

Pemiscot County Multi-Jurisdictional Hazard Mitigation Plan Update 2023



CONTRIBUTORS

Pemiscot County Hazard Mitigation Planning Committee

Jurisdictional Representatives

Name	Title	Department	Rep*	Jurisdiction/Agency/Organization
Jess Cagle	Emergency Management Director	Sheriff's Office	H	Pemiscot County
Pam Treece	County Clerk	County Clerk's Office	H D	Pemiscot County
Mark Cartee	Presiding Commissioner	County Commission	H D	Pemiscot County
Baughn Merideth	Commissioner	County Commission	H D	Pemiscot County
Takella Motton	City Clerk		H D	City of Caruthersville
Sue Grantham	Mayor		H D	City of Caruthersville
Frank Rose	Director	Code Enforcement	H D	City of Hayti
Jacquelyn Davis	Asst City Clerk		H D	City of Hayti Heights
Charlie Jones	Fire Chief	Fire Department	H	City of Caruthersville
Chris Moore	Superintendent		H A	South Pemiscot R-5 School District
Brad Gerling	Superintendent		H A	Caruthersville CPS-18 Schools
Jackie Johnson	Superintendent		H A	Hayti R-II School District
Joey Watkins	Superintendent		H A	Pemiscot Co R-3 School District
Clay Snider	Superintendent		H A	Cooter R-IV School District

Stakeholder Representatives

Name	Title	Rep*	Jurisdiction/Agency/Organization
Jacob Waddell	Operations Manager	H	Pemiscot-Dunklin Electric Cooperative, Inc.
David Fullhart	Executive Director	N	Pemiscot Initiative Network (PIN)
Lesley Rone	Regional Manager	D C	Missouri Department of Economic Development
Amber Childers**	Outreach Specialist	A C	University of Missouri Extension
Jack Mauldin**	EMS Director	H C	Lake County, Tennessee
Beth Treece**	Executive Director	B	Caruthersville Chamber of Commerce
Freddy Pugh**	Employee	B	BPS Networks
Jeremy Gray**	Southeast Rep	H C	SEMA Southeast District
Jim Grebing**	Executive Director	H C N	Bootheel Regional Planning Commission

*Representing:

- H = Local and regional agencies involved in hazard mitigation activities
- D = Agencies with authority to regulate development
- C = Neighboring community
- B = Business representative
- A = Academia representative
- N = Nonprofit representative

**Invited but did not participate

TABLE OF CONTENTS

<i>CONTRIBUTORS</i>	<i>i</i>
County A Hazard Mitigation Planning Committee.....	<i>i</i>
Stakeholder Representatives.....	<i>i</i>
<i>TABLE OF CONTENTS</i>	<i>i</i>
<i>EXECUTIVE SUMMARY</i>	<i>ii</i>
<i>PREREQUISITES</i>	<i>vii</i>
Model Resolution	<i>viii</i>
1 Introduction and Planning Process	1.1
2 Planning Area Profile and Capabilities.....	2.1
3 Risk Assessment	3.1
4 Mitigation Strategy	4.1
5 Plan Maintenance Process.....	5.1
Appendix A: Sources	
Appendix B: Planning participation documentation, kick-off meeting invitation	
Appendix C: Resolutions of adoption	
Appendix D: Questionnaires	
Appendix E: Critical Facilities	
Appendix F: Action Plans and STAPLEE worksheets	
Appendix G: Floodplain Ordinances	

EXECUTIVE SUMMARY

The purpose of hazard mitigation is to reduce or eliminate long-term risk to people and property from hazards. Pemiscot 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. The plan is an update of a plan that was approved in 2019. 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 County Multi-Hazard Mitigation Plan is a multi-jurisdictional plan that covers the following jurisdictions that participated in the planning process:

- Pemiscot County, unincorporated
- City of Caruthersville
- City of Hayti
- City of Hayti Heights
- Caruthersville CPS-18 Schools
- Cooter R-IV Schools
- Pemiscot R-3 Schools
- South Pemiscot Schools

Pemiscot County and the entities listed above developed a Multi-Jurisdictional Hazard Mitigation Plan that was approved by FEMA on January 22, 2019 (hereafter referred to as the *2019 Hazard Mitigation Plan*). This current planning effort serves to update that previously approved plan.

The plan update process followed a methodology in accordance with FEMA guidance, which began with the formation of a Mitigation Planning Committee (MPC) comprised of representatives from Pemiscot County and participating jurisdictions. The MPC updated the risk assessment that identified and profiled hazards that pose a risk to Pemiscot 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 tornadoes are among the hazards that historically have had a significant impact.

Based upon the risk assessment, the MPC voted to retain previous goals and add one additional goal. The goals are listed below:

- 1.) Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.
- 2.) Minimize property damage due to flooding.
- 3.) Minimize injuries and property damage due to seismic events.
- 4.) Minimize the impact to natural and human resources caused by drought and/or heat wave.
- 5.) Maintain public services to minimize the risk and reduce property damage caused by severe winter weather.
- 6.) Maintain and update the plan as needed.

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 4.1. Mitigation Action Matrix - Jurisdictions

#	Action	Caruthersville	Hayti Heights	Hayti	Unincorporated Pemiscot County	Mitigation Category	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
1.1	Adopt most current IRC (residential), IBC(commercial building) and ICC600 (high wind areas) building codes to withstand high winds and possible tornado.	X	X	X	X	Prevention	Tornadoes / Severe Thunderstorm		X	
1.2	Host Safety workshops annually with a focus on all natural hazards	X		X		Education and Outreach / Prevention	Tornadoes / Severe Thunderstorms		X	
1.4	Seek Funding for Storm Sirens				X	Prevention	Tornadoes / Severe Thunderstorm	X	X	
1.5	Apply for Funding for a FEMA Safe Room	X								
2.1	Adopt roadway drainage design referencing MoDot Engineering Policy Guide "748 Hydraulics and Drainage".	X	X	X	X	Prevention	Flood Related Hazards		X	X
2.6	Raise elevation on country roads throughout county that repeatedly flood and wash out.				X	Prevention	Flood and Levee Failure	X	X	X
2.7	Adopt FIRM and update or adopt floodplain ordinance to meet all NFIP requirements		X			Prevention	Flood Related Hazards	X	X	X
3.1	Adopt additional building codes for new construction and improvements of any critical facilities to reflect the NEHRP Seismic Provisions.	X		X	X	Prevention	Earthquake		X	
3.2	Designate an Emergency Operations Center and conduct an annual coordination exercise with all county officials	X		X	X	Emergency Services	Earthquake	X	X	
3.3	Local jurisdictions and school districts create an earthquake awareness program to create brochures on earthquake preparedness and distribute to libraries, courthouse, city hall and school classrooms and offices.	X	X	X		Education and Outreach / Prevention	Earthquake		X	

#	Action	Caruthersville	Hayti Heights	Hayti	Unincorporated Pemiscot County	Mitigation Category	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
3.5	Install bracing and stabilizing components to shelving, cabinets, and other equipment inside the fire station.	X		X		Prevention	Earthquake	X	X	
4.1	Adopt "best practices" policy in conjunction with the Soil and Water Conservation Commission during periods of drought. Print brochures and distribute to educate the public.	X	X	X	X	Education and Outreach / Prevention	Drought / Extreme Temperature / Wildfire	X	X	
4.2	Adopt "best practices" policy in conjunction with the Public Electric Utility Companies during periods of heatwave. Print in brochure and distribute to educate the public.	X		X	X	Education and Outreach / Prevention	Drought / Extreme Temperature / Wildfire	X	X	
5.1	Create an emergency snow route map for the county road system and coordinate snow removal activities with state and local officials in September of each year.		X		X	Emergency Services	Severe Winter Weather	X	X	
5.2	Meet annually with critical facilities administrators to develop severe winter weather strategies	X		X	X	Education and Outreach / Prevention	Severe Winter Weather	X	X	
5.3	Educate the public utility end user on preventative measures to reduce the risk to public and private property	X		X		Education and Outreach / Prevention	Severe Winter Weather	X	X	
5.5	Apply for funding to purchase a generator.					Prevention	Drought/Extreme Temp/Wildfire and Severe Winter Weather	X	X	

#	Action	Caruthersville	Hayti Heights	Hayti	Unincorporated Pemiscot County	Mitigation Category	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
6.1	Appoint a person or committee to review the Hazard Mitigation Plan periodically to ensure execution and suggest updates as needed.				X	Education and Outreach	Tornadoes/Severe Thunderstorm/ Flooding / Earthquake / Drought / Extreme Temperatures / Severe Winter Weather	X	X	X
Total Count of Mitigation Actions		12	6	11	11					

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 C, 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 the (local governing body/school district); and

WHEREAS the (local governing body/school district) has participated in the preparation of a multi-jurisdictional local hazard mitigation plan, hereby known as the (plan name), hereafter referred to as the *Plan*, in accordance with the Disaster Mitigation Act of 2000; and

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

WHEREAS the (local governing body) recognizes that land use policies have a major impact on whether people and property are exposed to natural hazards, the (local governing body/school district) will endeavor to integrate the *Plan* into the comprehensive planning process; and

WHEREAS adoption by the (local governing body/school district) demonstrates their 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:

In accordance with (local rule for adopting resolutions), the (local governing body/school district) adopts the final FEMA-approved *Plan*.

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	INTRODUCTION AND PLANNING PROCESS	1.1
1.1	<i>Purpose</i>	1.1
1.2	<i>Background and Scope</i>	1.2
1.3	<i>Plan Organization</i>	1.2
1.4	<i>Planning Process</i>	1.4
1.4.1	Multi-Jurisdictional Participation	1.5
1.4.2	The Planning Steps	1.7

1.1 PURPOSE

Hazard mitigation is the effort to reduce loss of life and property by lessening the impact of natural disasters. For hazard mitigation to be effective, mitigation actions must be taken prior to disaster, thereby reducing negative impacts to people and property. The purpose of this plan is for the jurisdictions and school districts of Pemiscot County to proactively identify their extent of exposure to natural hazards as well as attainable goals and specific actions designed to minimize harm to people and property following a disaster. Furthermore, the exercise of mitigation planning results in a document—such as the current document— which outlines strategies for the implementation of prioritized mitigation actions.

This plan includes two (2) participating jurisdictions and four (4) participating school districts that have met all requirements for inclusion. These entities completed requirements with the knowledge that participation would make them eligible for certain FEMA grant programs. Any communities that do not adopt the plan are not eligible for FEMA hazard mitigation grants.

The Robert T. Stafford Disaster Relief and Emergency Act (Public Law 93-288), which was later amended by The Disaster Mitigation Act of 2000 (Public Law 106-390), and implementation 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 establish the requirements for local hazard mitigation plans. (Hereafter, the amended law and implementing regulations will be referred to collectively as the Disaster Mitigation Act or DMA). The DMA sets forth the requirement for jurisdictions and special districts to adopt a hazard mitigation plan to be eligible to receive federal hazard mitigation grant funding. On October 1, 2002, FEMA published a change to the Interim Final Rule at 67 FR 61512, extending the effective date for state and local hazard mitigation plan adoption requirements to November 1, 2004. Since this date, participation within and adoption of a FEMA-approved hazard mitigation plan has been required for state, municipalities, and special districts to receive non-emergency Stafford Act assistance including hazard mitigation grant funding.

To assist jurisdictions and special districts in creating or updating their hazard mitigation plan, FEMA has created guidance documents. These documents, specifically FEMA's Local Mitigation Planning Handbook, March 2013 and FEMA's Local Mitigation Plan Review Guide, October 1, 2011, were consulted by Pemiscot County and its participating jurisdictions during the update of its 2019 Pemiscot County Hazard Mitigation Plan. The last plan was approved

1/17/19.

1.2 BACKGROUND AND SCOPE

Pemiscot County contracted with Bootheel Regional Planning & Economic Development Commission (BRPC) to develop its hazard mitigation plan. The plan identifies hazards that pose a risk to Pemiscot County and its communities and then examines the communities' capabilities and plan mitigation actions accordingly. The actions included in this plan are not solutions, but rather short-term efforts to promote long-term impacts. The following jurisdictions participated and passed resolutions expressing their support of the 2023 Pemiscot County Plan:

- Pemiscot County
- City of Caruthersville
- City of Hayti
- City of Hayti Heights
- Caruthersville 18 School District
- Cooter R-IV School District
- Pemiscot Co R-III School District
- South Pemiscot Co R-V School District

Pemiscot jurisdictions that did not participate in this plan were Pascola and Homestown that participated in the 2019 plan update. Hayti Heights and Cooter R-IV are new participants this year. Delta C-7, North Pemiscot R-1 and Hayti R-II opted out this year. Information in this 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

The Plan is organized into five chapters. The Plan chapters are:

- Chapter 1: Introduction and Planning Process

This section introduces the multi-jurisdictional hazard mitigation planning process and a detailed look at the participation of the local jurisdictions and school districts. It also details 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

Section two of this plan provides general background information and demographic statistics for Pemiscot County and its municipalities as well as the disaster response and recovery capabilities found in the county. The 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

Section three, 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 in explains the impact to the county and its jurisdictions should such hazards occur.

- Chapter 4: Mitigation Strategy

Section four 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
Section five outlines Hazard Mitigation Plan maintenance procedures.

- Appendices:
Appendix A: Sources
Appendix B: Planning participation documentation, kick-off meeting invitation
Appendix C: Resolutions of adoption
Appendix D: Questionnaires
Appendix E: List of Critical Facilities
Appendix F: Action Plans/STAPLEEs

The goals adopted for this plan are:

- 1.) Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.
- 2.) Minimize property damage due to flooding.
- 3.) Minimize injuries and property damage due to seismic events.
- 4.) Minimize the impact to natural and human resources caused by drought and/or heat wave.
- 5.) Maintain public services to minimize the risk and reduce property damage caused by severe winter weather.
- 6.) Maintain and update the plan as needed.

Table 1.1 shows each chapter and summarizes the changes made in this update.

Table 1.1. Changes Made in Plan Update

Plan Chapter	Changes Made in Plan Update
Chapter 1: Intro and Planning Process	Number of meetings reduced from 4 to 3, updated committee members, created special stakeholder meeting, updated meeting content, integrated new FEMA requirements, updated RiskMAP
Chapter 2: Planning Area Profile and Capabilities	Updated all demographic information using either the 2020 decennial census or 2021 ACS population estimates
Chapter 3: Risk Assessment	Updated all hazard data to the most current full year available.
Chapter 4: Mitigation Strategy	Updated STAPLEE sheet and Action Plans for all jurisdictions and school districts.
Chapter 5: Plan Implementation and Maintenance	Maintained the same implementation and maintenance strategy.

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.

Pemiscot County and Missouri State Emergency Management Agency (SEMA) have contracted with Bootheel Regional Planning & Economic Development Commission (BRPC) to facilitate and manage the update process for the 2023 Pemiscot County Hazard Mitigation Plan. BRPC, Pemiscot County and its municipalities and school districts participated fully in creating an approved plan update. Once the plan receives the final approval from FEMA, the participating jurisdictions will be eligible for Hazard Mitigation Assistance Grants as well as have defined mitigation activities to reduce the impact of natural hazards in their communities.

BRPC's role as facilitator includes the following elements:

- Assist in establishing a Mitigation Planning Committee (MPC) as defined by the Disaster Mitigation Act (DMA),
- Ensure 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),
- Facilitate the entire plan development process,
- Identify the data that MPC participants could provide and conduct the research and documentation necessary to augment that data,
- Assist in soliciting public input,
- Produce the draft and final plan update in a FEMA-approvable document and coordinate the Missouri State Emergency Management Agency (SEMA) and (FEMA) plan reviews.

Table 1.2 is a list of the Mitigation Planning Committee (MPC).

Table 1.2. Pemiscot County Mitigation Planning Committee (A1a)

Name	Title	Department	Jurisdiction/Agency/Organization
Jess Cagle	Emergency Management Director	County Sheriff's Office	Pemiscot County
Mark Cartee	Presiding Commissioner	County Commission	Pemiscot County
Baughn Merideth	Associate Commissioner	County Commission	Pemiscot County
Charlie Jones	Fire Chief	Caruthersville	Caruthersville
Joey Watkins	Superintendent	Public School	Pemiscot County R-3 District
Jackie Johnson	Superintendent	Public School	Hayti R-II
Brad Gerling	Superintendent	Public School	Caruthersville - 18
Clay Snider	Superintendent	Public School	Cooter R-IV
Sharron Shavers	City Clerk	Homestown	Homestown
Pam Treece	County Clerk	Pemiscot County	Pemiscot County
Sue Grantham	Mayor	Caruthersville	Caruthersville
Takella Motton	City Clerk	Caruthersville	Caruthersville
Jacqueline Davis	Asst City Clerk	Hayti Heights	Hayti Heights
Jacob Waddell	Operations Manager		Pemiscot -Dunklin Elect Co-Op
David Fullhart	Executive Director		Pemiscot Initiative Network
Lesley Rone	Manager	Southeast Region	Mo Dept of Economic Development

In several cases, more than one individual per jurisdiction participated in the planning meetings. Seeking resolutions for approval of the plan from the jurisdictions' boards was discussed at each planning meeting. The individuals listed comprising the MPC were responsible for presenting information to their boards to seek approval. (A1b) They were also the primary contact who attended meetings, providing data, feedback and information critical for the plan.

Table 1.3 lists the capability of participants in various mitigation categories.

Table 1.3. MPC Capability with Six Mitigation Categories

Community Department/Office	Preventive Measures	Property Protection	Structural Flood Control Projects	Natural Resource Protection	Public Information	Emergency Services
Emergency Manager	✓				✓	✓
Presiding Commissioner	✓	✓		✓	✓	
Associate Commissioner	✓	✓		✓	✓	✓
Fire Chief	✓	✓		✓		✓
Superintendent	✓	✓			✓	✓
Superintendent	✓	✓			✓	
Superintendent	✓	✓			✓	
Superintendent	✓	✓			✓	
Superintendent	✓	✓			✓	
City Clerk		✓	✓	✓	✓	
County Clerk	✓	✓		✓	✓	✓
Mayor		✓	✓	✓	✓	
City Clerk		✓	✓	✓	✓	
City Clerk		✓	✓	✓	✓	
Operations Manager	✓	✓			✓	✓
Executive Director	✓					✓
Manager			✓		✓	

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.

Bootheel Regional Planning & Economic Development Commission on behalf of Pemiscot County Commission and Pemiscot County EMA invited each city/village, all school districts and emergency personnel located in Pemiscot County to attend a kick-off meeting to discuss the benefits and purpose of a Multi-Jurisdictional plan and most importantly the participation requirements for each jurisdiction and school district wanting to adopt the plan. BRPC sent an invitation to key individuals in the county stating the meeting was open to the public and anyone interested in hazard mitigation was encouraged to attend. BRPC also posted on its Facebook page the date and location of the meeting and encouraged interested individuals and organizations to attend. The availability of a public survey regarding local hazard mitigation was similarly promoted – on the website and on social media. (See Appendix B).

The Disaster Mitigation Act of 2000 requires that jurisdictions within a multi-jurisdictional hazard mitigation plan participate in the planning process and formally adopt the completed plan before sending the plan draft to SEMA. Participation in the planning process will require representatives of each jurisdiction to:

- ✓ Attend at least 2 meetings
- ✓ Complete Data Collection Questionnaire
- ✓ Provide input into Risk Assessment
- ✓ Develop/update Mitigation Actions
- ✓ Review and comment on plan draft
- ✓ Formally adopt plan

BRPC staff as part of the agreement with Pemiscot County has formed the planning committee, facilitated all the meetings, compiled all the data, issued meeting notifications and documented each jurisdiction's attendance and participation. Documentation for attendance in the form of sign in sheets is (A1a) included in *Appendix B: Planning Participation Documentation*.

Jurisdictions that have met the requirements for participating in the plan include Pemiscot County (unincorporated), City of Caruthersville, City of Hayti and the City of Hayti Heights. The school districts Caruthersville CPS-18, Cooter R-IV, Pemiscot County R-III and South Pemiscot R-V.

The planning process included countywide participation and attendance at three main meetings. The meetings were labeled Kick-off meeting, Meeting #2 and Meeting #3. The Kick-off meeting introduced the committee members and stakeholders to what hazard mitigation is, why a multi-jurisdictional plan makes sense, and presented a timeline for completion of planning. BRPC staff reviewed all the hazards that impact the county and its municipalities and the group discussed risk assessment. An important element of the process is including the public in the process and a portion of the meeting was devoted to a discussion on how best to involve the public. (See Kick-off Agenda, Appendix B) Meeting #2 included reminders of the requirements for each jurisdiction to be part of the final plan, the status of each jurisdiction in completing their requirements, a review of the public survey results, review and acceptance of plan goals, review of disaster declarations from 2019 to present including both agricultural and FEMA declared disasters and a discussion of the next meeting date and next steps. In Meeting #3 the committee once again did a self-check of completion of requirements, introduction of the resolution to be passed by each council or board, a discussion of the impact of hazards on vulnerable populations and updates to mitigation plans. The STAPLEE risk assessment/cost-benefit tool was used by jurisdictions to analyze the feasibility of proposed actions. Those jurisdictions that did not complete their action updates and those not in attendance were granted a little more time to complete their proposed actions. Not all representatives were able to attend

all the meetings so calls and email follow-ups kept each jurisdiction on track to full completion of their parts of the plan update.

The public was involved in the plan in a number of ways. Initial planning committee members were informed that input from the public was needed and all were welcome to attend the meetings. A special public survey was created and participation was encouraged via social media as well as via the planning committee (See Appendix B). A special stakeholder meeting was hosted to gather a wider swath of additional input on the plan from special stakeholder groups. Invited groups included representatives from a local chamber of commerce, small business owners, academia, hazard mitigation (SEMA), Missouri DED, public utilities and water district and neighboring communities. Documentation of this meeting is in Appendix B. Less than half of invitees attended.

Table 1.4. Jurisdictional Participation in Planning Process

Jurisdiction	Kick-off Meeting	Meeting #2	Meeting #3	Data Collection Questionnaire Response	Update/Develop Mitigation Actions
Pemiscot County	x	x	x	x	x
City of Caruthersville	x	x	x	x	x
City of Hayti	x	One-on-One		x	x
City of Hayti Heights	x	x	x	x	x
Caruthersville CPS-18	x	x	x	x	x
Cooter R-IV	One-on-One			x	x
Pemiscot Co R-3	x	x		x	x
South Pemiscot R-5	x	x	x	x	x

1.4.2 The Planning Steps

FEMA’s Local Mitigation Planning Handbook (March 2013), Local Mitigation Plan Review Guide (October 1, 2011), Integrating Hazard Mitigation Into Local Planning: Case Studies and Tools for Community Officials (March 1, 2013), the previous Pemiscot County Hazard Mitigation Plan, and training at the SEMA Operations Center in Jefferson City were all used in planning. The Plan Review Tool was used to ensure that all requirements were met. The development of the plan followed the 10-step planning process adapted from FEMA’s Community Rating System (CRS) and Flood Mitigation Assistance Programs. The 10-step process allows the Plan to meet funding eligibility requirements of the Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program, Community Rating System, and Flood Migration Assistance Program. Table 1.5 shows how the CRS process aligns with the Nine Task Process outlined in the 2023 Local Mitigation Planning Handbook.

Table 1.5. County Mitigation Plan Update Process

Community Rating System (CRS) Planning Steps (Activity 510)	Local Mitigation Planning Handbook 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 4: Review Community Capabilities 44 CFR 201.6(b)(2) & (3)
Step 4. Assess the hazard	Task 5: 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)

The Community Development Specialists from Bootheel Regional Planning & Economic Commission began the plan update process by contacting local stakeholders that were identified as key officials who would be valuable to the update of the mitigation plan. County commissioners, city officials, and emergency management personnel were targeted as potential members of the MPC. An email was sent out to key individuals in February providing a summary of Hazard Mitigation and included an invite to the kick-off meeting. The notifications encouraged those invited to share the invitation with other individuals to increase public participation. (A2a, A3a) See Appendix B.

The Data Collection Questionnaires for the county’s school districts and municipalities were distributed at the very beginning of the update process via email along with a follow up during the kick-off meeting to explain the procedure, the need for the data collection, how the data would be used, and to answer any questions the committee may have had regarding the contents of the Data Collection Questionnaires. All participating jurisdictions were informed of the upcoming planning meetings in the county where BRPC personnel would review relevant information needed to update hazard mitigation plans. In total, three planning meetings were held in Pemiscot County – all at the Pemiscot County Courthouse in Caruthersville.

Table 1.6. Schedule of MPC Meetings (A1a)

Meeting	Topic	Date
Kick-off Meeting (Pemiscot County Courthouse)	<ul style="list-style-type: none"> • Purpose of Planning • Grant Programs Linked to Plan • Planning Tasks • Participation Requirements • Public Involvement Strategies • Data Collection Questionnaires • Hazards and Critical Facilities 	3/8/23

Planning Meeting #2 (Pemiscot County Courthouse)	<ul style="list-style-type: none"> • Purpose of Meeting/Review Participation Requirements • Jurisdiction Status Review • Review of Public Survey Responses • Review of Previous Goals and Adopt New Ones • Review Disaster Declarations since 2019 • Discuss Meeting #3 and Next Steps 	4/27/23
Planning Meeting #3 (Pemiscot County Courthouse)	<ul style="list-style-type: none"> • Purpose of Meeting/Review Participation Requirements • Jurisdiction Status Review • Discussion of Vulnerable Populations • Action Plan Updates Using the STAPLEE risk assessment tool • Discussion of Next Steps 	6/1/23
Special Meeting for Stakeholders (Virtual Meeting Hosted Via WebEx)	<ul style="list-style-type: none"> • Overview of Hazard Planning in Pemiscot County • Public Input Questions • Open Discussion 	9/12/23

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.

How the public could be involved was a topic discussed during the kick-off meeting held on March 8, 2023 at the Kick-Off Meeting in Caruthersville, Missouri. The Bootheel Regional Planning & Economic Development Commission staff explained the importance of public involvement during the planning process. The mitigation planning committee agreed with a plan to engage the public during the update process. A public survey would be made available on the BRPC website and the link would be emailed to all committee members. BRPC shared the survey link on its Facebook page and encouraged the committee to participate in the survey and share the link with family and friends. Results of the public survey were analyzed and reviewed by the committee at Meeting #2 so they could consider public input in their mitigation plans – see Meeting Agenda #2 – Appendix B. (A3a) The meetings were posted on the BRPC website and anyone interested in the planning process was invited to attend.

Comments from the public survey were shared with committee members. Committee members were encouraged to take public comments into consideration as they planned actions their jurisdictions would initiate in the plan update. In general, public feedback was aligned with that of committee members. Their comments regarding needs for the county were wide ranging, but topics that received more than one mention included drainage/flooding issues, tornado sirens and storm shelters (See Appendix B – Meeting 2 agenda for public survey results and comments.)

Step 3: Coordinate with Other Departments and Agencies and Incorporate Existing Information (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: (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.

There are a few organizations that are multijurisdictional in nature whose interests interface with hazard mitigation planning in Pemiscot County. These groups were included in the emailed invitation to the March 8, 2023 kick-off meeting at the Pemiscot County Courthouse. Ideally, national organizations like the Red Cross should come to the table for this exercise, but Pemiscot County is too small to have a local chapter. In small communities, local officials wear multiple hats out of necessity. Often the mayor of a small town is also a business owner or a city clerk is also a member of a neighborhood group or homeowners' association. The agencies and interest groups who were invited to take part in hazard mitigation plan update are listed below represented businesses, volunteer organizations, homeowners' groups, and many more although not all of them participated.

- Pemiscot County Emergency Management Director
- Pemiscot County Commission
- All Public School Districts
- Pemiscot Dunklin Electric Cooperative
- Pemiscot Initiative Network, a non-profit serving the underserved
- Members of neighboring communities
- Hayti Housing Authority
- University of Missouri Extension
- SEMA – Southeast Region
- Pemiscot Public Water District

The Data Collection Questionnaires that all participants completed were the basis for data incorporated into the plan. These documents included a wealth of information on the capabilities of participants, their experience with administering FEMA projects, their critical facilities, and many more items relevant to the plan.

A special meeting was called September 12, 2023 to get additional stakeholder involvement and input on the plan. The following were invited to weigh in on relevant hazard mitigation topics:

- Neighboring communities
 - Jack Mauldin, Lake County (TN) EMS Director – invited but did not attend
 - Lesley Rone, New Madrid County, Regional Manager Missouri DED - attended
 - Jim Grebing, Dunklin County, Executive Director of Bootheel Regional Planning Commission – invited but did not attend
- Businesses
 - Beth Treece Warmath, Executive Director of the Caruthersville Chamber of Commerce – invited but did not attend

- Freddy Pugh, Representative of BPS Networks, a communication company – invited but did not attend
- Academia
 - Amber Childers, Community Engagement Coordinator, University of Missouri Extension – invited but did not attend
- Local and regional agencies involved in hazard mitigation activities
 - Jeremy Gray, SEMA, Southeast District – invited but did not attend
 - Jacob Waddell, Operations Manager, Pemiscot-Dunklin Electric Cooperative - attended
- Other private and non-profit interests
 - Representative of the Pemiscot Water District – invited but did not attend
 - David Fullhart, Executive Director of PIN (Pemiscot Initiative Network), a non-profit serving the underserved – attended

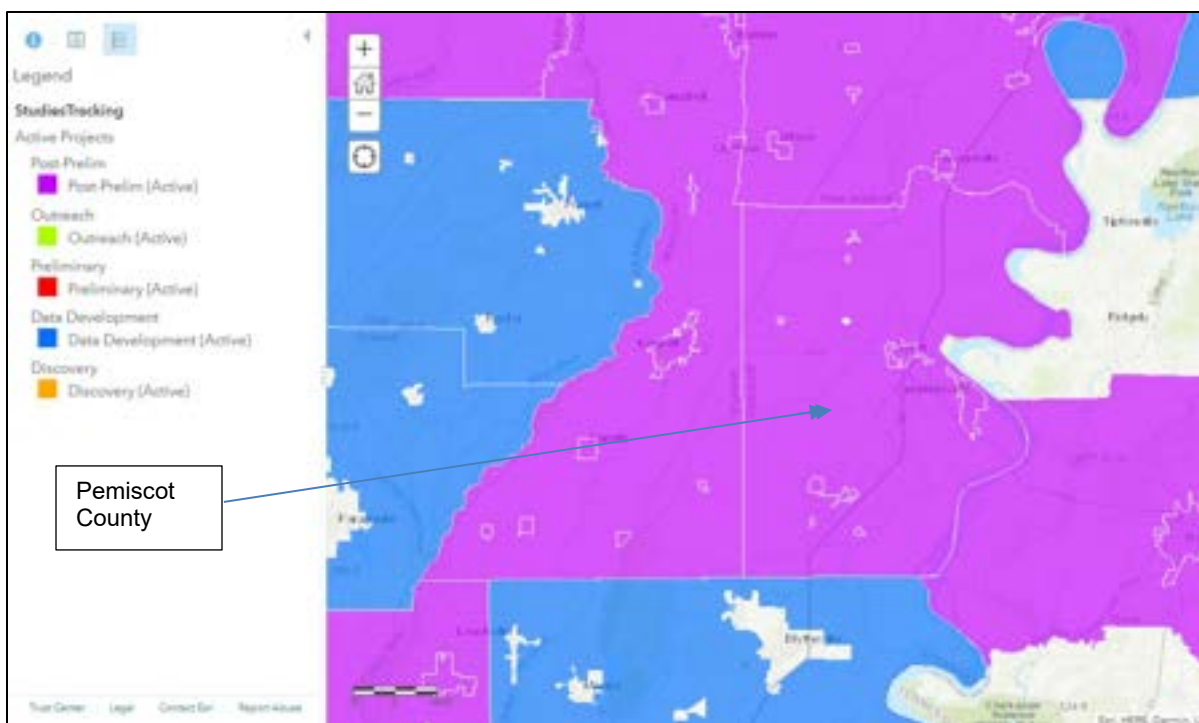
These individuals were emailed or called and sent a WebEx meeting invitation to participate in a virtual meeting to express their opinions and give feedback on hazard mitigation strategies. Their comments generally aligned with data from the public survey.

The group discussed a gap in weather coverage caused by lack of radar in the area. Very few electrical power lines are buried underground, so ice is a big problem in the county. There is a lack of housing for electrical crews who must come in from outside the region to work on repairs. The group collectively believed that tornadoes, followed by earthquakes posed the biggest threat to the county and that more shelters are needed. Appendix B includes proof of attendance at the meeting.

Coordination with FEMA Risk MAP Project

Risk Mapping, Assessment, and Planning (Risk MAP) is the Federal Emergency Management Agency (FEMA) Program that provides communities with flood information and tools they can use to enhance their mitigation plans and take action to better protect their citizens. Through collaboration with State, Tribal, and local entities, Risk MAP delivers quality data that increases public awareness and leads to action that reduces risk to life and property. Figure 1.1 shows the locations and status of RiskMAP projects in the southeastern portion of the state of Missouri. The map below indicates that Pemiscot County is currently in the Post-Prelim (Active) stage. The Post-Prelim stage means when FEMA has contracted for basic and enhanced analysis. DFIRM production and Risk MAP products. (A4a)

Figure 1.1. Map of RiskMAP Projects



Integration of Other Data, Reports, Studies, and Plans

The most current data, reports, studies and plans were reviewed in order to input the data that mostly represents the current view of Pemiscot County and its local jurisdictions. The resources used were(A4a):

- Current Missouri State Hazard Mitigation Plan
- Flood Insurance Rate Maps (FIRMs)
- State Department of Natural Resources (DNR)
- National Inventory of Dams (NID)
- US Department of Agriculture’s (USDA) Risk Management Agency Crop Insurance Statistics
- 2020 & 2021 Census Estimates
- 2019 Pemiscot County Hazard Mitigation Plan

Relevant information from the above-listed sources was reviewed by the Community Development Specialist (CDS) as appropriate and included within the updated planning document. Data was either manually entered by the CDS, or “copied and pasted” from the online data source to the document. Sources for each data insertion were cited where appropriate.

Step 4: Assess the Hazard: Identify and Profile Hazards (Handbook Task 5)

The planning committee, in their second and third meetings, discussed what hazards would be reviewed in the plan’s Risk Assessment. During Meeting #2, the Emergency Management Director for the county overviewed the Disaster Declarations that have impacted the county since the 2019 plan. During Meeting #2, The committee reviewed the list from the previous plan and compared it with the State Risk Assessment plan and the consensus was that the hazards from the previous plan were representative of the true hazards that faced the county. Each participating jurisdiction completed a Data Collection Questionnaire that BRPC

staff reviewed for inclusion in the plan. Chapter 2 includes more information on the hazards that were chosen as a threat to the county and the hazards that were not considered a threat to the county. See also Chapter 3 for additional detail on conclusions drawn from the data reviewed.

Step 5: Assess the Problem: Identify Assets and Estimate Losses

To accumulate data for assets for jurisdictions there were different resources such as HAZUS, Current Missouri State Mitigation Plan, and the previous Pemiscot County Plan. Loss estimates were gathered through US Department of Agriculture's (USDA) Risk Management Agency Crop Insurance Statistics, NCEI storm event database, and data collection questionnaires. Jurisdictions collected and reported information on their regulatory, personnel, fiscal and technical capabilities, as well as existing mitigation initiatives via the Data Collection Questionnaire. (These capabilities are detailed in Chapter 2: Planning Area Profiles and Capabilities). All the vulnerability estimates were taken from the 2023 State Plan, as the best and most current data.

Step 6: Set Goals (Handbook Task 6)

The MPC reviewed the goals adopted in the 2019 plan during Meeting #2. The overall consensus was to keep the same goals for the 2023 plan update but to include a goal to ensure the plan was maintained. The goals are listed below:

Goal 1: Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.

Goal 2: Minimize property damage due to flooding

Goal 3: Minimize injuries and property damage due to seismic events.

Goal 4: Minimize the impact to natural and human resources caused by drought and/or heat wave.

Goal 5: Maintain public services to minimize the risk and reduce property damage caused by severe winter weather.

Goal 6: Maintain and update the plan as needed.

Step 7: Review Possible Mitigation Actions and Activities

The Mitigation Planning Committee and representatives were emailed their previous action plans prior to Meeting #3 (if they participated in the last plan) and during that meeting were given the opportunity to discuss them with other representative from their jurisdictions, make updates, or take them back to their localities to review and update. BRPC encouraged development of new actions and for actions that covered all possible hazards. Committee members used the STAPLEE methodology to rate their intended actions to determine whether they were cost-beneficial and whether they were low, medium or high priority based on their ratings considering the social, technical, administrative, political, legal, economic and environmental aspects of each action. Participants were encouraged to focus on mitigation efforts that could be reasonably attained.

Step 8: Draft an Action Plan

Meeting #3 was when new actions were decided by many of the jurisdictions. Others took them back to consider further. Actions from the previous plans were reviewed and updated and then new actions were added as appropriate.

Step 9: Adopt the Plan (Handbook Task 8)

Jurisdictions and school districts were encouraged to introduce resolutions at their council and school board meetings in support of the Pemiscot County Hazard Mitigation Plan. It was a requirement for inclusion in the plan to be supportive of it. Jurisdictions were told that when the final plan is forthcoming from FEMA, if they are not supportive of the final plan, they may withdraw their support at that time. This option was given because the process of adoption of the resolution occurred prior to the first draft submission and approval.

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

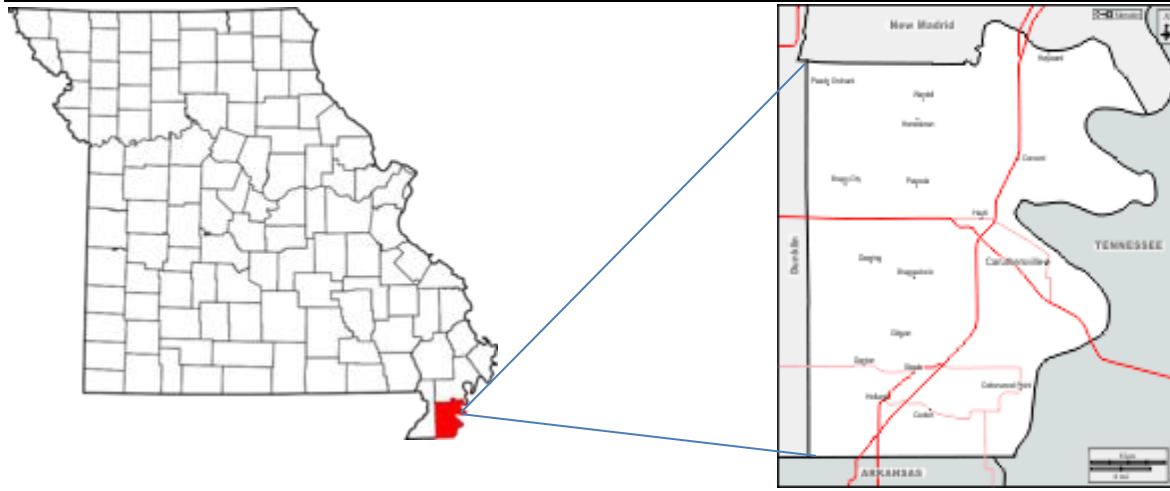
The strategy for plan implementation, monitoring and maintaining was done through phone calls and some emails. The details of implementation and monitoring are in chapter 5 of the plan.

2 PLANNING AREA PROFILE AND CAPABILITIES

2	PLANNING AREA PROFILE AND CAPABILITIES	2.0
	<i>Pemiscot County Planning Area Profile.....</i>	<i>2.1</i>
2.1.1	Geography, Geology and Topography.....	2.1
2.1.2	Climate	2.2
2.1.3	Population/Demographics	2.2
2.1.4	History	2.3
2.1.5	Occupations.....	2.3
2.1.6	Agriculture.....	2.3
2.1.7	FEMA Hazard Mitigation Assistance Grants in Planning Area	2.4
2.1.8	FEMA PA Grants in Planning Area	2.4
2.2	<i>Jurisdictional Profiles and Mitigation Capabilities</i>	<i>2.4</i>
2.2.1	Pemiscot County, Missouri	2.4
2.2.2	City of Caruthersville	2.6
2.2.3	City of Hayti	2.8
2.2.4	City of Hayti Heights	2.10
2.2.5	Summary of Jurisdictional Capabilities	2.11
2.2.6	Public School Districts Profiles and Mitigation Capabilities	2.14
2.2.7	Caruthersville CPS18 School District.....	2.15
2.2.8	Cooter R-IV School District	2.16
2.2.9	Pemiscot County R-3 School District	2.16
2.2.10	South Pemiscot R-V School District	2.17

Pemiscot County Planning Area Profile

Figure 2.1. **Map of Pemiscot County**



According to the US Census Bureau, the 2022 population estimate of Pemiscot County is 14,841. The current population represents a decrease of 18.9% in population from 18,296 according to the 2010 US Census. During the same timeframe the State of Missouri population reported an increase in population of 3.2% and the United States also reported an increase in population of 7.9%. The population as of the 2000 US Census in Pemiscot County was 20,047 indicating a decline of 26.0% as compared to 2022.

The median household income for Pemiscot County rose 13.2% from \$31,671 in 2016 to \$33,922 per 2021 US Census data. Median household income in 2000 was \$21,911. The 2021 level is 63.7% higher. Yet, family income in Pemiscot County lags far behind the state and national figures of \$61,043 and \$69,021, respectively.

The median house value increased 20.0% from \$70,400 in 2016 to \$84,500 in 2021. This is in stark contrast to the 2021 home values of \$171,800 for Missouri and \$244,900 for the nation.

2.1.1 Geography, Geology and Topography

Pemiscot County is located in southeast Missouri, positioned in the deepest portion of the southeast corner of the Bootheel. Pemiscot is bordered by the Mississippi River to the east, Arkansas to the south, Dunklin County to the west and Wayne, Bollinger, and Cape Girardeau to the north. The City of Caruthersville is the county seat. The county is completely rural, with no urban centers.

According to US Census data, Pemiscot County has a land area of 493 square miles (315,226 acres) and water area of 21 square miles (13,370 acres). Of the total land mass, 305,039 acres is farmland per USDA Census of Agriculture data. Pemiscot County is mostly all flat land with soil rich in texture and ideal for crop production.

The county crosses two (2) watersheds shown in Figure 2.2.

Lower Mississippi-Memphis

Little River Ditches



Figure 2.2. Source: [How's My Waterway | US EPA](#)

2.1.2 Climate

Average annual precipitation in Pemiscot County was 55.3 inches, according to the High Plains Regional Climate Center. This is higher than precipitation in the U.S. which is 37 inches annually. Snowfall is rare, averaging only about 5 inches per year.

Also, according to the High Plains Regional Climate Center, the average daily temperature in Pemiscot County is 60.3 degrees Fahrenheit. The average high in July is 90.1 degrees and the average low is 29.6 degrees in January.

2.1.3 Population/Demographics

Table 2.1. Pemiscot County Population 2010-2020 by Community

Jurisdiction	2010 Population	2020 Population	ACS 2022 Population Estimates	2010-2020 # Change	2010-2020 % Change
Pemiscot County unincorporated	8,197	6,781	7,358	-1,416	-17.3%
City of Caruthersville	6,166	5,562	5,606	-604	-9.8%
City of Hayti	2,939	2,493	2,204	-446	-15.2%
City of Hayti Heights	567	515	319	-52	-9.2%

Source: U.S. Bureau of the Census, Decennial Census, *population includes the portions of these cities in adjacent counties

7.3% of Pemiscot County's population is younger than the age of 5, more than Missouri (6.1%) and the U.S. (6.0%). Pemiscot County's older population 16.9% (older than 65 years), is the same as Missouri's and higher than that of the U.S. at 16.9% and 16.0%, respectively.

There are a total of 6,162 households in Pemiscot County. The average household size in the county is 3.24 which is much greater than the state of Missouri average of 2.46 and the national average of 2.60.

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. Resulting from the evaluation, a low number means that the county is more resilient to hazard events, while a high number means that the county is less resilient.

The SoVI Score for Pemiscot County is reported as 4.00, which ranks the county in the top 20% compared with the state and nation. The score places Pemiscot County at high risk for hazard vulnerability.

Table 2.2. Unemployment, Poverty, Education and Language Demographics, Pemiscot County

City Jurisdiction	Total in the Workforce	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 (spoken language other than English)
Pemiscot County	5,495	5.6%	27.5%	89.7%	6.9%	3.3%
City of Caruthersville	1,834	2.5%	25.2%	74.9%	7.3%	2.8%
City of Hayti	621	6.8%	40.8%	79.8%	5.8%	2.4%
City of Hayti Heights	73	6.7%	51.1%	89.6%	3.5%	3.4%
State	3,048,766	4.5%	12.7%	91.0%	30.7%	6.2%
Nation	166,672,597	5.5%	11.6%	88.9%	33.7%	21.7%

Source: U.S. Census, 2021 American Community Survey, 5-year Estimates

2.1.4 History

Pemiscot County was organized February 19, 1951 and named for the Native American word meaning “liquid mud.” The county seat is the city of Caruthersville. The first county seat was Gayoso, Missouri. There were three different buildings used as courthouses in Gayoso. One courthouse burned in 1882. It was rebuilt because the Mississippi River was eroding the land Gayoso was sitting on. The courthouse was moved to Caruthersville in 1899. There have been two different courthouses in Caruthersville. In 1893, Missouri’s General Assembly created the Saint Francis Levee District to alleviate that part of the Saint Francis basin lying with the counties of Dunklin, New Madrid and Pemiscot Counties. This act authorized taxes for the purpose of building, repairing, protecting and maintaining levees in the district. Caruthersville provided the first north/south artery intersecting each of the east west interstate highways west of the Mississippi River.

2.1.5 Occupations

Table 2.3 Occupation Statistics, Pemiscot 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
Pemiscot County	568	1254	1120	670	1146
City of Caruthersville	427	428	442	180	357
City of Hayti	68	245	81	88	139
City of Hayti Heights	0	31	19	1	22

Source: U.S. Census, 2021 American Community Survey, 5-year Estimates.

2.1.6 Agriculture

According to the 2017 Census of Agriculture, Pemiscot County has a total of 184 farms on a total of

296,190 acres of land. The average size of each farm is 1,610 acres with an average of \$865,217 in product sales. Pemiscot County’s top crops in acres are soybeans, corn, cotton, rice and wheat. The farming industry employs 480 workers.

2.1.7 FEMA Hazard Mitigation Assistance Grants in Planning Area

Table 2.4 FEMA HMA Grants in Pemiscot County from 1993-2022

Project Type	Sub applicant	Award Date	Project Total
206.2: Safe Room (Tornado and Severe Wind Shelter) - Public Structures	South Pemiscot Schools	9/23/19	\$638,880

Source: FEMA Data Sets, 2023

2.1.8 FEMA PA Grants in Planning Area

Table 2.5 FEMA PA Grants in Pemiscot County from 1993-2022

Declaration number	Project Type	Project size	Project Total
None	None		

Source: Federal Emergency Management Agency, 2023

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 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, and then school districts.

