private water and sewage sanitation could be impacted, and vector control (for mosquitoes and other entomology concerns) may be necessary.

When roads and bridges are inundated by water, damage can occur as the water scours materials around bridge abutments and gravel roads. Floodwater can also cause erosion undermining road beds. In some instances, steep slopes that are saturated with water may cause mud or rockslides onto roadways. These damages can cause costly repairs for state, county, and city road and bridge maintenance departments. When sewer back-up occurs, this can result in costly clean-up for home and business owners as well as present a health hazard.

Scour critical bridges have been identified in the planning area, and this information can be found on page 3.16.

Potential Losses to Existing Development

The 2023 Missouri Hazard Mitigation Plan used HAZUS data to analyze the county's vulnerability to flooding. A summary of the information is shown in the following table.

Table 3.25. HAZUS Estimates of Potential Losses for Daviess County

Data from State Plan	Daviess County
Countywide Building Exposure	$1,165,449,164
Structural Damage	$12,871,463
Loss Ratio	1.10%
Contents Loss	$21,233,598
Inventory Loss	$3,321,295
Total Direct Loss	$37,425,357
Total Income Loss	$35,258
Total Direct and Income Loss	$37,460,614
# HAZUS UDF Damaged Structures	15
# Substantially Damaged	0
# Displaced People	214
# Shelter Needs	4

Source: 2023 Missouri Hazard Mitigation Plan

The 2023 Missouri State Hazard Mitigation Plan also provides a further breakdown of potential losses

categorized by type of structure. That information is summarized in the following table.

Table 3.26. Potential Losses in Daviess County by Type of Structure

Type of Structure	Data from State Plan
Residential	40 Structures
	$8,983,797
Agriculture	239 Structures
	$58,492,425
Commercial	459 Structures
	$254,308,933
Education	0 Structures
	$0
Government	1 Structures
	$340,793
Industrial	4 Structures
	$4,368,814
Total # Population Affected	107

Source: 2023 Missouri Hazard Mitigation Plan

As the majority of the assets in the county are agricultural in nature, the following table provides crop losses experienced between 2013 and 2024.

Table 3.27. Crop Insurance Claims Paid in Daviess County due to Flood: 2013-2024

CROP YEAR	CROP LOSS	CAUSE OF LOSS	INSURANCE PAID ($)
2013	Corn	Flood or Excess Moisture	**$630,425.35**
	Wheat		**$37,394.00**
	Sorghum Grain		**$9,114.00**
	Soybeans		**$857,100.00**
2014	Corn	Flood or Excess Moisture	**$16,647.25**
	Wheat		**$658.00**
	Sorghum Grain		**$24.00**
	Soybeans		**$379,841.00**
2015	Corn	Flood or Excess Moisture	**$2,002,579.10**
	Wheat		**$81,637.72**
	Sorghum Grain		**$48,058.00**
	Soybeans		**$3,156,343.50**
	Oats		**$1,090.00**
2016	Corn	Flood or Excess Moisture	**$199,149.95**
	Wheat		**$12,578.12**
	Soybeans		**$329,045.00**
2017	Corn	Flood or Excess Moisture	**$1,264,019.71**
	Soybeans		**$2,051,053.50**
2018	Corn	Flood or Excess Moisture	**$10,247.00**
	Soybeans		**$197,343.40**
2019	Corn	Flood or Excess Moisture	**$5,359,593.81**
	Wheat		**$15,486.01**
	Sorghum Grain		**$23,028.00**
	Soybeans		**$2,893,447.73**
	Oats		**$1,519.00**
2020	**- No Claims -**		
2021	Corn	Flood or Excess Moisture	**$840,821.40**
	Wheat		**$2,306.00**
	Soybeans		**$513,331.65**
2022	Corn	Flood or Excess Moisture	**$90,714.00**
	Wheat		**$ -14,827.00**
	Sorghum Grain		**$9,838.00**
	Soybeans		**$239,338.00**
2023	Corn	Flood or Excess Moisture	**$516.00**
	Soybeans		**$22,612.00**

2024	Corn	Flood or Excess Moisture	**$81,737.65**
	Soybeans		**$188,158.00**
Total			**$21,551,968.85**

Impact of Previous and Future Development

Future development could impact flash and riverine flooding in Daviess County. Development in low-lying areas near rivers and streams or where interior drainage systems are not adequate to provide drainage during heavy rainfall events will be at risk to flash flooding. Future development would also increase impervious surfaces causing additional water run-off and drainage problems during heavy rainfall events.

In planning future development, jurisdictions in the planning area should avoid development in low-lying areas near rivers and streams or where interior drainage systems are not adequate to provide drainage during heavy rainfall events. Future development should also take into consideration the impact of additional impervious surfaces to water run-off and drainage capabilities during heavy rainfall events.

Hazard Summary by Jurisdiction

Vulnerability to flooding varies by jurisdiction as each community has a different layout, as described above, the City of Pattonsburg has a history of repetitive loss and would be more vulnerable to another loss in the future. The floodplain maps in the Geographic Location section depict the flood area in each jurisdiction.

Problem Statement

Daviess County:
Flooding is posing an ongoing threat to the “Magill bridge” due to bank erosion during high water, Flooding may also disrupt underground utilities such as water and communications.

Pattonsburg R-II School District:
Flooding leads to damage to transportation infrastructure and can disrupt the ability to transport kids to and from school.

3.4.2 Dam Failure

Hazard Profile

Hazard Description

A dam is defined as a barrier constructed across a watercourse for the purpose of storage, control, or diversion of water. Dams are typically constructed of earth, rock, concrete, or mine tailings. Dam failure is the uncontrolled release of impounded water resulting in downstream flooding, affecting both life and property. Dam failure can be caused by any of the following:

1. Overtopping: Inadequate spillway design, debris blockage of spillways or settlement of the dam crest.
2. Piping: Internal erosion caused by embankment leakage, foundation leakage and deterioration of pertinent structures appended to the dam.
3. Erosion: Inadequate spillway capacity causing overtopping of the dam, flow erosion, and inadequate slope protection.
4. Structural Failure: Caused by an earthquake, slope instability or faulty construction.

Include information about the dam classification systems under both the Missouri Department of Natural Resources (MoDNR) and the National Inventory of Dams (NID), which differ.

Table 3.28. MoDNR Dam Hazard Classification Definitions

Hazard Class	Definition
Class I	The area downstream from the dam that would be affected by inundation contains ten (10) or more permanent dwellings or any public building. Inspection of these dams must occur every two years
Class II	The area downstream from the dam that would be affected by inundation contains one (1) to nine (9) permanent dwellings, or one (1) or more campgrounds with permanent water, sewer, and electrical services or one (1) or more industrial buildings. Inspection of these dams must occur once every three years.
Class III	The area downstream from the dam that would be affected by inundation does not contain any of the structures identified for Class 1 or Class 2 dams. Inspection of these dams must occur once every five years.

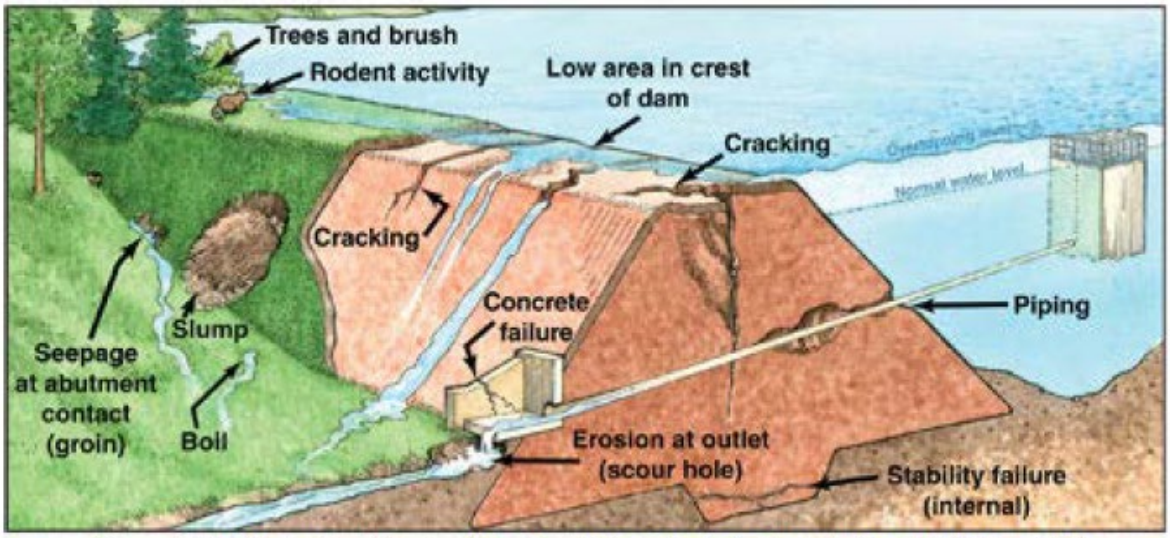
Source: Missouri Department of Natural Resources, http://dnr.mo.gov/env/wrc/docs/rules_reg_94.pdf

Table 3.29. NID Dam Hazard Classification Definitions

Hazard Class	Definition
Low Hazard	Loss of at least one human life is likely if the dam fails.
Significant Hazard	Possible loss of human life and likely significant property or environmental destruction.
High Hazard	Equal or exceed 25 feet in height and exceed 15 acre-feet storage; Equal or exceed 50 acre-feet storage and exceed 6 feet in height; Do not meet the criteria for high or significant hazard.

Source: National Inventory of Dams

Figure 3.15. Possible Causes of Dam Failure

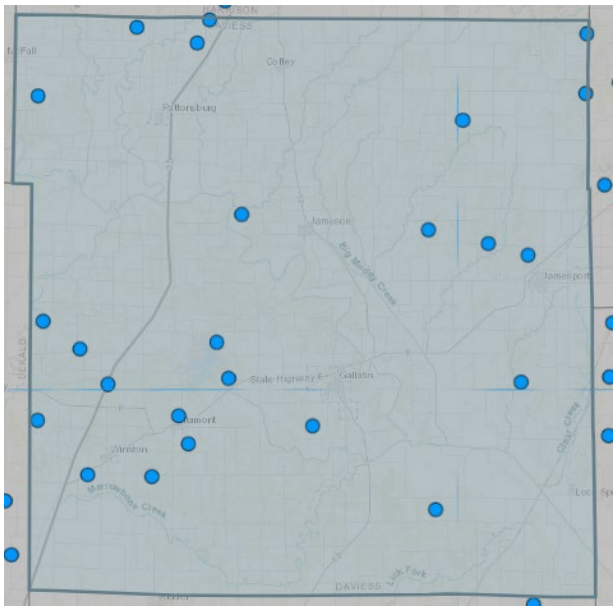


Source: United States Forest Service: https://www.fs.fed.us/eng/pubs/htmlpubs/htm12732805/page02.htm

Geographic Location

The following figure shows the location of dams located within the planning area. Daviess county has a total of 24 dams. Of these dams 0% are Federally Regulated dams. Four of these dams are high hazard dams per recorded data from the NID and Mo DNR. Six of the 24 dams are local government owned and operated, one is state owned and operated, and the remaining 16 dams are privately owned and operated.

Figure 3.16. Dams Located in Daviess County



Source: nid.sec.usace.army.mil

Table 3.30. Dams in Daviess County – Missouri DNR Data

Name	ID #	Owner Type	Height (ft)	Storage (acre-ft)	Hazard Potential
WOODWORTH LAKE DAM	MO10179	Private	30	193	High
LAKE VIKING DAM	MO10414	Private	85	25075	High
JOHNSON LAND DEVELOPMENT LAKE DAM	MO10415	Private	24	82	Low
EAST DAM	MO10416	Private	28	120	Low
YOUTSEY LAKE DAM	MO10419	Private	22	107	Low
JAMESPORT CITY LAKE DAM	MO10559	Local Government	35	385	Low
JAMESPORT LAKE DAM	MO10663	State	21	337	Low
HALLMAN LAKE DAM	MO10853	Private	20	171	Low
GRINDSTONE-LOST-MUDDY WATERSHED DAM F-20	MO11220	Local Government	28	103	Low
WOODWARD LAKE DAM	MO11906	Private	26	108	Low
FROMAN LAKE DAM	MO12038	Private	30	128	Low
GATES LAKE DAM	MO12044	Private	25	54	Low
GRINDSTONE-LOST-MUDDY WATERSHED DAM F-32	MO12112	Local Government	29	87	Low
GRINDSTONE LMC F-30	MO12113	Local Government	37	128	High
GRINDSTONE-LOST-MUDDY WATERSHED DAM LT-301	MO12247	Private	34	23	Low
SCOTT/COLBY LAKE DAM	MO12378	Private	48	653	High
GNAZZO DAM	MO50078	Private	27	52	Low
ROY WORRELL	MO50478	Private	30	61	Low
NANCY INDERWIESEN DAM	MO51235	Private	27	34	Low
DALE FRAZIER DAM	MO51236	Private	28	31	Low
DENNIS PATTERSON	MO51237	Private	36	18	Low
WEST FORK BIG CREEK DAM B-179	MO51277	Local Government	35	109	Low
WEST FORK BIG CREEK DAM B-163	MO51358	Local Government	35	56.09	Low

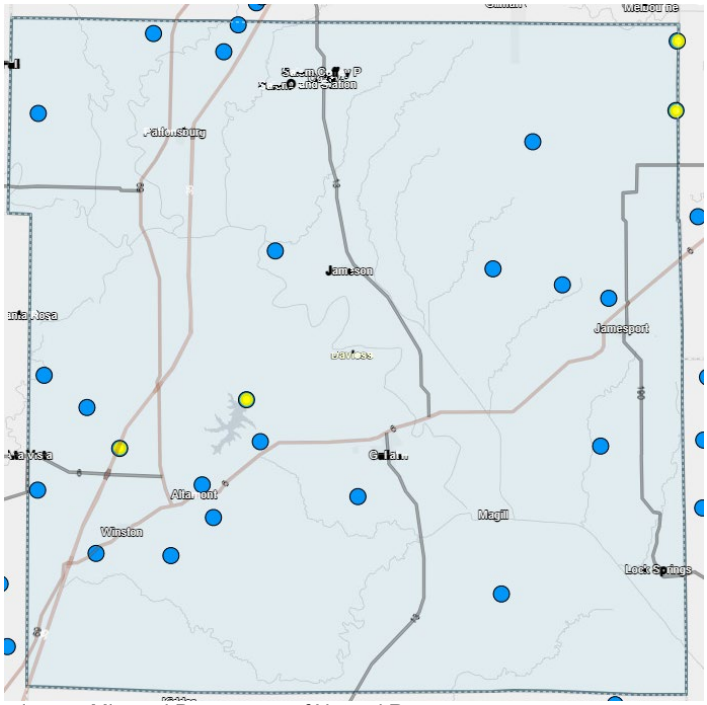
Source: Missouri Department of Natural Resources

Table 3.31. High Hazard Dams in Daviess County

Dam Name	Emergency Action Plan (EAP)AP	Dam Height (Ft)	Normal Storage (Acre-Ft)	Last Inspection Date	River	Nearest Downstream City	Distance To Nearest City (Miles)	Dam Owner
Grindstone LMC F-30	Y	37	128	3/1/2023	Tr-Lazy Creek	Santa Rosa	-	Local Government
Scott/Colby Lake Dam	Y	48	653	7/14/2022	Raccoon Creek	-	-	Private
Lake Viking Dam	Y	85	25,075	3/1/2023	Big Creek	Gallatin	13	Private
Woodworth Lake Dam	N	30	193	-	Cattail Creek	Trenton	8	Private

Sources: Missouri Department of Natural Resources, https://dnr.mo.gov/geology/wrc/dam-safety/damsinmissouri.htm and National Inventory of Dams, http://nid.usace.army.mil/cm_apex/f?p=838:12. Contact the MoDNR Dam and Reservoir Safety Program at 800-361-4827 to request the inundation maps for your county to show geographic locations at risk, extent of failure and to perform GIS analysis of those assets at risk to dam failure.

Figure 3.17. High Hazard Dam Locations in Daviess County and Areas Impacted in the Event of Breach.



Source: U.S. Army Corps of Engineers, Missouri Department of Natural Resources

Figure 3.18. Numbers and Types of Dams in Daviess County

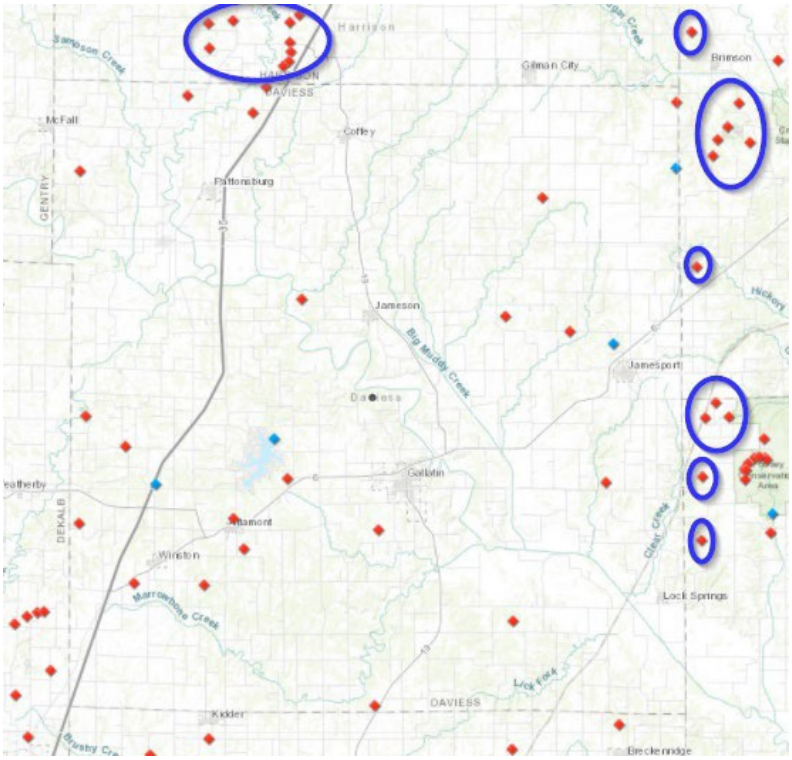
Count of NID Dams				Count of State Regulated Dams				Count of Federally Regulated Dams				Count of Un-Regulated Dams			
H	S	L	Total	1	2	3	Total	H	S	L	Total	H	S	L	Total
4	0	20	24	0	3	1	4	0	0	0	0	1	0	19	20

Source: 2023 Missouri State Hazard Mitigation Plan

Upstream Dams Outside the Planning Area

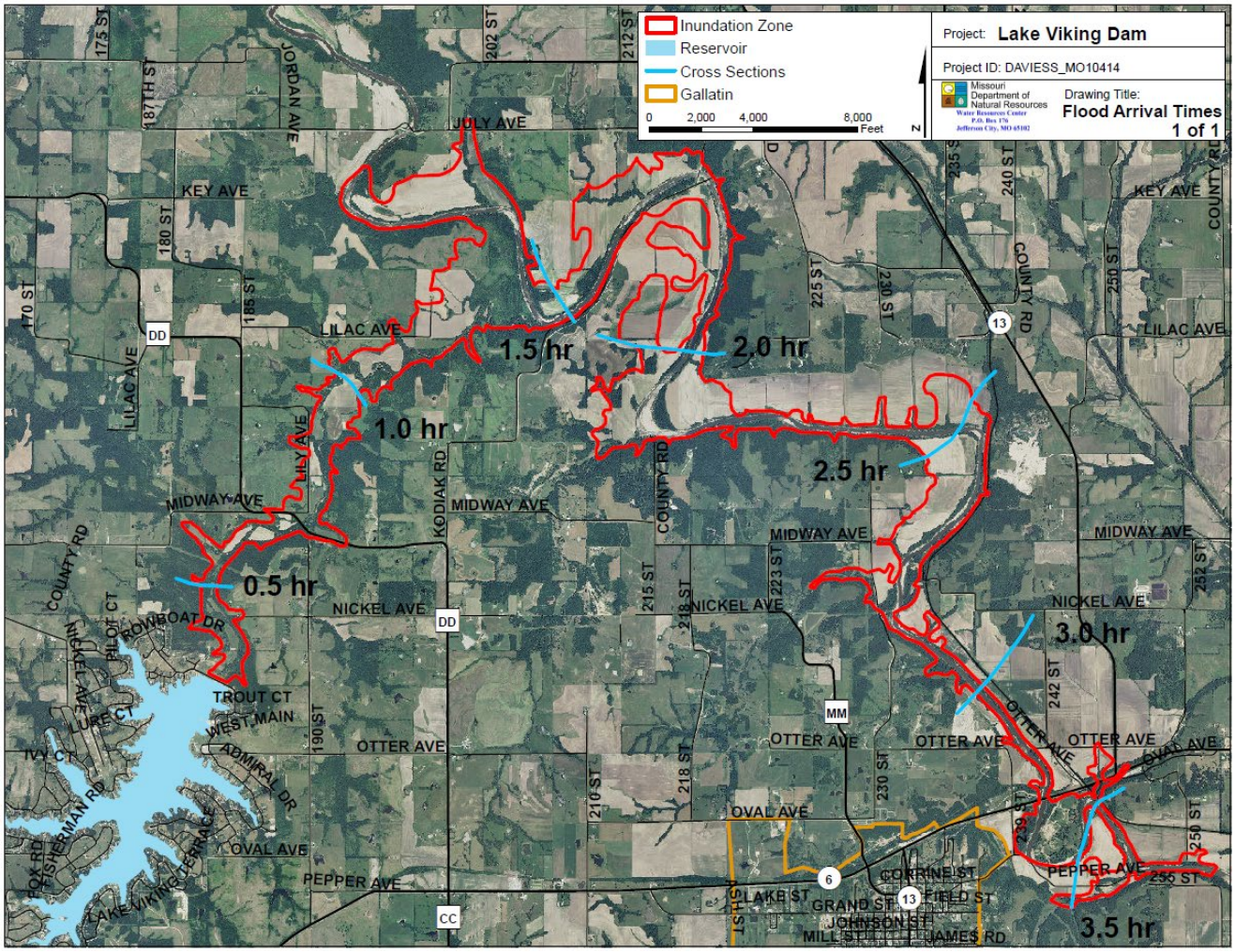
The Missouri Department of Natural Resources was contacted to see if dams located outside of Daviess County would impact the planning area in the event of failure. It was determined there are no dams in neighboring counties that would impact Daviess County due to dam failure. The upstream dams located near Daviess County are unregulated dams that are under 35' and do not pose a flood risk to the planning area. See **Figure 3.19** below.

Figure 3.19. Upstream Dams Outside Daviess



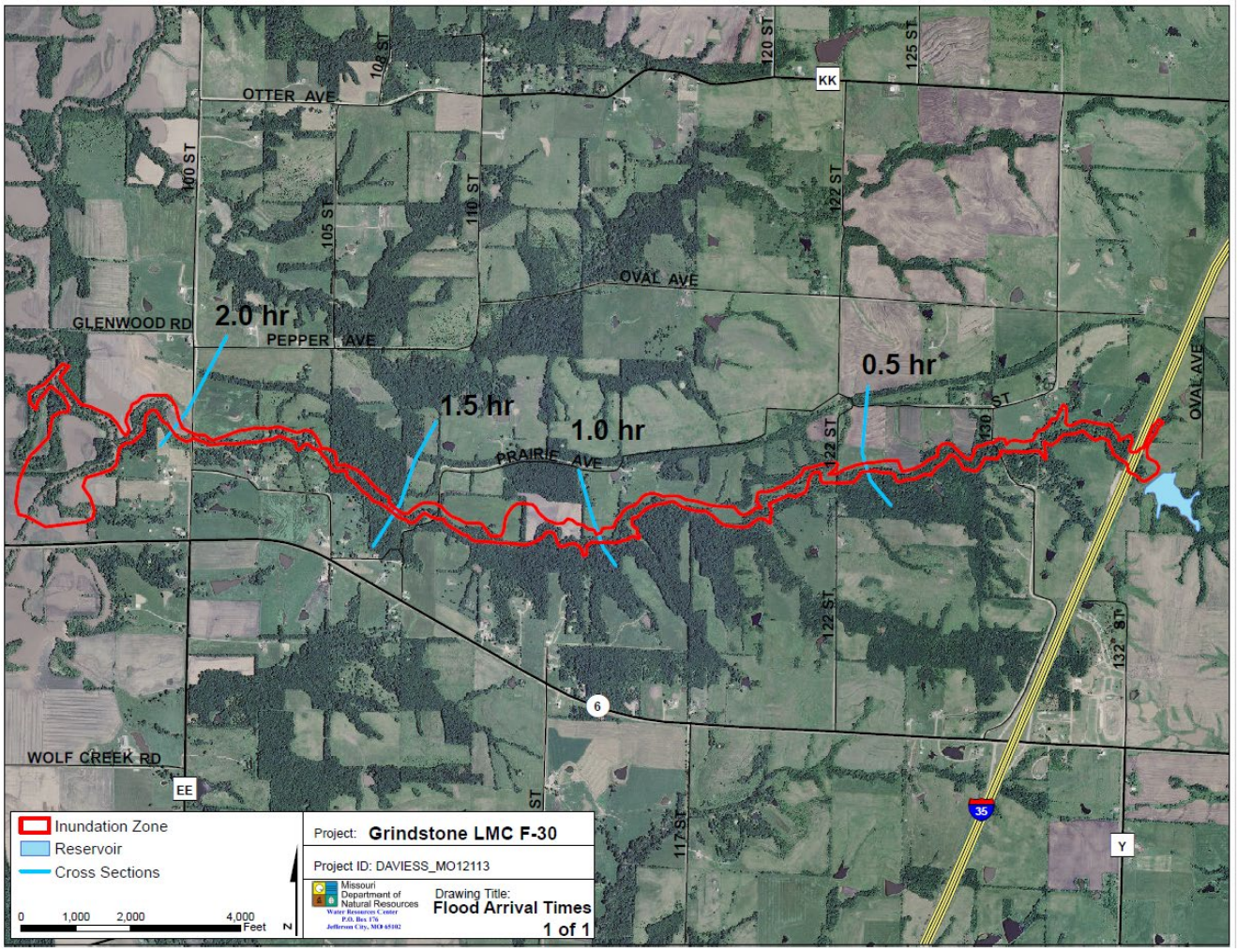
Source: U.S. Army Corps of Engineers, Missouri Department of Natural Resources

Figure 3.20. Lake Viking Dam Inundation Map



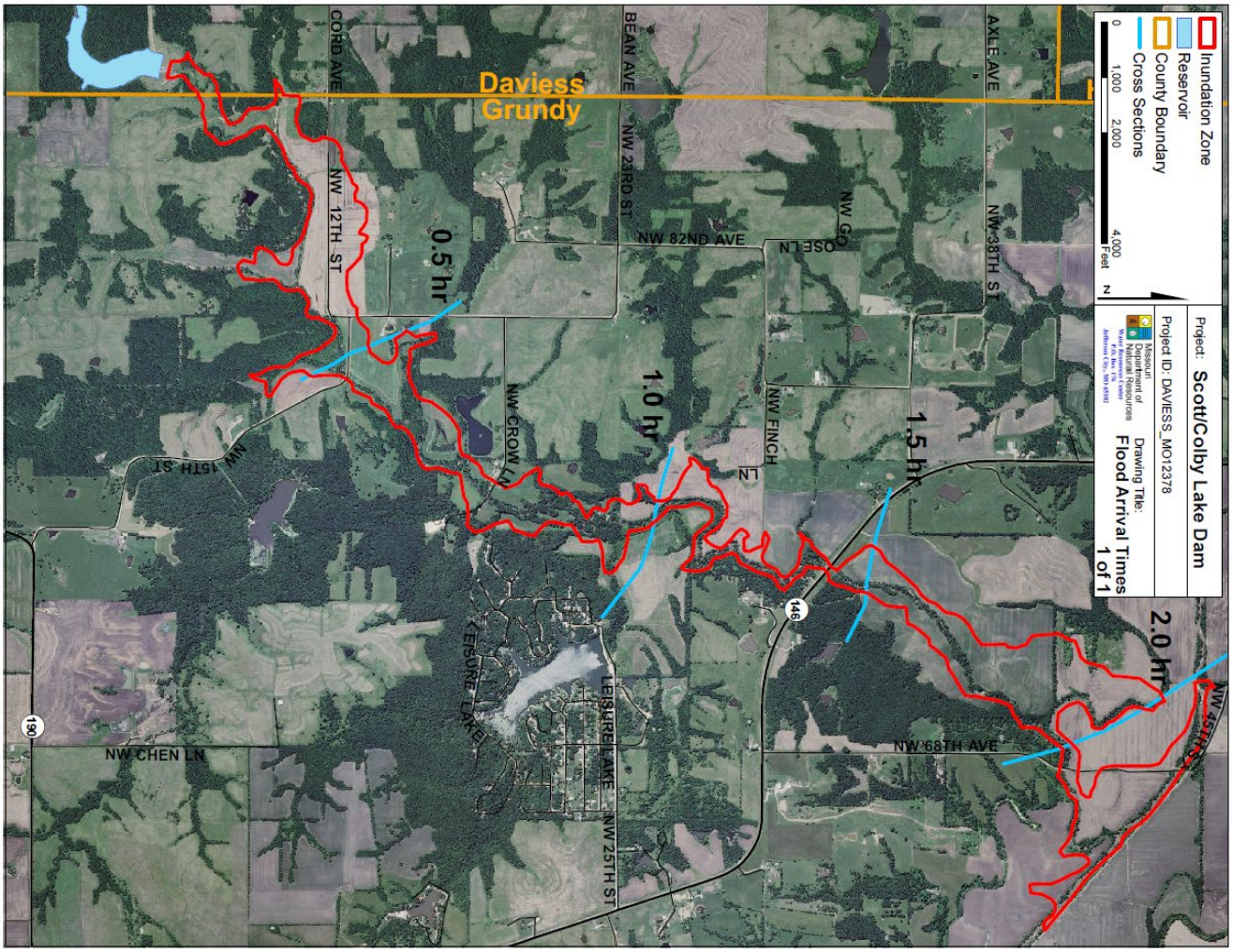
Source: Missouri Department of Natural Resources

Figure 3.18 Dam Inundation Map for Grindstone LMC F-30



Source: Missouri Department of Natural Resources

Figure 3.21. Dam Inundation Map for Scott/Colby Lake Dam



Source: Missouri Department of Natural Resources

Strength/Magnitude/Extent

The strength/magnitude of dam failure would be similar in some cases to flood events (see the flood hazard vulnerability analysis and discussion). The strength/magnitude/extent of dam failure is related to the volume of water behind the dam as well as the potential speed of onset, depth, and velocity. Note that for this reason, dam failures could flood areas outside of mapped flood hazards.

Daviess County has three high hazard dams regulated by the State (Lake Viking Dam, Grindstone LMC F-30, and Scott/Colby Lake Dam) which are all assigned a hazard class of 2. This hazard classification is defined as a dam that has one to nine permanent dwellings, or one or more campgrounds with permanent water, sewer and electrical services or one or more industrial buildings in the environmental zone downstream of the dam.

The following additional details on the extent of dam failure are excerpted below from FEMA's Federal Guidelines for Dam Safety, April 2004.

The area affected by dam failure during a given flow condition on a river is the additional area inundated by the incremental increase in flood elevation due to failure over that which would occur normally by flooding without dam failure. The area affected by a flood wave resulting from a theoretical dam breach is a function of the height of the flood wave and the downstream distance

and the width of the river at a particular location. An associated and important factor is the flood wave travel time. These elements are primarily a function of the rate and extent of dam failure, but also are functions of channel and floodplain geometry and roughness and channel slope.

Previous Occurrences

Stanford's National Performance of Dams database reports three incidents of dam failures in Daviess County, all three failures to Lake Viking Dam. The first failure of the Lake Viking Dam occurred on October 28, 1991, and the reason for the dam failure is unknown. The second failure occurred on July 22, 1993, and the third failure occurred on August 9, 1993. Both events were attributed to "Inflow Flood – Hydrologic Event". In all three instances of failure, no Emergency Action Plan was implemented.

Probability of Future Occurrence

Missouri dams 35 feet or more in height are regulated (10 CSR 22-1.020 (13)) and dam owners are required to complete an Emergency Action Plan (EAP).

Missouri DNR lists four state regulated dams in Daviess County. State regulated dams in Daviess County include Grindstone LMC F-30, Lake Viking Dam, Jamesport City Lake Dam and Scott/Colby Lake Dam. It appears that the area surrounding Lake Viking is the only community located in high-risk areas in the event of dam failure or overtop. Lake Viking and its dam are privately owned by the Viking Valley Association.

The Woodworth Lake Dam is privately owned and is the only high hazard dam in Daviess County that is not regulated by the state. The NID does not report an inspection date or an inspection frequency for this dam. Construction of this dam was completed in 1954.

There are three state-regulated, high hazard dams in Daviess County. The Lake Viking Dam is privately owned, has an inspection frequency of 3 years, and was last inspected on March 1, 2023. The Grindstone LMC F-30 Dam is local government owned, has an inspection frequency of 3 years, and was last inspected on March 1, 2023. The Scott/Colby Lake Dam is privately owned, does not have an inspection frequency, and was last inspected on July 14, 2022.

The probability of dam failure occurring in the planning area is difficult to estimate, but the risk cannot be ruled out. Regular inspection of the State Regulated Dams does lessen the probability of a future occurrence.

Changing Future Conditions Considerations and the Impacts of Climate Change

Studies have been conducted to investigate the impact of climate change scenarios on dam safety. Dam failure is already tied to flooding and the increased pressure flooding places on dams. The impacts of changing future conditions on dam failure will most likely be those related to changes in precipitation and flood likelihood. Changing future conditions projections suggest that precipitation may increase and occur in more extreme events, which may increase risk of flooding, putting stress on dams and increasing likelihood of dam failure.

There are predictions that flood levels will be higher in the future, and this increase will affect the safety of the dams in the future. Studies concluded that the total hydrological failure probability of a dam will increase in the future climate and that the extent and depth of flood waters will increase by the future dam break scenario.

Vulnerability

Vulnerability Overview

Vulnerability to dam failure is a factor due to the number of dams in the planning area, including four high hazard dams. Lake Viking Dam is in the unincorporated portion of the planning area and is the only dam in Daviess County that has reported failure. Lake Viking Dam has reported three failures, one failure due to an unknown reason and two failures due to inflow flood from a hydrologic event. An Emergency Action Plan was not required to be implemented in any of the three documented failures. The impact of a dam failure of Lake Viking Dam would potentially affect the landowners in the Lake Viking Community and the erected structures within.

Most of Daviess County's vulnerability in the event of a dam failure is loss of agricultural assets.

As there are no recorded dam failures within the jurisdictions, the failures are in the unincorporated area of Daviess County. The planning committee chose only to address high hazard dams when funding becomes available.

Potential Losses to Existing Development: (including types and numbers, of buildings, critical facilities, etc.)

The following table includes data obtained from the 2023 Missouri Hazard Mitigation Plan. The information is based on current HAZUS data, and calculates estimated values of buildings at risk, building values from HAZUS were used to determine an average value for each property type. This average value per property type was then applied to the number of structures in dam inundation areas by type to calculate an overall estimated value of buildings at risk by type. In addition to counts and values of structures at risk, an estimated population impacted for each county was calculated based on the number of residential properties in inundation areas multiplied by the average household size.

The following table provides the results of the inundation area analysis with the numbers and values of various types of structures, and population within the mapped inundation areas for State-Regulated Dams.

Table 3.32. Estimated Numbers and Values of Structures and Population Vulnerable to Failure of State-Regulated Dams with Available Inundation Areas for Daviess County

Agriculture			Industrial			Residential		
# of Structures	Value of Structures	Population	# of Structures	Value of Structures	Population	# of Structures	Value of Structures	Population
8	$1,610,411	0	24	$2,695,068	0	2	$369,466	5

Source: 2023 Missouri Hazard Mitigation Plan

There are no structures located within USACE Dam Inundation Areas for Daviess County.

The state plan provides an estimate of potential loss, by estimating the potential loss at 20% of the total structure value in dam inundation areas. This damage amount is based on FIA depth-damage curves for a one-story structure with no basement flooded to two feet. The amount of $1,136,741 is the state estimate for potential loss because of dam failure. However, it should be noted that this is a total for all dam inundation areas within the county and the likelihood of all dams failing

simultaneously is almost non-existent and should be taken into account when looking at this analysis.

Impact of Previous and Future Development

Due to the rural nature of Daviess County and the declining population over the last decade, there has been no significant development in the planning area. Therefore, there is no additional risk to consider for Daviess County in this plan update. Likewise, there are no current plans for any significant development for any of the jurisdictions within the county, and therefore, there are no increased risks that must be considered in the next five years.

Hazard Summary by Jurisdiction

The majority of Daviess County is not in danger of being inundated due to a breach in a dam. The only jurisdiction vulnerable to dam failure is the unincorporated county. None of the incorporated towns, school districts, or water districts in Daviess County are vulnerable to damage caused by dam failure.

Problem Statement

Daviess County:
There is concern surrounding the Lake Viking Association dam. A failure of the dam would result in a loss of water supply for many county residents and lead to possible damage to residents and infrastructure.

3.4.3 Earthquakes

Hazard Profile

Hazard Description

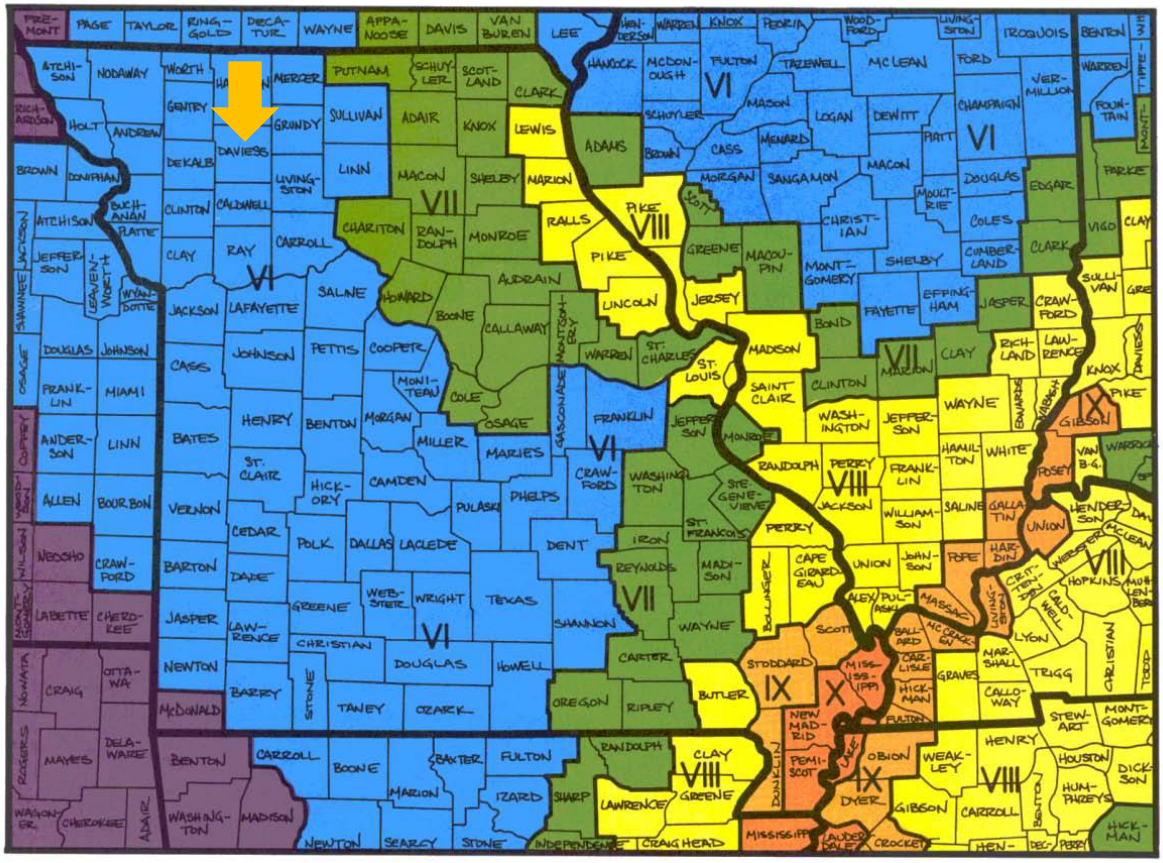
An earthquake is a sudden motion or trembling that is caused by a release of energy accumulated within or along the edge of the earth's tectonic plates. Earthquakes occur primarily along fault zones and tears in the earth's crust. Along these faults and tears in the crust, stresses can build until one side of the fault slips, generating compressive and shear energy that produces the shaking and damage to the built environment. The heaviest damage generally occurs nearest to the earthquake epicenter, which is that point on the earth's surface directly above the point of fault movement. The composition of geologic materials between these points is a major factor in transmitting energy to buildings and other structures on the earth's surface.

Missouri holds the record for the most devastating earthquake in the history of post-settlement North America. The New Madris 1811-1812 earthquake series included five earthquakes of magnitude 8.0 (Modified Mercalli Intensity Scale) or higher occurring in the period of December 16, 1811, through February 7, 1812. These earthquakes affected an estimated 600,000 square kilometers. Movement was felt as far away as Quebec, and damage was reported in Charleston, South Caroline, and Washington D.C.

Geographic Location

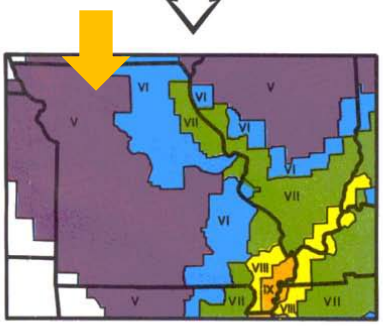
While the history of the New Madrid fault line and its potential for another major earthquake is well known and much studied, that threat lies far enough away from Daviess County that the effects of such an event would be negligible and would not vary much throughout the planning area. The most likely outcome for Daviess County would be as follows: everyone would feel movement, poorly built buildings would be damaged slightly, considerable quantities of dishes, glassware, and some windows would be broken, people would have trouble walking, pictures would fall off walls, plaster in walls might crack, and furniture could be overturned.

Figure 3.22. Impact Zones for Earthquake Along the New Madrid Fault



This map shows the highest projected Modified Mercalli intensities by county from a potential magnitude – 7.6 earthquake whose epicenter could be anywhere along the length of the New Madrid seismic zone.

6.7

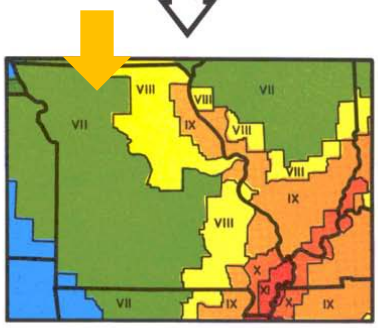


This map shows the highest projected Modified Mercalli intensities by county from a potential magnitude – 6.7 earthquake whose epicenter could be anywhere along the length of the New Madrid seismic zone.

7.6

This map shows the highest projected Modified Mercalli intensities by county from a potential magnitude – 8.6 earthquake whose epicenter could be anywhere along the length of the New Madrid seismic zone.

8.6



Source: https://sema.dps.mo.gov/docs/EQ_Map.pdf

Figure 3.23. Projected Earthquake Intensities

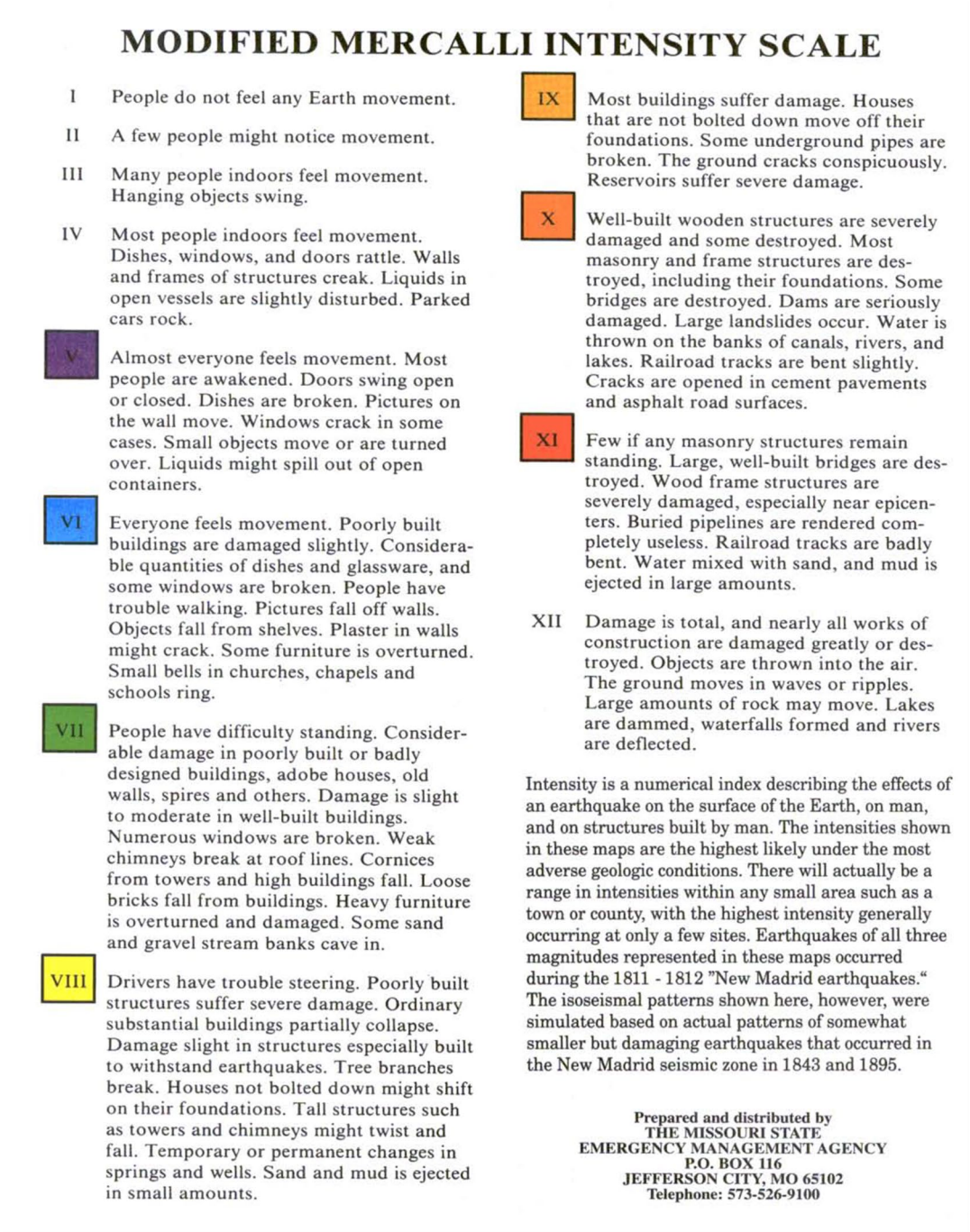
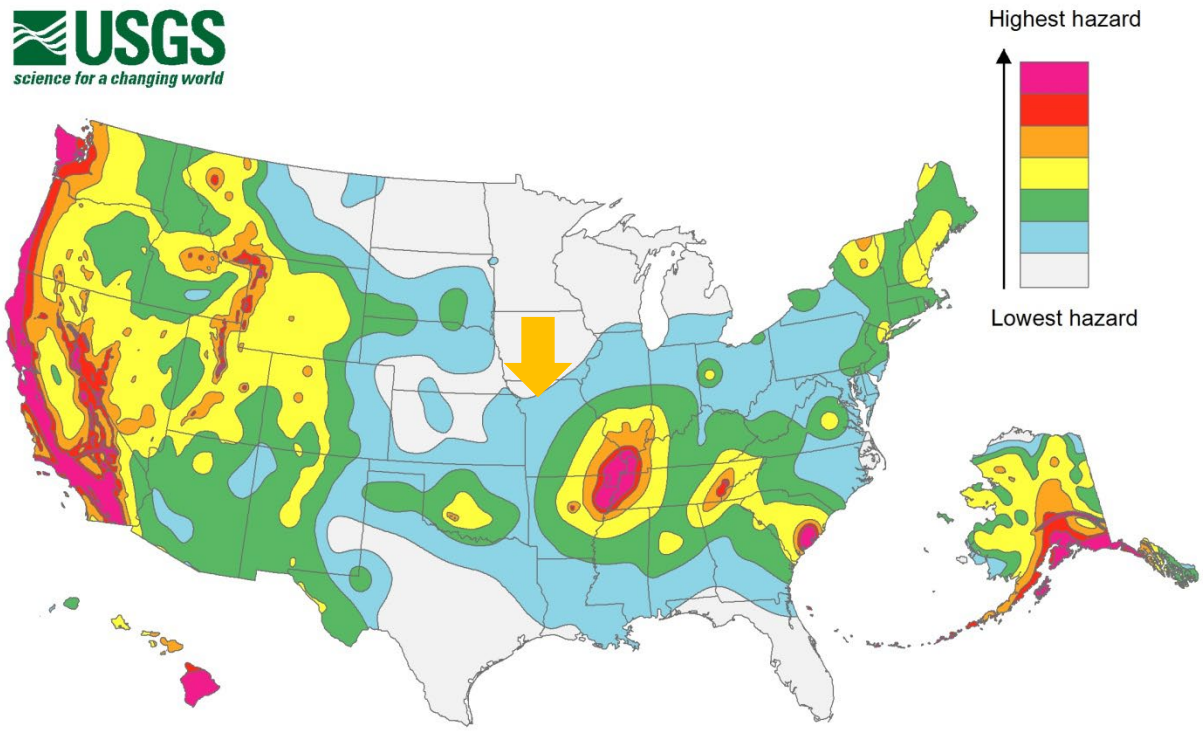


Figure 3.24. United States Seismic Hazard Map



Source: United States Geological Survey at https://www.usgs.gov/programs/earthquake-hazards/hazards

Strength/Magnitude/Extent

The extent or severity of earthquakes is generally measured in two ways: 1) the Richter Magnitude Scale is a measure of earthquake magnitude; and 2) the Modified Mercalli Intensity Scale is a measure of earthquake severity. The two scales are defined as follows.

Richter Magnitude Scale

The Richter Magnitude Scale was developed in 1935 as a device to compare the size of earthquakes. The magnitude of an earthquake is measured using a logarithm of the maximum extent of waves recorded by seismographs. Adjustments are made to reflect the variation in the distance between the various seismographs and the epicenter of the earthquakes. On the Richter Scale, magnitude is expressed in whole numbers and decimal fractions. For example, comparing a 5.3 and a 6.3 earthquake shows that the 6.3 quake is ten times bigger in magnitude. Each whole number increase in magnitude represents a tenfold increase in measured amplitude because of the logarithm. Each whole number step in the magnitude scale represents a release of approximately 31 times more energy.