2.2.1 Pemiscot County, Missouri

Pemiscot County's jurisdiction includes all unincorporated areas within the county boundaries. The county government is directed by the County Commission. There are three commissioners, the Presiding Commissioner and two Associate Commissioners elected to one of two districts. Pemiscot County operates as a third-class county. The county government has authority to administer county structures, infrastructures, and finances. The departments of the county include:

- Board of Commissioners
- County Clerk
- County Coroner
- County Assessor
- County Attorney
- County Collector
- County Recorder
- County Sheriff
- County Treasurer
- Emergency Management

- Public Administrator
- Road and Bridge Maintenance

Mitigation Initiatives/Capabilities

Staff capabilities to reduce the impact of natural hazards include key officials from the Pemiscot County Commission, the County Sheriff’s Department and the County Emergency Management Director (EMD). These key figures aid in planning, response and recovery processes. Using the guidelines established in the Emergency Operations Plan (EOP), Pemiscot County will coordinate with other local governments and private organizations to save lives, minimize injuries, protect property, preserve functioning civil government and maintain economic activities essential to the county’s survival and recovery from natural disasters. It is the EMD’s responsibility to develop and maintain the EOP.

Table 2.6 Unincorporated Pemiscot County Mitigation Capabilities

Capabilities	Status
Planning Capabilities	
Comprehensive or Land-Use Plan	N/A
Capital Improvement Plan	N/A
Transportation Plan / Highway Department	Y
Emergency Operations Plan	Y
Local Recovery Plan	
Debris Management Plan	Y
Firewise or other fire mitigation plan	N/A
Economic Development Plan	Y
Policies/Ordinance	
Zoning Ordinance	N/A
Building Code	N/A
Floodplain Ordinance	N/A
Drainage/Storm Water Ordinance	N/A
Drainage Ordinance	N/A
Site Plan Review Requirements	N/A
Historic Preservation Ordinance	N/A
Program	
National Flood Insurance Program (NFIP)	Y
NFIP Community Rating System (CRS)	N/A
National Weather Service (NWS) Storm Ready	N
Firewise Community Certification	N/A
Building Code Effectiveness Grading (BCEGs)	N/A
ISO Fire Rating	N/A
Public Education/Awareness	N/A
Mutual Aid Agreements	N
Studies/Reports/Maps	
Critical Facilities Inventory	Y
Vulnerable Population Inventory	N
Staff/Department	
Building Code Official/Building Inspector	N/A
Engineer	
Development Planner	
NFIP Floodplain Administrator	Y
Mapping Specialist (GIS)	Y
Public Works Official	Y
Emergency Management Coordinator	Y

Local Emergency Planning Committee	Y
Sanitation Department	N
Highway/Transportation Department	Y
Economic Development Department	Y
Housing Department	N
Historic Preservation	N
Non-Governmental Organizations (NGOs)	
American Red Cross	Y
Salvation Army	Y
Veterans Groups	Y
Local Environmental Organization	N
Homeowner Associations	N
Neighborhood Associations	N
Chamber of Commerce	N
Community Organizations (Lions, Kiwanis, etc.)	Y
Financial Resources	
Apply for Community Development Block Grants	Y
Fund projects thru Capital Improvements funding	Y
Authority to levy taxes for specific purposes	Y
Fees for water, sewer, gas, or electric services	N
Impact fees for new development	N
Incur debt through general obligation bonds	Y
Incur debt through special tax bonds	Y
Incur debt through private activities	N
Withhold spending in hazard prone areas	Y

Source: Data Collection Questionnaire, 2023

2.2.2 City of Caruthersville

The City of Caruthersville is located in the central west part of Pemiscot County, south of the Stoddard County border. The governing body consists of the mayor and five council members. Caruthersville experienced a decline of 9.8% in population from the 2010 census of 6,166 to the current 2021 estimated population of 5,562. Caruthersville has a 2.5% unemployment rate and 25.2% of the population are living below the poverty level. The median household income is \$33,922. Caruthersville has 2,663 housing units. According to 2021 estimates, 2.9% of the occupied housing units are mobile homes. 40.6% of the homes in Caruthersville were built between 1960 and 1979. The average household size is 2.61 per household. 13.6% of the population is age 65 or older.

The City of Caruthersville participated in the last update of the county-wide multijurisdictional plan. Mitigation activities have been limited due to limited capacities. The city carries mutual aid agreements with local governments and law enforcement agencies. The city has an Emergency Response Committee called the Bootheel LEPC. The city currently has four (4) outdoor warning sirens.

The city departments include:

- Mayor/ Board of Aldermen
- Police Department
- Fire Department
- Bootheel LEPC

Table 2.7. Caruthersville Mitigation Capabilities

Capabilities	Status
Planning Capabilities	
Comprehensive or Land-Use Plan	Y
Capital Improvement Plan	Y
Transportation Plan / Highway Department	Y 4/3/17
Emergency Operations Plan	Y
Local Recovery Plan	Y
Debris Management Plan	Y
Firewise or other fire mitigation plan	N
Economic Development Plan	Y
Policies/Ordinance	
Zoning Ordinance	Y
Building Code	Y 2018
Floodplain Ordinance	Y 2/1/88
Drainage/Storm Water Ordinance	N/A
Drainage Ordinance	N/A
Site Plan Review Requirements	Y
Historic Preservation Ordinance	Y
Program	
National Flood Insurance Program (NFIP)	Y
NFIP Community Rating System (CRS)	N
National Weather Service (NWS) Storm Ready	
Firewise Community Certification	N
Building Code Effectiveness Grading (BCEGs)	N
ISO Fire Rating	4
Public Education/Awareness	N
Mutual Aid Agreements	N
Studies/Reports/Maps	
Critical Facilities Inventory	N
Vulnerable Population Inventory	N
Staff/Department	
Building Code Official/Building Inspector	Y F/T
Engineer	Y P/T
Development Planner	N
NFIP Floodplain Administrator	Y F/T
Mapping Specialist (GIS)	Y
Public Works Official	Y F/T
Emergency Management Coordinator	Y P/T
Local Emergency Planning Committee	Y F/T
Sanitation Department	Y F/T
Highway/Transportation Department	N
Economic Development Department	N
Housing Department	Y F/T
Historic Preservation	Y P/T
Non-Governmental Organizations (NGOs)	
American Red Cross	N
Salvation Army	Y P/T
Veterans Groups	Y P/T
Local Environmental Organization	N
Homeowner Associations	N
Neighborhood Associations	N
Chamber of Commerce	Y
Community Organizations (Lions, Kiwanis, etc.)	Y P/T

Financial Resources	
Apply for Community Development Block Grants	Y
Fund projects thru Capital Improvements funding	Y
Authority to levy taxes for specific purposes	Y
Fees for water, sewer, gas, or electric services	Y
Impact fees for new development	N
Incur debt through general obligation bonds	Y
Incur debt through special tax bonds	N/A
Incur debt through private activities	N
Withhold spending in hazard prone areas	N

Source: Data Collection Questionnaire, 2023

2.2.3 City of Hayti

The City of Hayti is located approximately one mile east of the City of Hayti Heights. The governing body consists of the Mayor, four council members and one city clerk. Hayti has experienced a decrease of 15.2% in population from the 2010 Census of 2,939 residents to 2,493 in the most recent decennial census in 2020. Hayti has a 6.8% unemployment rate and 40.8% of the population is living below poverty level. Hayti has 1,260 total housing units. According to 2021 Estimates, 8.4% of the occupied housing units are mobile homes. 36.1% of the homes in Hayti were built prior to 1960. The average household size is 2.89 per household. 18.5% of the population is at the age of 65 and over.

The city of Hayti participated in the last update of the county-wide multijurisdictional plan. Mitigation activities have been limited due to limited capabilities. The city of Hayti carries no mutual aid agreements with local governments and law enforcement departments. The city currently has five outdoor warning sirens.

The city departments include:

- Mayor/ City Council
- City Clerk
- Police Department
- Fire Department

Table 2.7. Hayti Mitigation Capabilities

Capabilities	Status
Planning Capabilities	
Comprehensive or Land-Use Plan	N/A
Capital Improvement Plan	N/A
Transportation Plan / Highway Department	N/A
Emergency Operations Plan	Y
Local Recovery Plan	N/A
Debris Management Plan	N/A
Firewise or other fire mitigation plan	N/A
Economic Development Plan	N/A
Policies/Ordinance	
Zoning Ordinance	Y
Building Code	Y 2015
Floodplain Ordinance	Y
Drainage/Storm Water Ordinance	Y
Drainage Ordinance	Y

Site Plan Review Requirements	Y	
Historic Preservation Ordinance Program	N/A	
National Flood Insurance Program (NFIP)	Y	
NFIP Community Rating System (CRS)	N/A	
National Weather Service (NWS) Storm Ready	N/A	
Firewise Community Certification	N/A	
Building Code Effectiveness Grading (BCEGs)	N/A	
ISO Fire Rating	N/A	
Public Education/Awareness	N/A	
Mutual Aid Agreements	N/A	
Studies/Reports/Maps		
Critical Facilities Inventory	N/A	
Vulnerable Population Inventory	N/A	
Staff/Department		
Building Code Official/Building Inspector	Y	Frank Rose F/T
Engineer	N/A	
Development Planner	N/A	
NFIP Floodplain Administrator	Y	Frank Rose – Additional Duty
Mapping Specialist (GIS)	N/A	
Public Works Official	Y	Ben Sweet & Fernando Dunn F/T
Emergency Management Coordinator	Y	Jess Cagle - Acting
Local Emergency Planning Committee	N/A	
Sanitation Department	Y	Republic (Contracted)
Highway/Transportation Department	N/A	
Economic Development Department	N/A	
Housing Department	N/A	
Historic Preservation	N/A	
Non-Governmental Organizations (NGOs)		
American Red Cross	Y	
Salvation Army	Y	
Veterans Groups	Y	
Local Environmental Organization	N/A	
Homeowner Associations	N/A	
Neighborhood Associations	N/A	
Chamber of Commerce	Y	
Community Organizations (Lions, Kiwanis, etc.)	Y	Rotary
Financial Resources		
Apply for Community Development Block Grants	Y	
Fund projects thru Capital Improvements funding	Y	
Authority to levy taxes for specific purposes	Y	
Fees for water, sewer, gas, or electric services	Y	
Impact fees for new development	Y	
Incur debt through general obligation bonds	Y	
Incur debt through special tax bonds	N	
Incur debt through private activities	N	
Withhold spending in hazard prone areas	Y	

Source: Data Collection Questionnaire, 2023

2.2.4 City of Hayti Heights

The City of Hayti Heights is in eastern Pemiscot County. The local government consists of a mayor and city council. Hayti Heights has experienced a loss of 9.2% in population according to the decennial censuses in 2010 and 2020, decreasing from 567 to 515 residents. The rate of poverty in Hayti Heights was 51.1%. The unemployment rate was 6.7%. There were 206 total housing units and 42.9% of them were built between 1960 and 1979. 11.8% of housing units are mobile homes. The percentage of the population that was 65 and over was 7.5%. The median household income in the city was \$25,227. This data is according to the 2021 American Community Survey 5-year estimates.

The city of Hayti Heights did not participate in the last update of the multijurisdictional plan. No mutual aid is in place.

City Departments include:

- Mayor/City Council

Table 2.8 City of Hayti Heights Mitigation Capabilities

Capability	Status Including Date of Document or Policy
Planning Capabilities	
Comprehensive Plan	N/A
Builder's Plan	N/A
Capital Improvement Plan	N/A
Local Emergency Plan	N/A
Local Recovery Plan	N/A
Local Mitigation Plan	N/A
Economic Development Plan	N/A
Policies/Ordinance	Status Including Date of Document or Policy
Zoning Ordinance	N/A
Building Code	N/A
Floodplain Ordinance	N/A
Storm Water Ordinance	N/A
Drainage Ordinance	N/A
Site Plan Review Requirements	N/A
Historic Preservation Ordinance	N/A
Program	Status Including Date of Document or Policy
National Flood Insurance Program (NFIP) Participant	Y
NFIP Community Rating System (CRS) Participating Community	N/A
National Weather Service (NWS) Storm Ready	N/A
Firewise Community Certification	N/A
Building Code Effectiveness Grading (BCEGs)	N/A
ISO Fire Rating	N/A
Public Education/Awareness	N/A
Mutual Aid Agreements	N/A
Studies/Reports/Maps	
Critical Facilities Inventory	N/A
Vulnerable Population Inventory	N/A
Staff/Department	Status Including Date of Document or Policy
Building Code Official	N
Engineer	N
Development Planner	N
NFIP Floodplain Administrator	N
Mapping Specialist (GIS)	N
Public Works Official	N
Emergency Management Coordinator	N
Local Emergency Planning Committee	N
Sanitation Department	N

Transportation Department	N
Economic Development Department	N
Housing Department	N
Historic Preservation	N
Non-Governmental Organizations (NGOs)	Status Including Date of Document or Policy
American Red Cross	N
Salvation Army	N
Veterans Groups	N
Environmental Organization	N
Homeowner Associations	N
Neighborhood Associations	N
Chamber of Commerce	N
Community Organizations (Lions, Kiwanis, etc.)	N
Financial Resources	Status Including Date of Document or Policy
Ability to apply for Community Development Block Grants	N/A
Ability to fund projects through Capital Improvements funding	N/A
Authority to levy taxes for a specific purpose	N/A
Fees for water, sewer, gas, or electric services	Y
Impact fees for new development	N/A
Ability to incur debt through general obligation bonds	N/A
Ability to incur debt through special tax bonds	N/A
Ability to incur debt through private activities	N/A
Ability to withhold spending in hazard prone areas	N/A

Source: Data Collection Questionnaire 2023

2.2.5 Summary of Jurisdictional Capabilities

Table 2.15 Mitigation Capabilities Summary Table

CAPABILITIES	Pemiscot County	Caruthersville	Hayti	Hayti Heights
Planning Capabilities				
Comprehensive Plan	N/A	Y	N/A	N/A
Builder's Plan	N/A	N/A		
Capital Improvement Plan	N/A	Y	N/A	N/A
Local Emergency Plan	Yes	Y	Y	N/A
County Emergency Plan	N/A	Y		
Local Recovery Plan		Y	N/A	N/A
County Recovery Plan	N/A	Y		
Local Mitigation Plan	N/A		N/A	
Debris Management Plan	Yes	Y	N/A	N/A
Economic Development Plan	Yes	Y	N/A	
Transportation Plan	Yes	Y	N/A	N/A
Land-use Plan	N/A	Y	N/A	N/A
Flood Mitigation Assistance (FMA) Plan	Y	Y		
Watershed Plan	N/A	N		
Firewise or other fire mitigation plan	N/A	N	N/A	N/A

CAPABILITIES	Pemiscot County	Caruthersville	Hayti	Hayti Heights
Critical Facilities Plan (Mitigation/Response/Recovery)	Yes	Y		
Policies/Ordinance				
Zoning Ordinance	N/A	Y	Y	N/A
Building Code	N/A	Y	Y	N/A
Floodplain Ordinance	N/A	Y	Y	N/A
Subdivision Ordinance	N/A	Y		
Tree Trimming Ordinance	N/A	N		
Nuisance Ordinance	N/A	Y		
Storm Water Ordinance	N/A	N/A		
Drainage Ordinance	N/A	N/A	Y	N/A
Site Plan Review Requirements	N/A	Y	Y	N/A
Historic Preservation Ordinance	N/A	Y	N/A	N/A
Landscape Ordinance	N/A	N		
Iowa Wetlands and Riparian Areas Conservation Plan				
Program				
Zoning/Land Use Restrictions	N/A	Y		
Codes Building Site/Design	N/A	N		
National Flood Insurance Program (NFIP) Participant	Yes	Y	Y	Y
NFIP Community Rating System (CRS) Participating Community	N/A	N	N/A	N/A
Hazard Awareness Program	N/A	N		
National Weather Service (NWS) Storm Ready	N/A		N/A	N/A
Building Code Effectiveness Grading (BCEGs)	N/A	N	N/A	N/A
ISO Fire Rating	N/A	4	N/A	
Economic Development Program		Y		
Land Use Program	N/A	N		
Public Education/Awareness	N/A	N	N/A	N/A
Property Acquisition	N/A	Y		
Planning/Zoning Boards	N/A	Y		
Stream Maintenance Program	N/A	N		
Tree Trimming Program	N/A	N		
Engineering Studies for Streams (Local/County/Regional)	N/A			

CAPABILITIES	Pemiscot County	Caruthersville	Hayti	Hayti Heights
Mutual Aid Agreements	N	N	N/A	N/A
Studies/Reports/Maps				
Hazard Analysis/Risk Assessment (Local)		Y		
Hazard Analysis/Risk Assessment (County)		N/A		
Flood Insurance Maps				
FEMA Flood Insurance Study (Detailed)				
Evacuation Route Map	Y	Y		
Critical Facilities Inventory	Y	N	N/A	N/A
Vulnerable Population Inventory	N	N/A	N/A	N/A
Land Use Map	N	Y	N/A	
Staff/Department				
Building Code Official	N/A	Y	Y	N
Building Inspector	N/A	Y	Y	N
Mapping Specialist (GIS)	Y	Y	N/A	N
Engineer		Y	N/A	N
Development Planner		N	N/A	N
Public Works Official	Y	Y	Y	N/A
Emergency Management Coordinator	Y	Y	Y	N/A
NFIP Floodplain Administrator	Y	Y	Y	No
Bomb and/or Arson Squad				
Emergency Response Team	Y	N		N/A
Hazardous Materials Expert	N	N		
Local Emergency Planning Committee	Y	Y	N/A	N/A
County Emergency Management Commission	N	Y		
Sanitation Department	N	Y	N	N/A
Transportation Department	Y	N	N	N/A
Economic Development Department		N	N/A	N/A
Housing Department	N	Y	N/A	N/A
Planning Consultant	N	N		
Regional Planning Agencies	Y	Y	Y	Y
Historic Preservation	N	Y	N/A	N/A
Non-Governmental Organizations (NGOs)				
American Red Cross	Y	N	Y	N
Salvation Army	Y	Y	Y	N
Veterans Groups	Y	Y	Y	N

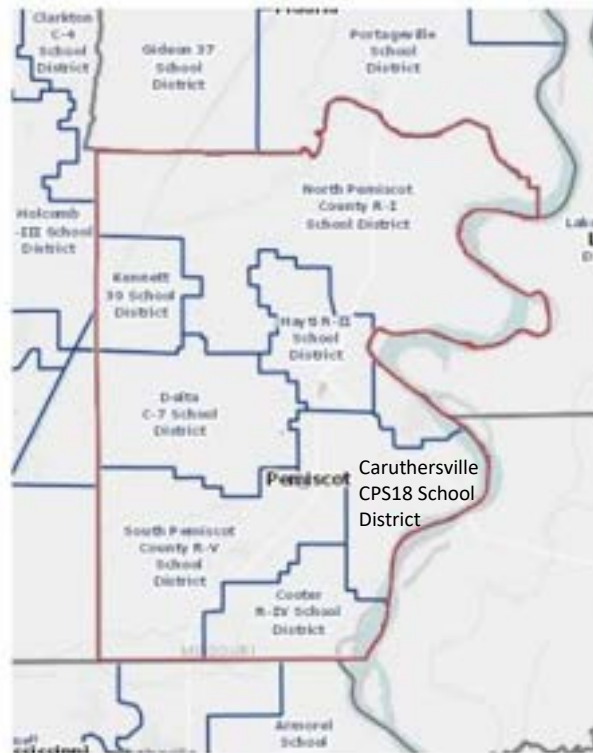
CAPABILITIES	Pemiscot County	Caruthersville	Hayti	Hayti Heights
Environmental Organization	N	N	N/A	N
Homeowner Associations	N	N	N/A	N
Neighborhood Associations	N	N	N/A	N
Chamber of Commerce	N	Y	Y	N
Community Organizations (Lions, Kiwanis, etc.)	Y	Y	Y	N
Financial Resources				
Apply for Community Development Block Grants	Y	Y	Y	N/A
Fund projects through Capital Improvements funding	Y	Y	Y	N/A
Authority to levy taxes for specific purposes	Y	Y	Y	N/A
Fees for water, sewer, gas, or electric services	N	Y	Y	Y
Impact fees for new development	N	N	Y	N/A
Incur debt through general obligation bonds	Y	Y	Y	N/A
Incur debt through special tax bonds	Y	N/A	N	N/A
Incur debt through private activities	N	N	N	N
Withhold spending in hazard prone areas	Y	N	N	N

Source: Data Collection Questionnaires, 2023

2.2.6 Public School Districts Profiles and Mitigation Capabilities

This section provides general information about participating school districts in the Plan. There are eight school districts and four of them participated in the plan. Figure 2.3 is a map of school district boundaries in Pemiscot County. The Kennett 39 School District is actually headquartered in Dunklin County and does not have facilities in Pemiscot County.

Figure 2.3. **Pemiscot County School Districts**



Source: Missouri Department of Elementary and Secondary Education

2.2.7 Caruthersville CPS18 School District

Caruthersville School District includes three buildings – an elementary building (PK-4), a middle school (5-8) and a high school building (9-12). The elementary school is located on Washington Avenue and the middle and high school are located on Ward Avenue. Table 2.16 provides building and enrollment information.

Table 2.16 Caruthersville CPS18 School District Buildings and Enrollment Data, 2023

District Name	Building Name	Building Enrolment
Caruthersville CPS 18	Elementary School	500
Caruthersville CPS 18	Middle School	188
Caruthersville CPS 18	High School	258

[School Data | Missouri Department of Elementary and Secondary Education \(mo.gov\)](https://doe.mo.gov/school-data)

Caruthersville Schools are governed by a Board of Education consisting of the Board President and six board members. The District serves 946 students and employs 95 teachers and staff. District departments include:

- Transportation
- Cafeteria Services

- Custodial Services
- Health Services
- Central Office

Caruthersville has a PA system in each building and has handheld and base station NOAA weather radios. The district added FEMA shelters to each campus. There has been generator installation in each safe room.

2.2.8 Cooter R-IV School District

All Cooter R-IV School District buildings are located at 1867 State Highway F, Cooter, Missouri. Table 2.17 provides building and enrollment information.

Table 2.17 Cooter R-IV School District Buildings and Enrollment Data, 2023

District Name	Building Name	Building Enrolment
Cooter R-IV	Cooter High School	135
Cooter R-IV	Cooter Elementary	74

[School Data | Missouri Department of Elementary and Secondary Education \(mo.gov\)](#)

Cooter R-IV Schools are governed by a Board of Education consisting of the Board President and six board members. The District serves 209 students with approximately 29 teachers and staff. District departments include:

- Transportation
- Cafeteria Services
- Custodial Services
- Health Services
- Central Office

Cooter R-IV is equipped with a public address system to serve as an emergency alert system. Table 2.17 provides building and enrollment information.

2.2.9 Pemiscot County R-3 School District

Table 2.18 Pemiscot County R-3 School District Buildings and Enrollment Data, 2023

District Name	Building Name	Building Enrolment
Pemiscot County R-3	Pemiscot County R-3 Elementary	142

[School Data | Missouri Department of Elementary and Secondary Education \(mo.gov\)](#)

Pemiscot County R-3 Schools is a K-8 school district located within the Caruthersville District. The school is governed by a Board of Education consisting of the Board President and six board members. The District serves 142 students with approximately 17 teachers and staff. District departments include:

- Transportation
- Cafeteria Services
- Custodial Services
- Health Services
- Central Office

The school has a VOIP speaker system that all phones can access. The district does not have NOAA weather radios, but rather cellular phones which alert to hazards.

2.2.10 South Pemiscot R-V School District

Two South Pemiscot R-V school buildings are located at 611 Beasley Road, Steele and the kindergarten center is located at 709 E Main Extension in Steele. Table 2.19 provides building and enrollment information.

Table 2.19 South Pemiscot R-V School District Buildings and Enrollment Data, 2023

District Name	Building Name	Building Enrolment
South Pemiscot R-V	South Pemiscot High School	245
South Pemiscot R-V	Central Elementary	359
South Pemiscot R-V	East Elementary	Included in Central

[School Data | Missouri Department of Elementary and Secondary Education \(mo.gov\)](#)

South Pemiscot R-V Schools are governed by a Board of Education consisting of the Board President and six board members. The District serves 604 students approximately with 68 teachers and staff.

District departments include:

- Transportation
- Cafeteria Services
- Custodial Services
- Health Services
- Central Office

South Pemiscot Schools have a PA System in all buildings. NOAA weather radios are used. The district added a FEMA building at East Elementary for students and staff and for the community after hours for a tornado safe room.

Table 2.20 Summary of Mitigation Capabilities – Pemiscot County School Districts

Capability	Caruthersville CPS18 R-IV	Cooter R-IV	Pemiscot Co R-3	South Pemiscot R-V
Planning Elements				
Master Plan/ Date	Y	N	Y	N
Capital Improvement	Y	N		N
School Emergency Plan / Date	Y	Y	Y	Y
Weapons Policy/Date	Y	Y	Y	Y
Personnel Resources				
Full-Time Building Official (Principal)	Y	Y	Y	Y
Emergency Manager	Y	N	Y	Y
Grant Writer	Y	N	Y	Y
Public Information Officer	Y	N	Y	Y
Financial Resources				
Capital Improvements	Y	Y	Y	Y
Local Funds	Y	Y	Y	Y

General Obligation Bonds	Y	Y	N	N
Special Tax Bonds	Y	Y	N	N
Private Activities/Donations	Y	Y	N	N
State And Federal Funds/Grants	Y	Y	Y	Y
Capability				
Fire Evacuation Training				
Tornado Sheltering Exercises				
Public Address/ Emergency Alert System	Y	Y	Y	Y
NOAA Weather Radios	Y	N	N	Y
Lock-Down Security Training				
FEMA Tornado Shelter/Saferoom	Y	N	N	Y
Campus Police	Y	N	N	Y

Data Collection Questionnaires, 2023

3 RISK ASSESSMENT

- 3 RISK ASSESSMENT1**
- 3.1 *HAZARD IDENTIFICATION*.....2
 - 3.1.1** Review of Existing Mitigation Plans3
 - 3.1.2** Review Disaster Declaration History3
 - 3.1.3** Hazards Identified6
 - 3.1.4** Multi-Jurisdictional Risk Assessment7
- 3.2 *ASSETS AT RISK*7
 - 3.2.1** Total Exposure of Population and Structures8
 - 3.2.2** Unincorporated County and Incorporated Cities8
 - 3.2.3** Critical and Essential Facilities and Infrastructure9
 - 3.2.4** Other Assets13
- 3.3 *LAND USE AND DEVELOPMENT*16
 - 3.3.1** Development Since Previous Plan Update.....16
 - 3.3.2** Future Land Use and Development (B2b)16
- 3.4 *HAZARD PROFILES, VULNERABILITY, AND PROBLEM STATEMENTS*.....17
 - Hazard Profiles17
 - Vulnerability Assessments18
 - Problem Statements20
 - 3.4.1** Flooding (Riverine and Flash)20
 - 3.4.2** Levee Failure30
 - 3.4.3** Dam Failure36
 - 3.4.4** Earthquakes36
 - 3.4.5** Land Subsidence/Sinkholes49
 - 3.4.6** Drought49
 - 3.4.7** Extreme Temperatures56
 - 3.4.8** Severe Thunderstorms Including High Winds, Hail, and Lightning63
 - 3.4.9** Severe Winter Weather73
 - 3.4.10** Tornado80
 - 3.4.11** Wildfire87

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 risk assessment process identifies and profiles relevant hazards and assesses the exposure of lives, property, and infrastructure to these 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 in the planning area to better understand their potential risk to natural hazards and provides a framework for developing and prioritizing mitigation actions to reduce risk from future hazard events.

A Multi-Jurisdictional Local Hazard Mitigation Plan was adopted in 2019. This risk assessment is an update to the risk assessment previously prepared.

The risk assessment for Pemiscot 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 jurisdiction
- 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:

- **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;
- **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;
- **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;
- **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: 1) 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; 2) Vulnerability Assessment further defines and quantifies populations, buildings, critical facilities, and other community/school or special district assets at risk to natural hazards; and 3) 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.

The Pemiscot County Hazard Mitigation Planning Committee has determined that this updated plan, as with past county plans, will address only natural hazards. Natural Hazard has been defined by I. Burton, R. Kates, and G. White in *The Environment as Hazard*, as “those elements of the physical environment, harmful to man and caused by forces extraneous to him.” Consistent with this definition, war, chemical contamination, and other manmade phenomena are excluded from classification as a natural hazard. Natural hazards can take many forms. 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 Hazard Mitigation Planning Committee (HMPC) reviewed data and discussed the impacts of each hazard of prime concern that are included and profiled in the most recent State of Missouri Hazard Mitigation Plan and the 2019 Pemiscot County Multi-Jurisdictional Local Hazard Mitigation Plan. The eleven natural hazards of prime concern for Missouri and Pemiscot County were:

- Flooding (Riverine and Flash);
- Levee Failure;
- Earthquake;
- Drought;
- Extreme Temperatures;
- Severe Thunderstorms;
- Severe Winter Weather;
- Tornadoes; and
- Wildfires.

3.1.2 Review Disaster Declaration History

One method used by the HMPC to identify hazards was to examine events that triggered federal and/or state disaster declarations. Federal and/or state declarations may be granted when the severity and magnitude of an event surpasses the ability of the local government to respond and recover. Disaster assistance is supplemental and sequential. When the local government’s capacity has been surpassed, a state disaster declaration may be issued, allowing for the provision of state assistance. Should the disaster be so severe that both the local and state governments’ capacities are exceeded, a federal emergency or disaster declaration may be issued allowing for the provision of federal assistance.

The federal government may issue a disaster declaration through FEMA, the U.S. Department of Agriculture (USDA), and/or the Small Business Administration. FEMA also issues emergency declarations, which are more limited in scope and do not include the long-term federal recovery programs of major disaster declarations. Determinations for declaration type are based on the scale and type of damages and institutions or industrial sectors affected.

Table 3.1 lists federal disaster declarations received by Pemiscot County. Each of the disaster events affected multiple counties. Some involved individual assistance, public assistance or both types of claims. Severe storms, tornadoes, and flooding were the most prevalent disasters.

A new type of disaster was declared in the timeframe from issuance of the last Pemiscot County Hazard Plan in 2019 to this version of the report and that was the COVID-19 pandemic that swept the nation, impacting nearly every aspect of life in Pemiscot County. The entry in Table 3.1

illustrates the huge impact in comparison with natural disasters that have been declared.

It is important to note that the federal government may issue a disaster declaration through the U.S. Department of Agriculture, as well as through FEMA. The quantity and types of damage and their impact on food sources are the factors that determine whether such declarations are issued.

The U.S. Department of Agriculture (USDA) provides assistance to farmers and other rural residents, as the result of natural disasters. Agricultural-related disasters are quite common. One-half to two-thirds of the counties in the United States have been designated as disaster areas in each of the past several years. Agricultural producers may apply for low-interest emergency loans in counties named as primary or contiguous in a disaster designation.

Table 3.1. FEMA Disaster Declarations that included Pemiscot County, Missouri, 1990-Present

Disaster Number	Declaration Date	Description	Individual Assistance (IA) Public Assistance (PA)
Major Disaster Declarations			
995	7/9/1993	SEVERE STORMS AND FLOODING	IA, PA
1023	4/21/1994	SEVERE STORMS, TORNADOES, AND FLOODING	IA
1054	6/2/1995	SEVERE STORMS, TORNADOES AND HAIL	IA, PA
1412	5/6/2002	SEVERE STORMS, TORNADOES AND FLOODING	IA, PA
1635	4/5/2006	SEVERE STORMS, TORNADOES, AND FLOODING	IA, PA
1749	3/19/2008	SEVERE STORMS AND FLOODING	IA, PA
1773	6/25/2008	SEVERE STORM AND FLOODING	IA, PA
1822	2/17/2009	SEVERE WINTER STORM	PA
1980	5/9/2011	SEVERE STORMS, TORNADOES, AND FLOODING	IA, PA
3232	9/10/2005	HURRICANE KATRINA EVACUATION	PA
3281	12/12/2007	SEVERE WINTER STORMS	PA
3303	1/30/2009	SEVERE WINTER STORM	PA
3317	2/3/2011	SEVERE WINTER STORM	PA
3374	1/2/2016	SEVERE STORMS, TORNADOES, STRAIGHT-LINE WINDS	PA
4238	8/7/2015	SEVERE STORMS, STRAIGHT-LINE WINDS, TORNADOES	PA
4317	1/21/2016	SEVERE STORMS, TORNADOES, STRAIGHT-LINE WINDS	PA
4435	8/16/2019	SEVERE STORMS, STRAIGHT-LINE WINDS AND FLOODING	PA
4451	7/9/2019	SEVERE STORMS, TORNADOES, FLOODING	PA
4452	7/9/2020	SEVERE STORMS, TORNADOES, STRAIGHT-LINE WINDS, AND FLOODING	PA
4490	3/26/2020	COVID-19 PANDEMIC	IA, PA

Disaster Number	Declaration Date	Description	Individual Assistance (IA) Public Assistance (PA)
Major Disaster Declarations			
4612	12/10/21	SEVERE STORMS, STRAIGHT-LINE WINDS, AND TORNADOES	PA

Source: Federal Emergency Management <http://www.fema.gov/disasters>

Research Additional Sources

Additional sources of data on locations and past impacts of hazards in the planning area include:

- Missouri Hazard Mitigation Plans (2023 and 2019)
- Previously approved Pemiscot County Multi-Jurisdictional Local Hazard Mitigation Plan (2019)
- 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 Conservation
- 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);
- Pemiscot County Comprehensive Plans to the extent available
- Pemiscot County Emergency Management
- Pemiscot County Flood Insurance Rate Map, FEMA
- Pemiscot County 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)
- Information provided by members of the Hazard Mitigation Planning Committee
- Various articles and publications available on the internet (sources are indicated where data is cited)

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 occurs 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 2023, 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.

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.

3.1.3 Hazards Identified

After reviewing the hazards in the State Plan as well as the disaster declaration history, the HMPC agreed on a list of natural hazards that significantly affect the planning area. These hazards are listed below in Table 3.2 with an “X” indicating the affected jurisdictions. Each of these hazards is profiled in further detail in the next section. (B1a, B1b)

Table 3.2. Hazards Identified for Each Jurisdiction

Jurisdiction	Drought	Earthquake, seismic activity,	Flooding (riverine and flash)	Extreme Heat	Levee Failure	Severe winter weather – snow, ice, extreme cold	Thunderstorms/ Hail, Winds	Tornado
Pemiscot County	X	X	X	X	X	X	X	X
Caruthersville	X	X	X	X	X	X	X	X
Hayti	X	X	X	X	X	X	X	X
Hayti Heights	X	X	X	X	X	X	X	X
Wardell	X	X	X	X	X	X	X	X
Caruthersville CPS 18	X	X	X	X	X	X	X	X
Cooter R-IV	X	X	X	X	X	X	X	X
Pemiscot Co R-III	X	X	X	X	X	X	X	X
South Pemiscot R-V	X	X	X	X	X	X	X	X

3.1.4 Multi-Jurisdictional Risk Assessment

For this multi-jurisdictional plan, the risk assessment presents each jurisdiction’s risks where they deviate from the risks facing the entire planning area. Pemiscot County is located in the most southeastern portion of the state and the Mississippi River is its east border. The county is fairly uniform in terms of climate and construction characteristics. The entire county is rural. Therefore, most of the hazards apply to most jurisdictions. Each hazard includes a profile and any risk differences based on jurisdiction are included in each hazard profile.

Accordingly, overall hazards and vulnerability do not vary greatly across the planning area for most hazards. Weather-related hazards, such as drought, extreme temperatures, severe thunderstorms, severe winter weather, and tornado affect the entire planning area.

The two largest jurisdictions are Caruthersville and Hayti. These two cities have more assets at a greater density, and therefore have greater vulnerability to weather-related hazards than the remaining areas. Rural areas in Pemiscot County are comprised of agricultural assets, primarily crops, which are vulnerable to natural hazards such as flooding, high winds, extreme heat, and drought. The differences in vulnerability will be discussed in greater detail in the following sections of each hazard.

The previous chapter, Chapter 2 Planning Area Profile and Capabilities, discussed the existing mitigation capabilities of each jurisdiction, such as plans and policies, personnel, and financial resources, which are or could be used to implement measures to reduce hazard losses.

3.2 ASSETS AT RISK

This section assesses the population, structures, critical facilities and infrastructure, and other important assets in the planning area that may be at risk to natural hazards. There have been small population decreases in the county, but the margin of error for those changes is significant in relation to the overall population. Therefore, the estimated changes in population cannot be depended upon to assess risk. Regardless, the communities in Pemiscot County are small and rural with the greatest asset being the land.

3.2.1 Total Exposure of Population and Structures

3.2.2 Unincorporated County and Incorporated Cities

In the following three tables, population data is based on 2020 Census Bureau data. Building counts and building exposure values are based on parcel data provided by the State of Missouri Geographic Information Systems (GIS) database. 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. It should be noted 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. Table 3.4 that follows provides the building value exposures for the county and each participating city in the planning area broken down by usage type. Table 3.5 provides the building count total for the county and each participating 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	2021 Annual Population Estimate	Building Count	Building Exposure (\$)	Contents Exposure (\$)	Total Exposure (\$)
City of Caruthersville	5,606	3,101	\$292,557,000	\$160,960,000	\$453,517,000
City of Hayti	2,204	1,481	\$155,632,000	\$89,330,000	\$244,962,000
City of Hayti Heights	319	273	\$22,767,000	\$11,514,000	\$34,281,000
Unincorporated Pemiscot County	7,820	3,718.	\$372,273,000	\$201,459,000	\$573,732,000
Totals	15,949	8,573	\$843,229,000	\$463,263,000	\$1,306,492,000

Source: U.S. Bureau of the Census, 2021 population estimates ; Building Count and Building Exposure, Missouri Outreach Folders – All Hazards Risk Data; Contents Exposure derived by applying multiplier to Building Exposure based on Hazus MH 2.1 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.

Table 3.4. Building Values/Exposure by Usage Type

Jurisdiction	Agriculture	Commercial	Education	Government	Industrial	Residential	Total
City of Caruthersville	\$417,000	\$40,039,000	\$15,680,000	\$2,413,000	\$1,504,000	\$232,504,000	\$292,557,000
City of Hayti	\$257,000	\$23,809,000	\$6,272,000	\$1,136,000	\$2,256,000	\$121,804,000	\$155,632,000
City of Hayti Heights	\$27,000	\$288,000	\$0	\$0	\$0	\$22,453,000	\$22,767,000

Unincorporated Pemiscot County	\$18,479,000	\$15,266,000	\$9,408,000	\$3,407,000	\$19,929,000	\$305,784,000	\$372,273,000
Totals	\$19,180,000	\$79,402,000	\$31,360,000	\$6,956,000	\$23,689,000	\$682,545,000	\$843,229,000

Source: Missouri Outreach Folders

Table 3.5. Building Counts by Usage Type

Jurisdiction	Agriculture	Commercial	Education	Government	Industrial	Residential	Total
City of Caruthersville	19	30	3	2	16	771	841
City of Hayti	11	8	5			273	297
City of Hayti Heights	55	21	4	3	12	941	1036
Unincorporated Pemiscot County	74	249	6	2	45	3765	4141
Totals	205	347	18	10	73	6874	7477

Source: Missouri Outreach Folders, All Hazards Risk Data

The number of enrolled students at 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) from school Data Collection Questionnaires.

Table 3.6. Population and Building Exposure by Participating Public School Districts

Public School District	Enrollment	Building Count	Building Exposure (\$)	Contents Exposure (\$)	Total Exposure (\$)
Caruthersville CPS-18	946	35	\$57,320,202	\$9,159,834	\$66,480,036
Cooter R-IV	209	7	\$11,189,640	\$2,064,759	\$13,254,399
Pemiscot Co Special School Dist	142	5	\$7,487,445	\$1,824,084	\$9,311,529
South Pemiscot Co R-IV	604	9	\$24,819,244	\$5,042,737	\$29,861,981
Totals	1,901	56	\$100,816,531	\$18,091,414	\$118,907,945

Source: [School Directory | Missouri Department of Elementary and Secondary Education \(mo.gov\)](#), HMPC Data Collection Questionnaires from Public School Districts

3.2.3 Critical and Essential Facilities and Infrastructure

As part of the update to the Pemiscot County Multi-Jurisdictional Hazard Mitigation Plan, participating jurisdictions assessed the vulnerability of the following types of facilities below:

- **Critical Facility:** Those facilities 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. This inventory was compiled from the 2023 Data Collection Questionnaires. The full list of critical facilities is included in Appendix E. This was created in 2023 by Pemiscot County Emergency Management.

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

Jurisdiction	Airport Facility	Childcare Facility	Communications Towers	Emergency Operations	Fire Service	Government	Hospital/Health Care	Nursing Homes	Police Station	School Facilities	Stormwater/Wastewater	TOTAL
Caruthersville	1	5	5	1	1	1		1	2	2	1	20
Hayti	1	3	2	1	1	1	1	1	1	2	1	15
Hayti Heights												0
Unincorporated Pemiscot County			3	1	1	1						6
Totals	2	8	10	3	3	3	1	2	3	4	2	41

Source: Data Collection Questionnaires 2023, information from Pemiscot County EMD

Figure 3.1 illustrates the locations of bridges in the planning area included in the National Bridge Inventory data set. For 2022, the NBI data set identified 209 bridges within Pemiscot County, 70 in good condition, 118 in fair condition and 21 in poor condition.

There are 221 scour critical bridges in Missouri, according to the 2023 State Hazard Mitigation Plan. Of those, one is in Pemiscot County and a second is on its border with New Madrid County as shown in Figure 3.2. Scour critical bridges are those bridges that are vulnerable to scour during a flood. Bridge scour is the removal of sediment such as sand and rocks from around bridge abutments or piers. Scour is caused by swiftly moving water and can scoop out scour holes, compromising the integrity of the bridge. The National Bridge Inventory uses a classification system of 0-3 to indicate the potential for scour. Bridges in the 0-1 categories are those that are at or near failure due to scour; those in the 2-3 categories are vulnerable to scour and determined to be unstable.

Figure 3.1. Pemiscot County Bridges



Source: modot.org

Figure 3.2. Missouri Scour Critical Bridges



3.2.4 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.

The following section of the plan identifies specific natural, historic, cultural, and economic assets in the planning area.

Threatened and Endangered Species:

Table 3.8 lists federally threatened, endangered, proposed and candidate species in Pemiscot County.

Table 3.8. Threatened and Endangered Species in Pemiscot County

Common Name	Scientific Name	Status
Gray Bat	Myotis grisescens	Endangered
Indiana Bat	Myotis sodalis	Endangered
Northern Long-Eared Bat	Myotis septentrionalis	Threatened
Pallid Sturgeon	Scaphirhynchus albus	Endangered
Piping Plover	Charadrius melodus	Threatened
Red Knot	Calidris canutus rufa	Threatened
Tri-colored Bat	Perimyotis subflavus	Proposed Endangered
Alligator Snapping Turtle	Macrochelys temminckii	Proposed Threatened
Decurrent False Aster	Boltonia decurrens	Threatened
Fat Pocketbook	Potamilus capax	Endangered
Monarch Butterfly	Danaus plexippus	Candidate

Source: [Map: U.S. Threatened and Endangered Species by County \(biologicaldiversity.org\)](https://www.biologicaldiversity.org/)

Natural Resources: As part of its mission to protect and manage the fish, forest, and wildlife resources of the state and to facilitate and provide opportunity for all citizens to use, enjoy, and learn about these resources, the Missouri Department of Conservation (MDC) maintains 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 the planning area and also includes local parks if available.

Table 3.9. Conservation Areas in Pemiscot County

Conservation Area Name	Location	City
Little River Conservation Area	Hwy 412 east of Kennett 4 miles	East of Kennett
Twin Borrow Pits Conservation Area	From Portageville, Rte T south, then east, then south, then CR 439 east 1.5 miles	South of Portageville
Wolf Bayou Unit of Black Island Conservation Area	Wardell exit off I-55 follow east outer rd south to Rt BB over the levee	South of Wardell
Stephen C. Bradford Unit of Black Island Conservation Area	From Hayti I-55 exit, take Hwy 84 east, then Co Rd 337 north, and Co Road 335 east	Northeast of Hayti
Gayoso Bent Unit of Black Island Conservation Area	Access by boat along the Mississippi River	Mississippi River east of Pemiscot County
Triangle Board Club Access	Rt N east of Hayti to CR 337	East of Hayti
John L. and Georgia Girvin Conservation Area	From Portageville, Hwy 162 east, to 439 south	Southeast of Portageville
DeSoto Unit of Black Island Conservation Area	Wardell exit off I-55, then to CR 338	Remote Pemiscot County
S.P. Reynolds Access	East End of Ward Avenue	Caruthersville

Source: [Conservation Areas Search | Missouri Department of Conservation \(mo.gov\)](https://www.mo.gov/conservation/conservation-areas-search/)

Public Park Name	City
England Park	Caruthersville
French Park	Caruthersville
Reynolds Park	Caruthersville
Veterans Park	Caruthersville

Source: Pemiscot County website

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 identifies the properties in Pemiscot County that are on the National Register of Historic Places.

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

Property	Address	City	Date Listed
Campbell Archaeological Site	Restricted	Cooter	7/24/74
Caruthersville Water Tower	W Third Street	Caruthersville	9/9/82
Delmo Community Center	Delmo Street	Homestown	1/15/09
Delta Center Mound	Restricted	Portageville	7/24/74
Denton Mound and Village Archaeological Site	Restricted	Denton	7/29/69
Murphy Mound Archaeological Site	3 miles SW of Caruthersville	Caruthersville	5/21/69
JM Wallace Archaeological Site	Restricted	Wardell	12/2/70
US Hwy 61 Arch	US Route 61 near Holland	Holland	10/28/01

Source: Missouri Department of Natural Resources – Missouri National Register Listings by County

Economic Resources: Table 3.11 identifies major non-government employers in the planning area.

Table 3.11. Major Non-Government Employers in Pemiscot County

Employer Name	Main Locations	Product or Service	Employees
Arcosa Marine Products	265 Co Hwy 346, Caruthersville	Industrial	345
Century Casino	777 E Third St, Caruthersville	Entertainment	182
Pemiscot Memorial Health Systems	946 E Reed St, Hayti	Healthcare	253

Source: Chamber of Commerce, Caruthersville

Agriculture: Agriculture plays a significant role in Pemiscot County's economy. The top crops in acres are wheat, corn, rice, soybeans, and cotton. Table 3.12 details agriculture-related jobs in Pemiscot County.

Table 3.12. Agriculture-Related Jobs in Pemiscot County

	Unpaid	1 Worker	2 Workers	3-4 workers	5-9 workers	10 or more workers
# of Farms	44	25	18	46	24	9
# of Workers	69	25	36	158	148	113

Source: Census of Agriculture 2017, County Data

A

s of 2017, 184 farms in Pemiscot County reported having a total of 480 workers across all farms

reporting.

3.3 LAND USE AND DEVELOPMENT

3.3.1 Development Since Previous Plan Update

Since 2010, Pemiscot County has decreased in population by 14.4% (2,635 persons) and the number of housing units has declined as well. Table 3.13 and Table 3.14 present this data by participating jurisdiction.

Table 3.13. County Population Growth, 2010 to 2020

Jurisdiction	2010 Population	2020 Population	2010-2020 # Change	2010-2020 % Change
Pemiscot County total	18,296	15,661	-2,635	-14.4%
City of Caruthersville	6,168	5,562	-606	-9.8%
City of Hayti	2,939	2,493	-446	-15.2%
City of Hayti Heights	626	515	-111	-17.7%

Source: U.S. Bureau of the Census, Decennial Census, Population as reported by the Census bureau

Population growth or decline is generally accompanied by increases or decreases in the number of housing units. Table 3.14 depicts the change in numbers of housing units in the planning area from 2010 to 2021.

Table 3.14. Change in Housing Units, 2010-2021

Jurisdiction	Housing Units 2010	Housing Units 2021	2010-2021 # Change	2010-2021 % Change
Pemiscot County total	15,428	15,771	343	2.2%
City of Caruthersville	6,177	5,519	-658	-10.7%
City of Hayti	2,875	2,154	-721	-25.1%
City of Hayti Heights	567	319	-248	-43.7%

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

3.3.2 Future Land Use and Development (B2b)

The likely trend in Pemiscot County is that agricultural and agricultural related industry will continue to be a large part of the county economy. The county is experiencing a steady population decline. Its one thriving employer and industry is entertainment provided by Century Casino.

Future development plans as reported on Data Collection Questionnaires are below. None of these developments should have a significant impact on hazard mitigation in the county.

City of Caruthersville – none listed in the questionnaire, but the city’s casino is undergoing a large renovation and expansion. The city and local non-profits are implementing plans to restore their historic water tower. There is a large community redevelopment plan for downtown Caruthersville underway that includes renovation of their Exchange Building and making improvements like walking trails, an outdoor event pavilion, and improved waterfront gathering spaces.

City of Hayti – the only recent development listed is their cannabis dispensary and no future plans are listed.

City of Hayti Heights – none.

Unincorporated Pemiscot County – none.

School District's Future Development

Data Collection Questionnaires were reviewed to see what planned improvements each participating school district has.

Caruthersville CPS 18 School District – no new construction is being planned in the near future.

Cooter R-IV School District – no new construction is being planned in the near future.

Pemiscot R-3 School District - no new construction is being planned in the near future.

South Pemiscot County R-V School District – no new construction is being planned in the near future.

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 **Error! Reference source not found.** is profiled individually in this section in alphabetical order. The level of information presented in the profiles varies by hazard based on the information available. With each update of this plan, new information will be incorporated to provide for better evaluation and prioritization of the hazards that affect the planning area. Detailed profiles for each of the identified hazards 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:** (B1f) This section describes the geographic areas in the planning area that are affected by the hazard. Where available, maps indicate the specific locations of the planning area that are vulnerable to the subject hazard. For most 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 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 percent 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.(B1e)
- **Changing Future Conditions Considerations and the Impact of Climate Change: (B2b)** This section presents potential changes to each hazard that are expected to occur due to variations in environment and climate. Predictions about the changes are contingent upon available research; therefore, some hazards have limited or unknown information.

It is difficult to predict the scope, severity, and pace of changing future conditions and the impacts posed by more intense storms, frequent heavy participation, heat waves, drought, and extreme flooding; none-the-less, according to the FEMA Climate Change Adaptation Policy Statement, they can significantly change the probabilities and magnitudes of hazards faced by communities.

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. (B2a) The vulnerability assessment further defines and quantifies populations, buildings, critical facilities, and other community assets at risk to natural hazards. The vulnerability assessment for this plan followed the methodology described in the FEMA publication *Understanding Your Risks—Identifying Hazards and Estimating Losses* (2002).

The vulnerability assessment was conducted based on the best available data, including data that was collected for the previous plan update. Data to support the vulnerability assessment was collected from the following sources:

- Personal interviews with HMPC members and other stakeholders; and,
- Other sources as cited.

The Vulnerability Assessment is divided into four parts:

- **Vulnerability Overview:** Provides an overall 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.
- **Potential Losses to Existing Development:** Describes the potential impacts of the hazard. Impact means the consequences of 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.
- **Previous and Future Development:** Presents how changes in development have impacted the community’s vulnerability to this hazard and describes how any changes in development that occurred in known hazard prone areas since the previous plan have increased or decreased the community’s vulnerability. This section also describes anticipated future development in the county, and how that would impact hazard risk in the planning area.

- **Hazard Summary by Jurisdiction:** For hazard risks that vary by jurisdiction, this section provides an overview of the variation and the factual basis for that variation.

Problem Statements

Each hazard analysis includes a summary of the problems created by the hazard in the planning area and possible ways to resolve those problems. The focus of the problem statements sub-section is to synthesize the “problems” revealed through the risk assessment with the process of updating the mitigation strategy and developing mitigation actions that are aimed at “solving” the identified problems.

3.4.1 Flooding (Riverine and Flash)

Hazard Profile

Hazard Description

A flood is partial or 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 river 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 levee and dam failure is discussed in Section 3.4.2 and Section 3.4.3 respectively. It will not be addressed in this section.

A flash flood occurs when water levels rise at an extremely fast rate due to 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 the 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 disperse 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 waters move 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 up 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

The table below provides the number of riverine flood events by location as recorded by the NCEI for the 26-year period between 1997 and 2022 within Pemiscot County and its incorporated cities.

Table 3.15. NCEI Pemiscot County Flood Events Summary, 1997 to 2022 (B2c)

Location	# of Events
Caruthersville	1
Pemiscot County, unincorporated	2

Source: National Centers for Environmental Information

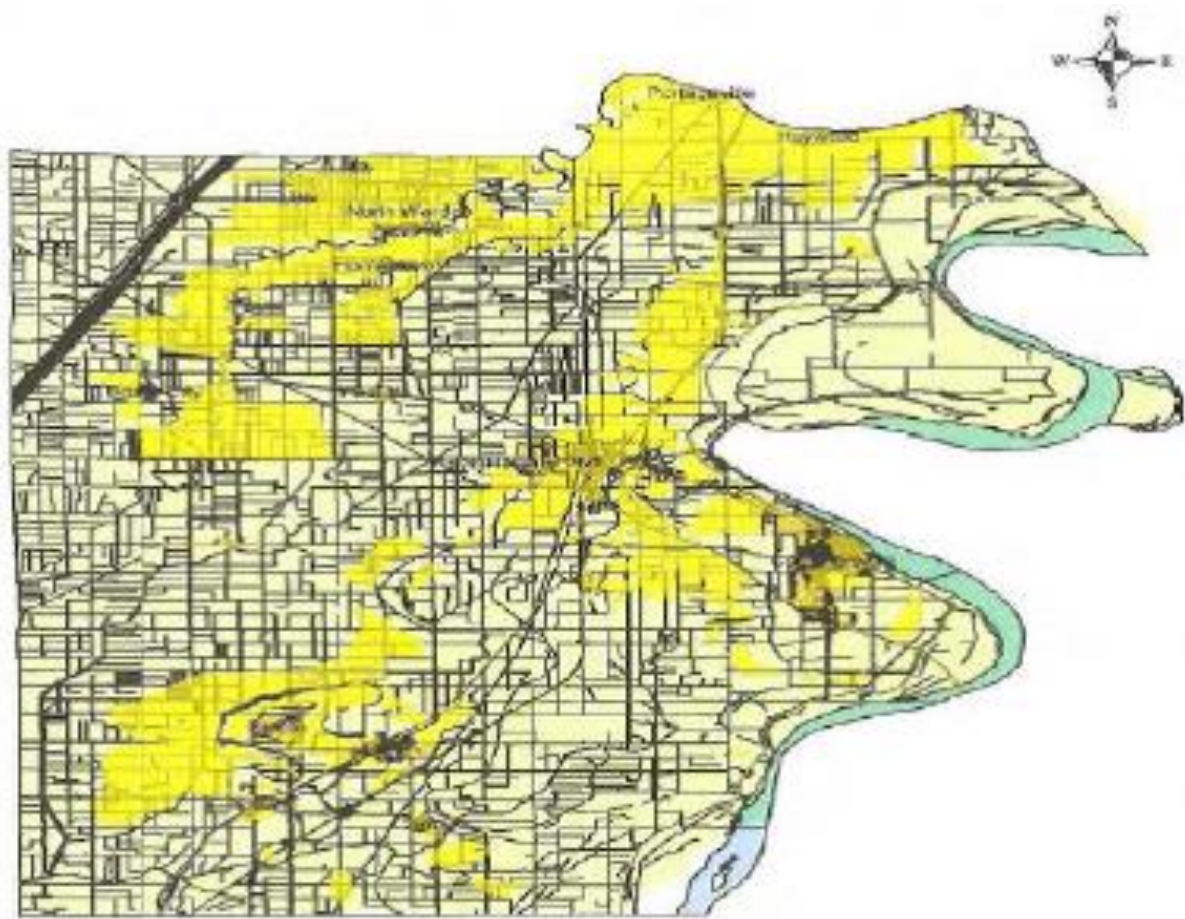
Flash floods occur in SFHA (Special Flood Hazard Areas) and in low-lying areas in the planning area. They also occur in areas without adequate drainage to carry away the amount of water that falls during intense rainfall events. Table 3.16 summarizes the number of flash flood events during a 20-year time period.

Table 3.16. NCEI Pemiscot County Flash Flood Events Summary, 2003 to 2022 (B2c)

Location	# of Events
Caruthersville	3
Hayti	1
Hayti Heights	0
Pemiscot County, unincorporated and other non-participating cities	5
- Steele - 1	
- Hayward - 1	
- Denton - 1	
- Wardell - 1	
- Kinfolk Ridge - 1	

0 depicts the areas of the planning area that are at risk to the 1% annual chance of flood, also known as the 100-year floodplain. Figures following 3.3 are each of the participating communities' FIRM maps.

Figure 3.3. Pemiscot County Floodplain Map




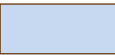


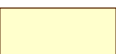
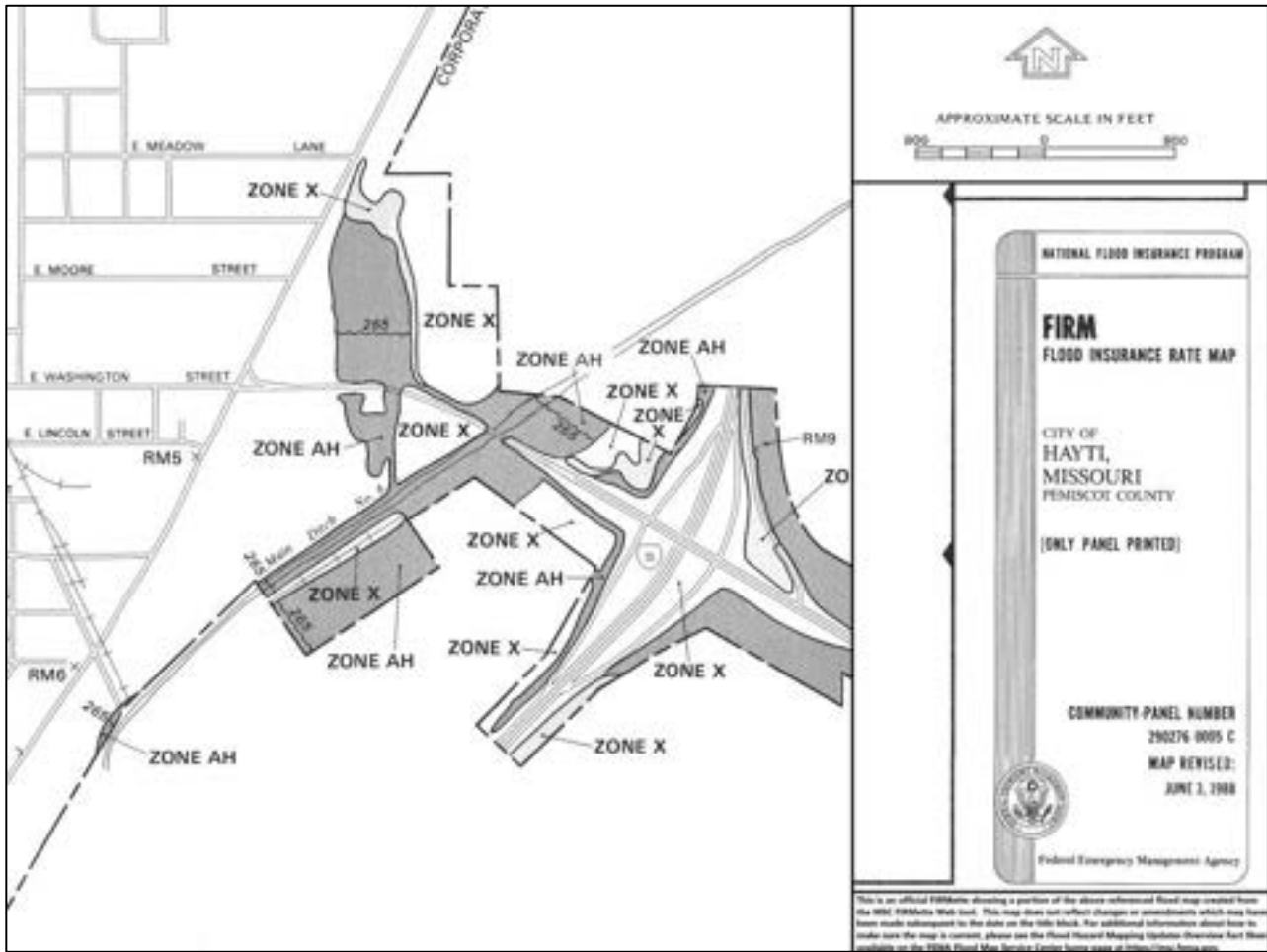
LEGEND			
	Roadways		Rivers, Streams, Lakes
	Communities		Out Special Flood Hazard Area
			In Special Flood Hazard Areas (100 Year)

Figure 3.4. Pemiscot County – Caruthersville FIRM



Figure 3.5. Pemiscot County Hayti FIRM



substantial damage/substantial improvement provisions and development. All jurisdictions have floodplain ordinances except Hayti Heights. Floodplain ordinances are found in Appendix G. Hayti Heights will pass a new ordinance as detailed in new Action 2.7.

Table 3.17. Community Participation in the National Flood Insurance Program in Pemiscot County, 2023

Jurisdiction	Status Date – Participating Regular Since	Floodplain Management Ordinance In Place	CRS Participant (Y/N)/ Class	Effective FIRM Date	Responsible for Floodplain Regs in SFHAs	Responsible for Floodplain Admin
Caruthersville	01/16/81	X	N	01/16/81	Barry Gilmore	Barry Gilmore
Hayti	09/29/78	X	N	06/03/88	Frank Rose	Frank Rose
Hayti Heights	06/15/81	X	N	10/16/96	Catrina Robinson	Catrina Robinson
Unincorporated Pemiscot County	05/17/82	X	N	2/05/03	Josh Boste	Josh Boste

Source: NFIP Community Status Book and Pemiscot County Hazard Mitigation Committee

Table 3.18. NFIP Policy and Claim Statistics as of 9/30/22

Community Name	Policies in Force	Insurance in Force	Closed Losses	Total Payments
Caruthersville	69	\$16,952,600	68	\$284,029
Hayti	9	\$2,651,200	8	\$33,626
Hayti Heights	1	\$48,000	0	\$0
Unincorporated Pemiscot County	216	\$48,878,000	48	\$292,247

Source: [nfip_hudex-policy-and-loss-data-by-geography_20220930.xlsx](https://www.flood.gov/nfip-hudex-policy-and-loss-data-by-geography-20220930.xlsx) (live.com)

The unincorporated portion of the county followed by the City of Caruthersville incurred the most losses. Their total claims payments were \$292,247 and \$284,029, respectively.

Table 3.19. Jurisdiction Approach to NFIP Compliance for Damage, Improvement, Development in SFHA

Community Name	Substantial Damage/Substantial Improvement Provisions	Development in SFHA
Caruthersville	Section 415.130	Section 415.030
Hayti	Section 415.290	Section 415.130, 415.140
Hayti Heights	New Action 2.7	New Action 2.7
Unincorporated Pemiscot County	Article 4	Article 3

Source: Jurisdiction Floodplain Ordinances found in Appendix G

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 9 repetitive loss properties. As of 2023, 1

property has been mitigated, leaving 7 unmitigated repetitive loss properties.

Table 3.20. Pemiscot County Repetitive Loss Properties

Jurisdiction	# of Properties Unmitigated	Type of Property	# Mitigated	Building Payments	Content Payments	Total Payments	Average Payment	# of Losses
Caruthersville	4	Residential	1	\$127,692	\$86,438	\$214,131	\$16,472	13
Steele	1	Residential		\$9,076	\$5,487	\$14,563	\$7,282	2
Unincorporated Pemiscot County	2	Residential	0	\$82,566	\$18,604	\$101,170	\$20,234	5

Source: Missouri SEMA as of 10/1/23

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.

Severe repetitive loss is included in the Caruthersville line item of Table 3.19. There were 4 total losses totaling \$98,238 in total payments.

Previous Occurrences

Flood events, as reported in the NOAA (National Oceanic and Atmospheric Administration) storm events database were reviewed. There were 12 flood events in the Planning Area between 2003 and 2022. Of these 12, 9 were reported as flash food events and 3 were reported as riverine events.

In addition, Pemiscot County has been included in 5 Presidential disaster declarations that included flooding between 1973 and 2022. Historical accounts of flooding events are recorded below. Sources include the NOAA database, FEMA, local news, and planning committee member accounts.

Table 3.21. NCEI Pemiscot County Flash Flood Events Summary, 2003 to 2022 (B2c)

Year	# of Events	# of Deaths	# of Injuries	Property Damages	Crop Damages
2003	1	0	0	\$1,000	0
2006	2	0	0	\$15,010	\$50,000
2009	3	0	0	\$30,000	0
2011	2	0	0	\$0	0
2012	1	0	0	\$10,000	0
Total	9	0	0	\$56,010	\$50,000

Source: [Storm Events Database - Search Results | National Centers for Environmental Information \(noaa.gov\)](https://www.ncei.noaa.gov/stormevents/)

Table 3.22. NCEI Pemiscot County Riverine Flood Events Summary, 2003 to 2022

Year	# of Events	# of Deaths	# of Injuries	Property Damages	Crop Damages
2011	1	0	0	\$250,000	0
2015	1	0	0	\$0	0
2019	1	0	0	0	0
Total	3	0	0	\$250,000	0

Source: [Storm Events Database - Search Results | National Centers for Environmental Information \(noaa.gov\)](https://www.ncei.noaa.gov/stormevents/)

Probability of Future Occurrence

The potential for flooding can change and increase through various land use changes and changes to land surface. A change in environment can create localized flooding problems inside and outside of natural floodplains through the alteration or confinement of natural drainage channels. These changes can be created by human activities or by other events, such as wildfires, earthquakes, or landslides.

Based on data from NCEI from 2003 to 2022, there were 12 records of flooding, 9 flood and 3 flash flood events over a 20-year period. That equates to a probability of .45 for flood events and .15 for flash flood events. The average number of any type of flood event calculates to .6 per year.

Changing Future Conditions Considerations and the Impact of Climate Change

According to the 2023 Missouri State Hazard Mitigation Plan, “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.”

Vulnerability

Vulnerability Overview

Flooding presents a danger to life and property, often resulting in injuries, and in some cases, fatalities. Flood water 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, 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. Flood waters can also cause erosion undermining road beds. In some instances, steep slopes that are saturated with water may cause mud or rock slides 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.

The 2023 State Hazard Mitigation Plan takes into account the following for calculating the vulnerability of the state to flood incidents: spatial analysis of exposure, estimation of losses and a review of historical damages. See Section 3.3.2 Critical and Essential Structures and Infrastructure for a discussion on scour critical bridges.

Potential Losses to Existing Development

It should be noted that all Pemiscot County communities can be impacted by flooding of major roads

and low water crossings in the areas proximate to their corporate limits. Several incorporated areas in the county are susceptible to street flooding during periods of heavy rain. Tables 3.20 and 3.21 above illustrate the dollars in damage incurred from riverine and flash floods in the county for the past 20 years. Table 3.22 provides the average losses by jurisdiction annually due to flooding.

Table 3.23. Average Yearly Losses by Jurisdiction 2003-2022

Jurisdiction	Riverine Flooding	Flash Flooding
City of Caruthersville	0	\$5
City of Hayti	0	\$1500
City of Hayti Heights	0	0
Unincorporated Pemiscot County	\$15,255	\$1250
Total	\$15,255	\$2755

Impact of Previous and Future Development

Future development could impact flash and riverine flooding in Pemiscot 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 of flash flooding. Future development would also increase impervious surfaces causing additional water run-off and drainage problems during heavy rainfall events.

According to the population and housing unit trend analysis, there is virtually no growth occurring in Pemiscot County and participating communities. Flood risk should not be increasing; assuming that floodplain ordinances are being effectively implemented and wise use of floodplains is being encouraged.

Any future development should also take into consideration the impact of additional impervious surfaces to water run-off and drainage capabilities during heavy rainfall events.

EMAP Consequence Analysis

Table 3.24. EMAP Impact Analysis: Flooding

Subject	Detrimental Impacts
Public	Localized impact expected to be severe for incident areas and moderate to light for other adversely affected areas.
Responders	Localized impact expected to limit damage to personnel in the flood areas at the time of the incident.
Continuity of Operations	Damage to facilities/personnel in the area of the incident may require temporary relocation of some operations. Localized disruption of roads, facilities, and/or utilities caused by incident may postpone delivery of some services.
Property, Facilities, and Infrastructure	Localized impact to facilities and infrastructure in the area of the incident. Some severe damage possible.
Environment	Localized impact expected to be severe for incident areas and moderate to light for other areas affected by the flood or HazMat spills.
Economic Condition of Jurisdiction	Local economy and finances adversely affected, possibly for an extended period of time.

Public Confidence in the Jurisdiction’s Governance	Ability to respond and recover may be questioned and challenged if planning, response, and recovery not timely and effective.
--	---

Hazard Summary by Jurisdiction

Flooding, especially flash flooding, can impact any area of Pemiscot County. The flooding will vary by jurisdiction. No educational facilities are located within the 100-year floodplain. School districts face the same risk as the city or county in which they are located. The following is a hazard summary by jurisdiction.

Pemiscot County – the unincorporated portion of the county has experienced 3 flash flood and 1 riverine flood events in the past 20 years.

City of Caruthersville – has experienced 3 flash flood events and 2 riverine flood in the past 20 years.

City of Hayti – has experienced 1 flash flood event in the past 20 years.

City of Hayti Heights – is less susceptible to flooding than the remainder of the county illustrated by zero flooding events in the past 20 years.

Problem Statement

- Although the county is bordered by the Mississippi River on the east, it has not suffered from riverine flooding much in the past 20 years. There has been no flood that caused any damage in the past 20 years. The county should continue to be vigilant in following NCIF recommendations.
- Flash flooding in Pemiscot County occurs occasionally. Jurisdictions should monitor areas that flood most and make infrastructure adjustments as needed.

3.4.2 Levee Failure

Hazard Profile

Hazard Description

Levees are earth embankments constructed along rivers and coastlines to protect adjacent lands from flooding. Floodwalls are concrete structures, often components of levee systems, designed for urban areas where there is insufficient room for earthen levees. When levees and floodwalls and their appurtenant structures are stressed beyond their capabilities to withstand floods, levee failure can result in injuries and loss of life, as well as damages to property, the environment, and the economy.

Levees can be small agricultural levees that protect farmland from high-frequency flooding. Levees can also be larger, designed to protect people and property in larger urban areas from less frequent flooding events such as the 100-year and 500-year flood levels. For purposes of this discussion, levee failure will refer to both overtopping and breach as defined in FEMA’s Publication “So You Live Behind a Levee”

(<http://mrcc.isws.illinois.edu/1913Flood/awareness/materials/SoYouLiveBehindLevee.pdf>).

Following are the FEMA publication descriptions of different kinds of levee failure.

Overtopping: When a Flood Is Too Big

Overtopping occurs when floodwaters exceed the height of a levee and flow over its crown. As the water passes over the top, it may erode the levee, worsening the flooding and potentially

causing an opening, or breach, in the levee.

Breaching: When a Levee Gives Way

A levee breach occurs when part of a levee gives way, creating an opening through which floodwaters may pass. A breach may occur gradually or suddenly. The most dangerous breaches happen quickly during periods of high water. The resulting torrent can quickly swamp a large area behind the failed levee with little or no warning.

Earthen levees can be damaged in several ways. For instance, strong river currents and waves can erode the surface. Debris and ice carried by floodwaters—and even large objects such as boats or barges—can collide with and gouge the levee. Trees growing on a levee can blow over, leaving a hole where the root wad and soil was. Burrowing animals can create holes that enable water to pass through a levee. If severe enough, any of these situations can lead to a zone of weakness that could cause a levee breach. In seismically active areas, earthquakes and ground shaking can cause a loss of soil strength, weakening a levee and possibly resulting in failure. Seismic activity can also cause levees to slide or slump, both of which can lead to failure.

Geographic Location

Missouri is a state with many levees. Currently, there is no single comprehensive inventory of levee systems in the state. Levees have been constructed across the state by public entities and private entities with varying levels of protection, inspection oversight, and maintenance. The lack of a comprehensive levee inventory is not unique to Missouri.

There are two concurrent nation-wide levee inventory development efforts, one led by the United State Army Corps of Engineers (USACE) and one led by Federal Emergency Management Agency (FEMA). The National Levee Database (NLD), developed by USACE, captures all USACE related levee projects, regardless of design levels of protection. The Midterm Levee Inventory (MLI), developed by FEMA, captures all levee data (USACE and non-USACE) but primarily focuses on levees that provide 1% annual-chance flood protection on FEMA Flood Insurance Rate Maps (FIRMs).

It is likely that agricultural levees and other non-regulated levees within the planning area exist that are not inventoried or inspected. These levees that are not designed to provide protection from the 1-percent annual chance flood would overtop or fail in the 1-percent annual chance flood scenario. Therefore, any associated losses would be taken into account in the loss estimates provided in the Flood Hazard Section.

The latest version of the NLD includes a searchable database of levees. In Pemiscot County, there are two levee systems shown on the NLD:

- Commerce Mo – St Francis River System
- Elk Chute Levee System

Figure 3.7 presents the location of these levees in and around Pemiscot County. Figure 3.8 presents areas protected by levee systems.

Approximately 47 miles of the Mississippi River borders Pemiscot County on the eastern side. Levee systems have been put into place to help alleviate flooding of the county.

Strength/Magnitude/Extent

Levee failure is typically an additional or secondary impact of another disaster such as flooding or

earthquake. The main difference between levee failure and losses associated with riverine flooding is magnitude. Levee failure often occurs during a flood event, causing destruction in addition to what would have been caused by flooding alone. In addition, there would be an increased potential for loss of life due to the speed of onset and greater depth, extent, and velocity of flooding due to levee breach.

As previously mentioned, agricultural levees and levees that are not designed to provide flood protection from at least the 1% chance flood likely do exist in the planning area. However, none of these levees are shown on the Preliminary DFIRM, nor are they enrolled in the USACE Levee Safety Program. As a result, an inventory of these types of levees is not available for analysis. Additionally, since these types of levees do not provide protection from the 1% annual chance flood, losses associated with overtopping or failure are captured in the Flood Section of this plan.

Previous Occurrences

Generally, levees protecting Pemiscot County have held firm in the recent past. A search of news accounts of levee failures and breaches resulted in one news story:

- **December, 2015** The Pemiscot County Sheriff's Office reported it had been asked by the Levee Authority to begin patrolling the levee system because of the rising Mississippi River levels. This was a precaution.

Figure 3.7. NLD Levee Locations in and near Pemiscot County

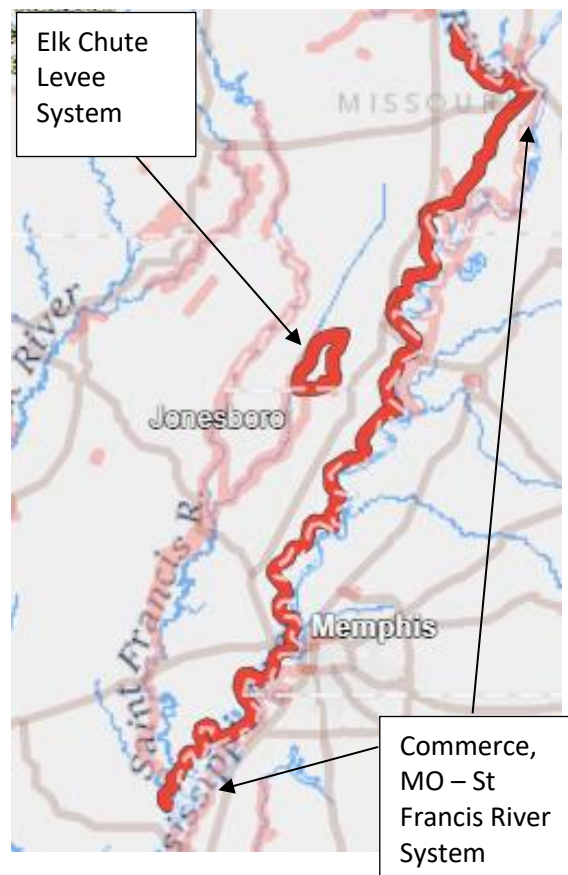
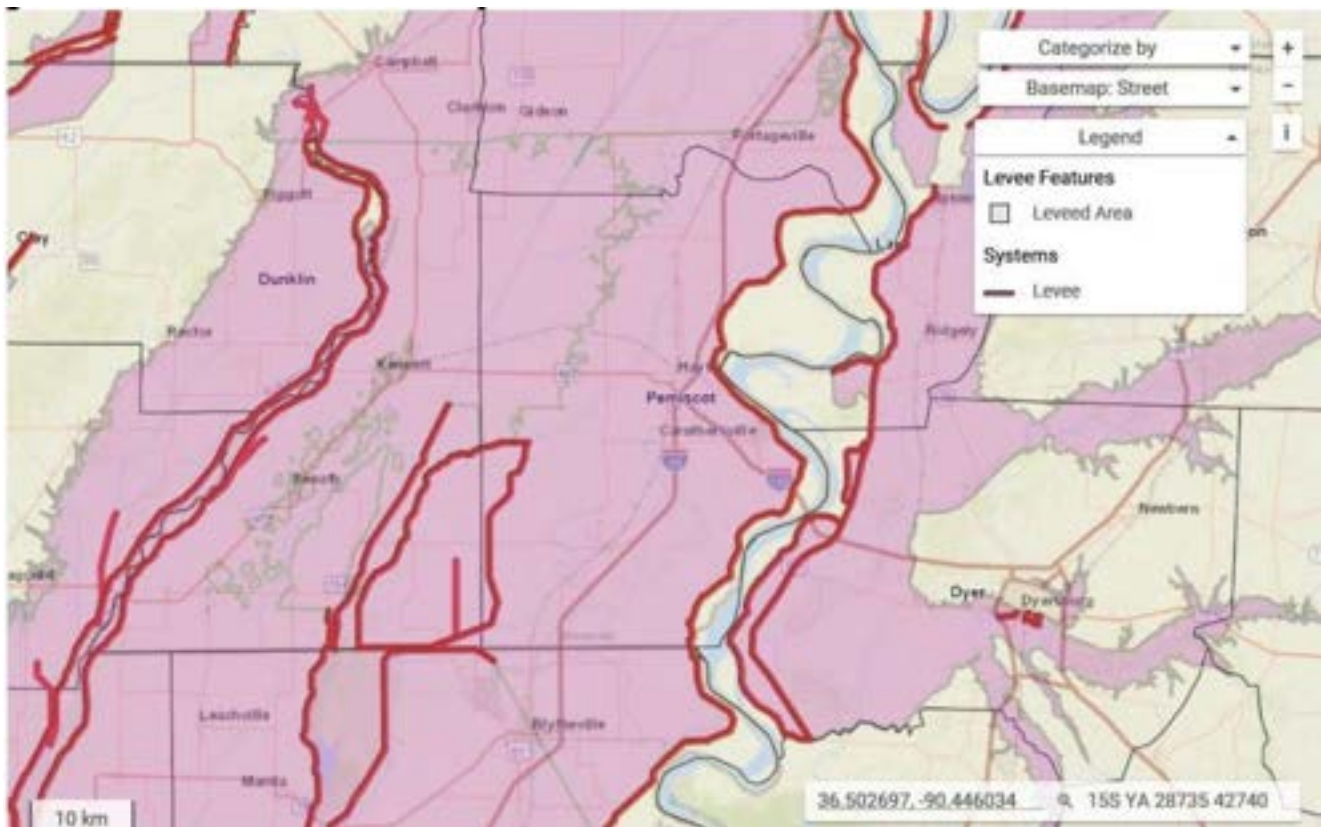


Figure 3.8. Mapping Areas Protected by Levee Systems Serving Pemiscot County



Probability of Future Occurrence

Probability of any occurrence of levee breach would be highly unlikely with the data available today. Levee breaches in Pemiscot County are very rare. There was an intentional breach created by explosives in Mississippi County in May 2011 which helped relieve potential problems in Pemiscot County. The US Army Corps of Engineers has the legal authority to breach the mainline levee any time the Ohio River at Cairo, Illinois crests about 50 feet. There was only one reported intentional breach during the past 15 years.

Changing Future Conditions Considerations and the Impact of Climate Change

The impact of changing future conditions on levee failure will most likely be related to changes in precipitation and flood likelihood. Climate change projections suggest that precipitation may increase and occur in more extreme events, which may increase risk of flooding, putting stress on levees and increasing likelihood of levee failure. Further, aging levee infrastructure and a lack of regular maintenance (including checking for seepage and removing trees, roots and other vegetation that can weaken a levee) coupled with more extreme weather events may increase risk of future levee failure.

Vulnerability

Vulnerability Overview

The USACE regularly inspects levees within its Levee Safety Program to monitor their overall condition, identify deficiencies, verify that maintenance is taking place, determine eligibility for federal rehabilitation assistance (in accordance with P.L. 84-99), and provide information about the levees on which the public relies. Inspection information also contributes to effective risk assessments and supports levee accreditation decisions for the National Flood Insurance Program administered by the Federal Emergency Management Agency (FEMA).

The USACE now conducts two types of levee inspections. Routine Inspection is a visual inspection to verify and rate levee system operation and maintenance. It is typically conducted each year for all levees in the USACE Levee Safety Program. Periodic Inspection is a comprehensive inspection led by a professional engineer and conducted by a USACE multidisciplinary team that includes the levee sponsor. The USACE typically conducts this inspection every five years on the federally authorized levees in the USACE Levee Safety Program.

Both Routine and Periodic Inspections result in a rating for operation and maintenance. Each levee segment receives an overall segment inspection rating of Acceptable, Minimally Acceptable, or Unacceptable. 9 defines the three ratings. Figure 3.9 defines the three ratings.

Figure 3.9. Definitions of the Three Levee System Ratings

Levee System Inspection Ratings	
Acceptable	All inspection items are rated as Acceptable.
Minimally Acceptable	One or more levee segment inspection items are rated as Minimally Acceptable or one or more items are rated as Unacceptable and an engineering determination concludes that the Unacceptable inspection items would not prevent the segment/system from performing as intended during the next flood event.
Unacceptable	One or more levee segment inspection items are rated as Unacceptable and would prevent the segment/system from performing as intended, or a serious deficiency noted in past inspections (previous Unacceptable items in a Minimally Acceptable overall rating) has not been corrected within the established timeframe, not to exceed two years.

The National Levee Database showed no levee systems in Pemiscot County that were rated unacceptable. The Commerce Mo St Francis River System is rated Moderate in terms of risk level. The Elk Chute Levee System risk is rated Low.

Potential Losses to Existing Development

Levee failure in Pemiscot County that occurs every 100 years has the potential of impacting the entire land mass of the county by visual assessment of Figure 3.5. All communities are at risk.

Similarly, all structures are also at risk, the loss from levee failures could amass losses of nearly \$3.5 billion based on total building and contents exposure. Pemiscot is one of the five counties in Missouri that stands to lose the most in the event of a major levee failure according to the 2023 Missouri State Hazard Mitigation Plan.

Impact of Previous and Future Development

According to the population and housing unit trend analysis, there is little to no growth and development in the county. Per Figure 3.5 above, all communities are in or very near levee protected areas.

EMAP Consequence Analysis

Table 3.25. EMAP Impact Analysis: Levee Failure

Subject	Detrimental Impacts
Public	Localized impact expected to be severe for inundation area and moderate to light for other adversely affected areas.
Responders	Localized impact expected to limit damage to personnel in the inundation area at the time of the incident.
Continuity of Operations	Damage to facilities/personnel in the area of the incident may require temporary relocation of some operations. Localized disruption of roads and/or utilities may postpone delivery of some services.
Property, Facilities, and Infrastructure	Localized impact to facilities and infrastructure in the inundation area of the incident. Some severe damage possible.
Environment	Localized impact expected to be severe for inundation area and moderate to light for other adversely affected areas.
Economic Condition of Jurisdiction	Local economy and finances adversely affected, possibly for an extended period of time, depending on damage and length of investigation.
Public Confidence in the Jurisdiction’s Governance	Localized impact expected to adversely affect confidence in local, state, and federal government, regardless of the levee owner.

Hazard Summary by Jurisdiction

All communities in Pemiscot County have levee protected areas. Figure 3.5 above shows these areas. All school districts in the county are within city limits and are therefore not listed separately in hazard summaries. One exception is Pemiscot County R-3 School District. It is included in the Pemiscot County summary.

Pemiscot County – the county overall has two levee systems within its boundaries. Within these systems are multiple individual levees. Although the possibility of a levee breach is rather remote, the

impact could be catastrophic in terms of loss of property, crops and potentially lives.

City of Caruthersville – has the greatest risk of impact by a levee breach because of its location adjacent to the Mississippi River and its population and infrastructure density.

City of Hayti – is less susceptible to flooding than Caruthersville because of its location 6 miles to the west. However if a Mississippi levee breached, the magnitude of the force of the river would likely impact the entire county.

City of Hayti Heights – just 1.1 miles from Hayti, the impact on Hayti Heights would likely be the same as the impact on Hayti.

Problem Statement

Flooding is the most common hazard associated with levee failure, breach or overtopping. Levee failure, breach or overtopping can result not only in loss of life, but also considerable loss of capital investment, loss of income and property damage. Levees can provide a false sense of security in property owners and may lead to a misunderstanding of the true risk of assets in levee protected zones. While levees do provide flood protection, given enough time most will either overtop or fail leading to unplanned damages.

- Nearly all of Pemiscot County is in the path of potential levee failure. Flood insurance within the areas protected by levees should be encouraged. Public outreach to residents, as well as real estate agents and lenders would be beneficial.
- Not all levees have been inspected recently. Coordination with the USACE to understand levee inspections and schedule to address any deficiencies is also recommended.
- Not all residents may be aware that they are located in an inundation area. Education and outreach may be helpful.

3.4.3 Dam Failure

Hazard Profile

Hazard Description

Pemiscot County contains only four small dams that are privately owned. According to the NID (National Dam Inventory), these dams are not federally regulated and do not pose a threat to the county if they fail. Therefore, the county opts to omit Dam Failure from its Hazard Mitigation Plan.

3.4.4 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. Heaviest damage generally occurs nearest 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 the energy to buildings and other structures on the earth's surface.

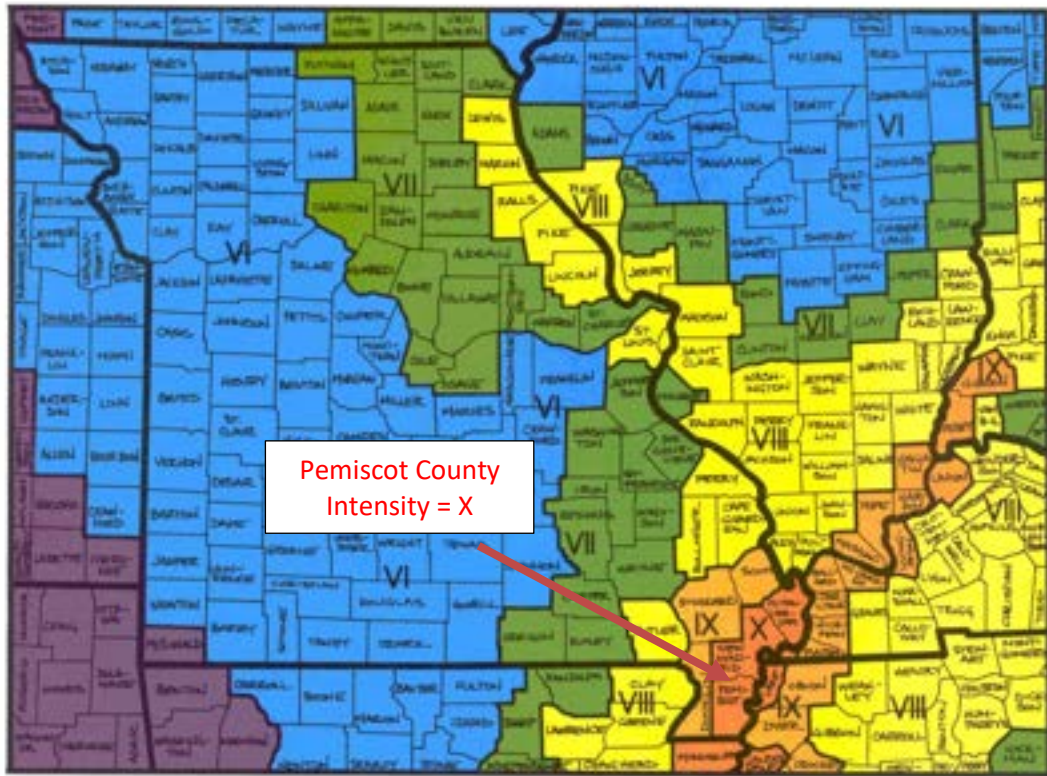
The New Madrid Earthquakes of 1811-1812 had a profound impact on the Missouri Bootheel. Pemiscot County lies just to the south of the epicenter of the quakes that were terrifyingly intense. The quakes caused liquefaction of the soil, sand blows, shifting of elevation of portions of the region and even a change in course of the Mississippi River. Although more than 200 years ago, the effect of the quakes that were estimated between 7.0 and 8.0 in magnitude must be considered when planning for a possible future seismic hazard.

There are eight seismic zones in the central United States. According to the US Geological Survey, the most active of the eight is the New Madrid Seismic Zone. It runs from northern Arkansas through southeast Missouri, western Tennessee and Kentucky and into the Ohio River Valley.

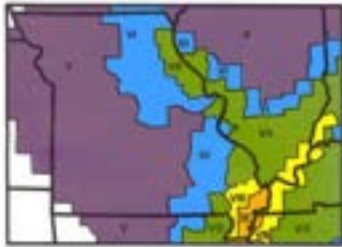
Geographic Location

Pemiscot County is near the center of the New Madrid Seismic Zone, located just south of New Madrid County. The planning area is most susceptible to earthquakes because it overlies the New Madrid Seismic Zone, therefore the earthquake intensity will not vary across Pemiscot County. In the map below, Figure 3.10, the highest projected Modified Mercalli intensities by county for a potential magnitude 7.6 earthquake whose epicenter could be anywhere along the length of the New Madrid Seismic Zone. The secondary maps in Figure 3.10 show the same regional intensities for 6.7 and 8.6 earthquakes, respectively. Pemiscot County experience the greatest intensity in either scenario. Figure 3.11 is a narrative description of the Modified Mercalli Intensity Scale.

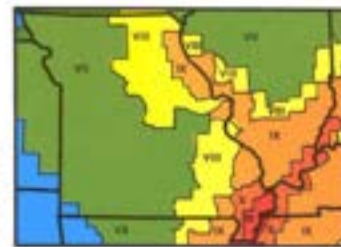
Figure 3.10. Impact Zones for Earthquake Along the New Madrid Fault



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.



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.



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.