Modified Mercalli Intensity Scale

The intensity of an earthquake is measured by the effect of the earthquake on the earth's surface. The intensity scale is based on the responses to the quake, such as people awakening, movement of furniture, damage to chimneys, etc. The intensity scale currently used in the United States is the

Modified Mercalli (MM) Intensity Scale. It was developed in 1931 and is composed of 12 increasing levels of intensity. They range from imperceptible shaking to catastrophic destruction, and each of the twelve levels is denoted by a Roman numeral. The scale does not have a mathematical basis, but is based on observed effects. Its use gives the laymen a more meaningful idea of the severity.

Previous Occurrences

Daviess County has had 0 earthquakes since 1931, and according to homefacts.com, there is a "Very Low" risk level for the county.

Probability of Future Occurrence

Additionally, this same website also projects the probability of Daviess County having a 5.0 Earthquake within the next 50 years at 0.18%.

2% Probability of Exceedance

The State Hazard Mitigation Plan ran a scenario, based on an event with a 2% probability of exceedance in 50 years, in order to determine the worst-case scenario. This scenario was equivalent to the 2,500-year earthquake scenario in HAZUS-MH. This methodology is based on the probabilistic seismic hazard shaking grids that were developed by the US Geological Survey (USGS) for the National Seismic Hazard Maps that are included with HAZUS-MH. The USGS maps provide estimates of peak ground acceleration and spectral acceleration at periods of 0.3 seconds and 0.1 seconds, respectively, which have a 2% probability of exceedance in the next 50 years. The most severe shaking is around the New Madrid Fault in Missouri. The following figure represents the potential for damage in areas with soils potentially susceptible to liquefaction.

Figure 3.25. HAZUS-MH Earthquake 2% Probability of Exceedance in 50 years – Ground

Shaking and Liquefaction Potential

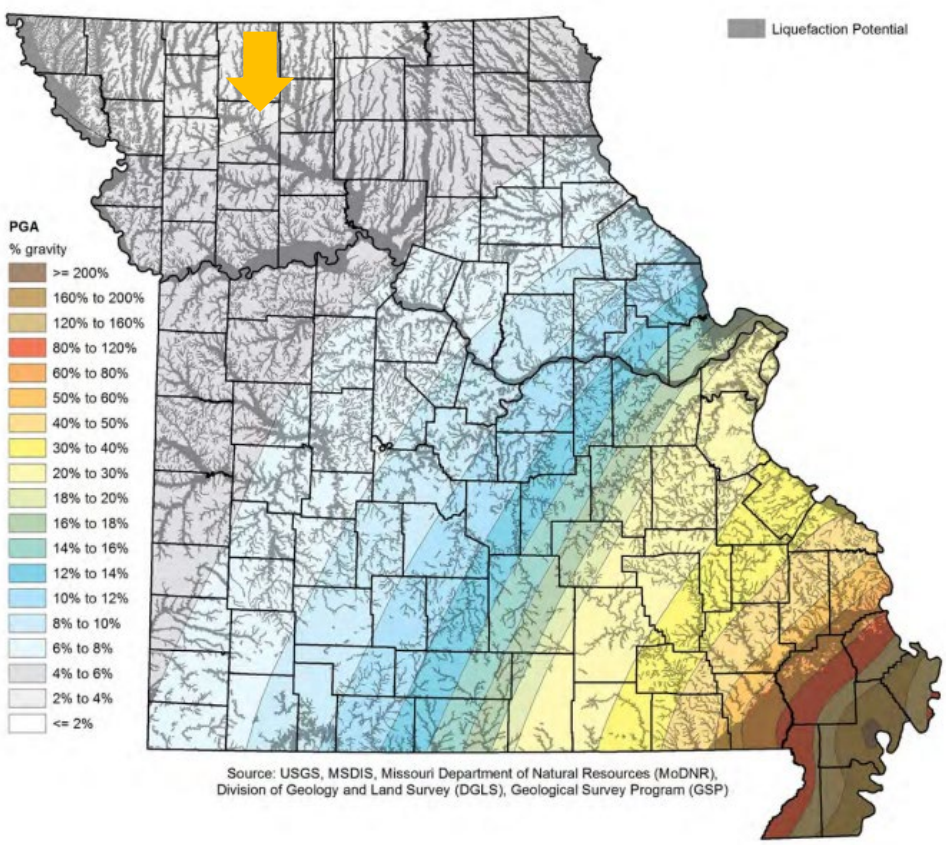


Table 3.33. HAZUS-MH Earthquake Loss Estimation 2% Probability of Exceedance in 50-Years Scenario Direct Economic Losses Results for Daviess County (All values in thousands)

County	Cost Structural Damage	Cost Non-structural Damage	Cost Contents Damage	Inventory Loss	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Daviess	$859	$1,628	$441	$24	$521	$94	$143	$172	$3,882

Source 2023 Missouri State Hazard Mitigation Plan

Changing Future Conditions Considerations and the Impacts of Climate Change

According to the 2023 Missouri State Hazard Mitigation plan, scientists are beginning to believe that there may be a connection between changing climate conditions and earthquakes. Changing ice caps and sea-level redistribute weight over fault lines, which could potentially have an influence on earthquake occurrences. However, currently no studies quantify the relationship to a high level of detail, so recent earthquakes should not be linked with climate change. While not conclusive, early research suggests that more intense earthquakes and tsunamis may eventually be added to the adverse consequences that are caused by changing future conditions.

Vulnerability

Vulnerability Overview

The 2023 Missouri State Hazard Mitigation Plan provided an earthquake loss estimation for each county. The annualized loss scenario from the 2023 State Hazard Mitigation Plan for Daviess County is provided in the following table.

Table 3.34. HAZUS-MH Earthquake Loss Estimation: Annualized Loss Scenario for Daviess County

County	Total Losses, in $ Thousands	Loss Per Capita, in $ Thousands	Loss Ratio, in $ per Million
Daviess	$4	$0.0005	$4

Source: Missouri Hazard Mitigation Plan 2023

According to the Overview of Residential Earthquake Insurance in 2023, 4.8% of the population of Daviess County residents had earthquake insurance. According to this report, the percentage of coverage for earthquakes has been declining since 2014. The following table provides county specific information.

Table 3.35. Earthquake Coverage in Daviess County, Missouri in 2023

Earthquake Exposures	Homeowners, Farm, Mobile Home Exposures	% With Earthquake Endorsement	Average Premium, All Earthquake	Average Premium, $110k-$140k Coverage
104	2,159	4.8%	$103	$64

Source: Missouri Department of Commerce & Insurance “overview of Residential Earthquake Insurance 2023”

Potential Losses to Existing Development

Potential losses to existing development were estimated using FEMA’s loss estimation software, HAZUS 6.0. The HAZUS building inventory counts are based on the 2020 census data and primarily 2022 economic values. Population counts are 2019 estimates from the US Census Bureau.

Figure 3.26. HAZUS Earthquake Loss Estimation with a 2% Probability of Exceedance in

50 Years Scenario – Total Building Loss

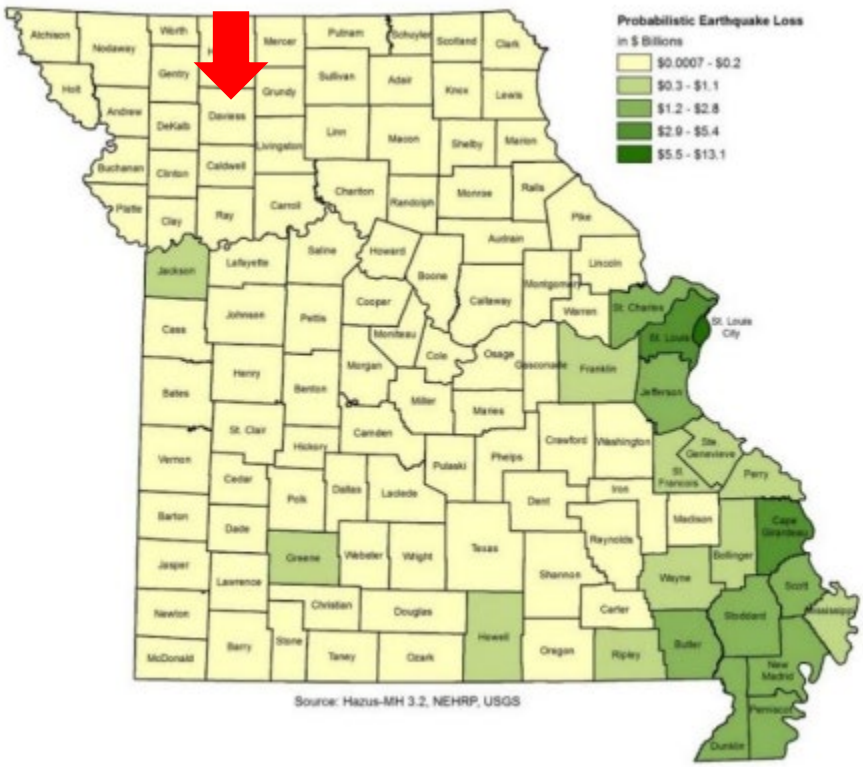


Table 3.36. FEMA National Risk Index Loss Estimation: Annualized Loss Scenario for Daviess County

Annualized Frequency	Expected Annual Loss Buildings (In $ Thousands)	Expected Annual Loss-Fatalities	Expected Annual Loss – Population Equivalence	Expected Annual Loss – Total	Expected Annual Loss Rating
0.00025	$4	0.00003	$205	$4,217	Very Low

Source: Missouri Hazard Mitigation Plan 2023

Impact of Previous and Future Development

Any future development to the planning area while unexpected, would not increase the risk to an earthquake other than contributing to the overall exposure of what could become damaged because of an earthquake event.

Hazard Summary by Jurisdiction

Since the earthquake intensity is not likely to vary greatly throughout Daviess County, the risk will be the same throughout. However, damages could differ if there are structural variations in the planning area-built environment. For example, older structures and those structures which are not in prime condition are likely to experience higher damages.

Since the earthquake intensity is not likely to vary greatly throughout the planning area, the risk will be the same throughout the planning area. According to Appendix C in the Missouri State Hazard Mitigation Plan the potential risk to Daviess County is classified as Low. There are also no projected damages to roadways or bridges in the planning area.

Problem Statement

Ground movement from earthquakes would lead to breaks in underground infrastructure such as water, gas and communications lines.

3.4.4 Drought

Hazard Profile

Hazard Description

Drought is generally defined as a condition of moisture levels significantly below normal for an extended period over a large area that adversely affects plants, animal life, and humans. A drought period can last for months, years, or even decades. There are four types of drought conditions relevant to Missouri, according to the State Plan, which are as follows.

- Meteorological drought is defined in terms of the basis of the degree of dryness (in comparison to some “normal” or average amount) and the duration of the dry period. A meteorological drought must be considered as region-specific since the atmospheric conditions that result in deficiencies of precipitation are highly variable from region to region.

- Hydrological drought is associated with the effects of periods of precipitation (including snowfall) shortfalls on surface or subsurface water supply (e.g., streamflow, reservoir and lake levels, ground water). The frequency and severity of hydrological drought is often defined on a watershed or river basin scale. Although all droughts originate with a deficiency of precipitation, hydrologists are more concerned with how this deficiency plays out through the hydrologic system. Hydrological droughts are usually out of phase with or lag the occurrence of meteorological and agricultural droughts. It takes longer for precipitation deficiencies to show up in components of the hydrological system such as soil moisture, streamflow, and ground water and reservoir levels. As a result, these impacts also are out of phase with impacts in other economic sectors.

- Agricultural drought focuses on soil moisture deficiencies, differences between actual and potential evaporation, reduced ground water or reservoir levels, etc. Plant demand for water depends on prevailing weather conditions, biological characteristics of the specific plant, its stage of growth, and the physical and biological properties of the soil.

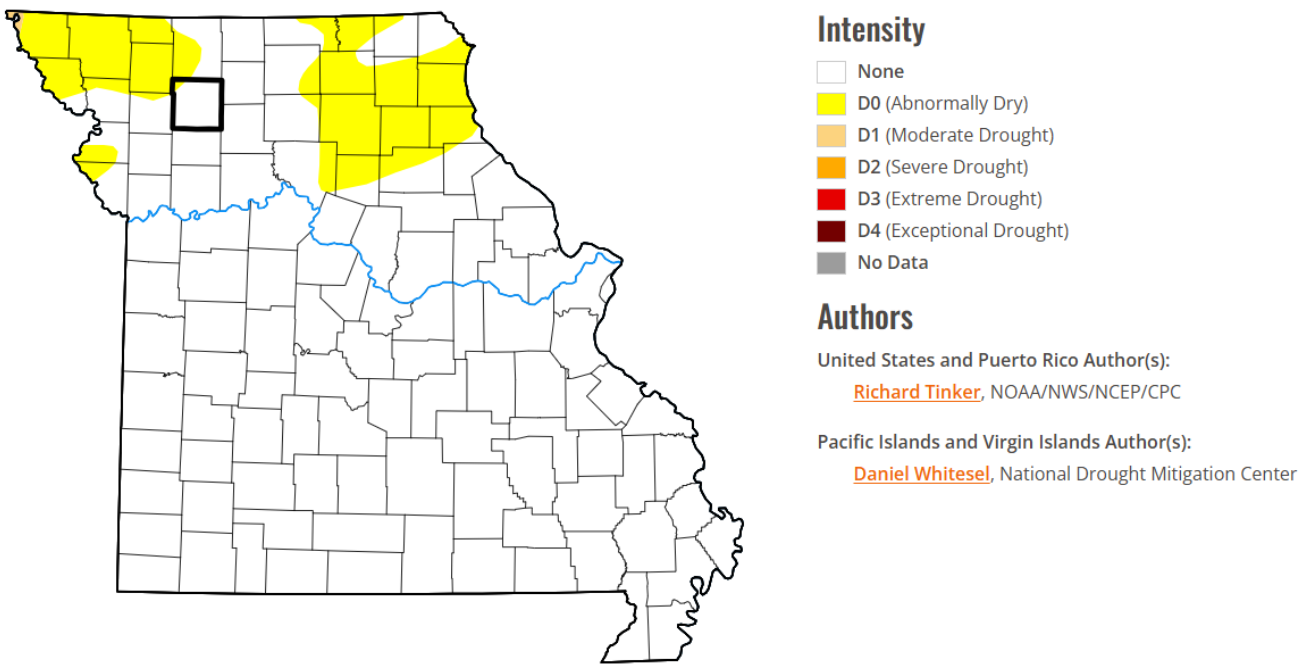
- Socioeconomic drought refers to when physical water shortage begins to affect people.

Geographic Location

Because of the broad scope of drought, all of Daviess County, with the exception of the school districts, is susceptible to this hazard. Agricultural land is extremely vulnerable to drought impacts. According to the most recent census of agriculture there are 320,474 acres of farmland in Daviess County out of approximately 364,160 acres in total. This amounts to roughly 88% of the land in Daviess County used for agricultural purposes, making the impacts of drought one that is acutely felt by residents of Daviess County.

The following figure is a recent map from the US Drought Monitor. Daviess County is outlined in black. This map is a snapshot of conditions on April 22, 2025. At the time of this document's preparation the planning area was not experiencing much drought, however, the entire planning area is at risk to drought (apart from school districts).

Figure 3.27. U.S. Drought Monitor Map of Missouri on April 22, 2025



Source: U.S. Drought Monitor, https://droughtmonitor.unl.edu/Maps/MapArchive.aspx

Strength/Magnitude/Extent

The Palmer Drought Indices measure dryness based on recent precipitation and temperature. The indices are based on a "supply-and-demand model" of soil moisture. Calculation of supply is relatively straightforward, using temperature and the amount of moisture in the soil. However, demand is more complicated as it depends on a variety of factors, such as evapotranspiration and recharge rates. These rates are harder to calculate. Palmer tried to overcome these difficulties by developing an algorithm that approximated these rates and based the algorithm on the most readily

available data — precipitation and temperature.

The Palmer Index has proven most effective in identifying long-term drought of more than several months. However, the Palmer Index has been less effective in determining conditions over a matter of weeks. It uses a "0" as normal, and drought is shown in terms of negative numbers; for example, negative 2 is moderate drought, negative 3 is severe drought, and negative 4 is extreme drought. Palmer's algorithm also is used to describe wet spells, using corresponding positive numbers.

Palmer also developed a formula for standardizing drought calculations for each individual location based on the variability of precipitation and temperature at that location. The Palmer index can therefore be applied to any site for which sufficient precipitation and temperature data is available.

The National Drought Mitigation Center uses a scale to show the intensity of drought that goes from D0 to D4. The following figure shows the correlation of this scale to the Palmer Index. Reports from NCEI Storm Database use the D0-D4 Scale in their narratives.

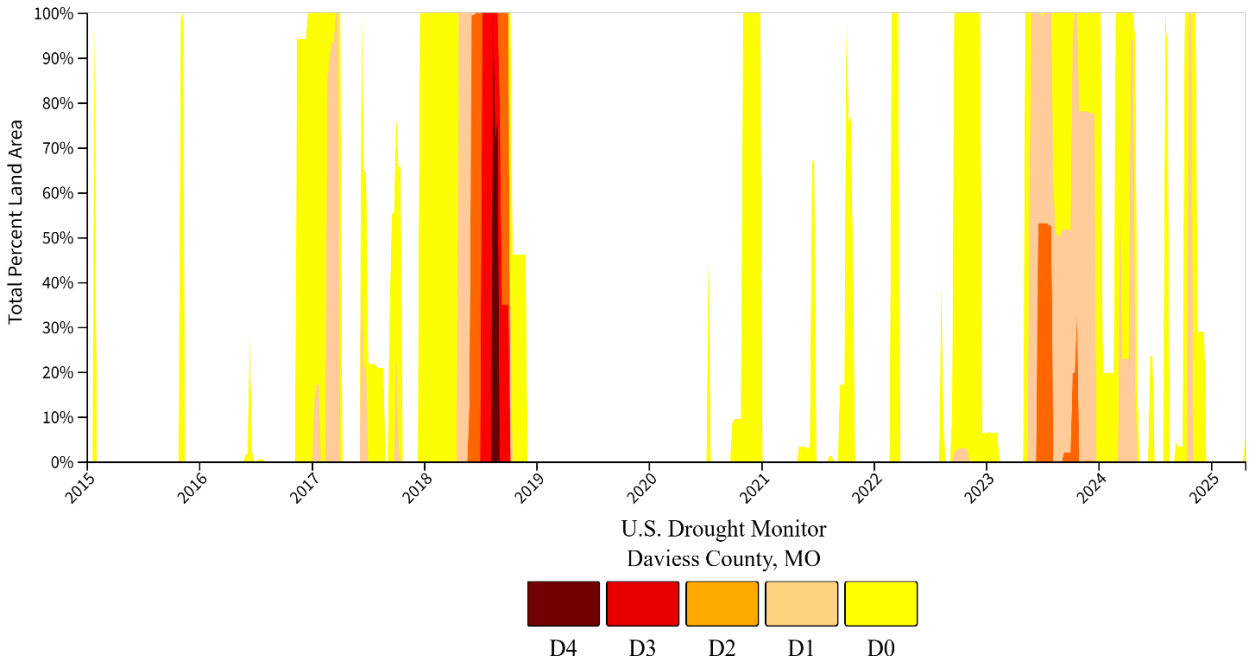
Figure 3.28. Drought Severity Classification

Category	Description	Possible Impacts	Palmer Drought Index
D0	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered	-1.0 to -1.9
D1	Moderate Drought	Some damage to crops, pastures; streams, reservoirs, or wells low, some water shortages developing or imminent; voluntary water-use restrictions requested	-2.0 to -2.9
D2	Severe Drought	Crop or pasture losses likely; water shortages common; water restrictions imposed	-3.0 to -3.9
D3	Extreme Drought	Major crop/pasture losses; widespread water shortages or restrictions	-4.0 to -4.9
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses; shortages of water in reservoirs, streams, and wells creating water emergencies	-5.0 or less

Previous Occurrences

The following figure, obtained from the US Drought Monitor (2015-2025) depicts the previous occurrence of drought in Daviess County by severity and total percentage of land area that was affected by the drought.

Figure 3.29. Percent of Daviess County in Drought 2015-2025



Source: http://droughtreporter.unl.edu/

The following table contains information of crop loss insurance claims paid out due to drought in Daviess County.

Probability of Future Occurrence

To determine the frequency of previous droughts in Daviess County the data was taken from droughtmonitor.unl.edu. A search was conducted on the frequency and drought classifications that Daviess County has had for the time frame of 1/1/2004 to 4/29/2024. This time frame encompasses 252 months in total, and this figure was used in the probability calculations. The following table provides a breakdown of the information that was gathered regarding Daviess County.

The following formula was used to calculate the probability of drought:

$$\frac{\#\ of\ months\ in\ drought}{total\ \#\ of\ months}\ x\ 100 = Average\ Percentage\ Probability$$

Probability of D0 Drought

$$\frac{113.75}{252}\ x\ 100 = 45.14\%\ Probability$$

Probability of D1 Drought

$$\frac{60.5}{252}\ x\ 100 = 24\%\ Probability$$

Probability of D2 Drought

$$\frac{23.5}{252} x\ 100 = 9.3\%\ Probability$$

Probability of D3 Drought

$$\frac{7.5}{252} x\ 100 = 3\%\ Probability$$

Probability of D4 Drought

$$\frac{.75}{252} x\ 100 = .3\%\ Probability$$

Changing Future Conditions Considerations and the Impacts of Climate Change

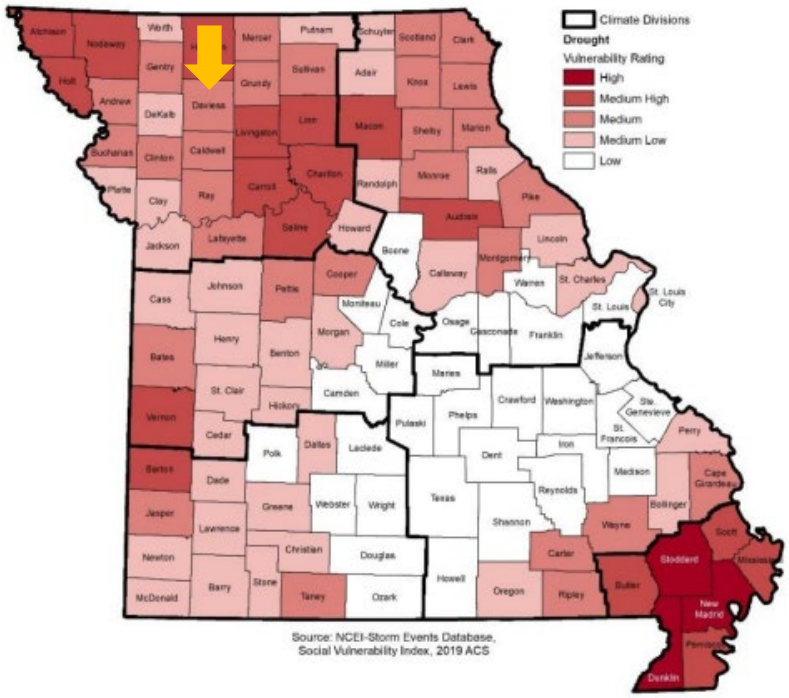
Although drought is not predictable, long-range outlooks and predicted impacts of climate change could indicate an increased chance of drought. With an increase in annual temperatures due to a changing climate, droughts are more likely to occur due to higher evaporation rates. With an increase in probability of wetter springs comes an increased likelihood of dryer summers. A dryer summer and higher temperatures would likely reduce the river flow and could potentially lead to a shortage of water availability, especially for agricultural purposes. This would have a large impact on Daviess County, which is largely agricultural.

A new analysis, performed for the Natural Resources Defense Council, studied the effects of climate change on water supply and demand in the United States. This study found that more than1,100 counties will face higher risks of water shortages by mid-century because of climate change. Two principal causes for this are shifts in precipitation and potential evapotranspiration (PET). Climate models predict a decrease in precipitation in many regions of the United States, including areas that may already be described as experiencing water shortages to some degree. This study shows a moderate risk of water shortage in 2050 for Daviess County.

Vulnerability

Vulnerability Overview

Figure 3.30. Drought Vulnerability in Missouri by County



In the preceding figure, per the Missouri Hazard Mitigation Plan, Daviess County is considered to be at medium risk to drought vulnerability. The method used to determine vulnerability to drought across Missouri was a statistical analysis of data from several sources: USDA Risk Management Agency's insured crop losses as a result of drought (2021-2022), USDA crop exposure by county, the calculated Social Vulnerability Index for Missouri Counties from the Hazards and Vulnerability Research Institute in the Department of Geography at the University of South Carolins, and storm events data (1996-December 31, 2021) and probability of severe drought based on historic Palmer Drought Severity Index. The USDA crop exposure by county is from the 2017 Agricultural Census and assumes that the larger the exposure, the greater potential for loss and impact on the local economy.

From the statistical data collected, four factors were considered in determining overall vulnerability to drought as follows: social vulnerability, crop exposure ratio, annualized crop claims paid, and likelihood of occurrence. Based on natural breaks in the statistical data, a rating value of 1 through 5 was assigned to each factor. Once the ranges were determined and applied to all factors considered in the analysis, the ratings were combined to determine an overall vulnerability rating for drought. These rating values correspond to the following descriptive terms:

1. Low
2. Medium-low
3. Medium
4. Medium-High
5. High

The following table utilizes these factors in determining the vulnerability rating of Daviess County to drought, according to the 2023 Missouri Hazard Mitigation Plan.

Table 3.37. Vulnerability of Daviess County to Drought

SOVI Index Rating	USDA RMA Total Drought Crop Claims	Average Annualized Crop Claims	USDA Claims Rating	2017 Crop Exposure	Crop Exposure Rating	Likelihood of Severe Drought	Drought Occurrence	Total Rating	Total Rating (text) Drought
3	$63,501,955	$6,350,196	5	$48,068,000	2	0.62	3	13	Medium

Source: 2023 Missouri State Hazard Mitigation Plan

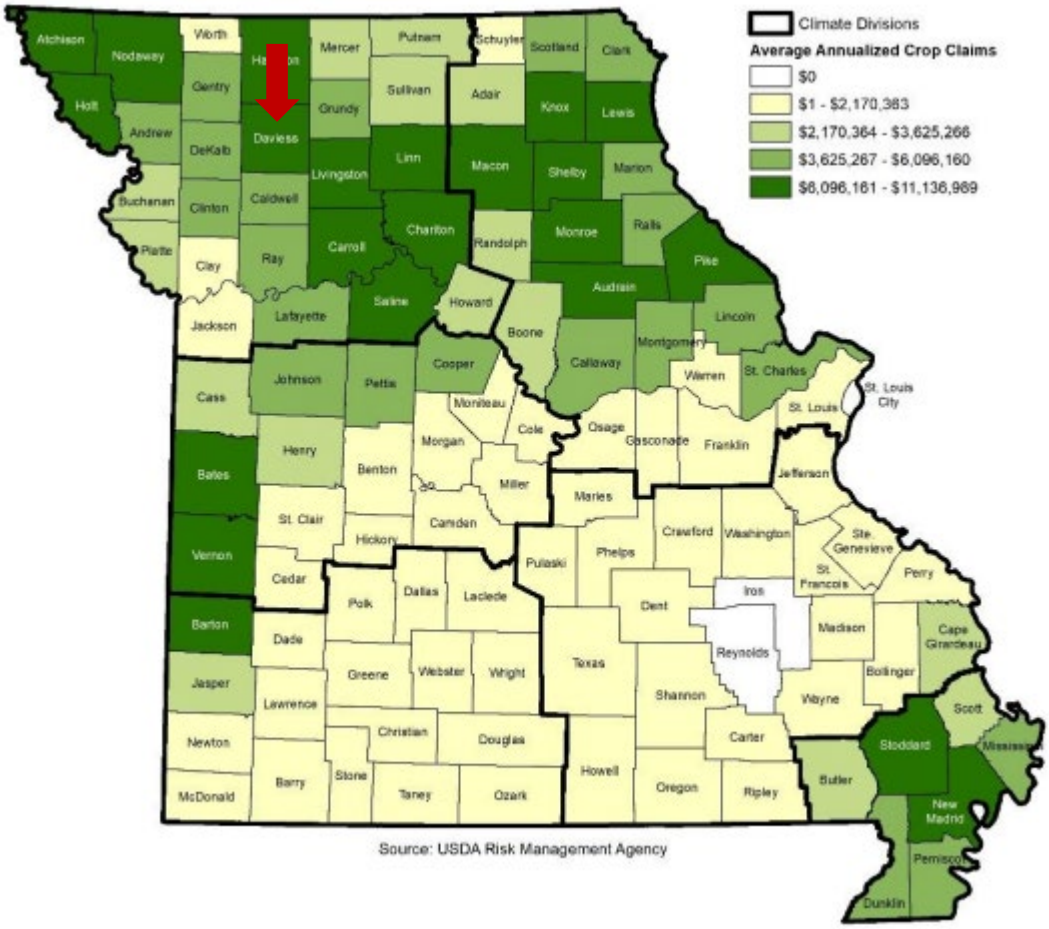
The following table contains information of crop loss insurance claims paid out due to drought in Daviess County.

Table 3.38. Crop Loss Payments in Daviess County 2013-2024

CROP YEAR	CROP LOSS	CAUSE OF LOSS	INSURANCE PAID ($)
2013	Corn	Drought	$3,857,810.85
	Grain Sorghum		$12,469.00
	Soybeans		$5,215,098.50
2014	Soybeans	Drought	$1,432.20
	Wheat		$2,883.50
2015	**- No Claims -**		
2016	Soybeans	Drought	$79,422.00
2017	Corn	Drought	$113,383.49
	Soybeans		$297,321.50
2018	Corn	Drought	$7,325,565.72
	Grain Sorghum		$3,030.00
	Oats		$6,327.00
	Soybeans		$3,518,820.43
	Wheat		$13,502.00
2019	Soybeans	Drought	$5,254.00
2020	Corn	Drought	$23,168.00
	Soybeans		$58,609.00
2021	Corn	Drought	$56,307.60
	Grain Sorghum		$6,783.00
	Soybeans		$111,171.60
2022	Corn	Drought	$326,272.00
	Wheat		$32,186.10
	Soybeans		$143,376.65
2023	Corn	Drought	$14,232.00
	Wheat		$14,488.00
	Soybeans		$145,842.00
2024	Corn	Drought	$26,106.65
	Soybeans		$457,391.70
TOTAL			**$21,868,254.49**

Source: USDA Cause of Loss Data

Figure 3.31. Annualized Drought Crop Insurance Claims Paid 2013-2021



Potential Losses to Existing Development

The National Drought Monitor Center at the University of Nebraska at Lincoln summarized the potential impacts of drought as follows: Drought can create economic impacts on agriculture and related sectors, including forestry and fisheries, because of the reliance of these sectors on surface and subsurface water supplies. In addition to losses in yields in crop and livestock production, drought is associated with increases in insect infestations, plant disease, and wind erosion. Droughts also bring increased problems with insects and disease to forests and reduce growth. The incidence of forest and range fires increases substantially during extended droughts, which in turn place both human and wildlife populations at higher levels of risk. Income loss is another indicator used in assessing the impacts of drought because so many sectors are affected. Finally, while drought is rarely a direct cause of death, the associated heat, dust and stress can all contribute to increased mortality.

The most vulnerable assets in Daviess County that are susceptible to drought are agricultural in nature. Over the last 20 years there has been a total of $21,868,254.49 in losses due to drought. Using this data, it can be determined that, on average, Daviess County can expect to see approximately $1,093,412.72 in crop losses annually due to drought conditions.

Impact of Previous and Future Development

Due to the declining population in Daviess County over the last decade, there are no planned nor

previous developments that would increase the impact of drought on the planning area. Increases in acreage planted with crops would increase the exposure to drought-related agricultural losses. In addition, increases in population impose additional strains on water supply systems to meet the growing demand for treated water, and these strains could prove impactful during times of drought.

Hazard Summary by Jurisdiction

Drought has the potential to impact all of Daviess County, except for the school districts. But the ways in which the impacts will be experienced vary. As discussed in the previous occurrences and vulnerability sections, most of the damages seen historically due to drought in Daviess County affect agriculture. Therefore, the magnitude of the impacts of drought may be greater in rural parts of the county, which have large areas of crops and wildlife. In areas with greater building density, there is more exposure to potential shrinking and expanding soil problems around foundations because of drought. If drought conditions are severe and prolonged, water supplies could also be affected.

The residents at greatest risk for heat-related illnesses and deaths include children up to five years of age and people 65 years of age or older. The following table provides the most at-risk population in the planning area by jurisdiction.

Table 3.39. Population in Daviess County Jurisdictions <5-years and 65+

Jurisdiction	Population Under 5 years	Population Under 5 Years (%)	Population Over 65	Population Over 65 (%)
Missouri	360,175	5.9%	1,062,483	17.3%
Daviess County	575	6.8%	1,793	21.2%
Village of Altamont	19	12.7%	25	16.7%
City of Coffey	6	5.6%	18	16.7%
City of Gallatin	118	6.9%	362	21.0%
Village of Jameson	2	1.6%	48	39.3%
City of Jamesport	28	4.4%	117	18.6%
City of Pattonsburg	10	4.1%	41	16.8%
Village of Winston	21	13.7%	18	11.8%

Source: 2023 ACS 5-year estimates US Census Bureau

Problem Statement

Drought could lead to issues with water supply issues, economic downturn and fire suppression. Drought may also lead to breaks in underground infrastructure as the dry ground shifts.

3.4.5 Extreme Temperatures

Hazard Profile

Hazard Description

Extreme temperature events, both hot and cold, can impact human health and mortality, natural ecosystems, agriculture and other economic sectors. According to information provided by FEMA, extreme heat is defined as temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks. Ambient air temperature is one component of heat conditions, with relative humidity being the other. The relationship of these factors creates what is known as the apparent temperature. The Heat Index chart shown in **Figure 3.32** uses both of these factors to produce a guide for the apparent temperature or relative intensity of heat conditions.

Extreme cold often accompanies severe winter storms and can lead to hypothermia and frostbite in people without adequate clothing protection. Cold can cause fuel to congeal in storage tanks and supply lines, stopping electric generators. Cold temperatures can also overpower a building's heating system and cause water and sewer pipes to freeze and rupture. Extreme cold also increases the likelihood for ice jams on flat rivers or streams. When combined with high winds from winter storms, extreme cold becomes extreme wind chill, which is hazardous to health and safety.

The National Institute on Aging estimates that more than 2.5 million Americans are elderly and especially vulnerable to hypothermia, with the isolated elders being most at risk. About 10 percent of people over the age of 65 have some kind of bodily temperature-regulating defect, and 3-4 percent of all hospital patients over 65 are hypothermic.

Also at risk, are those without shelter, those who are stranded, or who live in a home that is poorly insulated or without heat. Other impacts of extreme cold include asphyxiation (unconsciousness or death from a lack of oxygen) from toxic fumes from emergency heaters; household fires, which can be caused by fireplaces and emergency heaters; and frozen/burst pipes.

Geographic Location

Location within the county is not a factor when facing an extreme temperature event. Rather, they are area wide events. The entire planning area is subject to extreme temperatures and the risk of this hazard does not vary across jurisdictions.

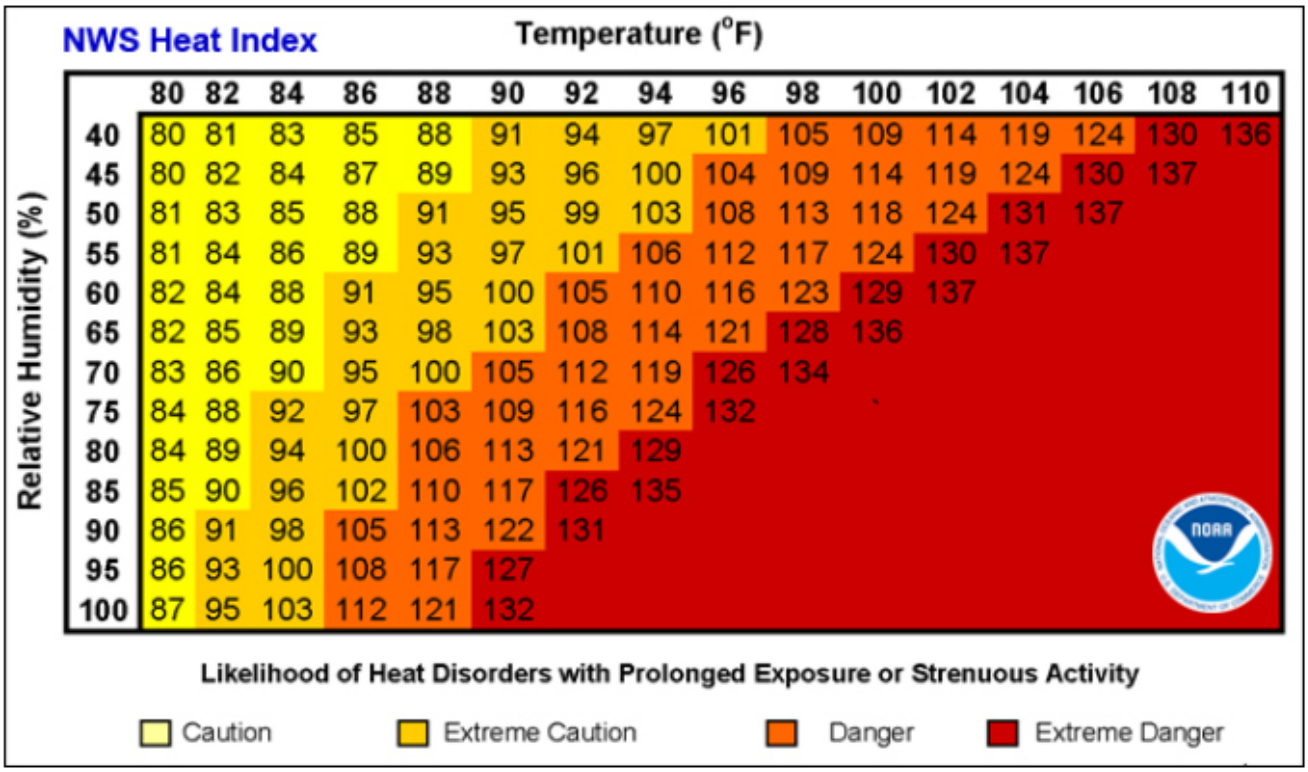
However, there are additional factors to consider when there is an extreme heat event. Specific climatic factors, such as temperature and humidity, along with wind and sun/shade determine the effects of this hazard. An individual's physical condition has a profound effect on their ability to deal with the effects of excessive heat. Illness or heavy exercise adds to the metabolic heat that the body must dissipate. Age is also a contributing factor. The accessibility of air-conditioned shelters is important to those falling into at-risk groups.

Strength/Magnitude/Extent

The National Weather Service (NWS) has an alert system in place (advisories or warnings) when the Heat Index is expected to have a significant impact on public safety. The expected severity of the heat determines whether advisories or warnings are issued. A common guideline for issuing excessive heat alerts is when for two or more consecutive days: (1) when the maximum daytime Heat Index is expected to equal or exceed 105 degrees Fahrenheit (°F); and the nighttime minimum Heat Index is 80°F or above. A heat advisory is issued when temperatures reach 105 degrees, and a

warning is issued at 115 degrees.

Figure 3.32. Heat Index (HI) Chart



Source: National Weather Service (NWS); https://www.weather.gov/safety/heat-index
Note: Exposure to direct sun can increase Heat Index values by as much as 15°F. The shaded zone above 105°F corresponds to a HI that may cause increasingly severe heat disorders with continued exposure and/or physical activity.

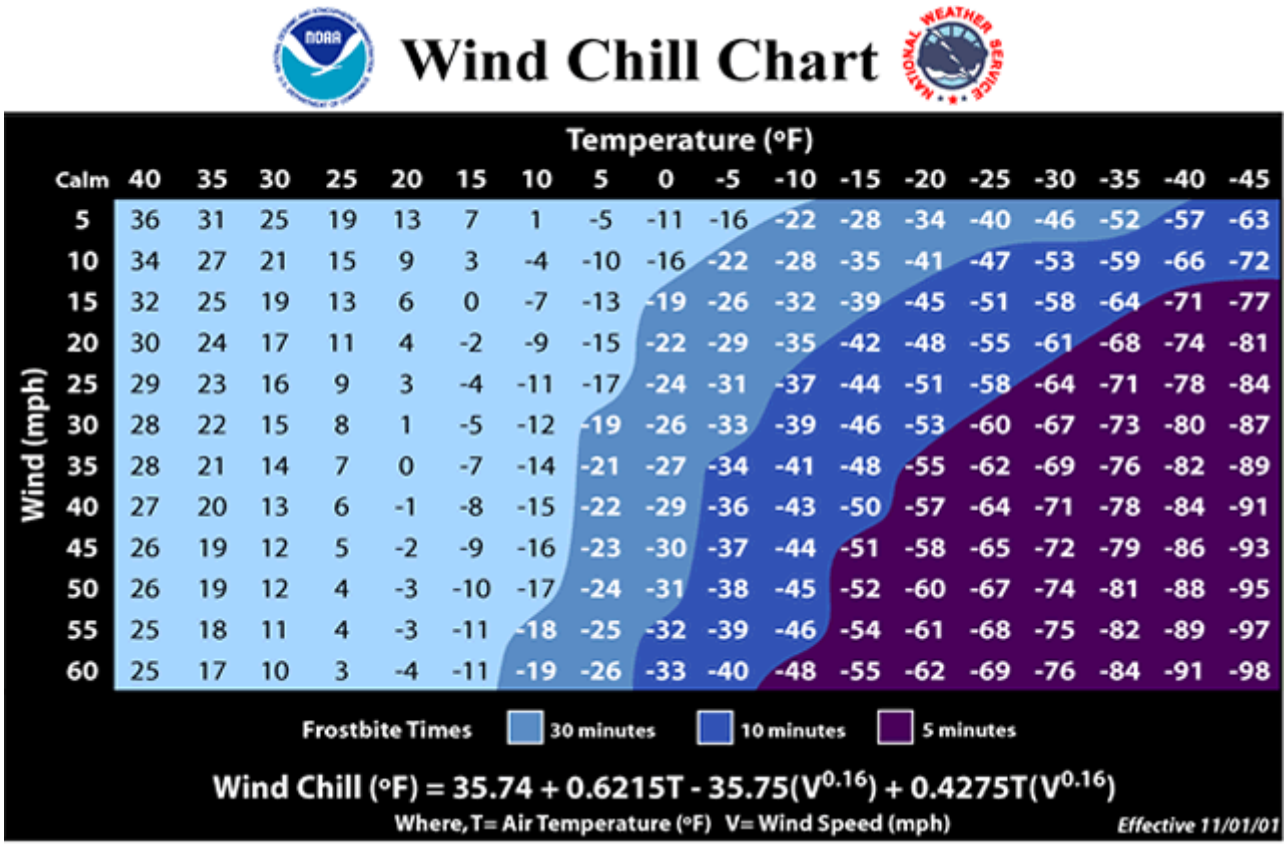
The NWS Wind Chill Temperature (WCT) index uses advances in science, technology, and computer modeling to provide an accurate, understandable, and useful formula for calculating the dangers from winter winds and freezing temperatures. The figure below presents wind chill temperatures which are based on the rate of heat loss from exposed skin caused by wind and cold. As the wind increases, it draws heat from the body, driving down skin temperature and eventually the internal body temperature.

The National Weather Service issues the following wind chill products as conditions warrant across the State of Missouri. NWS local offices in Missouri may collaborate with local partners to determine when an alert should be issued for a local area. The planning area is vulnerable to all of these warnings if the temperature drops low enough.

- Wind Chill Warning: NWS issues a wind chill warning when dangerously cold wind chill values are expected or occurring. If you are in an area with a wind chill warning, avoid going outside during the coldest parts of the day. If you do go outside, dress in layers, cover exposed skin, and make sure at least one other person knows your whereabouts. Update them when you arrive safely at your destination.
- Wind Chill Watch: NWS issues a wind chill watch when dangerously cold wind chill values are possible. As with a warning, adjust your plans to avoid being outside during the coldest parts of the day. Make sure your car has at least a half a tank of gas and update your winter survival kit.
- Wind Chill Advisory: NWS issues a wind chill advisory when seasonably cold wind chill values, but not extremely cold values are expected or occurring. Be sure you and your loved ones dress appropriately and cover exposed skin when venturing outdoors.

- Hard Freeze Warning: NWS issues a hard freeze warning when temperatures are expected to drop below 28°F for an extended period of time, killing most types of commercial crops and residential plants.
- Freeze Warning: When temperatures are forecasted to go below 32°F for a long period of time, NWS issues a freeze warning. This temperature threshold kills some types of commercial crops and residential plants.
- Freeze Watch: NWS issues a freeze watch when there is a potential for significant, widespread freezing temperatures within the next 24-36 hours. A freeze watch is issued in the autumn until the end of the growing season and in the spring at the start of the growing season.
- Frost Advisory: A frost advisory means areas of frost are expected or occurring, posing a threat to sensitive vegetation.

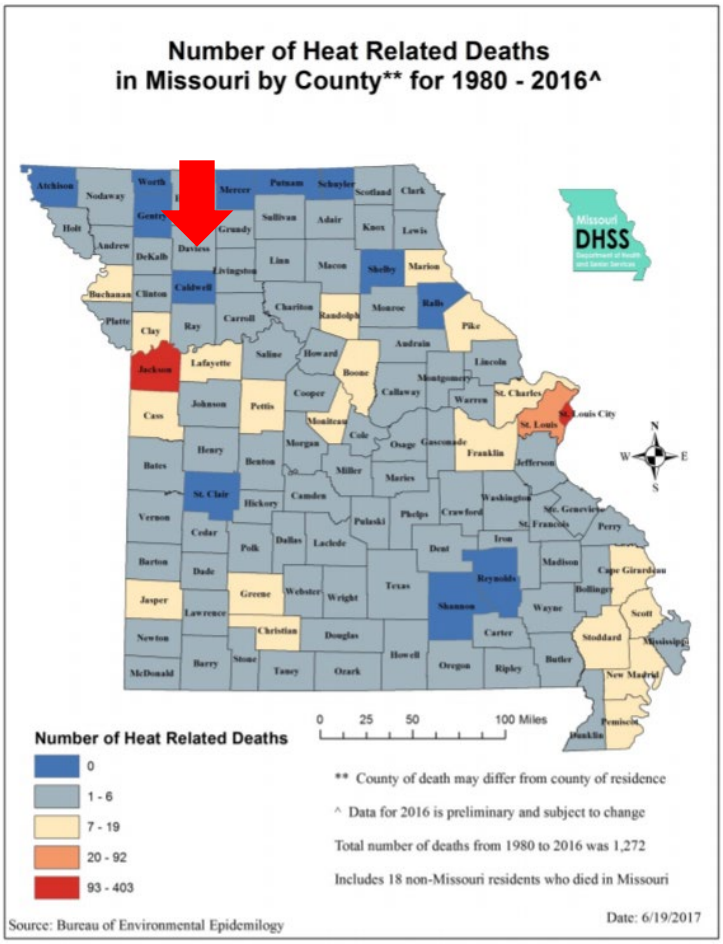
Figure 3.33. Wind Chill Chart



Source: https://www.weather.gov/safety/cold-wind-chill-chart

Previous Occurrences

Figure 3.34. Heat Related Deaths in Missouri 2000 - 2016



Source: https://health.mo.gov/living/healthcondiseases/hyperthermia/pdf/stat-report.pdf

Extreme heat can cause stress to crops and animals. According to USDA Risk Management Agency, losses to insurable crops during the 11-year period from 2013 to 2024 were $. Extreme heat can also strain electricity delivery infrastructure overloaded during peak use of air conditioning during extreme heat events. Another type of infrastructure damage from extreme heat is road damage. When asphalt is exposed to prolonged extreme heat, it can cause buckling of asphalt-paved roads, driveways, and parking lots.

From 1988-2011, there were 3,496 fatalities in the U.S. attributed to summer heat. This translates to an annual national average of 146 deaths. During the same period, __ deaths were recorded in the planning area, according to NCEI data. The National Weather Service stated that among natural hazards, no other natural disaster—not lightning, hurricanes, tornadoes, floods, or earthquakes—causes more deaths.

Figure 3.35. NCEI Daviess County Crop Loss Due to Extreme Cold/Freeze 2013-2024

CROP YEAR	CROP LOSS	CAUSE OF LOSS	INSURANCE PAID ($)
2013	- No Claims -		
2014	Wheat	Extreme Cold/Freeze	**$95,200.44**
2015	Wheat	Extreme Cold/Freeze	**$11,620.00**
2016	Soybeans	Extreme Cold/Freeze	**$14,717.00**

2017	- No Claims -		
2018	Wheat	Extreme Cold/Freeze	**$2,317.59**
2019	Wheat	Extreme Cold/Freeze	**$5,207.00**
2020	- No Claims -		
2021	Wheat	Extreme Cold/Freeze	**$13,938.00**
2022	- No Claims -		
2023	- No Claims -		
2024	Soybeans	Extreme Cole/Freeze	**$7,982.00**
Total			**$150,982.03**

Figure 3.36. NCEI Daviess County Crop Loss Due to Heat, Extreme Heat, or Hot Wind 2013-2024

CROP YEAR	CROP LOSS	CAUSE OF LOSS	INSURANCE PAID ($)
2013	Corn	Heat or Extreme Heat or Hot Wind	**$44,145.50**
	Soybeans		**$23,119.50**
2014	- No Claims -		
2015	- No Claims -		
2016	- No Claims -		
2017	- No Claims -		
2018	- No Claims -		
2019	- No Claims -		
2020	- No Claims -		
2021	Corn	Heat or Extreme Heat or Hot Wind	**$1,823.00**
2022	Soybeans	Heat or Extreme Heat or Hot Wind	**$9,660.30**
2023	- No Claims -		
2024	Corn	Heat or Extreme Heat or Hot Wind	**$1,472.00**
	Soybeans		**$7,377.00**
Total			**$87,597.30**

Extreme Cold and Heat-Related Event Narratives

According to the National Centers for Environmental Information (NCEI) Storm Events database, from 2013 to 2024, there have been 5 recorded events related to extreme cold and 7 recorded events related to extreme heat. The event narratives indicating significant impacts in Daviess County are summarized below.

Extreme Cold Events:

- January 6, 2014: A polar plunge of arctic air slammed into Kansas, bringing wind chill values to around 30 degrees below zero for the morning of January 6.
- February 14, 2021: In the first night of bitter cold across the area, temperatures dropped well below zero and with winds around 10-20 mph wind chills overnight going into Sunday morning dropped to around 20 to 30 below.
- February 15, 2021: In the second night of bitter cold across the area, temperatures dropped well below zero and with winds around 10-20 mph wind chills overnight going into Monday morning dropped to around 20 to 30 below.
- February 16, 2021: In the third night of bitter cold across the area, temperatures dropped well below zero and with winds around 10-20 mph wind chills overnight going into Sunday morning dropped to around 20 to 30 below.
- December 22, 2022: An arctic air mass sent temperatures below zero along with strong winds. Minimum wind chills across the region ranged from -30 to -40 degrees between roughly 10 am on 12/22 to noon on 12/23.