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

Figure 3.11. Projected Earthquake Intensities

MODIFIED MERCALLI INTENSITY SCALE

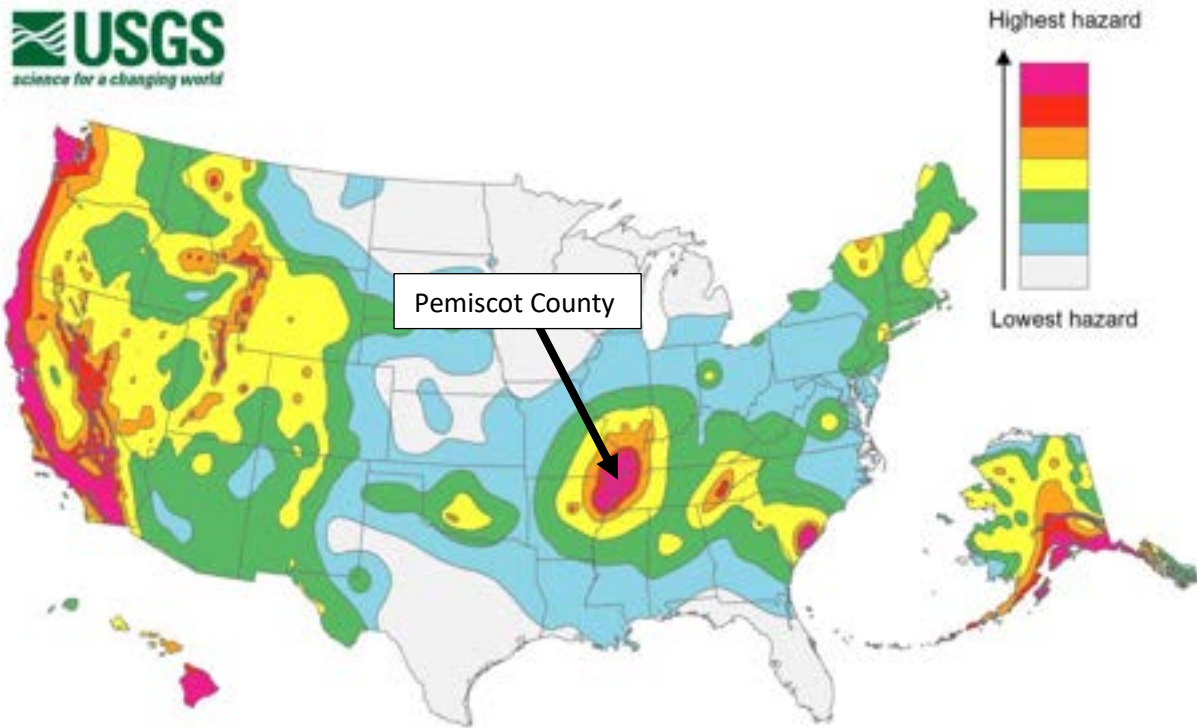
I	People do not feel any Earth movement.	IX	Most buildings suffer damage. Houses that are not bolted down move off their foundations. Some underground pipes are broken. The ground cracks conspicuously. Reservoirs suffer severe damage.
II	A few people might notice movement.	X	Well-built wooden structures are severely damaged and some destroyed. Most masonry and frame structures are destroyed, including their foundations. Some bridges are destroyed. Dams are seriously damaged. Large landslides occur. Water is thrown on the banks of canals, rivers, and lakes. Railroad tracks are bent slightly. Cracks are opened in cement pavements and asphalt road surfaces.
III	Many people indoors feel movement. Hanging objects swing.	XI	Few if any masonry structures remain standing. Large, well-built bridges are destroyed. Wood frame structures are severely damaged, especially near epicenters. Buried pipelines are rendered completely useless. Railroad tracks are badly bent. Water mixed with sand, and mud is ejected in large amounts.
IV	Most people indoors feel movement. Dishes, windows, and doors rattle. Walls and frames of structures creak. Liquids in open vessels are slightly disturbed. Parked cars rock.	XII	Damage is total, and nearly all works of construction are damaged greatly or destroyed. Objects are thrown into the air. The ground moves in waves or ripples. Large amounts of rock may move. Lakes are dammed, waterfalls formed and rivers are deflected.
V	Almost everyone feels movement. Most people are awakened. Doors swing open or closed. Dishes are broken. Pictures on the wall move. Windows crack in some cases. Small objects move or are turned over. Liquids might spill out of open containers.		
VI	Everyone feels movement. Poorly built buildings are damaged slightly. Considerable quantities of dishes and glassware, and some windows are broken. People have trouble walking. Pictures fall off walls. Objects fall from shelves. Plaster in walls might crack. Some furniture is overturned. Small bells in churches, chapels and schools ring.		
VII	People have difficulty standing. Considerable damage in poorly built or badly designed buildings, adobe houses, old walls, spires and others. Damage is slight to moderate in well-built buildings. Numerous windows are broken. Weak chimneys break at roof lines. Cornices from towers and high buildings fall. Loose bricks fall from buildings. Heavy furniture is overturned and damaged. Some sand and gravel stream banks cave in.		
VIII	Drivers have trouble steering. Poorly built structures suffer severe damage. Ordinary substantial buildings partially collapse. Damage slight in structures especially built to withstand earthquakes. Tree branches break. Houses not bolted down might shift on their foundations. Tall structures such as towers and chimneys might twist and fall. Temporary or permanent changes in springs and wells. Sand and mud is ejected in small amounts.		

Intensity is a numerical index describing the effects of an earthquake on the surface of the Earth, on man, and on structures built by man. The intensities shown in these maps are the highest likely under the most adverse geologic conditions. There will actually be a range in intensities within any small area such as a town or county, with the highest intensity generally occurring at only a few sites. Earthquakes of all three magnitudes represented in these maps occurred during the 1811 - 1812 "New Madrid earthquakes." The isoseismal patterns shown here, however, were simulated based on actual patterns of somewhat smaller but damaging earthquakes that occurred in the New Madrid seismic zone in 1843 and 1895.

Prepared and distributed by
THE MISSOURI STATE
EMERGENCY MANAGEMENT AGENCY
P.O. BOX 116
JEFFERSON CITY, MO 65102
Telephone: 573-526-9100

Figure 3.12 presents the location of Pemiscot County relative to a seismic hazard map of the United States, with Pemiscot County located in the category of highest hazard.

Figure 3.12. United States Seismic Hazard Map, Pemiscot County



Source: United States Geological Survey at https://earthquake.usgs.gov/hazards/hazmaps/conterminous/2014/images/HazardMap2014_lg.jpg

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 intensity 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 layman a more meaningful idea of the severity.

Previous Occurrences

Previous occurrences of earthquakes with a magnitude greater than 3.0 within and near Pemiscot County in the past 30 years include the following:

- 1981-06-26 - M 3.5 - 3km W of Dell, Arkansas
- 1982-02-02 - M 3.1 - 6km N of Dell, Arkansas
- 1984-12-03 - M 3.0 - 3km SE of Hayti, Missouri
- 1985-12-05 - M 3.5 - 6km NE of Dell, Arkansas
- 1986-05-24 - M 3.1 - 3km N of Gideon, Missouri
- 1987-06-19 - M 3.0 - 6km SSE Marston, Missouri
- 1989-04-27 - M 4.3 - 4km E of Steele, Missouri
- 1991-02-11 - M 3.0 - 2km NNW of Blytheville, Arkansas
- 1993-01-08 - M 3.5 - 6km WSW of Gosnell, Arkansas
- 1993-01-21 - M 3.0 - 6km NE of Caruthersville, Missouri
- 1994-04-23 - M 3.2 - 7km W of Gosnell, Arkansas
- 1995-06-06 - M 3.1 - 5km SSE of Ridgely, Tennessee
- 1996-11-29 - M 3.8 - 1km W of Blytheville, Arkansas
- 1999-08-23 - M 3.1 - 1km WSW of Ridgely, Tennessee
- 2003-04-30 - M 4.0 - 1km N of Blytheville, Arkansas
- 2005-06-02 - M 4.0 - 12km S of Ridgely, Tennessee
- 2006-09-07 - M 3.3 - 1km NW of Ridgely, Tennessee
- 2009-12-18 - M 3.1 - 9km SE of Marston, Missouri
- 2011-06-17 - M 3.3 - 6km NW of Tiptonville, Tennessee
- 2015-04-02 - M 3.6 - 1km WNW of Cooter, Missouri
- 2016-07-05 - M 3.0 - 5km SW of Caruthersville, Missouri
- 2017-07-31 - M 3.1 - 4km N of Ridgely, Tennessee
- 2017-08-15 - M 3.2 - 8km SSE of Marston, Missouri
- 2018-01-16 - M 3.6 - 4km NE of Caruthersville, Missouri
- 2018-11-22 - M 3.1 - 9km NW of Tiptonville, Tennessee

Additionally, there have been thousands of earthquake reports within the New Madrid seismic zone. Most of these earthquakes are too small to be felt, but on average about one earthquake per year is strong enough to be felt in the area.

Probability of Future Occurrence

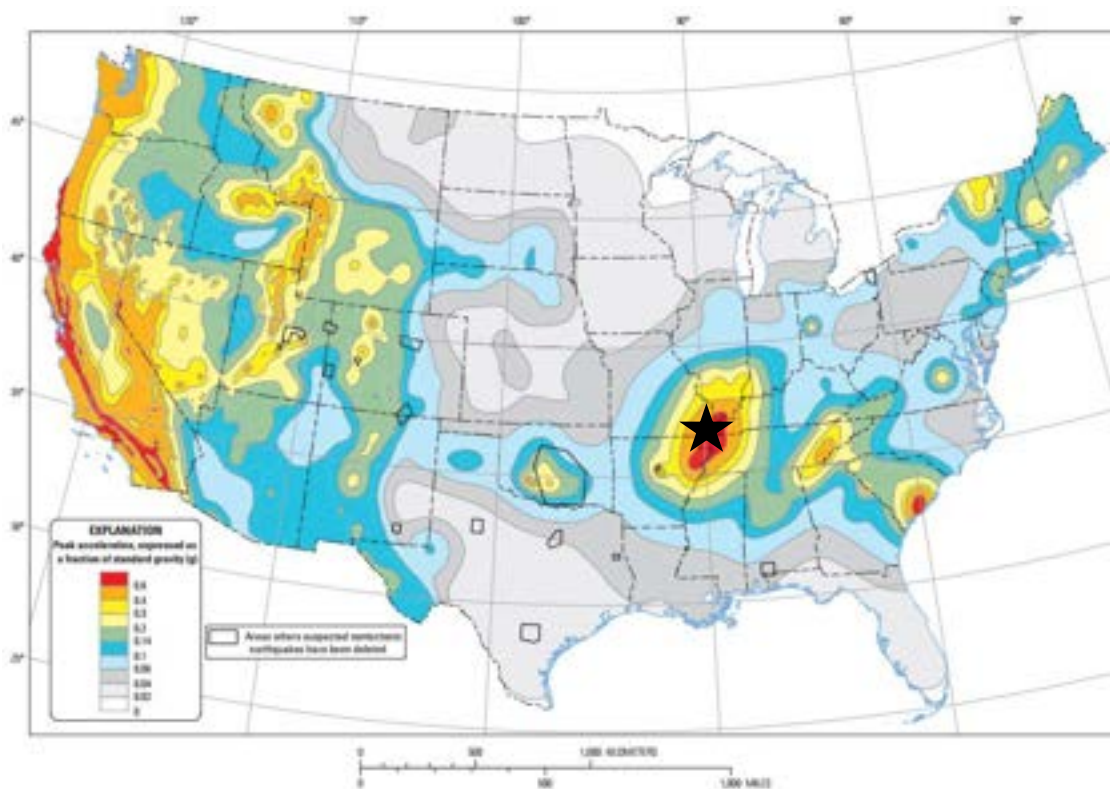
Ground motion is the movement of the earth's surface due to earthquakes or explosions. It is produced by waves generated by a sudden slip on a fault or sudden pressure at the explosive source and travels through the earth and along its surface. Ground motion is amplified when surface waves of unconsolidated materials bounce off or are refracted by adjacent solid bedrock. The probability of ground motion is depicted in USGS earthquake hazard maps by showing, by contour values, the earthquake ground motions (of a particular frequency) that have a common given probability of being exceeded in 50 years.

In developing Figure 3.13 the ground motions being considered at a given location are those from all future possible earthquake magnitudes at all possible distances from that location. The ground

motion coming from a particular magnitude and distance is assigned an annual probability equal to the annual probability of occurrence of the causative magnitude and distance. The method assumes a reasonable future catalog of earthquakes, based upon historical earthquake locations and geological information on the recurrence rate of fault ruptures. When all the possible earthquakes and magnitudes have been considered, a ground motion value is determined such that the annual rate of its being exceeded has a certain value.

Therefore, as presented on Figure 3.13, for the given probability of exceedance, two percent, the locations shaken more frequently will have larger ground motions. Pemiscot County is located within the red zone representing the largest peak acceleration of 0.8% g.

Figure 3.13. Two-Percent Probability of Exceedance in 50 Years of Peak Ground Acceleration



Source: U.S. Geological Survey, <https://earthquake.usgs.gov/static/lfs/nshm/conterminous/2014/2014pga2pct.pdf>
Note: Black star shows the approximate location of Pemiscot County.

Changing Future Conditions Considerations and the Impact of Climate Change

Scientists are beginning to believe 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 impacts and severity of earthquakes on Pemiscot County are potentially significant as illustrated by the 1811-1812 earthquakes. The most important direct earthquake hazard is ground shaking. According to MoDNR's Missouri Geological Survey, damage from earthquakes in the New Madrid Seismic Zone will vary depending on the earthquake magnitude, the character of the land, and the degree of urbanization. Since the county is rural dotted with small towns, the major damage will likely be to farmland.

During earthquakes liquefaction occurs. This could be an enormous problem when a large earthquake happens due to infrastructure damage making rescue and recovery difficult. Preparedness is needed as scholars estimate that the New Madrid Seismic Zone has the capability of generating Mercalli intensities of X in southeast Missouri. Studies and reports have been produced on the impact of a large earthquake to the region: *Impact of Earthquakes on the Central USA* (2018) is intended to provide scientific data upon which to base response and recovery planning for devastating earthquakes predicted for the New Madrid region.

Insurance is one tactic families can leverage against personal loss from an earthquake. Missouri is the third largest market for earthquake insurance among US states, exceeded only by California and Washington. Regular homeowners' policies do not cover damage from earthquakes. Earthquake coverage is purchased as separate coverage. Only 8.9% of homeowners in Pemiscot County in 2022 had earthquake coverage as compared with 15.6% in 2013. This aligns with the regional trend. As the average annual cost of earthquake coverage increases, the number of homeowners carrying it is dropping according to *2022 Residential Earthquake Coverage in Missouri* – a report published by the Missouri Department of Commerce & Insurance.

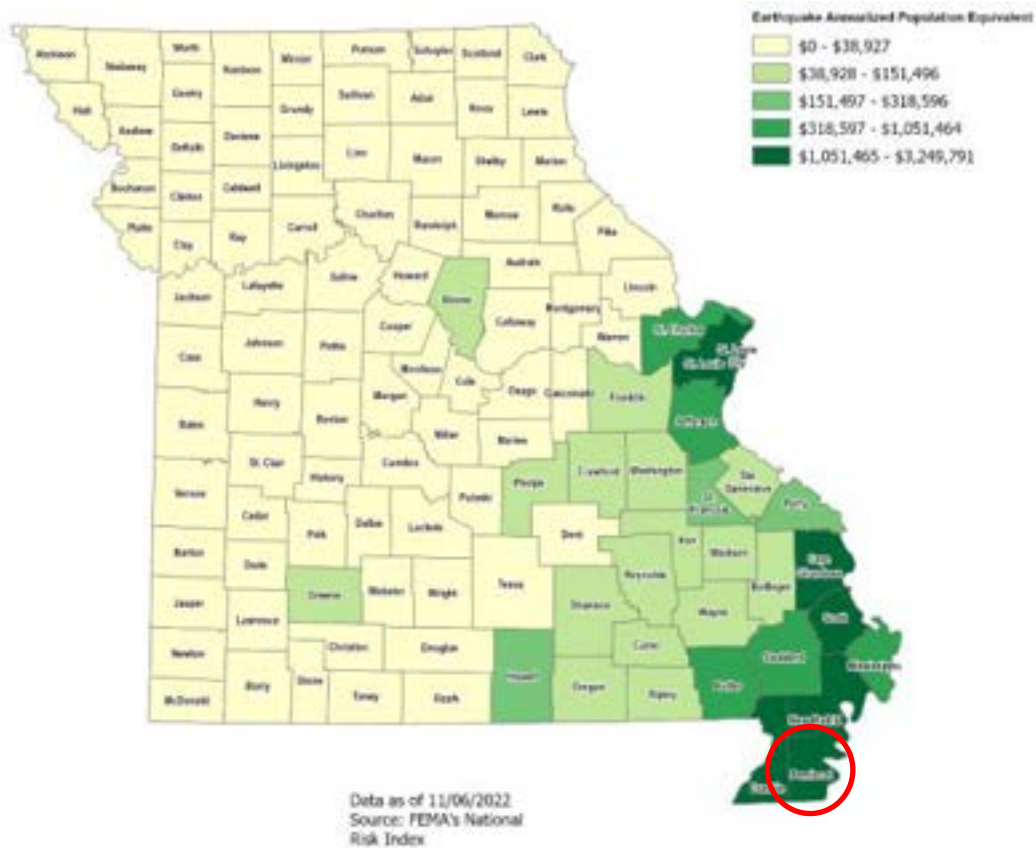
Potential Losses to Existing Development

Annualized Loss Scenario

Per the 2023 Missouri Hazard Mitigation Plan, large earthquake impact on Pemiscot County would be extensive. Only St. Louis County is estimated to have greater loss than the New Madrid Zone counties. Annualized loss is the maximum potential annual dollar loss resulting from various return periods averaged on a 'per year' basis. It is the summation of all HAZUS-supplied return periods multiplied by the return period probability (as a weighted calculation). This is the same scenario that FEMA National Risk Index uses to compare relative risk from earthquakes and other hazards at the county level nationwide.

Figure 3.14 is a FEMA National Risk Index map. The Risk Index calculates an annualized loss value for population. This population equivalence is calculated using a Value of Statistical Life (VSL) approach in which each fatality or ten injuries is treated as \$7.6 million of economic loss and adjusted for inflation for 2020 values. FEMA's National Risk Index combines the annualized losses for buildings and population for an overall expected annualized loss and loss rating. Pemiscot County is circled in white.

Figure 3.14. FEMA National Risk Index Annualized Loss Scenario – Missouri Population Equivalence Pemiscot County (Red Circle)

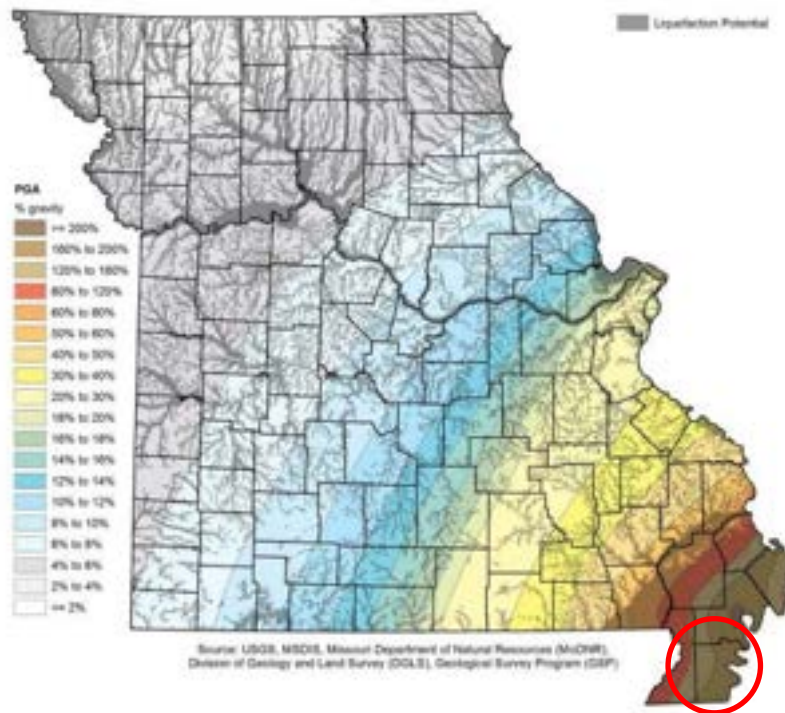


Source: 2023 Missouri State Hazard Mitigation Plan

2% Probability of Exceedance in 50-Years Earthquake Scenario

A second scenario, based on an event with a 2% probability of exceedance in 50 years, was done to model a worst-case scenario. This scenario is equivalent to the 2,500-year earthquake scenario in Hazus. Figure 3.15 presents the ground shaking and liquefaction potential for this scenario. The entire county would experience the most intense liquefaction.

Figure 3.15. Hazus Earthquake 2% Probability of Exceedance in 50-Years – Ground Shaking and Liquefaction Potential, Pemiscot County (White Circle)



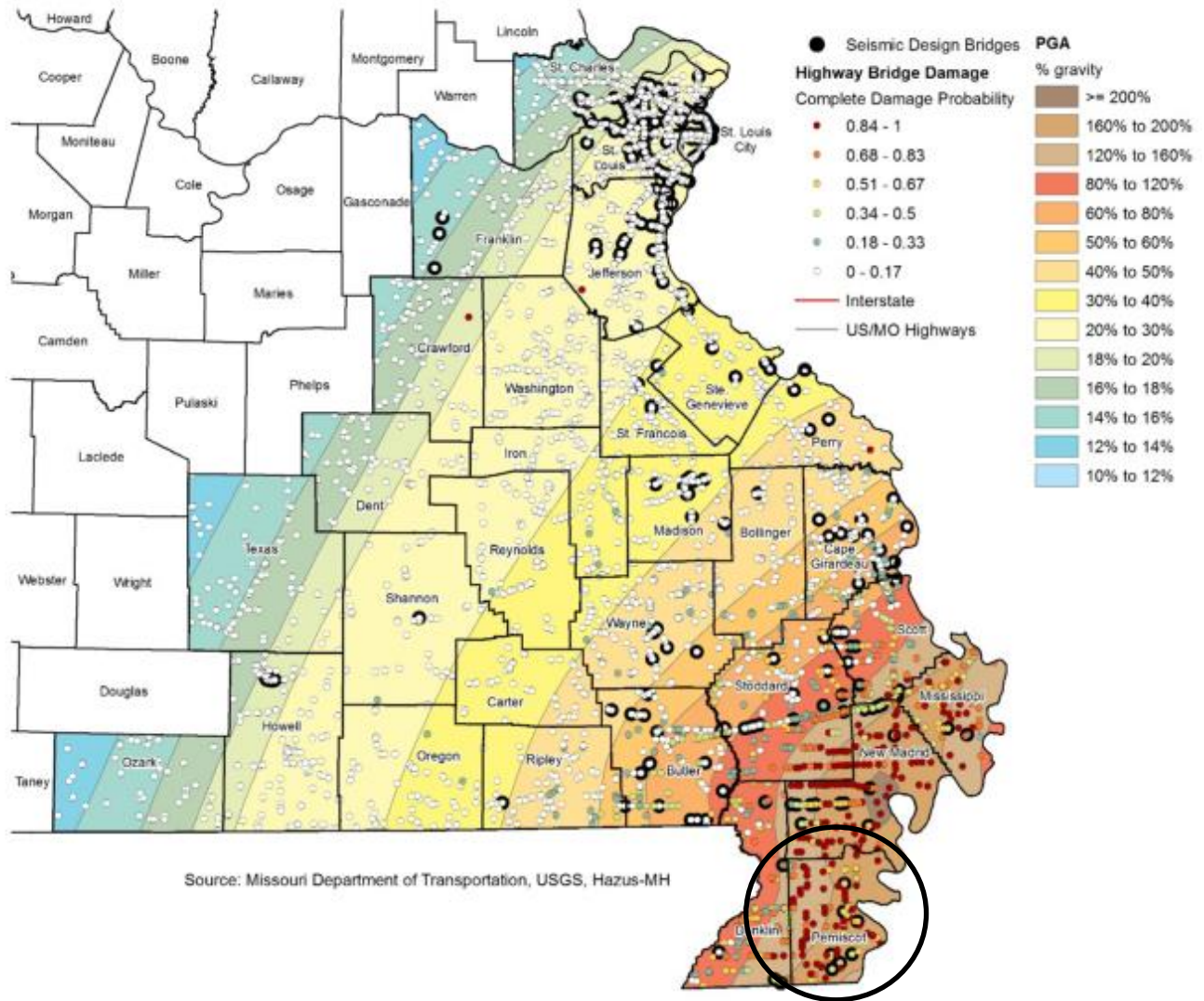
Source: 2023 Missouri State Hazard Mitigation Plan

In addition to building loss and loss of lives, the damage potential to bridges, hazardous materials facilities, and essential facilities is also likely in the event of a major earthquake in Pemiscot County. For Pemiscot County, there were 135 bridges identified by MDOT. Of these 135, 2% are expected to have no damage; 4% are expected to have slight damage; 5% are expected to have moderate damage; 12% are expected to have extensive damage; and 76% are expected to be completely damaged, see Figure 3.16.

For Pemiscot County, hazardous materials storage facilities are calculated to have very heavy damage, see Figure 3.17

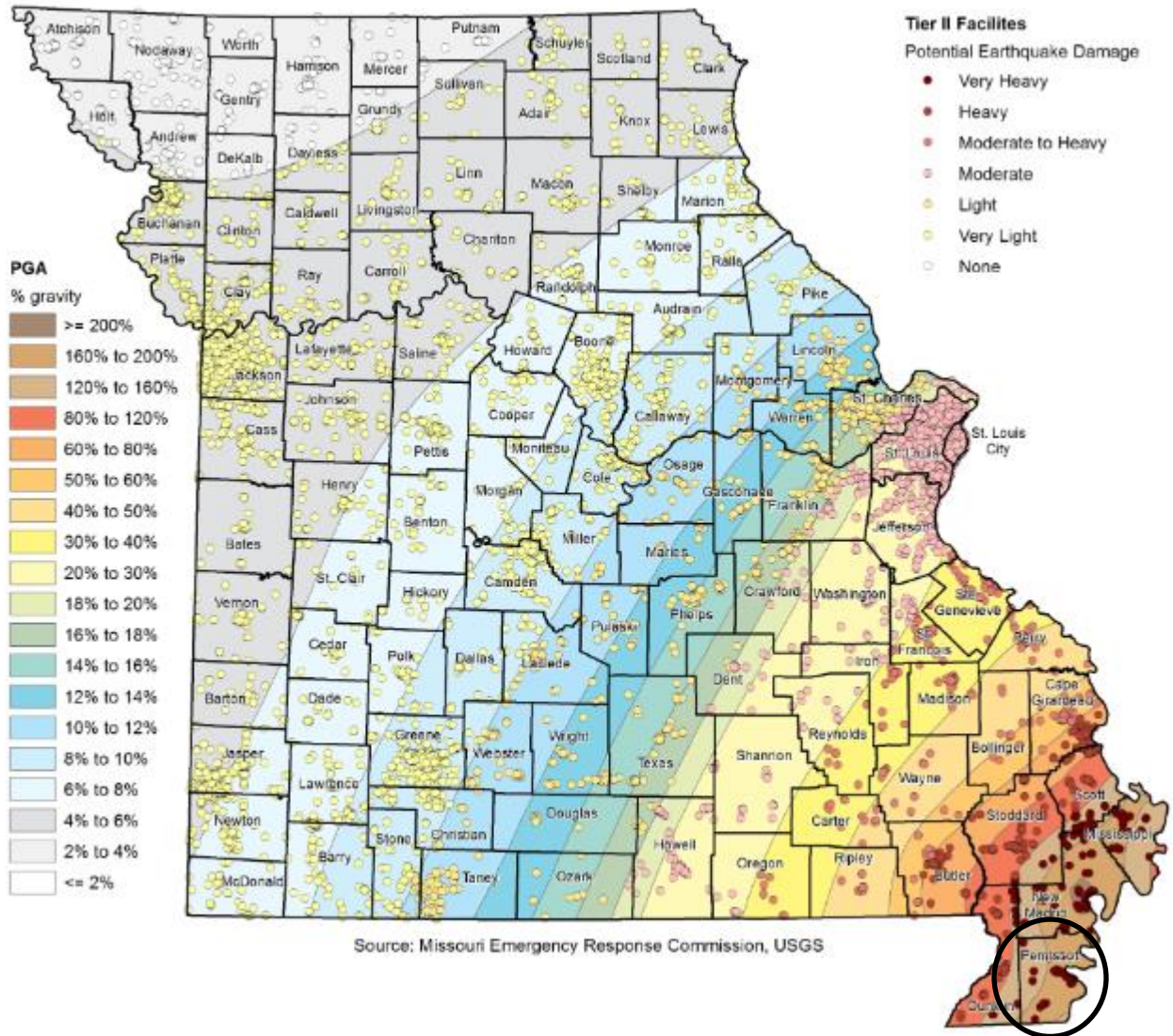
Critical Facilities with greater than 50% complete damage probability may include: all fire and police departments, all nursing facilities, all medical facilities and all schools.

Figure 3.16. Map of Bridge Damage Probability, Pemiscot County (Black Circle)



Source: 2018 Missouri State Hazard Mitigation Plan

Figure 3.17. Map of Hazardous Materials Facility Damage Potential, Pemiscot County (Black Circle)



Source: 2018 Missouri State Hazard Mitigation Plan

Impact of Previous and Future Development

According to population trends analysis, there is generally very little to no development and growth occurring in Pemiscot County. To some extent, modern building codes will help to reduce damage and casualties associated with future structures from earthquakes. Future facilities in the high-risk areas of Pemiscot County should be built to account for potential earth shaking and earthquake impacts.

EMAP Consequence Analysis

Table 3.26. EMAP Impact Analysis: Earthquakes

Subject	Detrimental Impacts
Public	Adverse impact expected to be severe for unprotected personnel and moderate to light for protected personnel.
Responders	Adverse impact expected to be severe for unprotected personnel and moderate to light for protected personnel.
Continuity of Operations	Damage to facilities/personnel in the area of the incident may require relocation of operations and lines of succession execution. Disruption of lines of communication and destruction of facilities may extensively postpone delivery of services.
Property, Facilities, and Infrastructure	Damage to facilities and infrastructure in the area of the incident may be extensive for facilities, people, infrastructure, and HazMat.
Environment	May cause extensive damage, creating denial or delays in the use of some areas. Remediation needed.
Economic Condition of Jurisdiction	Local economy and finances adversely affected, possibly for an extended period of time.
Public Confidence in the Jurisdiction’s Governance	Ability to respond and recover may be questioned and challenged if planning, response, and recovery not timely and effective.

Hazard Summary by Jurisdiction

Earthquake intensity is not likely to vary greatly throughout the planning area; thus, the risk will be the same throughout. However, damages could differ if there are structural variations in the planning area. For example, if one community has a higher percentage of residences built prior to 1939 than the other participants, that community is likely to experience greater damage. See Table 3.26 for a summary of the age of each jurisdiction’s buildings.

Table 3.27. Housing Units Built in 1939 or Earlier

Jurisdiction	Built 1939 or earlier #	Built 1939 or earlier %
Pemiscot County	568	9.2%
City of Caruthersville	221	10.4%
City of Hayti	121	12.2%
City of Hayti Heights	3	2.9%

Source: US Census Bureau American Community Survey 2021 5 Year Estimates <https://data.census.gov/>

Hayti has a higher percentage of very old homes, but Caruthersville is also at risk due to the quantity of older homes.

Problem Statement

- As identified within a high hazard area for earthquakes, seismic-resistant building codes are recommended throughout Pemiscot County.
- It is estimated 76% of bridges within Pemiscot County are expected to be completely damaged from the worst-case scenario event. Bridges with a high probability of damage/low post-earthquake functionality that are on major routes should be further evaluated for seismic hazard and retrofit potential.
- Fire, medical, and education facilities with a high probability of damage/low post-earthquake functionality should be further evaluated for seismic hazard and retrofit potential.
- Post-earthquake shelter planning should address alternate facilities and consider options for relocating people out of the hardest hit areas.
- With the decrease in earthquake insurance coverage over the past decade, public outreach and education efforts would be beneficial.

3.4.5 Land Subsidence/Sinkholes

Hazard Profile

Hazard Description

Pemiscot County does not contain the type of topography (karst) that causes sinkholes. Sinkholes result from a depression in the landscape where limestone formations have dissolved. Soils in Pemiscot County are either a mixed clay or sandy mixed soil. The soil tends to be stable which can be important when construction is considered.

3.4.6 Drought

Hazard Profile

Hazard Description

Drought is generally defined as a condition of moisture levels significantly below normal for an extended period of time 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.

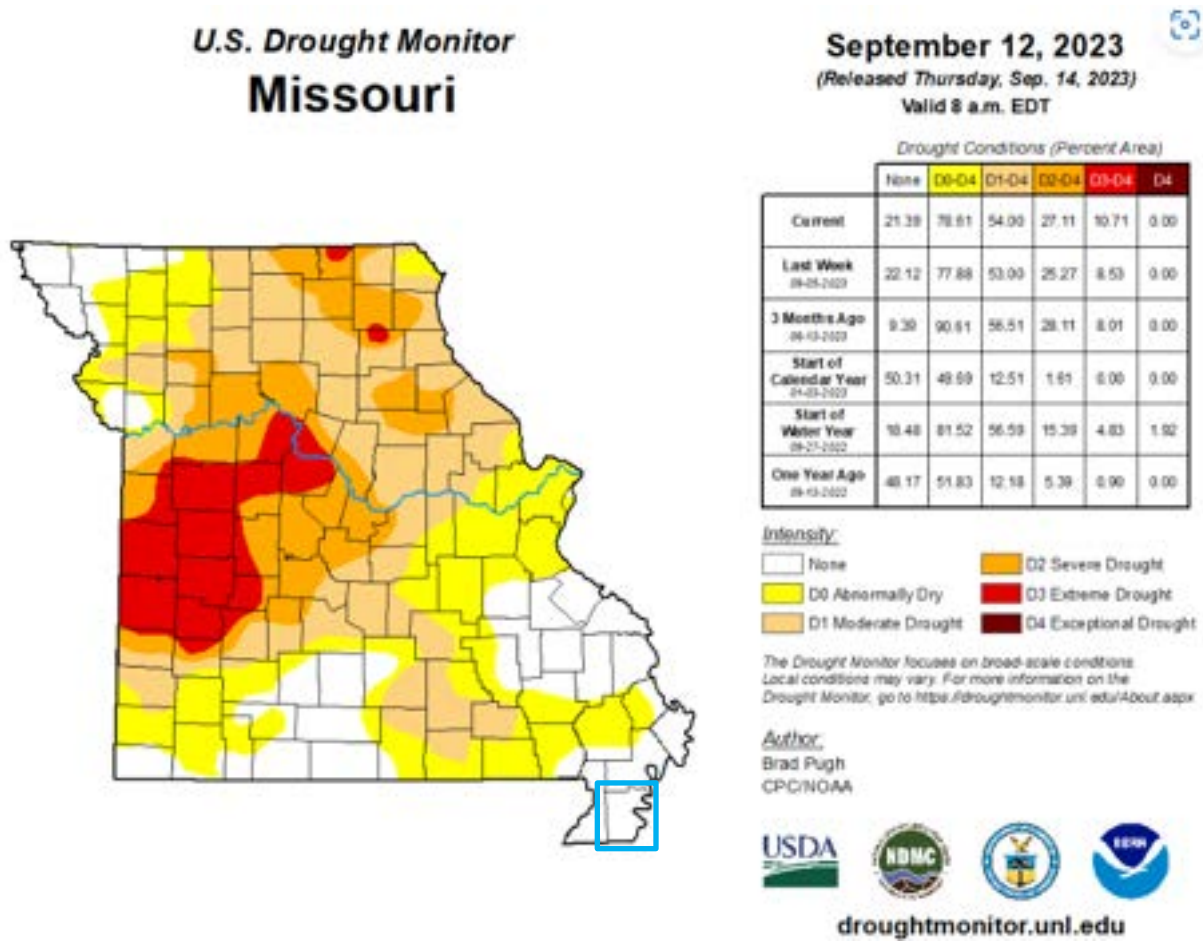
- Agricultural drought focus is on soil moisture deficiencies, differences between actual and potential evaporation, reduced ground water or reservoir levels, etc. Plant demand for water depends on prevailing weather conditions, biological characteristics of the specific plant, its stage of growth, and the physical and biological properties of the soil.
- Socioeconomic drought refers to when physical water shortage begins to affect people.

Geographic Location

Drought can occur anywhere within the Pemiscot County planning area; however, the agricultural sector typically experiences the most direct impacts from drought. According to the USDA's 2017 Census of Agriculture, Pemiscot County contained 184 farms which covered 296,190 acres of land or 90.1 percent of the county's total land area. It should be noted that the total number of farms and land in farms estimates declined by 19% and 3%, respectively. The average size of farms increased by 20%, indicating that smaller farms are selling out to larger corporate farms that may have more capacity to irrigate. Any new development that may occur in the county, because it is so limited, will have little influence on drought impact.

Figure 3.18 shows the U.S. Drought Monitor Map for the State of Missouri as of September 12, 2023. The location of Pemiscot County is indicated on the map by the blue square. As of this date, the Pemiscot County planning area is experiencing no drought conditions. The U.S Drought Monitor provides a snapshot of current drought conditions. It does not illustrate past conditions or predict potential for future drought.

Figure 3.18. U.S. Drought Monitor as of September 12, 2023 - Pemiscot County (Blue Square)



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 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 is used to describe wet periods, 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.

Previous Occurrences

The NCEI database reports 22 drought events in Pemiscot County during the 20-year period from 2003 through 2022. NCEI's reporting method designates each month of new or continuing severe drought as a new event. Periods of severe drought are combined and detailed in Table 3.27.

Table 3.28. NCEI Pemiscot County Drought Events Summary, 2003 through 2022

Event Dates	Months in Drought	Event Description
08/2007 – 10/2007	3	Below normal rainfall brought severe(D2)and extreme(D3) drought conditions to the Missouri Bootheel. Rainfall amounts during the month of August ranged from 2 to 3 inches below normal increasing the yearly deficit to 5 to 10 inches below normal. The drought impacted agricultural and hydrological interests of the area and burn bans were put into effect in some areas due to the lack of rainfall.
09/2010 – 3/2011	7	Below normal rainfall fell during the month of September across the Missouri Bootheel. The lack of rainfall expanded severe (D2) drought conditions into the Missouri Bootheel. The biggest impact from the drought was on agriculture as many crops suffered due to the lack of rainfall. Hydrological concerns also become an issue by the end of the month as many lake and river levels dropped.
05/2012 – 11/2012	7	Below normal rainfall through the spring brought on severe (D2) drought conditions across the Missouri Bootheel by the end of May. Many crops that were planted during the spring struggled to grow due to lack of water.
11/2016 – 12/2016	2	Abnormally dry weather continued during the month of November and fueled the spread of at least moderate (D2) drought conditions over most portions of the Mid-South. A semi-permanent upper ridge of high pressure resulted in little rainfall which continued the drought conditions. Dry conditions negatively impacted pastures, triggering more feeding of hay, and causing concern for hay shortages for the winter months. The drought caused river and lake levels to be at low levels.
10/2022 – 12/2022	3	Abnormally dry conditions continued severe (D2) drought conditions over the Missouri Bootheel through the month of November. The drought had little impact on agriculture as the dry weather allowed crops to be harvested and winter wheat to be planted. However, the dry conditions did elevate the risk of wildfires. River and lake levels were also at low or near record low levels. River traffic on the Mississippi River was impacted by the low water levels.

Source: NCEI Storm Events Database

The National Drought Mitigation Center (NDMC), located at the University of Nebraska in Lincoln, provides a clearinghouse for information on the effects of drought, based on reports from media, observers, impact records, and other sources.

According to the National Drought Mitigation Center's Drought Impact Reporter, during the 10-year period from January 2013 through December 2022, drought impacts were noted for the State of Missouri, of which several were reported to affect Pemiscot County. Table 3.28 summarizes the number of impacts reported by category and the years impacts were reported for each category. Note that the Drought Impact Reporter assigns multiple categories to each impact.

Table 3.29. Drought Impacts Reported for Pemiscot County from 2013 through 2022

Category	Impacts	Years Reported
Agriculture	9	2022, 2018, 2017, 2013
Business & Industry	1	2022
Plants & Wildlife	4	2022, 2018, 2017
Relief, Response & Restrictions	6	2022, 2018, 2013
Society & Public Health	1	2022
Water Supply & Quality	3	2022, 2018

Source: Drought Impact Reporter, <http://droughtreporter.unl.edu>

Descriptions of impacts are provided below as reported in the Drought Impact Reporter.

- **Oct 2022** – Hay thefts occurring in southeast Missouri.
- **Jul 2022 – Dec 2022** - Missouri governor signed executive order concerning drought actions.
- **Oct 2018** - High nitrate levels in some baled cornstalks in Missouri.
- **Aug 2018** – Hay, water relief for some Missouri farmers as rains helped lessen the impact of the 2018 drought.
- **July 2018** – Missouri senators sought relief for Missouri farmers and ranchers due to drought conditions. The dry conditions caused hay production to be down, resulting in necessary cattle sales.
- **July 2018** – Hay production down, cattle sales anticipated in Missouri.
- **June-Sept 2018** – Grazing variances result from drought conditions.
- **April 2017** – Missouri farmers were cautioned about toxic fescue.
- **Jan-May 2013** – The U.S. Department of Agriculture began declaring counties as primary and secondary disaster areas related to drought.

According to the USDA’s Risk Management Agency (RMA), between 2013-2022, the sum of claims paid for crop damage resulting from drought in Pemiscot County was \$682,917, or an average of \$68,292 in losses every year. Losses were greatest in 2022, when 1,770 acres of soybeans were affected, resulting in \$271,752 in crop losses. Losses were also significant in 2018, when \$188,284 in losses were claimed on 1,302 acres of corn, wheat, and soybeans. Table 3.29 summarizes the agricultural losses due to drought reported in the RMA system.

Table 3.30. Crop Losses Resulting from Drought in Pemiscot County, 2013-2022

Year	Commodity Affected	Determined Acres	Indemnity Amount
2013	Soybeans	1074.35	\$127,392
2015	Soybeans	713.28	\$37,548
2016	Soybeans	54.6	\$3,201
2017	Soybeans	289.26	\$54,740
2018	Corn, Soybeans, Wheat	1301.86	\$188,284
2022	Soybeans	1770.16	\$271,752
TOTAL		5203.5	\$682,917

Source: USDA Risk Management Agency

Probability of Future Occurrence

Based on data from NCEI, Pemiscot County has experienced approximately 22 months of severe drought or worse during the 120-month period from 2013 through 2022. This equates to a 18 percent probability of severe drought occurring in the planning area in any given month.

Although drought is not predictable, long-range outlooks and predicted impacts of climate change could indicate an increased chance of drought.

Changing Future Conditions Considerations and the Impact of Climate Change

The U.S. Climate Resilience Toolkit’s modeled data projects that Pemiscot County could experience an increase in average daily maximum temperature of between five and ten degrees Fahrenheit on average from 1990 to 2090. As discussed in the 2023 Missouri State Hazard Mitigation Plan, although the number of heavy rainfall events is expected to increase, the total rainfall is not expected to change. That means that there will likely be longer periods of time between rainfall events resulting

in more dry days. Higher temperatures may fuel increases in evaporation rates which could increase the intensity of naturally occurring droughts in the future.

An analysis performed for the Natural Resources Defense Council examined the effects of climate change on water supply and demand in the contiguous United States. The study found that more than 1,100 counties will face higher risks of water shortages by mid-century as the result of climate change. Two of the principal reasons for the projected water constraints are shifts in precipitation and potential evapotranspiration (PET). Climate models project decreases in precipitation in many regions of the U.S., including areas that may currently be described as experiencing water shortages of some degree.

Vulnerability

Vulnerability Overview

According to county level data from the 2023 Missouri State Hazard Mitigation Plan, Pemiscot County has a drought vulnerability rating of medium-high. The state plan notes that most of southern Missouri is less vulnerable to drought due to the abundant groundwater resources in the area with the exception of the southern corners of the state that are more likely to irrigate.

To determine vulnerability, the State of Missouri conducted a statistical analysis of data from several sources: USDA Risk Management Agency's insured crop losses as a result of drought (2007-2016), 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 Carolina, storm events data (1950 to December 31, 2016) and probability of severe drought based on historic Palmer Drought Severity Index. The USDA crop exposure by county is from the 2012 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. These rating values correspond to the following descriptive terms:

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

Using this system, Pemiscot County has a medium-high rating for social vulnerability and drought occurrence as well as a medium-high rating for crop exposure.

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.

Although it is difficult to quantify many of the potential losses that may occur due to drought, agricultural losses are direct economic costs that can be easily quantified through insurance claims. Pemiscot County’s crop exposure is medium-high, with more than 90 percent of the county’s total land area in use for agriculture. Over the past 10 years, Pemiscot County has experienced an average of \$68,292 in crop losses annually.

Impact of Previous and Future Development

Increases in acreage planted with crops would increase the exposure to drought-related agricultural losses. If the population decline reverses and turns into population increases, additional residents will 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.

EMAP Consequence Analysis

Table 3.31. EMAP Impact Analysis: Drought

Subject	Detrimental Impacts
Public	Most damage expected to be agricultural in nature. However, water supply disruptions may adversely affect people.
Responders	Nature of hazard expected to minimize any serious damage to properly equipped and trained personnel.
Continuity of Operations	Unlikely to necessitate execution of the Continuity of Operations Plan. Nature of hazard expected to minimize serious damage to services, except for moderate impact on water utilities.
Property, Facilities, and Infrastructure	Nature of hazard expected to minimize any serious damage to facilities.
Environment	May cause disruptions in wildlife habitat, increasing interface with people, and reducing numbers of animals.
Economic Condition of Jurisdiction	Local economy and finances dependent on abundant water supply adversely affected for duration of drought.
Public Confidence in the Jurisdiction’s Governance	Ability to respond and recover may be questioned and challenged if planning, response, and recovery not timely and effective.

Hazard Summary by Jurisdiction

Drought has the potential to impact all of Pemiscot County, but the ways in which impacts will be experienced vary. As discussed in the previous occurrences and vulnerability sections, most of the damages seen historically as a result of drought in Pemiscot County affect agriculture; plants and wildlife; and relief, response, and restrictions services. 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 the cities, the frequency of drought conditions may remain the same, but the impacts would fall on lawns, local gardens, and outdoor fields in school districts. In areas where there is greater building density, there is more exposure to potential shrinking and expanding soil problems around

foundations as a result of drought. If drought conditions are severe and prolonged, water supplies could also be affected. The entire county is highly dependent on groundwater resources.

Those at greatest risk for heat-related illness 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. Data from the 2021 American Community Survey was used to determine populations under 5 and over 65 years old. However, data was not available for overweight individuals and those on medications vulnerable to extreme heat. Table 3.31 below summarizes vulnerable populations in the participating jurisdictions.

Table 3.32. Pemiscot County Population Younger than Age 5 and Older than Age 65

Jurisdiction	Younger than 5	Older than 65	% of Total Population
Pemiscot County	1170	2695	24.2%
City of Caruthersville	365	765	20.1%
City of Hayti	119	407	23.9%
City of Hayti Heights	51	24	23.5%

Source: US Census Bureau American Community Survey 2021 5 Year Estimates <https://data.census.gov/>

Problem Statement

- Pemiscot County is highly dependent on groundwater resources which may be impacted by severe or prolonged drought. Possible solutions include the development of agreements with neighboring communities for a secondary water source and review of local ordinance/regulation for inclusion of water-use restrictions during periods of drought.
- Pemiscot County has a medium-high level of crop exposure. Possible solutions include encouraging farmers to purchase crop insurance and educating farmers on drought-resistant farming practices.

3.4.7 Extreme Temperatures

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 3.19 uses both 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 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.

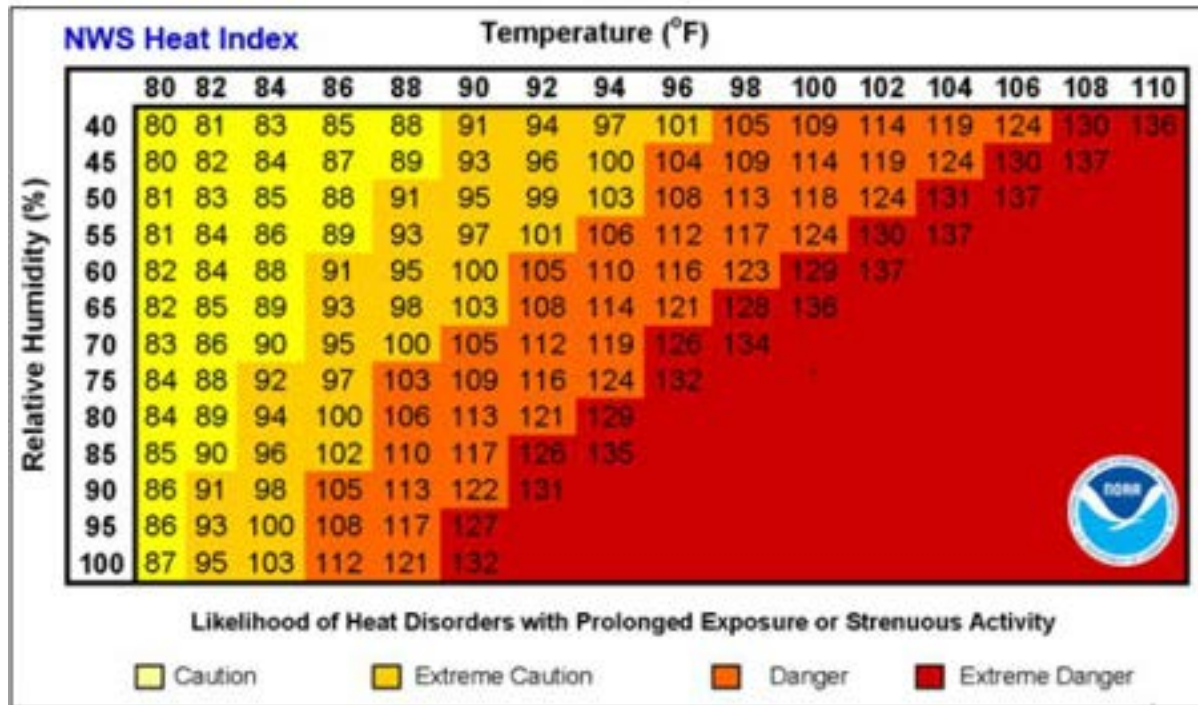
Geographic Location

Extreme temperatures are area-wide events. The entire planning area is subject to very high and very low temperatures and the risk of this hazard does not vary across jurisdictions.

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 refers to two or more consecutive days: (1) when the maximum daytime Heat Index is expected to equal or exceed 105 degrees Fahrenheit (°F); and (2) 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 3.19. Heat Index (HI) Chart



Source: National Weather Service (NWS); <https://www.weather.gov/safety/heat-index>

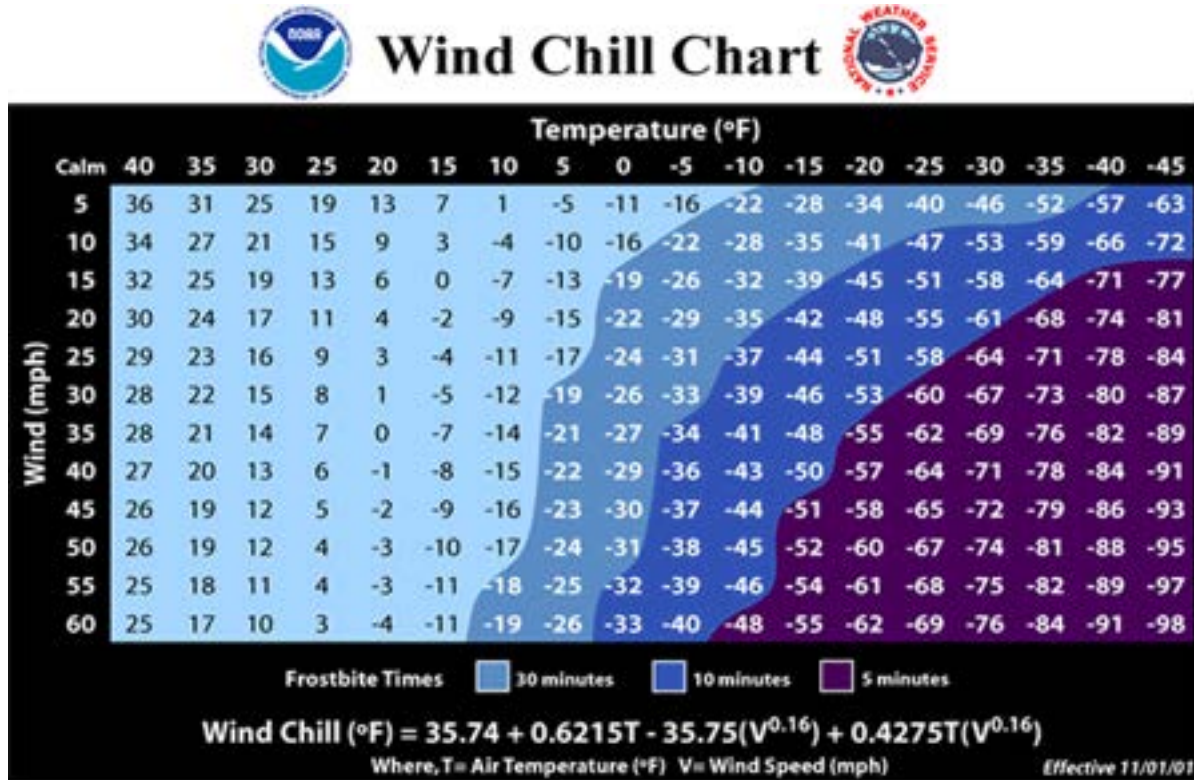
Note: Exposure to direct sun can increase Heat Index values by as much as 15°F. The shaded zone above 105°F corresponds to a HI that may cause increasingly severe heat disorders with continued exposure and/or physical activity.

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.

- 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.

Figure 3.20. Wind Chill Chart



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

Previous Occurrences

According to the National Centers for Environmental Information (NCEI) Storm Events database, from 2003 through 2022, there have been 58 recorded events related to extreme heat and 4 events related to extreme cold. These events are summarized in the table below. Although NCEI reports do not indicate any deaths directly resulting from these events, conditions may have resulted in related deaths. Event narratives indicating significant impacts in Pemiscot County are summarized below.

Table 3.33. NCEI Pemiscot County Extreme Temperature Recorded Events Summary, 2003-2022

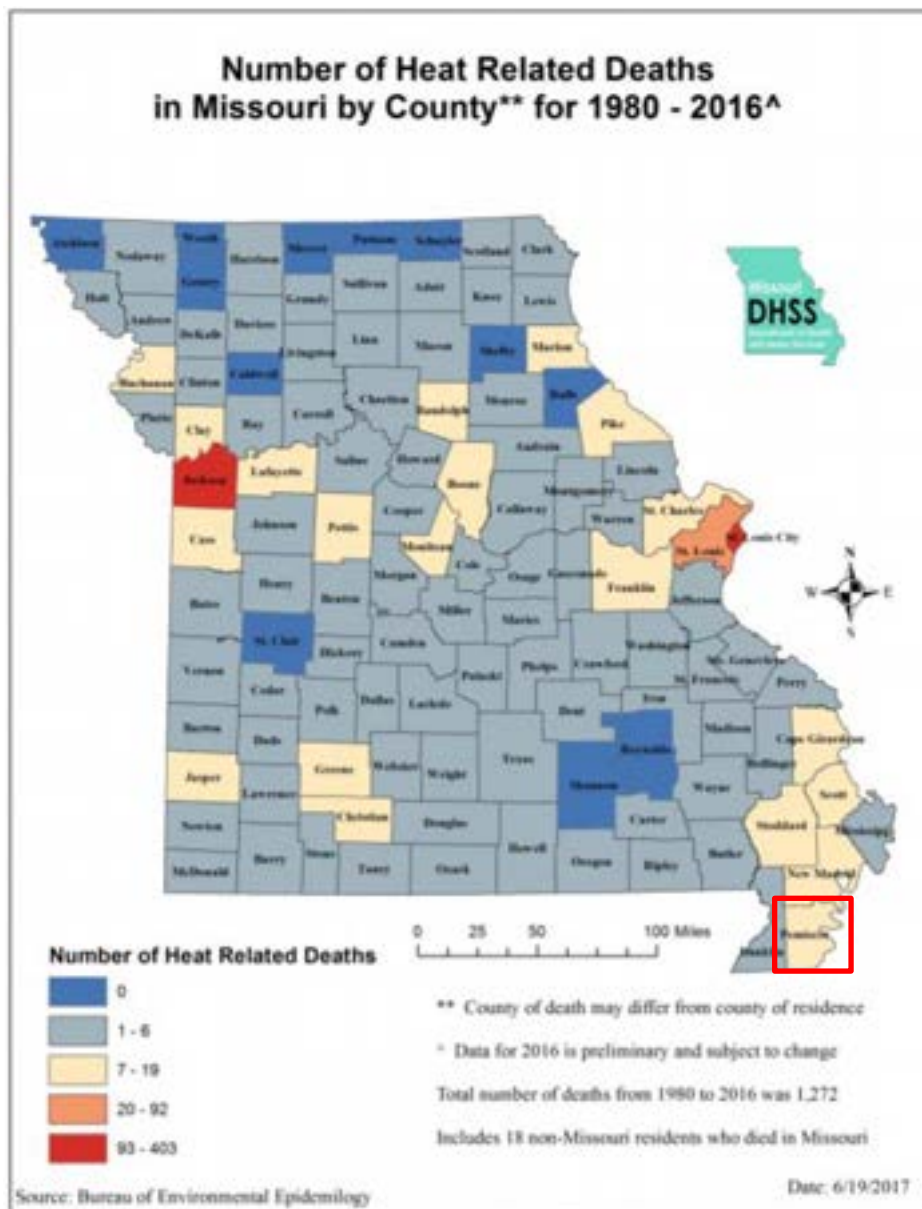
Event Type	Event Count	Injuries	Deaths	Property Damage
Extreme Heat-Related Events	58	0	0	0
<i>Heat</i>	38	0	0	0
<i>Excessive Heat</i>	20	0	0	0
Extreme Cold Related Events	4	0	0	0
<i>Cold/Wind Chill</i>	2	0	0	0
<i>Extreme Cold/Wind Chill</i>	1	0	0	0
<i>Frost/Freeze</i>	2	0	0	0
Total	62	0	0	0

- **July 5, 2022** – Upper-level high pressure strengthened over the region. Hot and humid conditions developed in early July and continued for much of the month. Heat index values reached or exceeded 110 degrees each afternoon.

- December 22-23, 2022** - The coldest airmass since December of 1989 descended upon the Mid-South right before Christmas. Gusty north winds combined with very cold temperatures produced wind chills as low as 25 degrees below zero across the Missouri Bootheel from late Thursday, December 22nd into Friday, December 23rd. Temperatures dropped to between 0 and 5 degrees below zero during the morning of Friday, December 23rd. Numerous frozen pipes occurred in residential houses and businesses across the region. Wind chills remained below zero into the morning hours of December 24th. Wind chills fell to around 25 degrees below zero and low temperatures fell to 3 degrees below zero.

Figure 3.21, based on data from the Missouri Bureau of Environmental Epidemiology, indicates the number of heat related deaths that have occurred between 1980 and 2016 by County. Pemiscot County (indicated by the red square) experienced between 7 and 19 deaths during this time.

Figure 3.21. Heat Related Deaths in Missouri 1980 - 2016



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

The National Weather Service reports that from 1992-2021, the U.S. has averaged 158 deaths related to heat annually. The National Weather Service stated that among hazards, no other natural disaster—not lightning, hurricanes, tornadoes, floods, or earthquakes—causes more deaths.

Extreme heat can cause stress to agricultural products. According to USDA Risk Management Agency (RMA), losses to insurable crops during the 10-year time period from 2013 through 2022 were substantial due to heat and hot wind. See Table 3.33.

Table 3.34. Crop Insurance Claims Paid in Pemiscot County from Extreme Heat and Hot Winds, 2013-2022

Year	Commodity Affected	Determined Acres	Indemnity Amount
2013	Corn, Soybeans	842.47	\$188,851
2014	Corn, Cotton, Rice	66.66	\$1,653
2015	Soybeans	83.08	\$15,320
2016	Soybeans	381.63	\$15,459
2017	Soybeans	160.91	\$34,430
2018	Soybeans	1380.93	\$157,396
2019	Rice	138.4	\$17,341
2020	Soybeans	78.3	\$22,717
2022	Corn, Cotton, Rice, Soybeans	4899.94	\$811,711
Totals		8032.32	\$1,264,878

Extreme cold and frost have also caused crop damage. According to USDA RMA, losses to insurable crops due to cold wet weather, frost and cold winter during the 10-year time period from 2013 through 2022 were more than \$300,000. See detail in Table 3.34.

Table 3.35. Crop Insurance Claims Paid in Pemiscot County from Extreme Cold and Cold Wet Weather, 2013-2022

Year	Commodity Affected	Determined Acres	Indemnity Amount
2013	Corn, Cotton, Grain Sorghum, Rice	101.27	\$17,702
2014	Corn, Rice, Wheat	926.82	\$133,276
2015	Corn, Cotton, Rice, Wheat, Soybeans	1456.22	\$69,896
2016	Rice	80.04	\$3,809
2017	Cotton	76.2	\$22,612
2018	Rice, Wheat	346.2	\$39,753
2020	Rice	101.4	\$4,867
2022	Soybeans, Wheat	164.27	\$19,588
Totals		3252.42	\$311,503

NCEI records report that Pemiscot County has experienced 58 extreme heat related events from 2003 through 2022, which equates to an annual average of 2.9 extreme heat events. Over the same period, there were 4 extreme cold related events, which equates to an annual average of .2 extreme cold events. Note that extreme temperature events may be underreported in the NCEI, therefore annual probability may be greater. Overall, extreme temperature events are likely to occur in Pemiscot County and are increasing.

Changing Future Conditions Considerations and the Impact of Climate Change

According to the Fourth National Climate Assessment (NCA), the modeled historical average annual five-day maximum temperature for Southern Missouri is 97 degrees Fahrenheit. This temperature is projected to increase to between 102 and 103 degrees Fahrenheit depending on emissions scenario

by the mid-twenty-first century. Such temperature extremes could jeopardize crop growth and reproduction. Additionally, the NCA reports that the Midwest is projected to have the largest increase in temperature-related premature deaths under the high emission scenario, with 2,000 additional premature deaths per year by 2090. Conversely, risk of death from extremely cold temperatures is expected to decrease. Additionally, increased financial and health burdens are expected because of increased electricity demand, higher utility bills, lost work hours, and premature deaths.

The U.S. Climate Resilience Toolkit indicates that in Pemiscot County, the average number of days with a maximum temperature above 100 degrees Fahrenheit will likely increase by the end of the century from less than 10 days to more than 20 days under lower emissions scenarios and more than 60 days under higher emissions scenarios. The average number of days with a minimum temperature below 32 degrees Fahrenheit is projected to decrease by approximately 20-40 days, depending on emissions scenario.

Vulnerability

Vulnerability Overview

According to the 2023 Missouri State Hazard Mitigation Plan, Pemiscot County has a vulnerability rating of medium for extreme heat and medium low for extreme cold. This scoring is based on the total population, the percentage of the population over 65, the likelihood of occurrence, and social vulnerability. Pemiscot County has a high rating for social vulnerability and a medium low rating for percentage of population over 65.

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.

Table 3.35 lists typical symptoms and health impacts due to exposure to extreme heat.

Table 3.36. 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.

Potential Losses to Existing Development

Extreme heat can 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.

Pemiscot County’s crop exposure is medium high, with a large portion of the county’s total land area in use for agriculture. Over the timeframe from 2013 - 2022, Pemiscot County has experienced an average of \$126,488 in crop losses annually due to extreme heat and \$31,150 in annual losses due to extreme cold.

Based on Missouri Bureau of Environmental Epidemiology data for heat-related deaths, Pemiscot County has experienced at least 7 heat-related deaths over a 36-year period, which equates to approximately a 19 percent chance of a heat-related death occurring in any given year.

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.

EMAP Consequence Analysis

Table 3.37. EMAP Impact Analysis: Extreme Temperatures

Subject	Detrimental Impacts
Public	Localized impact expected to be severe for incident areas and moderate to light for other adversely affected areas.
Responders	Localized impact expected to limit damage to personnel in the areas at the time of the incident.
Continuity of Operations	Unlikely to necessitate execution of the Continuity of Operations Plan. The extent of agricultural damage depends on duration. Water supplies and electricity may be disrupted.
Property, Facilities, and Infrastructure	Nature of hazard expected to minimize any serious damage to facilities. Asphalt parking lots and roads are routinely damaged during periods of extreme heat as the hot asphalt becomes less rigid and can be displaced by heavy equipment or automobiles.
Environment	Potential for crop damage; May cause disruptions in wildlife habitat, increase interface with people, and reduce numbers of animals.
Economic Condition of Jurisdiction	Local economy and finances dependent on stable electricity and water supply adversely affected for duration of heat wave.
Public Confidence in the Jurisdiction’s Governance	Ability to respond and recover may be questioned and challenged if planning, response, and recovery not timely and effective.

Hazard Summary by Jurisdiction

Those at greatest risk for heat-related illness 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 2020 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. **Table 3.37** 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 3.38. Pemiscot County Population Under Age 5 and Over Age 65

Jurisdiction	Population Under 5 yrs (%)	Population 65 yrs and over (%)
Pemiscot County	7.3%	16.9%
Caruthersville	6.5%	13.6%
Hayti	5.4%	18.5%
Hayti Heights	16.0%	7.5%

Source: American Community Survey 2021 5-year Estimates

Problem Statement

- Hayti Heights has the highest proportion of residents under 5 years old and Hayti has the highest proportion over 65 years old who are at a heightened risk for extreme-temperature related illnesses, injuries, and death. Possible solutions include organizing outreach to the vulnerable elderly populations, including establishing and promoting accessible heating or cooling centers in the community and creating a database in coordination with the Health Department to track those individuals at high risk.
- Pemiscot County has a medium high level of crop exposure. Possible solutions include encouraging farmers to purchase crop insurance and plant heat-resistant and/or frost-resistant crops.

3.4.8 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 3.4.1** and tornadoes (discussed separately in **Section 3.4.10**).

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.

Hail

According to the National Oceanic and Atmospheric Administration (NOAA), hail is precipitation that is formed when thunderstorm updrafts carry raindrops upward into the extremely cold atmosphere causing them to freeze. The raindrops form into small frozen droplets. They continue to grow as they make 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 to the earth. For example, a 1/4" diameter or pea-sized hail requires updrafts of 24 miles per hour, while a 2 3/4" 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 and could be extremely destructive, but even small pea-sized hail can do damage.

Lightning

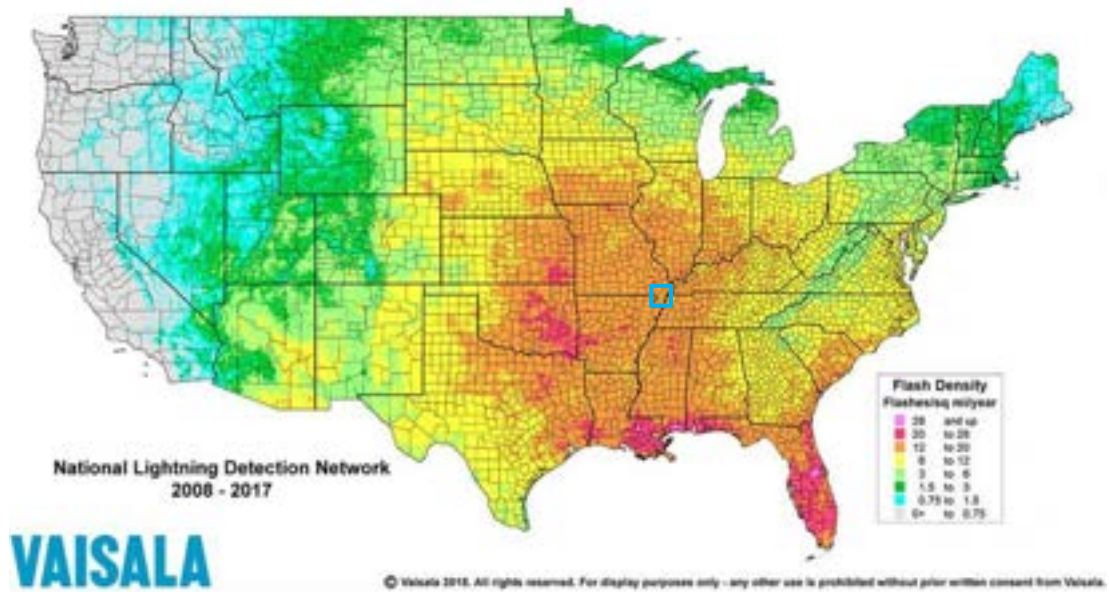
All thunderstorms produce lightning which can strike outside of the area where it is raining, even known to fall more than 10 miles away from the rainfall area. Thunder is simply the sound that lightning makes. Lightning is a huge discharge of electricity that shoots through the air causing vibrations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

Geographic Location

Thunderstorms and the associated winds, lightning, and hail are area-wide hazards that can occur anywhere in the county. Although these events occur similarly throughout the planning area, they are more frequently reported in more urbanized areas because damages are more likely to occur where exposure is greater in more densely developed areas.

Figure 3.22 shows lightning frequency in the state and nation. Pemiscot County is within the blue square. The county is located in the second highest flash density region of the nation and in the highest impacting the state.

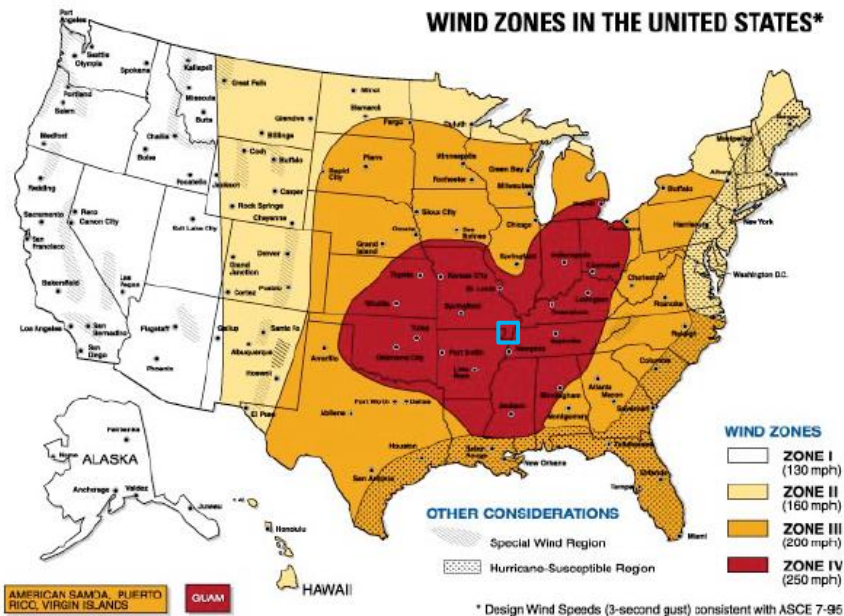
Figure 3.22. Location and Frequency of Lightning in Missouri



Source: National Weather Service, <http://www.vaisala.com/en/products/thunderstormandlightningdetectionsystems/Pages/NLDN.aspx>.

Figure 3.23 shows wind zones in the United States. Pemiscot County, indicated by the blue square, is within Wind Zone IV, which indicates that speeds of up to 250 mph have the potential to occur within the county.

Figure 3.23. 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), **Table 3.38** below describes typical damage impacts of the various sizes of hail.

Table 3.39. 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 wildfires, as well as damage electrical systems and equipment.

Previous Occurrences

The following tables detail the severe weather events recorded in the NCEI Storm Events database from 2003 through 2022. Where multiple events were reported for the same day, these events were combined and assigned the largest magnitude recorded. Narratives for specific events are reported below the tables. Note that there are limitations to NCEI data. For example, only reported lightning events that result in fatality, injury and/or property and crop damage are included in the NCEI.

Table 3.39 summarizes the 56 unique thunderstorm wind events reported during this 20-year period. Across all impacted areas, the events caused no deaths, 1 injury, and an estimated \$930,000 in property damages.

Table 3.40. NCEI Pemiscot County Thunderstorm Wind Events Summary, 2003 – 2022

Dates	Magnitude	Deaths	Injuries	Property Damages
4/4/2003	55	0	0	\$5,000
5/1/2003	55	0	0	\$5,000
5/8/2003	55	0	0	\$25,000
5/10/2003	50	0	0	\$1,000
7/28/2003	55	0	0	\$15,000
7/28/2003	55	0	0	\$15,000
8/22/2003	50	0	0	\$10,000
5/30/2004	50	0	0	\$5,000
3/9/2006	62	0	0	0
3/9/2006	60	0	0	\$10,000
5/26/2006	50	0	0	\$2,000
6/22/2006	50	0	0	\$5,000
8/14/2006	50	0	0	\$5,000
6/18/2007	50	0	0	\$17,000
10/18/2007	50	0	0	\$2,000
2/5/2008	50	0	0	\$10,000
3/18/2008	50	0	0	\$10,000
3/31/2008	50	0	0	\$5,000
4/3/2008	52	0	0	\$25,000
4/10/2008	56	0	0	0
5/8/2009	52	0	0	0
5/8/2009	50	0	0	\$20,000
6/15/2009	52	0	0	0
6/15/2009	61	0	0	0
7/15/2009	50	0	0	0
7/26/2009	50	0	0	0
7/26/2009	50	0	0	0
8/4/2009	50	0	0	\$2,000
3/11/2010	50	0	0	0
5/24/2010	50	0	0	0
7/17/2010	50	0	0	0
7/19/2010	56	0	0	0
2/24/2011	50	0	0	0
4/4/2011	50	0	0	\$20,000
4/19/2011	50	0	0	0
5/25/2011	50	0	0	0
5/25/2011	50	0	0	0
5/25/2011	50	0	0	0
5/25/2011	52	0	0	0
8/7/2011	50	0	0	0
1/17/2012	60	0	0	0
7/6/2012	50	0	1	0
9/5/2012	50	0	0	0
1/29/2013	50	0	0	0
6/28/2013	50	0	0	\$20,000
2/20/2014	50	0	0	0
7/22/2016	50	0	0	\$5,000
12/17/2016	50	0	0	\$5,000
4/26/2017	60	0	0	\$50,000
4/26/2017	60	0	0	\$75,000
4/26/2017	60	0	0	\$75,000
4/30/2017	60	0	0	\$100,000
5/27/2017	66	0	0	0
5/19/2018	61	0	0	0
12/1/2018	50	0	0	\$2,000
6/5/2019	50	0	0	0

Dates	Magnitude	Deaths	Injuries	Property Damages
6/16/2019	50	0	0	\$10,000
6/23/2019	50	0	0	0
1/11/2020	50	0	0	\$2,000
1/11/2020	50	0	0	\$2,000
5/3/2020	61	0	0	0
5/3/2020	56	0	0	0
5/4/2020	87	0	0	\$300,000
5/4/2020	65	0	0	0
5/4/2021	50	0	0	0
5/4/2021	53	0	0	0
5/4/2021	70	0	0	\$35,000
5/4/2021	61	0	0	0
7/31/2021	50	0	0	0
3/30/2022	50	0	0	\$5,000
4/13/2022	50	0	0	\$5,000
9/24/2022	52	0	0	\$20,000
9/24/2022	50	0	0	\$5,000
Total		0	1	\$930,000

Source: NCEI Storm Database

- **July 6, 2012** – a weak upper level disturbance moved southwestward through the Tennessee River Valley during the afternoon and evening hours of July 6, 2012. A thunderstorm became severe across the Missouri Bootheel with damaging winds. Straight line winds blew over a mobile home near Homestown. One person was injured.
- **April 30, 2017** – A passing upper level disturbance and cold front generated numerous thunderstorms across the midsouth starting in the evening hours of April 29 through the early morning hours of April 30. Several mobile homes were damaged in the town of Gobler.
- **May 4, 2020** - A macroburst occurred in the Missouri Bootheel producing widespread wind damage. This was the second day in a row that northern sections of the midsouth suffered widespread severe weather. The macroburst that struck Dunklin and caused widespread damage in southern New Madrid County then spread into northern Pemiscot County causing widespread damage in Wardell. Trees fell on houses. Numerous power lines were knocked down. A mobile home was blown over and several buildings were damaged. Several homes suffered roof damage.

Table 3.40 includes the only high wind event reported during the 20-year period from 2003 – 2022. Across all impacted areas, the event caused an estimated \$10,000 in property damages.

Table 3.41. NCEI Pemiscot County High Wind Event Summary, 2003 – 2022

Dates	Magnitude	Deaths	Injuries	Property Damages
1/29/2008	52	0	0	\$10,000

Source: NCEI Storm Database

- **January 29, 2008** – A strong low pressure system moved over the Missouri Bootheel during the late afternoon and evening hours of January 29, 2008. Very strong gradient winds with speeds up to 70 mph occurred over the area and as a result numerous reports of damage occurred. High winds blew down numerous trees near Caruthersville. In addition, a roof and garage door were damaged by the winds. Near Steele, a power pole was knocked down by the wind.

Table 3.41 summarizes the 31 unique hail events that included hail of at least 1 inch in diameter reported during this 20-year period. These events caused \$23,810 in damages across the total affected areas as detailed in the following table. There were several additional days with hail events for hail less than 1 inch in diameter as reported by NCEI during this period but are not reported in the table. There were no reported deaths or injuries associated with these smaller magnitude events, and minimal property damages were reported.

Table 3.42. NCEI Pemiscot County Hail Events Summary, 2003 – 2022

Dates	Magnitude (Diameter, inches)	Deaths	Injuries	Property Damages
4/6/2003	1.00 in.	0	0	\$100
4/29/2003	1.00 in.	0	0	\$150
4/29/2003	1.00 in.	0	0	\$100
5/8/2003	1.00 in.	0	0	\$110
10/18/2004	1.00 in.	0	0	\$100
5/13/2005	1.75 in.	0	0	\$750
5/3/2006	1.00 in.	0	0	\$5,000
5/20/2006	1.75 in.	0	0	\$8,000
5/26/2006	1.00 in.	0	0	\$7,500
4/10/2008	1.00 in.	0	0	\$2,000
6/15/2009	1.75 in.	0	0	0
6/15/2009	1.75 in.	0	0	0
6/15/2009	1.75 in.	0	0	0
5/17/2010	1.00 in.	0	0	0
5/24/2010	1.00 in.	0	0	0
4/23/2011	1.00 in.	0	0	0
5/25/2011	1.00 in.	0	0	0
6/17/2011	1.75 in.	0	0	0
4/5/2012	1.00 in.	0	0	0
6/3/2012	2.00 in.	0	0	0
9/27/2012	1.00 in.	0	0	0
4/19/2015	1.00 in.	0	0	0
12/23/2015	1.75 in.	0	0	0
5/19/2018	1.00 in.	0	0	0
5/4/2020	1.50 in.	0	0	0
5/4/2020	1.00 in.	0	0	0
1/1/2022	1.50 in.	0	0	0
4/11/2022	1.25 in.	0	0	0
4/11/2022	1.00 in.	0	0	0
4/11/2022	1.00 in.	0	0	0
5/21/2022	1.00 in.	0	0	0
Total		0	0	\$23,810

Source: NCEI, Storm Event Database

- **April 10, 2008** – A powerful upper level low pressure system moved into the midsouth during the evening hours and continued moving through the area during the day on April 11. These storms produced large hail, damaging winds and flash flooding. The storms continued into the overnight hours before dying off.
- **June 3, 2012** - An upper level disturbance moving through triggered numerous showers and thunderstorms along the warm front and eventually formed mesoscale convective system that pushed through during the evening hours of June 3. There were reports of large hail slightly larger than golf balls that fell across parts of southern Pemiscot County.
- **January 1, 2022** – Thunderstorms developed along a warm front during the early morning

hours of January 1. These storms intensified over the Missouri Bootheel and northwest Tennessee causing large hail and damaging winds.

Table 3.42 summarizes the one unique lightning event reported during this 20-year period. The event caused no property damage.

Table 3.43. NCEI Pemiscot County Lightning Events Summary, 2003 – 2022

Dates	Magnitude	Deaths	Injuries	Property Damage
05/05/2015	n/a	1	0	\$0

Source: NCEI Storm Events Database

- **May 5, 2015** – An upper level disturbance moving through triggered numerous showers and thunderstorms during the afternoon hours on May 15, 2015. Lightning struck a tree in Hayti City Park which then fell on a vehicle. The person inside the vehicle was killed.

Table 3.43 and **Table 3.44** summarize past crop damages due to high winds and hail as indicated by crop insurance claims. In total, high winds and hail caused \$2,041,781 in crop losses over the 10-year period from 2013 through 2022. The tables illustrate the magnitude of the impact on the planning area's agricultural economy.

Table 3.44. Crop Insurance Claims Paid in Pemiscot County from High Winds, 2013-2022.

Crop Year	Crop Name	Cause of Loss Description	Determined Acres	Insurance Paid
2013	Rice	Wind/Excess Wind	1025.96	\$91,990
2014	Rice	Wind/Excess Wind	133.35	\$152,503
2015	Rice	Wind/Excess Wind	0	\$63,836
2016	Rice	Wind/Excess Wind	975.47	\$499,465
2017	Rice, Soybeans	Wind/Excess Wind	456.77	\$145,974
2018	Rice, Soybeans	Wind/Excess Wind	322.95	\$358,669
2019	Rice, Soybeans, Wheat	Wind/Excess Wind	142.86	\$74,086
2020	Rice, Wheat	Wind/Excess Wind	170.55	\$245,278
2021	Rice	Wind/Excess Wind	0	\$152,842
2022	Rice, Soybeans	Wind/Excess Wind	39.84	\$125,634
Total			3267.75	\$1,910,277

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

Table 3.45. Crop Insurance Claims Paid in Pemiscot County from Hail, 2013-2022.

Crop Year	Crop Name	Cause of Loss Description	Determined Acres	Insurance Paid
2017	Soybeans	Hail	21.41	\$655
2020	Soybeans, Wheat	Hail	2075.81	\$123,316
2019	Soybeans	Hail	175.22	\$7,533
Total			2272.44	\$131,504

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

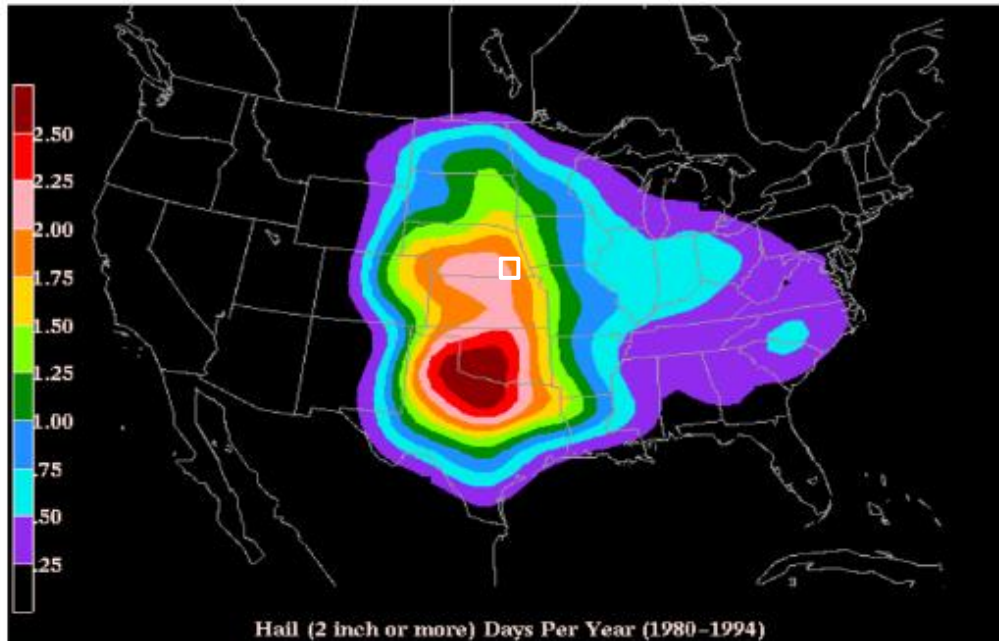
Probability of Future Occurrence

Severe weather events are highly likely to occur in Pemiscot County. According to storm events data reported by NCEI, Pemiscot County has experienced 56 thunderstorm wind events, 1 high wind events and 31 significant hail events, many resulting in reported damages in the past 20 years. Based on this historical data, the Pemiscot County planning areas is likely to average 2.8 thunderstorm wind events and 1.6 severe hail events annually. The annual probability of high wind and lightning events

is 28 percent and 16 percent, respectively.

Figure 3.24 shows severe hail frequency across the United States. Pemiscot County, indicated by the white square, has a .5 to .76 probability of experiencing 2" or larger hail in any given year.

Figure 3.24. 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 and the Impact of Climate Change

Research on the effects of climate change on severe weather is limited. However, according to the Fourth National Climate Assessment, some preliminary studies suggest that the frequency and intensity of severe thunderstorms may increase as the climate changes, especially during spring months in the Midwest and Great Plains regions. As stated in the 2023 Missouri State Hazard Mitigation Plan, predicted increases in temperature could help create atmospheric conditions that are fertile breeding grounds for severe thunderstorms and tornadoes in Missouri. These conditions increase risk to life and property in both the public and private sectors.

Vulnerability

Vulnerability Overview

The 2023 Missouri State Hazard Mitigation Plan assigns Pemiscot County a vulnerability rating of Medium Low. This rating is based on six factors: housing density, building exposure, percentage of mobile homes, social vulnerability, likelihood of occurrence, and average annual property loss. Pemiscot County has medium vulnerability scores for social vulnerability and percentage of mobile homes and a medium high score for annualized property loss due to high wind.

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 including people, crops, vehicles and built structures in the County are vulnerable to thunderstorms with lightning, high winds, and hail. 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 damage occurs 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 damage 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 as per information from [National Lightning Detection Network \(NLDN\) Vaisala Digital | National Lightning Detection Network Vaisala](#) and [Lightning Tips \(weather.gov\)](#).

Potential Losses to Existing Development

According to historical loss data reported for thunderstorm wind, high wind, hail, and lightning by NCEI, from 2003 through 2022, 89 unique severe weather events impacted Pemiscot County and caused an estimated \$963,810 in property damage. Note that damage estimates are for the entire area reported as affected by an event and therefore may overestimate actual damages. Based on this estimate, Pemiscot County experiences an average annual property loss of \$96,381.

The USDA’s RMA also reports crop losses as a result of hail and wind. Based on the \$2,014,781 in reported crop insurance claims from 2013 through 2022, Pemiscot County experiences an average annual crop loss of \$201,478 due to severe thunderstorms, wind and hail.

Using these historic losses as an indicator of potential future loss, Pemiscot County may experience an annual average of \$297,859 in total losses due to severe thunderstorms annually.

Previous and Future Development

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

EMAP Consequence Analysis

Table 3.46. EMAP Impact Analysis: Severe Thunderstorms

Subject	Detrimental Impacts
Public	Localized impact expected to be severe for incident areas and moderate to light for other adversely affected areas.
Responders	Localized impact expected to limit damage to personnel in the areas at the time of the incident.
Continuity of Operations	Damage to facilities/personnel in the area of the incident may require temporary relocation of some operations. Localized

Subject	Detrimental Impacts
	disruption of roads, facilities, and/or utilities caused by incident may postpone delivery of some services.
Property, Facilities, and Infrastructure	Localized impact to facilities and infrastructure in the area of the incident. Some severe damage possible.
Environment	Localized impact expected to be severe for incident areas and moderate to light for other areas affected by the storm or HazMat spills.
Economic Condition of Jurisdiction	Losses to private structures covered, for the most part, by private insurance.
Public Confidence in the Jurisdiction's Governance	Ability to respond and recover may be questioned and challenged if planning, response, and recovery not timely and effective.

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.

Table 3.46 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. No jurisdictions have 25 percent or more housing falling into either category.

Table 3.47. Housing Vulnerability Indicators by Pemiscot County Jurisdiction, 2021

Jurisdiction	Housing built before 1939 (%)	Mobile homes (%)
Pemiscot County	9.2%	9.2%
Caruthersville	10.4%	2.9%
Hayti	12.2%	8.4%
Hayti Heights	2.9%	11.8%

Source: US Census Bureau, American Community 2021 5-Year Estimates

Problem Statement

- Severe thunderstorm events are highly likely to continue occurring in Pemiscot County. Possible solutions for wind vulnerability include review of local ordinance and building codes to address high winds and/or construction techniques to include structural bracing, straps and clips, or anchor bolts.
- Possible solutions for vulnerability to lightning include installation of lightning rods and surge protection.
- Possible solutions for vulnerability to hail include use of building materials less prone to damage and encouraging farmers to purchase crop insurance.

3.4.9 Severe Winter Weather

Hazard Profile

Hazard Description

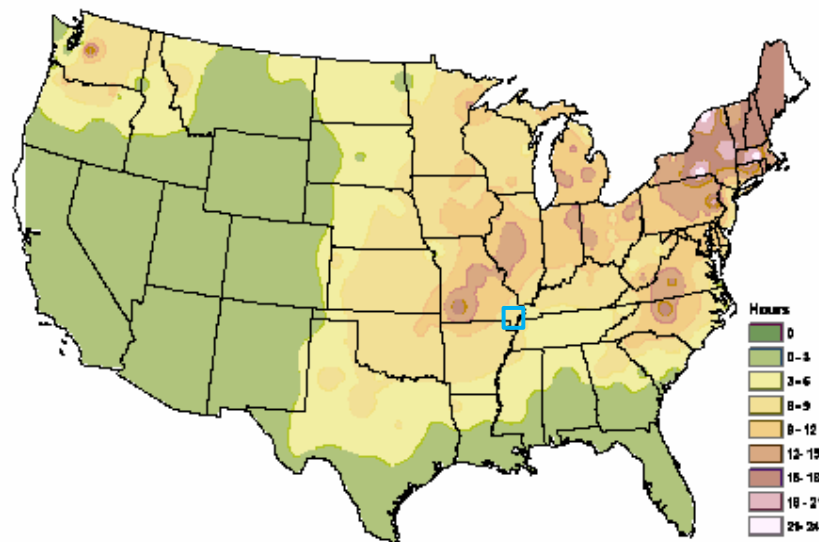
A major winter storm can last for several days and be accompanied by high winds, freezing rain or sleet, and heavy snowfall. Note that extreme cold temperatures may also accompany winter storms and are addressed in **Section** Error! Reference source not found.. The National Weather Service describes 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

All of Pemiscot County is vulnerable to heavy snow, ice, extreme cold temperatures and freezing rain. **Figure 3.25** depicts the average number of hours per year with freezing rain occurring across the United States. Pemiscot County, indicated by the blue square, averages between 3-6 hours of freezing rain per year.

Figure 3.25. 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 a 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

NCEI reports 43 winter storm-related events for the period from 2008 through 2022, summarized in **Table 3.47**. According to these records, events have resulted in \$25,000,000 in property damages across all impacted areas. No deaths or injuries were recorded.

Table 3.48. NCEI Pemiscot County Winter Weather Events Summary, 2003-2022

Type of Event	Start Date	# of Deaths	# of Injuries	Property Damages
Winter Weather	1/31/2008	0	0	0
Winter Storm	3/7/2008	0	0	0
Winter Storm	12/15/2008	0	0	0
Winter Storm	2/28/2009	0	0	0
Ice Storm	1/26/2009	0	0	\$25,000,000
Winter Storm	3/1/2009	0	0	0
Winter Storm	1/28/2010	0	0	0
Winter Storm	2/8/2010	0	0	0
Winter Weather	12/15/2010	0	0	0
Winter Weather	1/9/2011	0	0	0
Winter Weather	1/20/2011	0	0	0
Winter Storm	2/7/2011	0	0	0
Winter Weather	2/9/2011	0	0	0
Winter Weather	11/28/2011	0	0	0
Winter Weather	12/7/2011	0	0	0
Winter Storm	12/25/2012	0	0	0
Winter Weather	1/15/2013	0	0	0
Winter Weather	3/21/2013	0	0	0
Winter Storm	12/5/2013	0	0	0
Winter Storm	2/2/2014	0	0	0
Winter Weather	2/4/2014	0	0	0
Winter Weather	2/7/2014	0	0	0
Winter Storm	3/2/2014	0	0	0

Type of Event	Start Date	# of Deaths	# of Injuries	Property Damages
Winter Weather	11/16/2014	0	0	0
Winter Storm	2/15/2015	0	0	0
Winter Storm	2/20/2015	0	0	0
Winter Storm	3/4/2015	0	0	0
Winter Weather	1/20/2016	0	0	0
Winter Weather	1/6/2017	0	0	0
Winter Weather	3/11/2017	0	0	0
Winter Storm	1/15/2018	0	0	0
Winter Weather	2/6/2018	0	0	0
Winter Weather	11/14/2018	0	0	0
Winter Weather	12/8/2018	0	0	0
Winter Weather	1/19/2019	0	0	0
Winter Storm	2/9/2021	0	0	0
Heavy Snow	2/14/2021	0	0	0
Heavy Snow, Cold/Wind Chill	2/16/2021	0	0	0
Winter Weather	1/6/2022	0	0	0
Winter Storm	2/3/2022	0	0	0
Winter Storm	2/23/2022	0	0	0
Winter Weather	3/11/2022	0	0	0
Winter Weather, Cold/Wind Chill	12/22/2022	0	0	0
Total		0	0	\$25,000,000

Source: NCEI, Storm Event Database

The following event narratives for incidents with significant impacts on Pemiscot County were reported in NCEI:

- January 26, 2009** - The combination of abundant moisture, a low pressure system moving through the region, and cold air at the surface caused an ice storm to occur over the Missouri Bootheel. Most of the precipitation fell in the form of freezing rain. Toward the end of the event, precipitation changed briefly to sleet and snow. Significant ice accumulations occurred in Dunklin and Pemiscot Counties. One to two inches of ice fell across the counties in addition to one inch of snow. Numerous trees and power lines were knocked down from the ice storm. The counties lost from seventy to one hundred percent of their power during the peak of the ice storm. Emergency shelters were opened for storm victims. Roads were very hazardous to travel and many accidents occurred as a result.
- February 16, 2021** – An arctic airmass settled over the region in the wake of a departing winter storm. Snow cover combined with clear skies and diminishing winds to produce the coldest night across much of the midsouth since 1989. Several locations dropped below zero with wind chills reaching fifteen below on Tuesday morning, February 16. High temperatures only reached the teens for the third day in a row across much of the region.
- December 22, 2022** – The coldest airmass since December of 1989 descended upon the midsouth right before Christmas. Gusty north winds combined with very cold temperatures producing wind chills as low as 25 degrees below zero across the Missouri Bootheel from late Thursday, December 22 into Friday, December 23. Temperatures dropped to between 0 and 5 degrees below zero during the morning of Friday, December 23. Numerous frozen pipes occurred in residential houses and businesses across the region. Wind chills remained below zero into the morning hours of December 24.