Extreme Heat Events:

- July 21, 2005: Oppressive heat and humidity prevailed across the area from July 21st to July 25th. Afternoon heat indices reached from 105 to 110 degrees. Kansas City International heat index reached 114 degrees on July 22nd and St. Joseph topped out at 113 degrees on July 22nd.
- July 16, 2006: Oppressive heat and humidity combined to produce afternoon and early evening heat indices from 105 to 115 degrees, from July 16th through July 20th. The highest computed heat index reached 121 degrees at Amity Missouri. Three males and one female died of heat related causes in Jackson County.
- July 29, 2006: Oppressive heat and humidity combined to produce heat indices from 105 to 115 degrees, from July 29th through July 31st.
- August 1, 2006: Oppressive heat and humidity continued from July...with heat indices from 105 to 115 degrees before ending on August 2nd. Two males aged 58 and 62 died due to the heat.
- August 6, 2007: An upper-level ridge of high pressure, persisted across the area from August 6th through August 17th. The combination of heat and humidity produced heat index readings in the 105 to 115-degree range.
- July 18, 2012: An unusually strong upper-level ridge of high pressure, dominated the central United States with very hot and dry conditions, from July 18th through 25th 2012. Temperatures topped out from 100 to 110 degrees.
- August 19, 2023: Max heat indices during the afternoons of August 19th through August 25th, 2023, primarily ranged from the 110 to 120-degree range.

Probability of Future Occurrence

NCEI, dating from 2004 to April of 2025, indicates a total of 7 events related to extreme heat and 5 events related to extreme cold. Based on this historical data, the calculated probability of an event is as follows:

Probability of an Extreme Heat Event:

$$\boldsymbol{Probability = \frac{\#\ of\ events}{Years} = \frac{7}{20} = 35\%}$$

Daviess County has a 35% chance of experiencing an extreme heat event in any given year.

Probability of an Extreme Cold Event:

$$\boldsymbol{Probability = \frac{\#\ of\ events}{Years} = \frac{5}{20} = 25\%}$$

Daviess County has a 25% chance of experiencing an extreme cold event in any given year.

Changing Future Conditions Considerations

By the end of the century, the temperatures are projected to continue to increase. The best-case scenario, with lower greenhouse gas emissions, temperatures are expected to exceed historic levels by the middle of the 21st century. If greenhouse gas emissions are not curbed, historically unprecedented warming is projected by the end of the century. Due to the change in climate, it is projected that by the middle of the 21st century, record breaking heat is likely to occur on a regular basis. This will lead to a higher frequency of heat waves.

The impacts of extreme temperatures are experienced more acutely by the elderly and other

vulnerable populations. High temperatures are often higher in urban areas, of which Daviess County has none. There is a higher demand for electricity as people try and keep cool. This increased demand adds a strain to electricity providers and could potentially lead to an increase in the number of power outages.

Additionally, air quality and water quality can be adversely affected by an increase in temperatures. Chariton County is mostly agricultural, and the strain placed on crops and livestock could increase along with the temperature.

Vulnerability

Vulnerability Overview

Those at greatest risk for heat-related illness include infants and children up to five years of age, people 65 years of age and older, people who are overweight, and people who are ill or on certain medications. However, even young and healthy individuals are susceptible if they participate in strenuous physical activities during hot weather. In agricultural areas, the exposure of farm workers, as well as livestock, to extreme temperatures is a major concern.

The following table lists typical symptoms and health impacts due to exposure to extreme heat.

Table 3.40. Typical Health Impacts of Extreme Heat

Heat Index (HI)	Disorder
80-90° F (HI)	Fatigue possible with prolonged exposure and/or physical activity
90-105° F (HI)	Sunstroke, heat cramps, and heat exhaustion possible with prolonged exposure and/or physical activity
105-130° F (HI)	Heatstroke/sunstroke highly likely with continued exposure

Source: National Weather Service Heat Index Program, www.weather.gov/os/heat/index.shtml

The National Institute on Aging estimates that more than 49 million Americans over the age of 65 are particularly vulnerable to hypothermia, with isolated elders being most at risk. For an older person, a body temperature of 95° or lower can cause many health problems, such as heart attack, kidney problems, liver damage or worse.

Also at risk are those without shelter, those who are stranded, and those who live in a home that is poorly insulated or without heat. Other impacts of extreme cold include asphyxiation (unconsciousness or death from a lack of oxygen) from toxic fumes from emergency heaters; household fires, which can be caused by fireplaces and emergency heaters; and frozen/burst pipes.

Extreme heat and extreme cold events are common occurrences in Missouri. The method used to determine vulnerability to extreme temperatures across Missouri was statistical analysis of data from several sources: National Centers for Environmental Information (NCEI) storm events data (1996 to December 31, 2021), total population and percentage of population over 65 data from the U.S. Census (2019), and the calculated Social Vulnerability Index for Missouri counties from the Hazards and Vulnerability Research Institute in the Department of Geography at the University of South Carolina.

From the statistical data collected, four factors were considered in determining overall vulnerability to extreme temperatures as follows: total population, percentage of population over 65, likelihood of occurrence, and social vulnerability. Based on natural breaks in the statistical data, a rating value of 1 through 5 was assigned to each factor. Once the individual ratings were determined for the above factors, a combined vulnerability rating was computed for extreme heat and extreme cold. These rating values correspond to the following descriptive terms:

1) Low

2) Medium-Low
3) Medium
4) Medium-High
5) High

Table 3.41. Likelihood of Occurrence and Overall Vulnerability Rating for Extreme Temperatures

Heat					Cold				
Total Events	Likelihood of Occurrence	Likelihood Rating	Total Vulnerability	Total Vulnerability Description	Total Events	Likelihood of Occurrence	Likelihood Rating	Total Vulnerability	Total Vulnerability Description
15	0.58	1	8	Low Medium	6	0.24	2	9	Medium

Source: 2023 Missouri State Hazard Mitigation Plan

Potential Losses to Existing Development

During extreme heat events structural, road, and electrical infrastructure are vulnerable to damages. Depending upon temperatures and the duration of extreme temperature losses will vary.

In the years from 2013-2024 Daviess County suffered a total of $238,579.33 in crop losses due to extreme temperatures. This would equal approximately $21,689.03 in claims for crop loss each year in Daviess County.

Impact of Previous and Future Development

Population growth can result in increases in the age groups that are most vulnerable to extreme heat. Population growth also increases the strain on electricity infrastructure, as more electricity is needed to accommodate the growing population.

Include discussion of any jurisdictions in a growth mode.

Hazard Summary by Jurisdiction

There is no variation in vulnerability due to location or jurisdiction within the planning area. Rather those at greatest risk for heat-related illnesses and deaths include children up to five years of age, people 65 years of age and older, people who are overweight, and people who are ill or on certain medications. To determine jurisdictions within the planning area with populations more vulnerable to extreme heat, demographic data was obtained from the 2010 census on population percentages in each jurisdiction comprised of those under age 5 and over age 65. Data was not available for overweight individuals and those on medications vulnerable to extreme heat. The table below summarizes vulnerable populations in the participating jurisdictions. Note that school and special districts are not included in the table because students and those working for the special districts are not customarily in these age groups.

Table 3.42. Daviess County Population Under Age 5 and Over Age 65, 2023 Census Data

Jurisdiction	Population Under 5	% Population Under 5	Population 65 and over	% Population 65 and over
Daviess County	585	6.9%	1724	20.5%
City of Altamont	7	4.1%	32	18.7%
City of Coffey	10	6.6%	29	19.2%
City of Gallatin	149	8.2%	372	20.4%
Village of Jameson	0	0%	19	26.0%
City of Jamesport	45	8.1%	94	16.8%
Village of Lock Springs	4	10.0%	6	15.0%
City of Pattonsburg	28	8.9%	59	18.8%
Village of Winston	16	7.0%	37	16.2%

Source: U.S. Census Bureau, Profile of General Population and Housing Characteristics (DP1)

Problem Statement

Extreme heat could lead to increased use of water increasing stress on the public water supply systems, as well as increasing the risk to the health of residents who lack proper cooling systems. Heat will also increase demand for electricity and could lead to possible power outages. Extreme cold will cause schools to alter class times and in some cases suspend classes all together, cold temperatures may also lead to frozen pipes and increases in electric demand.

3.4.6 Severe Thunderstorms Including High Winds, Hail, and Lightning

Hazard Profile

Hazard Description

Thunderstorms

A thunderstorm is defined as a storm that contains lightning and thunder which is caused by unstable atmospheric conditions. When cold upper air sinks and warm moist air rises, storm clouds or 'thunderheads' develop resulting in thunderstorms. This can occur singularly, as well as in clusters or lines. The National Weather Service defines a thunderstorm as "severe" if it includes hail that is one inch or more, or wind gusts that are at 58 miles per hour or higher. At any given moment across the world, there are about 1,800 thunderstorms occurring. Severe thunderstorms most often occur in Missouri in the spring and summer, during the afternoon and evenings, but can occur at any time. Other hazards associated with thunderstorms are heavy rains resulting in flooding (discussed separately in **Section 3.41**) and tornadoes (discussed separately in **Section 3.48**).

High Winds

A severe thunderstorm can produce winds causing as much damage as a weak tornado. The damaging winds of thunderstorms include downbursts, microbursts, and straight-line winds. Downbursts are localized currents of air blasting down from a thunderstorm, which induce an outward burst of damaging wind on or near the ground. Microbursts are minimized downbursts covering an area of less than 2.5 miles across. They include a strong wind shear (a rapid change in the direction of wind over a short distance) near the surface. Microbursts may or may not include precipitation and can produce winds at speeds of more than 150 miles per hour. Damaging straight-line winds are high winds across a wide area that can reach speeds of 140 miles per hour.

Lightning

All thunderstorms produce lightning which can strike outside of the area where it is raining and is has been known to fall more than 10 miles away from the rainfall area. Thunder is simply the sound that lightning makes. Lightning is a huge discharge of electricity that shoots through the air causing vibrations and creating the sound of thunder.

Hail

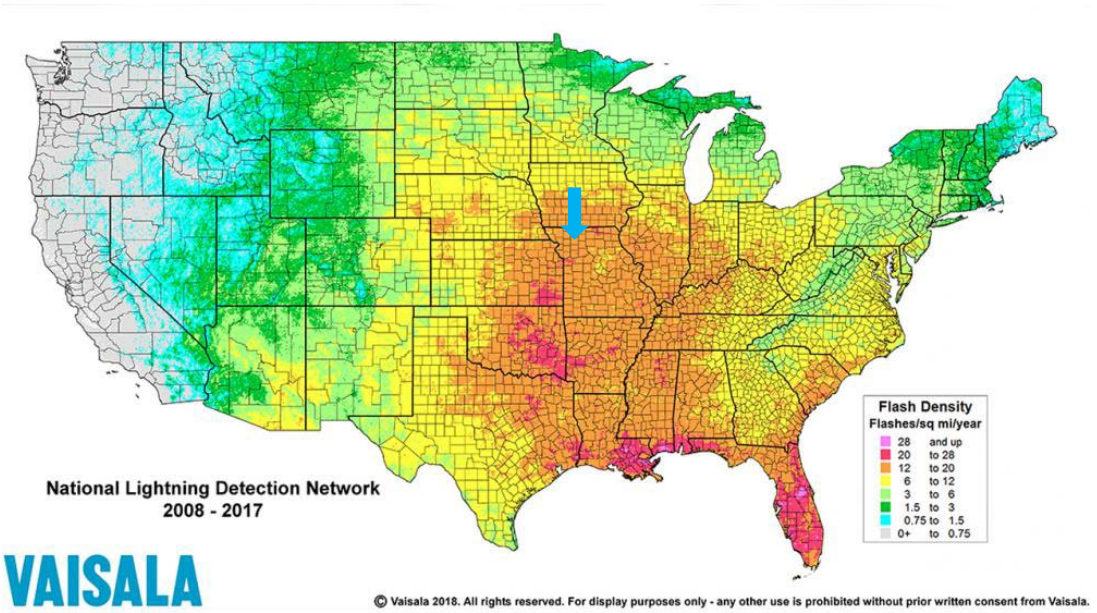
According to the National Oceanic and Atmospheric Administration (NOAA), hail is precipitation that is formed when thunderstorm updrafts carry raindrops upward into extremely cold atmosphere causing them to freeze. The raindrops form into small frozen droplets. They continue to grow as they come into contact with super-cooled water which will freeze on contact with the frozen rain droplet. This frozen droplet can continue to grow and form hail. As long as the updraft forces can support or suspend the weight of the hailstone, hail can continue to grow before it hits the earth.

At the time when the updraft can no longer support the hailstone, it will fall down to the earth. For example, a ¼" diameter or pea sized hail requires updrafts of 24 miles per hour, while a 2 ¾" diameter or baseball sized hail requires an updraft of 81 miles per hour. According to the NOAA, the largest hailstone in diameter recorded in the United States was found in Vivian, South Dakota on July 23, 2010. It was eight inches in diameter, almost the size of a soccer ball. Soccer-ball-sized hail is the exception, but even small pea-sized hail can do damage.

Geographic Location

Thunderstorms/high winds/hail/lightning events are an area-wide hazard that can happen anywhere in the county. Although these events occur similarly throughout the planning area, they are more frequently reported in more urbanized areas. In addition, damages are more likely to occur in more densely developed urban areas. The majority of Daviess County is rural. According to the following table, the flash density of lightning in Daviess County is categorized as 12 to 20 flashes/square mile/year.

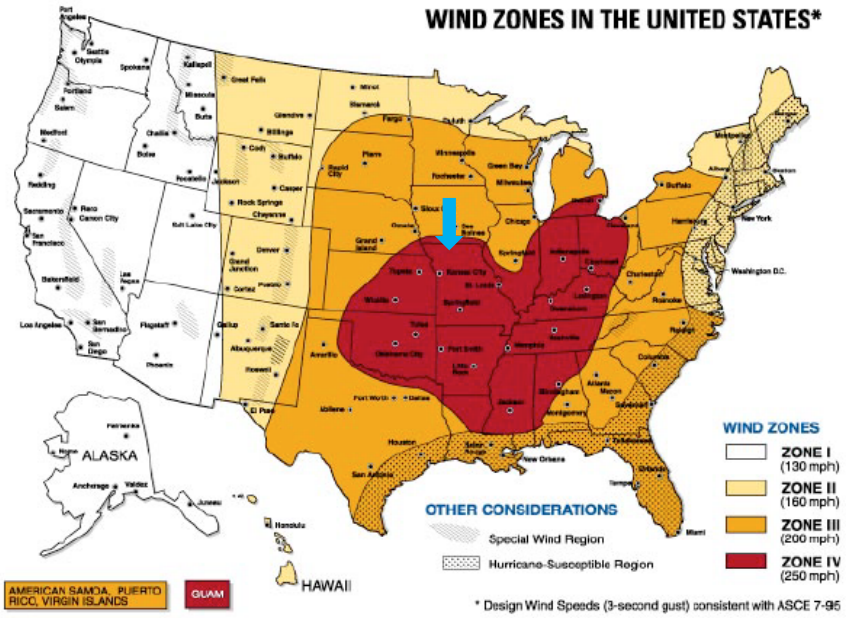
Figure 3.37. Location and Frequency of Lightning in Missouri



Source: National Weather Service, http://www.vaisala.com/en/products/thunderstormandlightningdetectionsystems/Pages/NLDN.aspx . Note: indicate location of planning area with a colored square or arrow.

Daviess County, indicated with an arrow in the following figure, is entirely within Zone 4. This information indicates that Daviess County could sustain wind speeds of up to 250 miles per hour.

Figure 3.38. Wind Zones in the United States



Source: FEMA 320, Taking Shelter from the Storm, 3rd edition, https://www.fema.gov/pdf/library/ism2_s1.pdf

Strength/Magnitude/Extent

Based on information provided by the Tornado and Storm Research Organization (TORRO), the Table below describes typical damage impacts of the various sizes of hail.

Table 3.43. Tornado and Storm Research Organization Hailstorm Intensity Scale

Intensity Category	Diameter (mm)	Diameter (inches)	Size Description	Typical Damage Impacts
Hard Hail	5-9	0.2-0.4	Pea	No damage
Potentially Damaging	10-15	0.4-0.6	Mothball	Slight general damage to plants, crops
Significant	16-20	0.6-0.8	Marble, grape	Significant damage to fruit, crops, vegetation
Severe	21-30	0.8-1.2	Walnut	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
Severe	31-40	1.2-1.6	Pigeon's egg > squash ball	Widespread glass damage, vehicle bodywork damage
Destructive	41-50	1.6-2.0	Golf ball > Pullet's egg	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
Destructive	51-60	2.0-2.4	Hen's egg	Bodywork of grounded aircraft dented, brick walls pitted
Destructive	61-75	2.4-3.0	Tennis ball > cricket ball	Severe roof damage, risk of serious injuries
Destructive	76-90	3.0-3.5	Large orange > Soft ball	Severe damage to aircraft bodywork
Super Hailstorms	91-100	3.6-3.9	Grapefruit	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
Super Hailstorms	>100	4.0+	Melon	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

Source: Tornado and Storm Research Organization (TORRO), Department of Geography, Oxford Brookes University
Notes: In addition to hail diameter, factors including number and density of hailstones, hail fall speed and surface wind speeds affect severity. http://www.torro.org.uk/site/hscale.php

Straight-line winds are defined as any thunderstorm wind that is not associated with rotation (i.e., is

not a tornado). It is these winds, which can exceed 100 miles per hour, which represent the most common type of severe weather. They are responsible for most wind damage related to thunderstorms. Since thunderstorms do not have narrow tracks like tornadoes, the associated wind damage can be extensive and affect entire (and multiple) counties. Objects like trees, barns, outbuildings, high-profile vehicles, and power lines/poles can be toppled or destroyed, and roofs, windows, and homes can be damaged as wind speeds increase.

The onset of thunderstorms with lightning, high wind, and hail is generally rapid. Duration is less than six hours and warning time is generally six to twelve hours. Nationwide, lightning kills 75 to 100 people each year. Lightning strikes can also start structural and wildland fires, as well as damage electrical systems and equipment.

Previous Occurrences

Limitations to the use of NCEI reported lightning events include the fact that only lightning events that result in fatality, injury and/or property and crop damage are in the NCEI.

The tables below (**Table 3.455 through Table 3.488**) summarize past crop damages as indicated by crop insurance claims. The tables illustrate the magnitude of the impact on the planning area's agricultural economy.

Table 3.44. Crop Insurance Claims Paid in Daviess County from Thunderstorms, (2013-2024)

Crop Year	Crop Name	Cause of Loss Description	Insurance Paid
2013	No Claims		
2014	No Claims		
2015	No Claims		
2016	No Claims		
2017	No Claims		
2018	No Claims		
2019	No Claims		
2020	No Claims		
2021	No Claims		
2022	No Claims		
2023	No Claims		
2024	No Claims		
Total			**$0**

Source: USDA Risk Management Agency, Insurance Claims, https://www.rma.usda.gov/data/cause

Table 3.45. Crop Insurance Claims Paid in Daviess County from High Winds, (2013-2024)

Crop Year	Crop Name	Cause of Loss Description	Insurance Paid
2013	No Claims		
2014	No Claims		
2015	No Claims		
2016	No Claims		
2017	No Claims		
2018	No Claims		
2019	No Claims		
2020	No Claims		
2021	Corn	Wind/Excess Wind	$16,444

2022	No Claims
2023	No Claims
2024	No Claims
Total	**$16,444**

Source: USDA Risk Management Agency, Insurance Claims, https://www.rma.usda.gov/data/cause

Table 3.46. Crop Insurance Claims Paid in Daviess County from Lightning, (2013-2024)

Crop Year	Crop Name	Cause of Loss Description	Insurance Paid
2013	No Claims		
2014	Wheat	Lightning	$1,986
2015	Soybeans	Lightning	$306
2016	No Claims		
2017	No Claims		
2018	No Claims		
2019	No Claims		
2020	No Claims		
2021	Corn	Lightning	-$31,349
2022	No Claims		
2023	No Claims		
2024	No Claims		
Total			**-$29,057**

USDA Risk Management Agency, Insurance Claims, https://www.rma.usda.gov/data/cause

Table 3.47. Crop Insurance Claims Paid in Daviess County from Hail, (2013-2024)

Crop Year	Crop Name	Cause of Loss Description	Insurance Paid
2013	No Claims		
2014	Wheat	Hail	$31,781.44
2015	Corn	Hail	$3,350
	Soybeans		$753
2016	No Claims		
2017	Corn	Hail	$6,051
2018	No Claims		
2019	No Claims		
2020	Corn	Hail	$42,332
	Soybeans		$1,576
2021	No Claims		
2022	No Claims		
2023	No Claims		
2024	No Claims		
Total			**$85,843.44**

USDA Risk Management Agency, Insurance Claims, https://www.rma.usda.gov/data/cause

The following table includes NCEI reported events and damages for the past 20 years for all four included hazards when information is available. (2004 through April 30, 2025)

Table 3.48. NCEI Reported Thunderstorm Events and Damages in Daviess County (2004-2024)

Date	Event Type	Magnitude	Deaths/Injuries	Property Damage	Crop Damage
5/23/2004	Thunderstorm Wind	52	0	0	0
5/24/2004	Hail	0.75	0	0	0

5/27/2004	Hail	2.75	0	5000	0
6/12/2004	Hail	1.75	0	0	0
6/12/2004	Thunderstorm Wind	65	0	0	0
6/13/2004	Thunderstorm Wind	52	0	0	0
7/13/2004	Hail	0.88	0	0	0
10/29/2004	Thunderstorm Wind	57	0	0	0
10/29/2004	Hail	0.75	0	0	0
10/29/2004	Thunderstorm Wind	57	0	0	0
5/11/2005	Hail	2.75	0	0	0
5/11/2005	Hail	2.5	0	0	0
5/11/2005	Hail	0.88	0	0	0
5/11/2005	Hail	1.75	0	0	0
5/11/2005	Hail	1	0	0	0
6/4/2005	Hail	1.25	0	0	0
8/28/2005	Hail	1	0	0	0
11/27/2005	Hail	0.75	0	0	0
3/12/2006	Thunderstorm Wind	52	0	1000	0
3/12/2006	Thunderstorm Wind	52	0	1000	0
3/12/2006	Thunderstorm Wind	52	0	2000	0
3/12/2006	Hail	1.5	0	0	0
3/12/2006	Hail	2.5	0	50000	0
3/12/2006	Hail	1.75	0	0	0
3/12/2006	Hail	0.88	0	0	0
3/12/2006	Hail	1	0	0	0
3/12/2006	Hail	1.75	0	0	0
3/12/2006	Hail	0.88	0	0	0
4/18/2006	Hail	0.75	0	0	0
4/18/2006	Hail	1	0	0	0
4/18/2006	Hail	1.25	0	0	0
4/18/2006	Hail	1.5	0	0	0
4/18/2006	Hail	1.5	0	0	0
4/18/2006	Hail	2	0	0	0
6/10/2006	Hail	0.75	0	0	0
6/11/2006	Hail	1.75	0	0	0
7/13/2006	Thunderstorm Wind	61	0	0	0
7/13/2006	Thunderstorm Wind	61	0	0	0
8/6/2006	Thunderstorm Wind	52	0	0	0
11/10/2006	Lightning		0	5000	0
7/14/2007	Hail	1	0	0	0
8/8/2007	Thunderstorm Wind	66	0	0	0
8/12/2007	Thunderstorm Wind	52	0	0	0
11/12/2007	Hail	0.75	0	0	0
4/10/2008	Thunderstorm Wind	50	0	1000	0
4/10/2008	Thunderstorm Wind	52	0	0	0
4/23/2008	Thunderstorm Wind	52	0	0	0
5/1/2008	Hail	1.25	0	0	0
5/1/2008	Hail	1.75	0	0	0

5/1/2008	Hail	1	0	0	0
5/1/2008	Hail	1.75	0	0	0
5/1/2008	Hail	0.88	0	0	0
6/5/2008	Thunderstorm Wind	52	0	0	0
6/15/2008	Hail	1.75	0	0	0
6/15/2008	Hail	2	0	0	0
8/28/2008	Thunderstorm Wind	52	0	0	0
3/6/2009	Hail	1	0	0	0
3/6/2009	Hail	1	0	0	0
3/6/2009	Hail	0.75	0	0	0
4/25/2009	Hail	0.75	0	0	0
4/25/2009	Hail	1	0	0	0
4/25/2009	Hail	0.75	0	0	0
5/7/2009	Hail	1	0	0	0
5/7/2009	Thunderstorm Wind	52	0	250	0
6/1/2009	Hail	1.25	0	0	0
6/1/2009	Hail	0.75	0	0	0
6/1/2009	Hail	1	0	0	0
6/7/2009	Hail	1	0	0	0
6/7/2009	Hail	2.75	1	10000	0
6/7/2009	Hail	4	0	500000	0
6/7/2009	Hail	1	0	0	0
6/7/2009	Hail	1.75	0	0	0
6/7/2009	Hail	1	0	0	0
6/7/2009	Hail	1.5	0	0	0
6/7/2009	Hail	1	0	0	0
6/7/2009	Thunderstorm Wind	52	0	0	0
6/7/2009	Thunderstorm Wind	61	0	10000	0
6/7/2009	Thunderstorm Wind	61	0	0	0
6/7/2009	Thunderstorm Wind	70	0	0	0
4/2/2010	Thunderstorm Wind	61	0	3000	0
4/2/2010	Thunderstorm Wind	52	0	45000	0
4/2/2010	Thunderstorm Wind	70	0	1000	0
4/2/2010	Thunderstorm Wind	52	0	10000	0
4/24/2010	Thunderstorm Wind	52	0	1000	0
4/30/2010	Hail	1	0	0	0
5/2/2010	Hail	0.88	0	0	0
5/7/2010	Hail	0.75	0	0	0
6/4/2010	Hail	0.88	0	0	0
6/4/2010	Hail	1.25	0	0	0
6/4/2010	Hail	2.75	0	0	0
6/4/2010	Hail	1	0	0	0
6/4/2010	Hail	1.25	0	0	0
6/18/2010	Hail	0.75	0	0	0
6/19/2010	Thunderstorm Wind	52	0	0	0
6/19/2010	Thunderstorm Wind	52	0	0	0
6/19/2010	Thunderstorm Wind	56	0	0	0

7/18/2010	Thunderstorm Wind	52	1	0	0
8/13/2010	Thunderstorm Wind	61	0	750	0
8/13/2010	Thunderstorm Wind	52	0	0	0
8/13/2010	Thunderstorm Wind	52	0	0	0
8/13/2010	Thunderstorm Wind	56	0	0	0
8/13/2010	Thunderstorm Wind	52	0	0	0
8/13/2010	Thunderstorm Wind	52	0	0	0
8/20/2010	Thunderstorm Wind	52	0	0	0
9/2/2010	Hail	1	0	0	0
10/23/2010	Hail	0.75	0	0	0
3/22/2011	Hail	0.88	0	0	0
3/22/2011	Hail	1	0	0	0
4/3/2011	Hail	1.75	0	0	0
5/21/2011	Hail	0.75	0	0	0
5/21/2011	Thunderstorm Wind	56	0	0	0
5/21/2011	Thunderstorm Wind	52	0	0	0
6/9/2011	Hail	1	0	0	0
6/9/2011	Hail	1	0	0	0
6/9/2011	Hail	1.75	0	0	0
6/9/2011	Hail	0.88	0	0	0
6/9/2011	Hail	1	0	0	0
6/9/2011	Hail	1.25	0	0	0
6/9/2011	Hail	2.5	0	0	0
6/9/2011	Hail	3	0	0	0
6/9/2011	Hail	2.75	0	0	0
6/9/2011	Hail	1.5	0	0	0
6/20/2011	Thunderstorm Wind	52	0	0	0
6/20/2011	Thunderstorm Wind	52	0	0	0
6/26/2011	Thunderstorm Wind	61	0	0	0
6/26/2011	Thunderstorm Wind	52	0	0	0
6/26/2011	Thunderstorm Wind	52	0	0	0
8/18/2011	Thunderstorm Wind	61	0	250	0
8/18/2011	Thunderstorm Wind	61	2	3000	0
8/18/2011	Thunderstorm Wind	61	0	7000	0
8/18/2011	Thunderstorm Wind	61	0	2000	0
2/28/2012	Thunderstorm Wind	61	0	10000	0
3/29/2012	Hail	1.5	0	0	0
3/29/2012	Hail	1	0	0	0
5/4/2012	Hail	1	0	0	0
7/7/2012	Thunderstorm Wind	61	0	0	0
7/7/2012	Thunderstorm Wind	61	0	0	0

8/8/2012	Hail	1.75	0	0	0
8/8/2012	Thunderstorm Wind	61	0	1000	0
8/8/2012	Thunderstorm Wind	61	0	8000	0
8/8/2012	Thunderstorm Wind	61	0	0	0
5/19/2013	Thunderstorm Wind	54	0	0	0
5/19/2013	Hail	1.5	0	0	0
5/19/2013	Thunderstorm Wind	52	0	0	0
5/19/2013	Thunderstorm Wind	61	0	6000	0
10/30/2013	Hail	1	0	0	0
10/30/2013	Hail	1.25	0	0	0
3/27/2014	Thunderstorm Wind	55	0	0	0
3/27/2014	Hail	0.75	0	0	0
4/27/2014	Hail	1	0	0	0
5/10/2014	Hail	1.5	0	0	0
5/10/2014	Hail	1.75	0	0	0
5/12/2014	Thunderstorm Wind	52	0	0	0
4/7/2015	Hail	0.75	0	0	0
5/16/2015	Thunderstorm Wind	52	0	0	0
5/16/2015	Thunderstorm Wind	52	0	0	0
5/17/2015	Thunderstorm Wind	52	0	0	0
6/11/2015	Thunderstorm Wind	52	0	0	0
6/11/2015	Thunderstorm Wind	52	0	0	0
6/21/2015	Hail	2	0	0	0
6/21/2015	Hail	0.88	0	0	0
6/21/2015	Hail	1	0	0	0
6/21/2015	Hail	1	0	0	0
7/24/2015	Thunderstorm Wind	52	0	0	0
7/24/2015	Hail	1	0	0	0
8/3/2015	Hail	1.5	0	0	0
11/11/2015	High Wind	52	0	0	0
3/23/2016	Hail	0.75	0	0	0
4/27/2016	Hail	2	0	0	0
7/7/2016	Thunderstorm Wind	56	0	0	0
3/6/2017	Thunderstorm Wind	61	0	0	0
5/17/2017	High Wind	61	0	0	0
6/28/2017	Hail	2.5	0	0	0
6/28/2017	Thunderstorm Wind	52	0	0	0
6/28/2017	Thunderstorm Wind	52	0	0	0
7/12/2017	Thunderstorm Wind	52	0	0	0
6/2/2018	Thunderstorm Wind	56	0	0	0
5/28/2019	Hail	1	0	0	0
6/15/2019	Hail	1.25	0	0	0

6/22/2019	Thunderstorm Wind	61	0	0	0
6/22/2019	Thunderstorm Wind	52	0	0	0
8/21/2019	Thunderstorm Wind	52	0	0	0
9/27/2019	Hail	1.25	0	0	0
9/27/2019	Hail	1	0	0	0
9/27/2019	Hail	1	0	0	0
9/27/2019	Hail	1	0	0	0
5/24/2020	Hail	1	0	0	0
5/24/2020	Thunderstorm Wind	52	0	0	0
5/24/2020	Thunderstorm Wind	52	0	0	0
5/24/2020	Hail	1	0	0	0
5/24/2020	Hail	1.5	0	0	0
5/24/2020	Hail	1.25	0	0	0
8/10/2020	Thunderstorm Wind	56	0	0	0
8/10/2020	Thunderstorm Wind	65	0	0	0
6/24/2021	Thunderstorm Wind	56	0	0	0
6/24/2021	Thunderstorm Wind	56	0	0	0
7/10/2021	Thunderstorm Wind	52	0	0	0
10/24/2021	Thunderstorm Wind	61	0	0	0
12/15/2021	High Wind	56	0	0	0
12/15/2021	Thunderstorm Wind	52	0	10000	0
3/5/2022	Hail	1	0	0	0
4/23/2022	Thunderstorm Wind	52	0	0	0
4/23/2022	Thunderstorm Wind	52	0	0	0
7/7/2022	Thunderstorm Wind	61	0	0	0
3/31/2023	Hail	1	0	0	0
3/31/2023	Hail	1	0	0	0
5/6/2023	Thunderstorm Wind	61	0	0	0
5/6/2023	Thunderstorm Wind	61	0	0	0
5/6/2023	Hail	2.75	0	0	0
5/6/2023	Hail	4	0	0	0
5/6/2023	Hail	4	0	0	0
6/17/2023	Hail	1.75	0	0	0
6/17/2023	Hail	1	0	0	0
6/30/2023	Thunderstorm Wind	52	0	0	0
7/29/2023	Thunderstorm Wind	52	0	0	0
7/29/2023	Thunderstorm Wind	61	0	0	0
5/24/2024	Hail	1.5	0	0	0
Total			**4**	**$693,250**	**$0**

Source: NCEI Storm Database (Magnitude if Thunderstorm/Wind reflects MPH, if Hail reflects size in inches)

Table 3.49. NCEI Thunderstorm Event Narratives for Daviess County (Where Available)

DATE	EVENT_NARRATIVE
5/27/2004	Also 2-inch diameter tree branches down.
10/29/2004	6-to-8-inch tree limbs down.
3/12/2006	Tree blown into trailer, power lines reported down along HWY 69
8/6/2006	4-to-6-inch tree limbs snapped off.
11/10/2006	Lightning struck a school in Winston. The lightning hit the computer lab. There was extensive damage to 7 computers, and the intercom system became inoperable as well. Damage was observed on the roof where the lightning struck. There were no students or teachers in the lab when the lightning hit.
11/12/2007	Penny-sized hail was reported and was starting to cover the ground.
4/10/2008	Powerlines and tree limbs were reported down.
5/7/2009	Large maple tree was blown down on a house.
6/7/2009	Grapefruit sized hail lasted 10 minutes, on the west shore of Lake Viking. One injury was reported from broken glass. Most homes suffered damage to roofs, windows, siding, and automobiles. Power lines were reported down, and an elementary school was damaged. A car was blown off HWY 6 by winds estimated at 80 MPH.
4/2/2010	Boats were reported to be blown over at Lake Viking. A chimney was reported collapsed and several roofs were blown off buildings. Thunderstorm winds were estimated to be up to 80 mph. Sheds were reported overturned, and a barn was blown down along Business HWY 6 and a two-foot diameter was uprooted.
4/24/2010	Thunderstorm winds estimated up to 60 mph, blew a vehicle off of I-35.
6/19/2010	Thunderstorm winds were estimated up to 65 mph.
7/18/2010	Thunderstorm wind gusts were estimated up to 60 mph.
8/13/2010	A tractor trailer was blown off of Interstate 35, near exit 61. The driver suffered minor injuries. Numerous trees were blown down, blocked portions of Highway 69 near Winston. Thunderstorm wind gusts were estimated to 70 mph. A large tree was reported down across Interstate 35, near mile marker 68 and a large tree was blocking HWY 69 between Pattonsburg and Winston.
8/20/2010	Thunderstorm wind gusts were estimated up to 60 mph.
5/21/2011	Thunderstorm wind gusts were estimated up to 65 mph. small tree limbs were broken.
6/20/2011	A tree was blown down, with thunderstorm wind gusts estimated up to 60 mph.
6/26/2011	Car was reported to have been blown off a road in old Pattonsburg. Thunderstorm wind gusts were estimated up to 70 mph. Highway 13 was reported to be blocked by a downed tree. Thunderstorm wind gusts were estimated up to 60 mph.
8/18/2011	A second story window was blown out of the house. Thunderstorm wind gusts were estimated up to 70 mph. Power poles were reported snapped off. A gas station awning was blown down. Two injuries were reported in a car underneath the fallen awning. Damage was reported to the roof. A 40-foot-tall radio tower was blown over.
2/28/2012	Two mobile homes were blown over, along with power lines down. Two people were trapped for a while, but were uninjured.
7/7/2012	Thunderstorm wind gusts were estimated up to 70 mph. Time was estimated by radar.
8/8/2012	A trailer was blown off its foundation and several trees were reported down as well. Thunderstorm wind gusts were estimated up to 70 mph. Numerous trees and power lines were reported down, along with several outbuildings, near Cord Avenue and 69 Highway. Thunderstorm wind gusts were estimated up to 70 mph.
5/19/2013	A roof was reported blown off a house. Thunderstorm wind gusts were estimated up to 70 mph.
3/27/2014	Power lines down and damage to a house.
5/12/2014	Small outbuildings were blown down. Some minor siding damage was reported from debris blown into a residence. And a small deer fence was blown down near Jamesport.
4/7/2015	This report was gained via social media.

5/16/2015	The emergency manager relayed a report from the public of winds in excess of 60 mph with power flickering. Tree limbs were blown down.
5/17/2015	Trees were blown down along Highway 6 near Highway CC, blocking the road.
6/11/2015	Fire rescue reported a 60-mph wind gust.
7/24/2015	Numerous tree limbs were blown down.
11/11/2015	A dry line punched through the area on the afternoon of November 11, bringing 50 to 60 mph synoptic straight-line winds. Local ASOS observations reported gusts near 60 mph across the area, but the winds also damaged, trees, power lines, and a few outbuildings. This dry line also created some thunderstorm activity, which caused some isolated convective wind damage.
4/27/2016	This report came via social media.
7/7/2016	A large tree of unknown size or condition was reported down near Gallatin.
3/6/2017	An Emergency Manager for Daviess County reported 70 mph wind near Jamesport.
5/17/2017	These winds were caused by sub-severe rain showers causing synoptically driven low level winds to the surface, resulting in numerous reports of 60-70 mph winds and isolated structural and minor tree damage. Utility poles were down and 6-to-8-inch trees were snapped in Gallatin from these strong winds.
6/28/2017	Fire departments in Coffey and Lock Springs reported 60 mph wind, concurrent with 2.5-inch hail.
7/12/2017	Several trees of unknown size and condition were knocked down near Gallatin.
6/2/2018	A large tree was down over Highway 6.
6/22/2019	Large trees down across HWY 1 near AA. Emergency management reported 60 mph wind.
8/21/2019	A 60-mph wind was reported by the public.
5/24/2020	Tree limbs and powerlines were down at Flint Road and HWY K. A trained spotter reported 60 MPH winds.
8/10/2020	Several trees were uprooted. Metal farm outbuildings were heavily damaged, and an aluminum grain trailer was blown over. A power pole and numerous trees were snapped near the intersection of Highway P and Highway 190 near Jamesport.
6/24/2021	Four power poles were down on Highway 69. A power line and tree down just north of Jameson near Kodiak and Highway 13.
7/10/2021	There were several reports of tree limbs down, some of which were around 8 inches.
10/24/2021	A few trees were uprooted in the Pattonsburg area.
12/15/2021	Through the afternoon on December 15th strong wind caused sustained winds in the 40 to 50 mph range, with frequent gusts well over 60 mph. While most ASOS and AWOS stations recorded gusts around 65 mph, there were several reports of higher winds and damage representative of around 70 mph, such as tree damage and powerlines down. This all preceded strong thunderstorms that also caused strong winds and scattered damage across the area. There was a report of a carport and a lean-to blown over in Coffey, Missouri.
4/23/2022	Powerlines were reported down from 60 mph wind in the area. A tree was down across Highway J, just south of Altamont.
7/7/2022	Emergency management reported power lines down near Altamont.
3/31/2023	A supercell produced 1 hail in Daviess County.
5/6/2023	Straight line winds of 60 to 70 mph were estimated south of Gilman City in association with the rear flank downdraft of a supercell thunderstorm. Baseball sized hail was reported in Pattonsburg. Softball sized hail was reported about 3 miles south southwest of Coffey. Softball sized hail was reported about 3 miles south of Coffey along Missouri Route 13.
6/17/2023	Golf ball sized hail was reported in Old Pattonsburg. Quarter sized hail was reported in Pattonsburg.
6/30/2023	Estimated 60 mph winds north of Altamont on the south side of Lake Viking.
7/29/2023	Estimated 60 mph winds in Pattonsburg. Estimated 70 mph wind in Gallatin.
5/24/2024	Reports of golf ball sized hail in Jamesport.

Source: NCEI Storm Database

Probability of Future Occurrence

Probability of Thunderstorm

$$Probability = \frac{\#\ of\ events}{Years} = \frac{93}{21} = 4.43$$

According to the above calculation, the planning area of Daviess County should experience an average of 4.43 Thunderstorms annually.

Probability of Thunderstorm with High or Excessive Winds

$$Probability = \frac{\#\ of\ events}{Years} = \frac{31}{21} = 1.48$$

According to the above calculation, the planning area of Daviess County should experience a thunderstorm accompanied by high or excessive winds (60 mph or greater) approximately 1.48 times annually.

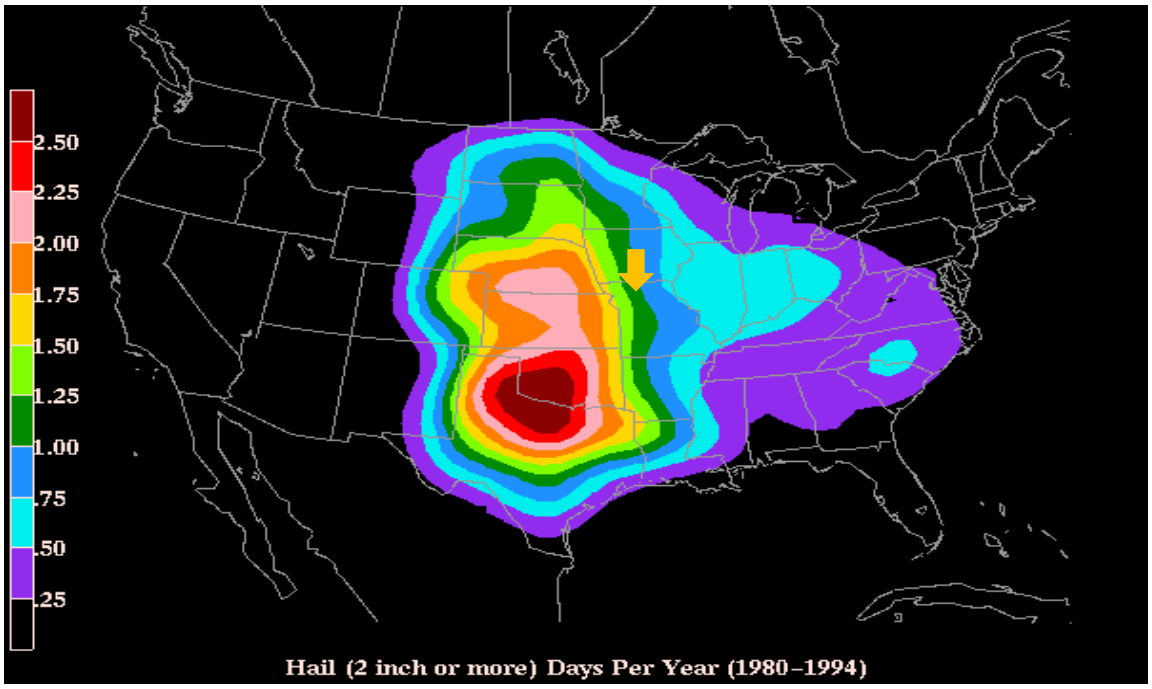
Probability of Thunderstorm with Hail

$$Probability = \frac{\#\ of\ events}{Years} = \frac{120}{21} = 5.71$$

According to the above calculation, the planning area of Daviess County should experience a thunderstorm accompanied by hail approximately 5.71 times annually.

The figure below shows the annual hailstorm probability in Daviess County for hail stones larger then 2 inches in diameter from 1980 through 1994. Daviess County, indicated by an arrow, experienced 1 day per year where the size of the hailstones were 2 inches in diameter between the period of 1980 through 1994.

Figure 3.39. Annual Hailstorm Probability (2" diameter or larger), U 1980- 1994



Source: NSSL, http://www.nssl.noaa.gov/users/brooks/public_html/bighail.gif Note:

Changing Future Conditions Considerations

As temperatures increase with changing conditions, the severity of storms is likely to increase, as warm air is the key component of thunderstorms. Due to higher levels of convection, there could be a higher frequency and severity of storm events.

Vulnerability

Vulnerability Overview

Severe thunderstorm losses are usually attributed to the associated hazards of hail, downburst winds, lightning and heavy rains. Losses due to hail and high wind are typically insured losses that are localized and do not result in presidential disaster declarations. However, in some cases, impacts are severe and widespread and assistance outside state capabilities is necessary. Hail and wind also can have devastating impacts on crops. Severe thunderstorms/heavy rains that lead to flooding are discussed in the flooding hazard profile. Hailstorms cause damage to property, crops, and the environment, and can injure and even kill livestock. In the United States, hail causes more than $1 billion in damage to property and crops each year. Even relatively small hail can shred plants to ribbons in a matter of minutes. Vehicles, roofs of buildings and homes, and landscaping are also commonly damaged by hail. Hail has been known to cause injury to humans, occasionally fatal injury.

In general, assets in the County vulnerable to thunderstorms with lightning, high winds, and hail include people, crops, vehicles, and built structures. Although this hazard results in high annual losses, private property insurance and crop insurance usually cover the majority of losses. Considering insurance coverage as a recovery capability, the overall impact on jurisdictions is reduced.

Most lightning damages occur to electronic equipment located inside buildings. But structural damage can also occur when a lightning strike causes a building fire. In addition, lightning strikes can cause damages to crops, if fields or forested lands are set on fire. Communications equipment and warning transmitters and receivers can also be knocked out by lightning strikes. http://www.vaisala.com/en/products/thunderstormandlightningdetectionsystems/Pages/NLDN.aspx and http://www.lightningsafety.noaa.gov/

The method used to determine vulnerability to severe thunderstorms across Missouri was statistical analysis of data from several sources: National Centers for Environmental Information (NCEI) storm events data (1996 to December 31, 2021), HAZUS Building Exposure Value data, housing density and mobile home data from the U.S. Census (2019), and the calculated Social Vulnerability Index for Missouri Counties from the Hazards and Vulnerability Research Institute in the Department of Geography at the University of South Carolina.

From the statistical data collected, six factors were considered in determining overall vulnerability to lightning as follows: housing density, building exposure, percentage of mobile homes, social vulnerability, likelihood of occurrence, and average annual property loss. Based on natural breaks in the statistical data, a rating value of 1 through 5 was assigned to each factor. Once the ranges were determined and applied to all factors considered in the analysis for wind, hail, and lightning, they were rated individually and factored together to determine an overall vulnerability rating for thunderstorms. This vulnerability rating was taken from the 2023 Missouri State Hazard Mitigation Plan.

These rating values correspond to the following descriptive terms:

1) Low
2) Medium-Low

3) Medium
4) Medium-High
5) High

Table 3.50. Housing Density, Building Exposure, SOVI, and Mobile Home Data for Daviess County

Total Building Exposure (HAZUS)	Building Exposure Rating	Housing Density	Housing Density Rating	SOVI Rating	SOVI Ranking Rating	Percent Mobile Homes	Percent Mobile Homes Rating
$1,005,674,000	1	7.43	1	Medium	3	9.6%	3

Source: 2023 Missouri State Hazard Mitigation Plan

Table 3.51. High Wind, Hail, and Lightning Events, Likelihood of Occurrence, and Associated Ratings for Daviess County

High Wind			Hail			Lightning		
Total Number of Events	Likelihood of Occurrence	Likelihood of Occurrence Rating	Total Number of Events	Likelihood of Occurrence	Likelihood of Occurrence Rating	Total Number of Events	Likelihood of Occurrence	Likelihood of Occurrence Rating
105	4.04	2	131	5.04	3	1	0.04	1

Source: 2023 Missouri State Hazard Mitigation Plan

Table 3.52. Annualized Property Loss and Associated Ratings for Daviess County

High Wind		Hail		Lightning	
Total Annualized Property Loss	Total Annualized Property Loss Rating	Total Annualized Property Loss	Total Annualized Property Loss Rating	Total Annualized Property Loss	Total Annualized Property Loss Rating
$4,856	1	$21,731	1	$192	1

Source: 2023 Missouri State Hazard Mitigation Plan

Potential Losses to Existing Development

According to historical loss data reported for thunderstorm wind, high wind, hail, and lightning by NCEI, from 2013-2025, 217 severe weather events impacted Daviess County and caused an estimated $693,250 in property damage with no reported crop damage. Based on this estimate Daviess County experiences an average annual property loss of approximately $31,511.36.

The USDA reported crop losses due to high winds, lightning, and hail. According to the USDA there were $73,230.44 in crop insurance claims recorded from 2013 to 2024. Based on these figures, Daviess County can expect to experience an average annual crop loss of $6,657.31.

Previous and Future Development

Any additional development that occurs in Daviess County will result in increased exposure and thus increased vulnerability to severe thunderstorms and their associated wind, hail, and lightning.

Hazard Summary by Jurisdiction

Thunderstorms, high winds, lightning, and hail events are area-wide and expected to occur uniformly across the planning area. However, the magnitude of impacts may vary by jurisdiction based on the physical vulnerability of structures.

The following table details the percentage of housing built before 1939 and the percentage of manufactured housing units in each jurisdiction, as both characteristics may indicate increased vulnerability to severe thunderstorms. Notably, the city of Coffey has an unusually high percentage of mobile homes, which could potentially be more prone to damage during a thunderstorm event. Both Jameson and Winston have a high percentage of homes built prior to 1939, accounting for over half of the occupied homes in each of these jurisdictions. Homes built prior to 1939 could be at greater risk during a thunderstorm.

Table 3.53. Housing Vulnerability Indicators for Daviess County, 2023

Jurisdiction	% of Mobile Homes	% of Homes Built Prior to 1939
Daviess County	10.3%	24.9%
Altamont	33.9%	26.8%
Coffey	60.8%	17.6%
Gallatin	2.4%	27.1%
Jameson	32.7%	52.7%
Jamesport	5.7%	16.7%
Pattonsburg	30.7%	16.0%
Winston	14.8%	53.7%

Source: 2023 ACS, US Census Bureau

Problem Statement

Severe thunderstorms and associated hazards such as lightning can result in power outages and damage to equipment resulting in operational capacity, such as at water treatment plants. Severe storms may also knock out communications system to critical facilities such as schools, strong winds may lead to structural damage and loss of residents and facilities.

3.4.7 Severe Winter Weather

Hazard Profile

Hazard Description

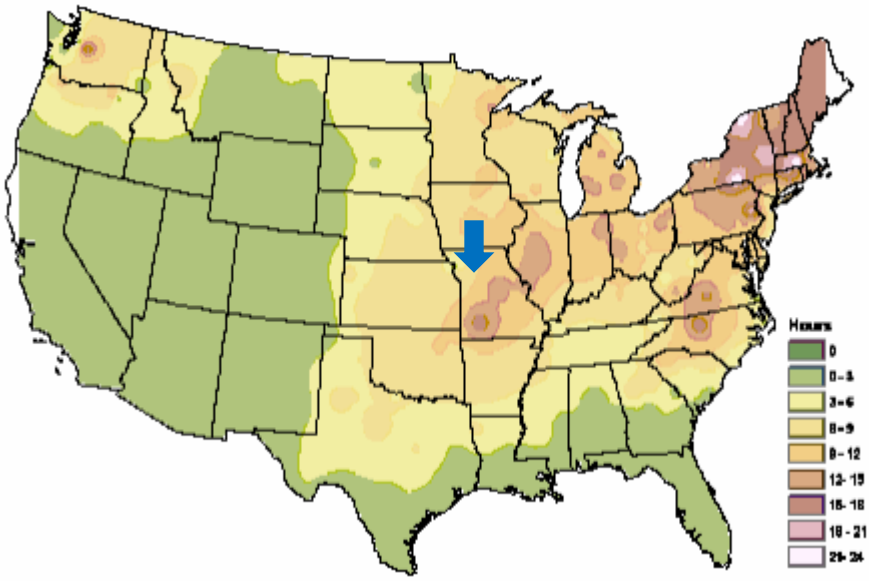
A major winter storm can last for several days and be accompanied by high winds, freezing rain or sleet, heavy snowfall, and cold temperatures. The National Weather Service describes different types of winter storm events as follows.