Winter storms can take a toll on crop production in Pemiscot County. **Table 3.48** shows the USDA's Risk Management Agency payments for insured crop losses in the planning area resulting from cold conditions and snow for the past 10 years. From 2013 through 2022, Pemiscot County has experienced \$311,503 in crop losses due to severe winter weather.

Table 3.49. Crop Insurance Claims Paid in Pemiscot County as a Result of Cold Conditions, 2013-2022

Year	Commodity Affected	Determined Acres	Indemnity Amount
2013	Corn, Cotton, Grain Sorghum, Rice	101.27	\$17,702
2014	Corn, Rice, Wheat	926.82	\$133,276
2015	Corn, Cotton, Rice, Wheat, Soybeans	1456.22	\$69,896
2016	Rice	80.04	\$3,809
2017	Cotton	76.2	\$22,612
2018	Rice, Wheat	346.2	\$39,753
2020	Rice	101.4	\$4,867
2022	Soybeans, Wheat	164.27	\$19,588
Totals		3252.42	\$311,503

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

Probability of Future Occurrence

According to NCEI historical storm events data for 2003 through 2022, there have been 43 winter storm related events in Pemiscot County, including 2 heavy snow events, 1 ice storm event, 18 winter storm events, and 22 winter weather events. This equates to an average of 2.2 winter storm-related events annually.

Changing Future Conditions Considerations and the Impact of Climate Change

Per the 2023 Missouri State Hazard Mitigation Plan, “a shorter overall winter season and fewer days of extreme cold may have both positive and negative indirect impacts. As both temperature and precipitation increase during the winter months, freezing rain will be more likely. Additional wintertime precipitation in any form will contribute to saturation and increase the risk and/or severity of spring flooding. A greater proportion of wintertime precipitation may fall as rain rather than snow.”

Vulnerability Overview

The 2023 Missouri State Hazard Mitigation Plan rates vulnerability to severe winter weather based on five factors: housing density, building exposure, social vulnerability, likelihood of occurrence, and average annual property loss. Pemiscot County was rated Medium Low for likelihood of occurrence, High for SOVI Rating and Medium for annualized property loss, resulting in an overall rating of Medium High.

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 forced 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 also experience loss of income due to closure during winter storms.

Overhead power lines and infrastructure are also vulnerable to damage from winter storms. In particular ice accumulation during winter storm events may cause damage to power lines due to the ice weight on the lines and equipment. Damage also occurs 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 or adequate heat 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 2009 BCA Reference Guide, the economic impact from loss of power is \$126 per person per day of lost service.

Potential Losses to Existing Development

Based on NCEI data for historical winter weather events from 2008 through 2022, Pemiscot County has averaged \$1,666,667 annually in property losses as a result of winter weather.

Based on data from the USDA’s RMA from 2013 through 2022, Pemiscot County averages \$31,150 per year in crop losses due to winter weather conditions.

Overall, Pemiscot County can expect an average of \$1,697,817 in annual losses due to severe winter weather.

Previous and Future Development

There is minimal future development projected for Pemiscot County, therefore the potential impact of winter weather is not expected to increase due to development within the planning area.

EMAP Consequence Analysis

Table 3.50. EMAP Impact Analysis: Severe Winter Weather

Subject	Detrimental Impacts
Public	Localized impact expected to be severe for affected areas and moderate to light for other less affected areas.
Responders	Adverse impact expected to be severe for unprotected personnel and moderate to light for trained, equipped, and protected personnel.
Continuity of Operations	Unlikely to necessitate execution of the Continuity of Operations Plan. Localized disruption of roads and/or utilities caused by incident may postpone delivery of some services.
Property, Facilities, and Infrastructure	Localized impact to facilities and infrastructure in the areas of the incident. Power lines and roads most adversely affected.
Environment	Environmental damage to trees, bushes, etc.
Economic Condition of Jurisdiction	Local economy and finances may be adversely affected, depending on damage.
Public Confidence in the Jurisdiction’s Governance	Ability to respond and recover may be questioned and challenged if planning, response, and recovery not timely and effective.

Hazard Summary by Jurisdiction

Agricultural exposure is higher in the unincorporated areas of the county. Building and infrastructure exposure is greater in more densely populated parts of the county. Transportation incidents related to winter storms impact all jurisdictions. Buildings with high occupancy and mobile home parks may be more vulnerable to winter storm events. According to American Community 2017-2021 Survey 5-Year Estimates Caruthersville and Hayti have buildings with 10 or more units. The percentage of manufactured and/or mobile homes by jurisdiction is discussed below within information on vulnerability.

Pemiscot County – The unincorporated portion of the county is likely to experience 2 winter weather events per year. Damages are not anticipated to be as significant as within jurisdictions. This is due solely to the low population density of the county—41.0 persons per square mile for the county as a whole—as compared to Missouri’s at 89.5 and the US’s at 93.8. About 9.2% of housing in the county is mobile homes.

Caruthersville – While the City of Caruthersville is also likely to experience an average of approximately 2 winter weather events per year, its vulnerability to damage from these types of events is considerably higher than its neighboring cities. This is because the city’s population density is comparatively high. Around 3.6% of its housing are in 10 or more units. Manufactured homes make up 2.9% of housing in the city.

Hayti – The City of Hayti is also likely to experience 2 winter weather events per year and its vulnerability to damage from these types of events is higher than the remainder of the planning area. 9.5% of its housing include 10 or more units. Hayti has a very high percentage of manufactured homes at 8.4%

Hayti Heights – The city has a comparatively high rate of manufactured homes in the city – 11.8% but no building complexes with 10 or more units. The city, like the county, will experience about around 2 winter weather events annually.

Caruthersville CPS-18 School District – lies within the City of Caruthersville and has the same vulnerability to severe winter weather as the city.

Cooter R-IV School District – lies within the City of Cooter, a non-participating community and has the same vulnerability to severe winter weather as the rest of the planning area.

Pemiscot R-3 School District – lies in the rural area and has the same vulnerability to winter weather as Pemiscot County.

South Pemiscot R-V School District – lies within the City of Steele, a non-participating community and has the same vulnerability to severe winter weather as the remainder of the planning area.

Problem Statement

- Pemiscot County is likely to continue experiencing severe winter weather events. Possible solutions include providing and publicizing the locations of warming shelters, burying overhead power lines, and educating the public on the safe use of generators.
- Mobile homes may suffer structural damage from the weight of snow and ice accumulation on their roofs. Possible solutions include providing public education on proper safety precautions for winter storm preparedness.

3.4.10 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 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.

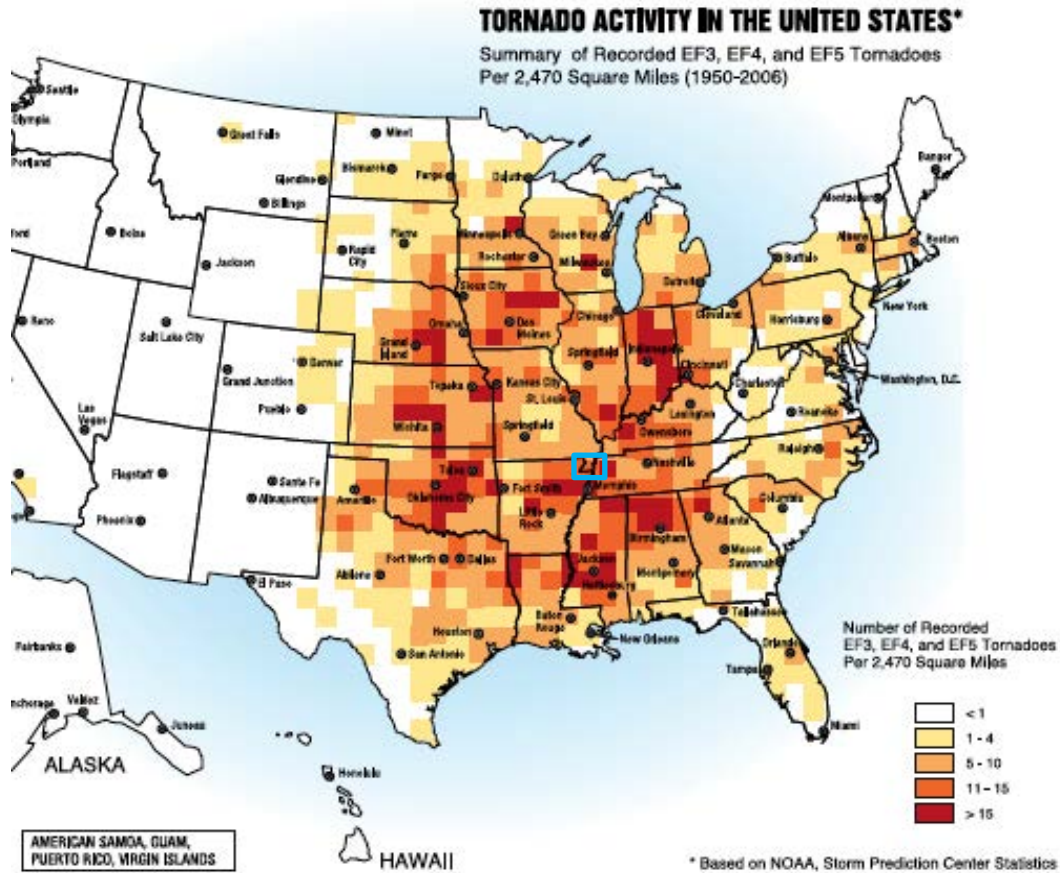
A typical tornado can be described as a funnel-shaped cloud that is “anchored” to a cloud, usually a cumulonimbus that is also in contact with the earth’s surface. This contact on average lasts 30 minutes and covers an average distance of 15 miles. The width of the tornado (and its path of destruction) is usually about 300 yards. However, tornadoes can stay on the ground for upward of 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 mile.

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 within the Pemiscot County planning area. Figure 3.26 illustrates the average tornado activity across the United States from 1950 to 2006. Pemiscot County, indicated by the blue square, is in an area that experiences an average of 11 to 15 tornados per 2,470 square miles annually.

Figure 3.26. Tornado Activity in the United States



Source: FEMA 320, Taking Shelter from the Storm, 3rd edition

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, 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 3.50**) 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 3.51. 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 Nu	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 3.51**. 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 of damage is located online at www.spc.noaa.gov/efscale/ef-scale.html.

Table 3.52. 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 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

Table 3.52 lists NCEI reported tornado events and damages since 1993 in the Pemiscot County planning area. Prior to 1993, only tornadoes causing significant destruction were recorded.

There are limitations to the use of NCEI tornado data that must be noted. Tornadoes reported in Storm Data and the Storm Events Database are in segments, and 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.

Based on NCEI data, 24 tornado segments have occurred in Pemiscot County across 20 different days between 1993 and 2022. These events caused 7 deaths, 151 injuries and an estimated \$61,876,000 in property damage.

Table 3.53. Recorded Tornadoes in Pemiscot County, 1993 – 2022

Date	Beginning Location	Ending Location	Length (miles)	Width (yards)	F/EF Rating	Death	Injury	Property Damage
5/3/1993	Caruthersville	Caruthersville	1.5	50	F1	0	0	\$50,000
4/15/1994	Steele	Steele	1	30	F0	0	0	0
4/27/1994	Caruthersville	Caruthersville	.25	40	F0	0	0	0
4/19/1995	Holland	Steele	5	50	F0	0	0	\$5,000
1/18/1996	Caruthersville	Caruthersville	2	50	F1	0	0	\$50,000
7/30/1998	Caruthersville	Caruthersville	.1	10	F0	0	0	0
1/21/1999	Steele	Steele	.1	10	F0	0	0	\$50
4/24/2002	Hayti	Hayti	.3	25	F0	0	0	\$5,000
5/4/2003	Steele	Steele	6	440	F0	0	0	\$1,000
5/8/2003	Cooter	Cooter	1	75	F0	0	0	\$5,000
10/18/2004	Cooter	Cooter	.5	125	F2	3	7	\$300,000
4/2/2006	Deering	Deering	17.6	880	F3	2	130	\$60,000,000
4/25/2006	Braggadocio	Braggadocio	15	100	F1	0	0	\$60,000
4/25/2006	Steele	Steele	7	30	F0	0	0	\$10,000
5/24/2009	Cottonwood Pt	Cottonwood Pt	1.32	25	EF0	0	0	0
4/5/2012	Netherlands	Netherlands	.19	50	EF0	0	0	0
4/5/2012	Concord	Concord	.16	50	EF0	0	0	0
2/20/2014	Deering	Deering	.24	70	EF1	0	5	\$75,000
2/20/2014	Hayti Heights	Hayti Heights	.04	25	EF1	0	0	\$10,000
5/2/2019	Kinfolk Ridge	Caruthersville	2.76	150	EF0	0	0	\$5,000
9/1/2020	Deering	Braggadocio	2.1	50	EF0	0	0	0
5/4/2021	Concord	Stanley	2.73	90	EF0	0	0	\$50,000
12/10/2021	Samford	Hayti	17.79	1800	EF4	2	9	\$1,250,000
12/10/2021	Gayoso0	Stewart	4.74	1800	EF2	0	0	0
Total						7	151	\$61,876,000

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

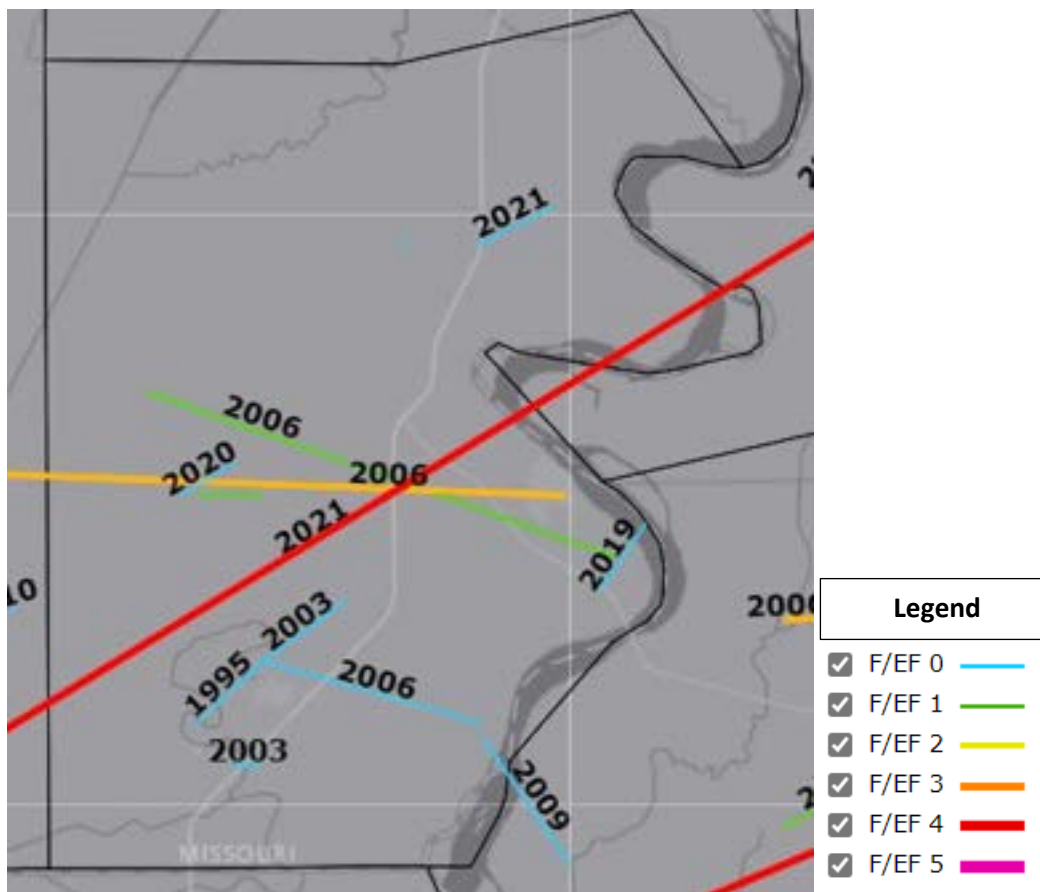
The following event narratives were reported by NCEI.

- October 18, 2004** – A tornado struck just south of Cooter and moved east. The tornado produced substantial damage to a farmhouse and a couple of modular homes. The tornado killed three persons who lived at the farm and injured seven others. A large grain trailer and several trees were blown over.

- **April 2, 2006** - A tornado continued east out of Dunklin County into Pemiscot County. The tornado lifted near the Mississippi River. There were two fatalities in Braggadocio. One hundred thirty people were injured. The most affected area was the southern portion of Caruthersville. Two hundred twenty-six homes were destroyed and five hundred forty-two homes were damaged. In addition, the city of Caruthersville's water tower was destroyed, cutting off water access to the entire city.
- **December 10, 2021** – The day was unseasonably warm over the region. Temperatures broke several long-standing records. A strong upper-level trough was approaching from the west, providing strong lift within the unseasonably warm and unstable air mass. The first supercell developed in central Arkansas and tracked into northeast Arkansas producing a few weak tornadoes initially before intensifying and killing two people. The tornado eventually strengthened into an EF-4 while moving through the Missouri Bootheel. The tornado then tracked across the Mississippi River into northwest Tennessee, producing an additional 4 fatalities. This tornado lifted for a brief time in Obion County, reorganized, and then moved into Kentucky. Peak winds in Pemiscot County were estimated at 170 mph.

Figure 3.27 maps historic tornado events that impacted Pemiscot County according to mapping produced by the Midwestern Regional Climate Center (MRCC). These events resulted in 7 deaths.

Figure 3.27. Pemiscot County Map of Historic Tornado Events



Source: Midwestern Regional Climate Center

Tornadoes have the potential to cause significant crop damage, and past events in NCEI describe damages to crops as well as farm buildings and equipment. These events are accounted for in

Section Error! Reference source not found. as part of the Thunderstorms, High Wind, Hail and Lightning hazard. There are no crop losses reported by RMA for tornadoes in Pemiscot County. This may be due to crop losses being processed as damaged due to wind or excess wind.

Probability of Future Occurrence

Based on the 24 historical events reported by NCEI for the period from 1993 through 2022, Pemiscot County has an 80 percent chance of being impacted by a tornado in any given year.

Changing Future Conditions Considerations and the Impact of Climate Change

Scientists do not know how the frequency and severity of tornadoes will change. As reported in the Fourth National Climate Assessment, some research suggests that tornado activity has become more variable, concluding that the number of days with large outbreaks have been increasing since the 1950s and that densely concentrated tornado outbreaks are on the rise. The 2023 Missouri State Hazard Mitigation Plan notes research that 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.

Vulnerability

Vulnerability Overview

Pemiscot County is in a region of the U.S. with high frequency of dangerous and destructive tornadoes referred to as “Tornado Alley”, illustrated below.

Figure 3.28. Tornado Alley in the U.S.



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

The 2023 Missouri State Hazard Mitigation Plan rates tornado vulnerability based on the following criteria: building exposure, population density, social vulnerability, percentage of mobile homes, likelihood of occurrence, and annual property loss. The State plan rates Pemiscot County’s overall vulnerability at Medium High.

Potential Losses to Existing Development

Of the 24 tornado segments reported by NCEI that hit Pemiscot County from 1993 through 2022, 15 were F0/EF0, 5 were F1/EF1, 2 were an EF2, 1 was an EF3 and 1 was EF4. There was \$61,876,000 in property damage reported from these events, which equates to an average annual loss of \$2,062,533 due to tornadoes.

Previous and Future Development

Although Pemiscot County is not in a population growth phase, some jurisdictions are experiencing small population gains which logically means additional exposure to tornadoes. Buildings with high occupancy such as schools, government offices, skilled care facilities and mobile home parks are always at risk for loss of life and injuries due to concentrated populations. Table 3.53 shows the impact analysis of tornadoes.

EMAP Consequence Analysis

Table 3.54. EMAP Impact Analysis: Tornadoes

Subject	Detrimental Impacts
Public	Localized impact expected to be severe for incident areas and moderate to light for other adversely affected areas.
Responders	Localized impact expected to limit damage to personnel in the areas at the time of the incident.
Continuity of Operations	Damage to facilities/personnel in the area of the incident may require temporary relocation of some operations. Localized disruption of roads, facilities, and/or utilities caused by incident may postpone delivery of some services.
Property, Facilities, and Infrastructure	Localized impact to facilities and infrastructure in the area of the incident. Some severe damage possible.
Environment	Localized impact expected to be severe for incident areas and moderate to light for other areas affected by the storm or HazMat spills.
Economic Condition of Jurisdiction	Local economy and finances adversely affected, possibly for an extended period of time.
Public Confidence in the Jurisdiction's Governance	Ability to respond and recover may be questioned and challenged if planning, response, and recovery not timely and effective.

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, the increased density of buildings and infrastructure, or the high concentration of mobile homes. Pemiscot County Unincorporated and Caruthersville have the greatest number of buildings constructed prior to 1939, making them more vulnerable to tornado damage. Communities that have adopted building codes may also be less vulnerable to damages. Housing vulnerability related to structure age was detailed in **Table 3.26**. Event narratives above mention mobile homes frequently. It is generally accepted that mobile homes are highly vulnerable to damage or devastation by tornadoes. Below, **Table 3.54** illustrates the number and percentage of mobile homes in each jurisdiction.

Table 3.55. Mobile Homes in Pemiscot County

Jurisdiction	Number of Mobile Homes	Percentage of Mobile Homes
Caruthersville	77	2.9
Hayti	106	8.4
Hayti Heights	24	11.8
Pemiscot County, entire	689	9.2

Source: US Census Bureau American Community Survey 2020 5 Year Estimates <https://data.census.gov/>

Problem Statement

- There are no tornado warning sirens within some Pemiscot County jurisdictions. Possible solutions include promoting the use of NOAA weather radios and conducting public education and outreach activities to increase awareness of tornado risk.
- Mobile homes are particularly vulnerable to tornadoes. A possible solution is to provide public outreach and/or conduct inspections to ensure the proper tie downs are installed on mobile homes.

3.4.11 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 700 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 wildfires 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 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.

Geographic Location

Damages due to wildfires are 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.

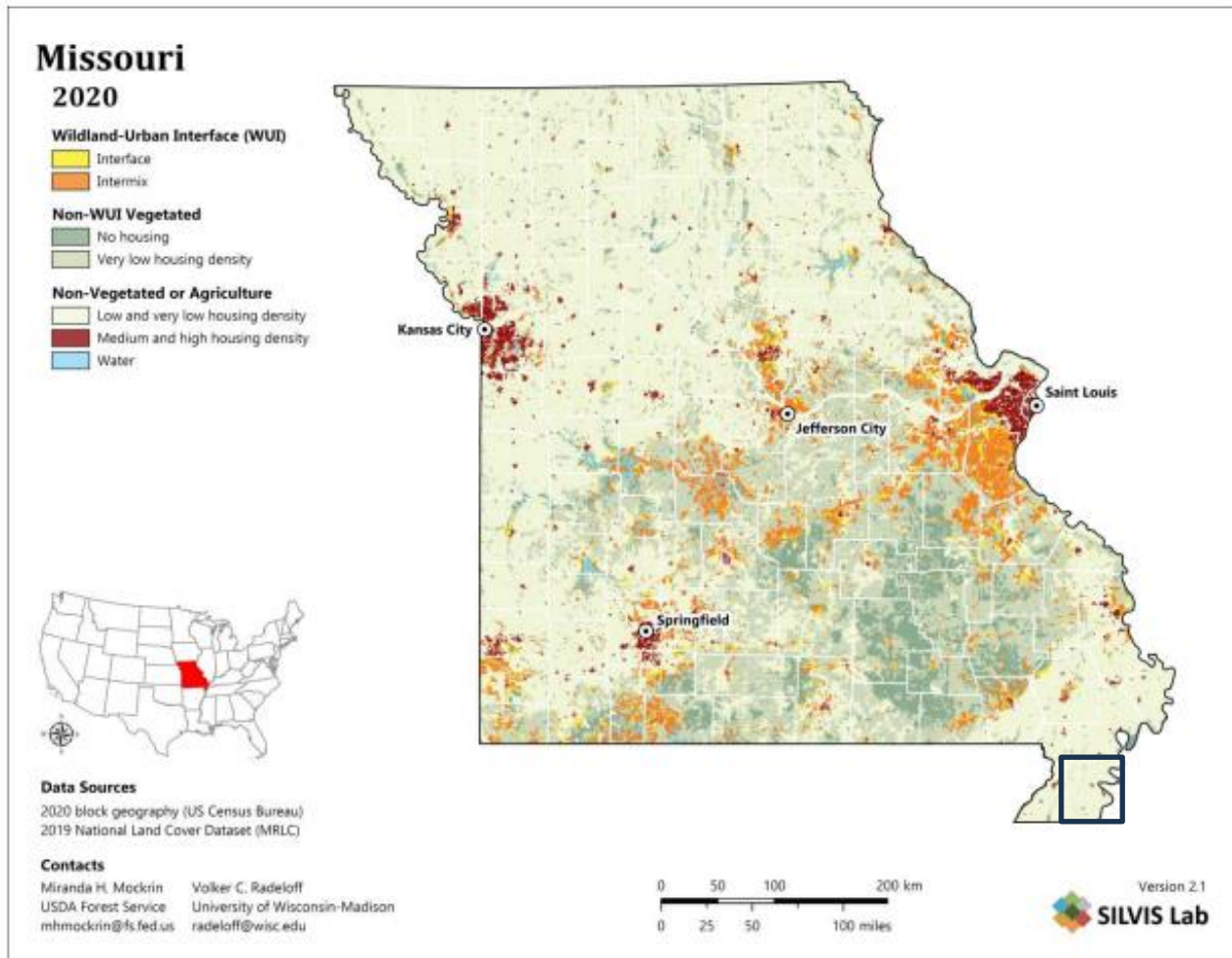
Pemiscot County is predominately classified as non-vegetated or agricultural with few pockets of WUI intermix areas and minimal dense housing in its larger communities. See Figure 3.29. Pemiscot County is marked by a black rectangle.

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, including those in Pemiscot County, are not the size and intensity of those in the western United States, they could impact agricultural areas 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 sometimes “torch” or “crown” out in certain dense evergreen stands like eastern red cedar and shortleaf pine. However, Pemiscot County does not have the extensive stands of evergreens found in the western US that fuel the large fire storms seen on television news stories.

Figure 3.29. WUI Areas in Missouri, 2020



Source: University of Wisconsin -Madison, SILVIS Lab,
https://geoserver.silvis.forest.wisc.edu/geodata/wui_change_2020/maps/qifs/white/MO_WUI_v21_white_2020.qif

While very unusual, crown fires can and sometimes 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 firefighters to 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 2 wildfire events since 2003 that have burned more than 50 acres. These 2 events resulted in no threatened residences; 1 threatened outbuildings; 1 damaged outbuilding; and no personal injuries or fatalities.

Previous Occurrences

According to the Missouri Department of Conservation, there were approximately 160 noted wildfires within Pemiscot County between 2003 and 2022. Two of them burned 50 or more acres. There was

no additional data records for the school districts within Pemiscot County.

Wildfire events burning more than 50 acres have included the following:

- October 8, 2015 – 82 acres – Report of a grass fire on Highway 412 at Highway B/Z, which started as a controlled burn of an 80-acre rice field and spread into a ditch. The fire occurred near Hayti and the Hayti Fire Department responded.
- June 11, 2017 – 100 acres – A local farmer was burning a 100 acre wheat field when the controlled burn got out of control and caught the grass ditch and a wooded area that had two older buildings on it. This occurred near Braggadocio and the Hayti Fire Department responded.

Probability of Future Occurrence

With 160 wildfires noted within Pemiscot County between 2003 and 2022, the likelihood of occurrence can be calculated to average 8 wildfire events per year. With the total acreage burned during this same period as 589.7 acres, the annual average acreage burned can be calculated as 29.5 acres burned per year and the average event can be calculated as 3.7 acres. The most common known cause noted was “unknown.” This information came from the Missouri Department of Conservation Wildfire Reporting database.

Changing Future Conditions Considerations and the Impact of Climate Change

According to the 2023 State Hazard Mitigation plan, higher temperatures will reduce the number of days prescribed burning can be performed. Reduction of prescribed burning will allow for growth of understory vegetation. Drought is also anticipated to increase in frequency and intensity during the summer months under projected scenarios. Drought can lead to dead or dying vegetation and landscaping material close to structures which creates fodder for wildfires within both urban and rural settings.

Vulnerability

Vulnerability Overview

Based on data from the Missouri Department of Conservation Wildfire Report. The average amount of land burned in one year as a result of wildfires in Pemiscot County was almost 30 acres. This average was based on 160 wildfires occurring in the county between 2003 and 2022. The total acreage burned during this nineteen-year time period was 590 acres. Per the data, the county was in the lower category for number of fires per year when compared to other counties in the state. The average burn per wildfire is 3.7 acres.

With climate changing to more extreme weather conditions, the possibility of wildfires may increase. Potential wildfires pose a risk to people, buildings and wildlife. The risk is not only from the fire itself, but from smoke produced and the remaining residue. There is very little WUI area in Pemiscot County as can be seen in Figure 3.29 above. There are some limitations of the data on wildfires, although the MDC data is generally agreed to be the most accurate source.

Potential Losses to Existing Development

To estimate potential damage to existing development, WUI areas should be closely examined. Per the 2023 Missouri State Hazard Mitigation Plan, there are 705.98 acres of land located within WUI areas in the county. Within those WUI areas are 1,202 structures, valued at \$175,967,670, and 2,746 persons vulnerable to wildfire. When categorized by type, the majority of structures at risk were determined to be residential (1,121 structures valued at \$138,293,495). The breakdown of the

properties in the planning area determined vulnerable to wildfire is as follows:

- Agricultural, 13 structures valued at \$57,274;
- Commercial, 57 structures valued as \$32,837,344;
- Educational, 2 structures valued at \$1,568,000;
- Government, 8 structures valued at \$2,271,508;
- Industrial, 1 structure valued at \$5,940,049; and,
- Residential, 1,121 structures valued at \$138,293,495.

Impact of Previous and Future Development

There is very little planned development in Pemiscot County and very little WUI, but there is much agricultural acreage. Those fields located near more densely populated areas could pose a threat to housing developments.

EMAP Consequence Analysis

Table 3.56. EMAP Impact Analysis: Wildfire

Subject	Detrimental Impacts
Public	Localized impact expected to be severe for incident areas and moderate to light for other adversely affected areas.
Responders	Localized impact expected to limit damage to personnel in the incident areas at the time of the incident.
Continuity of Operations	Damage to facilities/personnel in the area of the incident may require temporary relocation of some operations. Localized disruption of roads and/or utilities caused by incident may postpone delivery of some services.
Property, Facilities, and Infrastructure	Localized impact to facilities and infrastructure in the area of the incident. Some severe damage possible.
Environment	Localized impact expected to be severe for incident areas and moderate to light for other areas affected by smoke or HazMat remediation.
Economic Condition of Jurisdiction	Local economy and finances may be adversely affected, depending on damage and length of investigations.
Public Confidence in the Jurisdiction’s Governance	Ability to respond and recover may be questioned and challenged if planning, response, and recovery not timely and effective.

Hazard Summary by Jurisdiction

For those jurisdictions without identified wildfire urban interface or intermix areas, the probability of wildfire is noted as unlikely. School district risk is based upon their corresponding jurisdiction.

Because the county is 90% agricultural which is open and unpopulated, the risk to human life is minimal. The largest jurisdiction, Caruthersville, is at greatest risk of the damage of a wildfire due to

concentrations of housing.

Problem Statement

- Very few Pemiscot County parcels are located within the identified WUI areas. Jurisdictions with new housing construction should note the location of WUI areas and inform residents of wildfire protection measures for new structures.
- There are multiple fire departments within Pemiscot County: Caruthersville, Cooter, Hayti, Hayti Heights, Steele and Wardell. The departments should confirm mutual aid agreements with neighboring counties; publicize information on open burning under Missouri regulations and continue to report wildfire incidents to the National Fire Incident Reporting System through Missouri Department of Public Safety.

4	MITIGATION STRATEGY.....	4.1
4.1	Goals.....	4.1
4.2	Identification and Analysis of Mitigation Actions.....	4.2
4.3	Implementation of Mitigation Actions	4.5

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 Hazard Mitigation Review Guide (October 1, 2012)*.

- **Mitigation Goals** are general guidelines that explain desired achievement. Goals are long-term policy statements and global visions that support the mitigation strategy. Goals address the risk of hazards identified in the plan.
- **Mitigation Actions** are specific actions, projects, activities, or processes taken to reduce or eliminate long-term risk to people and property from hazards and their impacts. Implementing mitigation actions helps achieve the plan’s mission and goals.

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 an existing hazard mitigation plan. Therefore, the goals from the 2019 *Pemiscot County Hazard Mitigation Plan* were reviewed to determine if they are still valid. The MPC participated in a facilitated discussion during their second meeting to review and update the plan goals. To ensure that the goals are comprehensive and support State goals, the 2018 *Missouri State Hazard Mitigation Plan* goals were reviewed as well by consulting staff. Although the goals were slightly different, they were in alignment. The MPC voted to maintain the goals from the 2019 plan.

The current goals adopted by the planning committee are as follows:

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

4.2 Identification and Analysis of Mitigation Actions

44 CFR Requirement §201.6(c)(3)(ii): The mitigation strategy shall include a section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.

During the second MPC meeting, the results of the public survey were provided to the MPC members for review and the key issues were identified for specific hazards. The survey results were plotted on a grid to visually illustrate opinions on the likelihood and magnitude of potential hazards. The County Emergency Management Director, Jess Cagle, presented information on disaster declarations that have occurred in the county since the previous plan update. Members were informed that Meeting #3 would be their opportunity to assess risks and review previous Action Plans, updating them based on STAPLEE assessment, current available priorities and resources. Actions from the previous plan included completed actions, on-going actions, and actions upon which progress had not been made. The MPC was reminded that there are funding opportunities through FEMA that help address needs in their jurisdictions.

Problem statements are included 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 problem statements allowed the planners to recognize new and innovative strategies to mitigate risks in the planning area.

The focus of Meeting #3 was to update the mitigation strategy. For a comprehensive range of mitigation actions to consider, the MPC reviewed the following information during Meeting #3:

- A list of actions proposed in the previous mitigation plan, the current State Plan, and approved plans in surrounding counties,
- Key issues from the risk assessments.
- State priorities and hazard mitigations established for HMA grants, and
- Public input during meetings, responses to data collection questionnaires, and public survey results.

During Meeting #3, most individual jurisdictions, including school districts, developed final mitigation strategy for inclusion in the plan. Those that needed more time, were absent for Meeting #3 or who wanted to take it back to their jurisdictions for further discussion and consideration were granted more time to complete their action plans. They were encouraged to use previous action plans as a basis but to consider new actions that made sense based on the multiple resources at their disposal.

The MPC reviewed the actions from the previously approved plan for progress made since the plan had been adopted, using worksheets included in Appendix F 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" directly on the old action plans by marking them as:

- 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 and a comparison of previous plans to new proposed plans, there was 1 completed action and 30 continuing actions (either ongoing or modified).

Table 4.1 provides a summary of the action statuses for each jurisdiction:

Table 4.1. Action Status Summary

Jurisdiction	Total Number of Existing Mitigation Actions	Completed Actions	Continuing Actions (ongoing or modify)	Deleted Actions
Caruthersville	12	0	12	0
Hayti	11	0	11	0
Hayti Heights	NA			
Unincorporated Pemiscot County	10	0	10	0
Caruthersville School District 18	9	0	9	0
Cooter School District R-IV	NA			
Pemiscot County School District R-3	NA			
South Pemiscot School District R-V	8	1	7	0
Total	50	1	49	0

Submitted revised 2023 Action Worksheets. N/A – Updated information not available/not provided by jurisdiction and/or school Source district.

Table 4.2 provides a summary of the completed and deleted actions from the previous plan.

Table 4.2. Summary Deleted Actions from the Previous Plan

	Deleted Actions	Jurisdiction	Reason for Deletion
	None		

Source: 2023 Jurisdiction Action Plans

For a comprehensive range of mitigation actions to consider, the jurisdictions were provided relevant information and sources to be used in development of new mitigation actions including:

- Updated Plan Goals
- Previous Actions from 2019 Plan
- State Priorities for Hazard Mitigation Assistance Grants
- Public Opinion from Surveys

To facilitate discussion and ideas on new actions that jurisdictions may want to submit to the plan update, the planning committee reviewed the plan goals that were updated at Meeting #2. Key issues/problem statements for hazards in the risk assessment were also discussed, as well as the actions from the 2019 plan that were identified relative to each hazard. The discussion was geared toward identifying any gaps that may exist between the problems identified and actions already developed to address the problems to develop new actions.

The jurisdictions were encouraged to be comprehensive and include all appropriate actions to work toward becoming more disaster resistant. They were encouraged to maintain a realistic approach and were reminded that the hazard mitigation plan is a “living document.” As capabilities, vulnerabilities, or the nature of hazards that threaten each jurisdiction change, the mitigation actions can and should be updated to reflect those changes, including addition or deletion of actions, as appropriate.

As part of the meeting discussion, jurisdictions were instructed to consider the potential cost of each project in relation to the anticipated future cost savings and the value of human lives. Jurisdictions used the STAPLEE risk assessment tool to gauge the cost-benefit of proposed actions.

4.3 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 given the option to meet with others in their communities 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 cost-benefit analysis in determining project priority. The Disaster Mitigation Act requires cost-benefit 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 2018 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.

- **Social:** Will the action be acceptable to the community? Could it have an unfair effect on a particular segment of the population?
- **Technical:** Is the action technically feasible? Are there secondary impacts? Does it offer a long-term solution?
- **Aministrative:** Are there adequate staffing, funding, and maintenance capabilities to implement the project?
- **Political:** Will there be adequate political and public support for the project?
- **Legal:** Does your jurisdiction have the legal authority to implement the action?
- **Economic:** Is the action cost-beneficial? Is there funding available? Will the action contribute to the local economy?
- **Environmental:** Will there be negative environmental consequences from the action? Does it comply with environmental regulations? Is it consistent with community environmental goals?

Will historic structures be saved or protected?
Could it be implemented quickly?
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 F. 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.

The mitigation action summary table presenting the summary of continuing and new mitigation actions for each jurisdiction is provided in Table 4.3 and for each school district in Table 4.4. The Action ID for each action has been carried over from the 2019 plan for continuing actions. As a result of completed and deleted actions, the Action ID does not follow a sequential order. New actions were assigned the next sequential Action ID for each jurisdiction. Following the action summary tables, additional details are provided for each continuing and new through action worksheets for each specific jurisdiction. The action worksheets, see Figure 4.2, serve as the roadmap describing how each action will be implemented and administered by the local jurisdiction. STAPLEE sheets are located in Appendix F.

The jurisdictions of Bragg City, Cooter, Deering, Hayward, Holland, Homestown, Pascola, Steele and Wardell in Pemiscot County did not participate in the plan update.

Three public schools including Delta C-7; Hayti R-II; and N. Pemiscot County R-1 did not participate in the plan update.

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		Score
Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		
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)		
<input type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25 - 29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by
(Name, Title, Phone Number) _____

Figure 4.2. Mitigation 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.

Table 4.3. Mitigation Action Matrix - Jurisdictions

#	Action	Caruthersville	Hayti Heights	Hayti	Unincorporated Pemiscot County	Mitigation Category	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
1.1	Adopt most current IRC (residential), IBC(commercial building) and ICC600 (high wind areas) building codes to withstand high winds and possible tornado.	X	X	X	X	Prevention	Tornadoes / Severe Thunderstorm		X	
1.2	Host Safety workshops annually with a focus on all natural hazards	X		X		Education and Outreach / Prevention	Tornadoes / Severe Thunderstorms		X	
1.4	Seek Funding for Storm Sirens				X	Prevention	Tornadoes / Severe Thunderstorm	X	X	
1.5	Apply for Funding for a FEMA Safe Room	X								
2.1	Adopt roadway drainage design referencing MoDot Engineering Policy Guide "748 Hydraulics and Drainage".	X	X	X	X	Prevention	Flood Related Hazards		X	X
2.6	Raise elevation on country roads throughout county that repeatedly flood and wash out.				X	Prevention	Flood and Levee Failure	X	X	X
2.7	Adopt FIRM and update or adopt floodplain ordinance to meet all NFIP requirements		X			Prevention	Flood Related Hazards	X	X	X
3.1	Adopt additional building codes for new construction and improvements of any critical facilities to reflect the NEHRP Seismic Provisions.	X		X	X	Prevention	Earthquake		X	
3.2	Designate an Emergency Operations Center and conduct an annual coordination exercise with all county officials	X		X	X	Emergency Services	Earthquake	X	X	
3.3	Local jurisdictions and school districts create an earthquake awareness program to create brochures on earthquake preparedness and distribute to libraries, courthouse, city hall and school classrooms and offices.	X	X	X		Education and Outreach / Prevention	Earthquake		X	
3.5	Install bracing and stabilizing components to shelving, cabinets, and other equipment inside the fire station.	X		X		Prevention	Earthquake	X	X	

#	Action	Caruthersville	Hayti Heights	Hayti	Unincorporated Pemiscot County	Mitigation Category	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
4.1	Adopt "best practices" policy in conjunction with the Soil and Water Conservation Commission during periods of drought. Print brochures and distribute to educate the public.	X	X	X	X	Education and Outreach / Prevention	Drought / Extreme Temperature / Wildfire	X	X	
4.2	Adopt "best practices" policy in conjunction with the Public Electric Utility Companies during periods of heatwave. Print in brochure and distribute to educate the public.	X		X	X	Education and Outreach / Prevention	Drought / Extreme Temperature / Wildfire	X	X	
5.1	Create an emergency snow route map for the county road system and coordinate snow removal activities with state and local officials in September of each year.		X		X	Emergency Services	Severe Winter Weather	X	X	
5.2	Meet annually with critical facilities administrators to develop severe winter weather strategies	X		X	X	Education and Outreach / Prevention	Severe Winter Weather	X	X	
5.3	Educate the public utility end user on preventative measures to reduce the risk to public and private property	X		X		Education and Outreach / Prevention	Severe Winter Weather	X	X	
5.5	Apply for funding to purchase a generator.					Prevention	Drought/Extreme Temp/Wildfire and Severe Winter Weather	X	X	
6.1	Appoint a person or committee to review the Hazard Mitigation Plan periodically to ensure execution and suggest updates as needed.				X	Education and Outreach	Tornadoes/Severe Thunderstorm/ Flooding / Earthquake / Drought / Extreme Temperatures / Severe Winter Weather	X	X	X
	Total Count of Mitigation Actions	12	6	11	11					

Table 4.4. Mitigation Action Matrix – School Districts

#	Action	Caruthersville District 18	Cooter R-IV	Pemiscot Co R-3	South Pemiscot R-5	Mitigation Category	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
1.3	Construct FEMA Safe Room	X	X	X	X	Prevention	Tornadoes / Severe Thunderstorms		X	
1.6	Install emergency generator in FEMA Safe room	X			X	Emergency Services	Tornadoes / Severe Thunderstorms	X	X	
2.2	Create a program to clean and maintain current drainage systems	X	X	X	X	Prevention	Flood Related Hazards	X	X	X
2.3	Alter Bus Routes when flooding exists	X			X	Prevention	Flood Related Hazards	X	X	X
2.4	Inform Parents/Guardians of impact of flooding	X			X	Prevention	Flood Related Hazards	X	X	X
2.5	Install grinder pumps in wastewater to control flooding				X	Prevention	Flood Related Hazards	X	X	X
3.3	Educate students and community about safety procedures for earthquakes through brochures	X	X	X	X	Prevention	Earthquake	X	X	
3.4	Inform parents/guardians of crisis plan and how it affects students	X			X	Education and Outreach	Earthquake	X	X	
3.5	Install bracing and stabilize components for shelving/cabinets/and other equipment	X				Prevention	Earthquake	X	X	
4.3	Alter Student Activities during extreme heat to protect them	X	X	X	X	Prevention	Drought / Extreme Temperature / Wildfire	X	X	

#	Action	Caruthersville District 18	Cooter R-IV	Pemiscot Co R-3	South Pemiscot R-5	Mitigation Category	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NFIP
5.2	Meet annually with critical administrators to develop severe winter weather strategies	X				Prevention	Extreme Winter Weather	X	X	
5.4	Meet with State and County Road officials to set priorities for snow removal	X			X	Emergency Services	Extreme Winter Weather	X	X	
5.5	Purchase Generators for campus		X	X	X	Prevention	Drought and Extreme Temperatures / Severe Winter Weather	X	X	
6.1	Appoint contact to review plan periodically to ensure execution and suggest updates	X	X			Prevention	Tornadoes/Severe Thunderstorm/ Flooding / Earthquake / Drought / Extreme Temperatures / Severe Winter Weather	X	X	
	Total Count of Mitigation Actions	12	6	5	11					

5 PLAN MAINTENANCE PROCESS

5 PLAN MAINTENANCE PROCESS	5.1
5.1 Monitoring, Evaluating, and Updating the Plan.....	5.1
5.1.1 Responsibility for Plan Maintenance	5.1
5.1.2 Plan Maintenance Schedule	5.2
5.1.3 Plan Maintenance Process.....	5.2
5.2 Incorporation into Existing Planning Mechanisms	5.3
5.3 Continued Public Involvement	5.4

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 MPC is a standing committee, with oversight by the county emergency management agency and the Bootheel Regional Planning Commission. The MPC is responsible for maintenance needs. Maintenance includes ensuring participation from 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 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 agrees to meet annually and after a state or federally declared hazard event as appropriate to monitor progress and update the mitigation strategy. The Regional Planner of BRPC will be responsible for initiating the plan reviews and will invite members of the MPC to the meeting. The planner from BRPC will complete an annual progress report and distribute via e-mail to the list of stakeholders to continue public involvement.

In coordination with all participating jurisdictions, a five-year written update of the plan will 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

Progress on the proposed actions can be monitored by evaluating changes in vulnerabilities identified in the plan. The MPC during the annual meeting should 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).

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 (or designated responsible entity) member 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 (or designated responsible entity) 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 or designated responsible entity) deems appropriate and necessary. Changes will be approved by the Pemiscot County Commission 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.