- **Blizzard**—Winds of 35 miles per hour or more with snow and blowing snow reducing visibility to less than ¼ mile for at least three hours.
- **Blowing Snow**—Wind-driven snow that reduces visibility. Blowing snow may be falling snow and/or snow on the ground picked up by the wind.
- **Snow Squalls**—Brief, intense snow showers accompanied by strong, gusty winds. Accumulation may be significant.
- **Snow Showers**—Snow falling at varying intensities for brief periods of time. Some accumulation is possible.
- **Freezing Rain**—Measurable rain that falls onto a surface with a temperature below freezing. This causes it to freeze to surfaces, such as trees, cars, and roads, forming a coating or glaze of ice. Most freezing-rain events are short lived and occur near sunrise between the months of December and March.
- **Sleet**—Rain drops that freeze into ice pellets before reaching the ground. Sleet usually bounces when hitting a surface and does not stick to objects.

Geographic Location

The entire county is vulnerable to heavy snow, ice, extreme cold temperatures, and freezing rain. According to the following figure, the average amount of hours of freezing rain Daviess County can expect annually is between 6 and 12 hours per year.

Figure 3.40. NWS Statewide Average Number of Hours per Year with Freezing Rain



Source: American Meteorological Society. "Freezing Rain Events in the United States." http://ams.confex.com/ams/pdfpapers/71872.pdf

Strength/Magnitude/Extent

Severe winter storms include heavy snowfall, ice, and strong winds which can push the wind chill well below zero degrees in the planning area.

For severe weather conditions, the National Weather Service issues some or all of the following products as conditions warrant across the State of Missouri. NWS local offices in Missouri may collaborate with local partners to determine when an alert should be issued for a local area.

- Winter Weather Advisory — Winter weather conditions are expected to cause significant inconveniences and may be hazardous. If caution is exercised, these situations should not become life threatening. Often the greatest hazard is to motorists.
- Winter Storm Watch — Severe winter conditions, such as heavy snow and/or ice are possible within the next day or two.
- Winter Storm Warning — Severe winter conditions have begun or are about to begin.
- Blizzard Warning — Snow and strong winds will combine to produce blinding snow (near zero visibility), deep drifts, and life-threatening wind chill.
- Ice Storm Warning -- Dangerous accumulations of ice are expected with generally over one quarter inch of ice on exposed surfaces. Travel is impacted, and widespread downed trees and power lines often result.
- Wind Chill Advisory -- Combination of low temperatures and strong winds will result in wind

chill readings of -20 degrees F or lower.

- Wind Chill Warning -- Wind chill temperatures of -35 degrees F or lower are expected. This is a life-threatening situation.

Previous Occurrences

The following table contains the winter weather events in Daviess County, Missouri for the last 20 years. The rows highlighted in blue are events that lasted for more than one day but can be attributed to one storm system. The narrative information follows the table and provides additional information about the winter weather events that Daviess County has experienced over the last 20 years.

Table 3.54. NCEI Daviess County Winter Weather Events Summary, 2004-2024

Type of Event	Date	# of Death/Injuries	Property Damages	Crop Damages
Winter Storm	2/5/2004	0	0	0
Winter Storm	1/3/2005	0	0	0
Winter Storm	1/4/2005	0	0	0
Winter Weather	1/20/2006	0	0	0
Ice Storm	11/29/2006	0	0	0
Winter Storm	1/12/2007	0	0	0
Heavy Snow	1/20/2007	0	0	0
Heavy Snow	2/12/2007	0	0	0
Ice Storm	12/1/2007	0	0	0
Ice Storm	12/10/2007	0	250,000	0
Winter Storm	12/22/2007	0	0	0
Heavy Snow	2/5/2008	0	0	0
Winter Storm	2/16/2008	0	0	0
Ice Storm	12/18/2008	0	0	0
Winter Storm	3/28/2009	0	0	0
Blizzard	12/7/2009	0	0	0
Winter Storm	12/24/2009	0	0	0
Winter Storm	1/6/2010	0	0	0
Winter Storm	2/21/2010	0	0	0
Winter Weather	1/10/2011	0	0	0
Blizzard	2/1/2011	0	0	0
Winter Storm	2/24/2011	0	0	0
Winter Weather	1/11/2012	0	0	0
Winter Weather	1/27/2012	0	0	0
Winter Weather	2/13/2012	0	0	0
Winter Weather	2/23/2012	0	0	0
Winter Storm	12/20/2012	0	0	0
Winter Weather	1/30/2013	0	0	0
Winter Storm	2/21/2013	0	0	0
Winter Storm	2/25/2013	0	0	0
Winter Weather	5/2/2013	0	0	0
Heavy Snow	12/21/2013	0	0	0
Heavy Snow	2/4/2014	0	0	0
Heavy Snow	1/31/2015	0	0	0
Heavy Snow	2/1/2015	0	0	0
Winter Storm	12/27/2015	0	0	0
Ice Storm	1/15/2017	0	0	0
Ice Storm	2/20/2018	0	0	0
Blizzard	11/25/2018	0	0	0
Winter Storm	1/11/2019	0	0	0
Ice Storm	2/7/2019	0	0	0
Winter Storm	1/10/2020	0	0	0
Winter Storm	12/29/2020	0	0	0
Heavy Snow	1/21/2023	0	0	0

Source: NCEI, data accessed 4/2025

Table 3.55. Event Narratives for Winter Weather Events (2004-2024)

Date	Event Narrative
11/29/2006	One quarter to one half inch of ice reported across the county.
1/12/2007	Up to an inch of freezing rain and sleet.
1/20/2007	Four to six inches of snow, reported across the county.
2/12/2007	Four to six inches of snow fell across the county.
12/1/2007	One quarter of an inch of ice was reported across the county.
12/10/2007	Ice accumulations of 1/2 to 3/4 of an inch were reported across the county. Numerous tree branches and power lines down.
12/22/2007	Eight inches of snow was reported in Gallatin. Blowing and drifting snow made travel hazardous.
2/5/2008	Eight inches of snow was measured at Pattonsburg.
2/16/2008	Up to five inches of snow was reported across the county. There was also blowing and drifting of the snow.
12/18/2008	One quarter of an inch of ice was reported.
3/28/2009	Three to four inches of snow, sleet, and freezing rain, were reported across the county.
12/7/2009	Snowfall amounts up to 8 inches were reported across the county. The combination of the snow, gusty winds to 45 mph, and wind chills to 10 below zero, created blizzard conditions across the area.
12/24/2009	Up to 14 inches of snow fell across the county. Gusty northwest winds caused blowing and drifting of the snow.
1/6/2010	Up to 6 inches of snow was reported in Gallatin. Strong gusty northwest winds caused blowing and drifting snow.
2/21/2010	Twelve inches of snow was measured in Gallatin. Blowing and drifting snow caused hazardous driving conditions.
1/10/2011	Eight inches of snow was measured in Gallatin.
2/1/2011	Blizzard conditions were observed across the county, with frequent wind gusts up to 45 mph, visibilities less than 1/4 of a mile, and heavy snow of up to 8 inches, measured near Pattonsburg. Travel was nearly impossible, with the blowing and drifting snow, and the very low visibilities.
2/24/2011	The combination of up to 8 inches of snow, and blowing and drifting snow, led to hazardous driving conditions across the county.
1/11/2012	The observer in Gallatin reported 1.5 inches of snow.
1/27/2012	The observer in Gallatin reported 1.8 inches of snow.
2/13/2012	Three to four inches of snow was measured across the county.
2/23/2012	One and a half inches of snow was measured in Gallatin.
12/20/2012	The combination of high winds and heavy local snowfall, caused near blizzard conditions across the county.
1/30/2013	Snowfall was measured at 2.0 inches in Pattonsburg and Gallatin.
2/21/2013	Gallatin measured 8.5 inches of snow.
2/25/2013	Twelve inches of snow was measured near Gallatin.
5/2/2013	Gallatin measured 4.0 inches of snow.

12/21/2013	Light to moderate snow picked up during the afternoon hours on December 21. Preceding the snow freezing rain produced some minor icing in and around the area. Once the snow began it quickly accumulated between 6 and 8 inches across the area. The highest amount received came from Chillicothe, Missouri where 6 to 7 inches of snow fell. While there were several vehicle spin-outs across the area, and despite the ice accumulation the widespread effects were rather minimal.
2/4/2014	A major winter storm trekked through Kansas and Missouri on February 4 and 5. By the time the storm finished it dropped around a foot of snow across the entire area.
1/31/2015	Light snow fell for a long duration across northern Missouri through the evening and overnight hours on January 1 through the early morning hours on February 2. Strong winds moved into the area while the snow was falling and caused visibility problems and drifting on the roads. Generally, 6 to 8 inches fell across the county with the highest reported total coming from Gallatin, where 7 inches fell. Numerous vehicle accidents occurred due to the poor driving conditions, but no serious injuries were reported.
2/1/2015	Light snow fell for a long duration across northern Missouri through the evening and overnight hours on January 1 through the early morning hours on February 2. Strong winds moved into the area while the snow was falling and caused visibility problems and drifting on the roads. Generally, 6 to 8 inches fell across the county with the highest reported total coming from Gallatin, where 7 inches fell. Numerous vehicle accidents occurred due to the poor driving conditions, but no serious injuries were reported.
12/27/2015	Several areas across northeast Kansas and northwest Missouri saw ice accumulation approaching a quarter inch as well as sleet ranging from a quarter to a half inch in most locations, with some locations reporting over an inch of sleet. Once the sleet ended another 3 to 4 inches of snow fell before the system moved out.
1/15/2017	To finish off a prolonged freezing rain event across northeast Kansas and northwest Missouri light rain lifted north into far northern Missouri causing ice to accumulate through the day on Sunday and overnight into Monday morning. Several trained weather spotters from across northern Missouri reported a quarter inch of ice on all surfaces. Several area roads were ice covered through the day on Sunday and into Monday morning before temperatures warmed above freezing Monday morning.
2/20/2018	Through February 20, 2018 numerous accidents occurred as a result of widespread accumulating ice. Patchy freezing drizzle started as early as midnight on the morning of February 20, but the heavier rain fell through the morning and early afternoon hours. Numerous powerlines and trees sustained some damage from the accumulation of 1/8 to 1/3 inch of ice across a widespread area.
11/25/2018	Blizzard conditions started after a few hours of light to moderately falling snow. Once the heavy snow arrived winds gusted up to 46 mph for nearly 4 hours, creating whiteout conditions, officially measured by the ASOS at nearby KLWD as sub-quarter mile for that duration. Despite the heavy impacts from this system affecting Thanksgiving weekend return traffic, only one injury accident occurred along I-35 at MM 54 due to icy conditions.
1/11/2019	Between 8 and 12 inches of snow fell across Daviess County, with most of it falling over the course of the first 12 hours. Light snow continued into the next day (January 12), but it was fairly light and only accounted for 1 to 2 inches.

2/7/2019	While light freezing drizzle occurred off and on February 5, the bulk of the freezing rain fell during the overnight period on February 6 into February 7. Over the course of the event Daviess County received approximately a quarter inch of ice accumulation. Numerous vehicle accidents occurred area-wide and minor tree damage occurred.
1/10/2020	Freezing rain occurred through much of the night going into January 11 and caused around a quarter to one-third inch accumulation. This occurred prior to about 2 to 3 inches of snow falling. This resulted in several auto accidents.
12/29/2020	During the day on December 29, a potent winter storm moved into the area. The precipitation started as primarily snow during the morning hours producing a couple inches of accumulation but switched to freezing rain just before 1 pm as warm air aloft moved over the area. Moderate to at times heavy rain ensued through the rest of the morning and early to middle afternoon hours, before eventually moving out by the evening hours. The main impact from this storm was several power outages around the area. Due to the rain rates, not all the nearly 1 inch of liquid precipitation accreted on surfaces, but a quarter to half inch did accrete, causing a significant disruption to the power, and closing numerous roads.
1/21/2023	Up to 7.5 of snow fell across Daviess County on Jan 21st.

Source: NCEI Storm Data Weather Data (Accessed on 4/2025)

The following table includes the crop losses for Daviess County over the last 10 years due to freeze or cold winter. Winter storms, cold, frost, and freeze take a toll on crop production in the planning area. The following table shows the USDA's Risk Management Agency payments for insured crop losses in the planning area because of cold conditions and snow for the last 10 years.

Table 3.56. Crop Insurance Claims Paid in Daviess County as a Result of Cold Conditions, Freeze, Heavy Snow 2013-1014

Year	Crop	Cause of Loss	Crop Loss ($)
2013	**No Claims**		
2014	Wheat	Freeze	$6,058.80
		Cold Winter	$89,141.64
2015	Wheat	Cold Winter	$11,620.00
2016	Soybeans	Cold Winter	$14,707.00
2017	**No Claims**		
2018	Wheat	Freeze	$2,317.59
	Soybeans	Snow	$3,541.00
2019	Wheat	Cold Winter	$5,207.00
2020	Corn	Snow	-$897.00
2021	Wheat	Cold Winter	$13,938.00
	Corn	Snow	-$15,923.00
2022	**No Claims**		
2023	**No Claims**		
2024	Soybeans	Freeze	$7,982.00
Total			**$137,693.03**

Source: USDA Risk Management Agency. https://www.rma.usda.gov/data/cause

Probability of Future Occurrence

Over the last 20 years, Daviess County has experienced 45 winter weather events. Since one storm would generally include more than one type of event the probability of future occurrence was calculated as follows:

$$Probability = \frac{number\ of\ events}{number\ of\ years} = \frac{45}{20} = 2.25$$

This calculation would indicate that Daviess County could expect to experience on average, 2.25 winter weather events annually.

Changing Future Conditions Considerations

With higher average temperatures occurring across the globe due to climate change, one might assume that winters would be milder. However, with the increase in the atmosphere's water-holding capacity, there is an increased likelihood of heavy snow events. Changes in the jet stream patterns can also result in allowing pools of very cold air to sink further south than usual. In summation, the changing climate could result in more severe storms, both in duration and amount of precipitation.

Vulnerability

Vulnerability Overview

From the 2023 Missouri Hazard Mitigation Plan, the method used to determine vulnerability to severe winter weather across Missouri was statistical analysis of data from several sources: National Centers for Environmental Information (NCEI) storm events data (1996 to December 31, 2021), HAZUS Building Exposure Value Data, housing density data from the US Census, and the calculated Social Vulnerability Index for Missouri Counties from the Hazard and Vulnerability Research Institute in the Department of Geography at the University of South Carolina.

From the statistical data collected, five factors were considered in determining overall vulnerability to severe winter weather as follows: housing density, building exposure, social vulnerability, likelihood of occurrence, and average annual property loss. Based on natural breaks in the statistical data, a rating value of 1 through 5 was assigned to each factor. These rating values correspond to the following descriptive terms:

1. Low
2. Low-medium
3. Medium
4. Medium-high
5. High

Once the individual ratings were determined for the above factors, a combined vulnerability rating was computed for severe winter weather events. The following table provides the calculated ranges applied to determine overall vulnerability of Missouri counties to severe winter weather.

Table 3.57. Ranges for Severe Winter Weather Combined Vulnerability Rating

	Low (1)	Low-Medium (2)	Medium (3)	Medium-High (4)	High (5)
Severe Winter Weather Combined Vulnerability	7-8	8-10	10-12	12-15	15-22

Source: 2023 Missouri State Hazard Mitigation Plan

Table 3.58. Housing Density, Building Exposure, and SOVI Data for Chariton County

	Total Building Exposure (HAZUS)	Building Exposure Rating	Housing Density	Housing Density Rating	SOVI Ranking	SOVI Rating
Daviess	$1,005,674,000	1	7.43	1	Medium	3

Source: 2023 Missouri State Hazard Mitigation Plan

Heavy snow can bring a community to a standstill by inhibiting transportation (in whiteout conditions), weighing down utility lines, and by causing structural collapse in buildings not designed to withstand the weight of the snow. Repair and snow removal costs can be significant. Ice buildup can collapse utility lines and communication towers, as well as make transportation difficult and hazardous. Ice can also become a problem on roadways if the air temperature is high enough that precipitation falls as freezing rain rather than snow.

Buildings with overhanging tree limbs are more vulnerable to damage during winter storms when limbs fall. Businesses experience loss of income because of closure during power outages. In general, heavy winter storms increase wear and tear on roadways though the cost of such damages is difficult to determine. Businesses can experience loss of income as a result of closure during winter storms.

Overhead power lines and infrastructure are also vulnerable to damages from winter storms. In particular ice accumulation during winter storm events damage power lines due to the ice weight on the lines and equipment. Damages also occur to lines and equipment from falling trees and tree limbs weighted down by ice. Potential losses could include the cost of repair or replacement of damaged facilities and lost economic opportunities for businesses.

Secondary effects from loss of power could include burst water pipes in homes without electricity during winter storms. Public safety hazards include risk of electrocution from downed power lines. Specific amounts of estimated losses are not available due to the complexity and multiple variables associated with this hazard. Standard values for loss of service for utilities reported in FEMA's BCA Toolkit 6.0 Release Notes, the economic impact because of loss of power is $174 per person per day of lost service.

The following tables contain information from the 2023 Missouri State Hazard Mitigation Plan. These tables were included in the plan to provide additional data obtained from the NCEI and utilized to complete the overall vulnerability analysis and the total overall vulnerability rating for severe winter weather in Daviess County. The total number of winter weather events includes "blizzard", "heavy snow", "ice-storm", "winter-storm", and "winter weather events."

Table 3.59. Annualized Severe Winter Weather Damages in Daviess County

Annualized Blizzard Property Loss ($)	Annualized Heavy Snow Property Loss ($)	Annualized Ice Storm Property Loss ($)	Annualized Winter Storm Property Loss ($)	Annualized Winter Weather Property Loss ($)	Total Annualized Winter Weather Property Loss ($)
$0	$3,846	$9,615	$0	$0	$13,462

Source: 2023 Missouri State Hazard Mitigation Plan

Table 3.60. Additional Statistical Data for Severe Winter Weather Vulnerability in Daviess

County

Type of Data	Amount
Total # of Winter Weather Events	54
Likelihood of Occurrence	2.08
Likelihood of Occurrence Rating	3
Total Annualized Property Loss	$13,731
Total Annualized Property Loss Rating	1
Overall Vulnerability Rating	9
Overall Vulnerability Rating Description	Medium Low

Source: 2023 Missouri State Hazard Mitigation Plan

Potential Losses to Existing Development

The next severe winter storm will most likely close schools and businesses for multiple days and make roadways hazardous for travel. Heavy ice accumulation may damage electrical infrastructures causing prolonged power outages for large portions of the region. In addition, freezing temperatures make water lines vulnerable to freezing. Fallen tree limbs also pose a threat to various structures/infrastructures across the county.

Previous and Future Development

Future development could potentially increase vulnerability to this hazard by increasing demand on the utilities and increasing the exposure of infrastructure networks. At this time, there is little expected in the way of new development that would lead to an increased risk to the planning area.

Hazard Summary by Jurisdiction

There is no variation in vulnerability due to location or jurisdiction within the planning area, as these events tend to be wide-spread rather than concentrated in a specific jurisdiction. The entire planning area is equally likely to experience either extreme heat or extreme cold.

However, those at greatest risk for illness and deaths due to extreme temperatures include children five years of age and younger, people 65 years of age and older, people who are overweight, and people who are ill or on certain medications. To determine jurisdictions within the planning area with populations more vulnerable to extreme heat or cold, demographic data was obtained from the 2022 census on population percentages in each jurisdiction comprised of those under age 5 and over age 65. Data was not available for overweight individuals and those on medications vulnerable to extreme temperatures. The table below summarizes vulnerable populations in the participating jurisdictions. Note that school and special districts are not included in the table because students and those working for the special districts are not customarily in these age groups.

Table 3.61. Daviess County Vulnerable Population by Age Group

Jurisdiction	Population Under 5	% Population Under 5	Population 65 and over	% Population 65 and over
Daviess County	585	6.9%	1724	20.5%
City of Altamont	7	4.1%	32	18.7%
City of Coffey	10	6.6%	29	19.2%
City of Gallatin	149	8.2%	372	20.4%
Village of Jameson	0	0%	19	26.0%
City of Jamesport	45	8.1%	94	16.8%
Village of Lock Springs	4	10.0%	6	15.0%
City of Pattonsburg	28	8.9%	59	18.8%

Village of Winston	16	7.0%	37	16.2%

Source: U.S. Census Bureau, Profile of General Population and Housing Characteristics (DP1)

Problem Statement

Extreme temperatures can lead to a disruption in services to the county, such as schools and private commerce. Additional strains on the electric grid could potentially cause interruptions to power. During extreme cold events water lines could freeze or burst.

3.4.8 Tornado

Hazard Profile

Hazard Description

Essentially, tornadoes are a vortex storm with two components of winds. The first is the rotational winds that can measure up to 500 miles per hour, and the second is an uplifting current of great strength. The dynamic strength of both these currents can cause vacuums that can overpressure structures from the inside.

Although tornadoes have been documented in all 50 states, most of them occur in the central United States. The unique geography of the central United States allows for the development of thunderstorms that spawn tornadoes. The jet stream, which is a high-velocity stream of air, determines which area of the central United States will be prone to tornado development. The jet stream normally separates the cold air of the north from the warm air of the south. During the winter, the jet stream flows west to east from Texas to the Carolina coast. As the sun "moves" north, so does the jet stream, which at summer solstice flows from Canada across Lake Superior to Maine. During its move northward in the spring and its recession south during the fall, the jet stream crosses Missouri, causing the large thunderstorms that breed tornadoes.

Tornadoes spawn from the largest thunderstorms. The associated cumulonimbus clouds can reach heights of up to 55,000 feet above ground level and are commonly formed when Gulf air is warmed by solar heating. The moist, warm air is overridden by the dry cool air provided by the jet stream. This cold air presses down on the warm air, preventing it from rising, but only temporarily. Soon, the warm air forces its way through the cool air and the cool air moves downward past the rising warm air. This air movement, along with the deflection of the earth's surface, can cause the air masses to start rotating. This rotational movement around the location of the breakthrough forms a vortex, or funnel. If the newly created funnel stays in the sky, it is referred to as a funnel cloud. However, if it touches the ground, the funnel officially becomes a tornado.

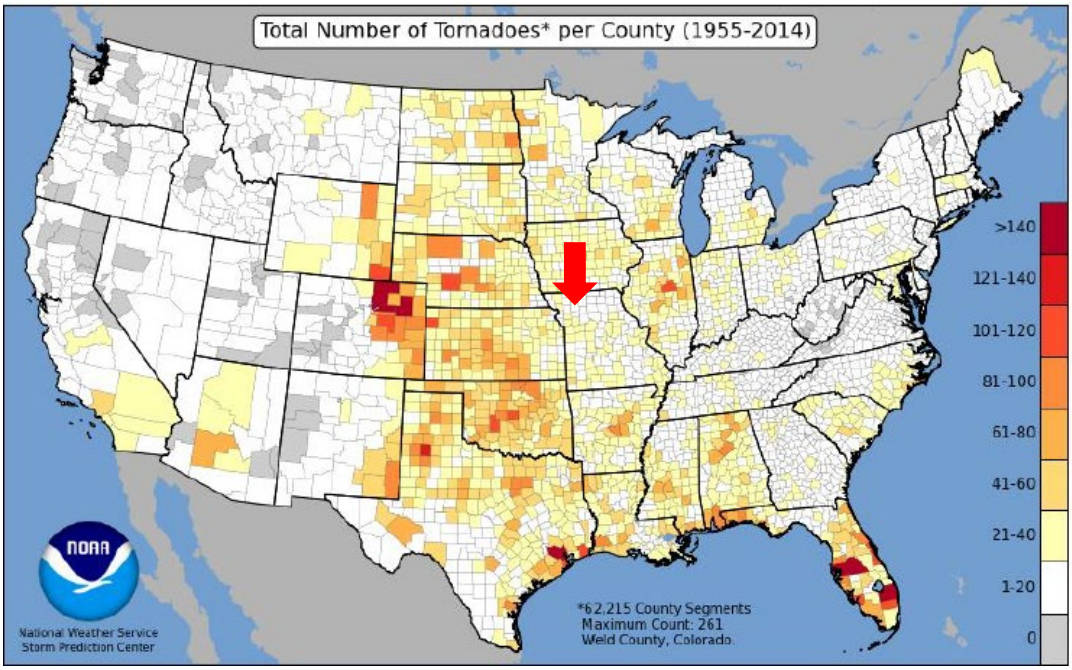
A typical tornado can be described as a funnel-shaped cloud that is "anchored" to a cloud, usually a cumulonimbus that is also in contact with the earth's surface. This contact on average lasts 30 minutes and covers an average distance of 15 miles. The width of the tornado (and its path of destruction) is usually about 300 yards. However, tornadoes can stay on the ground for up to 300 miles and can be up to a mile wide. The National Weather Service, in reviewing tornadoes occurring in Missouri between 1950 and 1996, calculated the mean path length at 2.27 miles and the mean path area at 0.14 square miles.

The average forward speed of a tornado is 30 miles per hour but may vary from nearly stationary to 70 miles per hour. The average tornado moves from southwest to northeast, but tornadoes have been known to move in any direction. Tornadoes are most likely to occur in the afternoon and evening but have been known to occur at all hours of the day and night.

Geographic Location

Tornadoes can occur anywhere in the planning area. The following map was obtained from the 2023 Missouri State Hazard Mitigation Plan and shows the total number of tornadoes per county. Daviess County is indicated with a red arrow, and according to this map, had between 1-20 tornadoes between 1955 and 2014.

Figure 3.41. Tornado Activity in the United States 1955-2014



Source: NOAA Tornado Activity in the United States

Strength/Magnitude/Extent

Tornadoes are the most violent of all atmospheric storms and are capable of tremendous destruction. Wind speeds can exceed 250 miles per hour and damage paths can be more than one mile wide and 50 miles long. Tornadoes have been known to lift and move objects weighing more than 300 tons a distance of 30 feet, toss homes more than 300 feet from their foundations, and siphon millions of tons of water from water bodies. Tornadoes also can generate a tremendous amount of flying debris or "missiles," which often become airborne shrapnel that causes additional damage. If wind speeds are high enough, missiles can be thrown at a building with enough force to penetrate windows, roofs, and walls. However, the less spectacular damage is much more common.

Tornado magnitude is classified according to the EF- Scale (or the Enhance Fujita Scale, based on the original Fujita Scale developed by Dr. Theodore Fujita, a renowned severe storm researcher). The EF-Scale (see **Table 3.6262**) attempts to rank tornadoes according to wind speed based on the damage caused. This update to the original F Scale was implemented in the U.S. on February 1, 2007.

Table 3.62. Enhanced F Scale for Tornado Damage

Fujita Scale			Derived EF Scale		Operational EF Scale	
F Number	Fastest ¼-mile (mph)	3 Second Gust (mph)	EF Number	3 Second Gust (mph)	EF Number	3 Second Gust (mph)
0	40-72	45-78	0	65-85	0	65-85
1	73-112	79-117	1	86-109	1	86-110
2	113-157	118-161	2	110-137	2	111-135
3	158-207	162-209	3	138-167	3	136-165
4	208-260	210-261	4	168-199	4	166-200
5	261-318	262-317	5	200-234	5	Over 200

Source: The National Weather Service, www.spc.noaa.gov/faq/tornado/ef-scale.html

The wind speeds for the EF scale and damage descriptions are based on information on the NOAA Storm Prediction Center as listed in **Table 3.6363**. The damage descriptions are summaries. For

the actual EF scale it is necessary to look up the damage indicator (type of structure damaged) and refer to the degrees of damage associated with that indicator. Information on the Enhanced Fujita Scale's damage indicators and degrees or damage is located online at www.spc.noaa.gov/efscale/ef-scale.html.

Table 3.63. Enhanced Fujita Scale with Potential Damage

Enhanced Fujita Scale			
Scale	Wind Speed (mph)	Relative Frequency	Potential Damage
EF0	65-85	53.5%	Light. Peels surface off some roofs; some damage to gutters or siding; branches broken off trees; shallow-rooted trees pushed over. Confirmed tornadoes with no reported damage (i.e. those that remain in open fields) are always rated EF0).
EF1	86-110	31.6%	Moderate. Roofs severely stripped; mobile homes overturned or badly damaged; loss of exterior doors; windows and other glass broken.
EF2	111-135	10.7%	Considerable. Roofs torn off well-constructed houses; foundations of frame homes shifted; mobile homes complete destroyed; large trees snapped or uprooted; light object missiles generated; cars lifted off ground.
EF3	136-165	3.4%	Severe. Entire stores of well-constructed houses destroyed; severe damage to large buildings such as shopping malls; trains overturned; trees debarked; heavy cars lifted off the ground and thrown; structures with weak foundations blown away some
EF4	166-200	0.7%	Devastating. Well-constructed houses and whole frame houses completely levelled; cars thrown and small missiles generated.
EF5	>200	<0.1%	Explosive. Strong frame houses levelled off foundations and swept away; automobile-sized missiles fly through the air in excess of 300 ft.; steel reinforced concrete structure badly damaged; high rise buildings have significant structural deformation; incredible phenomena will occur.

Source: NOAA Storm Prediction Center, http://www.spc.noaa.gov/efscale/ef-scale.html

Enhanced weather forecasting has provided the ability to predict severe weather likely to produce tornadoes days in advance. Tornado watches can be delivered to those in the path of these storms several hours in advance. Lead time for actual tornado warnings is about 30 minutes. Tornadoes have been known to change paths very rapidly, thus limiting the time in which to take shelter. Tornadoes may not be visible on the ground if they occur after sundown or due to blowing dust or driving rain and hail.

Previous Occurrences

There are limitations to the use of NCEI tornado data that must be noted. For example, one tornado may contain multiple segments as it moves geographically. A tornado that crosses a county line or state line is considered a separate segment for the purposes of reporting to the NCEI. Also, a tornado that lifts off the ground for less than 5 minutes or 2.5 miles is considered a separate segment. If the tornado lifts off the ground for greater than 5 minutes or 2.5 miles, it is considered a separate tornado. Tornadoes reported in Storm Data and the Storm Events Database are in segments.

Table 3.64. Recorded Tornadoes in Daviess, 1993 – Present

Date	Beginning Location	Ending Location	Length (miles)	Width (yards)	F/EF Rating	Death	Injury	Property Damage	Crop Damage
7/6/2002	JAMESON	JAMESON	0.1	25	F0	0	0	0	0
7/6/2002	JAMESPORT	JAMESPORT	0.1	25	F0	0	0	0	0

5/27/2004	JAMESPORT	JAMESPORT	1	50	F0	0	0	0	0
5/29/2004	PATTONSBURG	PATTONSBURG	16	800	F4	0	0	0	0
5/29/2004	COFFEY	COFFEY	5	100	F0	0	0	0	0
6/4/2005	GALLATIN	GALLATIN	0.5	50	F0	0	0	0	0
5/7/2009	LOCK SPGS	LOCK SPGS	0.1	25	EF0	0	0	0	0
3/27/2014	ALTA VISTA	CIVIL BEND	9.25	200	EF1	0	0	0	0
3/27/2014	JAMESON	JAMESON	2.98	100	EF2	0	0	0	0
4/27/2016	WINSTON	ALTAMONT	4.28	25	EF0	0	0	0	0
10/24/2021	PATTONSBURG	PATTONSBURG	0.14	20	EF0	0	0	$20,000	0

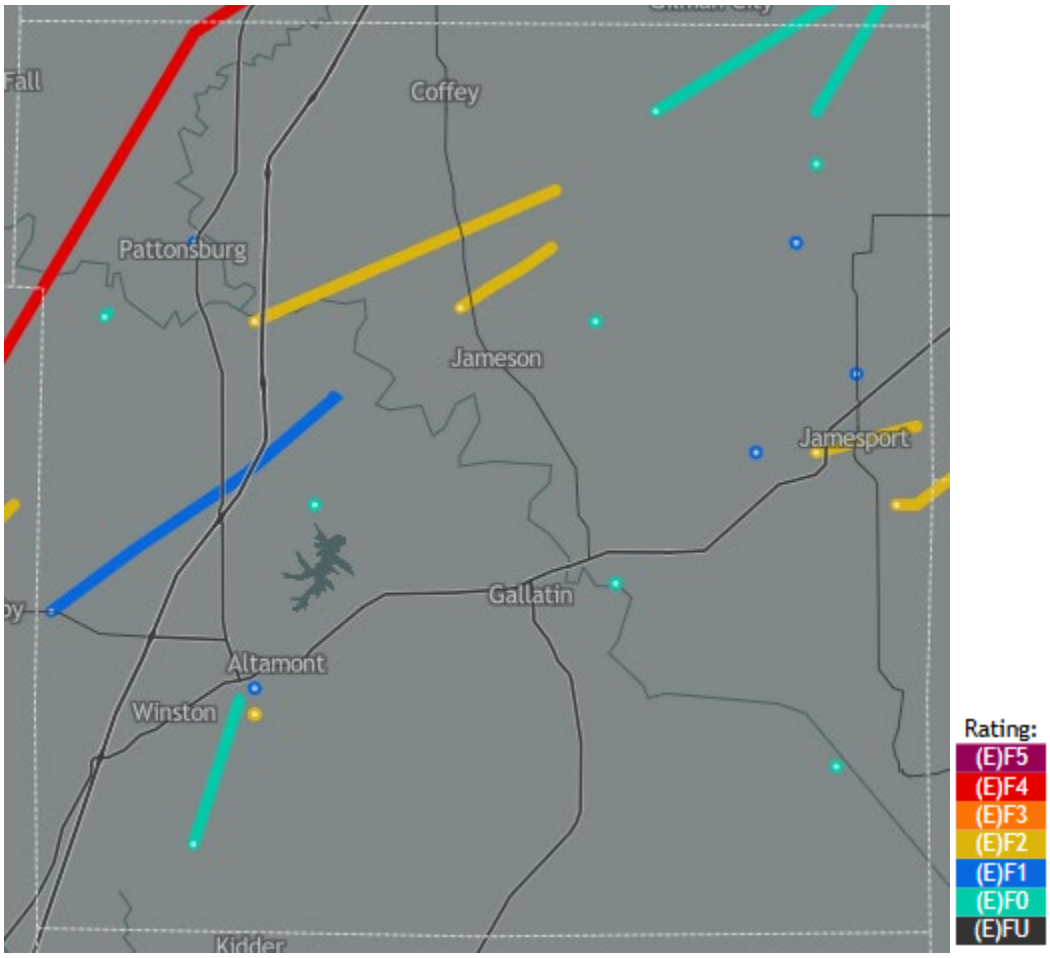
Source: National Centers for Environmental Information, http://www.NCEI.noaa.gov/stormevents/

There were 11 tornado events listed in the NCEI storm database for Daviess County. The events listed as wind events were included in the plan under severe storms. The narratives obtained from the NCEI storm database are listed in the Table below.

Table 3.65. Tornado Event Narratives for Daviess County (1993-2025)

Date	Event Narrative
7/26/2002	Brief tornado touchdown with no damage or injuries reported.
7/26/2002	Brief tornado touchdown. Minor damage to a barn and farmstead.
5/27/2004	Brief tornado touchdown along the Harrison and Daviess county line. Tornado entered Daviess county 10 miles north of Jamesport, and then dissipated.
5/29/2004	Large F4 tornado crossed into Daviess county from Dekalb county at 2135 and then crossed into Harrison county at 2150. Tornado stayed in rural areas of the Grand River flood plain.
5/29/2004	Tornado crossed into Harrison county 1 mile southwest of Melborne.
6/4/2005	Brief tornado touchdown north of Viking Lake.
5/7/2009	A tornado with only half of the funnel visible, briefly touched down at 1901 CST in rural wooded land. Tree debris was observed by this tornado, flying through the area. The tornado quickly lifted at 19:02 CST.
3/27/2014	A weak tornado persisted for approximately 12 minutes as it traversed across rural portions of Daviess County. A mobile home was overturned about 4 miles northeast of Weatherby, Missouri and a couple modular homes suffered minor damage across rural portions of Daviess County.
3/27/2014	A strong tornado impacted a farmstead and another residence, both north of Jameson, Missouri. The residence on the farmstead was a small residential home that had the roof completely removed and outer wall partially destroyed. At this residence a large metal outbuilding showed signs of sheet metal siding being removed from strong winds entering the structure. About a mile northeast of this structure a modular home was completely destroyed with the debris blown completely away. Several large barns also noted sheet metal siding being ripped off.
4/27/2016	A tornado formed in southwest Daviess County and had intermittent ground circulations along a 4 mile path that saw it dissipate 2 miles southwest of Altamont, Missouri. This tornado remained in rural areas away from any structures, so little to no damage resulted from this tornado.
10/24/2021	A weak and brief tornado formed in Daviess County that destroyed an outbuilding at a residential farm in a rural area. NWS survey also indicated a grain bin caved in at the property.

Figure 3.42. Daviess County Map of Historic Tornado Events (Jan. 1, 1953-April 30, 2025)



Source: Missouri Tornado History Project, tornadoarchive.com

Table 3.66. Crop Losses from Tornadoes in Daviess County, 2013-2024

CROP YEAR	CROP LOSS	CAUSE OF LOSS	INSURANCE PAID ($)
2013		No Claims	
2014		No Claims	
2015		No Claims	
2016		No Claims	
2017		No Claims	
2018		No Claims	
2019		No Claims	
2020		No Claims	
2021		No Claims	
2022		No Claims	
2023		No Claims	
2024		No Claims	
Total			**$ 0.00**

According to the Midwestern Regional Climate Center data, Daviess County has had a total of 21 tornadoes touch down in the county bewee the years of 1950 and 2022. There have been no recorded crop losses due to tornado events in the last 11 years.

However, it is worth noting that there have been some crop losses due to high winds/excessive winds claimed in the planning area. These crop losses have been mentioned in the thunderstorm high winds category and any crop losses due to high winds have been listed in Section 3.4.6 on Severe

Thunderstorms.

Probability of Future Occurrence

The probability of Chariton County experiencing a tornado has been calculated by the number of tornado events, without regard for previous EF Ratings. The following table has been included for informational purposes and indicates how many previous tornadoes have been recorded and their EF Rating.

Table 3.67. Previous Tornado Events in Daviess County by EF Rating 1950-2022

EF Rating	EF0	EF1	EF2	EF3	EF4	EF5
Number of Events	9	5	4	0	1	0

Source: Midwestern Regional Climate Center, 1950-2022

Probability of Tornado:

$$Probability = \frac{Number\ of\ Events}{Number\ of\ Years} = \frac{19}{72} = 26.4\%$$

According to the previous calculation, the probability of Daviess County experiencing a tornado, regardless of EF scale, is approximately 26.4%.

Changing Future Conditions Considerations

According to the Missouri State Hazard Mitigation Plan, scientists do not know how the frequency and severity of tornadoes will change. Research published in 2015 suggests that changes in heat and moisture content in the atmosphere, brought on by a warming world, could be playing a role in making tornado outbreaks more common and severe in the US. The research concluded that the number of days with large outbreaks has been increasing since the 1950's and that densely concentrated tornado outbreaks are on the rise. It is notable that the research shows that the area of tornado activity is not expanding, but rather the areas already subject to tornado activity are seeing more densely packed tornadoes. Because Daviess County experiences approximately one tornado every four years, and based on the research, the frequency of such events could increase in the future.

Vulnerability

Vulnerability Overview

The 2023 Missouri State Hazard Mitigation Plan provided the following vulnerability analysis of Daviess County to tornadoes.

The method used to determine vulnerability to tornadoes across Missouri was statistical analysis of data from several sources: HAZUS building exposure value data, population density and mobile home data from the U.S. Census (2019), the calculated Social Vulnerability Index for Missouri Counties from the Hazards and Vulnerability Research Institute in the Department of Geography at the University of South Carolina, and storm events data (1950 to December 31, 2021) from the National Centers for Environmental Information (NCEI). It is important to realize that one limitation

to the NCEI data is that many tornadoes that might have occurred in uninhabited areas, as well as some in inhabited areas, may not have been reported. The incompleteness of the data suggests that it is not appropriate for use in parametric modeling. In addition, NOAA data cannot show a realistic frequency distribution of different Fujita scale tornado events, except for recent years. Thus, a parametric model based on a combination of many physical aspects of the tornado to predict future expected losses was not used. The statistical model used for this analysis was probabilistic based purely on tornado frequency and historic losses. It is based on past experience and forecasts the expected results for the immediate or extended future.

From the statistical data collected, six factors were considered in determining overall vulnerability to tornadoes as follows: building exposure, population density, social vulnerability, percentage of mobile homes, likelihood of occurrence, and annual property loss. Based on natural breaks in the statistical data, a rating value of 1 through 5 was assigned to each factor. Once the ranges were determined and applied to all factors considered in the analysis, the ratings were combed to determine an overall vulnerability rating for tornadoes. These rating values correspond to the following descriptive terms:

1) Low
2) Medium-Low
3) Medium
4) Medium-High
5) High

Table 3.68. Likelihood of Occurrence, Annual Property Loss, and Overall Vulnerability Rating for Daviess County by Tornadoes

Total Number of Tornadoes	20
Likelihood of Occurrence	0.278
Likelihood of Occurrence Rating	2
Total Annualized Property Loss	$40,000
Total Annualized Property Loss Rating	1
Overall Vulnerability Rating	11
Overall Vulnerability Rating Description	Medium Low

Source: 2023 Missouri State Hazard Mitigation Plan

Table 3.69. Tornado Vulnerability Rating for Daviess County

Vulnerability	Data for Chariton County
Total Building Exposure	$1,005,674,000
Exposure Rating	1
Population Density	14.70
Population Density Rating	1
SOVI Index Ranking	Medium
SOVI Rating	3
Percent of Mobile Homes	9.6
Mobile Home Rating	3

Source: 2023 Missouri State Hazard Mitigation Plan

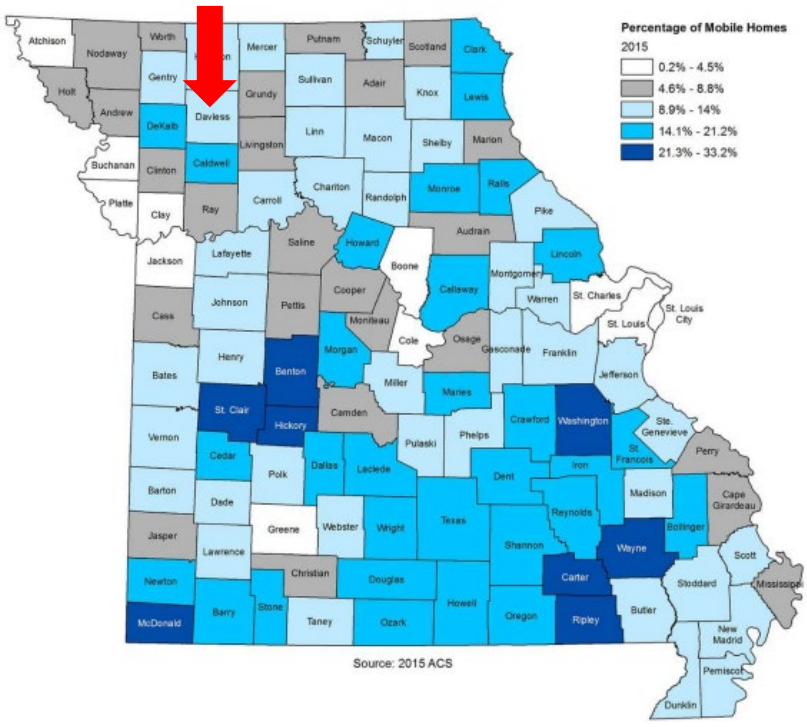
Daviess County is a region of the U.S. with high frequency of dangerous and destructive tornadoes referred to as “Tornado Alley”, illustrated below. (Indicated by red arrow).

Figure 3.43. Tornado Alley in the U.S.

Source: http://www.tornadochaser.net/tornalley.html

Another factor to consider when determining vulnerability to tornadoes is the number of mobile homes in a county. Mobile homes are especially vulnerable to this hazard, as they are not built to provide adequate shelter from tornadoes, rather citizens that dwell in mobile homes must typically seek shelter elsewhere. Per the following figure, Daviess County has between 8.9% and 14%.

Figure 3.44. Percent of Mobile Homes Per County in Missouri



Source: 2023 Missouri Hazard Mitigation Plan

Potential Losses to Existing Development

While there are no losses reported in the USDA Risk Management database as being from tornadoes, there were damages of $20,000 of property reported by the NCEI database. This is an

average loss of $1,333 annually.

Previous and Future Development

Vulnerability to tornadoes is anticipated to remain the same. Future development for public buildings such as schools, government offices, as well as buildings with high occupancy and campgrounds should consider including a tornado safe room to protect occupants in the event of a tornado.

Hazard Summary by Jurisdiction

A tornado event could occur anywhere in the planning area, but some jurisdictions would suffer heavier damages because of the age of the housing unit, the increased density of buildings and infrastructure, or the high concentration of mobile homes.

It is generally accepted that mobile homes are highly vulnerable to damage or devastation by tornadoes. The following table illustrates the number of mobile homes and homes built prior to 1939.

Table 3.70. Housing Vulnerability Indicators for Daviess County, 2023

Jurisdiction	% of Mobile Homes	% of Homes Built Prior to 1939
Daviess County	10.3%	24.9%
Altamont	33.9%	26.8%
Coffey	60.8%	17.6%
Gallatin	2.4%	27.1%
Jameson	32.7%	52.7%
Jamesport	5.7%	16.7%
Pattonsburg	30.7%	16.0%
Winston	14.8%	53.7%

Source: 2023 Missouri State Hazard Mitigation Plan

Problem Statement

A tornado could lead to damage to critical facilities, or disrupt the utility systems to critical facilities. A significant tornado would lead to a loss of life and may overwhelm resources.

3.4.9 Wildfire

Hazard Profile

Hazard Description

The fire incident types for wildfires include:

1) natural vegetation fire,
2) outside rubbish fire,
3) special outside fire, and
4) cultivated vegetation, crop fire.

The Forestry Division of the Missouri Department of Conservation (MDC) is responsible for protecting privately owned and state-owned forests and grasslands from wildfires. To accomplish this task, eight forestry regions have been established in Missouri for fire suppression. The Forestry Division works closely with volunteer fire departments and federal partners to assist with fire suppression activities. Currently, more than 900 rural fire departments in Missouri have mutual aid agreements with the Forestry Division to obtain assistance in wildfire protection if needed.

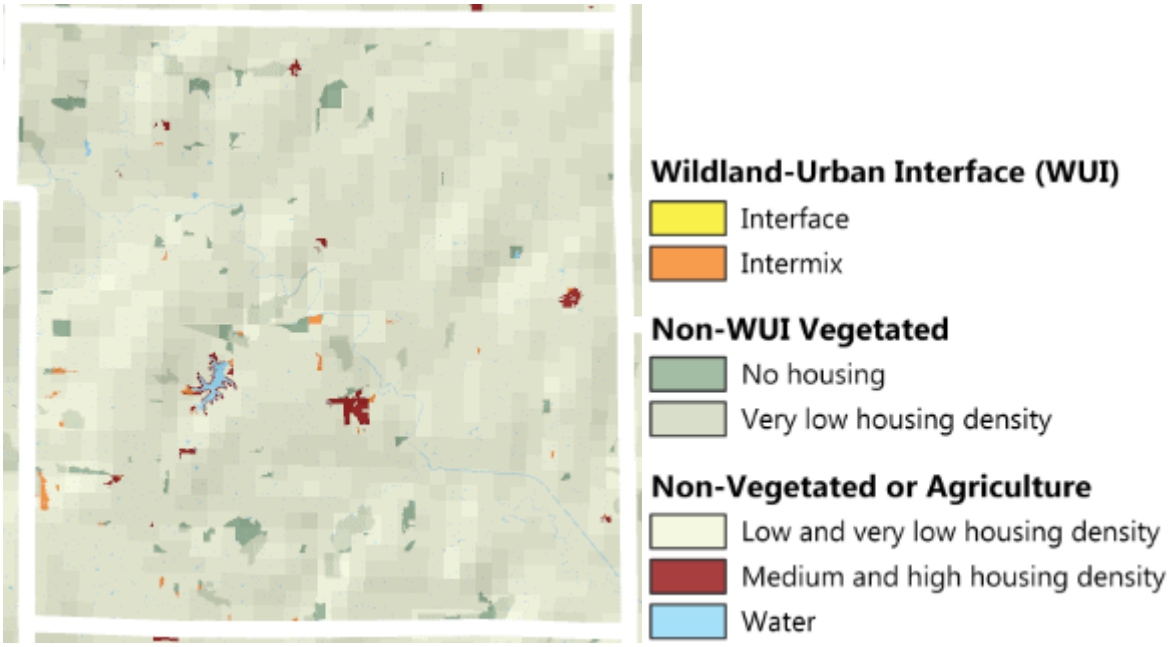
Most Missouri fires occur during the spring season between February and May. The length and severity of wildland fires depend largely on weather conditions. Spring in Missouri is usually characterized by low humidity and high winds. These conditions result in higher fire danger. In addition, due to the recent lack of moisture throughout many areas of the state, conditions are likely to increase the risk of wildfires. Drought conditions can also hamper firefighting efforts, as decreasing water supplies may not prove adequate for firefighting. It is common for rural residents to burn their garden spots, brush piles, and other areas in the spring. Some landowners also believe it is necessary to burn their forests in the spring to promote grass growth, kill ticks, and reduce brush. Therefore, spring months are the most dangerous for wildfires. The second most critical period of the year is fall. Depending on the weather conditions, a sizeable number of fires may occur between mid-October and late November.

Geographic Location

Damages due to wildfires would be higher in communities with more wildland–urban interface (WUI) areas.

The term refers to the zone of transition between unoccupied land and human development and needs to be defined in the plan. Within the WUI, there are two specific areas identified: 1) Interface and 2) Intermix. The interface areas are those areas that abut wildland vegetation and the Intermix areas are those areas that intermingle with wildland areas.

Figure 3.45. Map of Daviess County Wildland-Urban Interface (WUI) Areas



Source: MO_WUI_v4_white_2020.gif (6600×5100)

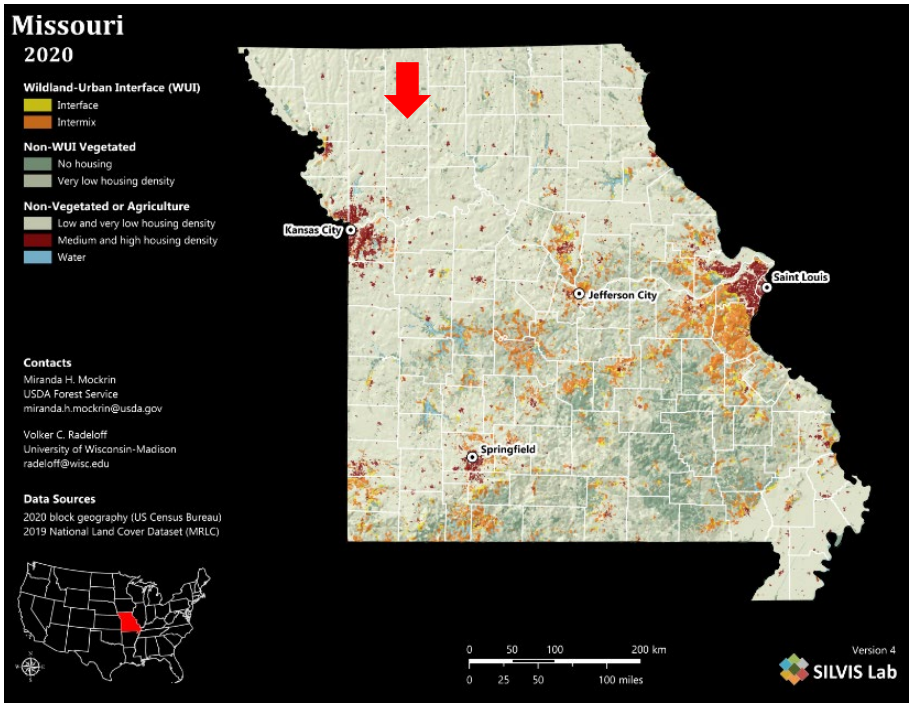
As the previous figure illustrates, Daviess County is largely rural with very little density in housing. The most at-risk areas to wildfire are those areas that have a high wildland-urban Interface. In the planning area there are relatively few areas of concern, however there are intermittent areas of medium and high housing density and small areas of intermix.

However, there are areas of medium and high housing density located throughout the county, concentrated in the towns and villages and surrounding Lake Viking.

The areas that are most at risk would be where intermix is located near medium and high housing density, such as surrounding Lake Viking, and parts of Gallatin and Jamesport.

The following figure is a map of the State of Missouri that shows the Wildland-Urban Interface (WUI) areas statewide. Daviess County is indicated with an arrow.

Figure 3.46. State of Missouri Wildland-Urban Interface WUI Areas



Source: MO_WUI_v4_black_2020.gif (6600×5100)

Strength/Magnitude/Extent

Wildfires damage the environment, killing some plants and occasionally animals. Firefighters have been injured or killed, and structures can be damaged or destroyed. The loss of plants can heighten the risk of soil erosion and landslides. Although Missouri wildfires are not the size and intensity of those in the Western United States, they could impact recreation and tourism in and near the fires.

Wildland fires in Missouri have been mostly a result of human activity rather than lightning or some other natural event. Wildfires in Missouri are usually surface fires, burning the dead leaves on the ground or dried grasses. They do sometimes “torch” or “crown” out in certain dense evergreen stands like eastern red cedar and shortleaf pine. However, Missouri does not have the extensive stands of evergreens found in the western US that fuel the large fire storms seen on television news stories.

While very unusual, crown fires can and do occur in Missouri native hardwood forests during prolonged periods of drought combined with extreme heat, low relative humidity, and high wind. Tornadoes, high winds, wet snow and ice storms in recent years have placed a large amount of woody material on the forest floor that causes wildfires to burn hotter and longer. These conditions also make it more difficult for fire fighters suppress fires safely.

Often wildfires in Missouri go unnoticed by the general public because the sensational fire behavior that captures the attention of television viewers is rare in the state. Yet, from the standpoint of destroying homes and other property, Missouri wildfires can be quite destructive.

There have been no notable structural fires that resulted from wildfires in the planning area since the previous plan update.

Previous Occurrences

With 281 fires and wildfires reported within Daviess County between 2014 and 2025 which amounted

to a total of 4,682.1 acres destroyed by wildfire.

According to the Missouri Department of Conservation Wildfire Reporting Database the most common cause of wildfire, where a cause was given, was “debris”. Debris was listed as a cause for 101 of the 281 events, accounting for nearly 35.6% of all fires in the planning area. The second most common cause of fire, where one was given, was due to equipment malfunction. 30 fires, or 10.7% could be attributed to “equipment”.

There have been no notable fire events since the last plan update in any school districts or special districts.

Probability of Future Occurrence

When calculating the probability of wildfires in Daviess County the following formula was used:

$$Probability = \frac{\#\ of\ events}{\#\ of\ years} = \frac{281}{11} = 25.5\ events$$

The previous calculation indicates that the planning area could expect to experience approximately 25.5 wildfire events per year.

$$Acreage\ Burned = \frac{\#\ of\ acres\ burned}{\#\ of\ fires} = \frac{4{,}682.1\ acres}{281\ fires} = 16.7\ acres\ per\ fire$$

The average amount of acres would be approximately 16.7 acres burned per fire.

Changing Future Conditions Considerations

The predicted higher temperatures and changes in rainfall are not likely to substantially reduce forest cover in Chariton County, although the composition of trees in the forests may change. An increase in droughts would reduce forest productivity. Additionally, the changing future conditions are likely to increase the amount of damage from insects and diseases. But longer growing seasons and increased carbon dioxide concentrations could quite possibly offset the losses from these factors.

As the climate changes, the abundance of pines in Chariton County is likely to increase, while the population of hickory trees is likely to decrease. Higher temperatures will also reduce the number of days prescribed burning can be performed. Reduction of prescribed burning will allow for growth of understory vegetation – providing fuel for destructive wildfires.

Drought is also anticipated to increase in frequency and intensity during summer months under projected future scenarios. Drought can lead to dead or dying vegetation and landscaping material close to structures, which increases the possibility of structural fires in both urban and rural areas.

Vulnerability

Vulnerability Overview

Higher temperatures and changes in rainfall are unlikely to substantially reduce forest cover in Missouri, although the composition of trees in the forests may change. More droughts would reduce forest productivity, and changing future conditions are also likely to increase the damage from insects and diseases. But longer growing seasons and increased carbon dioxide concentrations could more than offset the losses from those factors. Forests cover about one-third of the state, dominated by oak and hickory trees. As the climate changes, the abundance of pines in Missouri’s forests is likely to increase, while the population of hickory trees is likely to decrease. Higher temperatures will also

reduce the number of days prescribed burning can be performed. Reduction of prescribed burning will allow for growth of understory vegetation – providing fuel for destructive wildfires. Drought is also anticipated to increase in frequency and intensity during summer months under projected future scenarios. Drought can lead to dead or dying vegetation and landscaping material close to structures which creates fodder for wildfires within both the urban and rural settings.

Potential Losses to Existing Development

The following table were obtained from the 2023 Missouri State Hazard Mitigation Plan, and provide what available information there is regarding potential losses due to wildfire in the planning area.

Table 3.71. Statistical Data for Wildfire Hazard in Daviess County

Number of Wildfires 2004-2021	Likelihood of Occurrence (#/yr)	Total Acres Burned	Average Annual Acreage Burned
426	23.7	7,066.82	392.6

Source: 2023 Missouri State Hazard Mitigation Plan

Table 3.72. Estimated Numbers and Values of Structures and Population Vulnerable to Wildfire in Daviess County

Type of Property	Number of Structures	Value of Structures	Population
Agriculture	53	$71,041	0
Commercial	4	$403,304	0
Residential	60	$10,483,497	160
Total	**117**	**$10,957,842**	**160**

Source: 2023 Missouri State Hazard Mitigation Plan

The following table presents the estimated potential losses in Daviess County based upon the total acreage within the identified WUI area, the total structure value within the WUI area, the calculated average value per acre within the WUI area, and the average annual acreage burned for 2004-2021.

Table 3.73. Wildfire Potential Loss Estimates for Daviess County

Total WUI Acreage	Total Structure Value Within WUI	Average Value/Acre Within WUI	Average Annual Acreage Burned	Potential Loss
597.31	$10,960,841	$18,350	392.60	$7,204,364

Impact of Previous and Future Development

Future and previous development in the wildland-urban interface would increase vulnerability to the hazard. There are no proposed developments within the county that would increase the vulnerability.

Hazard Summary by Jurisdiction

The rural jurisdictions in the planning area are all surrounded by undeveloped agricultural land and face the possibility of a wildfire event. The school districts are located in such a way that they are not particularly vulnerable to wildfire as there are barriers in place that would lessen the impacts of a wildfire. Future wildfires in Daviess County should have a negligible adverse impact on the community, as it would affect a small percentage of the population. Nonetheless, homes and

businesses located in unincorporated areas are at higher risk from wildfires due to proximity to wood and distance from fire services. Variations in both structural/urban and wildfires cannot be determined at this time due to lack of data. However, both fire types are expected to occur on an annual basis across the county.

Problem Statement

Wildfire would lead to the loss of agricultural products, residential and commercial properties and possible loss of life. A large size, or number of wildfires could overload available resources.

2 PLANNING AREA PROFILE AND CAPABILITIES

2.1 DAVIESS COUNTY PLANNING AREA PROFILE

According to the US Census, the population estimate for Daviess County according to the American

Community Survey for 2023 is 8,449 persons compared to the 2020 Census population of 8,249: a 2.6% increase in the three-year period. The increase in population is above the Missouri growth rate of 0.2% for the same period. The growth rate nationally for the same period is 1%.
Figure 2.1 shows a map of Daviess County, including the cities, villages, and towns in the County.
Figure 2.2 shows, in red, where Daviess County is located within the State of Missouri.

Figure 2.1. Map of Daviess County

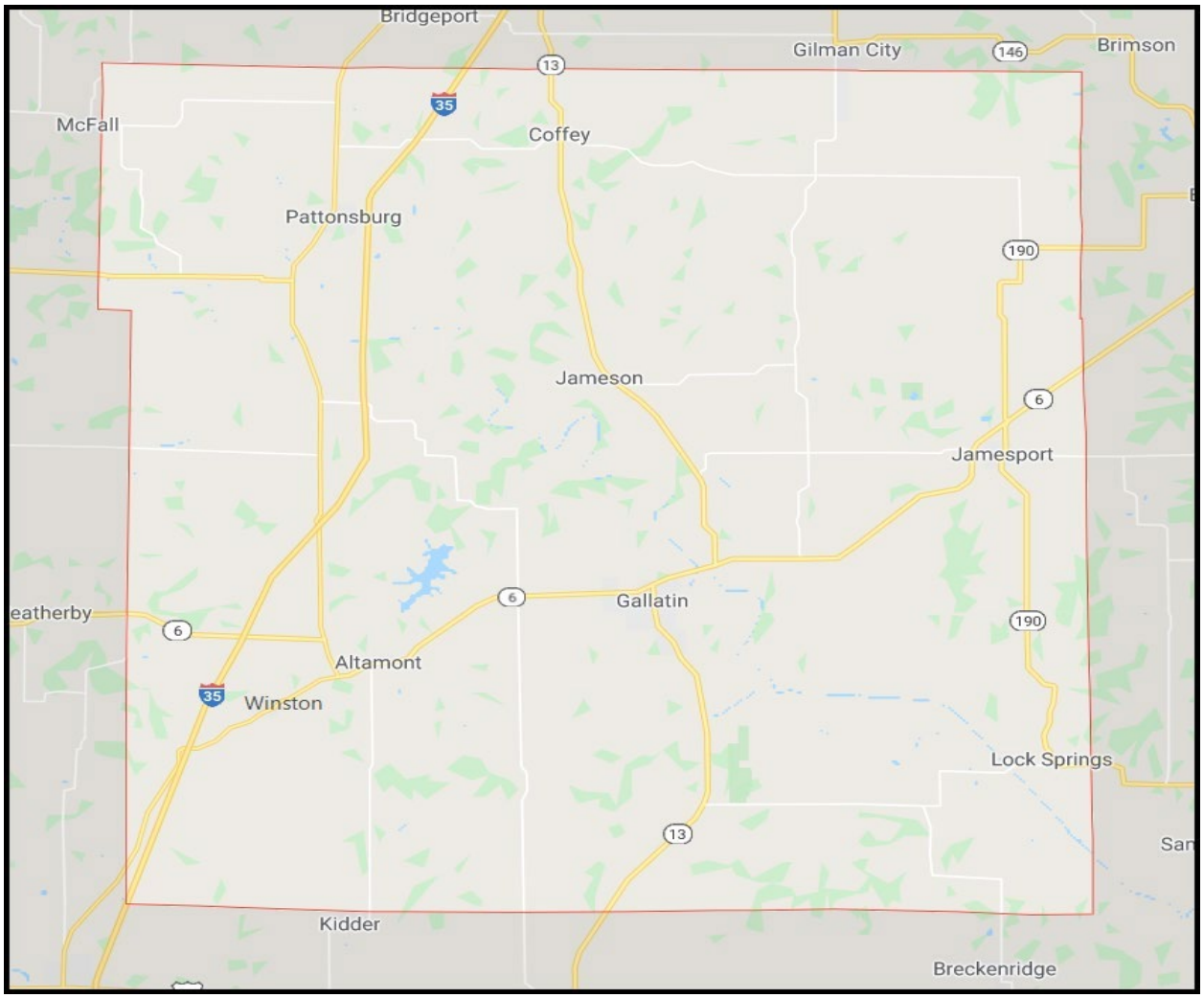
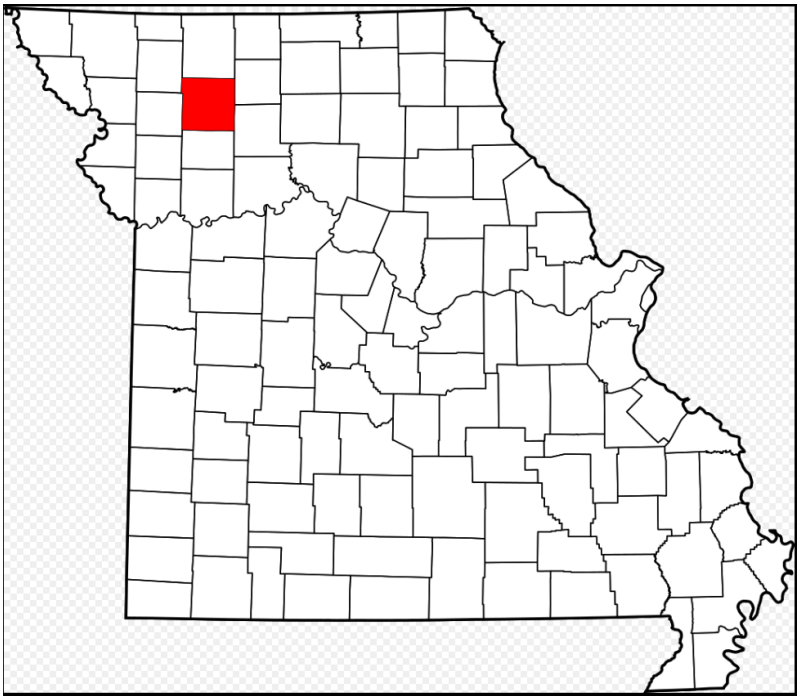


Figure 2.2. Map of Missouri with Daviess County Highlighted



Provide the following information in narrative form, reference: https://data.census.gov/

Population of Daviess County as of the most recent census data, the American Community Survey for 2023, is 8,449 persons compared to the 2020 Census population of 8,249: a 2.6% increase in the three-year period. The increase in population is above the Missouri growth rate of 0.2% for the same period. The growth rate nationally for the same period is 1%.

According to data from Data USA, the 2022 median household income was $59,706. This has increased significantly from 2010 where the median household income was $42,188. In 2010 the state median household income was $47,764 and the median household income was $53,482 nationally.

The 2023 median property value was $149,200 according to the US Census 2023 ACS 5-year estimates. This increased from $102,800 in 2010. In 2010 the median property value was $136,700 for Missouri, and $175,700 for the United States.

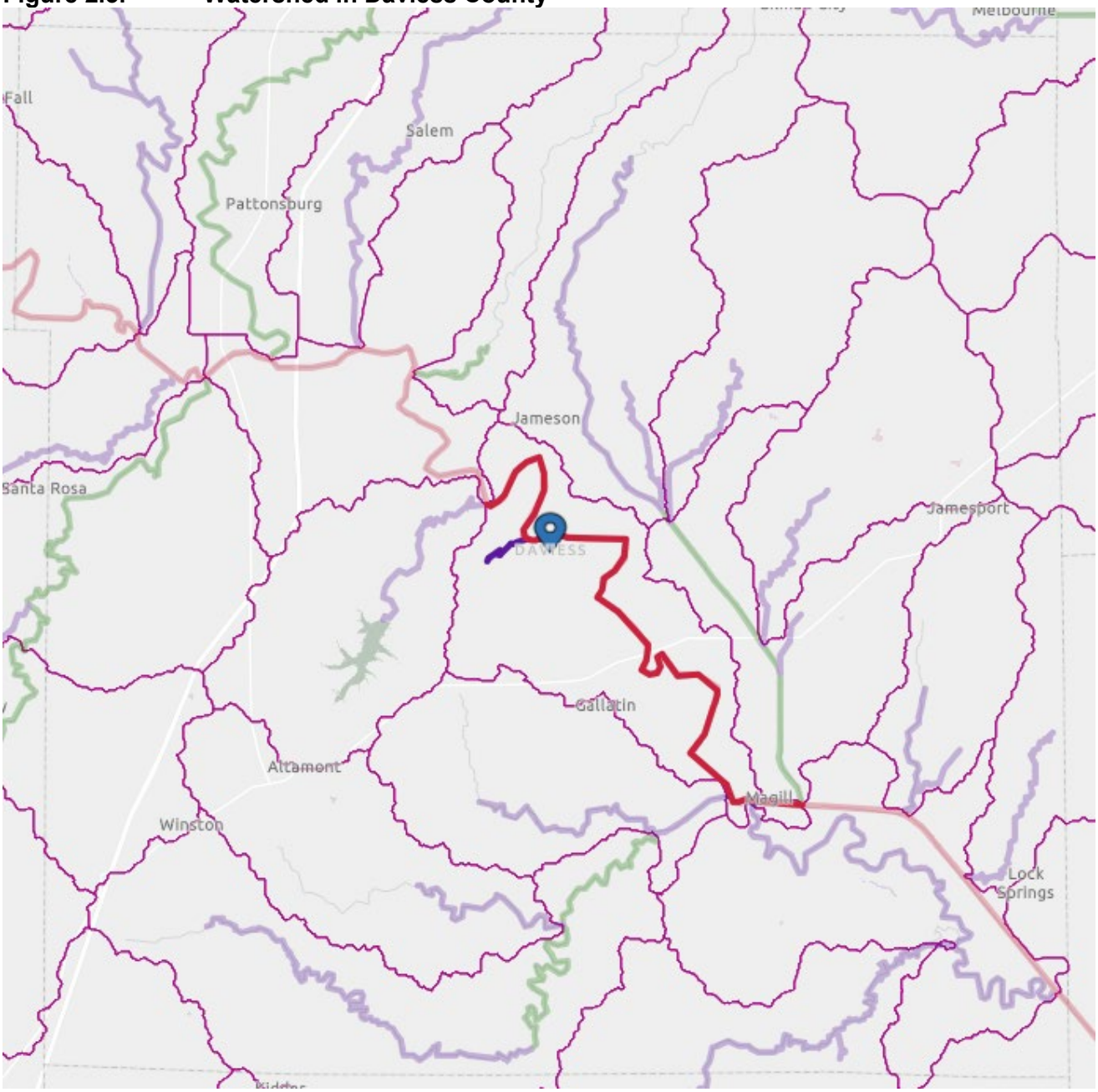
- County median household income and percentage growth since 2010, as compared to statewide and national figures from the latest 5-year American Community Survey data.
- County median house value percentage growth since 2010 compared to state and national figures from the latest 5-year American Community Survey data.

2.1.1 Geography, Geology and Topography

Daviess County totals 569 miles^2, of this 563 miles^2 are land and 5.8 miles^2 water. The county is a mix of residents living in unincorporated and incorporated areas. The county is mostly rural, and agriculture is the main enterprise of the county. Crops and posture make up most of the land cover, but there are some forested areas on the floodplains along major creeks and rivers.

The Grand River flows diagonally through the county from northwest to southeast, with numerous tributaries present along the way. The following figure was obtained from the EPA's website, "How's My Waterway"; the purple lines represent the watersheds in Daviess County. Gallatin and Magill are both partially located in the watershed.

Figure 2.3. Watershed in Daviess County



Source: EPA website; How's My Waterway - Community

The planning area is mostly comprised of rural land that is used for agriculture.

There are seven soil associations in Daviess County. The Grundy-Seymour-Shelby association occurs throughout the County, covering approximately 35% of the Region and overlays Glacial Till that is gently to strongly rolling with moderately drained soil. The Wabash-Nodaway association extends diagonally across the County along the Grand River, covering approximately 20% of the Region, is comprised of slopes that are gentle to nearly level and found in the valleys of streams and tributaries. The other associations (Edina, Lacona-Sampsel-Snead, Gara, Mandeville-Keytesville-Snead, and Shelby) occur less extensively throughout the County.

2.1.2 Climate

Daviess County, Missouri has a temperate climate with warm and humid summers and cold winters. The average high temperature in the summer is around 85° Fahrenheit, while the winter low can drop to -20° F. In Daviess County, there are 23.3 days annually when the high temperature is over 90° F, which makes it one of the coolest places in Missouri.

Rainfall is plentiful in both summer and winter months, making it an ideal place for growing crops. During the spring and fall, temperatures are milder, and rain is more sporadic. The area also experiences occasional snowfall but usually not extreme amounts.

Daviess County gets 39 inches of rain, on average, per year. The US average is 38 inches per year. Daviess County averages 17 inches of snow per year. There are, on average, 215 sunny days per year in Daviess County. Daviess County gets some kind of precipitation, on average, 92 days per year.

2.1.3 Population/Demographics

Table 2.1 provides the populations for each city, village, and the unincorporated county for 2010, 2020, and latest population estimates or American Community Survey with the number and percentage change. The unincorporated area population can be estimated by subtracting the populations of the incorporated areas from the overall county population.

Table 2.1. Daviess County Population 2010-2020 by Jurisdiction

Jurisdiction	2010 Population	2020 Population	2023 Annual Population Estimate or ACS Population	# Change (2010-2023)	% Change (2010-2023)
Daviess County	8,433	8,430	8,449	+19	+1.8%
Daviess County Unincorporated	5,013	5,112	5,322	+309	+6.1%
Village of Altamont	204	171	150	-54	-26.4%
City of Coffey	166	151	108	-58	-34.9%
City of Gallatin	1,786	1,821	1,722	-64	-3.5%
Village of Jameson	133	73	122	-11	-8.2%
City of Jamesport	524	559	628	+104	+19.8%
City of Pattonsburg	348	314	244	-104	-29.8%
Village of Winston	259	229	153	-106	-40.9%

Source: U.S. Bureau of the Census, Decennial Census, annual population estimates/ 5-Year American Community Survey 2023;
*population includes the portions of these cities in adjacent counties

According to the US Census Bureau, Daviess County has 6.9% of the total population under the age of five while the United States currently has 5.5% of the total population under the age of 5. In Daviess County 22.3% of the total population is over the age of 65, while the United States has 17.7% of the population over the age of 65.

Daviess County has 3,071 households with, on average, 2.7 people per household. This is comparable to the 127,482,865 household in the United States with, on average, 2.54 persons per household.

Table 2.2. Daviess County Population Under Age 5 and Over Age 65, 2010-2019 Census Data

Jurisdiction	Population Under 5	% Population Under 5	Population 65 and over	% Population 65 and over
Daviess County	585	6.9%	1724	20.5%
City of Altamont	7	4.1%	32	18.7%
City of Coffey	10	6.6%	29	19.2%
City of Gallatin	149	8.2%	372	20.4%
Village of Jameson	0	0%	19	26.0%
City of Jamesport	45	8.1%	94	16.8%
Village of Lock Springs	4	10.0%	6	15.0%
City of Pattonsburg	28	8.9%	59	18.8%
Village of Winston	16	7.0%	37	16.2%

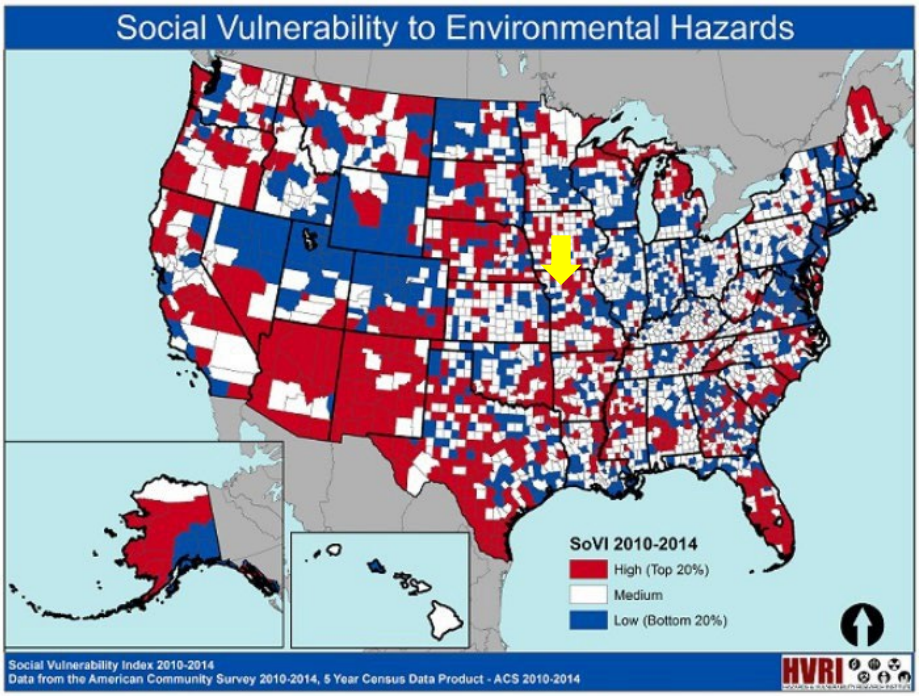
Source US Census, 2023 American Community Survey, 5-year estimates: DP05, ACS Demographics and Housing Estimates

The University of South Carolina developed an index to evaluate and rank the ability to respond to, cope with, recover from, and adapt to disasters. The index synthesizes 29 socioeconomic variables which research literature suggests contribute to reduction in a community's ability to prepare for, respond to, and recover from hazards. SoVI ® data sources include primarily those from the United States Census Bureau.

To visually compare the SoVI® scores at a state and national level, they are mapped using quantiles. Scores in the top 20% of the United States are more vulnerable counties (red) and scores in the bottom 20% of the United States indicate the least vulnerable counties (blue). A low SoVI score number means that the county is more resilient to hazard events, and a high SoVI score number means the county is less resilient. Daviess County has a medium SoVI score.

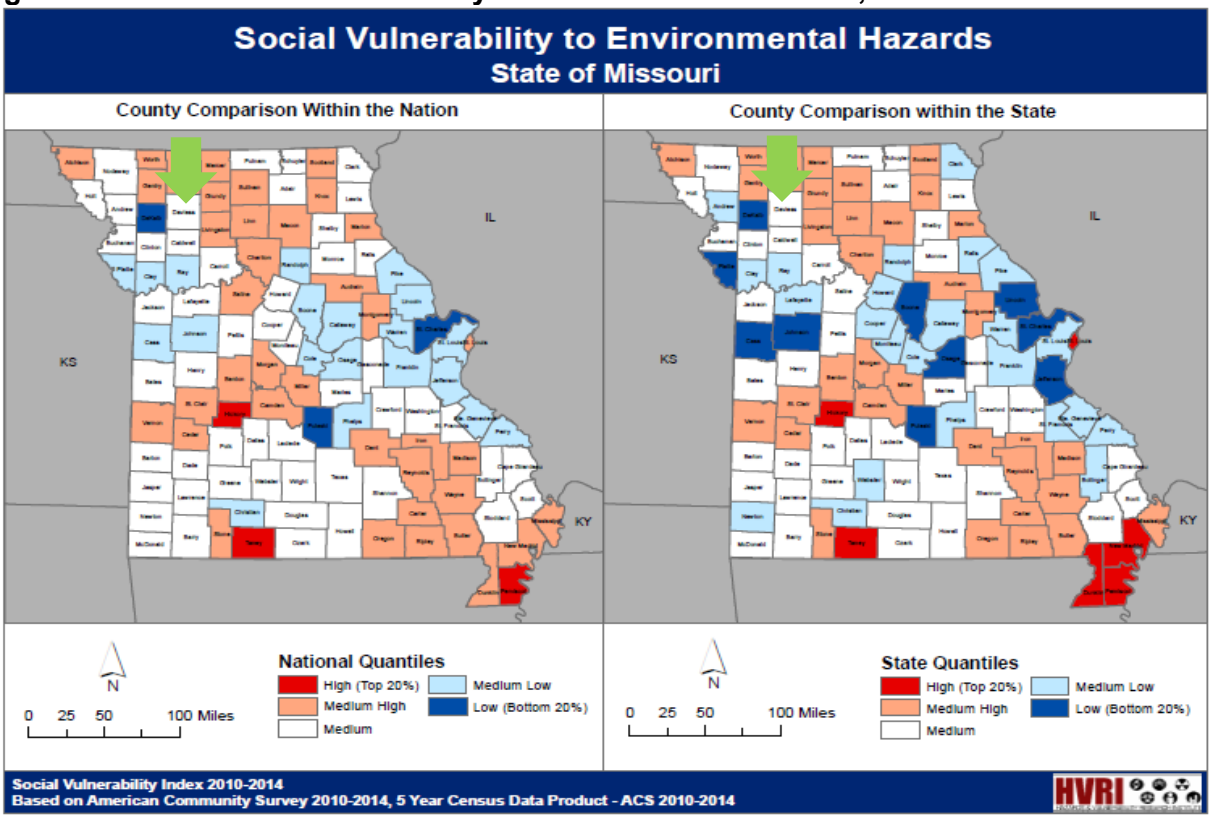
Figure 2.4 below shows the SoVI scores for Daviess County from 2010 - 2014 at both the state and national levels. Daviess County has a medium SoVI score of as compared to the other counties in the state and as compared to other counties in the United States. As you can see, the score remained the same regardless of comparison level.

Figure 2.4. SoVI Scores for Daviess County



Source: http://artsandsciences.sc.edu/geog/hvri/sovi%C2%AE-0

Figure 2.5. Social Vulnerability to Environmental Hazards, State of Missouri



Source: http://artsandsciences.sc.edu/geog/hvri/sites/sc.edu.geog.hvri/files/attachments/MO_1014.pdf

Table 2.3. Unemployment, Poverty, Education, and Language Percentage Demographics, Daviess County, Missouri

Jurisdiction	Total in Labor Force	Percent of Population Unemployed	Percent of Families Below the Poverty Level	Percentage of Population (High School graduate)	Percentage of Population (bachelor's degree or higher)	Percentage of population with spoken language other than English
Daviess County	3,814	1.8%	13.2%	85.7%	18.4%	8.5%
Village of Altamont	57	0.0%	30.7%	70.5%	3.2%	0.0%
City of Coffey	39	0.0%	49.1%	78.8%	2.5%	0.0%
City of Gallatin	680	4.3%	24.7%	89.1%	20.3%	2.2%
Village of Jameson	37	13.5%	26.2%	96.4%	3.6%	0.0%
City of Jamesport	338	2.1%	11.1%	86.1%	5.6%	2.7%
City of Pattonsburg	66	0.0%	17.5%	66.3%	7.4%	0.0%
Village of Winston	80	0.0%	8.9%	98.9%	6.3%	2.3%
Missouri	3,180,243	3.4%	12.0%	92.0%	33.2%	7.0%
Nationwide	171,742,922	4.3%	12.5%	89.8%	36.2%	22.5%

Source: U.S. Census, 2023 American Community Survey, 5-year Estimates.

2.1.4 History

According to Latter Day Saint movement founder Joseph Smith, Adam-ondi-Ahman, situated in the central part of the county, was where Adam and Eve relocated after being banished from the Garden of Eden. According to LDS tradition, the site is to be a gathering spot prior to the Second Coming of Jesus Christ.

In 1838, two years after the county was organized, Joseph Smith's claims about the history of the area spurred in an influx of Mormon settlers. Non-Mormon residents feared they were going to lose control of the county and attempted to prevent Mormons from voting in the Gallatin Election Day Battle. This was to be the first skirmish in the Mormon War. Later, in retaliation for violence to their families and destruction of their property, some Mormons burned and sacked Gallatin, Grindstone Fork, Millport and other smaller settlements. The plundered goods were deposited in the Bishop's storehouse at Diahman. Millport, which at the time was the largest city in the county and the center for trade, never recovered, and became a ghost town. Missouri Governor Lilburn Boggs issued an Extermination Order to drive the Mormons from the state after arresting Joseph Smith and other leaders of the church.

Daviess County played a major role in the history of the outlaw James-Younger Gang. The first confirmed bank robbery involving Jesse James occurred on December 7, 1869, at the Daviess County Savings Association in Gallatin. John W. Sheets, the bank cashier, was killed in the process by Jesse James, who believed Sheets was Samuel P. Cox, who had killed James's bushwhacker colleague Bloody Bill Anderson during the American Civil War. On July 15, 1881, the gang was believed to have been responsible for the robbery of the Rock Island Line at Winston in which a conductor and passenger were killed.

After Jesse James was murdered in St. Joseph, Frank James surrendered in 1882 to face Daviess County charges in connection with the train robbery/murder as well as murder charges in the 1869 bank robbery. Frank James was tried from August 20 – September 6, 1883. Interest was so intense that the trial was moved to the Gallatin Opera House to accommodate the crowds. James was found not guilty of involvement in both crimes. Charges were made that the jury was filled with Southern sympathizers who refused to convict one of their own.

The Daviess County Savings Association and the Gallatin Opera House have since been torn down, although the Winston Rock Island Line train station still stands and is operated by the local historical society as a museum.

Daviess County has one of only three Rotary Jails still in existence. Also known as the "Squirrel Cage Jail," it is now a museum and is on the National Register of Historic Places.

2.1.5 Occupations

The following table provides occupation statistics for each jurisdiction and Daviess County, as a whole.

Table 2.4. Occupation Statistics, Daviess County, Missouri

Place	Management, Business, Science, and Arts Occupations	Service Occupations	Sales and Office Occupations	Natural Resources, Construction, and Maintenance Occupations	Production, Transportation, and Material Moving Occupations
Daviess County	1,201	549	764	487	733
Village of Altamont	13	20	2	7	15
City of Coffey	0	9	8	7	15
City of Gallatin	164	117	91	90	189
Village of Jameson	1	19	5	5	2
City of Jamesport	78	99	74	16	64
City of Pattonsburg	18	6	16	10	16
Village of Winston	17	17	18	2	26

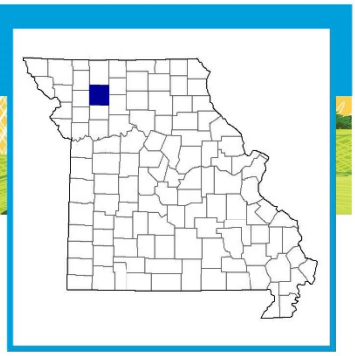
Source: U.S. Census, 2023 American Community Survey, 5-year Estimates.

2.1.6 Agriculture

The Daviess County Profile of the 2022 Census of Agriculture indicated that the county has a total of 976 farms with a total of 320,474 acres. The average farm size is 328 acres, which 11 acres is above the State average of 291 acres. Land use on Daviess County farms breaks out as cropland with 71%, pastureland with 12%, woodland at 10% and all other use types make up the remaining 7% of use. The top crop for Daviess County is soybeans with 115,753 acres planted.
Corn is the second crop producer with 38,031 planted, followed by 28,193 planted acres of hay and all other forage. The average sales per farm is $184,937 with crop sales making up 32% and livestock, poultry and products making up the other 68% of the sales.

Figure 2.6. USDA Census Profile for Daviess County (pg. 1)

2017 CENSUS OF AGRICULTURE *County Profile*



Daviess County
Missouri

Total and Per Farm Overview, 2017 and change since 2012

	2017	% change since 2012
Number of farms	1,015	-15
Land in farms (acres)	306,550	-3
Average size of farm (acres)	302	+15
Total	($)	
Market value of products sold	131,059,000	+36
Government payments	7,048,000	-16
Farm-related income	6,515,000	-37
Total farm production expenses	114,677,000	+23
Net cash farm income	29,946,000	+35
Per farm average	($)	
Market value of products sold	129,122	+60
Government payments (average per farm receiving)	10,647	+9
Farm-related income	13,773	-31
Total farm production expenses	112,982	+45
Net cash farm income	29,503	+59

1 Percent of state agriculture sales

Share of Sales by Type (%)

Crops	37
Livestock, poultry, and products	63

Land in Farms by Use (%) [a]

Cropland	63
Pastureland	17
Woodland	11
Other	8

Acres irrigated: 578
(Z)% of land in farms

Land Use Practices (% of farms)

No till	22
Reduced till	12
Intensive till	12
Cover crop	9

Farms by Value of Sales

	Number	Percent of Total [a]
Less than $2,500	429	42
$2,500 to $4,999	48	5
$5,000 to $9,999	85	8
$10,000 to $24,999	146	14
$25,000 to $49,999	104	10
$50,000 to $99,999	65	6
$100,000 or more	138	14

Farms by Size

	Number	Percent of Total [a]
1 to 9 acres	27	3
10 to 49 acres	184	18
50 to 179 acres	442	44
180 to 499 acres	213	21
500 to 999 acres	87	9
1,000 + acres	62	6

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

Source: USDA Census of Agriculture

Figure 2.7. USDA Census of Agriculture for Daviess County (pg. 2)

Daviess County
Missouri, 2017
Page 2

2017 CENSUS OF AGRICULTURE *County Profile*

Market Value of Agricultural Products Sold

	Sales ($1,000)	Rank in State [b]	Counties Producing Item	Rank in U.S. [b]	Counties Producing Item
Total	**131,059**	**29**	**114**	**897**	**3,077**
Crops	**48,068**	**47**	**114**	**1,114**	**3,073**
Grains, oilseeds, dry beans, dry peas	44,498	48	112	814	2,916
Tobacco	(D)	3	4	251	323
Cotton and cottonseed	-	-	5	-	647
Vegetables, melons, potatoes, sweet potatoes	219	30	113	1,241	2,821
Fruits, tree nuts, berries	(D)	54	111	(D)	2,748
Nursery, greenhouse, floriculture, sod	726	28	108	945	2,601
Cultivated Christmas trees, short rotation woody crops	-	-	37	-	1,384
Other crops and hay	2,548	29	114	994	3,040
Livestock, poultry, and products	**82,991**	**15**	**114**	**627**	**3,073**
Poultry and eggs	3,389	30	112	665	3,007
Cattle and calves	10,751	71	113	1,201	3,055
Milk from cows	(D)	71	97	(D)	1,892
Hogs and pigs	68,053	3	111	91	2,856
Sheep, goats, wool, mohair, milk	187	38	111	832	2,984
Horses, ponies, mules, burros, donkeys	407	9	113	528	2,970
Aquaculture	-	-	43	-	1,251
Other animals and animal products	(D)	16	111	(D)	2,878

Total Producers [c]	**1,751**
Sex	
Male	1,150
Female	601
Age	
<35	172
35 – 64	978
65 and older	601
Race	
American Indian/Alaska Native	1
Asian	2
Black or African American	8
Native Hawaiian/Pacific Islander	-
White	1,736
More than one race	4
Other characteristics	
Hispanic, Latino, Spanish origin	13
With military service	224
New and beginning farmers	425

Percent of farms that:

Have internet access	65
Farm organically	1
Sell directly to consumers	2
Hire farm labor	16
Are family farms	96

Top Crops in Acres [d]

Soybeans for beans	75,597
Corn for grain	36,133
Forage (hay/haylage), all	33,480
Wheat for grain, all	1,779
Corn for silage or greenchop	259

Livestock Inventory (Dec 31, 2017)

Broilers and other meat-type chickens	405
Cattle and calves	25,202
Goats	357
Hogs and pigs	200,834
Horses and ponies	1,468
Layers	61,405
Pullets	(D)
Sheep and lambs	1,114
Turkeys	228

See 2017 Census of Agriculture, U.S. Summary and State Data, for complete footnotes, explanations, definitions, commodity descriptions, and methodology.
[a] May not add to 100% due to rounding. [b] Among counties whose rank can be displayed. [c] Data collected for a maximum of four producers per farm.
[d] Crop commodity names may be shortened; see full names at www.nass.usda.gov/go/cropnames.pdf. [e] Position below the line does not indicate rank.
(D) Withheld to avoid disclosing data for individual operations. (NA) Not available. (Z) Less than half of the unit shown. (-) Represents zero.

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

Source: USDA Census of Agriculture

2.1.7 FEMA Hazard Mitigation Assistance (HMA) Grants in Planning Area

(Reference PRT B1-d).

Inclusion of the history of previous hazard events for each identified hazard *since the last update* is a MUST that is met in Chapter 3, Section 3.1.2, with documentation of state of emergency declarations.

Table 2.5. FEMA HMA Grants in Daviess County from 1993-2023

Disaster Declaration	Project Type	Sub-Grantee	Date Approved	Project Total
DR-0995	Acquisition of Private Real Property (Structures and Land) – Riverine	City of Pattonsburg	7/22/1994	$3,661,006
Total				**$3,661,006**

Source: Federal Emergency Management Agency, 12/30/2024

2.1.8 FEMA Public Assistance (PA) Grants in Planning Area

The following table provides information about previous public assistance grants awarded to Daviess County from 1993 to 2025.

Table 2.6. FEMA PA Grants in Daviess County from 1993-2025

Disaster Declaration	Incident Type	Project Size	Applicant	Project Total
1631	Severe Storm	Small	PUBLIC BUILDINGS AND FACILITIES	$1,000
1631	Severe Storm	Small	PUBLIC BUILDINGS AND FACILITIES	$1,000
1708	Severe Storm	Small	DEBRIS REMOVAL	$2,435
1708	Severe Storm	Small	ROADS AND DITCHES	$10,836
1708	Severe Storm	Small	CULVERT/DITCH WASHOUT	$14,466
1708	Severe Storm	Small	ROADS AND BRIDGES - GRANITE AVENUE	$2,614
1708	Severe Storm	Small	ROADWAY/GRADER DITCH WASHOUT	$10,030
1708	Severe Storm	Small	ROAD WASHOUTS	$5,095
1708	Severe Storm	Small	ROAD & BRIDGE DAMAGE	$3,292
1708	Severe Storm	Small	ROAD & BRIDGE WASHOUTS	$3,426
1708	Severe Storm	Small	ROADS AND BRIDGES	$3,937
1708	Severe Storm	Small	ROAD/DITCH WASHOUT	$12,485
1708	Severe Storm	Small	ROAD/DITCH EROSION	$5,231
1708	Severe Storm	Small	ROADS AND BRIDGES	$1,471
1708	Severe Storm	Small	ROADS, CULVERTS AND BRIDGES	$25,141
1708	Severe Storm	Small	ROADS, CULVERTS AND BRIDGES	$3,649
1708	Severe Storm	Small	ROADS AND BRIDGES	$3,576
1708	Severe Storm	Small	ROADS AND BRIDGES	$1,456
1736	Severe Ice Storm	Small	EMERGENCY PROTECTIVE MEASURES	$3,696
1736	Severe Ice Storm	Small	PA PILOT - DEBRIS REMOVAL	$21,923
1736	Severe Ice Storm	Small	POWER LINES & UTILITY POLE DAMAGES	$17,069

1773	Severe Storm	Small	ROAD / CULVERT WASHUT	$2,247
1773	Severe Storm	Small	ROAD / CULVERT WASHOUT	$27,845
1773	Severe Storm	Small	WATER PIPE LINE DAMAGES	$29,000
1773	Severe Storm	Small	WATER PIPE WASHOUT	$2,950
1773	Severe Storm	Small	PIPE LINE DAMAGE	$37,536
1773	Severe Storm	Small	SCHOOL BUILDING CARPET DAMAGES	$1,000
1773	Severe Storm	Small	WATER PIPE WASHOUT	$2,578
1773	Severe Storm	Small	ROAD WASHOUT	$18,720
1773	Severe Storm	Small	SEWER SYSTEM DAMAGES	$38,525
1773	Severe Storm	Small	ROAD & CULVERT WASHOUT	$13,701
1773	Severe Storm	Small	ROAD WASHOUT	$6,458
1773	Severe Storm	Small	ROAD WASHOUT	$6,240
1773	Severe Storm	Small	ROAD WASHOUT	$13,966
1773	Severe Storm	Small	ROAD WASHOUT	$14,243
1773	Severe Storm	Small	ROAD WASHOUT	$3,980
1773	Severe Storm	Small	ROAD WASHOUT	$5,258
1773	Severe Storm	Small	ROAD / CULVERT WASHOUT	$25,047
1773	Severe Storm	Small	ROAD & CULVERT WASHOUT	$18,360
1773	Severe Storm	Small	BRIDGE / CULVERT WASHOUT	$14,480
1773	Severe Storm	Small	ROAD/CULVERT WASHOUT	$9,810
1773	Severe Storm	Small	ROAD & CULVERT WASHOUT	$12,545
1773	Severe Storm	Small	ROAD / CULVERT WASHOUT	$23,377
1773	Severe Storm	Small	ROAD/CULVERT WASHOUT	$21,022
1773	Severe Storm	Small	ROADS & CULVERT WASHOUT	$10,015
1773	Severe Storm	Small	ROAD & CULVERT WASHOUT	$17,007
1934	Severe Storm	Small	JS12401 - 1934 - DAVIESS COUNTY SPECIAL ROAD DISTRICT #	$5,293
1934	Severe Storm	Small	1934-Marion Township-082-MH02	$3,103
1934	Severe Storm	Small	JS12402 - 1934 - DAVIESS COUNTY SPECIAL ROAD DISTRICT #	$2,200
1934	Severe Storm	Small	082MH01-1934- Marion Township	$3,264
1934	Severe Storm	Small	135RM01-1934- Jamesport Special Road District	$1,596
1934	Severe Storm	Small	082MH03-1934- Marion Township	$6,704
1934	Severe Storm	Small	056RM03-1934-Monroe Township	$11,461
1934	Severe Storm	Small	056RM01-Roads & Bridges	$36,116
1934	Severe Storm	Small	056RM05-Graveled Roadway	$11,424
1934	Severe Storm	Small	056RM02-Graveled Roadway	$7,543
1934	Severe Storm	Small	056RM04-Graveled Roadway	$8,029
1934	Severe Storm	Small	082MHO5 -Township Roads	$3,162
1934	Severe Storm	Small	082MHO4 - -Township Roads	$2,800
1934	Severe Storm	Small	RM13502- Roadways	$6,290
1934	Severe Storm	Small	RM13505- Roadways	$5,872
1934	Severe Storm	Small	RM13504- Roadways	$2,773
1934	Severe Storm	Small	RM13503- Roadways	$4,595
1934	Severe Storm	Small	RM13506- Roadways and Culverts	$1,389
1934	Severe Storm	Small	MH08207-Township Roads	$3,977
1934	Severe Storm	Small	MH08208-Township Roads	$2,018
1934	Severe Storm	Small	MH08206-Township Roads (Culvert)	$1,803
1934	Severe Storm	Small	RM05101 - Roadway	$5,972
1934	Severe Storm	Small	RM05102 - Roadway	$4,762
1934	Severe Storm	Small	129OL01 - Multiple Culverts	$4,384
1934	Severe Storm	Small	129OL03 - Multiple Roads	$2,109
1934	Severe Storm	Small	129OL02 - Multiple Roads	$4,398
1934	Severe Storm	Small	RM05108 - Roadway	$8,630
1934	Severe Storm	Small	RM05103 - Culverts	$2,763
1934	Severe Storm	Small	RM05106 - Roadway	$5,762

1934	Severe Storm	Small	RM05107 - Roadway	$12,311
1934	Severe Storm	Small	RM05105 - Roadway	$16,597
1934	Severe Storm	Small	MH08209 - Township Roads	$1,868
1934	Severe Storm	Small	MH13001- Roads- Culverts	$1,896
1934	Severe Storm	Small	MH13002- Roads- Culverts	$2,111
1934	Severe Storm	Small	OL07303- Road Shoulder	$3,178
1934	Severe Storm	Small	OL07301- Ditch/ Shoulder	$3,178
1934	Severe Storm	Small	OL07302- Ditch/ Shoulder	$2,562
1934	Severe Storm	Small	RM05113- Roadway	$7,928
1934	Severe Storm	Small	RM05112 - Roadway	$12,253
1934	Severe Storm	Small	RM05110- Roadway	$22,675
1934	Severe Storm	Small	RM05109- Roadway	$8,717
1934	Severe Storm	Small	MH13003- Roads	$15,345
1934	Severe Storm	Small	MH13004 - Roads	$7,824
1934	Severe Storm	Small	RM13001- Roads- Culverts	$1,435
1934	Severe Storm	Small	MH13005- Roads	$6,502
1934	Severe Storm	Small	MC05201 - 235th, 242nd, 252th, Quick Ave, Prairie Ave	$9,550
1934	Severe Storm	Small	MC05202 - Quarts Ave	$7,907
1934	Severe Storm	Small	MC05203 - Oval Ave & 270th St and Quarts	$1,528
1934	Severe Storm	Small	RM05115 - Roadway	$3,410
1934	Severe Storm	Small	RM05104 - Roadway & Culverts	$3,815
1934	Severe Storm	Small	RM05111 - Roadway	$13,078
1934	Severe Storm	Small	RM05114 - Roadway	$9,903
1934	Severe Storm	Small	OL04401 - Waste Water Plant / Transformer	$4,347
1934	Severe Storm	Small	OL04402 - Lift Station	$1,652
1934	Severe Storm	Small	JS08001- Culverts in Village	$2,552
1934	Severe Storm	Small	RM13805- Roadway and Culverts	$1,404
1934	Severe Storm	Small	RM13806- Roadway and Culverts	$1,829
1934	Severe Storm	Small	RM13804- Roadway	$5,450
1934	Severe Storm	Small	RM13802- Roadway	$9,121
1934	Severe Storm	Small	26LICMS- Roads,Ditches and Intersections	$20,132
1934	Severe Storm	Small	RM04804- Roadway	$7,746
1934	Severe Storm	Small	RM04801- Roadway	$3,838
1934	Severe Storm	Small	RM04802- Roadway Culverts	$3,051
1934	Severe Storm	Small	RM04803- Roadway and Culvert	$1,455
1934	Severe Storm	Small	KG025- Bridge	$10,687
1934	Severe Storm	Small	DCRAC01- Culvert	$4,974
1934	Severe Storm	Small	KG024- Road	$12,642
1934	Severe Storm	Small	KLA-003- Culvert Embankments	$7,760
1934	Severe Storm	Small	KG023- Road	$56,169
1934	Severe Storm	Small	ALRAC01- Roads	$15,394
1934	Severe Storm	Small	KLA-002- Roads and Ditches	$7,293
1934	Severe Storm	Small	OL04703- Road	$8,200
1934	Severe Storm	Small	JS25202- Varouis Roads in Township	$5,089
1934	Severe Storm	Small	OL04702- Roads	$8,269
1934	Severe Storm	Small	JS25201- 24"x60 Feet Drainage Culvert 5 small tubes	$10,293
1934	Severe Storm	Small	JS25203- Roadway Erosion & Surface Aggregate Loss	$5,587
1934	Severe Storm	Small	30PACMS - Roads, Roadway and Intersections	$8,172
1934	Severe Storm	Small	27LOCMS - Road, Ditches and Intersections	$22,871
1934	Severe Storm	Small	JARAC01 - Roads	$11,539
1934	Severe Storm	Small	OL04403 - Debris Removal	$3,966

			Emergency Measures	
1934	Severe Storm	Small	RM13801 - Roadway	$7,038
1934	Severe Storm	Small	RM13803 - Roadway and Culverts	$1,062
1934	Severe Storm	Small	OL04701 - Roads	$26,324
1934	Severe Storm	Small	31DACMS - Bridge	$41,779
1934	Severe Storm	Small	KLA-004 - Low Water Crossing	$23,487
1934	Severe Storm	Small	KG022 - Bridge	$4,191
1934	Severe Storm	Small	DCRAC02 - Culvert	$2,570
4200	Severe Storm	Large	DVEWC03 - FOURTEEN (14) GRAVEL ROADS	$158,889
4200	Severe Storm	Small	DVSFC05 Roads	$15,478
4200	Severe Storm	Small	DVJLC09 Roads	$9,406
4200	Severe Storm	Small	DVSCC08 Roads	$26,160
4200	Severe Storm	Small	DVSCC07 Roads	$15,125
4200	Severe Storm	Small	DVLKC11 Gravel Roads	$7,491
4200	Severe Storm	Small	DVMDC13 Roads	$18,465
4200	Severe Storm	Small	DVJFC01 Roads	$19,786
4200	Severe Storm	Small	DVJFC02 Culverts	$6,095
4200	Severe Storm	Small	DVMDC12 Roads	$11,310
4200	Severe Storm	Small	DVJLC10 Roads	$7,905
4200	Severe Storm	Small	DVPKC14 Roads	$41,264
4200	Severe Storm	Small	DVSFC06 Roads	$36,802
4200	Severe Storm	Small	DVNAC04 ROADS	$23,376
4238	Severe Storm	Small	DAV001F-PWSD #2	$20,604
4238	Severe Storm	Small	DAV024C - Damaged Roads	$32,179
4238	Severe Storm	Small	DAV004C - Road Damage	$82,622
4238	Severe Storm	Small	DAV003C - Road Damage	$63,270
4238	Severe Storm	Small	Benton Township Roads and Culverts	$37,116
4238	Severe Storm	Small	DAV013C'Sheridan Township Roads and Culverts	$14,916
4238	Severe Storm	Small	DAV020C-ROADS AND CULVERTS	$47,128
4238	Severe Storm	Small	DAV009C - Road Damage	$67,203
4238	Severe Storm	Small	DAV011C-ROADS	$31,788
4238	Severe Storm	Small	DAV018C-Road, Ditch and Culvert Repair	$55,011
4238	Severe Storm	Small	DAV007C-Jamesport Special Roads District	$107,645
4238	Severe Storm	Small	DAV002C-Harrison Township	$45,596
4238	Severe Storm	Small	DAV017C- 32 sites road and culvert washout	$59,441
4238	Severe Storm	Small	DAV016C - 292nd Street Bridge	$115,420
4451	Severe Storm(s)	Small	Estimated Management Costs	$2,835
4451	Severe Storm(s)	Small	Washington Township Roads and Culverts	$22,863
4451	Severe Storm(s)	Small	Culvert Damage - Work Completed	$10,443
4451	Severe Storm(s)	Large	Damaged Clarifier for the Wastewater System	$840,074
4451	Severe Storm(s)	Small	3 damaged Bridge approaches and 1 damaged bridge decking	$12,271
4451	Severe Storm(s)	Small	Work to be completed - Roads	$43,173
4451	Severe Storm(s)	Small	Roadwork	$77,945
4451	Severe Storm(s)	Small	Maloney Bridge - Flood damaged	$121,647
4451	Severe Storm(s)	Small	Roads and Culverts	$34,709
4451	Severe Storm(s)	Small	WC Roads	$32,437
4451	Severe Storm(s)	Small	Culverts	$13,885
4451	Severe Storm(s)	Small	Damaged /washed out waterline	$17,630
4451	Severe Storm(s)	Small	WC Roads	$3,682
4451	Severe Storm(s)	Small	WTBC-Erosion scouring and rock loss on roads	$86,050

4451	Severe Storm(s)	Small	WTBC Roads	$18,200
4451	Severe Storm(s)	Small	WC Roads	$64,319
4451	Severe Storm(s)	Large	WTBC Roads	$285,914
4451	Severe Storm(s)	Large	WTBC - Jump Street bridge repair	$456,269
4451	Severe Storm(s)	Small	WTBC- Culverts	$14,912
4451	Severe Storm(s)	Small	WC Culverts	$4,146
4451	Severe Storm(s)	Small	WTBC - DR4451-Mo Daviess County PWSD # 2 / damaged water lines	$16,064
4451	Severe Storm(s)	Small	Management Costs	$15,398
4451	Severe Storm(s)	Small	Damaged Culverts in Daviess County	$11,416
4451	Severe Storm(s)	Small	WC-Monroe Township Roads-Daviess County	$19,934
4451	Severe Storm(s)	Small	WTBC-Intermittent road damage throughout the district	$95,849
4451	Severe Storm(s)	Small	WTBC- Road Damage	$113,202
4451	Severe Storm(s)	Small	WTBC Roads	$103,322
4451	Severe Storm(s)	Small	WC - Lock Springs Roads District #3 damaged roads	$13,420
4451	Severe Storm(s)	Small	Rebuild Saber Road	$76,753
4451	Severe Storm(s)	Small	Embankment	$3,797
4451	Severe Storm(s)	Small	WC-Erosion scouring and rock loss on roads	$44,930
4612	Severe Storm(s)	Small	Gravel Roads	$205,789
4612	Severe Storm(s)	Small	County Wide Culvert and Bridge repair	$4,000
4612	Severe Storm(s)	Small	Jefferson Township Gravel Secondary Roads	$124,135
4612	Severe Storm(s)	Small	APP CERT-City wide roads	$10,217
4612	Severe Storm(s)	Small	APP CERT - Aerator Repair at Waste Water Plant	$20,021
4612	Severe Storm(s)	Small	Jefferson Township Washout around Culverts	$19,188
4612	Severe Storm(s)	Small	Gallatin, City of Admin. Cost	$1,512
4612	Severe Storm(s)	Small	Township Road and culvert repair	$37,989
Total				**$8,542,762.30**

Source: Federal Emergency Management Agency, 12/31/2024

2.2 JURISDICTIONAL PROFILES AND MITIGATION CAPABILITIES

This section will include individual profiles for each participating jurisdiction. It will also include a discussion of previous mitigation initiatives and ongoing mitigation capabilities in the planning area. There will be a summary table indicating specific capabilities of each jurisdiction that relate to their ability to implement mitigation opportunities. The unincorporated county is profiled first, followed by the incorporated communities, special districts, and school districts.