Where possible, plan participants, including school and special districts, will use existing plans and/or programs to implement hazard mitigation actions. Those existing plans and programs were described in Section 2.2 of this plan. Based on the capability assessments of the participating jurisdictions, communities in Pemiscot 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;
- Pemiscot 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 Pemiscot County Emergency Management Director will provide the updated Mitigation Strategy with current status

of each mitigation action to the County Commission as well as all Mayors, City Clerks, and School District Superintendents. The Emergency Manager Director will request that the mitigation strategy be incorporated, where appropriate, in other planning mechanisms.

0 below lists the planning mechanisms by jurisdiction into which the Hazard Mitigation Plan will be integrated.

Table 5.1 Planning Mechanisms Identified for Integration of Hazard Mitigation Plan

Jurisdiction	Planning Mechanisms
Pemiscot County	Comprehensive Plan Future Growth Plan Watershed Plan
Incorporated Jurisdictions	Zoning and Building Policy
School Districts	School Emergency Plan Master Plan

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 Bootheel Regional & Economic Planning Commissions website following each annual review of the mitigation plan. 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 and social media.

Appendix A

Hazard Mitigation Websites

<https://www.ncdc.noaa.gov/stormevents/> - Primary source of data on most hazards

<https://www.iris.edu/hq/> - Earthquake data

<http://ds.iris.edu///index.html?format=text&nodata=404&starttime=1970-01-01&endtime=2025-01-01&orderby=time-desc&limit=4500&maxlat=36.98500&minlat=35.87125&maxlon=-89.03320&minlon=-90.49438&sbl=1&zm=9&mt=ter> - Earthquake Browser Mapping

Drought sites

Data sources: <http://www.drought.unl.edu/> <http://droughtreporter.unl.edu/>

http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1_Chapter_2_County_Level/Missouri/ and

http://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/Missouri/ provide information on agriculture at the county level.

Go to <http://www.rma.usda.gov/data/cause.html>

<http://droughtreporter.unl.edu/>

Some specific sources for this hazard (DROUGHT) are:

- Maps of effects of drought, National Drought Mitigation Center (NDMC) located at the University of Nebraska in Lincoln; <http://www.drought.unl.edu/>.
- Historical drought impacts, National Drought Mitigation Center (NDMC) located at the University of Nebraska in Lincoln; at <http://droughtreporter.unl.edu/>.
- Recorded low precipitation, NOAA Regional Climate Center, (<http://www.hprcc.unl.edu>).
- Water shortages, Missouri's Drought Response Plan, Missouri Department of Natural Resources, <http://dnr.mo.gov/pubs/WR69.pdf>
- Populations served by groundwater by county, USGS-NWIS, <http://maps.waterdata.usgs.gov/mapper/index.html>
- Census of Agriculture, http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1_Chapter_2_County_Level/Missouri/ and http://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/Missouri/
- USDA Risk Management Agency, Insurance Claims, <http://www.rma.usda.gov/data/cause.htm>
- Natural Resources Defense Council, <http://www.nrdc.org/globalWarming/watersustainability/>

Police and Sheriff Contacts

<https://ago.mo.gov/divisions/litigation/police-and-sheriffs-contacts?pd=d>

Earthquake

Some specific sources for this hazard are:

- U.S. Seismic Hazard Map, United States Geological Survey, http://earthquake.usgs.gov/hazards/products/conterminous/2014/HazardMap2014_lg.jpg;
- 6.5 Richter Magnitude Earthquake Scenario, New Madrid Fault Zone map, <http://www.igsb.uiowa.edu/Browse/quakes/quakes.htm>;
- Probability of magnitude 5.0 or greater within 100 Years, United States Geological Survey, <https://geohazards.usgs.gov/eqprob/2009/index.php>

BRIDGE

- <http://t4america.org/maps-tools/bridges/>
- <http://www.fhwa.dot.gov/bridge/nbi/no10/county.cfm>

Extreme Heat

Some specific sources for this hazard are:

- National Climatic Data Center, Storm Events Database, <http://www.ncdc.noaa.gov/stormevents/>
- Heat Index Chart & typical health impacts from heat, National Weather Service; National Weather Service Heat Index Program, www.weather.gov/os/heat/index.shtml ;
- Daily temperatures averages and extremes, High Plains Regional Climate Summary, http://www.hprcc.unl.edu/data/historical/index.php?state=ia&action=select_state&submit=Select+State;
- Hyperthermia mortality, Missouri; Missouri Department of Health and Senior Service, <http://health.mo.gov/living/healthcondiseases/hyperthermia/pdf/hyper1.pdf>;
- Hyperthermia mortality by Geographic area, Missouri Department of Health and Senior Services, <http://health.mo.gov/living/healthcondiseases/hyperthermia/pdf/hyper2.pdf>;
- Go to <http://www.rma.usda.gov/data/cause.html> to download tables with insurance payments by year. Under indemnities only, select the years of data you want.

FLOODING

Some specific sources for this hazard are:

- Watershed map, Environmental Protection Agency, http://cfpub.epa.gov/surf/county.cfm?fips_code=19169

- FEMA Map Service Center, Digital Flood Insurance Rate Maps (DFIRM) for all jurisdictions, if available, msc.fema.gov/portal
 - NFIP Community Status Book, <http://www.fema.gov/national-flood-insurance-program/national-flood-insurance-program-community-status-book>
 - NFIP claims status, BureauNet, <http://bsa.nfipstat.fema.gov/reports/reports.html>
 - Flood Insurance Administration—Repetitive Loss List (this must be requested from the State Floodplain Management agency or FEMA)
 - National Climatic Data Center, Storm Events Database, <http://www.ncdc.noaa.gov/stormevents/>
- USDA Risk Management Agency, Insurance Claims, <http://www.rma.usda.gov/data/cause.htm>

American Society of Civil Engineers, “So You Live Behind a Levee”, 2010

- CBS News, <http://www.cbsnews.com/stories/2007/05/09/national/main2778061.shtml>
- Entrepreneur Magazine, Winter, 2006; Floodplain development—learning from the Great Flood of 1993; <http://www.entrepreneur.com/tradejournals/article/161065854.html>.
- FEMA, Missouri DFIRM Status, October 2009
- The National Levee Challenge: Levees and the FEMA Flood Map Modernization Initiative, September 2006: *Interagency Levee Policy Review Committee report to FEMA*. See http://www.fema.gov/plan/prevent/fhm/lv_report.shtm
- National Levee Safety Program Act of 2007, <http://www.emforum.org/vforum/lc071212.htm>.
- Preliminary Report of the Scientific Assessment and Strategy Team, 1994; <http://desastres.usac.edu.gt/documentos/pdf/eng/doc5646/doc5646-8a.pdf>
- SEMA Situation Report, March 18, 2008 <http://sema.dps.mo.gov/SitReps/SITREPMAR182008%2010%20am.pdf>
- U.S. Army Corps of Engineers, Levee Safety Program, <http://www.usace.army.mil/CEPA/FactSheets/Pages/LeveeSafetyProgram.aspx>
- Water Resources Development Act, November 8, 2007, <http://thomas.loc.gov/cgi-bin/query/D?c110:6:./temp/~c110pqqCqG>

LIGHTNING

Some Specific Sources for this hazard are:

- FEMA 320, Taking Shelter from the Storm, 3rd edition, http://www.weather.gov/media/bis/FEMA_SafeRoom.pdf Lightning Map, National Weather Service, http://www.lightningsafety.noaa.gov/stats/08_Vaisala_NLDN_Poster.pdf National Weather Service, http://www.lightningsafety.noaa.gov/stats/08_Vaisala_NLDN_Poster.pdf
- Death and injury statistics from lightning strikes, National Weather Service.
- Wind Zones in the U.S. map, FEMA, http://www.fema.gov/plan/prevent/saferoom/tsfs02_wind_zones.shtm;
- Annual Windstorm Probability (65+knots) map U.S. 1980-1994, NSSL, http://www.nssl.noaa.gov/users/brooks/public_html/bigwind.gif
- Hailstorm intensity scale, The Tornado and Storm Research Organization (TORRO), <http://www.torro.org.uk/site/hscale.php>;

- NCDC data;
- USDA Risk Management Agency, Insurance Claims, <http://www.rma.usda.gov/data/cause.htm>
- National Severe Storms Laboratory – hail map, http://www.nssl.noaa.gov/users/brooks/public_html/bighail.gif
http://www.lightningsafety.noaa.gov/stats/08_Vaisala_NLDN_Poster.pdf and <http://www.lightningsafety.noaa.gov/>

TORNADO

Some specific sources for this hazard are:

- Enhanced F Scale for Tornado Damage, NWS, www.spc.noaa.gov/faq/tornado/ef-scale.html;
- Enhanced Fujita Scale's damage indicators and degrees of damage table, NOAA Storm Prediction Center, www.spc.noaa.gov/efscale/ef-scale.html;
- Tornado Activity in the U.S. map (1950-2006), FEMA 320, Taking Shelter from the Storm, 3rd edition;
- Tornado Alley in the U.S. map, <http://www.tornadochaser.net/tornalley.html>
- Enhanced Fujita Scale, www.spc.noaa.gov/efscale/ef-scale.html
- National Climatic Data Center, <http://www.ncdc.noaa.gov/stormevents/>
- Tornado History Project, map of tornado events, <http://www.tornadohistoryproject.com/tornado/Missouri>

Information on the Enhanced Fujita Scale's damage indicators and degrees of damage is located online at www.spc.noaa.gov/efscale/ef-scale.html.

WINTER STORMS

Some specific sources for this hazard are:

- Wind chill chart, National Weather Service, <http://www.nws.noaa.gov/om/winter/windchill.shtml>;
- Average Number of House per year with Freezing Rain, American Meteorological Society. "Freezing Rain Events in the United States." <http://ams.confex.com/ams/pdfpapers/71872.pdf>;
- USDA Risk Management Agency, Insurance Claims, <http://www.rma.usda.gov/data/cause.htm>
- Any local Road Department data on the cost of winter storm response efforts.
- National Climatic Data Center, Storm Events Database, <http://www.ncdc.noaa.gov/stormevents/>

Appendix B



BOOTHEEL
REGIONAL PLANNING
ECONOMIC DEVELOPMENT COMMISSION

Subject: Pemiscot County Multi-jurisdictional Hazard Mitigation Plan Update

On behalf of the Pemiscot County Commission, you are invited to the Kick-Off Meeting to update the county's Multi-jurisdictional Hazard Mitigation Plan. The existing plan, approved by FEMA five years ago, was developed in accordance with the Disaster Mitigation Act of 2000. To maintain eligibility for certain FEMA Hazard Mitigation Assistance grants, the Act requires jurisdictions to develop a plan to assess their risks to hazards and identify actions that can be taken to reduce future losses. The law requires Plans to be updated every five years; your participation is a key to this process.

Pemiscot County Multi-jurisdictional Hazard Mitigation Plan Update

Kickoff Meeting: Wednesday, March 8

Meeting Time: 10 am

Place: Pemiscot County Courthouse, Second Floor Courtroom

Address: 610 Ward Avenue, Caruthersville, Missouri

This planning process is heavily dependent on the participation of representatives from local government agencies and departments, the public, and other stakeholder groups. A Hazard Mitigation Planning Committee will be formed to support this project and will include representatives from the County, cities, school districts, private-non-profit entities, business partners, academic institutions, and other local, state, and federal agencies acting in or serving Pemiscot County.

At the kickoff meeting, we will discuss the benefits of updating the plan, the project schedule, and the hazards that affect Pemiscot County, such as tornadoes, floods, extreme temperatures, severe winter weather, and more. **Pemiscot County requests your assistance in forwarding this invitation to others in your jurisdiction that might participate.**

The Bootheel Regional Planning Commission is responsible for developing this plan. Community Development Specialists Christy LeGrand and Christine Young (573-614-5178, ext.106) are coordinating this effort. We need your participation to successfully complete this project and ensure your organization is eligible for FEMA hazard mitigation assistance funding. Cities, counties, and school districts that do not participate in an approved Hazard Mitigation Plan are **NOT eligible** to apply for FEMA's Hazard Mitigation Assistance grants.

Please confirm your attendance or provide contact information for your designated alternate by responding to Christy LeGrand at clegrand@bootrpc.com.

Thank you,

Jim Grebing
Executive Director
Bootheel Regional Planning and Economic Development Commission

Pemiscot County Hazard Mitigation Plan Kick-Off

Hosted by Bootheel Regional Planning Commission,
Pemiscot Co Commission and Pemiscot Co EMA

March 8, 2023



1

Agenda

1. Overview - Why This Plan?
2. What's New This Year?
3. Grant Programs Linked to Plan
4. Planning Tasks/Timeline
5. Participation Requirements
6. Public Involvement
7. Data Collection Questionnaires
8. Hazards and Critical Facilities
9. Next Steps

2 Kick-Off Meeting March 8, 2023

2

Why this Plan?

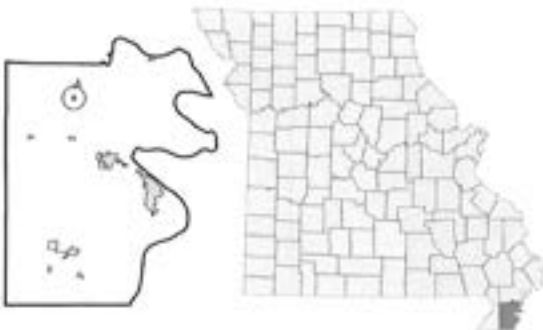
- Reduce long-term risk to people and property
- Be proactive
- Be eligible for FEMA Hazard Mitigation Assistance
- Disaster Mitigation Act of 2000 established requirement for local hazard mitigation



3

What's New This Year?

- **Climate Change**
What Impact on our County?



4

Grants Linked to This Plan

FEMA makes funding available through the Hazard Mitigation Assistance (HMA) grant programs:

- Hazard Mitigation Grant Program
- Building Resilient Infrastructure and Communities Program (BRIC)
- Flood Mitigation Assistance (FMA) Program

Q: How are you eligible?

A: Being part of an approved Hazard Mitigation Plan!

5

5

Tasks/Timeline

March

- Kick-Off Meeting/Finalize committee
- Distribute data questionnaires, public surveys

April

- Meeting #2

May

- Meeting #3

July

- Meet with commission re public comments
- Initiate resolutions

August

- Finalize resolutions
- Submit 1st Draft to SEMA/FEMA by 9/23

6

“

What is required of my Organization?

What is my role as a Committee Member?

7

Public Involvement

- Public Surveys
- Public Comment
- BRPC Website



8

Data Collection Questionnaires

Questionnaires for School Districts

- 5-10 pages in length
- Will ask them to be returned within 2 weeks
- Are essential to participation
- Help assess needs and capacity

Questionnaires for Local Governments

- 15-20 pages in length
- Will ask them to be returned within 3 weeks
- Are essential to participation
- Help assess needs and capacity

9

9

Hazards and Critical Facilities – You Tell Us

Most Critical Facilities

- What buildings are most vital to Pemiscot County overall and to local communities?

Disasters – Last 5 Years

- What disasters or hazards have occurred here since 2018?
- Do you see trends?

Hazards Facing Pemiscot Co

- Flooding
- Earthquakes
- Drought, Extreme Heat
- Tornadoes, Severe Storms
- Levee Failure
- Severe Winter Weather, Extreme Cold
- Others?

10

10

Next Steps

Mid-March

Questionnaire
Public Survey

April

Meeting #2

May

Meeting #3

July

Resolutions

Late Fall/Early Winter

Feedback from SEMA/FEMA

11

11



BOOTHEEL
REGIONAL PLANNING
ECONOMIC DEVELOPMENT COMMISSION

Thank you

We appreciate your attendance and participation!

Your actions make Pemiscot County safer.

12

Agenda
Pemiscot County Hazard Mitigation Planning Meeting #2
Pemiscot County Courthouse
4/27/23 - 10 am

1. Introductions
2. Purpose of Meeting/Review Participation Requirements
 - a. Attendance at 2 of 3 Planning Meetings
 - b. Adoption of resolution
 - c. Completion and submission of Data Collection Questionnaire
3. Jurisdiction Status as of 4/21/23
 - a. Schools that returned Questionnaires: South Pemiscot R-5, Pemiscot Special School District, Pemiscot R-3 and Caruthersville. All others are still needed.
 - b. All jurisdictions and the county still need to return their Questionnaires except Caruthersville and Hayti Heights. They get a gold star!
4. Overview of FEMA Hazard Mitigation Training – Christine Young
5. What is Mitigation?
6. Review Previous Goals – update?

Previous Goals for Pemiscot County in 2019 were:

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

7. Recent Disasters that have Impacted Pemiscot County:

Agricultural

2019 – Excessive Rainfall, Flooding

2022 – Drought Fast-Track

FEMA

2019 – Severe Storms, Tornadoes, Straight Line Winds, Flooding

2020 – Severe Storms, Tornadoes, Straight Line Winds, Flooding

2021 – Tornadoes, Severe Storms

8. Review Public Survey Results (below)
9. Discuss Meeting #3 Date and Next Steps

Public Survey Response as of 4/25/23

Number of Responses: 29

Q1 From:

- City of Bragg City - 1
- City of Caruthersville - 5
- City of Cooter - 1
- City of Hayti - 1
- City of Hayti Heights - 0
- City of Holland - 1
- City of Homestown - 1
- City of Pascola - 0
- City of Steele - 5
- City of Wardell - 2
- Other Unincorporated Parts of Pemiscot County - 12

Q2 Rate the likelihood of each hazard impacting your jurisdiction adversely in any given year either as Very Unlikely, Possible, Likely, Highly Likely

	VERY UNLIKELY-	POSSIBLE-	LIKELY-	HIGHLY LIKELY-	TOTAL-
- Flooding	0.00% 0	41.38% 12	31.03% 9	27.59% 8	29
- Earthquake	0.00% 0	48.28% 14	27.59% 8	24.14% 7	29
- Drought/Extreme Heat	3.45% 1	41.38% 12	31.03% 9	24.14% 7	29
- Tornadoes/Severe Storms	6.90% 2	27.59% 8	27.59% 8	37.93% 11	29
- Sinkholes	13.79% 4	58.62% 17	20.69% 6	6.90% 2	29
- Severe Winter Weather/Ice/Extreme Cold	3.45% 1	27.59% 8	37.93% 11	31.03% 9	29

	VERY UNLIKELY-	POSSIBLE-	LIKELY-	HIGHLY LIKELY-	TOTAL-
- Hazardous Chemical Event	25.00% 7	57.14% 16	14.29% 4	3.57% 1	28

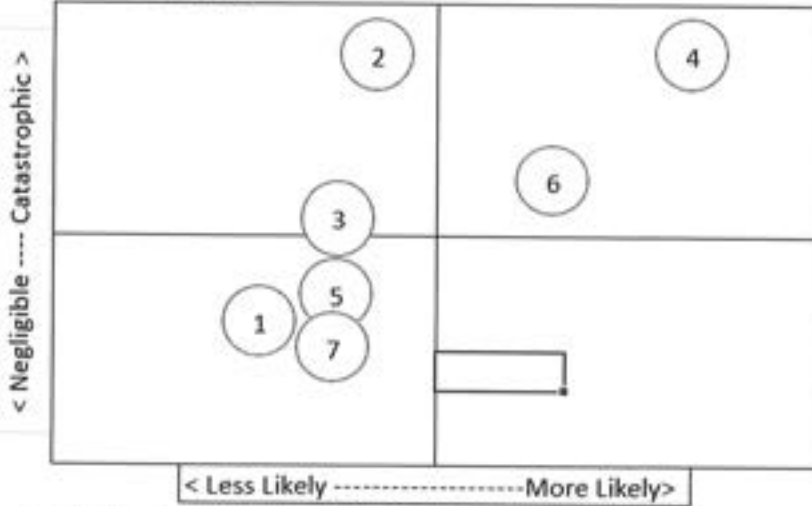
Commentary: Tornadoes/Severe Storms received the most highly likely ratings. Severe Winter Weather/Ice/Extreme Cold received the most likely/highly likely combo ratings. Other than Hazardous Chemical Events, Sinkholes received the most very unlikely ratings and combo very unlikely/possible ratings.

Q3 Please indicate your opinion on the potential magnitude of each hazard's impact, should it occur, on your jurisdiction. Please rate as follows: Negligible, Limited, Critical, Catastrophic.

	NEGLIGIBLE-	LIMITED-	CRITICAL-	CATASTROPHIC-	TOTAL-
- Flooding	0.00% 0	44.83% 13	41.38% 12	13.79% 4	29
- Earthquake	0.00% 0	10.34% 3	17.24% 5	72.41% 21	29
- Drought/Extreme Heat	13.79% 4	37.93% 11	41.38% 12	6.90% 2	29
- Tornadoes/Severe Storms	0.00% 0	6.90% 2	41.38% 12	51.72% 15	29
- Sinkholes	31.03% 9	44.83% 13	17.24% 5	6.90% 2	29
- Severe Winter Weather/Ice/Extreme Cold	6.90% 2	34.48% 10	48.28% 14	10.34% 3	29
- Hazardous Chemical Event	24.14% 7	31.03% 9	20.69% 6	24.14% 7	29

Commentary: Earthquakes received the most catastrophic ratings. Tornadoes/severe storms received the most critical/catastrophic combo ratings. Sinkholes received the most negligible ratings. Sinkholes received the most negligible/limited combo ratings.

Public Perception of Likelihood and Magnitude of Potential Natural Hazards



- 1 Flooding
- 2 Earthquake
- 3 Drought/Extreme Heat
- 4 Tornadoes/Severe Storms
- 5 Sinkholes
- 6 Severe Winter Weather/Extreme Cold
- 7 Hazardous Chemical Spills

Q4 FEMA Hazard Mitigation Grants may be available to your jurisdiction. Which of these are the top three priorities in your opinion for preparedness.

Flood-prone property acquisition & structure demolition/relocation	24.14%	7
-	27.59%	
Flood-prone structure elevation		8
-	3.45%	
Dry floodproofing historical and/or non-residential structures		1
-	51.72%	
Minor localized flood reduction projects like storm water management or localized flood control projects		15
-	34.48%	
Structural retrofitting of existing buildings to add a tornado safe room		10

-	62.07%
New tornado safe room	18
-	24.14%
Retrofitting existing buildings and facilities to resist wind damage	7
-	31.03%
Electrical utilities infrastructure retrofit	9
-	17.24%
Soil erosion stabilization	5
-	3.45%
Wildfire mitigation	1
-	48.28%
Hazard warning systems	14

Q5 Please comment on any issues that the Pemiscot County Hazard Mitigation Committee should consider in developing a strategy to reduce future losses caused by hazard events.

- Make sure to have proper communication among various jurisdictions, emergency responders and other agencies to properly coordinate emergency procedures.
- Portageville city limit has drainage and flood issues that need to be addressed to prevent homes from flooding and streets from flooding.
- Finalize the updated/proposed FEMA flood map revisions.
- More advanced and reliable warning systems.
- More trained employees.
- Tornado sirens that are LOUD and WORK
- Storm shelters hazmat teams.
- Better storm water drainage throughout the city. Seep water is still a problem within the east side of Caruthersville.
- Find a way to get information out to the public other than an email survey.
- A new flood wall is now being.
- Reinforcing infrastructure projects dealing with water, sewer, drainage and streets.
- We are in an earthquake prone area and we should be as ready as possible for such an event.
- Flood plan and tornado sire and shelter.

Agenda
Pemiscot County Hazard Mitigation Planning Meeting #3
Pemiscot County Courthouse
6/1/23 - 10 am

1. Introductions
2. Purpose of Meeting/Review Participation Requirements
 - a. Attendance at 2 of 3 Planning Meetings
 - b. Adoption of resolution in support of the plan
 - c. Completion and submission of Data Collection Questionnaire, Staplee Worksheets and Action Plan Updates
3. Jurisdiction Status Review – see below
4. Vulnerable Population Discussion – Christine Young
5. Final Hazard List to Include in Report – see below
6. Staplee Sheets/Action Plans – complete today or return by 6/8
7. Discussion of Next Steps

Jurisdiction Status as of 5/26/23

<i>Jurisdiction</i>	<i>Meeting 1</i>	<i>Meeting 2</i>	<i>Meeting 3</i>	<i>Questionnaire</i>	<i>Resolution</i>
Pemiscot County	X	X			
City of Bragg City					
City of Caruthersville	X	X		X	
City of Cooter					
City of Hayti	X				
City of Hayti Heights	X	X		X	
City of Holland	X				
City of Homestown	X	X			
City of Pascola					
City of Steele					
City of Wardell	X				
Caruthersville CPS-18	X	X		X	X
Cooter R-IV					
Delta C-7					
Hayti R-II	X	X			
North Pemiscot R1					
Pemiscot Co Special School District	X			X	
Pemiscot Co R3	X	X		X	X
South Pemiscot R-5	X	X		X	X

Final Hazards List Discussion

Hazards included in the 2018/2019 Pemiscot County Hazard Mitigation Plan:

- ✓ Drought
- ✓ Earthquake
- ✓ Flooding (riverine and flash)
- ✓ Heatwave
- ✓ Levee Failure
- ✓ Severe Winter Weather (snow, ice, extreme cold)
- ✓ Thunderstorm/High Winds/Hail/Lightning
- ✓ Tornado

Hazards included in the most current Missouri Hazard Mitigation Plan (not including those caused by humans or technology):

- ✓ Dam Failure
- ✓ Drought
- ✓ Earthquake
- ✓ Extreme Temperatures
- ✓ Flooding (riverine and flash)
- ✓ Levee Failure
- ✓ Severe Thunderstorms
- ✓ Severe Winter Weather
- ✓ Sinkholes
- ✓ Tornado
- ✓ Wildfire

Agenda

Pemiscot County Special Meeting

Via WebEx

9/12/23 - 1 pm

1. Introductions
2. Purpose of Meeting – Why Were You Invited?
3. Overview of Hazard Mitigation Planning
4. Discuss Online Draft Hazard Mitigation Plan
5. Questions for Group Discussion:
 - a. What do you believe are the natural hazard most likely to occur in Pemiscot County?
 - b. What hazards do you believe will have the most potential magnitude on your organization or jurisdiction?
 - c. What do you see as the top priorities in terms of hazard mitigation grant funding? What needs do you think are most urgent?
 - d. How safe do you feel from a natural hazard in this county?
6. Final comments, use of feedback.

Meeting Attendance Record

Date: March 8, 2023

Meeting: Kickoff Pemiscot County Hazard Mitigation Planning
Pemiscot County Courthouse, 2nd Floor Courtroom, Caruthersville, MO

Time: 10:00 AM

Name	Representing	Mailing Address	Business Phone / Cell Phone / Preferred Email
Christine Young	BRPC		573-614-5178 clegrand@bootrpe.com
Christy LeGrand	BRPC		573-614-5178
Jack Johnson	Hayti R-2	500 N. 4th Hayti Mo 63851	573-359-6500
Frank Rose	Hayti City Hall	hayticode@gmail.com	573-359-4173 573-359-0340 EXT 5
LERO Pickens	Hayti R-2	500 N 4th Hayti MO 63851 pickings@hof.k12.mo.us	573-359-6500
Sue Grantham	City of Caruthersville	300 W. 3 rd Caruthersville, Mo.	573-332-2142
Charlie Jones	City of Caruthersville	Charlie Jones 42@hotmail.com	573-359-5042
Glen Carter	South Annist R-5	scarter@southpemiscot.com	573-695-3342

Meeting Attendance Record

Date: March 8, 2023

Meeting: Kickoff Pemiscot County Hazard Mitigation Planning
 Pemiscot County Courthouse, 2nd Floor Courtroom, Caruthersville, MO

Time: 10:00 AM

Name	Representing	Mailing Address	Business Phone / Cell Phone / Preferred Email
Doug White	Pemiscot County Special School Dist.	1317 W. State Hwy 84 Hrft, MO 63851	573-359-0021 (W) 573-724-7485 (C) dwhite@pscd.k12.mo.us
Joey Watkins	Pemiscot County R3 School	1727 County Hwy 536 Caruthersville, MO 63830	573-333-1854 (W) 573-724-1733 (C) j.watkins@v3.k12.mo.us
Brad Bartling	Caruthersville School Dist	1711 Ward Ave Caruthersville, MO 63830	573-333-6100 573-724-0046 bradling@eps18.org
Jacquelyn Davis	Hatch-Hickert City Hall	PO Box 426 Hatch, Mo	573-359-1608 Hatch.Hickert.CityHall@capital
Wade Cook	Pemiscot County	610 Wagon Ave STE B Caruthersville, MO 63830	573-333-4203 wcook@ptt.net
Ron Joyce	Pemiscot County	609 W. W. Ave. CARUTHERSVILLE, MO 63830	573-333-4203 pemcoclenk@stacyjohn.net
Noble Nelson	Pemiscot	223 CR 41'S Bragg, CITY, MO	nnelson997@gmail.com

Meeting Attendance Record

Date: March 8, 2023

Meeting: Kickoff Pemiscot County Hazard Mitigation Planning
 Pemiscot County Courthouse, 2nd Floor Courtroom, Caruthersville, MO

Time: 10:00 AM

Name	Representing	Mailing Address	Business Phone / Cell Phone / Preferred Email
Beverly Culmore	City of Caruthersville	200 W 3rd Caruthersville 63850	573 724 6715 inspector@caruthersville.com
Les Myrick	City of Holland	P.O. Box 83 Holland MO 63853	870-824-8670 les.myrick@yahoo.com
John Ferguson II	Pemiscot Post	2353 N St. Hwy D Hayti 63851	john@pemiscotpost.com
Tahella Norton	City of Caruthersville	200 W. 3rd St Caruthersville MO	573-333-2442
Jessi Cagle	Pemiscot County	PO Box 1031 Caruthersville MO	573-553-4101 jessicagle@pemiscot.com

Meeting Attendance Record

Date: April 27, 2023

Meeting: Pemiscot County Hazard Mitigation Planning

Time: 10:00 AM

Location: Pemiscot County Courthouse, Caruthersville, MO

Name	Representing	Mailing Address	Business Phone / Cell Phone / Preferred Email
Christy LeGrand	BRPC		
Christine Young	BRPC		
Aun Shanthan	City of Caruthersville		
Stephanie McGraw	Caruthersville Public Schools	1705 Ward Avenue Caruthersville, Mo. 63830	573-283-6100 smcgrawecps18.org
Sgt. Cayle	Pemiscot County		
Charlie Jones	City of Caruthersville		
Dagha Meredith	Pemiscot County	2703 S. Ward Caruthersville, MO 63830	573-259-4186

Meeting Attendance Record

Date: April 27, 2023

Meeting: Pemiscot County Hazard Mitigation Planning

Time: 10:00 AM

Location: Pemiscot County Courthouse, Caruthersville, MO

Name	Representing	Mailing Address	Business Phone / Cell Phone / Preferred Email
Tatiana Motter	City of Caruthersville	20 W. 3rd St Caruthersville	Clark@Caruthersville.com 573-333-2142
Gloria Carter	South Pemiscot School	611 Brasley Rd. Steady, Mo	573-695-3342
Aechi Johnson	Hayt R-2	500 N 4th Hayt 63877	573-355-6500
Shaun Shavers	Homeowner	100 N. Roosevelt St	573 428 3769
Pam Bruce	PEMISCOT CO.	610 WARD AVE., CARUTHERSVILLE, MO	573-333-4203
Gary Witherin	Pemiscot County R3 School	1727 County Hwy 53C 63830	573 724 1732
Barry Culmer 2	City of Caruthersville	200 W 3rd Caruthersville	573 724 6715

Meeting Attendance Record

Date: April 27, 2023 Meeting: Pemiscot County Hazard Mitigation Planning Time: 10:00 AM
Location: Pemiscot County Courthouse, Caruthersville, MO

Name	Representing	Mailing Address	Business Phone / Cell Phone / Preferred Email
Saeguelyn Davis	Doris Heights		
Jim Grebing	BRPC		

Meeting Attendance Record

Date: June 1, 2023

Meeting: Pemiscot County Hazard Mitigation Planning Time: 10:00 AM

Location: Pemiscot County Courthouse, Caruthersville MO

Name	Representing	Mailing Address	Business Phone / Cell Phone / Preferred Email
Christine Young	BRPC	105 E. Main St Dexter Mo	573-614-5178 Cyoung@bootrpe.com
Christy LeGrand	BRPC	" "	573-614-5178 clegrand@bootrpe.com
Mark Cutler	Pemiscot County		573-757-8854
Suzie Meert	Pemiscot County		573-359-4186
Charlie Jones	City of Caruthersville,		
Brad Berling	Caruthersville Schools	1711 Ward Ave. Caruthersville MO 63830	573-353-6100 berling@cps18.org
Ann Dyack	City of Caruthersville		

Meeting Attendance Record

Date: June 1, 2023

Meeting: Pemiscot County Hazard Mitigation Planning Time: 10:00 AM

Location: Pemiscot County Courthouse, Caruthersville MO

Name	Representing	Mailing Address	Business Phone / Cell Phone / Preferred Email
Catherine Davis	Nash Heights		
Pam Freese	Pemiscot County		
Betsy Gilmore	City of Caruthersville		
Tara Cagle	Pemiscot County		

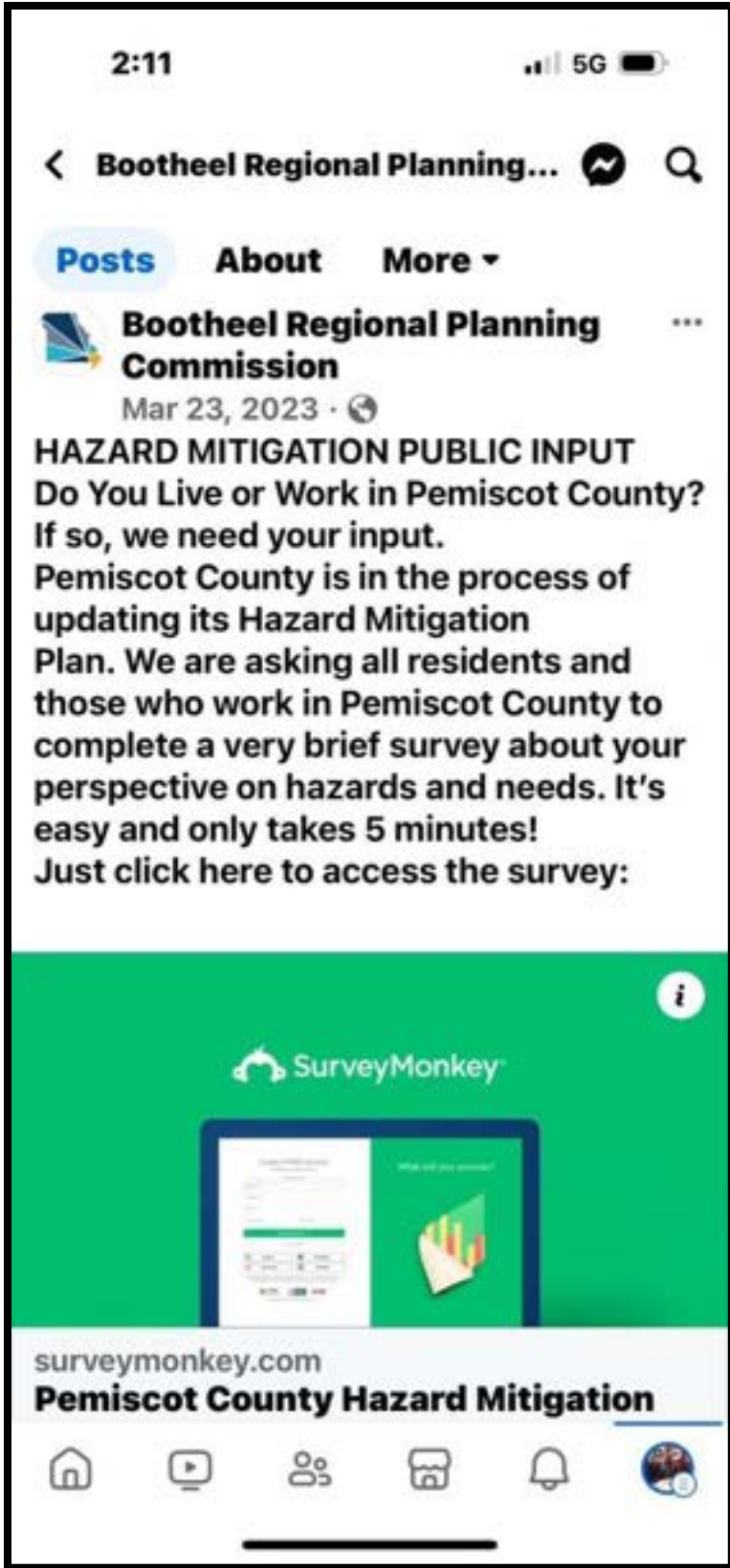
Special Meeting Hosted 9/12/23 – Pemiscot County

The following responses to this meeting have been received:

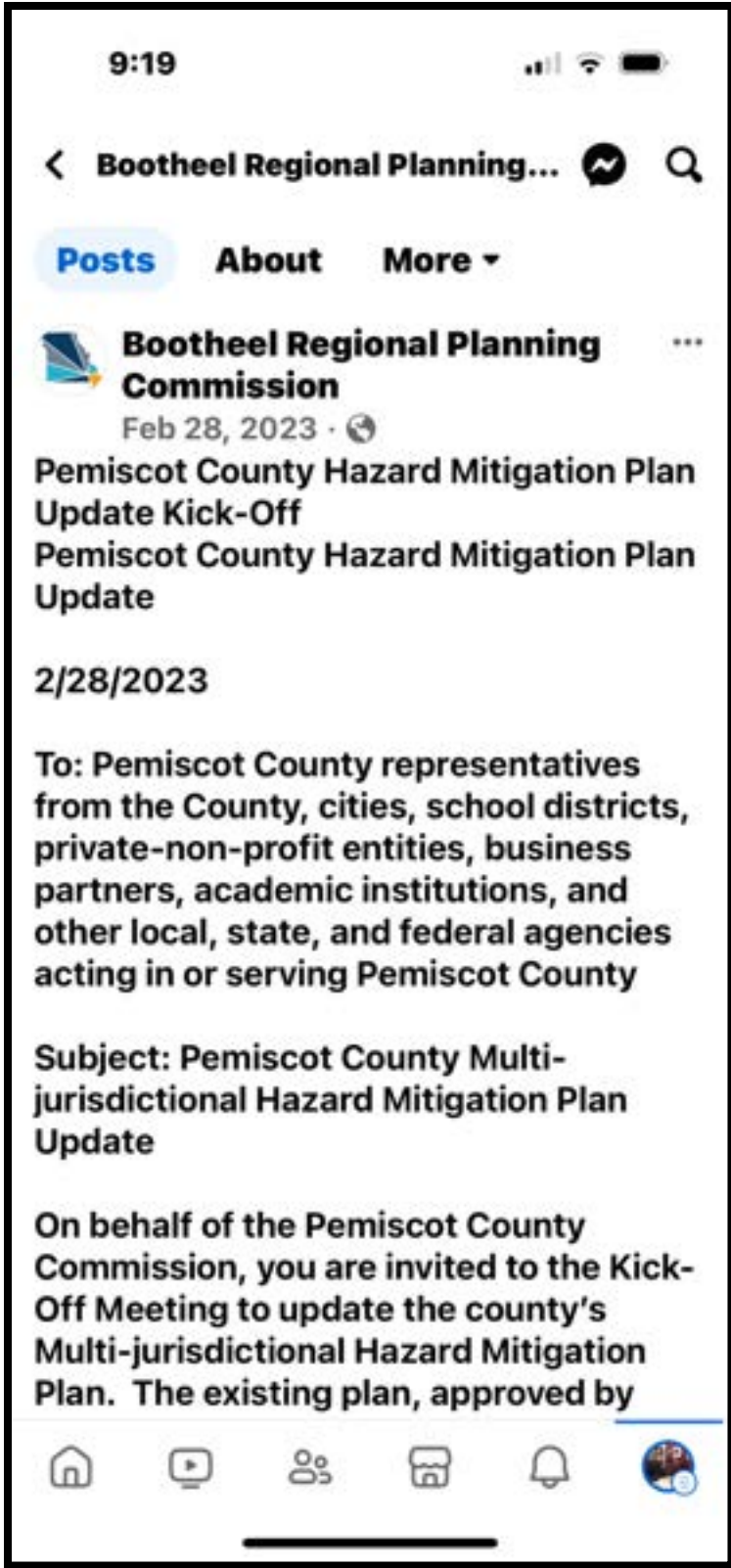
<input checked="" type="checkbox"/>	Name	Attendance	Response
<input checked="" type="checkbox"/>	Christy Legrand	Meeting Organizer	None
<input checked="" type="checkbox"/>	sarvtherovillechamber@gmail	Required Attendee	None
<input checked="" type="checkbox"/>	lakeco_ems@att.net	Required Attendee	None
<input checked="" type="checkbox"/>	fred@pugh@bpsnetworks.co	Required Attendee	None
<input checked="" type="checkbox"/>	Childers, Amber <achilders@	Required Attendee	Accepted
<input checked="" type="checkbox"/>	jeremy.gray@sema.dps.mo.g	Required Attendee	Accepted
<input checked="" type="checkbox"/>	jacob@pdec.coop	Required Attendee	Accepted
<input checked="" type="checkbox"/>	Bone, Lesley <Lesley.Bone@s	Required Attendee	Accepted
<input checked="" type="checkbox"/>	administrator@psdc1.com	Required Attendee	None
<input checked="" type="checkbox"/>	dfulhart@yahoo.com	Required Attendee	None
<input checked="" type="checkbox"/>	Jim Grebing	Required Attendee	None
<input checked="" type="checkbox"/>	Christine Young	Optional Attendee	Accepted



Promotion of the Public Input on the Bootheel Regional Planning Commission website.



Promotion of Public Input on the Bootheel Regional Planning Commission Facebook Page.



Facebook Post inviting public to attend the Kick-Off Meeting for Hazard Mitigation Planning in Pemiscot County, continuation below.



Facebook Post inviting public to attend the Kick-Off Meeting for Hazard Mitigation Planning in Pemiscot County, part 2.

APPENDIX C

THE CITY OF CARUTHERSVILLE, MO

RESOLUTION NO. 2023-03

A RESOLUTION OF THE CITY OF CARUTHERSVILLE ADOPTING A HAZARD MITIGATION PLAN 2023

WHEREAS the City of Caruthersville recognizes the threat that natural hazards pose to people and property within the City of Caruthersville; and

WHEREAS the City of Caruthersville has prepared a multi-hazard mitigation plan, hereby known as Hazard Mitigation Plan 2023 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 The Hazard Mitigation Plan 2023 identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the City of Caruthersville the impacts of future hazards and disasters; and

WHEREAS adoption by the City of Caruthersville demonstrates its commitment to hazard mitigation and achieving the goals outlined in The Hazard Mitigation Plan 2023

NOW THEREFORE, BE IT RESOLVED BY THE CITY OF CARUTHERSVILLE, MO. THAT:

Section 1. In accordance with (local rule for adopting resolutions), the City of Caruthersville adopts the Hazard Mitigation Plan 2023. While content related to the City of Caruthersville may require revisions to meet the plan approval requirements, changes occurring after adoption will not require the City of Caruthersville 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 8 in favor and 0 against, and 0 abstaining, this 5 day of June, 2023.

By: City Council (print name)

ATTEST: By: Takella Motton (print name)

APPROVED AS TO FORM: By: Sue Grantham (print name)

CITY OF HAYTI, MISSOURI

RESOLUTION NO. 2023-01

A RESOLUTION OF THE CITY OF HAYTI, MISSOURI UPDATING THE MULTI-HAZARD MITIGATION PLAN FOR THE CITY OF HAYTI, MISSOURI

WHEREAS, the Board of Aldermen recognizes the threat that natural hazards pose to people and property within the city of Hayti; and

WHEREAS, the City of Hayti has created a working draft of a multi-hazard mitigation plan, which shall be known as The City of Hayti Multi-Hazard Mitigation Plan which is made 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, The City of Hayti Multi-Hazard Mitigation Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the city of Hayti; and

WHEREAS, the Board of Aldermen of the City of Hayti wishes to demonstrate its commitment to hazard mitigation and achieving the goals outlined in The City of Hayti Multi-Hazard Mitigation Plan;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF HAYTI, MISSOURI, THAT:

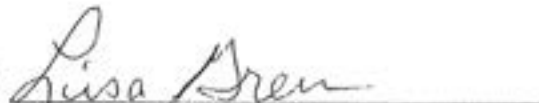
Section 1. The Board of Aldermen of the City of Hayti adopts The City of Hayti Multi-Hazard Mitigation Plan dated as of the 14th day of August, 2023. While content related to the City of Hayti may require revisions to meet the plan approval requirements, changes occurring after adoption will not require the City of Hayti 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 3 in favor and 0 against, and 0 abstaining, this 14th day of August, 2023.



APPROVED AS TO FORM:


Lawrence G. Dorroh, City Attorney


Lisa Green, Mayor
ATTEST:


Karla J. Laws, City Clerk

CITY OF HAYTI HEIGHTS

RESOLUTION NO. 0520236

A RESOLUTION OF CITY OF HAYTI HEIGHTS ADOPTING the City of Hayti Heights Floodplain Management Ordinance

WHEREAS City of Hayti Heights recognizes the treat that natural hazards pose to people and property within City of Hayti Heights; and

Whereas the City of Hayti Heights has prepared a multi-hazard mitigation plan, hereby known as City of Hayti Heights June 6, 2023 in accordance with federal laws, including the **Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the Nation Flood Insurance Act of 1968, as amended; and the National Dam Safety Program Act, as amended; and**

WHEREAS City of Hayti Heights 6 June 6, 2023 identifies mitigation goals and action to reduce or eliminate long-term risk to people and property in City of Hayti Heights from the impacts of future hazards and disasters; and

WHEREAS adoption by the City of Hayti Heights demonstrates its commitment to hazard mitigation and achieving the goals outlined in the City of Hayti Heights June 6, 2023.

NOW THEREFORE, BE IT RESOLVED BY THE CITY OF HAYTI HEIGHTS, MISSOURI THAT:

Section 1. In accordance City of Hayti Heights and local governing body adopts the City of Hayti Heights

FLOODPLAIN MANAGEMENT ORDINANCE 6 JUNE 2023. While content related to City of Hayti Heights may require revisions to meet the plan approval requirements, changes occurring after adoption will not require City of Hayti Heights 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 4 in favor and 0 against, and _____ abstaining this

Day of June 6, 2023

BY: Board & Mayor

ATTEST: BY _____

APPROVED AS TO FORM: BY Pat Roberson

RESOLUTION NO. 103

A RESOLUTION OF THE PEMISCOT COUNTY COMMISSION ADOPTING THE 2023 PEMISCOT COUNTY HAZARD MITIGATION PLAN.