The plan must describe how the existing authorities, policies, programs, funding and resources of each participant are available to support the mitigation strategy. This **must** include a discussion of the existing building codes and land use and development ordinances or regulations. The plan **must** also describe the ability of each participating jurisdiction to expand on and improve the capabilities. See Task 5 in the *Local Mitigation Planning Handbook May 2023.*

2.2.1 Unincorporated Daviess County

Daviess County founded in 1836, is named for Col. Joseph H. Daviess of Kentucky who fell in the 1811 battle of Tippecanoe. The County Seat is located in the City of Gallatin. Total land area for Daviess County includes 569 square miles.

The Black Hawk War was fought in 1831 and the Latter-Day Saints came to Daviess County and established settlements of Adam-ondi-Ahman, Marrowbone, Honey creek and Lick Fork. In 1836 Daviess County was created by an Act of the General Assembly of Missouri and named after Joseph Hamilton Daviess, an eminent lawyer. The oldest town in the county, Gallatin, was founded and became the county seat in 1837. In 1837 and 1838, the land within the county was sectioned. According to Latter Day Saint movement founder Joseph Smith, Adam-ondi-Ahman, situated in the central part of the county, was where Adam and Eve relocated after being banished from the Garden of Eden. According to LDS tradition, the site is to be a gathering spot prior to the Second Coming of Jesus Christ.

In 1838, two years after the county was organized, Joseph Smith's claims about the history of the area spurred in an influx of Mormon settlers. Non-Mormon residents feared they were going to lose control of the county and attempted to prevent Mormons from voting in the Gallatin Election Day Battle. This was to be the first skirmish in the Mormon War. Later, in retaliation for violence to their families and destruction of their property, some Mormons burned and sacked Gallatin, Grindstone Fork, Millport and other smaller settlements. The plundered goods were deposited in the Bishop's storehouse at Diahman. Millport, which at the time was the largest city in the county and the center for trade, never recovered, and became a ghost town.

Missouri Governor Lilburn Boggs issued an Extermination Order to drive the Mormons from the state after arresting Joseph Smith and other leaders of the church.

In 1844, ten townships were designated and named as Gallatin, Harrison, Jefferson, Benton,Hickory, North, Madison, Sugar Creek, Jackson and Grand River.

Daviess County played a major role in the history of the outlaw James-Younger Gang. The first confirmed bank robbery involving Jesse James occurred on December 7, 1869 at the Daviess County Savings Association in Gallatin. John W. Sheets, the bank cashier, was killed in the process by Jesse James, who believed Sheets was Samuel P. Cox, who had killed James's bushwhacker colleague Bloody Bill Anderson during the American Civil War. On July 15, 1881, the gang was believed to have been responsible for the robbery of the Rock Island Line at Winston in which a conductor and passenger were killed.

After Jesse James was murdered in St. Joseph, Frank James surrendered in 1882 to face Daviess County charges in connection with the train robbery/murder as well as murder charges in the 1869 bank robbery. Frank James was tried from August 20-September 6, 1883. Interest was so intense that the trial was moved to the Gallatin Opera House to accommodate the crowds. James was found not guilty of involvement in both crimes. Charges were made that the jury was filled with Southern sympathizers who refused to convict one of their own.

The Daviess County Savings Association and the Gallatin Opera House have since been torn down, although the Winston Rock Island Line train station still stands and is operated by the local historical society as a museum. Daviess County has one of only three Rotary Jails still in existence. Also known as the "Squirrel Cage Jail," it is now a museum and is on the National Register of Historic Places.

According to the Association of Religion Data Archives County Membership Report (2020), Daviess County is sometimes regarded as being on the northern edge of the Bible Belt, with evangelical Protestantism being the most predominant religion. The most predominant denominations among residents in Daviess County who adhere to a religion are Southern Baptists (34.8%) and Amish groups (12%). Daviess County is home to the largest Amish settlement in Missouri, located in the City of Jamesport area.

As of the 2020 census, there were 8,430 people and 3,071 households residing in the county. The population density was 14.9 people per square mile. There were 4,123
housing units at an average density of 7.3 per square mile. The racial makeup of the county was 98.1% White, 1.1% Black or African American, 1.3% Native American, 0.3% Asian, 0.3% Pacific Islander, 0.8% from other races.
1.6% of the population was Hispanic or Latino of any race.

There were 3,071 households, out of which 31.6% had children under the age of 18 living with them, 59.7% were married couples living together, 18.3% had a female householder with no spouse present. 13.1% of all households were made up of individuals, and 7.5% had someone living alone who was 65 years of age or older. The average household size was 2.70 and the average family size was 3.28.

In the county, the population was spread out, with 25.7% under the age of 18 and 20.6% who were 65 years of age or older. The median age was 40.9 years. For every 100 females there were 100.9 males. The median income for a household in the county was $52,143, and the median income for a family was $62,558. About 13.2% of the population were below the poverty line,

The County is governed by an elected board of Commissioners composed of Presiding Commissioner and two Associate Commissioners. Other positions within Daviess County’s government include:

Assessor
Associate Circuit Judge
Circuit Clerk
Community, Family & Youth Services
Collector
Coroner
County Clerk
County Library
County Treasurer
Emergency Management
General Services

Health Department
Health Services
Interim Coroner
Presiding Circuit Judge
Prosecuting Attorney
Public Administrator
Recorder
Sheriff
Treasurer
Veteran's Affairs
Zoning Administrator

Mitigation Initiatives/Capabilities

The County itself does not currently have any Planning and Zoning requirements. The County does have an Emergency Management Director (EMD) and Local Emergency Planning Committee (LEPC). The EMD plans and directs disaster responses or crisis management activities, provides disaster preparedness training, and prepares emergency plans and procedures for natural disasters. The County has a County Emergency Management Plan, County Mitigation Plan and Mutual Aid Agreements.

Daviess County has done little involving mitigation activities since the last hazard mitigation plan update due to limited capabilities, both financially and in terms of staff availability.

(Reference PRT C1-b).

Table 2.7. Unincorporated Daviess County Mitigation Capabilities

Capabilities	Status, *Including Date of Document or Policy*
Planning Capabilities	
Comprehensive Plan	No
Builder's Plan	No
Capital Improvement Plan	No
City Emergency Operations Plan	N/A
County Emergency Operations Plan	Yes
Local Recovery Plan	N/A
County Recovery Plan	Mentioned in LEOP
City Mitigation Plan	N/A
County Mitigation Plan	Yes
Debris Management Plan	Yes
Economic Development Plan	No
Transportation Plan	No
Land-use Plan	No
Flood Mitigation Assistance (FMA) Plan	No
Watershed Plan	No
Firewise or other fire mitigation plan	No
School Mitigation Plan	No
Critical Facilities Plan	No
Policies/Ordinance	
Zoning Ordinance	No, Class 3 County
Building Code	No
Floodplain Ordinance	No
Subdivision Ordinance	No
Tree Trimming Ordinance	No
Nuisance Ordinance	No
Stormwater Ordinance	No
Drainage Ordinance	No
Site Plan Review Requirements	No
Historic Preservation Ordinance	No
Landscape Ordinance	No
Seismic Construction Ordinance	No
Program	
Zoning/Land Use Restrictions	No
Codes Building Site/Design	No
Hazard Awareness Program	LEPC, Hazard Material Plan (response)
National Flood Insurance Program (NFIP)	No
NFIP Community Rating System (CRS) program	No, Lowest rating

Capabilities	Status, *Including Date of Document or Policy*
National Weather Service (NWS) Storm Ready	Mostly, formal applications have not been submitted
Firewise Community Certification	No
Building Code Effectiveness Grading (BCEGs)	No
ISO Fire Rating	No, all fire districts are volunteer
Economic Development Program	No
Land Use Program	No
Public Education/Awareness	LEPC
Property Acquisition	No
Planning/Zoning Boards	No
Stream Maintenance Program	No
Tree Trimming Program	No
Engineering Studies for Streams (Local/County/Regional)	
Mutual Aid Agreements	Mo Scope
Studies/Reports/Maps	
Hazard Analysis/Risk Assessment (Local)	Region H THIRA (complete July 2021)
Hazard Analysis/Risk Assessment (County)	Region H THIRA (July 2025)
Flood Insurance Maps	SEMA
FEMA Flood Insurance Study (Detailed)	MO SEMA Floodplain
Evacuation Route Map	LEOP
Critical Facilities Inventory	Some listed in LEOP
Vulnerable Population Inventory	No
Land Use Map	
Staff/Department	
Building Code Official	None
Building Inspector	None
Mapping Specialist (GIS)	None
Engineer	None
Development Planner	None
Public Works Official	N/A
Emergency Management Director	David Roll
NFIP Floodplain Administrator	None
Emergency Response Team	None
Hazardous Materials Expert	Region H Hazmat Team
Local Emergency Planning Committee	Yes, volunteer
County Emergency Management Commission	No
Sanitation Department	No
Transportation Department	No
Economic Development Department	No
Housing Department	No
Historic Preservation	No
Non-Governmental Organizations (NGOs)	
American Red Cross	St. Joesph
Salvation Army	St. Louis
Veterans Groups	N/A
Local Environmental Organization	No
Homeowner Associations	Lake Viking (Viking Valley Association)
Neighborhood Associations	Lake Viking (Viking Valley Association)
Chamber of Commerce	No
Community Organizations (Lions, Kiwanis, etc.)	4-H, Rotary,

Capabilities	Status, *Including Date of Document or Policy*
Local Funding Availability	
Apply for Community Development Block	Yes, Green Hills Regional Planning Commission
Fund projects through Capital	Yes, Public vote required
Authority to levy taxes for a specific purpose	Yes, Public vote required
Fees for water, sewer, gas, or electric services	No
Impact fees for new development	No
Ability to incur debt through general obligation bonds	No
Ability to incur debt through special tax bonds	No
Ability to incur debt through private activities	Yes, Public vote required
Withhold spending in hazard prone areas	No

Source: Data Collection Questionnaire, 8/20/2025

2.1.3 City of Coffey

The city of Coffey, originally called Coffeyburg, was laid out in 1856 by B.H. Coffey. A post office called Coffeysburg was established in 1867. The name was changed to Coffey in 1910. Coffey is made up of 0.208 square miles, all land.

As of 2023 census estimates there were 108 people in 51 households. The population density was 540 people per square mile. There were 70 housing units at an average density of 350 per square mile. The racial makeup of the city was 100% White. The 56 households featured 17.6% with children under the age of 18 living with them, 41.2% were married couples living together, 11.8% had a female householder with no spouse present, 45% of households were one person and 21% were persons aged 65 or older. The average household size was 2.12 and the average family size was 3.08. The age distribution was 22% under the age of 18 and 16% were 65 or older. The median age was 35.9 years. For every 100 females, there were 145.5 males.

The median household income was $25,625, 49.1% of the population living below the poverty line, including 54.2% under eighteen and 27.8% of those over 65.

The City of Coffey is governed by a Mayor and a City Council of 4 members. There are currently no past or ongoing projects or programs designed to reduce disaster losses. There have been no approved projects submitted for FEMA mitigation grants as of December 2024. The hazard-related concerns regarding the vulnerability of special needs populations (elderly, disabled, and low-income) are those concerns associated with warning and disaster recovery and rebuilding from tornadoes and earthquakes, as well as drought and severe temperatures.

There is 1 outdoor warning siren in the community, and it is activated by the 911 Coop. The city does not utilize any other warning systems. Some citizens utilize personal social media platforms to obtain general warnings for the area. There are no designated public shelters or safe rooms in the city.

There has been no residential, commercial or industrial development since the last plan update in 2020. There are no development trends or expected areas of growth and there are no new facilities or infrastructures planned in the next 5 years. There are no major employers in the city limits.

The City of Coffey has had limited mitigation activities due to limited capabilities. The City of Coffey expanding its mitigation capabilities is unlikely, due to limited capabilities, both financially and in terms of staff availability.

The City of Coffey's mitigation initiatives include:

- Weather Alerts
- Accessible Contact Information
- Debris Removal and Regular Brush Clearing
- Mutual Aid Agreements
- Weather Spotter Training
- Vulnerable Population Identification
- Representative on County Hazard Mitigation Steering Committee
- Critical Facilities Back-Up

Table 2.8. City of Coffey Mitigation Capabilities

Capability	Status, *Including Date of Document or Policy*
Planning Capabilities	
Comprehensive Plan	
Builder's Plan	
Capital Improvement Plan	
Local Emergency Plan	
County Emergency Plan	
Local Recovery Plan	
County Recovery Plan	
Local Mitigation Plan	
County Mitigation Plan	
Economic Development Plan	
Transportation Plan	
Land-use Plan	
Flood Mitigation Assistance (FMA) Plan	
Watershed Plan	
Firewise or other fire mitigation plan	
School Mitigation Plan	
Critical Facilities Plan (Mitigation/Response/Recovery)	
Policies/Ordinance	
Zoning Ordinance	
Building Code	
Floodplain Ordinance	
Subdivision Ordinance	
Tree Trimming Ordinance	
Nuisance Ordinance	
Storm Water Ordinance	
Drainage Ordinance	
Seismic Construction Ordinance	
Capability	
Site Plan Review Requirements	
Historic Preservation Ordinance	
Landscape Ordinance	
Wetlands and Riparian Areas Conservation Plan	
Debris Management Plan	
Program	
Zoning/Land Use Restrictions	
Codes Building Site/Design	
National Flood Insurance Program (NFIP) Participant	
NFIP Community Rating System (CRS) Participating Community	
Hazard Awareness Program	
National Weather Service (NWS) Storm Ready	
Building Code Effectiveness Grading (BCEGs)	
ISO Fire Rating	

Capability	Status, *Including Date of Document or Policy*
Economic Development Program	
Land Use Program	
Public Education/Awareness	
Property Acquisition	
Planning/Zoning Boards	
Stream Maintenance Program	
Tree Trimming Program	
Engineering Studies for Streams (Local/County/Regional)	
Mutual Aid Agreements	
Studies/Reports/Maps	
Hazard Analysis/Risk Assessment (Local)	
Hazard Analysis/Risk Assessment (County)	
Flood Insurance Maps	
FEMA Flood Insurance Study (Detailed)	
Evacuation Route Map	
Critical Facilities Inventory	
Vulnerable Population Inventory	
Land Use Map	
Staff/Department	
Building Code Official	
Building Inspector	
Mapping Specialist (GIS)	
Engineer	
Development Planner	
Public Works Official	
Emergency Management Coordinator	
NFIP Floodplain Administrator	
Emergency Response Team	
Hazardous Materials Expert	
Local Emergency Planning Committee	
County Emergency Management Commission	
Sanitation Department	
Transportation Department	
Economic Development Department	
Housing Department	
Historic Preservation	
Non-Governmental Organizations (NGOs)	
American Red Cross	
Salvation Army	
Veterans Groups	
Environmental Organization	
Homeowner Associations	
Neighborhood Associations	
Chamber of Commerce	
Community Organizations (Lions, Kiwanis, etc.)	
Local Funding Availability	
Ability to apply for Community Development Block Grants	
Ability to fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water, sewer, gas, or electric services	
Impact fees for new development	
Ability to incur debt through general obligation bonds	
Ability to incur debt through special tax bonds	
Ability to incur debt through private activities	
Ability to withhold spending in hazard prone areas	

Source: Data Collection Questionnaire, Date

2.1.4 City of Gallatin

In 1837, Gallatin was founded and became the county seat. Gallatin was named for America's longest serving Secretary of the Treasury, Albert Gallatin, and it is the oldest city in Daviess County. In 1856, Gallatin officially became incorporated as a town. Gallatin has 2.7 square miles of land, 0.017 square miles of water.

The Gallatin Election Day Battle took place on August 6, 1838. About 200 people attempted to forcibly prevent Latter-day Saints (also known as Mormons) from voting in the newly created county's first election. In October 1838, David W. Patten led Mormon troops in the Daviess County expedition in which the Mormons burned and looted much of Gallatin, Millport and Grindstone Fork, consecrating the stolen goods to the bishop's storehouse. The skirmishes were part of the 1838 Mormon War. Gallatin is important in the Latter-day Saint religion; nearby is a place known to its members as Adam-ondi-Ahman. They believe it to be the site where Adam and Eve lived after they had been expelled from the Garden of Eden.

In 1892, Grand River College moved from Edinburg, Missouri to Gallatin, where it operated for a period under the auspices of William Jewell College before it closed permanently in 1910 after a fire. The Daviess County Rotary Jail and Sheriff's Residence, the A. Taylor Ray House and the Daviess County Courthouse are listed on the National Register of Historic Places.

As of the 2023 census estimates there were 1,722 people in 711 households living in the city. The population density was 637.7 people per square mile. There were 897 housing units at an average density of 332 per square mile.

The racial makeup of the city was 98.7% White, 1.7% Native American. There were 711 households, out of which 33.3% had children under the age of 18 living with them, 42.6% were married couples living together, 26.3% had a female householder with no spouse present and 36.3% had someone who was 65 years of age or older. The average household size was 2.37 and the average family size was 3.06.

In the city, the population is spread out, with 27% under the age of 18 and 21% who were 65 years of age or older. The median age was 36.8 years. For every 100 females, there were 100.2 males. The median income for a household in the city was $43,322, About 24.7% of the population were below the poverty line, including 28% of those under age 18 and 12% of those age 65 or over.

Gallatin has the main branch of the Daviess County Library. Gallatin is comprised of a downtown square area which contains mostly older brick 2 story buildings on the south, west and east sides. The north side of the downtown square is home to 2 local banks. The Daviess County Courthouse is situated in the middle of the square in downtown Gallatin.

Residential housing surrounds the downtown area on all 4 sides. In the northwest part of Gallatin, there is a major industrial park, USDA/FSA and other small government branch offices, an agricultural sale barn and Daviess County Nursing and Rehab. There is an agricultural equipment auction company in the northeast part of Gallatin, as well as a grain elevator and MFA Propane storage facility.

There has been one approved project submitted for a FEMA mitigation grant as of December 2024 due to flooding and high waters on May 27, 2019. Property damage due to flooding totalled $950,000 and infrastructure damage included a clarifier that floated to the surface of the ground which requires replacement, and damage to the roads. The replacement of the clarifier is an infrastructure project funded by a FEMA mitigation grant.

The hazard-related concerns regarding the vulnerability of special needs populations (elderly, disabled, and low-income) are those concerns associated with warning and disaster recovery and rebuilding from tornadoes and earthquakes, as well as drought and severe temperatures.

There is 1 outdoor warning siren in the community. It is regularly inspected, tested monthly and it is activated by 911. The city does utilize a Text Caster warning system that sends texts to subscribers, it is a free sign-up and subscription for all citizens with a cell phone. The city does not utilize any other warning systems. Some citizens utilize personal social media platforms to obtain general warnings for the area.

There is one designated public tornado shelter on East Grand Street in the basement of the First Christian Church in Gallatin. There is one safe room in the city located at the Daviess County Library in Gallatin. Currently, a private company (Access II) in Gallatin is constructing a new building on the edge of the city limits and the company is considering building a Tornado Shelter within the current building plans.

There has been no major residential development since the last plan update in 2020. There have been several large agricultural buildings constructed at the Gallatin Industrial Park by a privately owned company within the last 2 years. Development trends or expected areas of growth planned within the next 5 years include renovation of 1 building from storage to a dispensary and new construction of 2 commercial buildings, both at the Gallatin Industrial Park. There are no new city owned facilities or infrastructures planned in the next 5 years, with exception of improvement of streets. There are plans to build new homes in the Westwood Subdivision and the Gallatin Estates Apartments are scheduled to remodeled and expanded.

The major employers in the City of Gallatin include the city itself, Daviess County, B&S Auction, Gallatin R-V School District, Daviess County Nursing and Rehab, Gold Key Technologies, Landmark and McBee Farms. These companies represent the following fields: agriculture, technology, healthcare, education, manufacturing/skilled trades, and government.

The city has designated the City Administrator to be the designated Emergency and Mitigation Planner, and he has agreed to participate in the County's Hazard Mitigation Planning Committee. The City does not participate in the National Flood Insurance Program, and the City Administrator is the NFIP Floodplain Administrator. The city identified several critical and high potential loss facilities: Gallatin Fire District, City Hall, Gallatin Police Station, Gallatin Electric Plan and Gallatin Water Plant, all buildings in the Gallatin R-V School District, Summit Natural Gas Building and Ferrell Gas Building. Highway 6 and Highway 13 are the major lifelines of the city and damage from a natural hazard would endanger or impede the normal functions of the city and its government.

The City of Gallatin's mitigation initiatives include:

- Early Warning Siren
- Weather Alerts
- Debris Removal and Regular Brush Clearing
- Emergency Preparedness Education
- Mutual Aid Agreements
- Weather Spotter Training
- Critical Facilities Back-Up
- Accessible Contact Information
- City Hazard Education for Those Involved in Land Development
- Vulnerable Population Identification
- Storm Shelter
- Generator
- NFIP Participation

- Survey Flood Plain Areas
- Generator for Water Plant
- Tree Trimming
- Structure Grant for Road and Street Improvement
- AMI System
- Snow Removal
- Dump Truck

The City of Gallatin has had limited mitigation activities since the last plan update due to limited capabilities. The City of Gallatin expanding its mitigation capabilities is unlikely due to limited capabilities, both financially and in terms of staff availability.

Table 2.9. City of Gallatin Mitigation Capabilities

Capability	Status, *Including Date of Document or Policy*
Planning Capabilities	
Comprehensive Plan	Yes 1996
Builder's Plan	No
Capital Improvement Plan	Development in Process
Local Emergency Plan	Yes
County Emergency Plan	Yes
Local Recovery Plan	Yes – Located in Emergency Plan
County Recovery Plan	Yes
Local Mitigation Plan	Yes – Located in Co. Mitigation Plan
County Mitigation Plan	Yes
Economic Development Plan	
Transportation Plan	Development in Process
Land-use Plan	Yes – Street improvement plan in place
Flood Mitigation Assistance (FMA) Plan	Yes – Current Plan in Place
Watershed Plan	No
Firewise or other fire mitigation plan	No
School Mitigation Plan	No
Critical Facilities Plan (Mitigation/Response/Recovery)	Yes – Located in Emergency Plan
Policies/Ordinance	
Zoning Ordinance	Yes
Building Code	Yes – Version BOCA
Floodplain Ordinance	Yes – 2016
Subdivision Ordinance	No
Tree Trimming Ordinance	No
Nuisance Ordinance	Yes
Storm Water Ordinance	Yes
Drainage Ordinance	Yes
Seismic Construction Ordinance	No
Capability	
Site Plan Review Requirements	No
Historic Preservation Ordinance	No
Landscape Ordinance	No
Wetlands and Riparian Areas Conservation Plan	
Debris Management Plan	
Program	
Zoning/Land Use Restrictions	Yes
Codes Building Site/Design	Yes
National Flood Insurance Program (NFIP) Participant	No
NFIP Community Rating System (CRS) Participating Community	No
Hazard Awareness Program	No
National Weather Service (NWS) Storm Ready	No

Capability	Status, *Including Date of Document or Policy*
Building Code Effectiveness Grading (BCEGs)	
ISO Fire Rating	Yes – Rating Unknown
Economic Development Program	Development in Process
Land Use Program	No
Public Education/Awareness	No
Property Acquisition	No – evaluated on a case-by-case basis
Planning/Zoning Boards	Yes
Stream Maintenance Program	No
Tree Trimming Program	No
Engineering Studies for Streams (Local/County/Regional)	No
Mutual Aid Agreements	Yes
Studies/Reports/Maps	
Hazard Analysis/Risk Assessment (Local)	No
Hazard Analysis/Risk Assessment (County)	No
Flood Insurance Maps	Yes
FEMA Flood Insurance Study (Detailed)	Yes
Evacuation Route Map	Yes – Located in emergency plan
Critical Facilities Inventory	No
Vulnerable Population Inventory	No
Land Use Map	No
Staff/Department	
Building Code Official	No
Building Inspector	No
Mapping Specialist (GIS)	No
Engineer	No
Development Planner	No
Public Works Official	No
Emergency Management Coordinator	No
NFIP Floodplain Administrator	No
Emergency Response Team	Yes – Volunteer ream through county LGPC
Hazardous Materials Expert	No
Local Emergency Planning Committee	Yes
County Emergency Management Commission	
Sanitation Department	Yes
Transportation Department	Yes
Economic Development Department	No
Housing Department	No
Historic Preservation	No
Non-Governmental Organizations (NGOs)	
American Red Cross	No – Shelter Locations Only
Salvation Army	Yes – Saint Louis Chapter
Veterans Groups	
Environmental Organization	No
Homeowner Associations	No
Neighborhood Associations	No
Chamber of Commerce	No
Community Organizations (Lions, Kiwanis, etc.)	Yes – Rotary Clubs
Local Funding Availability	
Ability to apply for Community Development Block Grants	Yes
Ability to fund projects through Capital Improvements funding	Yes
Authority to levy taxes for a specific purpose	Yes
Fees for water, sewer, gas, or electric services	Yes – All except gas service
Impact fees for new development	Yes
Ability to incur debt through general obligation bonds	Yes
Ability to incur debt through special tax bonds	Yes
Ability to incur debt through private activities	Yes
Ability to withhold spending in hazard prone areas	Yes

Source: Data Collection Questionnaire, 8/20/2025

Additional information obtained from the data collection questionnaire includes:

- The City of Gallatin has a mayor and four council members to make up their government.
- They have one outdoor warning sirens which is activated by 911.
- The City of Gallatin also utilizes their text caster as another form of a warning system.
- They do have designated public tornado shelters and saferooms and are constructed in accordance with FEMA standards.
    - Address of locations: Daviess County Library 306 W. Grand and Access II 101 Industrial Parkway.
- Major employers in their jurisdiction with numbers of employees are City of Gallatin with 11 employees, Daviess County, Gallatin R-5 School with 96 employees, Daviess Co. Nursing Home, Gold Key, and Dungy's Market.

2.1.5 Village of Jameson

The Village of Jameson was originally established as Feurst Summit in 1854 but was renamed Jameson in 1871. Jameson is made up of 0.224 square miles, all of which is land.

As of the 2023 census estimates, there were 122 people and 55 households in the village. The population density was 610 people per square mile. There were 46 housing units at an average density of 230 per square mile.

The racial makeup of the village was 100% White. There were 55 households, out of which 18.2% had children under the age of 18 living with them, 38.2% were married couples living together, 52.7% had a female householder with no spouse present, and 6.5% had someone living alone who was 65 years of age or older. The average household size was 2.22 and the average family size was 3.24.

In the village the population was 32% under the age of 18 and 39% who were 65 years of age or older. The median age was 64.1 years. For every 100 females, there were 74.3 males.
The median income for a household in the village was $40,080. 26.2% of the population is currently living below the poverty line, including 35.9% of under eighteen and 25% of those over the age of 65.

The Village of Jameson is home to North Daviess R-III School District. There is a Post Office, Fire District Building and a small concentration of older buildings in the downtown area. There is a City Park with a Snack Shack that is used for concessions, etc. The historical religious site, Adam-ondi-Aman, is in the surrounding area of Jameson, and is located south of the city limits.

There are currently no past or ongoing projects or programs designed to reduce disaster losses. There have been no approved projects submitted for FEMA mitigation grants as of January 2025.

The hazard-related concerns regarding the vulnerability of special needs populations (elderly, disabled, and low-income) are those concerns associated with warning and disaster recovery, and rebuilding from tornadoes and earthquakes, as well as drought and severe temperatures. The village is small with a small budget and is unable to help with major expenses for rebuilding.

There is one outdoor warning siren in the community that is activated by 911. The Jameson Fire Protection District Fire Chief can activate the siren manually if needed. The Village does not utilize any other warning systems. Some citizens utilize personal social media platforms to obtain general warnings for the area. There are no designated public tornado shelters or safe rooms in the Village currently. The Board of Trustees would like to have a community shelter or safe room if mitigation

grant funding is available in the future.

There has been no residential or industrial development since the last plan update in 2014. The only commercial development was by the main convenience store which added storage units and a car wash. There are no development trends or expected areas of growth in the next 5 years. There are no major employers in the city limits except for the North Daviess R-III School District.

The Village of Jameson is governed by a Board of Trustees with 5 members including 1 Chairman, and a Village Clerk. The Village has designated the Village Clerk to be the designated Planning Committee Member. She agreed to participate in the County Planning Committee.
The Village does not participate in the National Flood Insurance Program due to being sanctioned on September 30, 2016, as flooding is not a major concern in the city limits and the area around the city is mostly agricultural.

The Village did identify North Daviess R-III School District, the Post Office and the Fire District Building as high potential loss facilities, and it has no concerns regarding transportation and lifelines that would endanger or impede the normal functions of the Village or its government.

The Village of Jameson's mitigation initiatives include:
Weather Alerts
Accessible Contact information
Debris Removal and Regular Brush Clearing
Emergency Preparedness Education
Mutual Aid Agreements
Weather Spotter Training
Storm Shelters
Vulnerable Population Identification
Snow Removal

The Village of Jameson has had limited mitigation activities since the last plan update due to limited capabilities. The Village of Jameson expanding its mitigation capabilities is unlikely due to limited capabilities, both financially and in terms of staff availability.

Table 2.10. Village of Jameson Mitigation Capabilities

Capability	Status, *Including Date of Document or Policy*
Planning Capabilities	
Comprehensive Plan	No
Builder's Plan	No
Capital Improvement Plan	No
Local Emergency Plan	No
County Emergency Plan	Yes
Local Recovery Plan	No
County Recovery Plan	Yes
Local Mitigation Plan	Yes
County Mitigation Plan	Yes
Economic Development Plan	No
Transportation Plan	No
Land-use Plan	No
Flood Mitigation Assistance (FMA) Plan	No
Watershed Plan	No
Firewise or other fire mitigation plan	Jameson Fire District
School Mitigation Plan	North Daviess R-III
Critical Facilities Plan (Mitigation/Response/Recovery)	No
Policies/Ordinance	

Capability	Status, *Including Date of Document or Policy*
Zoning Ordinance	No
Building Code	No
Floodplain Ordinance	No
Subdivision Ordinance	No
Tree Trimming Ordinance	No
Nuisance Ordinance	No
Storm Water Ordinance	No
Drainage Ordinance	No
Seismic Construction Ordinance	No
Capability	
Site Plan Review Requirements	No
Historic Preservation Ordinance	No
Landscape Ordinance	No
Wetlands and Riparian Areas Conservation Plan	No
Debris Management Plan	No
Program	
Zoning/Land Use Restrictions	No
Codes Building Site/Design	No
National Flood Insurance Program (NFIP) Participant	No
NFIP Community Rating System (CRS) Participating Community	No
Hazard Awareness Program	No
National Weather Service (NWS) Storm Ready	No
Building Code Effectiveness Grading (BCEGs)	No
ISO Fire Rating	No
Economic Development Program	No
Land Use Program	No
Public Education/Awareness	No
Property Acquisition	No
Planning/Zoning Boards	No
Stream Maintenance Program	No
Tree Trimming Program	No
Engineering Studies for Streams (Local/County/Regional)	No
Mutual Aid Agreements	No
Studies/Reports/Maps	
Hazard Analysis/Risk Assessment (Local)	No
Hazard Analysis/Risk Assessment (County)	No
Flood Insurance Maps	No
FEMA Flood Insurance Study (Detailed)	No
Evacuation Route Map	No
Critical Facilities Inventory	No
Vulnerable Population Inventory	No
Land Use Map	No
Staff/Department	
Building Code Official	No
Building Inspector	No
Mapping Specialist (GIS)	No
Engineer	No
Development Planner	No
Public Works Official	No
Emergency Management Coordinator	No
NFIP Floodplain Administrator	No
Emergency Response Team	No
Hazardous Materials Expert	No
Local Emergency Planning Committee	No
County Emergency Management Commission	Yes
Sanitation Department	No
Transportation Department	No
Economic Development Department	No

Capability	Status, *Including Date of Document or Policy*
Housing Department	No
Historic Preservation	No
Non-Governmental Organizations (NGOs)	
American Red Cross	No
Salvation Army	No
Veterans Groups	Yes
Environmental Organization	No
Homeowner Associations	No
Neighborhood Associations	Jameson Betterment Association
Chamber of Commerce	No
Community Organizations (Lions, Kiwanis, etc.)	Lions Club of Jameson
Local Funding Availability	
Ability to apply for Community Development Block Grants	No
Ability to fund projects through Capital Improvements funding	No
Authority to levy taxes for a specific purpose	Yes
Fees for water, sewer, gas, or electric services	Yes, sewer only
Impact fees for new development	No
Ability to incur debt through general obligation bonds	No
Ability to incur debt through special tax bonds	No
Ability to incur debt through private activities	No
Ability to withhold spending in hazard prone areas	No

Source: Data Collection Questionnaire, 8/20/2025

2.1.6 City of Jamesport

The city of Jamesport was laid out in 1856, built in 1858, but was not incorporated until 1872. Jamesport was named for its first two settlers, James Gillilan and James Allen. Jamesport is the home of the largest Amish community in Missouri. Jamesport is a total area of 0.56 square miles, all of which is land.

As of the 2023 census estimates, there were 628 people with 245 households living in the city. The population density was 1046 people per square mile. There were 284 housing units at an average density of 473 per square mile.

The racial makeup of the city was 94.9% White, 5.6% Black or African American, and 0.8%. American Indian and Alaska Native Hispanic or Latino of any race were 2.1% of the population.

There were 245 households, out of which 27.3% had children under the age of 18 living with them, 55.1% were married couples living together, 24.5% had a female householder with no spouse present, and 15.9% had someone living alone who was 65 years of age or older. The average household size was 256 and the average family size was 3.24.

In the city the population is distributed as follows: 17.8% under the age of 18 and 18.6% who were 65 years of age or older. The median age was 40.8 years. For every 100 females, there were 82.6 males. The median income for a household in the city was $46.875. About 11% of the population were below the poverty line, including 7% of those under age 18 and 5% of those age 65 or over.

Public education from kindergarten through 12th grade is provided by the Tri-County R-VII School District. K-6 is located at Tri-County Elementary School, and 7-12 is located at Tri-County High School. There are also five private schools in the area. The Jamesport Mennonite School provides education for 1st through 8th grades. The seven Amish schools in the area include Spring Hill, Country View, Hickory Hill (1-8), Meadow View (1-7), Oak Grove (1-8), and Walnut Creek (1-8), and Special Education School. There is also a New Order Amish School, Faith View School.

Jamesport has a lending library, a branch of the Daviess County Library.
The post office building collapsed in the summer of 2020 and the area has since been cleared. Temporary post office boxes have been placed until the new post office.
The downtown area contains mostly older brick buildings and contains retail shops mostly of antiques and quilting supplies, along with handmade goods from local artisans.

There is one Community Center called the Spillman Center, which holds craft fairs, holiday shopping fair events, and other events for large gatherings. On the southeast side of the downtown area, there is a community park, senior housing, 4-H fairgrounds and baseball fields.
The schools are located east of the downtown area. There is residential housing on the south, west and north sides of the downtown area. There are several Amish owned retail shops with bulk goods, recovery sales outlets, greenhouses, bakeries, and quilting stores outside of the city limits in the surrounding areas of Jamesport.

The city is governed by a Mayor and a City Council composed of 4 Aldermen.

There are currently no past or ongoing projects or programs designed to reduce disaster losses. There have been no approved projects submitted for FEMA mitigation grants as of December 2024.

The hazard-related concerns regarding the vulnerability of special needs populations (elderly, disabled, and low-income) are those concerns associated with warning and disaster recovery and rebuilding from tornadoes and earthquakes, as well as drought and severe temperatures.

There is 1 outdoor warning siren in the community, and it is activated by the city and 911 Coop. The city does not utilize any other warning systems. Some citizens utilize personal social media platforms to obtain general warnings for the area. There is 1 designated public tornado shelter and/or safe room in the city, and it is located in the Jamesport Baptist Church.

There has been no residential development since the last plan update in 2020. There have been some commercial and industrial developments in the City of Jamesport's surrounding area that are in the construction and agricultural industries. Jamesport Lumber Company, Jamesport Construction Company, a poultry growing facility, and a butchering and meat locker facility. There are no development trends or expected areas of growth, nor are there new facilities or infrastructures planned in the next 5 years.

The major employer in the city limits is the Tri-County R-VII School District. There is a major employer in the surrounding area, one that is in the construction industry, Jamesport Concrete, LLC., as identified by the Daviess County Commission.

The city has designated the City Clerk and the Mayor to be the designated Planning Committee Members. Both agreed to participate in the County Planning Committee. The City does not participate in the National Flood Insurance Program, as flooding is not a major concern in the city limits and the area around the city is agricultural and the surrounding retail shops are Amish-owned.

The city identified three high potential loss facilities, the Fire District Building, City Hall and the City's Maintenance Building. The city has no concerns regarding transportation and lifelines that would endanger or impede the normal functions of the city or its government.

The City of Jamesport's mitigation initiatives are:

- Early Warning Sirens
- Generator

- Weather Alerts
- Debris Removal and Regular Brush Clearing
- Emergency Preparedness Education
- Mutual Aid Agreements
- Weather Spotter Training
- Critical Facilities Back-Up
- Accessible Contact Information
- City Hazard Education for Land Development
- Vulnerable Population Identification
- Snow Removal

The City of Jamesport has had limited mitigation activities since the last plan update due to limited capabilities. The City of Jamesport expanding its mitigation capabilities is unlikely due to limited capabilities, both financially and in terms of staff availability.

Table 2.11. City of Jamesport Mitigation Capabilities

Capability	Status, *Including Date of Document or Policy*
Planning Capabilities	
Comprehensive Plan	
Builder's Plan	
Capital Improvement Plan	
Local Emergency Plan	6/3/2025 - updated
County Emergency Plan	
Local Recovery Plan	
County Recovery Plan	
Local Mitigation Plan	6/3/2025 - updated
County Mitigation Plan	
Economic Development Plan	
Transportation Plan	
Land-use Plan	
Flood Mitigation Assistance (FMA) Plan	
Watershed Plan	
Firewise or other fire mitigation plan	
School Mitigation Plan	
Critical Facilities Plan (Mitigation/Response/Recovery)	
Policies/Ordinance	
Zoning Ordinance	
Building Code	
Floodplain Ordinance	
Subdivision Ordinance	
Tree Trimming Ordinance	
Nuisance Ordinance	
Storm Water Ordinance	
Drainage Ordinance	
Seismic Construction Ordinance	
Capability	
Site Plan Review Requirements	
Historic Preservation Ordinance	
Landscape Ordinance	
Wetlands and Riparian Areas Conservation Plan	
Debris Management Plan	
Program	
Zoning/Land Use Restrictions	N/A
Codes Building Site/Design	N/A
National Flood Insurance Program (NFIP) Participant	

Capability	Status, *Including Date of Document or Policy*
NFIP Community Rating System (CRS) Participating Community	
Hazard Awareness Program	
National Weather Service (NWS) Storm Ready	
Building Code Effectiveness Grading (BCEGs)	
ISO Fire Rating	
Economic Development Program	
Land Use Program	
Public Education/Awareness	
Property Acquisition	
Planning/Zoning Boards	
Stream Maintenance Program	
Tree Trimming Program	
Engineering Studies for Streams (Local/County/Regional)	
Mutual Aid Agreements	
Studies/Reports/Maps	
Hazard Analysis/Risk Assessment (Local)	
Hazard Analysis/Risk Assessment (County)	
Flood Insurance Maps	
FEMA Flood Insurance Study (Detailed)	
Evacuation Route Map	
Critical Facilities Inventory	
Vulnerable Population Inventory	
Land Use Map	
Staff/Department	
Building Code Official	
Building Inspector	
Mapping Specialist (GIS)	
Engineer	
Development Planner	
Public Works Official	
Emergency Management Coordinator	
NFIP Floodplain Administrator	
Emergency Response Team	
Hazardous Materials Expert	
Local Emergency Planning Committee	
County Emergency Management Commission	David Cox
Sanitation Department	
Transportation Department	
Economic Development Department	
Housing Department	
Historic Preservation	
Non-Governmental Organizations (NGOs)	
American Red Cross	
Salvation Army	
Veterans Groups	
Environmental Organization	
Homeowner Associations	
Neighborhood Associations	
Chamber of Commerce	
Community Organizations (Lions, Kiwanis, etc.)	Yes
Local Funding Availability	
Ability to apply for Community Development Block Grants	Yes
Ability to fund projects through Capital Improvements funding	Yes
Authority to levy taxes for a specific purpose	Yes
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	

Capability	Status, *Including Date of Document or Policy*
Ability to incur debt through general obligation bonds	
Ability to incur debt through special tax bonds	
Ability to incur debt through private activities	
Ability to withhold spending in hazard prone areas	?

Source: Data Collection Questionnaire, 8/20/2025

Additional information obtained from the Jurisdictional Capabilities Questionnaire:

- In Jamesport, they have a mayor, and four city council members to make up their government.
- They have one outdoor warning siren and it is activated by county officials.
- Jamesport does have designated public tornado shelters/saferooms. The Baptist Churn on 201 Vine Street and the Methodist Church on 109 E Main.

2.1.7 City of Pattonsburg

In 1845, Pattonsburg was originally established as a settlement Elm Flats on the bottom lands on bank of Sampson Creek. Matthew Patton built Patton's Mill, a water mill on Big Creek. Elm Flats then became Pattonsburg because of the mill on the edge of town. This first location is now referred to as "Old Pattonsburg," because it was devastated by the Flood of 1993. As a result of the flooding, the City of Pattonsburg was moved to higher ground, four miles north of the original location, which is a location chosen by the residents of Pattonsburg. Pattonsburg has a total area of 0.606 square miles of land and 0.002 square miles of water.

As of the 2023 census estimates, there were 244 people with 75 households living in the city. The population density was 406 inhabitants per square mile. There were 124 housing units at an average density of 206 per square mile. The racial makeup of the city was 94% White, 7% African American. Hispanic or Latino of any race were 1.2% of the population. Within the 75 households 22% had children under the age of 18 living with them, 38% were married couples living together, 29% had a female householder with no spouse present, 18% had a male householder with no spouse present, and 22% had someone living alone who was 65 years of age or older. The average household size was 1.9 and the average family size was 25.

The median age in the city was 35.6 years. 7.8% of residents were under the age of 18 and 16.8% were 65 years of age or older. The gender makeup of the city was 66% male and 34% female.

The City of Pattonsburg is governed by a Mayor and City Council comprised of 5 members and a City Clerk. There are currently no past or ongoing projects or programs designed to reduce disaster losses.

There have been no approved projects submitted for FEMA mitigation grants as of December 2024. The city has no hazard-related concerns regarding the vulnerability of special needs populations (elderly, disabled, and low-income) because the population and concentration of citizens in the city limits is low. Therefore, the city has no major hazard-related concerns associated with warning and disaster recovery and rebuilding from tornadoes and earthquakes, as well as drought and severe temperatures.

There is one outdoor warning siren in the community activated by a key that is the responsibility of Pattonsburg Fire Protection District. The city does not utilize any other warning systems. Some citizens utilize personal social media platforms to obtain general warnings for the area. There is one designated public tornado shelter in the city limits and it is located at 1 Panther Drive in Pattonsburg.

The city contains a few businesses in the city limits. The Daviess-DeKalb Regional Jail employs around 50 employees and is the largest employer in the Pattonsburg area. Other smaller employers include Rob's Cycle with 10 employees, 110 Services with 8 employees, BTC Bank with 4 employees, the City of Pattonsburg with 4 employees and a medical clinic with 4 employees. Bailey's Underground is a company that does agricultural and commercial boring for underground utility lines and it is unknown how many people are employed. Tree Climber's Production Company is a book production and sales company, with a non-profit side of the company called Tree Climber's Association, and it is unknown how many are employed by either side. Smithfield Hog Production has a training facility in town, but training is only conducted sporadically, and the number of training attendees varies.

The Pattonsburg Fire Protection District has 28 volunteer firefighters, none of which work at or regularly spend time at the fire station, only occupying the station before and after calls or during the occasional fire meeting. The downtown strip has buildings attached to each other on either side. There has been no residential or industrial development since the last plan update in 2020. The only commercial development was by Rob's Cycle, which added a storage building behind the dealership. There are no development trends or expected areas of growth and no new development planned is the next 5 years. There are no major employers in the city limits.

The city has designated the City Clerk to be the designated Planning Committee Member. She has agreed to participate in the County Planning Committee.

The City does participate in the National Flood Insurance Program, but flooding is not a major concern within the city limits since the town moved to higher ground after the flood of 1993. The city identified 3 high potential loss facilities which include the City's Waterworks plant, the City's Wastewater Plant and the Fire Station. There are no concerns regarding transportation and lifelines that would endanger or impede the normal functions of the city or its government.

The City of Pattonsburg's mitigation initiatives include:

- Hazard Education for Those Involved in Land Development
- Weather Alerts
- Accessible Contact information
- Critical Facilities Back-Up
- Debris Removal and Regular Brush Clearing
- Emergency Preparedness Education
- Mutual Aid Agreements
- Storm Shelters
- Weather Spotter Training
- Vulnerable Population Identification
- Snow Removal
- Participation in NFIP

The City of Pattonsburg has had limited mitigation activities since the last plan update due to limited capabilities. The City of Pattonsburg expanding its mitigation capabilities is unlikely due to limited capabilities, both financially and in terms of staff availability.

Table 2.12. Pattonsburg Mitigation Capabilities

Capability	Status, *Including Date of Document or Policy*
Planning Capabilities	
Comprehensive Plan	Yes
Builder's Plan	
Capital Improvement Plan	
Local Emergency Plan	
County Emergency Plan	Water and Waste Water EOP 1-23-25
Local Recovery Plan	
County Recovery Plan	
Local Mitigation Plan	
County Mitigation Plan	Yes
Economic Development Plan	
Transportation Plan	
Land-use Plan	Yes
Flood Mitigation Assistance (FMA) Plan	
Watershed Plan	
Firewise or other fire mitigation plan	
School Mitigation Plan	
Critical Facilities Plan (Mitigation/Response/Recovery)	
Policies/Ordinance	
Zoning Ordinance	Yes Nov. 12, 1998
Building Code	Yes Nov. 12, 1998
Floodplain Ordinance	Yes/No
Subdivision Ordinance	Yes
Tree Trimming Ordinance	
Nuisance Ordinance	Yes
Storm Water Ordinance	
Drainage Ordinance	
Seismic Construction Ordinance	
Capability	
Site Plan Review Requirements	
Historic Preservation Ordinance	
Landscape Ordinance	
Wetlands and Riparian Areas Conservation Plan	
Debris Management Plan	
Program	
Zoning/Land Use Restrictions	Yes Nov. 12, 1998
Codes Building Site/Design	Yes Nov. 12, 1998
National Flood Insurance Program (NFIP) Participant	
NFIP Community Rating System (CRS) Participating Community	Yes
Hazard Awareness Program	Unknown
National Weather Service (NWS) Storm Ready	No
Building Code Effectiveness Grading (BCEGs)	
ISO Fire Rating	06/9/2020? 07/7x June 1, 2015
Economic Development Program	
Land Use Program	
Public Education/Awareness	
Property Acquisition	
Planning/Zoning Boards	
Stream Maintenance Program	
Tree Trimming Program	
Engineering Studies for Streams (Local/County/Regional)	
Mutual Aid Agreements	
Studies/Reports/Maps	
Hazard Analysis/Risk Assessment (Local)	
Hazard Analysis/Risk Assessment (County)	
Flood Insurance Maps	
FEMA Flood Insurance Study (Detailed)	

Capability	Status, *Including Date of Document or Policy*
Evacuation Route Map	No
Critical Facilities Inventory	
Vulnerable Population Inventory	
Land Use Map	
Staff/Department	
Building Code Official	City Employee
Building Inspector	City Employee
Mapping Specialist (GIS)	
Engineer	
Development Planner	
Public Works Official	
Emergency Management Coordinator	
NFIP Floodplain Administrator	
Emergency Response Team	
Hazardous Materials Expert	
Local Emergency Planning Committee	
County Emergency Management Commission	
Sanitation Department	
Transportation Department	
Economic Development Department	
Housing Department	
Historic Preservation	
Non-Governmental Organizations (NGOs)	
American Red Cross	
Salvation Army	
Veterans Groups	
Environmental Organization	
Homeowner Associations	
Neighborhood Associations	
Chamber of Commerce	
Community Organizations (Lions, Kiwanis, etc.)	Lions Club
Local Funding Availability	
Ability to apply for Community Development Block Grants	Yes
Ability to fund projects through Capital Improvements funding	Yes
Authority to levy taxes for a specific purpose	Yes
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	Yes
Ability to incur debt through general obligation bonds	Yes
Ability to incur debt through special tax bonds	Yes
Ability to incur debt through private activities	Yes
Ability to withhold spending in hazard prone areas	Yes

Source: Data Collection Questionnaire, 8/20/2025

- The City of Pattonsburg has a mayor, and five city council members to make up their government,
- They have no tornado shelters.
- For warning sirens, the Fire Department is notified by Daviess County Central 911 office, then a firefighter has to manually turn on the siren. The Daviess/Dekalb Co. Jail also can set off their siren during a hazardous event as well.
- The Daviess/Dekalb Co. Jail utilizes their warning siren if there is a jail break.
- The City of Pattonsburg has Pattonsburg R-ll School (Panther Drive Pattonsburg MO, 64670) as a designated tornado shelter/saferoom. It is unknown if it is in accordance with FEMA standards.
- There have been 4 residential homes that have been built since 1998 since the last plan update.
- Not much has changed since 1998, but they have noticed a big need for residential housing.

They have registered in three different surveys with the county. Two are for residential development and one is for commercial businesses. No new development is expected to occur in the 100-year floodplain or in any other hazardous areas.

- There are no plans currently for any new facilities or infrastructure in the city within the next five years.

2.2.2 Summary of Jurisdictional Capabilities

The Jurisdictional Capabilities are listed in the following table. The information in the table was obtained from the Jurisdictional Capabilities Questionnaire that was completed, as a requirement of being a plan participant.

Table 2.13. Mitigation Capabilities Summary Table

CAPABILITIES	Uninc. Daviess County	City of Coffey	City of Gallatin	Village of Jameson	City of Jamesport	City of Pattonsburg
Planning Capabilities						
Comprehensive Plan	No			No		Yes
Builder's Plan	No			No		
Capital Improvement Plan	No			No		
Local Emergency Plan	No			No		
County Emergency Plan	Yes			No		
Local Recovery Plan	N/A			No		
County Recovery Plan	LEOP			Yes		
Local Mitigation Plan	N/A			Yes		
County Mitigation Plan	Yes			Yes		
Debris Management Plan	Yes			No		
Economic Development Plan	No			No		
Transportation Plan	No			No		
Land-use Plan	No			No		
Flood Mitigation Assistance (FMA) Plan	No			No		
Watershed Plan	No			No		
Firewise or other fire mitigation plan	No			Yes		
School Mitigation Plan	No			Yes		
Critical Facilities Plan (Mitigation/Response/Recovery)	No			No		
Policies/Ordinance						
Zoning Ordinance	No			No		
Building Code	No			No		
Floodplain Ordinance	No			No		
Subdivision Ordinance	No			No		
Tree Trimming Ordinance	No			No		
Nuisance Ordinance	No			No		
Storm Water Ordinance	No			No		
Drainage Ordinance	No			No		
Site Plan Review Requirements	No			No		

CAPABILITIES	Uninc. Daviess County	City of Coffey	City of Gallatin	Village of Jameson	City of Jamesport	City of Pattonsburg
Historic Preservation Ordinance	No			No		
Landscape Ordinance	No			No		
Seismic Construction Ordinance	No			No		
Program						
Zoning/Land Use Restrictions	**No**			**No**		
Codes Building Site/Design	No			No		
National Flood Insurance Program (NFIP) Participant	No			No		
NFIP Community Rating System (CRS) Participating Community	No			No		
Hazard Awareness Program	LEPC			No		
National Weather Service (NWS) Storm Ready	Mostly			No		
Building Code Effectiveness Grading (BCEGs)	No			No		
ISO Fire Rating	No			No		
Economic Development Program	No			No		
Land Use Program	No			No		
Public Education/Awareness	LEPC			No		
Property Acquisition	No			No		
Planning/Zoning Boards	No			No		
Stream Maintenance Program	No			No		
Tree Trimming Program	No			No		
Engineering Studies for Streams (Local/County/Regional)	No			No		
Mutual Aid Agreements	MO SCOPE			No		
Studies/Reports/Maps						
Hazard Analysis/Risk Assessment (Local)	**Region H THIRA**			**No**		
Hazard Analysis/Risk Assessment (County)	Region H THIRA			No		
Flood Insurance Maps	SEMA			No		
FEMA Flood Insurance Study (Detailed)	SEMA Floodplain			No		
Evacuation Route Map	LEOP			No		
Critical Facilities Inventory	LEOP			No		
Vulnerable Population Inventory	No			No		
Land Use Map	No			No		
Staff/Department						

CAPABILITIES	Uninc. Daviess County	City of Coffey	City of Gallatin	Village of Jameson	City of Jamesport	City of Pattonsburg
Building Code Official	**None**			**No**		
Building Inspector	None			No		
Mapping Specialist (GIS)	None			No		
Engineer	None			No		
Development Planner	None			No		
Public Works Official	None			No		
Emergency Management Coordinator	Yes			No		
NFIP Floodplain Administrator	None			No		
Emergency Response Team	None			No		
Hazardous Materials Expert	Region H			No		
Local Emergency Planning Committee	Yes			No		
County Emergency Management Commission	No			Yes		
Sanitation Department	No			No		
Transportation Department	No			No		
Economic Development Department	No			No		
Housing Department	No			No		
Historic Preservation	No			No		
Non-Governmental Organizations (NGOs)						
American Red Cross	**St. Joseph**			**No**		
Salvation Army	St. Louis			No		
Veterans Groups	N/A			Yes		
Environmental Organization	No			No		
Homeowner Associations	Lake Viking			No		
Neighborhood Associations	Lake Viking			Yes		
Chamber of Commerce	No			No		
Community Organizations (Lions, Kiwanis, etc.)	4-H, Rotary			Yes		

Financial Resources						
Apply for Community Development Block Grants	**Yes**			**No**		
Fund projects through Capital Improvements funding	Yes			No		
Authority to levy taxes for specific purposes	Yes			Yes		

CAPABILITIES	Uninc. Daviess County	City of Coffey	City of Gallatin	Village of Jameson	City of Jamesport	City of Pattonsburg
Fees for water, sewer, gas, or electric services	No			Yes		
Impact fees for new development	No			No		
Incur debt through general obligation bonds	No			No		
Incur debt through special tax bonds	No			No		
Incur debt through private activities	Yes			No		
Withhold spending in hazard prone areas	No			No		

Source: Data Collection Questionnaire, August 2025

2.2.3 Special District

Describe the purpose of the special district, the area it covers, whether or not it is a public entity, how it is governed (Board of Trustees who are appointed or elected). Does it have the power to levy taxes? Who owns it? How is it funded? List the departments, such as:

- Customer Service
- Information Technology
- Human Resources
- Water Distribution and Grounds
- Engineering
- Finance
- Office of the CEO / General Manager
- Water Production

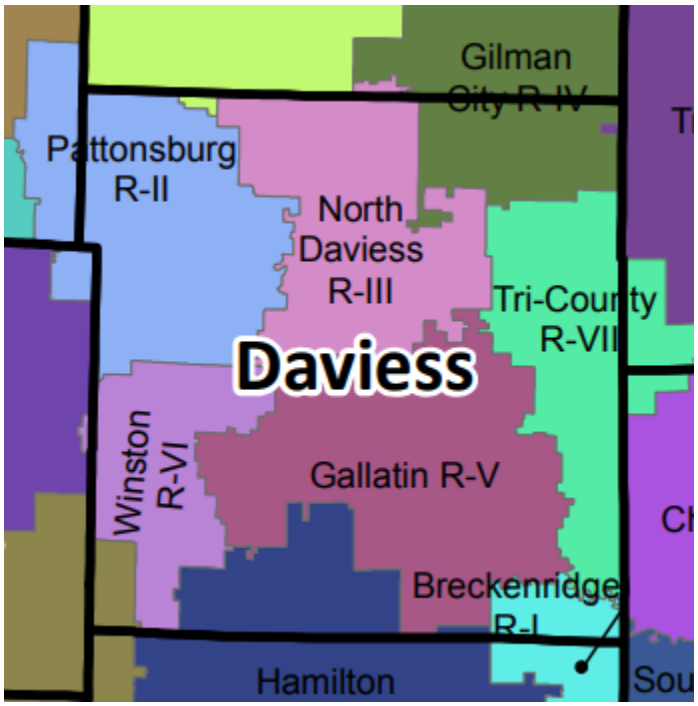
List past or ongoing projects or programs designed to reduce disaster losses, such as a levees or flood walls protecting a portion of the facility. List mitigation-related capabilities such as:

- On-site warning sirens
- Weather radios
- Mutual Aid Agreements in place
- Critical Facilities Inventory
- Engineer on Staff
- Emergency Management Coordinator on Staff
- Ability to fund projects through Capital Improvements Funding
- Fees collected for water services
- Financial Resources from Impact fees for new development
- Ability to withhold spending in hazard prone areas

2.2.4 School District Profiles and Mitigation Capabilities

Daviess County contains 5 public school districts. There are 7 private schools in Daviess County, all of which are run by the Amish and Mennonite Religious Communities, none of which participated in the plan update.

Figure 2.8 School Districts of Daviess County



Schools and School Districts of Daviess County
Public Schools

Gallatin R-V School District – Gallatin, MO
602 S Olive St. Gallatin, MO 64640-9471
Phone: 660-663-2171
Fax: 660-663-2559
E-mail: jcollins@gallatin.k12.mo.us
Assessed Valuation: $55,239,739
Covel D. Searcy Elementary School (PK-04)
Gallatin Middle School (05-08)
Gallatin High School (09-12)

North Daviess County R-III School District – Jameson, MO
413 E 2nd St. Jameson, MO 64647-0172
Phone: 660-828-4123
Fax: 660-828-4122
E-mail: superintendent@northdaviessr-iii.com
Assessed Valuation: $14,290,879
North Daviess County Elementary School (PK-06)
North Daviess County High School (07-12)

Pattonsburg R-II School District – Pattonsburg, MO
1 Panther Drive P.O. Box 200 Pattonsburg, MO 64670-0200
Phone: 660-367-2111
Fax: 660-367-4205
E-mail: bpottorff@pattonsburg.k12.mo.us
Assessed Valuation: $19,060,505
Pattonsburg Elementary School (PK-06)
Pattonsburg High School (07-12)

Tri-County R-VII School District – Jamesport, MO

904 W Auberry Grove Jamesport, MO 64648-7374
Phone: 660-684-6118
Fax: 660-684-6218
E-mail: dprobasco@trico.k12.mo.us
Assessed Valuation: $27,989,060
Tri-County Elementary School (K-06)
Tri-County High School (07-12)

Winston R-VI School District – Winston, MO
200 W Third P.O. Box 38 Winston, MO 64689-0038
Phone: 660-339-6462
Fax: 660-339-6468
E-mail: brobinson@winston.k12.mo.us
Assessed Valuation: $31,312,967
Winston Elementary School (PK-06)
Winston High School (07-12)

There are several private schools in the planning district. There is a large Amish population in the county, and there is also a private Mormon school. They were all invited to participate in the plan development but did not attend meetings. They will be invited to attend during the next update of the plan.

Table 2.14. Daviess County Buildings and Enrollment Data, August 2025

District Name	Building Name	Building Enrolment
Gallatin R-V School District		
North Daviess County R-III School District		
Pattonsburg R-II School District		
Tri-County R-VII School District		
Winston R-VI School District		

Source: https://dese.mo.gov/school-data, August 28, 2025

Table 2.15. Summary of Mitigation Capabilities-Daviess County School Districts

Capability	Gallatin R-V School District	North Daviess County R-III School District	Pattonsburg R-II School District	Tri-County R-VII School District	Winston R-VI School District
Planning Elements					
Master Plan/ Date			June 2021		Yes, Unknown
Capital Improvement Plan/Date			January 2025		2017, updates are in progress
School Emergency Plan / Date			August 2024		2024
Weapons Policy/Date			Annually		July 2014. Policy 1432
Personnel Resources					
Full-Time Building Official (Principal)			Several		No
Emergency Manager			Bill Pottorff Superintendent		Collaborating with county departments
Grant Writer			N/A		Falls under superintendent role
Public Information Officer			N/A		No
Financial Resources					
Capital Improvements Project Funding			Yes		Yes, limited
Local Funds			Yes		Yes, limited
General Obligation Bonds			Yes		
Special Tax Bonds			Yes		
Private Activities/Donations			Yes		
State and Federal Funds/Grants			Yes		Yes, limited
Other					
Public Education Programs					
Privately or Self- Insured?					
Fire Evacuation Training					
Tornado Sheltering Exercises					
Public Address/Emergency Alert System					
NOAA Weather Radios					
Lock-Down Security Training					
Mitigation Programs					
Tornado Shelter/Saferoom					
Campus Police					

Source: Data Collection Questionnaire, August 2025

44 CFR Requirement §201.6(c)(3): The plan shall include a mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.

This section presents the mitigation strategy updated by the Mitigation Planning Committee (MPC) based on the [updated] risk assessment. The mitigation strategy was developed through a collaborative group process. The process included review of [updated] general goal statements to guide the jurisdictions in lessening disaster impacts as well as specific mitigation actions to directly reduce vulnerability to hazards and losses. The following definitions are taken from FEMA's *Local Mitigation Planning Policy Guide (2023)*

- **Goals** are broad, long-term policy and vision statements that explain what is to be achieved by implementing the mitigation strategy.

- A **mitigation action** is a measure, project, plan or activity proposed to reduce current and future vulnerabilities described in the risk assessment.

4.1 Goals

44 CFR Requirement §201.6(c)(3)(i): [The hazard mitigation strategy shall include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

This planning effort is an update to Daviess County's existing hazard mitigation plan approved by FEMA on September 20, 2021. Therefore, the goals from the 2021 Daviess County Hazard Mitigation Plan were reviewed to see if they were still valid, feasible, practical, and applicable to the defined hazard impacts. The MPC conducted a discussion session during their second meeting to review and update the plan goals. To ensure that the goals developed for this update were comprehensive and supported State goals, the 2023 State Hazard Mitigation Plan goals were reviewed and updated. The MPC also reviewed the goals from current surrounding county plans.

During the second MPC meeting, the results of the risk assessment update were provided to the MPC members for review, and the key issues were identified for specific hazards. Changes in risk since adoption of the previously approved plan were discussed. Actions from the previous plan included completed actions, on-going actions, and actions upon which progress had not been made. The MPC discussed SEMA's identified funding priorities and the types of mitigation actions generally recognized by FEMA.

The MPC included problem statements in the plan update at the end of each hazard profile. The

problem statements summarize the risk to the planning area presented by each hazard and include possible methods to reduce that risk. Use of the problem statements allowed the MPC to recognize new and innovative strategies for mitigating risks in the planning area.

The focus of Meeting #3 was update of the mitigation strategy. For a comprehensive range of mitigation actions to be considered, the MPC reviewed the following information during Meeting #3:

- A list of actions proposed in the previous mitigation plan, the current 2023 State Plan, and approved plans in surrounding counties,
- Key issues from the risk assessments, including the problem statements concluding each hazard profile and vulnerability analysis,
- State priorities established for HMA grants, and
- Public input during meetings, responses to data collection questionnaires, and other efforts to involve the public in the plan development process.

For Meeting #3, individual jurisdictions, including school and special districts, developed final mitigation strategy for submission to the MPC. They were encouraged to review the details of the risk assessment vulnerability analysis specific to their jurisdiction. They were also provided a link to the FEMA's publication, *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards (January 2013).* This document was developed by FEMA as a resource for identification of a range of potential mitigation actions for reducing risk to natural hazards and disasters.

The MPC reviewed the actions from the previously approved plan for progress made since the plan had been adopted, using worksheets included in Appendix C of this plan. Prior to Meeting #3, the list of actions for each jurisdiction was emailed to that jurisdiction's MPC representative along with the worksheets. Each jurisdiction was instructed to provide information regarding the "Action Status" with one of the following status choices:

- Completed, with a description of the progress;
- Ongoing, with a description of the progress made to date; or
- Not Yet Started, with a discussion of the reasons for lack of progress.

Additionally, the future inclusion of each mitigation action in the plan update was identified as either keep, delete, or modify. Based on the status updates, there were xx completed actions, xx continuing actions (either ongoing or modified), and xx deleted actions.

Table 4.1 provides a summary of the action statuses for each jurisdiction:

Table 4.1. Action Status Summary

Jurisdiction	Completed Actions	Continuing Actions (ongoing or modify)	Deleted Actions
Daviess County	3	10	1
Coffey			
Gallatin			
Jameson			
Jamesport			
Pattonsburg			
Pattonsburg R-II			
North Daviess R-III			
Gallatin R-V			

Winston R-VI			
Pattonsburg Rescue and Fire protection district			

Table 4.2 provides a summary of the completed and deleted actions from the previous plan.

Table 4.2. Summary of Completed and Deleted Actions from the Previous Plan

Completed Actions	Completion Details (date, amount, funding source)
Gallatin: Dump Truck	05/01/2017; $150,000; HMGP with local fund match
Gallatin: AMI Meters	Acquired with local funds
Post elevation certificates to local website	09/09/2018; N/A; Staff time for scanning elevation certificates and posting to community website
Deleted Actions	**Reason for Deletion**
Implement a stormwater utility to maintain drainage infrastructure.	No political support at this time.

Source: Previously approved County Hazard Mitigation Plan; Data Collection Questionnaires.

The MPC, when discussing proposed actions, discussed the potential benefits of the proposed actions and considered if the proposed actions cost would be financially responsible. The cost of a proposed action was weighed against potential future savings. Only those actions that were considered financially beneficial and responsible were included in the plan.

Due to limited resources in the region several actions were removed from the previous plan, as they were determined to not be feasible with the current resources of the region.

4.2 Implementation of Mitigation Actions

44 CFR Requirement §201.6(c)(3)(ii): The mitigation strategy shall include an action strategy describing how the actions identified in paragraph (c)(2)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefits review of the proposed projects and their associated costs.

Jurisdictional MPC members were encouraged to meet with others in their community to finalize the actions to be submitted for the updated mitigation strategy. Throughout the MPC consideration and discussion, emphasis was placed on the importance of a benefit-cost analysis in determining project priority. The Disaster Mitigation Act requires benefit-cost review as the primary method by which mitigation projects should be prioritized. The MPC decided to pursue implementation according to when and where damage occurs, available funding, political will, jurisdictional priority, and priorities identified in the 2023 Missouri State Hazard Mitigation Plan. The benefit/cost review at the planning stage primarily consisted of a qualitative analysis and was not the detailed process required grant funding application. For each action, the plan sets forth a narrative describing the types of benefits that could be realized from action implementation. The cost was estimated as closely as possible, with further refinement to be supplied as project development occurs.

FEMA's STAPLEE methodology was used to assess the costs and benefits, overall feasibility of mitigation actions, and other issues impacting project. During the prioritization process, the jurisdictions used worksheets to assign scores. The worksheets posed questions based on the

STAPLEE elements as well as the potential mitigation effectiveness of each action. Scores were based on the responses to the questions as follows:

Definitely YES = 3 points
Maybe YES = 2 points
Probably NO = 1 points
Definitely NO = 0 points

The following questions were asked for each proposed action.

S: Is the action socially acceptable?
T: Is the action technically feasible and potentially successful?
A: Does the jurisdiction have the administrative capability to successfully implement this action?
P: Is the action politically acceptable?
L: Does the jurisdiction have the legal authority to implement the action?
E: Is the action economically beneficial?
E: Will the project have an environmental impact that is either beneficial or neutral? (score “3” if positive and “2” if neutral)

Will the implemented action result in lives saved?
Will the implanted action result in a reduction of disaster damage?

The final scores are listed below in the analysis of each action. The worksheets are attached to this plan as Appendix C. The STAPLEE final score for each action, absent other considerations, such as a localized need for a project, determined the priority. Low priority action items were those that had a total score of between 0 and 24. Moderate priority actions were those scoring between 25 and 29. High priority actions scored 30 or above. A blank STAPLEE worksheet is shown in Figure 4.1

Figure 4.1. Blank STAPLEE Worksheet

STAPLEE Worksheet		
Name of Jurisdiction:		
Action or Project		
Action/Project Number:	Insert a unique action number for this action for future tracking purposes. This can be a combination of the jurisdiction name, followed by the goal number and action number (i.e. Joplin1.1)	
Name of Action or Project:		
Mitigation Category:	Prevention; Structure and Infrastructure Projects; Natural Systems Protection; Education and Outreach; Emergency Services	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		
T: Is it **Technically** feasible and potentially successful?		
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		
P: Is it **Politically** acceptable?		
L: Is there **Legal** authority to implement?		
E: Is it **Economically** beneficial?		
E: Will the project have either a neutral or positive impact on the natural **Environment**?		
Will historic structures be saved or protected?		
Could it be implemented quickly?		
STAPLEE SCORE		
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	
MITIGATION EFFECTIVENESS SCORE		
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

The goals and actions **must** be consistent with the hazards identified in the plan. For each jurisdiction, the hazards identified with the highest (1) probability and (2) historic damage **must** have strategy to mitigate future damages. Note that each jurisdiction participating in the plan must have mitigation actions specific to that jurisdiction that are based on the community's risk and vulnerabilities, as well as community priorities. See Task 6, *Local Mitigation Planning Handbook (2023)*. Include narrative explaining how this was done.

The plan **must** address continued compliance with NFIP regulatory actions for participating jurisdictions. Simply stating "The community will continue to comply with NFIP," will not meet this requirement. The description could include, but is not limited to:

- Adoption and enforcement of floodplain management requirements, including regulating new construction in Special Flood Hazard Areas (SFHAs);
- Floodplain identification and mapping, including any local requests for map updates; or
- Description of community assistance and monitoring activities.

Jurisdictions where an FHBM or FIRM has been issued that are currently not participating in the NFIP and may meet this requirement by describing the reasons why the community does not participate. See Task 5.3, *Local Mitigation Planning Handbook (2023)*.

Analyze each of the final mitigation actions using the following worksheet, **and include the analysis in the plan**, along with an introductory paragraph explaining methodology[8(a)]. Each jurisdiction **must** complete an action worksheet for each hazard identified. Organize the actions by the goal statement that they fall under and include a completed worksheet for each new and continuing mitigation action. Be careful to ensure that the plan for implementation is specific to each jurisdiction. For example, responsible department, planning mechanism to be used in implementation, status, and other elements should all be specific to the subject jurisdiction.

A summary table (**Table 4.3**) of mitigation actions is also recommended.

The plan MUST describe prioritization criteria. The criteria MUST include an emphasis on maximized benefits in relation to cost of action. This can be done by including STAPLEEs in Appendix C (Reference PRT C5-a) and referencing them in the narrative.

The plan MUST analyze a comprehensive range of mitigation actions/projects – including regulation, infrastructure, natural systems protection, education & awareness - to reduce the hazards identified in the risk assessment. This is mostly complete within the Action Worksheets, but add narrative as needed for any Assets at Risk identified on page 3.7. (Reference PRT C4-a)

The plan MUST identify one or more action for each hazard addressed in the risk assessment. The Mitigation Category should be one of the following: Structure and Infrastructure, Planning and Regulation, Natural Systems Protection, or Education and Outreach (Reference PRT C4-b)

The plan MUST identify the entity that will implement the action, potential timeframe for completion, and a potential funding source (Reference PRT C5-b).

- Action Worksheets must identify expected time frames for completion. General terms like "short-term," "medium-term" and "long-term" must be defined. "Ongoing" is acceptable when used appropriately (e.g., for multi-phased projects).
- Action Worksheet funding source cannot be generic such as "grant" or "federal" and cannot be vague such as "other". Sources of local funding may include the general operating budget, capital improvement budgets, staff time, impact fees, special assessment districts and more.

The plan MUST indicate the status of all actions – whether they were completed or not, for each jurisdiction. If the action was not completed, the plan MUST state whether the action is no longer relevant or will stay included. Reference any documentation in Appendix C as appropriate. (Reference PRT E2-b)

The planner should verify Table 4.3 is identical to Table 1 in the Executive Summary and includes all actions from Chapter 4 (and Appendix C as appropriate).

See Local Mitigation Planning Handbook (2023) and Mitigation Ideas (2013) for ideas.

ACTION WORKSHEET

Action Worksheet	
Name of Jurisdiction:	
Risk / Vulnerability	
Hazard(s) Addressed:	List the hazard or hazards that will be addressed by this action
Problem being Mitigated:	Provide a brief description of the problem that the action will address. Utilize the problem statement developed in the risk assessment.
Action or Project	
Applicable Goal Statement:	Choose the goal statement that applies to this action
Action/Project Number:	Insert a unique action number for this action for future tracking purposes. This can be a combination of the jurisdiction name, followed by the goal number and action number (i.e. Joplin1.1)
Name of Action or Project:	
Mitigation Category:	Prevention; Structure and Infrastructure Projects; Natural Systems Protection; Education and Outreach; Emergency Services
Action or Project Description:	Describe the action or project.
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	Provide a narrative describing the losses that will be avoided by implementing this action. If dollar amounts of avoided losses are known, include them as well.
Plan for Implementation	
Responsible Organization/Department:	Which organization will be responsible for tracking this action? Be specific to include the specific department or position within a department.
Supporting Organization/Department:	Which organization/department will assist in implementation of this action?
Action/Project Priority:	Include the STAPLEE score and Priority (H, M, L)
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	List specific funding sources that may be used to pay for the implementation of the action.
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress:	For Continuing actions only, indicate the report on progress. If the action is not started, indicate any barriers encountered to initiate the action. If the action is in progress, indicate the activity that has occurred to date.

Daviess County Actions

Action Worksheet	
Name of Jurisdiction:	DAVIESS COUNTY
Risk / Vulnerability	
Hazard(s) Addressed:	Severe thunderstorm and Tornado
Problem being Mitigated:	Weather Alerting, Sirens and Mass notifications
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning.
Action/Project Number:	County - 2025.1
Name of Action or Project:	**Installation weather warning systems**
Mitigation Category:	Prevention, Structure and Infrastructure Projects, Emergency Services
Action or Project Description:	Installation of warning sirens in un-covered areas of the county, add mass notification systems and promote weather radio purchases.
Estimated Cost:	$45,000 per siren or $270,000 for 6 sirens
Benefits:	With adequate time for warning of storms, residents can seek cover to help minimize the loss of life.
Plan for Implementation	
Responsible Organization/Department:	County EMD
Supporting Organization/Department:	County Commission
Action/Project Priority:	Medium Priority
Timeline for Completion:	1-5 years
Potential Fund Sources:	Hazard Mitigation Grant Funds
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP
Progress Report	
Action Status:	Continued
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	DAVIESS COUNTY
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Lack of public knowledge about natural disasters.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	County - 2025.2
Name of Action or Project:	**PUBLIC MITIGATION EDUCATION**
Mitigation Category:	Education and Outreach
Action or Project Description:	Provide education on the hazards faced in the county and what steps the public can take to mitigate losses.
Estimated Cost:	$500
Benefits:	The general population will increase understanding of natural disasters and how to reduce risk to life and property from the hazards
Plan for Implementation	
Responsible Organization/Department:	Daviess County Emergency Management
Supporting Organization/Department:	SEMA, FEMA, NWS, USGS
Action/Project Priority:	Medium
Timeline for Completion:	2026
Potential Fund Sources:	Emergency management budget, General Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	unknown
Progress Report	
Action Status:	Ongoing
Report of Progress:	Continue, In Progress

Action Worksheet	
Name of Jurisdiction:	DAVIESS COUNTY
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Severe thunderstorms, Severe winter weather, Tornado
Problem being Mitigated:	Transportation routes can be disrupted by debris caused by natural disasters.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	County – 2025.3
Name of Action or Project:	**DEBRIS REMOVAL**
Mitigation Category:	Structure and Infrastructure
Action or Project Description:	Mitigate the risk to life and property and promote continued operation of government and emergency functions by regularly removing debris as needed along transportation routes and drainage systems.
Estimated Cost:	$500,000
Benefits:	Frequent removal of debris will help keep roadways and drainage systems clear. Emergency services can response quicker to emergencies. Stormwater can drain effectively and reduce the risk of flooding with regular removal of debris.
Plan for Implementation	
Responsible Organization/Department:	Road and Bridge Department, EMD
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential Fund Sources:	General Revenue, Hazard mitigation grants, Flood mitigation assistance grants, Department of transportation.
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP, Debris management plan, Transportation plan
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	DAVIESS COUNTY
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure
Problem being Mitigated:	Significant infrastructure damage occurs in floodplains protected by dam.
Action or Project	
Applicable Goal Statement:	Goal 2: Minimize property damage due to flooding, levee failure or dam incidents.
Action/Project Number:	County – 2025.4
Name of Action or Project:	**CONSTRUCTION UPGRADES TO PROTECT INFRASTRUCTURE**
Mitigation Category:	Structure and Infrastructure Mitigation Projects
Action or Project Description:	In situations in which flood waters tend to wash out roads repeatedly, construct mitigation measures, such as larger tubes, embankment reinforcement, and diversion structures.
Estimated Cost:	$2,000,000
Benefits:	Construction upgrades will improve the integrity of Daviess County infrastructure in a hazard event.
Plan for Implementation	
Responsible Organization/Department:	Daviess County Highway Department (Road and Bridge)
Supporting Organization/Department:	Daviess County Commission
Action/Project Priority:	High
Timeline for Completion:	5 years
Potential Fund Sources:	Hazard mitigation grants, flood mitigation grants, Department of transportation, community development block grants, and county transportation budget.
Local Planning Mechanisms to be Used in Implementation, if any:	None
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	DAVIESS COUNTY
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Severe thunderstorms, Severe winter weather, Tornado
Problem being Mitigated:	Backup utility and communications services for critical facilities
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	County – 2020.5
Name of Action or Project:	**CRITICAL FACILITIES UTITLTY AND COMMUNCATIONS BACK-UP**
Mitigation Category:	Emergency Services
Action or Project Description:	Assist critical facilities with acquiring backup generator, transfer switches and or back up communications systems for command and control of critical assets.
Estimated Cost:	$1,000 to $1,000,000
Benefits:	Critical facilities, such as schools, water systems and other community lifelines can operate in the event of a disruption to utility services.
Plan for Implementation	
Responsible Organization/Department:	Presiding Commissioner, Mayors, Superintendents
Supporting Organization/Department:	
Action/Project Priority:	HIGH
Timeline for Completion:	5 years
Potential Fund Sources:	Hazard mitigation grant funding, Community capital funding, Assistance to firefighters grants.
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP
Progress Report	
Action Status:	Continued – In Progress
Report of Progress:	None

Action Worksheet	
Name of Jurisdiction:	DAVIESS COUNTY
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	It is necessary to maintain and update Mutual Aid Agreements for swift response to provide support during a natural disaster.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	County – 2025.6
Name of Action or Project:	**MUTUAL AID AGREEMENTS**
Mitigation Category:	Emergency Services
Action or Project Description:	Execute and maintain mutual aid agreements with partners such as law enforcement, fire, EMS and public works
Estimated Cost:	$500
Benefits:	Mutual Aid Agreements will expedite swifter response for assistance from organizations with whom the County has agreements during and after a natural disaster.
Plan for Implementation	
Responsible Organization/Department:	Daviess County Fire Departments, Public works, law enforcement and Ambulance Districts
Supporting Organization/Department:	Daviess County EMD, Daviess County Commission
Action/Project Priority:	HIGH
Timeline for Completion:	5 years
Potential Fund Sources:	General revenue budgets
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP
Progress Report	
Action Status:	Continued, In Progress
Report of Progress:	None

Action Worksheet	
Name of Jurisdiction:	DAVIESS COUNTY
Risk / Vulnerability	
Hazard(s) Addressed:	Severe thunderstorms, Tornado
Problem being Mitigated:	Storm shelters are effective in mitigating the loss of property and life during tornados and severe thunderstorms. A community-wide storm shelter program should be adopted for residents who may not have adequate shelter in their homes to minimize the potential for loss of life. School safe rooms can protect students from injury during a thunderstorm, tornado or natural wind event/disaster.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning.
Action/Project Number:	County – 2025.7
Name of Action or Project:	**STORM SHELTERS / BUILDING RETROFITTING**
Mitigation Category:	Structure and Infrastructure Projects
Action or Project Description:	Utilize grant funds and local resources to construct storm shelters, or retrofit existing buildings in locations with insufficient protection including, but not limited to, schools, local recreation areas, and public facilities in the county
Estimated Cost:	$50,000 to $500,000
Benefits:	Storm shelters can protect the lives of individuals in a thunderstorm, tornado or hazardous wind event who may not have other options for sufficient shelter.
Plan for Implementation	
Responsible Organization/Department:	Daviess County EMD, County Commission
Supporting Organization/Department:	Local fire departments, Local Police Departments, GHRPC
Action/Project Priority:	High
Timeline for Completion:	5 years
Potential Fund Sources:	General Revenue, Capital projects, Hazard mitigation grant, school safety grants. Community development block grants
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP, School safety plans, Capital improvement plans
Progress Report	
Action Status:	Continued
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	DAVIESS COUNTY
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure
Problem being Mitigated:	Flooding of Daviess County Creeks has proven to be costly to the residents of Daviess County.
Action or Project	
Applicable Goal Statement:	Goal 2: Minimize property damage due to flooding, levee failure or dam incidents
Action/Project Number:	County – 2025.8
Name of Action or Project:	**FLOOD MITIGATION PROJECTS**
Mitigation Category:	Structure and Infrastructure Projects
Action or Project Description:	Evaluate, design, and improve infrastructure systems, such as tubes, drains and bridges to mitigate future losses by upsizing, or realignment where needed
Estimated Cost:	$500,000 to $1,000,000
Benefits:	Construction or modification of culverts, levees, floodwalls, berms, etc. can decrease the risk of floodwaters damaging homes, businesses and roadways, etc.
Plan for Implementation	
Responsible Organization/Department:	Daviess County Road and Bridge Department
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	2030
Potential Fund Sources:	General revenue, Capital projects, Road and Bridge, MODOT, Hazard Mitigation grant funding
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP, Transportation capital improvement plan,
Progress Report	
Action Status:	Ongoing
Report of Progress:	Continued Progress

Action Worksheet	
Name of Jurisdiction:	CITY OF COFFEY
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Severe thunderstorms, Severe winter weather, Tornado
Problem being Mitigated:	Early Warning systems
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather
Action/Project Number:	CC - 2025.1
Name of Action or Project:	**INSTALLATION OF WARNING SYSTEMS**
Mitigation Category:	Prevention, Structure and Infrastructure Projects, Emergency Services
Action or Project Description:	Installation of warning systems, such as Weather Radios, Warning sirens, and Mass notification systems to alert the public of hazardous events
Estimated Cost:	$50,000
Benefits:	With adequate time for warning of storms, residents take action to reduce the risk to life and property.
Plan for Implementation	
Responsible Organization/Department:	City Officials, County EMD
Supporting Organization/Department:	Daviess County Commission
Action/Project Priority:	Medium Priority
Timeline for Completion:	5 years
Potential Fund Sources:	Hazard Mitigation Grant Funds, Capital projects
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	Continued
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF COFFEY
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Severe thunderstorms, Severe winter weather, Tornado
Problem being Mitigated:	Transportation routes can be disrupted by debris buildup caused by natural disasters.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CC – 2025.2
Name of Action or Project:	**DEBRIS REMOVAL**
Mitigation Category:	Structure and Infrastructure
Action or Project Description:	Mitigate the risk to life and property by regularly removing debris as needed along transportation routes and drainage systems.
Estimated Cost:	$50,000
Benefits:	Frequent removal of debris will help keep roadways and drainage systems clear. Emergency services will be able to respond quicker to emergencies. Stormwater can drain effectively and reduce the risk of flooding with regular removal of debris.
Plan for Implementation	
Responsible Organization/Department:	Mayor. Town board
Supporting Organization/Department:	County Road and Bridge Department, MODOT, Townships
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential Fund Sources:	Hazard mitigation grant program, Flood mitigation assistance grant, Public works budget.
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP, Debris management plan.
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF COFFEY
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Mitigation remains the best option to reduce the impacts of hazard events
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CC – 2025.3
Name of Action or Project:	**MUTUAL AID AGREEMENTS**
Mitigation Category:	Emergency Services
Action or Project Description:	Execute and maintain mutual aid agreements with partners from Law enforcement, Fire, EMS and Public works.
Estimated Cost:	$500
Benefits:	Mutual Aid Agreements will expedite response for assistance from organizations.
Plan for Implementation	
Responsible Organization/Department:	City government
Supporting Organization/Department:	Daviess County EMD
Action/Project Priority:	HIGH
Timeline for Completion:	1 year
Potential Fund Sources:	General revenue
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF COFFEY
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Earthquakes, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado,
Problem being Mitigated:	Loss of critical facilities following an event due to utility or communications failures
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CC – 2025.4
Name of Action or Project:	**CRITICAL FACILITIES UTILITY BACK-UPS**
Mitigation Category:	Emergency Services
Action or Project Description:	Assist critical facilities with emergency utility options such as back up generators, transfer switches, and back up communications for command and control.
Estimated Cost:	$1,000 to $1,000,0000
Benefits:	Critical facilities can continue to operate in the event of a disaster.
Plan for Implementation	
Responsible Organization/Department:	Mayor, City Council, Local Emergency Coordinator
Supporting Organization/Department:	County EMD
Action/Project Priority:	HIGH
Timeline for Completion:	1 – 5 years
Potential Fund Sources:	Hazard mitigation grant funding, Capital projects
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP, Mutual Aid Agreements, Capital improvement plan
Progress Report	
Action Status:	Continued
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF COFFEY
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Extreme temperatures (severe heat and severe cold) present hardship and high risk for injury or death to county citizens, especially the very young and old.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CC – 2025.5
Name of Action or Project:	**VULNERABLE POPULATION IDENTIFICATION**
Mitigation Category:	Emergency Services
Action or Project Description:	Identify and maintain list of local vulnerable populations that are the most susceptible to extreme heat and cold, as well as other hazards to ensure that local public safety officials confirm their well-being during episodes of extreme temperature, reducing the risk of loss of life due to hazardous conditions and natural hazards.
Estimated Cost:	$500
Benefits:	Lives could be saved through identification of vulnerable populations for well-being checks during natural hazards.
Plan for Implementation	
Responsible Organization/Department:	Village Officials
Supporting Organization/Department:	County EMD, County Health Department, Coordination with Senior Centers, DHHS, local doctor’s offices, County Sheriff’s Dept, Ambulance District, Fire District
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential Fund Sources:	General Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	Ongoing

Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF GALLATIN
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Severe thunderstorms, Severe winter weather, Tornado
Problem being Mitigated:	Early Warning systems
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather
Action/Project Number:	CG - 2025.1
Name of Action or Project:	**INSTALLATION OF WARNING SYSTEMS**
Mitigation Category:	Prevention, Structure and Infrastructure Projects, Emergency Services
Action or Project Description:	Installation of warning systems, such as Weather Radios, Warning sirens, and Mass notification systems to alert the public of hazardous events
Estimated Cost:	$50,000
Benefits:	With adequate time for warning of storms, residents take action to reduce the risk to life and property.
Plan for Implementation	
Responsible Organization/Department:	City Officials, County EMD
Supporting Organization/Department:	Daviess County Commission
Action/Project Priority:	Medium Priority
Timeline for Completion:	5 years
Potential Fund Sources:	Hazard Mitigation Grant Funds, Capital projects
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	Continued
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF GALLATIN
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Severe thunderstorms, Severe winter weather, Tornado
Problem being Mitigated:	Transportation routes can be disrupted by debris buildup caused by natural disasters.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CG – 2025.2
Name of Action or Project:	**DEBRIS REMOVAL**
Mitigation Category:	Structure and Infrastructure
Action or Project Description:	Mitigate the risk to life and property by regularly removing debris as needed along transportation routes and drainage systems.
Estimated Cost:	$50,000
Benefits:	Frequent removal of debris will help keep roadways and drainage systems clear. Emergency services will be able to respond quicker to emergencies. Stormwater can drain effectively and reduce the risk of flooding with regular removal of debris.
Plan for Implementation	
Responsible Organization/Department:	PUBLIC WORKS
Supporting Organization/Department:	County Road and Bridge Department, MODOT, Townships
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential Fund Sources:	Hazard mitigation grant program, Flood mitigation assistance grant, Public works budget.
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP, Debris management plan.
Progress Report	
Action Status:	Continued
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF GALLATIN
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Mitigation is an extremely effectively way to reduce costs and lower the impact of future disasters.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CG – 2025.3
Name of Action or Project:	**MITIGATION EDUCATION**
Mitigation Category:	Education and Outreach
Action or Project Description:	Provide mitigation information and resources related to all natural disasters to the public through active education and outreach programs.
Estimated Cost:	$500
Benefits:	The general population will increase understanding of how reduce the risk to life and property during a hazardous event.
Plan for Implementation	
Responsible Organization/Department:	Mayor, Board of alderman
Supporting Organization/Department:	Daviess County EMD, Fire Districts
Action/Project Priority:	HIGH
Timeline for Completion:	1 - 5 years
Potential Fund Sources:	General Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF GALLATIN
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Mitigation remains the best option to reduce the impacts of hazard events
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CG – 2025.4
Name of Action or Project:	**MUTUAL AID AGREEMENTS**
Mitigation Category:	Emergency Services
Action or Project Description:	Execute and maintain mutual aid agreements with partners from Law enforcement, Fire, EMS and Public works.
Estimated Cost:	$500
Benefits:	Mutual Aid Agreements will expedite response for assistance from organizations with which the Village has agreements during and after a natural disaster.
Plan for Implementation	
Responsible Organization/Department:	City government
Supporting Organization/Department:	Daviess County EMD
Action/Project Priority:	HIGH
Timeline for Completion:	1 year
Potential Fund Sources:	General revenue
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF GALLATIN
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Earthquakes, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado,
Problem being Mitigated:	Loss of critical facilities following an event due to utility or communications failures
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CG – 2025.5
Name of Action or Project:	**CRITICAL FACILITIES UTILITY BACK-UPS**
Mitigation Category:	Emergency Services
Action or Project Description:	Assist critical facilities with emergency utility options such as backup generators, transfer switches, and back up communications for command and control.
Estimated Cost:	$1,000 to $1,000,0000
Benefits:	Critical facilities can continue to operate in the event of a disaster.
Plan for Implementation	
Responsible Organization/Department:	Mayor, City Council, Local Emergency Coordinator
Supporting Organization/Department:	County EMD
Action/Project Priority:	HIGH
Timeline for Completion:	1 – 5 years
Potential Fund Sources:	Hazard mitigation grant funding, Capital projects
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP, Mutual Aid Agreements, Capital improvement plan
Progress Report	
Action Status:	Continued
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF GALLATIN
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Development in hazard prone areas.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CG – 2025.6
Name of Action or Project:	**HAZARD EDUCATION FOR THOSE INVOLVED IN LAND DEVELOPMENT**
Mitigation Category:	Structure and Infrastructure Projects, Outreach and Education
Action or Project Description:	Provide resources to land developers on the various hazards that impact the area and offer mitigation idea
Estimated Cost:	$1,000
Benefits:	Low cost. Easy implementation to post notices about available information.
Plan for Implementation	
Responsible Organization/Department:	City Council
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential Fund Sources:	Emergency management budget, General Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	Hazard mitigation plan
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF GALLATIN
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding
Problem being Mitigated:	Unregulated development in the floodplains
Action or Project	
Applicable Goal Statement:	Goal 2: Minimize property damage due to flooding, levee failure or dam incidents.
Action/Project Number:	CG – 2025.8
Name of Action or Project:	**PARTICIPATION IN NFIP (National Floodplain Insurance Program)**
Mitigation Category:	NFIP Floodplain Management
Action or Project Description:	City of Gallatin will continue to participate in NFIP, re-evaluate and continue enforcement of ordinances and regulations, and continue to work with the floodplain manager to promote flood insurance, develop methods of reducing long term risk due to flooding hazards.
Estimated Cost:	$100 annually
Benefits:	Reduce long term risks from flooding
Plan for Implementation	
Responsible Organization/Department:	Floodplain Manager
Supporting Organization/Department:	City government
Action/Project Priority:	Medium
Timeline for Completion:	5 years
Potential Fund Sources:	Flood plain management budget.
Local Planning Mechanisms to be Used in Implementation, if any:	FIRM Maps, Flood plain management ordinance
Progress Report	
Action Status:	Ongoing
Report of Progress:	Continued progress

Action Worksheet	
Name of Jurisdiction:	CITY OF GALLATIN
Risk / Vulnerability	
Hazard(s) Addressed:	Severe thunderstorms, Tornado,
Problem being Mitigated:	FEMA-approved storm shelters have proven effective in mitigating the loss of property and life during tornadoes. A community-wide shelter program should be adopted for residents who may not have adequate shelter in their homes to minimize the potential for loss of life. School safe rooms can protect students from injury during a thunderstorm, tornado or natural wind event/disaster.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning.
Action/Project Number:	CG – 2025.9
Name of Action or Project:	**STORM SHELTER, SAFE ROOM, BUILDING RETROFITTING**
Mitigation Category:	Emergency Services
Action or Project Description:	Either construct new, or retrofit existing areas to shelter persons during hazardous weather events.
Estimated Cost:	$50,000 to $500,000
Benefits:	Storm shelters can protect the lives of individuals in a thunderstorm, tornado or hazardous wind event who may not have other options for sufficient shelter.
Plan for Implementation	
Responsible Organization/Department:	City Council
Supporting Organization/Department:	GHRPC
Action/Project Priority:	High
Timeline for Completion:	5 years
Potential Fund Sources:	Hazard mitigation grant, Capital improvement, Community development block grants.
Local Planning Mechanisms to be Used in Implementation, if any:	Capital improvement plan
Progress Report	
Action Status:	Continued
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF GALLATIN
Risk / Vulnerability	
Hazard(s) Addressed:	Severe Thunderstorms, Severe Winter Weather
Problem being Mitigated:	The electrical grid and transportation system are most affected by severe weather.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning.
Action/Project Number:	CG – 2025.10
Name of Action or Project:	**TREE TRIMMING MAINTENANCE**
Mitigation Category:	Structure and Infrastructure Projects
Action or Project Description:	Mitigate the future losses of service, and damage to infrastructure by keeping vegetation cleared from utility lines
Estimated Cost:	$5,000 annually
Benefits:	Trimming and maintaining tree branches will reduce the number of down power lines during a hazard event.
Plan for Implementation	
Responsible Organization/Department:	City of Gallatin Public Works
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	1-5 years
Potential Fund Sources:	Operations budget
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF GALLATIN
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding
Problem being Mitigated:	Transportation Hazards
Action or Project	
Applicable Goal Statement:	Goal 2: Minimize property damage due to flooding, levee failure or dam incidents.
Action/Project Number:	CG – 2025.11
Name of Action or Project:	**STRUCTURE UPGRADES ROAD AND BRIDGE UPGRADES**
Mitigation Category:	Infrastructure Mitigation
Action or Project Description:	Upgrade infrastructure through the use of upsized tubes, diversion channels or other mitigation steps to reduce the impacts of flooding on roadway systems
Estimated Cost:	$100,000
Benefits:	Reduce long-term spending on repairing the same flood damage.
Plan for Implementation	
Responsible Organization/Department:	City of Gallatin
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	1-5 years
Potential Fund Sources:	Hazard mitigation grants, Community development block grants, Operations budget, Capital projects
Local Planning Mechanisms to be Used in Implementation, if any:	Capital plan
Progress Report	
Action Status:	Continued
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	VILLAGE OF JAMESON
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	All citizens should have sufficient access to advance and emergency weather information in times of severe weather.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather.
Action/Project Number:	VJ – 2025.1
Name of Action or Project:	**WEATHER ALERT SYSTEMS**
Mitigation Category:	Emergency Services
Action or Project Description:	Maintain, install, or promote weather alerting systems such as Sirens, Weather radios, and Mass notification systems to ensure the public gets critical weather or emergency information on a timely basis
Estimated Cost:	$1,000
Benefits:	Reach more residents during severe weather, increasing potential to save lives and property.
Plan for Implementation	
Responsible Organization/Department:	Village Board of Trustees
Supporting Organization/Department:	County EMD, Fire Department
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential Fund Sources:	General Revenue, Emergency management
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	VILLAGE OF JAMESON
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Severe thunderstorms, Severe winter weather, Tornado
Problem being Mitigated:	Transportation routes can be disrupted by debris buildup caused by natural disasters.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	VJ 2025.2
Name of Action or Project:	**DEBRIS REMOVAL**
Mitigation Category:	Structure and Infrastructure
Action or Project Description:	Mitigate the risk to life and property by regularly removing debris as needed along transportation routes and drainage systems.
Estimated Cost:	$50,000
Benefits:	Frequent removal of debris will help keep roadways and drainage systems clear. Emergency services will be able to respond quicker to emergencies. Stormwater can drain effectively and reduce the risk of flooding with regular removal of debris.
Plan for Implementation	
Responsible Organization/Department:	PUBLIC WORKS
Supporting Organization/Department:	County Road and Bridge Department, MODOT, Townships
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential Fund Sources:	Hazard mitigation grant program, Flood mitigation assistance grant, Public works budget.
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP, Debris management plan.
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	VILLAGE OF JAMESON
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Mitigation remains the best option to reduce the impacts of hazard events
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	VJ 2025.3
Name of Action or Project:	**MUTUAL AID AGREEMENTS**
Mitigation Category:	Emergency Services
Action or Project Description:	Execute and maintain mutual aid agreements with partners from Law enforcement, Fire, EMS and Public works.
Estimated Cost:	$500
Benefits:	Mutual Aid Agreements will expedite response for assistance from organizations with which the Village has agreements during and after a natural disaster.
Plan for Implementation	
Responsible Organization/Department:	City government
Supporting Organization/Department:	Daviess County EMD
Action/Project Priority:	HIGH
Timeline for Completion:	1 year
Potential Fund Sources:	General revenue
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	VILLAGE OF JAMESON
Risk / Vulnerability	
Hazard(s) Addressed:	Severe thunderstorms, Tornado
Problem being Mitigated:	Storm shelters have proven effective in mitigating the loss of property and life during tornadoes. A community-wide shelter program should be adopted for residents who may not have adequate shelter in their homes to minimize the potential for loss of life. School safe rooms can protect students from injury during a thunderstorm, tornado or natural wind event/disaster.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning.
Action/Project Number:	VJ 2025.4
Name of Action or Project:	**STORM SHELTER, SAFE ROOM, BUILDING RETROFITTING**
Mitigation Category:	Structure and Infrastructure projects
Action or Project Description:	Either construct new, or retrofit existing areas to shelter persons during hazardous weather events.
Estimated Cost:	$50,000 to $500,000
Benefits:	Storm shelters can protect the lives of individuals in a thunderstorm, tornado or hazardous wind event who may not have other options for sufficient shelter.
Plan for Implementation	
Responsible Organization/Department:	City Council
Supporting Organization/Department:	GHRPC
Action/Project Priority:	High
Timeline for Completion:	5 years
Potential Fund Sources:	Hazard mitigation grant, Capital improvement, Community development block grants.
Local Planning Mechanisms to be Used in Implementation, if any:	Capital improvement plan
Progress Report	
Action Status:	Continued
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	VILLAGE OF JAMESON
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Natural hazards impacts to vulnerable populations
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	VJ 2025.5
Name of Action or Project:	**VULNERABLE POPULATION IDENTIFICATION**
Mitigation Category:	Emergency Services
Action or Project Description:	Identify and maintain list of local vulnerable populations that are the most susceptible to hazards to ensure that local public safety officials confirm their well-being during episodes of extreme temperature, reducing the risk of loss of life due to hazardous conditions and natural hazards.
Estimated Cost:	$500
Benefits:	Lives could be saved through identification of vulnerable populations for well-being checks during natural hazards.
Plan for Implementation	
Responsible Organization/Department:	City government
Supporting Organization/Department:	County EMD, County Health Department, Coordination with Senior Centers, DHHS, local doctor's offices, County Sheriff's Dept, Ambulance District, Fire District
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential Fund Sources:	General Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF JAMESPORT
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	All citizens should have sufficient access to advance and emergency weather information in times of severe weather.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather.
Action/Project Number:	CJP 2025.1
Name of Action or Project:	**WEATHER ALERT SYSTEMS**
Mitigation Category:	Emergency Services
Action or Project Description:	Maintain, install, or promote weather alerting systems such as Sirens, Weather radios, and Mass notification systems to ensure the public gets critical weather or emergency information on a timely basis
Estimated Cost:	$1,000
Benefits:	Reach more residents during severe weather, increasing potential to save lives and property.
Plan for Implementation	
Responsible Organization/Department:	Village Board of Trustees
Supporting Organization/Department:	County EMD, Fire Department
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential Fund Sources:	General Revenue, Emergency management
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF JAMESPORT
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Earthquakes, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado,
Problem being Mitigated:	Loss of critical facilities following an event due to utility or communications failures
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CJP – 2025.2
Name of Action or Project:	**CRITICAL FACILITIES UTILITY BACK-UPS**
Mitigation Category:	Structure and infrastructure projects
Action or Project Description:	Assist critical facilities with emergency utility options such as backup generators, transfer switches, and back up communications for command and control.
Estimated Cost:	$1,000 to $1,000,0000
Benefits:	Critical facilities can continue to operate in the event of a disaster.
Plan for Implementation	
Responsible Organization/Department:	Mayor, City Council, Local Emergency Coordinator
Supporting Organization/Department:	County EMD
Action/Project Priority:	HIGH
Timeline for Completion:	1 – 5 years
Potential Fund Sources:	Hazard mitigation grant funding, Capital projects
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP, Mutual Aid Agreements, Capital improvement plan
Progress Report	
Action Status:	Continued
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF JAMESPORT
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Severe thunderstorms, Severe winter weather, Tornado
Problem being Mitigated:	Transportation routes can be disrupted by debris buildup caused by natural disasters.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CJP 2025.3
Name of Action or Project:	**DEBRIS REMOVAL**
Mitigation Category:	Structure and Infrastructure
Action or Project Description:	Mitigate the risk to life and property by regularly removing debris as needed along transportation routes and drainage systems.
Estimated Cost:	$50,000
Benefits:	Frequent removal of debris will help keep roadways and drainage systems clear. Emergency services will be able to respond quicker to emergencies. Stormwater can drain effectively and reduce the risk of flooding with regular removal of debris.
Plan for Implementation	
Responsible Organization/Department:	PUBLIC WORKS
Supporting Organization/Department:	County Road and Bridge Department, MODOT, Townships
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential Fund Sources:	Hazard mitigation grant program, Flood mitigation assistance grant, Public works budget.
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP, Debris management plan.
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF JAMESPORT
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Mitigation remains the best option to reduce the impacts of hazard events
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CJP 2025.4
Name of Action or Project:	**MUTUAL AID AGREEMENTS**
Mitigation Category:	Emergency Services
Action or Project Description:	Execute and maintain mutual aid agreements with partners from Law enforcement, Fire, EMS and Public works.
Estimated Cost:	$500
Benefits:	Mutual Aid Agreements will expedite response for assistance from organizations with which the Village has agreements during and after a natural disaster.
Plan for Implementation	
Responsible Organization/Department:	City government
Supporting Organization/Department:	Daviess County EMD
Action/Project Priority:	HIGH
Timeline for Completion:	1 year
Potential Fund Sources:	General revenue
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF JAMESPORT
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Development in hazard prone areas.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CJP 2025.5
Name of Action or Project:	**HAZARD EDUCATION FOR THOSE INVOLVED IN LAND DEVELOPMENT**
Mitigation Category:	Structure and Infrastructure Projects
Action or Project Description:	Provide resources to land developers on the various hazards that impact the area and offer mitigation ideas
Estimated Cost:	$1,000
Benefits:	Low cost. Easy implementation to post notices about available information.
Plan for Implementation	
Responsible Organization/Department:	City Council
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential Fund Sources:	Emergency management budget, General Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	Hazard mitigation plan
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF JAMESPORT
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Natural hazards impacts to vulnerable populations
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CJP 2025.6
Name of Action or Project:	**VULNERABLE POPULATION IDENTIFICATION**
Mitigation Category:	Emergency Services
Action or Project Description:	Identify and maintain list of local vulnerable populations that are the most susceptible to hazards to ensure that local public safety officials confirm their well-being during episodes of extreme temperature, reducing the risk of loss of life due to hazardous conditions and natural hazards.
Estimated Cost:	$500
Benefits:	Lives could be saved through identification of vulnerable populations for well-being checks during natural hazards.
Plan for Implementation	
Responsible Organization/Department:	City government
Supporting Organization/Department:	County EMD, County Health Department, Coordination with Senior Centers, DHHS, local doctor’s offices, County Sheriff’s Dept, Ambulance District, Fire District
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential Fund Sources:	General Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF PATTONSBURG
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Development in hazard prone areas.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CP – 2025.1
Name of Action or Project:	**HAZARD EDUCATION FOR THOSE INVOLVED IN LAND DEVELOPMENT**
Mitigation Category:	Structure and Infrastructure Projects
Action or Project Description:	Provide resources to land developers on the various hazards that impact the area and offer mitigation idea
Estimated Cost:	$1,000
Benefits:	Low cost. Easy implementation to post notices about available information.
Plan for Implementation	
Responsible Organization/Department:	City Council
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential Fund Sources:	Emergency management budget, General Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	Hazard mitigation plan
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF PATTONSBURG
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	All citizens should have sufficient access to advance and emergency weather information in times of severe weather.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather.
Action/Project Number:	CP 2025.2
Name of Action or Project:	**WEATHER ALERT SYSTEMS**
Mitigation Category:	Emergency Services
Action or Project Description:	Maintain, install, or promote weather alerting systems such as Sirens, Weather radios, and Mass notification systems to ensure the public gets critical weather or emergency information on a timely basis
Estimated Cost:	$1,000
Benefits:	Reach more residents during severe weather, increasing potential to save lives and property.
Plan for Implementation	
Responsible Organization/Department:	Village Board of Trustees
Supporting Organization/Department:	County EMD, Fire Department
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential Fund Sources:	General Revenue, Emergency management
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF PATTONSBURG
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Earthquakes, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado,
Problem being Mitigated:	Loss of critical facilities following an event due to utility or communications failures
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CP – 2025.3
Name of Action or Project:	**CRITICAL FACILITIES UTILITY BACK-UPS**
Mitigation Category:	Structure and infrastructure projects
Action or Project Description:	Assist critical facilities with emergency utility options such as backup generators, transfer switches, and back up communications for command and control.
Estimated Cost:	$1,000 to $1,000,0000
Benefits:	Critical facilities can continue to operate in the event of a disaster.
Plan for Implementation	
Responsible Organization/Department:	Mayor, City Council, Local Emergency Coordinator
Supporting Organization/Department:	County EMD
Action/Project Priority:	HIGH
Timeline for Completion:	1 – 5 years
Potential Fund Sources:	Hazard mitigation grant funding, Capital projects
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP, Mutual Aid Agreements, Capital improvement plan
Progress Report	
Action Status:	Continued
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF PATTONSBURG
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Severe thunderstorms, Severe winter weather, Tornado
Problem being Mitigated:	Transportation routes can be disrupted by debris buildup caused by natural disasters.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CP 2025.4
Name of Action or Project:	**DEBRIS REMOVAL**
Mitigation Category:	Structure and Infrastructure
Action or Project Description:	Mitigate the risk to life and property by regularly removing debris as needed along transportation routes and drainage systems.
Estimated Cost:	$50,000
Benefits:	Frequent removal of debris will help keep roadways and drainage systems clear. Emergency services will be able to respond quicker to emergencies. Stormwater can drain effectively and reduce the risk of flooding with regular removal of debris.
Plan for Implementation	
Responsible Organization/Department:	PUBLIC WORKS
Supporting Organization/Department:	County Road and Bridge Department, MODOT, Townships
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential Fund Sources:	Hazard mitigation grant program, Flood mitigation assistance grant, Public works budget.
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP, Debris management plan.
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF PATTONSBURG
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Mitigation remains the best option to reduce the impacts of hazard events
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CP 2025.4
Name of Action or Project:	**MUTUAL AID AGREEMENTS**
Mitigation Category:	Emergency Services
Action or Project Description:	Execute and maintain mutual aid agreements with partners from Law enforcement, Fire, EMS and Public works.
Estimated Cost:	$500
Benefits:	Mutual Aid Agreements will expedite response for assistance from organizations with which the city has agreements during and after a natural disaster.
Plan for Implementation	
Responsible Organization/Department:	City government
Supporting Organization/Department:	Daviess County EMD
Action/Project Priority:	HIGH
Timeline for Completion:	1 year
Potential Fund Sources:	General revenue
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF PATTONSBURG
Risk / Vulnerability	
Hazard(s) Addressed:	Severe thunderstorms, Tornado
Problem being Mitigated:	Storm shelters have proven effective in mitigating the loss of property and life during tornadoes. A community-wide shelter program should be adopted for residents who may not have adequate shelter in their homes to minimize the potential for loss of life. School safe rooms can protect students from injury during a thunderstorm, tornado or natural wind event/disaster.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning.
Action/Project Number:	CP 2025.6
Name of Action or Project:	**STORM SHELTER, SAFE ROOM, BUILDING RETROFITTING**
Mitigation Category:	Structure and infrastructure projects
Action or Project Description:	Either construct new, or retrofit existing areas to shelter persons during hazardous weather events.
Estimated Cost:	$50,000 to $500,000
Benefits:	Storm shelters can protect the lives of individuals in a thunderstorm, tornado or hazardous wind event who may not have other options for sufficient shelter.
Plan for Implementation	
Responsible Organization/Department:	City Council
Supporting Organization/Department:	GHRPC
Action/Project Priority:	High
Timeline for Completion:	5 years
Potential Fund Sources:	Hazard mitigation grant, Capital improvement, Community development block grants.
Local Planning Mechanisms to be Used in Implementation, if any:	Capital improvement plan
Progress Report	
Action Status:	Continued
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF PATTONSBURG
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Natural hazards impacts to vulnerable populations
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	CP 2025.7
Name of Action or Project:	**VULNERABLE POPULATION IDENTIFICATION**
Mitigation Category:	Emergency Services
Action or Project Description:	Identify and maintain list of local vulnerable populations that are the most susceptible to hazards to ensure that local public safety officials confirm their well-being during episodes of extreme temperature, reducing the risk of loss of life due to hazardous conditions and natural hazards.
Estimated Cost:	$500
Benefits:	Lives could be saved through identification of vulnerable populations for well-being checks during natural hazards.
Plan for Implementation	
Responsible Organization/Department:	City government
Supporting Organization/Department:	County EMD, County Health Department, Coordination with Senior Centers, DHHS, local doctor’s offices, County Sheriff’s Dept, Ambulance District, Fire District
Action/Project Priority:	High
Timeline for Completion:	1-5 years
Potential Fund Sources:	General Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	CITY OF PATTONSBURG
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding
Problem being Mitigated:	Unregulated development in the floodplains
Action or Project	
Applicable Goal Statement:	Goal 2: Minimize property damage due to flooding, levee failure or dam incidents.
Action/Project Number:	CP – 2025.8
Name of Action or Project:	**PARTICIPATION IN NFIP (National Floodplain Insurance Program)**
Mitigation Category:	Planning and regulation
Action or Project Description:	City will continue to participate in NFIP, re-evaluate and continue enforcement of ordinances and regulations, and continue to work with the floodplain manager to promote flood insurance, develop methods of reducing long term risk due to flooding hazards.
Estimated Cost:	$100 annually
Benefits:	Reduce long term risks from flooding
Plan for Implementation	
Responsible Organization/Department:	Floodplain Manager
Supporting Organization/Department:	City government
Action/Project Priority:	Medium
Timeline for Completion:	5 years
Potential Fund Sources:	Flood plain management budget.
Local Planning Mechanisms to be Used in Implementation, if any:	FIRM Maps, Flood plain management ordinance
Progress Report	
Action Status:	Ongoing
Report of Progress:	Continued progress

Action Worksheet	
Name of Jurisdiction:	PATTONSBURG R-II
Risk / Vulnerability	
Hazard(s) Addressed:	Severe thunderstorms, Tornado
Problem being Mitigated:	Storm shelters have proven effective in mitigating the loss of property and life during tornadoes. A community-wide shelter program should be adopted for residents who may not have adequate shelter in their homes to minimize the potential for loss of life. School safe rooms can protect students from injury during a thunderstorm, tornado or natural wind event/disaster.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning.
Action/Project Number:	PSD 2025.1
Name of Action or Project:	**STORM SHELTER, SAFE ROOM, BUILDING RETROFITTING**
Mitigation Category:	Structure and infrastructure projects
Action or Project Description:	Either construct new or retrofit existing areas to shelter persons during hazardous weather events.
Estimated Cost:	$50,000 to $500,000
Benefits:	Storm shelters can protect the lives of individuals in a thunderstorm, tornado or hazardous wind event who may not have other options for sufficient shelter.
Plan for Implementation	
Responsible Organization/Department:	School District
Supporting Organization/Department:	GHRPC
Action/Project Priority:	High
Timeline for Completion:	5 years
Potential Fund Sources:	Hazard mitigation grant, Capital improvement, Community development block grants.
Local Planning Mechanisms to be Used in Implementation, if any:	Capital improvement plan
Progress Report	
Action Status:	Continued
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	PATTONSBURG R-II
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Lack of public knowledge about natural disasters.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	PSD 2025.2
Name of Action or Project:	**PUBLIC MITIGATION EDUCATION**
Mitigation Category:	Education and Outreach
Action or Project Description:	Provide education on the hazards faced in the county and what steps the public can take to mitigate losses.
Estimated Cost:	$500
Benefits:	The general population will increase understanding of natural disasters and how to reduce risk to life and property from the hazards
Plan for Implementation	
Responsible Organization/Department:	School district
Supporting Organization/Department:	DCEMA, SEMA, FEMA, NWS, USGS
Action/Project Priority:	Medium
Timeline for Completion:	2026
Potential Fund Sources:	Emergency management budget, General Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	District Emergency Plan, Hazard mitigation plan
Progress Report	
Action Status:	Ongoing
Report of Progress:	Continuing, In Progress

Action Worksheet	
Name of Jurisdiction:	NORTH DAVIESS R-III
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Lack of public knowledge about natural disasters.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	NDSD 2025.1
Name of Action or Project:	**PUBLIC MITIGATION EDUCATION**
Mitigation Category:	Education and Outreach
Action or Project Description:	Provide education on the hazards faced in the county and what steps the public can take to mitigate losses.
Estimated Cost:	$500
Benefits:	The general population will increase understanding of natural disasters and how to reduce risk to life and property from the hazards
Plan for Implementation	
Responsible Organization/Department:	School district
Supporting Organization/Department:	DCEMA, SEMA, FEMA, NWS, USGS
Action/Project Priority:	Medium
Timeline for Completion:	2026
Potential Fund Sources:	Emergency management budget, General Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	District Emergency Plan, Hazard mitigation plan
Progress Report	
Action Status:	Ongoing
Report of Progress:	Continuing, In Progress

Action Worksheet	
Name of Jurisdiction:	GALLATIN R-V
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Lack of public knowledge about natural disasters.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	GSD 2025.1
Name of Action or Project:	**PUBLIC MITIGATION EDUCATION**
Mitigation Category:	Education and Outreach
Action or Project Description:	Provide education on the hazards faced in the county and what steps the public can take to mitigate losses.
Estimated Cost:	$500
Benefits:	The general population will increase understanding of natural disasters and how to reduce risk to life and property from the hazards
Plan for Implementation	
Responsible Organization/Department:	School district
Supporting Organization/Department:	DCEMA, SEMA, FEMA, NWS, USGS
Action/Project Priority:	Medium
Timeline for Completion:	2026
Potential Fund Sources:	Emergency management budget, General Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	District Emergency Plan, Hazard mitigation plan
Progress Report	
Action Status:	Ongoing
Report of Progress:	Continuing, In Progress

Action Worksheet	
Name of Jurisdiction:	WINSTON R-VI
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Lack of public knowledge about natural disasters.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	WSD 2025.1
Name of Action or Project:	**PUBLIC MITIGATION EDUCATION**
Mitigation Category:	Education and Outreach
Action or Project Description:	Provide education on the hazards faced in the county and what steps the public can take to mitigate losses.
Estimated Cost:	$500
Benefits:	The general population will increase understanding of natural disasters and how to reduce risk to life and property from the hazards
Plan for Implementation	
Responsible Organization/Department:	School district
Supporting Organization/Department:	DCEMA, SEMA, FEMA, NWS, USGS
Action/Project Priority:	Medium
Timeline for Completion:	2026
Potential Fund Sources:	Emergency management budget, General Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	District Emergency Plan, Hazard mitigation plan
Progress Report	
Action Status:	Ongoing
Report of Progress:	Continuing, In Progress

Action Worksheet	
Name of Jurisdiction:	WINSTON R-VI
Risk / Vulnerability	
Hazard(s) Addressed:	Severe thunderstorms, Tornado
Problem being Mitigated:	Storm shelters have proven effective in mitigating the loss of property and life during tornadoes. A community-wide shelter program should be adopted for residents who may not have adequate shelter in their homes to minimize the potential for loss of life. School safe rooms can protect students from injury during a thunderstorm, tornado or natural wind event/disaster.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning.
Action/Project Number:	WSD 2025.2
Name of Action or Project:	**STORM SHELTER, SAFE ROOM, BUILDING RETROFITTING**
Mitigation Category:	Emergency Services
Action or Project Description:	Either construct new or retrofit existing areas to shelter persons during hazardous weather events.
Estimated Cost:	$50,000 to $500,000
Benefits:	Storm shelters can protect the lives of individuals in a thunderstorm, tornado or hazardous wind event who may not have other options for sufficient shelter.
Plan for Implementation	
Responsible Organization/Department:	School District
Supporting Organization/Department:	GHRPC
Action/Project Priority:	High
Timeline for Completion:	5 years
Potential Fund Sources:	Hazard mitigation grant, Capital improvement, Community development block grants.
Local Planning Mechanisms to be Used in Implementation, if any:	Capital improvement plan
Progress Report	
Action Status:	Continued
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	PATTONSBURG RESCUE & FIRE PROTECTION DISTRICT
Risk / Vulnerability	
Hazard(s) Addressed:	Wildfire
Problem being Mitigated:	Loss of lives and property due to wildfires
Action or Project	
Applicable Goal Statement:	Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire
Action/Project Number:	PRFPD 2025.1
Name of Action or Project:	**UPDATED FIRE FIGHTING EQUIPMENT**
Mitigation Category:	Emergency Services
Action or Project Description:	Upgrade existing firefighting equipment to comply with new modern standards and allow for increased capacity to mitigate future losses through faster response
Estimated Cost:	$50,000 to $1,500,000
Benefits:	Reduce property losses by putting out wildfires faster
Plan for Implementation	
Responsible Organization/Department:	Fire District
Supporting Organization/Department:	GHRPC
Action/Project Priority:	High
Timeline for Completion:	5 years
Potential Fund Sources:	Hazard mitigation grant, Capital improvement, Community development block grants.
Local Planning Mechanisms to be Used in Implementation, if any:	Capital improvement plan
Progress Report	
Action Status:	New
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	PATTONSBURG RESCUE & FIRE PROTECTION DISTRICT
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Lack of public knowledge about natural disasters.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	PRFPD 2025.2
Name of Action or Project:	**MITIGATION EDUCATION**
Mitigation Category:	Education and Outreach
Action or Project Description:	Provide education on the hazards faced in the county and what steps can take to mitigate losses by the public, developers and government officials
Estimated Cost:	$500
Benefits:	The general population will increase understanding of natural disasters and how to reduce risk to life and property from the hazards land developers will better understand how to reduce risk in any new development
Plan for Implementation	
Responsible Organization/Department:	Firel district
Supporting Organization/Department:	DCEMA, SEMA, FEMA, NWS, USGS
Action/Project Priority:	Medium
Timeline for Completion:	2026
Potential Fund Sources:	Emergency management budget, General Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	District Emergency Plan, Hazard mitigation plan
Progress Report	
Action Status:	Ongoing
Report of Progress:	Continuing, In Progress

Action Worksheet	
Name of Jurisdiction:	PATTONSBURG RESCUE & FIRE PROTECTION DISTRICT
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	All citizens should have sufficient access to advance and emergency weather information in times of severe weather.
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather.
Action/Project Number:	PRFPD 2025.2
Name of Action or Project:	**WEATHER ALERT SYSTEMS**
Mitigation Category:	Emergency Services
Action or Project Description:	Maintain, install, or promote weather alerting systems such as Sirens, Weather radios, and Mass notification systems to ensure the public gets critical weather or emergency information on a timely basis
Estimated Cost:	$1,000
Benefits:	Reach more residents during severe weather, increasing potential to save lives and property.
Plan for Implementation	
Responsible Organization/Department:	Fire district
Supporting Organization/Department:	County EMD, Fire Department
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential Fund Sources:	General Revenue, Emergency management
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	PATTONSBURG RESCUE & FIRE PROTECTION DISTRICT
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Updated methods for mitigating loss of life and property
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	PRFPD 2025.4
Name of Action or Project:	**DISASTER DRILLS & TRAINING**
Mitigation Category:	Emergency Services, Planning and regulation
Action or Project Description:	Review the hazard mitigation plan and learn about the latest methods for reducing risk and implement a training system to train on new methods
Estimated Cost:	$1,000
Benefits:	Reducing risk to life and property by staying up to date
Plan for Implementation	
Responsible Organization/Department:	Fire district
Supporting Organization/Department:	County EMD, Fire Department
Action/Project Priority:	High
Timeline for Completion:	1 – 5 years
Potential Fund Sources:	General Revenue, Emergency management
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP, Hazard mitigation plan
Progress Report	
Action Status:	New
Report of Progress:	New Project

Action Worksheet	
Name of Jurisdiction:	PATTONSBURG RESCUE & FIRE PROTECTION DISTRICT
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire
Problem being Mitigated:	Mitigation remains the best option to reduce the impacts of hazard events
Action or Project	
Applicable Goal Statement:	Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes, severe thunderstorm high winds, hail and lightning. Goal 2: Minimize property damage due to flooding, levee failure or dam incidents. Goal 3: Minimize the impact to natural and human resources caused by drought, extreme temperatures and wildfire Goal 4: Maintain public services, protect life, and minimize the risk of property damage caused by severe winter weather Goal 5: Minimize injuries and property damage due to seismic and/or geological events.
Action/Project Number:	PRFPD 2025.5
Name of Action or Project:	**MUTUAL AID AGREEMENTS**
Mitigation Category:	Emergency Services
Action or Project Description:	Execute and maintain mutual aid agreements with partners from Law enforcement, Fire, EMS and Public works.
Estimated Cost:	$500
Benefits:	Mutual Aid Agreements will expedite response for assistance from organizations with which the city has agreements during and after a natural disaster.
Plan for Implementation	
Responsible Organization/Department:	Fire District
Supporting Organization/Department:	Daviess County EMD
Action/Project Priority:	HIGH
Timeline for Completion:	1 year
Potential Fund Sources:	General revenue
Local Planning Mechanisms to be Used in Implementation, if any:	LEOP
Progress Report	
Action Status:	Ongoing
Report of Progress:	New Project

Table 4.3. Mitigation Action Matrix

#	Action	Jurisdiction	Priority	Goals Addressed	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
	Structure and Infrastructure Projects							
County - 2025.1	Installation weather warning systems	Daviess Co	Medium	1	Severe thunderstorm Tornado	✓	✓	
County 2025.3	Debris removal	Daviess Co.	High	1 2 4 5	Flooding, Dam Failure, Earthquakes, Severe thunderstorms, Severe winter weather, Tornado	✓		
County 2025.4	Construction upgrades to protect Infrastructure	Daviess Co	High	2	Flooding, Dam Failure	✓	✓	
County 2025.7	Storm shelters / Retrofitting	Daviess Co	High	1	Severe thunderstorms Tornado	✓	✓	
County 2025.8	Flood Mitigation Projects	Daviess Co.	High	2	Flooding, Dam failure	✓	✓	
CC 2025.1	Installation weather warning systems	Coffey	Medium	1	Severe thunderstorm Tornado	✓	✓	
CC 2025.2	Debris removal	Coffey.	High	1 2 4 5	Flooding, Dam Failure, Earthquakes, Severe thunderstorms, Severe winter weather, Tornado	✓		

#	Action	Jurisdiction	Priority	Goals Addressed	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
CG 2025.1	Installation weather warning systems	Gallatin	Medium	1 2 4	Flooding, Dam Failure, Severe thunderstorms, Severe winter weather, Tornado	✓	✓	
CG 2025.2	Debris removal	Gallatin	High	1 2 4 5	Flooding, Dam Failure, Earthquakes, Severe thunderstorms, Severe winter weather, Tornado	✓		
CG 2025.9	Storm shelters / Retrofitting	Gallatin	High	1	Severe thunderstorms Tornado	✓		
CG 2025.10	Tree trimming/Maintenance	Gallatin	Medium	1	Severe thunderstorm, Severe winter weather	✓	✓	
CG 2025.11	Structure upgrades for road and bridges	Gallatin	Medium	2	Flooding	✓	✓	✓
VJ 2025.2	Debris removal	Jameson	High	1 2 4 5	Flooding, Dam Failure, Earthquakes, Severe thunderstorms, Severe winter weather, Tornado	✓		
VJ 2025.4	Storm shelters / Retrofitting	Jameson	High	1	Severe thunderstorms Tornado	✓	✓	

#	Action	Jurisdiction	Priority	Goals Addressed	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
CJP 2025.2	Critical facilities utility backups	Jamesport	High	1 2 4 5	Flooding, Dam failure, Earthquakes, Severe Thunderstorms, Severe winter weather, Tornadoes	✓		
CJP 2025.3	Debris removal	Jamesport	High	1 2 4 5	Flooding, Dam Failure, Earthquakes, Severe thunderstorms, Severe winter weather, Tornado	✓		
CP 2025.3	Critical facilities utility backups	Pattonsburg	High	1 2 4 5	Flooding, Dam failure, Earthquakes, Severe Thunderstorms, Severe winter weather, Tornadoes	✓		
CP 2025.4	Debris removal	Jamesport	High	1 2 4 5	Flooding, Dam Failure, Earthquakes, Severe thunderstorms, Severe winter weather, Tornado	✓		
CP 2025.6	Storm shelters / Retrofitting	Pattonsburg	High	1	Severe thunderstorms Tornado	✓	✓	

#	Action	Jurisdiction	Priority	Goals Addressed	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
PSD 2025.1	Storm shelters / Retrofitting	Pattonsburg R-II	High	1	Severe thunderstorms Tornado	✓	✓	
WSD 2025.1	Storm shelters / Retrofitting	Winston R-VI	High	1	Severe thunderstorms Tornado	✓	✓	
	Natural Systems Protection							
	Planning and Regulation							
CG 2025.8	Participation in the NFIP	Gallatin	Medium	2	Flooding			✓
CP 2025.8	Participation in the NFIP	Pattonsburg	Medium	2	Flooding			✓
PRFPD 2025.4	Disaster drills and Training	Pattonsburg rescue and fire protection district	High	1 2 3 4 5	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire	✓	✓	
	Education and Outreach							

#	Action	Jurisdiction	Priority	Goals Addressed	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
County 2025.2	Public Mitigation Education	Daviess Co	Medium	1 2 3 4 5	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire	✓	✓	
CG 2025.3	Public Mitigation Education	Gallatin	High	1 2 3 4 5	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire	✓	✓	✓
CG 2025.6	Hazard education for those involved in land development	Gallatin	High	1 2 3 4 5	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire	✓	✓	✓

#	Action	Jurisdiction	Priority	Goals Addressed	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
CJP 2025.5	Hazard education for those involved in land development	Jamesport	High	1 2 3 4 5	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire	✓	✓	✓
CP 2025.1	Hazard education for those involved in land development	Pattonsburg	High	1 2 3 4 5	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire	✓	✓	✓
PSD 2025.2	Public Mitigation Education	Pattonsburg R-II	High	1 2 3 4 5	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire	✓	✓	

#	Action	Jurisdiction	Priority	Goals Addressed	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
NDSD 2025.1	Public Mitigation Education	North Daviess R-III	High	1 2 3 4 5	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire	✓	✓	
GSD 2025.1	Public Mitigation Education	Gallatin R-V	High	1 2 3 4 5	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire	✓	✓	
WSD 2025.2	Public Mitigation Education	Winston R-VI	High	1 2 3 4 5	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire	✓	✓	

#	Action	Jurisdiction	Priority	Goals Addressed	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
PRFPD 2025.2	Public Mitigation Education	Pattonsburg rescue and fire protection distict	High	1 2 3 4 5	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire	✓	✓	
	Emergency Services & Prevention							
County - 2025.1	Installation weather warning systems	Daviess Co	Medium	1	Severe thunderstorm Tornado	✓	✓	
County 2025.5	Critical facilities utility backups	Daviess Co	High	1 2 4 5	Flooding, Dam failure, Earthquakes, Severe Thunderstorms, Severe winter weather, Tornadoes	✓		
County 2025.6	Mutual Aid Agreements	Daviess Co.	High	1 2 3 4 5	Flooding, Dam failure, Earthquakes, Severe Thunderstorms, Severe winter weather, Tornadoes, Wildfires	✓	✓	
CC 2025.1	Installation weather warning systems	Coffey	Medium	1	Severe thunderstorm Tornado	✓	✓	

#	Action	Jurisdiction	Priority	Goals Addressed	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
CC 2025.6	Mutual Aid Agreements	Coffey.	High	1 2 3 4 5	Flooding, Dam failure, Earthquakes, Severe Thunderstorms, Severe winter weather, Tornadoes, Wildfires	✓	✓	
CC 2025.5	Critical facilities utility backups	Coffey	High	1 2 4 5	Flooding, Dam failure, Earthquakes, Severe Thunderstorms, Severe winter weather, Tornadoes	✓		
CC 2025.5	Vulnerable population identification	Coffey	High	1 2 3 4 5	Flooding, Dam Failure, Earthquakes, Severe Thunderstorms, Severe winter weather, Tornadoes, Wildfires	✓	✓	
CG 2025.1	Installation weather warning systems	Gallatin	Medium	1 2 4	Flooding, Dam Failure, Severe thunderstorms, Severe winter weather, Tornado	✓	✓	

#	Action	Jurisdiction	Priority	Goals Addressed	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
CG 2025.4	Mutual Aid Agreements	Gallatin.	High	1 2 3 4 5	Flooding, Dam failure, Earthquakes, Severe Thunderstorms, Severe winter weather, Tornadoes, Wildfires	✓	✓	
CG 2025.5	Critical facilities utility backups	Gallatin	High	1 2 4 5	Flooding, Dam failure, Earthquakes, Severe Thunderstorms, Severe winter weather, Tornadoes	✓		
VJ - 2025.1	Installation weather warning systems	Jameson	High	1	Severe thunderstorm Tornado	✓		
VJ 2025.3	Mutual Aid Agreements	Jameson.	High	1 2 3 4 5	Flooding, Dam failure, Earthquakes, Severe Thunderstorms, Severe winter weather, Tornadoes, Wildfires	✓	✓	

#	Action	Jurisdiction	Priority	Goals Addressed	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
VJ 2025.5	Vulnerable population identification	Jameson	High	1 2 3 4 5	Flooding, Dam Failure, Earthquakes, Severe Thunderstorms, Severe winter weather, Tornadoes, Wildfires	✓	✓	
CJP 2025.1	Installation weather warning systems	Jamesport	High	1 2 3 4	Flooding, Dam Failure, Earthquakes, Extreme Temps., Severe Thunderstorms, Severe winter weather, Tornadoes, Wildfires	✓	✓	
CJP 2025.4	Mutual Aid Agreements	Jamesport.	High	1 2 3 4 5	Flooding, Dam failure, Earthquakes, Severe Thunderstorms, Severe winter weather, Tornadoes, Wildfires	✓	✓	

#	Action	Jurisdiction	Priority	Goals Addressed	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
CJP 2025.6	Vulnerable population identification	Jamesport	High	1 2 3 4 5	Flooding, Dam Failure, Earthquakes, Severe Thunderstorms, Severe winter weather, Tornadoes, Wildfires	✓	✓	
CP 2025.2	Installation weather warning systems	Pattonsburg	High	1 2 3 4	Flooding, Dam Failure, Earthquakes, Extreme Temps., Severe Thunderstorms, Severe winter weather, Tornadoes, Wildfires	✓	✓	
CP 2025.4	Mutual Aid Agreements	Pattonsburg	High	1 2 3 4 5	Flooding, Dam failure, Earthquakes, Severe Thunderstorms, Severe winter weather, Tornadoes, Wildfires	✓	✓	

#	Action	Jurisdiction	Priority	Goals Addressed	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
CP 2025.7	Vulnerable population identification	Pattonsburg	High	1 2 3 4 5	Flooding, Dam Failure, Earthquakes, Severe Thunderstorms, Severe winter weather, Tornadoes, Wildfires	✓	✓	
PRFPD 2025.1	Updated firefighting equipment	Pattonsburg Rescue & Fire protection district	High	3	Wildfires	✓	✓	
PRFPD 2025.2	Installation weather warning systems	Pattonsburg rescue and fire protection district	High	1 2 3 4	Flooding, Dam Failure, Earthquakes, Extreme Temps., Severe Thunderstorms, Severe winter weather, Tornadoes, Wildfires	✓	✓	
PRFPD 2025.4	Disaster drills and Training	Pattonsburg rescue and fire protection district	High	1 2 3 4 5	Flooding, Dam Failure, Earthquakes, Drought, Extreme Temperatures, Severe thunderstorms, Severe winter weather, Tornado, Wildfire	✓	✓	

#	Action	Jurisdiction	Priority	Goals Addressed	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
PRFPD 2025.5	Mutual Aid Agreements	Pattonsburg rescue and fire protection district	High	1 2 3 4 5	Flooding, Dam failure, Earthquakes, Severe Thunderstorms, Severe winter weather, Tornadoes, Wildfires	✓	✓	

CRS Activity Points

Community Rating System (CRS) Planning Steps (Activity 510)	Local Mitigation Planning Handbook Tasks (44 CFR Part 201)
Step 6. Set goals	Task 5: Review Community Capabilities Task 6: Develop a Mitigation Strategy 44 CFR 201.6(c)(3)(i); 44 CFR 201.6(c)(3)(ii); and 44 CFR 201.6(c)(3)(iii)
Step 7. Review possible activities	
Step 8. Draft an action plan	

6. Set Goals. (max: 2)

(a) 2 points - The points for this step are provided if the plan includes a statement of the goals of the community's floodplain management or hazard mitigation program. The goals must address all flood-related problems identified in CRS Step 5.

Preparation of Section 4.1 demonstrates the development of the community goals for the hazard mitigation program. These goals must address flood-related problems identified in the risk assessment.

7. Review possible activities. (max: 35)

(a) 5 points - If the plan reviews preventive activities, such as zoning, stormwater management regulations, building codes, subdivision ordinances, and preservation of open space, and the effectiveness of current regulatory and preventive standards and programs. (REQUIRED)
(b) 5 points - If the plan reviews whether the community's floodplain management regulatory standards are sufficient for current and future conditions, as discussed under CRS Steps 4(c) and 5(f).
(c) 5 points - If the plan reviews property protection activities, such as acquisition, retrofitting, and flood insurance;
(d) 5 points - If the plan reviews activities to protect the natural and beneficial functions of the floodplain, such as wetlands protection;
(e) 5 points - If the plan reviews emergency services activities, such as warning and sandbagging;
(f) 5 points - If the plan reviews structural projects, such as levees, reservoirs, and channel modifications; and
(g) 5 points - If the plan reviews public information activities, such as outreach projects and environmental education programs.

This CRS step requires documentation that the various activities were considered, not just listed for identification/selection. The mitigation action category has been added to the STAPLEE Worksheet. As the MPC identifies and considers mitigation actions, a STAPLEE worksheet should be completed. Thus, all actions, both selected for implementation and eliminated, can be documented as considered in the review process.

8. Draft an action plan. (max: 60)

(a) 45 points, depending on how many categories are covered by the action items:
    1) 10 points, if the action plan includes flood-related recommendations for activities from two of the six categories credited in CRS Step 7; OR
    2) 20 points, if the action plan includes flood-related recommendations for activities

from three of the six categories credited in CRS Step 7; OR

3) 30 points, if the action plan includes flood-related recommendations for activities from four of the six categories credited in CRS Step 7; OR
4) 45 points, if the action plan includes flood-related recommendations for activities from five of the six categories credited in CRS Step 7.

The mitigation action categories have been added to the Mitigation Action Worksheet and the new Table 4.3, Mitigation Action Matrix. In addressing each of these mitigation categories, the community will develop a comprehensive hazard mitigation program, as well as, maximize CRS activity points.

(b) 10 points - If the action plan establishes or revises post-disaster redevelopment and mitigation policies and procedures.

Policies specific to the post-disaster environment and associated redevelopment are credited. As an example, identifying areas anticipated to be most impacted by a flood event and determining whether the areas will be rebuilt if substantially damaged.

(c) 5 points - If the plan includes action items (other than public information activities) to mitigate the effects of the other natural hazards identified in the hazard assessment.

The preparation of the multi-hazard mitigation plan and review of possible actions for multiple hazards will satisfy this CRS activity.

5 PLAN MAINTENANCE PROCESS

This chapter provides an overview of the overall strategy for plan maintenance and outlines the method and schedule for monitoring, updating and evaluating the plan. The chapter also discusses incorporating the plan into existing planning mechanisms and how to address continued public involvement.

5.1 Monitoring, Evaluating, and Updating the Plan

44 CFR Requirement 201.6(c)(4): The plan maintenance process shall include a section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.

5.1.1 Responsibility for Plan Maintenance

The State Emergency Management Agency (SEMA) requires that Hazard Mitigation Plans be reviewed periodically, at least annually, to ensure that goals and objectives are being considered. Revisions to the actions or strategies may be required, as well as acknowledging completed successful mitigations. This section of the Daviess County Multi-jurisdictional Hazard Mitigation Plan provides the process to review, revise, and update the plan.

The maintenance of the plan shall be delegated to the Mitigation Planning Committee. They will meet annually and following any disaster declarations and will invite members of the public as well as officials from participating jurisdictions to attend these meetings to discuss the plan progress and determine if any updates or amendments need to be considered.

Maintenance shall involve agreement of the participating jurisdictions, including school and special districts, to:

- Meet annually, and after a disaster event, to monitor and evaluate the implementation of the plan;
- Act as a forum for hazard mitigation issues;
- Disseminate hazard mitigation ideas and activities to all participants;
- Pursue the implementation of high priority, low- or no-cost recommended actions;
- Maintain vigilant monitoring of multi-objective, cost-share, and other funding opportunities to help the community implement the plan's recommended actions for which no current funding exists;

- Monitor and assist in implementation and update of this plan;
- Keep the concept of mitigation in the forefront of community decision making by identifying plan recommendations when other community goals, plans, and activities overlap, influence, or directly affect increased community vulnerability to disasters;
- Report on plan progress and recommended changes to the County Board of Supervisors and governing bodies of participating jurisdictions; and
- Inform and solicit input from the public.

The MPC is an advisory body and can only make recommendations to county, city, town, or district elected officials. Its primary duty is to see the plan successfully carried out and to report to the community governing boards and the public on the status of plan implementation and mitigation opportunities. Other duties include reviewing and promoting mitigation proposals, hearing stakeholder concerns about hazard mitigation, passing concerns on to appropriate entities, and posting relevant information in areas accessible to the public.

5.1.2 Plan Maintenance Schedule

The MPC and the County Emergency Manager agree to meet annually and after a state or federally declared hazard event as appropriate to monitor progress and update the mitigation strategy. The Daviess County Emergency Management Director and GHRPC will be responsible for initiating the plan reviews and will invite members of the MPC to the meeting.

In coordination with all participating jurisdictions, the Emergency Management Director will be responsible for initiating a five-year written update of the plan to be submitted to the Missouri State Emergency Management Agency (SEMA) and FEMA Region VII per Requirement §201.6(c)(4)(i) of the Disaster Mitigation Act of 2000, unless disaster or other circumstances (e.g., changing regulations) require a change to this schedule.

5.1.3 Plan Maintenance Process

There were no changes made in the Daviess County Hazard Mitigation Plan due to changes in priorities of any jurisdiction that participated in the development of the plan.
(Reference PRT E2-a)
The MPC and the Emergency Management Director, in cooperation with GHRPC, will assess annually the plan for effectiveness at achieving its stated purpose and goals. The evaluation of the effectiveness of the plan will include any progress on proposed actions, development of new actions if necessary or desired, and by evaluating changes in vulnerabilities identified in the plan. Progress on the proposed actions will be monitored by evaluating changes in vulnerabilities identified in the plan. The MPC and the Emergency Management Director shall, during the annual meeting review changes in vulnerability identified as follows:

- Decreased vulnerability as a result of implementing recommended actions,
- Increased vulnerability as a result of failed or ineffective mitigation actions,
- Increased vulnerability due to hazard events, and/or
- Increased vulnerability as a result of new development (and/or annexation).

(Reference PRT D2-b)

Future 5-year updates to this plan will include the following activities:

- Consideration of changes in vulnerability due to action implementation,
- Documentation of success stories where mitigation efforts have proven effective,
- Documentation of unsuccessful mitigation actions and why the actions were not effective,

- Documentation of previously overlooked hazard events that may have occurred since the previous plan approval,
- Incorporation of new data or studies with information on hazard risks,
- Incorporation of new capabilities or changes in capabilities,
- Incorporation of growth data and changes to inventories, and
- Incorporation of ideas for new actions and changes in action prioritization.

In order to best evaluate any changes in vulnerability as a result of plan implementation, the participating jurisdictions will adopt the following process:

- Each proposed action in the plan identified an individual, office, or agency responsible for action implementation. This entity will track and report on an annual basis to the jurisdictional MPC and the Emergency Management Director on action status. The entity will provide input on whether the action as implemented meets the defined objectives and is likely to be successful in reducing risk.
- If the action does not meet identified objectives, the jurisdictional MPC member will determine necessary remedial action, making any required modifications to the plan.

Changes will be made to the plan to remedy actions that have failed or are not considered feasible. Feasibility will be determined after a review of action consistency with established criteria, time frame, community priorities, and/or funding resources. Actions that were not ranked high but were identified as potential mitigation activities will be reviewed as well during the monitoring of this plan. Updating of the plan will be accomplished by written changes and submissions, as the MPC and the Emergency Management Director deem appropriate and necessary. Changes will be approved by Daviess County Commissioners and the governing boards of the other participating jurisdictions.

5.2 Incorporation into Existing Planning Mechanisms

44 CFR Requirement §201.6(c)(4)(ii): [The plan shall include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.

Prior to the development of this plan, the participating jurisdictions did not integrate information from the previous hazard mitigation plan into other planning mechanisms. The participating jurisdictions will attempt to remedy this lack of integration moving forward by applying the identified hazard mitigation actions into updates of other planning mechanisms. (Reference PRT D3-a) (Reference PRT E2-c)

Where possible, plan participants, including school and special districts, will use existing plans and/or programs to implement hazard mitigation actions. Based on the capability assessments of the participating jurisdictions, communities in Daviess County will continue to plan and implement programs to reduce losses to life and property from hazards. This plan builds upon the momentum developed through previous and related planning efforts and mitigation programs and recommends implementing actions, where possible, through the following plans:

- General or master plans of participating jurisdictions;
- Ordinances of participating jurisdictions;
- Chariton County Emergency Operations Plan;
- Capital improvement plans and budgets;
- Other community plans within the County, such as water conservation plans, storm water

management plans, and parks and recreation plans;
- School and Special District Plans and budgets; and
- Other plans and policies outlined in the capability assessment sections for each jurisdiction in Chapter 2 of this plan.

The MPC members involved in updating these existing planning mechanisms will be responsible for integrating the findings and actions of the mitigation plan, as appropriate. The MPC is also responsible for monitoring this integration and incorporation of the appropriate information into the five-year update of the multi-jurisdictional hazard mitigation plan.

Additionally, after the annual review of the Hazard Mitigation Plan, the Daviess County Emergency Management Director will provide the updated Mitigation Strategy with current status of each mitigation action to the County Commissioners as well as all Mayors, City Clerks, and School District Superintendents. The Emergency Management Director will request that the mitigation strategy be incorporated, where appropriate, in other planning mechanisms. (Reference PRT D2-a and D2-c)

Table 5.1 below lists the planning mechanisms by jurisdiction into which the Hazard Mitigation Plan will be integrated. (Reference PRT D3-b)

Table 5.1. Planning Mechanisms Identified for Integration of Hazard Mitigation Plan

Jurisdiction	Planning Mechanisms	Integration Process for Previous Plan	Integration Process for Current Plan
Unincorporated County	Highway Department Capital Improvement Project List	Highway Department attended all planning meetings and identified actions relating to transportation infrastructure were included in annual update to CIP List	Highway Department attended all planning meetings. Identified new actions or ongoing actions relating to transportation infrastructure will be included in annual update to CIP List

5.3 Continued Public Involvement

44 CFR Requirement §201.6(c)(4)(iii): [The plan maintenance process shall include a] discussion on how the community will continue public participation in the plan maintenance process.

The hazard mitigation plan update process provides an opportunity to publicize success stories resulting from the plan's implementation and seek additional public comment. Information about the annual reviews will be posted in the local newspaper, as well as, on the Daviess County website following each annual review of the mitigation plan and will solicit comments from the public based on the annual review. When the MPC reconvenes for the five-year update, it will coordinate with all stakeholders participating in the planning process. Included in this group will be those who joined the MPC after the initial effort, to update and revise the plan. Public notice will be posted, and public participation will be actively solicited, at a minimum, through available website postings and press releases to local media outlets, primarily newspapers. (Reference

PRT D1-a)