WHEREAS the Pemiscot County Commission recognizes the threat that natural hazards pose to people and property within Pemiscot County; and

WHEREAS the Pemiscot County Commission has prepared a multi-hazard mitigation plan, hereby known as the 2023 Pemiscot County Hazard 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

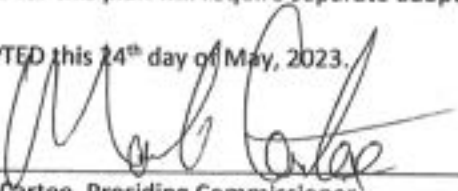
WHEREAS the 2023 Pemiscot County Hazard Mitigation Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Pemiscot County from the impacts of future hazards and disasters; and

WHEREAS adoption by the Pemiscot County Commission demonstrates its commitment to hazard mitigation and achieving the goals outlined in the 2023 Pemiscot County Hazard Mitigation Plan.

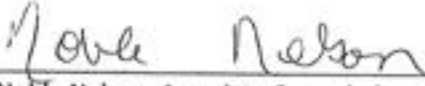
NOW THEREFORE, BE IT RESOLVED BY PEMISCOT COUNTY, MISSOURI, THAT:

In accordance with the Pemiscot County Commission policies, the Pemiscot County Commission adopts the 2023 Pemiscot County Hazard Mitigation Plan. While content related to Pemiscot County may require revisions to meet the plan approval requirements, changes occurring after adoption will not require the Pemiscot County Commission 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 this 14th day of May, 2023.



Mark Cartee, Presiding Commissioner




Noble Nelson, Associate Commissioner District 1



Baughn Merideth, Associate Commissioner District 2

ATTEST:



Pam Treece, County Clerk

FEMA Mitigation Plan Adoption Resolution

CARUTHERSVILLE SCHOOL DISTRICT, MISSOURI

A RESOLUTION OF CARUTHERSVILLE SCHOOL DISTRICT ADOPTING THE FEMA MITIGATION PLAN, MAY 10, 2023

WHEREAS the (CARUTHERSVILLE SCHOOL DISTRICT) recognizes the threat and natural hazards pose to people and property within (CARUTHERSVILLE SCHOOL DISTRICT); and

WHEREAS the (CARUTHERSVILLE SCHOOL DISTRICT) has prepared a multi-hazard mitigation plan, hereby known as FEMA MITIGATION PLAN, MAY 10, 2023 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 FEMA MITIGATION PLAN, MAY 10, 2023 identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in (CARUTHERSVILLE SCHOOL DISTRICT) from the impacts of future hazards and disasters; and

WHEREAS adoption by the (CARUTHERSVILLE SCHOOL DISTRICT) demonstrates its commitment to hazard mitigation and achieving the goals outlined in the FEMA MITIGATION PLAN, MAY 10, 2023.

NOW THEREFORE, BE IT RESOLVED BY THE (CARUTHERSVILLE SCHOOL DISTRICT), (MISSOURI), THAT:

Section 1. In accordance with Board Policy BBA, the (CARUTHERSVILLE SCHOOL DISTRICT) adopts the FEMA MITIGATION PLAN, MAY 10, 2023. While content related to (CARUTHERSVILLE SCHOOL DISTRICT) may require revisions to meet the plan of approval requirements, changes occurring after adoption will not require (CARUTHERSVILLE 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 ___ 10 ___ day of ___ May ___, 2023.

By: Jimmy Lyas (print name)

ATTEST: By: Rita Jones (print name)

APPROVED AS TO FORM: By: Jimmy Lyas (print name)

COOTER R-IV SCHOOL DISTRICT, MISSOURI

RESOLUTION NO. 1

A RESOLUTION OF COOTER R-IV SCHOOL DISTRICT ADOPTING THE HAZARD MITIGATION PLAN

WHEREAS the Cooter R-IV School District School Board recognizes the threat that natural hazards pose to people and property within Cooter R-IV School District; and

WHEREAS the Cooter R-IV School District has prepared a multi-hazard mitigation plan, hereby known as Hazard 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 Hazard Mitigation Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Cooter R-IV School District from the impacts of future hazards and disasters; and

WHEREAS adoption by the Cooter R-IV School District School Board demonstrates its commitment to hazard mitigation and achieving the goals outlined in the Hazard Mitigation Plan.

NOW THEREFORE, BE IT RESOLVED BY THE COOTER R-IV SCHOOL DISTRICT, MISSOURI, THAT:

Section 1. The Cooter R-IV School District School Board adopts the Hazard Mitigation. While content related to Cooter R-IV School District may require revisions to meet the plan approval requirements, changes occurring after adoption will not require Cooter R-IV School District to re-adopt any iterations of the plan. Subsequent plan updates following the approval period for this plan will require separate adoption resolutions.

ADOPTED by a vote of 6 in favor and 0 against, and 1 abstaining, this 18th day of May 2023.

By: James Lynn (Print Name)

ATTEST: By: Brandon Neal (Print Name)

APPROVED AS TO FORM: By: Beverly Battles (Print Name)

Hazardous Mitigation Resolution

Pemiscot County R-3 School District, Missouri

A RESOLUTION OF PEMISCOT COUNTY R-3 SCHOOL DISTRICT ADOPTING HAZARDOUS MITIGATION PLAN ON MAY 9, 2023

WHEREAS the Pemiscot County R-3 School Board recognizes the threat that natural hazards pose to people and property within Pemiscot County R-3 School District; and

WHEREAS the Pemiscot County R-3 School District has prepared a multi-hazard mitigation plan, hereby known as Pemiscot County R-3 School Hazardous Mitigation Plan, May 2023 in accordance with federal laws, including 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 Act, as amended; and

WHEREAS Pemiscot County R-3 School Hazardous Mitigation Plan, May 2023 identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Pemiscot County R-3 School District from the impacts of future hazards and disasters; and

WHEREAS adopting by the Pemiscot County R-3 School Board demonstrates its commitment to hazard mitigation and achieving the goals outlined in the Pemiscot County R-3 Hazardous Mitigation Plan.

NOW THEREFORE, BE IT RESOLVED BY THE PEMISCOT COUNTY R-3 SCHOOL DISTRICT, MISSOURI, THAT:

Section 1. In accordance with Pemiscot County R-3 School District, the School Board adopts the Pemiscot County R-3 Hazardous Mitigation Plan. While contents related to Pemiscot County R-3 may require revisions to meet the plan approval requirements, changes occurring after adoption will not require the School Board 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 7 in favor and 0 against, and 0 abstaining, this 9th day of May, 2023.

By: Bobby S. Garkumel (print name)

ATTEST: By: Ronda Gilmore (print name)

APPROVED AS TO FORM: By: Kim Sullivan (print name)

South Pemiscot R-V School District

South Pemiscot R- V School District Steele, Mo 63877

Resolution No. 1

A resolution of South Pemiscot School Board adopting the Mitigation Plan for Pemiscot County, Missouri on May, 11th, 2023.

WHEREAS the South Pemiscot R-V School Board recognizes the threat that natural hazards pose to people and property within South Pemiscot School District.

WHEREAS, the South Pemiscot R-V School District has prepared multi- hazard mitigation, hereby known as the Pemiscot County Hazard Plan on May 11th, 2023 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 the Pemiscot County Hazard Mitigation Plan adopted on May 11th, 2023 identifies mitigation goals and actions to reduce or eliminate long term risk to people and property in South Pemiscot R-V School District from the impacts of future hazards and disasters; and

WHEREAS adoption by the South Pemiscot R-V School Board demonstrates its commitment to hazard mitigation and achieving the goals outlined in the Pemiscot County Hazard Mitigation Plan on Thursday, May 11th 2023.

NOW THEREFORE, BE IT RESOLVED BY THE SOUTH PEMISCOT SCHOOL BOARD, IN STEELE, MO, THAT

Section 1. In accordance with local rule for adopting resolutions, the South Pemiscot School Board adopts the Pemiscot County Hazard Plan on May 11th, 2023. While content related to the South Pemiscot R-V School District may need revisions to meet the plan approval requirements, changes occurring after adoption will not require South Pemiscot R-V 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 6 in favor 0 against, and 0 abstaining, this 11th day of May

May 11th, 2023.

By: David L Greese Print Name

Attest: Allison Graham Print Name

Approved as to form by: CHRIS MORG Print Name

APPENDIX D

Multi-Jurisdictional Hazard Mitigation Plan
Data Collection Questionnaire
For Local Governments

County: PEMISCOT _____

Jurisdiction: CARUTHERSVILLE, MO 63830 _____

Return by: 3/31/23

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not be eligible applicants** for FEMA mitigation funding programs. Please note: School Districts and other Educational Institutions should complete the Data Collection Questionnaire indicated "For School Districts and Educational Institutions".

Prepared by: CHARLIE JONES _____

Phone: 573-359-5042 _____

Email: CHARLIEJONES42@HOTMAIL.COM _____

Date: MARCH 31, 2023 _____

Please return questionnaires by email or fax to:

Name: Christy LeGrand Christine Young

Email: clegrand@bootrpc.com cyoung@bootrpc.com

Fax: 573-614-5182

Section 145.115. Economic Development Tax. [Ord. No. 2018-04, 5-21-2018; Ord. No. 2018-06, 8-20-2018]

There is hereby imposed a sales tax in the amount of one-half of one percent (0.5%) on all retail sales made in the City which are subject to taxation under the provisions of Sections 144.010 to 144.525, inclusive, RSMo., as amended, for economic development purposes, including, but not limited to, the construction, extension and improvement of the City's combined waterworks and sewerage system. The imposition of said sales tax shall become effective as provided by law upon approval thereof by a majority of the votes cast on the proposition by the qualified voters of the City voting thereon.¹

1. Editor's Note: This tax was approved by the voters at an election held 8-7-2018.

Section 410.010. Creation. [CC 1983 App. A Art. I; Ord. No. 395, 10-19-1970]

This Chapter shall be known, referred to, and cited as "*The Land Subdivision Chapter of Caruthersville, Missouri.*" This Chapter is to provide for the coordination of streets within subdivisions with other existing or planned streets or with other features of the Comprehensive Plan of Caruthersville, Missouri; for minimum requirements of the preliminary and final plats; for minimum standards of physical improvements in new subdivisions for adequate open spaces for traffic, utilities, fire fighting apparatus, recreation, light and air; and for a distribution of population and traffic for the health, safety, and general welfare of the community.

CAPABILITY ASSESSMENT & INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan. Although some of this information may have been captured in your previous mitigation plan, it is important to ensure this information is current in the plan update

Please indicate which of the following your jurisdiction has in place. For elements that do not pertain to your type of public entity, please indicate with "N/A". If applicable, please provide a completion date for the element. If your jurisdiction does not have a particular element, and a higher level of government has the authority pertaining to your jurisdiction, please indicate this in the comments column. If your jurisdiction has any of the **underlined and bolded** elements, please provide a copy of the document to the contact listed on the front and indicate method in the comments column (i.e. available on the web, will email or mail).

Element	Yes, No, N/A	Comments and/or Weblink
Planning Capabilities		
<u>Comprehensive Plan</u>	Date: Y	WEB
Builder's Plan	Date: NA	
Capital Improvement Plan	Date: Y 5/15/89	
City Emergency Operations Plan	Date: Y 7/2022	
County Emergency Operations Plan	Date: Y	
Local Recovery Plan	Date: Y 7/2022	
County Recovery Plan	Date: Y	
City Mitigation Plan	Date:	
County Mitigation Plan	Date: Y	
Debris Management Plan	Date: Y	CODE CH-220.010
<u>Economic Development Plan</u>	Date: Y	WEB SECTION 145.115
Transportation Plan	Date: Y 4/3/17	
Land-use Plan	Date: Y	WEB TITLE IV CH 400, 405, 410
Flood Mitigation Assistance (FMA) Plan	Date: Y	CH-415
<u>Watershed Plan</u>	Date: N	
Firewise or other fire mitigation plan	Date: N	
Critical Facilities Plan (Mitigation/Response/Recovery)	Date: Y	WEB

Element	Yes, No, N/A	Comments and/or Weblink
Policies/Ordinance		
Zoning Ordinance	Y	WEB
Building Code	Version: 2018 IBC	
Floodplain Ordinance	Date: 2/1/88	
Subdivision Ordinance	Y	
Tree Trimming Ordinance	N	
Nuisance Ordinance	Y	WEB
Stormwater Ordinance	NA	
Drainage Ordinance	NA	
Site Plan Review Requirements	Y	WEB
Historic Preservation Ordinance	Y	WEB
Landscape Ordinance	N	
Program		
Zoning/Land Use Restrictions	Y	WEB
Codes Building Site/Design	N	
Hazard Awareness Program	N	
National Flood Insurance Program (NFIP)		
NFIP Community Rating System (CRS) program		If so, what is your current level rating?
National Weather Service (NWS) Storm Ready Certification		
Firewise Community Certification	N	
Building Code Effectiveness Grading (BCEGs)	N	
ISO Fire Rating	Rating: 4	
Economic Development Program	Y	
Land Use Program	N	
Public Education/Awareness	N	
Property Acquisition	Y	
Planning/Zoning Boards	Y	
Stream Maintenance Program	N	
Tree Trimming Program	N	
Engineering Studies for Streams (Local/County/Regional)		

Element	Yes, No, N/A	Comments and/or Weblink
Mutual Aid Agreements	N	
Studies/Reports/Maps		
<u>Hazard Analysis/Risk Assessment (City)</u>	Y	
<u>Hazard Analysis/Risk Assessment (County)</u>	NA	
Evacuation Route Map	Y	
<u>Critical Facilities Inventory</u>	N	
<u>Vulnerable Population Inventory</u>	N	
<u>Land Use Map</u>	Y	
Staff/Department		Full Time or Part Time?
Building Code Official	Y	F
Building Inspector	Y	F
Mapping Specialist (GIS)	Y	
Engineer	Y	P
Development Planner	N	
Public Works Official	Y	F
Emergency Management Coordinator	Y	P
NFIP Floodplain Administrator	Y	F
Emergency Response Team	N	
Hazardous Materials Expert	N	
Local Emergency Planning Committee	Y	F
County Emergency Management Commission	Y	P
Sanitation Department	Y	F
Transportation Department	N	
Economic Development Department	N	
Housing Department	Y	F
Historic Preservation	Y	P
Non-Governmental Organizations (NGOs)	Is there a local chapter? Yes or No	
American Red Cross	N	
Salvation Army	Y	P
Veterans Groups	Y	P

Element	Yes, No, N/A	Comments and/or Weblink
Local Environmental Organization	N	
Homeowner Associations	N	
Neighborhood Associations	N	
Chamber of Commerce	Y	P
Community Organizations (Lions, Kiwanis, etc.)	Y	P
Financial Resources		Is your jurisdiction able to? Yes or No
Apply for Community Development Block Grants		Y
Fund projects thru Capital Improvements funding		Y
Authority to levy taxes for specific purposes		Y
Fees for water, sewer, gas, or electric services		Y
Impact fees for new development		N
Incur debt through general obligation bonds		Y
Incur debt through special tax bonds		NA
Incur debt through private activities		N
Withhold spending in hazard prone areas		N

For plan updates, the plan maintenance process outlined in your previous plan requires all participating jurisdictions to incorporate the requirements of the mitigation plan into other planning mechanisms, when appropriate. A key element of effective implementation of mitigation is for the mitigation plan to be incorporated in existing authorities, policies, programs, and resources. Next to each applicable planning mechanism, indicate how your jurisdiction incorporated the previous mitigation plan. If no incorporation has occurred, please explain, including background information detailing any challenges preventing incorporation.

Planning Capabilities	Method of Incorporation Since Previous Plan or Challenges Preventing Incorporation
Comprehensive Plan	Y
Builder's Plan	N
Capital Improvement Plan	PENDING
Local Recovery Plan	Y
County Recovery Plan	
Debris Management Plan	
Economic Development Plan	Y
Transportation Plan	N
Land-use Plan	Y
Watershed Plan	N
Firewise or other Fire Mitigation Plan such as Community Wildfire Protection Plan	N

Additional Questions

1. How is your government structure organized? (Commission, Mayor/City Council, how many members)

MAYOR, COUNCIL, CITY ATTORNEY, CITY CLERK 11 MEMBERS

2. List any past or ongoing public education or information programs, such as for responsible water use, fire safety, household preparedness, or environmental education.

FIRE PREVENTION IN OCTOBER & STORMS & SKY AWARENESS

3. List any other past or ongoing projects or programs designed to reduce disaster losses, these may include projects to protect critical facilities. Be sure to include pending or approved projects submitted for FEMA mitigation grants.

HIGH SCHOOL, MIDDLE SCHOOL, AND ELEMENTARY

4. Describe any hazard-related concerns or issues regarding the vulnerability of special needs populations, such as the elderly, disabled, low-income, or migrant farm workers.

PUBLIC HOUSING UNITS

5. How many outdoor warning sirens are in your community? 4

How are they activated (indicate responsible department/personnel)?

FROM FIRE DEPARTMENT ON DUTY/ENGINEER

6. Does your community utilize any other warning systems such as Cable Override, Reverse 911, etc? If so, please describe.

NIXEL

7. Does your community have designated public tornado shelters/saferooms? If so, are they constructed in accordance with FEMA standards?

Y

Please provide address locations:

1708 WARD, 16TH & WARD, 900 WASHINGTON

8. List residential, commercial and industrial development in your jurisdiction since last plan update.

9. Describe development trends and expected growth areas. Is any new development expected to occur in the 100-year floodplain? Is any new development expected to occur in any other known hazard areas? If possible, please provide a map indicating potential/planned growth areas.

10. Are any new facilities or infrastructure planned for construction during the next five years? If so, please provide facility name and purpose along with proposed locations, if known.

11. Please list major employers in your jurisdiction with an estimated number of employees.

CASINO

12. Please list Mitigation Planning Committee members who served during the development of the previously approved plan. Was the process set forth for monitoring the implementation of the previously approved mitigation plan adhered to? Did the Committee meet as was specified in the previously approved plan? Why or why not?

CHARLIE JONES

13. Describe your jurisdiction's participation in the NFIP. Include information about how compliance with the NFIP is enforced locally.

VULNERABILITY ASSESSMENT

The purpose of this worksheet is to assess the vulnerable buildings, populations, critical facilities, infrastructure, and other important assets in your community by using the best available data to complete the table. Use the table on the next page to compile a detailed inventory of specific assets at risk including critical facilities and infrastructure; natural, cultural, and historical assets; and economic assets. In the natural hazard column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Natural Hazards	
Flooding (Major & Flash) – RF YES	Drought – D YES
Levee Failure – LF YES	Extreme Temperature – ET YES
Dam Failure – DF NO	Severe Thunderstorm (incl. winds, hail, lightning) – ST YES
Earthquake – EQ YES	Severe Winter Weather (incl. snow, ice, severe cold) – SWW YES
Land Subsidence / Sinkholes – LSS YES	Tornadoes – T YES
Drought – D YES	Wildfire – WF YES

Critical Facilities and Infrastructure

A critical facility may be defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. FEMA's HAZUS-MH loss estimation software uses the following three categories of critical assets. 'Essential facilities' are those that if damaged would have devastating impacts on disaster response and/or recovery. 'High potential loss facilities' are those that would have a high loss or impact on the community. Transportation and lifeline facilities are third category of critical assets; examples are provided below.

Essential Facilities

Hospitals and other medical facilities
 Police stations X
 Fire station X
 Emergency Operations X
 Centers

High Potential Loss Facilities

Power plants
 Dams/levees X
 Military installations
 Hazardous material sites X
 Schools X
 Shelters
 Day care centers X
 Nursing homes X
 Main government buildings X

Transportation and Lifeline

Highways, bridges, and tunnels X
 Railroads and facilities
 Bus facilities
 Airports X
 Water treatment facilities X
 Natural gas facilities and pipelines X
 Oil facilities and pipelines
 Communications facilities X

Economic Assets

Economic assets at risk may include major employers or primary economic sectors, such as agriculture, whose losses or inoperability would have severe impacts on the community and its ability to recover from disaster.

YES

Asset Inventory

Please list critical facilities and other community assets, the square feet, values, and occupancy/capacity. If not applicable, enter "N/A". In the last column, use the codes from the previous page to indicate hazards to which the asset is vulnerable. Add as many rows as needed. If this information is available in GIS format, please provide.

Critical Facilities

Name of Asset	Address	Area (sq.ft.)	Replacement Value (Insured) (\$)	Contents Value (\$)	Occupancy/ Capacity (#)	Natural Hazards
Essential Facilities such as hospitals and other medical facilities, police and fire stations, Emergency Operations Centers	1400 WARD AVE	12,000		\$500,000.00	100	
PUBLIC SAFETY BLDG						
EOC SAME AS ABOVE						

Name of Asset	Address	Area (sq.ft.)	Replacement Value (Insured) (\$)	Contents Value (\$)	Occupancy/ Capacity (#)	Natural Hazards
High Potential Loss Facilities such as power plants, dams/levees, military installations, hazardous materials sites, shelters, day care centers, nursing homes, main government buildings (Do not include schools—they will be reported by the school districts)						
ST FRANCIS LEVEE DIST.						
MFA LIQUID FERTILIZER						
GREEN POINT AG						
SOUTHGATE NURSING FAC.	500 TRUMAN BLVD					
CITY HALL	200 W 3 RD ST					
PEM COURTHOUSE	610 WARD AVE					
POST OFFICE	300 CARLETON					
Transportation and Lifelines such as highways, bridges, and tunnels, railroads and facilities, bus facilities, airports, water treatment facilities, natural gas facilities and pipelines, oil facilities, oil facilities and pipelines, communications facilities						
STATE HWY 84 & RT U						
CVILLE AIRPORT						
WATER PLANT #2						
LIBERTY UTILITIES/GAS						
PEM CO 911 CTR	800 WARD AVE					

*If replacement cost data is not available, use the best available data (assessed valuation or other method for estimating cost) and explain any data deficiencies.

Economic Assets (Major Employers, etc)

Asset	Address	Product/ Service	Value (if known)	Number of Employees	Hazards
CENTURY CASINO	777 W 3 RD ST	GAMING	50 MILLION		

HISTORIC HAZARD EVENTS

Please fill out the sheet on the next page for each significant hazard event that affected **Your Jurisdiction**. **Make as many copies as necessary to record all events** and complete with as much detail as possible. This includes all events associated with the hazards listed below that have caused previous damage in your jurisdiction. It is especially important to capture events that either were not included in the previous Hazard Mitigation Plan or occurred since the plan was completed. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Jurisdiction	CARUTHERSVILLE
Type of event	TORNADO
Nature and magnitude of event	EF-3
Location	WEST TO EAST SIDE ¼ MILE WIDE
Date of event	APRIL 2, 2006
Injuries	64
Deaths	0
Property damage	
Infrastructure damage	\$11,000,000
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	DR1635
Source of information	
Comments	

HISTORIC HAZARD EVENTS (continued)

Please fill out the sheet on the next page for each significant hazard event that affected **Your Jurisdiction**. **Make as many copies as necessary to record all events** and complete with as much detail as possible. This includes all events associated with the hazards listed below that have caused previous damage in your jurisdiction. It is especially important to capture events that either were not included in the previous Hazard Mitigation Plan or occurred since the plan was completed. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Jurisdiction	CARUTHERSVILLE
Type of event	ICE STORM
Nature and magnitude of event	MODERATE
Location	PEMISCOT COUNTY
Date of event	JANUARY 17, 2009
Injuries	0
Deaths	0
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	SCHOOLS CLOSE DUE TO POWER OUTAGES
Other damage	
Insured losses	
Federal/state disaster relief funding	
Source of information	
Comments	

HISTORIC HAZARD EVENTS

Please fill out the sheet on the next page for each significant hazard event that affected **Your Jurisdiction**. **Make as many copies as necessary to record all events** and complete with as much detail as possible. This includes all events associated with the hazards listed below that have caused previous damage in your jurisdiction. It is especially important to capture events that either were not included in the previous Hazard Mitigation Plan or occurred since the plan was completed. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Jurisdiction	CARUTHERSVILLE
Type of event	FLOOD
Nature and magnitude of event	EXTENSIVE
Location	WHOLE CITY
Date of event	3-11-19 THRU 4-28-19 & 4-29-19 THRU 7-5-19
Injuries	0
Deaths	0
Property damage	
Infrastructure damage	\$1,054,340.00
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	HEADWORKS, MANHOLES, SINK HOLES, SEWER, LIFT STATIONS, STORM DRAINS, WATERLINES, FORCEMAINS
Insured losses	
Federal/state disaster relief funding	DR4435 & DR 4451
Source of Information	CITY CLERK
Comments	

ASSESSMENT OF PREVIOUSLY PROPOSED ACTIONS

Jurisdiction: _____

The contractor/plan development facilitator has provided a list of actions proposed in the previously approved plan for each jurisdiction. Use the worksheet below to evaluate whether each action is still current, feasible, desirable, and/or creates benefit that outweighs the cost.

The worksheet should include information on the status of the action and progress made in implementation, if any. This includes:

- For **completed actions** provide a description of the implementation process. This may be a success story you would like to publicize in your community.
- Some of the actions might have been **ongoing** in nature, such public information and education programs. When this is the case, indicate what activity has occurred during the previous five years, and indicate if this program is still viable enough that it should be carried on into the future.
- If **no progress** has been made in the implementation of a given action, discuss why. Note that implementation is not a requirement. However, if no progress has been made, perhaps this is an action that would be appropriate to delete in the updated plan.

During review of the previously approved actions, consider whether any new actions should be proposed. Perhaps damages from a recent hazard event have indicated the need for new approaches to protect property and life. Review the problem statements from the updated plan for ideas. Also review the FEMA publication *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards (January 2013)*.

#	Action	Status			Description of Implementation Activities or Reasons for Lack of Progress	Keep – ✓ Delete – X Modify – M
		Complete	Ongoing	No Progress		

#	Action	Status			Description of Implementation Activities or Reasons for Lack of Progress	Keep - ✓ Delete - X Modify - M
		Complete	Ongoing	No Progress		

Multi-Jurisdictional Hazard Mitigation Plan
Data Collection Questionnaire
For Small Local Governments

County: Pemiscot

Jurisdiction: Hayti

Return by: 8/25/23

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not** be eligible applicants for FEMA mitigation funding programs. Please note: School Districts and other Educational Institutions should complete the Data Collection Questionnaire indicated "For School Districts and Educational Institutions".

Prepared by: Frank Rose

Phone: 573-359-6340 EXT 5

Email: hayticode@gmail.com

Date: 9/13/23

Please return questionnaires by email or fax to:

Name: Christy LeGrand Christine Young

Email: clegrand@bootrpc.com cyoung@bootrpc.com

Fax: 573-614-5182

CAPABILITY ASSESSMENT & INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan. Although some of this information may have been captured in your previous mitigation plan, it is important to ensure this information is current in the plan update

Please indicate which of the following your jurisdiction has in place. For elements that do not pertain to your type of public entity, please indicate with "N/A". If applicable, please provide a completion date for the element. If your jurisdiction does not have a particular element, and a higher level of government has the authority pertaining to your jurisdiction, please indicate this in the comments column. If your jurisdiction has any of the **underlined and bolded** elements, please provide a copy of the document to the contact listed on the front and indicate method in the comments column (i.e. available on the web, will email or mail).

Element	Yes, No, N/A	Comments and/or Weblink
Planning Capabilities		
Comprehensive or Land-Use Plan	N/A	Date:
Capital Improvement Plan	N/A	Date:
Transportation Plan / Highway Department	N/A	Date:
Emergency Operations Plan	YES	Date:
Local Recovery Plan	N/A	Date:
Debris Management Plan	N/A	Date:
Firewise or other fire mitigation plan	N/A	Date:
Economic Development Plan	N/A	Date:
Policies/Ordinance		
Zoning Ordinance	YES	
Building Code	YES	Version: 2015
Floodplain Ordinance	YES	Date:
Drainage/Stormwater Ordinance	YES	
Site Plan Review Requirements	YES	
Historic Preservation Ordinance	N/A	

Element	Yes, No, N/A	Comments and/or Weblink
Program		
National Flood Insurance Program (NFIP)	YES	
NFIP Community Rating System (CRS) program	N/A	If so, what is your current level rating?
National Weather Service (NWS) Storm Ready Certification	N/A	
Firewise Community Certification	N/A	
Building Code Effectiveness Grading (BCEGs)	N/A	
ISO Fire Rating	Rating:N/A	
Public Education or information programs (i.e., responsible water use, fire safety, household preparedness, or environmental education)	N/A	
Mutual Aid Agreements	N/A	
Studies/Reports/Maps		
Critical Facilities Inventory	N/A	
Vulnerable Population Inventory	N/A	
Staff/Department		Full Time or Part Time?
Building Code Official / Building Inspector	YES-FRANK ROSE	FT
Engineer	N/A	
Development Planner	N/A	
NFIP Floodplain Administrator	YES-FRANK ROSE	ADDITIONAL DUTY
Mapping Specialist (GIS)	N/A	
Public Works Official	YES- BEN SWEET & FERNANDO DUNN	2-FT
Emergency Management Coordinator	JESS CAGLE	ACTING EMC
Local Emergency Planning Committee	N/A	
Sanitation Department	REPUBLIC	CONTRACTED
Highway/Transportation Department	N/A	
Economic Development Department	N/A	
Housing Department	N/A	
Historic Preservation	N/A	

Element	Yes, No, N/A	Comments and/or Weblink
Non-Governmental Organizations (NGOs)		
	Is there a local chapter? Yes or No	
American Red Cross	YES	
Salvation Army	YES	
Veterans Groups	YES	
Local Environmental Organization	N/A	
Homeowner Associations	N/A	
Neighborhood Associations	N/A	
Chamber of Commerce	YES	
Community Organizations (Lions, Kiwanis, etc.)	YES	ROTARY
Financial Resources		Is your jurisdiction able to? Yes or No
Apply for Community Development Block Grants		YES
Fund projects thru Capital Improvements funding		YES
Authority to levy taxes for specific purposes		YES
Fees for water, sewer, gas, or electric services		YES
Impact fees for new development		YES
Incur debt through general obligation bonds		YES
Incur debt through special tax bonds		NO
Incur debt through private activities		NO
Withhold spending in hazard prone areas		NO

For plan updates, the plan maintenance process outlined in your previous plan requires all participating jurisdictions to incorporate the requirements of the mitigation plan into other planning mechanisms, when appropriate. A key element of effective implementation of mitigation is for the mitigation plan to be incorporated in existing authorities, policies, programs, and resources. Next to each applicable planning mechanism, indicate how your jurisdiction incorporated the previous mitigation plan. If no incorporation has occurred, please explain, including background information detailing any challenges preventing incorporation.

Planning Capabilities	Method of Incorporation Since Previous Plan or Challenges Preventing Incorporation
Comprehensive or Land-Use Plan	N/A
Capital Improvement Plan	N/A
Transportation Plan / Highway Department	N/A
Emergency Operations Plan	INCORPORATED, SEPTEMBER 2012
Local Recovery Plan	N/A
Debris Management Plan	N/A
Firewise or other fire mitigation plan	N/A
Economic Development Plan	N/A

Additional Questions

1. How is your government structure organized? (Commission, Mayor/City Council, how many members)

MAYOR (1) COUNCIL (4)

2. List any other past or ongoing projects or programs designed to reduce disaster losses, these may include projects to protect critical facilities. Be sure to include pending or approved projects submitted for FEMA mitigation grants.

INSTALLED 3 NEW OUTDOOR WARNING SIRENS IN 2023

3. Describe any hazard-related concerns or issues regarding the vulnerability of special needs populations, such as the elderly, disabled, low-income, or migrant farm workers.

N/A

4. How many outdoor warning sirens are in your community? (5)

How are they activated (indicate responsible department/personnel)?

FIRE DEPARTMENT PERSONNEL

5. Does your community utilize any other warning systems such as Cable Override, Reverse 911, etc? If so, please describe.

NO

6. Does your community have designated public tornado shelters/safe rooms? If so, are they constructed in accordance with FEMA standards?

NO

Please provide address locations:

7. Identify residential, commercial and industrial development in your jurisdiction since last plan update.

GREENLIGHT MARIJUANA DISPENSARY

8. Describe development trends and expected growth areas. Is any new development expected to occur in the 100-year floodplain? Is any new development expected to occur in any other known hazard areas? If possible, please provide a map indicating potential/planned growth areas.

NONE

9. Are any new facilities or infrastructure planned for construction during the next five years? If so, please provide facility name and purpose along with proposed locations, if known.

NONE

10. Please list major employers in your jurisdiction with an estimated number of employees.

PILOT- (34)

11. Please list Mitigation Planning Committee members who served during the development of the previously approved plan. Was the process set forth for monitoring the implementation of the previously approved mitigation plan adhered to? Did the Committee meet as was specified in the previously approved plan? Why or why not?

N/A

12. Describe your jurisdiction's participation in the NFIP. Include information about how compliance with the NFIP is enforced locally.

IF ANY COMMERCIAL, RESIDENTIAL OR INDUSTRY ARE PLANNING TO BUILD IN THE FLOOD ZONE AN ELEVATION CERTIFICATE MUST BE COMPLETED BY THE END OF THE PROJECT.

VULNERABILITY ASSESSMENT

The purpose of this worksheet is to assess the vulnerable buildings, populations, critical facilities, infrastructure, and other important assets in your community by using the best available data to complete the table. Use the table on the next page to compile a detailed inventory of specific assets at risk including critical facilities and infrastructure; natural, cultural, and historical assets; and economic assets. In the natural hazard column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Natural Hazards	
Flooding (Major & Flash) - RF	Drought - D
Levee Failure - LF	Extreme Temperature - ET
Dam Failure - DF	Severe Thunderstorm (incl. winds, hail, lightning) - ST
Earthquake - EQ	Severe Winter Weather (incl. snow, ice, severe cold) - SWW
Land Subsidence / Sinkholes - LSS	Tornadoes - T
Drought - D	Wildfire - WF

Critical Facilities and Infrastructure

A critical facility may be defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. FEMA's HAZUS-MH loss estimation software uses the following three categories of critical assets. 'Essential facilities' are those that if damaged would have devastating impacts on disaster response and/or recovery. 'High potential loss facilities' are those that would have a high loss or impact on the community. Transportation and lifeline facilities are third category of critical assets; examples are provided below.

Essential Facilities

Hospitals and other medical facilities
Police stations
Fire station
Emergency Operations Centers

High Potential Loss Facilities

Power plants
Dams/levees
Military installations
Hazardous material sites
Schools
Shelters
Day care centers
Nursing homes
Main government buildings

Transportation and Lifeline

Highways, bridges, and tunnels
Railroads and facilities
Bus facilities
Airports
Water treatment facilities
Natural gas facilities and pipelines
Oil facilities and pipelines
Communications facilities

Economic Assets

Economic assets at risk may include major employers or primary economic sectors, such as agriculture, whose losses or inoperability would have severe impacts on the community and its ability to recover from disaster.

Name of Asset	Address	Area (sq. ft.)	Replacement Value (Insured) (\$)	Contents Value (\$)	Occupancy/ Capacity (#)	Natural Hazards
High Potential Loss Facilities such as power plants, dams/levees, military installations, hazardous materials sites, shelters, day care centers, nursing homes, main government buildings (Do not include schools—they will be reported by the school districts)	PHASE II ACADEMY LLC 215 E BROADWAY					TORNADO
HATTIE'S CHILD ENRICHMENT DAYCARE LLC	510 SOUTH THIRD					TORNADO
PEMISCOT MEMORIAL HOSPITAL						TORNADO
Transportation and Lifelines such as highways, bridges, and tunnels; railroads and facilities, bus facilities, airports, water treatment facilities, natural gas facilities and pipelines, oil facilities, oil facilities and pipelines, communications facilities	WATER DEPARTMENT PLANT 403 NORTH THIRD					

Name of Asset	Address	Area (sq. ft.)	Replacement Value (Insured) (\$)	Contents Value (\$)	Occupancy/ Capacity (#)	Natural Hazards

*If replacement cost data is not available, use the best available data (assessed valuation or other method for estimating cost) and explain any data deficiencies.

Economic Assets (Major Employers, etc)

Asset	Address	Product/ Service	Value (if known)	Number of Employees	Hazards
PILOT	1701 MO-84	GAS, DIESEL AND FOOD	N/A	34	TORNADO

HISTORIC HAZARD EVENTS

Please fill out the sheet on the next page for each significant hazard event that affected **Your Jurisdiction**. **Make as many copies as necessary to record all events** and complete with as much detail as possible. This includes all events associated with the hazards listed below that have caused previous damage in your jurisdiction. It is especially important to capture events that either were not included in the previous Hazard Mitigation Plan or occurred since the plan was completed. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Jurisdiction	N/A
Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Source of information	
Comments	

HISTORIC HAZARD EVENTS (continued)

Please fill out the sheet on the next page for each significant hazard event that affected **Your Jurisdiction**. **Make as many copies as necessary to record all events** and complete with as much detail as possible. This includes all events associated with the hazards listed below that have caused previous damage in your jurisdiction. It is especially important to capture events that either **were not included** in the previous **Hazard Mitigation Plan** or occurred since the plan was completed. **Attach supporting documentation, photocopies of newspaper articles, or other original sources.**

Jurisdiction	N/A
Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Source of information	

Comments	
-----------------	--

ASSESSMENT OF PREVIOUSLY PROPOSED ACTIONS

Jurisdiction: HAYTI

The contractor/plan development facilitator has provided a list of actions proposed in the previously approved plan for each jurisdiction. Use the worksheet below to evaluate whether each action is still current, feasible, desirable, and/or creates benefit that outweighs the cost.

- The worksheet should include information on the status of the action and progress made in implementation, if any. This includes:
- For **completed actions** provide a description of the implementation process. This may be a success story you would like to publicize in your community.
 - Some of the actions might have been **ongoing** in nature, such public information and education programs. When this is the case, indicate what activity has occurred during the previous five years, and indicate if this program is still viable enough that it should be carried on into the future.
 - If **no progress** has been made in the implementation of a given action, discuss why. Note that implementation is not a requirement. However, if no progress has been made, perhaps this is an action that would be appropriate to delete in the updated plan.

During review of the previously approved actions, consider whether any new actions should be proposed. Perhaps damages from a recent hazard event have indicated the need for new approaches to protect property and life. Review the problem statements from the updated plan for ideas. Also review the FEMA publication *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards (January 2013)*.

#	Action	Status			Description of Implementation Activities or Reasons for Lack of Progress	Keep - <input checked="" type="checkbox"/> Delete - <input type="checkbox"/> Modify - <input type="checkbox"/>
		Complete	Ongoing	No Progress		
1.1	the jurisdiction will establish a policy or ordinance for building recommendations for all future construction projects. the policy will refer to the newest building codes provided by the ICC		<input checked="" type="checkbox"/>		Implemented new building codes-2015	<input checked="" type="checkbox"/>

#	Action	Status			Description of Implementation Activities or Reasons for Lack of Progress	Keep - ✓ Delete - X Modify - M
		Complete	Ongoing	No Progress		
2.1	The jurisdiction will add an ordinance/policy for roadway designs to refer to MoDot Engineering Policy Guide when creating a design for drainage. 748 hydraulics and Drainage is the section of the guide that should be reference..		✓			✓
3.1	The jurisdiction will adopt an ordinance/policy for all new critical facilities be designed/built according to the NEHRP Seismic provisions.		✓			✓

#	Action	Status			Description of Implementation Activities or Reasons for Lack of Progress	Keep - ✓ Delete - X Modify - M
		Complete	Ongoing	No Progress		

Multi-Jurisdictional Hazard Mitigation Plan
Data Collection Questionnaire
For Small Local Governments

County: Pemiscot
Jurisdiction: Hayti Heights City Hall
Return by: 3/7/23

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not** be eligible applicants for FEMA mitigation funding programs. Please note: School Districts and other Educational Institutions should complete the Data Collection Questionnaire indicated "For School Districts and Educational Institutions".

Prepared by: Jacquelyn S. Davis
Phone: (573) 359-1608
Email: haytiheightsadminln@yahoo.com
Date: 3/30/23

Please return questionnaires by email or fax to:

Name: Christy LeGrand Christine Young

Email: clegrand@bootrpc.com cyoung@bootrpc.com

Fax: 573-614-5182

CAPABILITY ASSESSMENT & INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan. Although some of this information may have been captured in your previous mitigation plan, it is important to ensure this information is current in the plan update

Please indicate which of the following your jurisdiction has in place. For elements that do not pertain to your type of public entity, please indicate with "N/A". If applicable, please provide a completion date for the element. If your jurisdiction does not have a particular element, and a higher level of government has the authority pertaining to your jurisdiction, please indicate this in the comments column. If your jurisdiction has any of the **underlined and bolded** elements, please provide a copy of the document to **the contact listed on the front** and indicate method in the comments column (i.e. available on the web, will email or mail).

Element	Yes, No, N/A	Comments and/or Weblir
Planning Capabilities		
Comprehensive or Land-Use Plan	n/a	Date:
Capital Improvement Plan	n/a	Date:
Transportation Plan / Highway Department	n/a	Date:
Emergency Operations Plan	n/a	Date:
Local Recovery Plan	n/a	Date:
Debris Management Plan	n/a	Date:
Firewise or other fire mitigation plan	n/a	Date:

Economic Development Plan		Date:
Policies/Ordinance		
Zoning Ordinance	n/a	
Building Code	n/a	Version:
Floodplain Ordinance	n/a	Date:
Drainage/Stormwater Ordinance	n/a	
Site Plan Review Requirements	n/a	
Historic Preservation Ordinance	n/a	
Program		
National Flood Insurance Program (NFIP)	n/a	
NFIP Community Rating System (CRS) program	n/a	If so, what is your current level r
National Weather Service (NWS) Storm Ready Certification	n/a	
Firewise Community Certification	n/a	
Building Code Effectiveness Grading (BCEGs)	n/a	
ISO Fire Rating	Rating:	
Public Education or information programs (i.e., responsible water use, fire safety, household preparedness, or environmental education)	n/a	
Mutual Aid Agreements	n/a	
Studies/Reports/Maps		
Critical Facilities Inventory	n/a	
Vulnerable Population Inventory	n/a	
Staff/Department		Full Time or Part Time?
Building Code Official / Building Inspector	no	
Engineer	no	
Development Planner	no	
NFIP Floodplain Administrator	no	
Mapping Specialist (GIS)	no	

For plan updates, the plan maintenance process outlined in your previous plan requires all participating jurisdictions to incorporate the requirements of the mitigation plan into other planning mechanisms, when appropriate. A key element of effective implementation of mitigation is for the mitigation plan to be incorporated in existing authorities, policies, programs, and resources. Next to each applicable planning mechanism, indicate how your jurisdiction incorporated the previous mitigation plan. If no incorporation has occurred, please explain, including background information detailing any challenges preventing incorporation.

Planning Capabilities	Method of Incorporation Since Previous Plan or Challenges Preventing Incorporation
Comprehensive or Land-Use Plan	n/a
Capital Improvement Plan	n/a
Transportation Plan / Highway Department	n/a
Emergency Operations Plan	n/a
Local Recovery Plan	n/a
Debris Management Plan	n/a
Firewise or other fire mitigation plan	n/a
Economic Development Plan	n/a

Incur debt through private activities	no
Withhold spending in hazard prone areas	no

Additional Questions

- How is your government structure organized? (Commission, Mayor/City Council, how many members)

Mayor / City Council

- List any other past or ongoing projects or programs designed to reduce disaster losses, these may include projects to protect critical facilities. Be sure to include pending or approved projects submitted for FEMA mitigation grants.

n/a

- Describe any hazard-related concerns or issues regarding the vulnerability of special needs populations, such as the elderly, disabled, low-income, or migrant farm workers.

none

- How many outdoor warning sirens are in your community?

1

How are they activated (indicate responsible department/personnel)?

Nayti City

- Does your community utilize any other warning systems such as Cable Override, Reverse 911, etc? If so, please describe.

IRIS, Immediate Response Information System
Missouri one call

- Does your community have designated public tornado shelters/saferooms? If so, are they constructed in accordance with FEMA standards?

no

Please provide address locations:

- Identify residential, commercial and industrial development in your jurisdiction since last plan update.

n/a

- Describe development trends and expected growth areas. Is any new development expected to occur in the 100-year floodplain? Is any new development expected to occur in any other known hazard areas? If possible, please provide a map indicating potential/planned growth areas.

n/a

- Are any new facilities or infrastructure planned for construction during the next five years? If so, please provide facility name and purpose along with proposed locations, if known.

n/a

- Please list major employers in your jurisdiction with an estimated number of employees.

17011E

- Please list Mitigation Planning Committee members who served during the development of the previously approved plan. Was the process set forth for monitoring the implementation of the previously approved mitigation plan adhered to? Did the Committee meet as was specified in the previously approved plan? Why or why not?

n/a

- Describe your jurisdiction's participation in the NFIP. Include information about how compliance with the NFIP is enforced locally.

n/a

VULNERABILITY ASSESSMENT

The purpose of this worksheet is to assess the vulnerable buildings, populations, critical facilities, infrastructure, and other important assets in your community by using the best available data to complete the table. Use the table on the next page to compile a detailed inventory of specific assets at risk including critical facilities and infrastructure; natural, cultural, and historical assets; and economic assets. In the natural hazard column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Natural Hazards	
Flooding (Major & Flash) - RF	Drought - D
Levee Failure - LF	Extreme Temperature - ET
Dam Failure - DF	Severe Thunderstorm (incl. winds, hail, lightning) - ST
Earthquake - EQ	Severe Winter Weather (incl. snow, ice, severe cold) - S
Land Subsidence / Sinkholes - LSS	Tornadoes - T
Drought - D	Wildfire - WF

Critical Facilities and Infrastructure

A critical facility may be defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. FEMA's HAZUS-MH loss estimation software uses the following three categories of critical assets. 'Essential facilities' are those that if damaged would have devastating impacts on disaster response and/or recovery. 'High potential loss facilities' are those that would have a high loss or impact on the community. Transportation and lifeline facilities are third category of critical assets; examples are provided below.

Essential Facilities

Hospitals and other medical facilities
Police stations
Fire station
Emergency Operations Centers

High Potential Loss Facilities

Power plants
Dams/levees
Military installations
Hazardous material sites
Schools
Shelters
Day care centers
Nursing homes
Main government buildings

Transportation and Lifeline

Highways, bridges, and tunnels
Railroads and facilities
Bus facilities
Airports
Water treatment facilities
Natural gas facilities and pipelines
Oil facilities and pipelines
Communications facilities

Economic Assets

Economic assets at risk may include major employers or primary economic sectors, such as agriculture, whose losses or inoperability would have severe

impacts on the community and its ability to recover from disaster.

Asset Inventory

Please list critical facilities and other community assets, the square feet, values, and occupancy/capacity. If not applicable, enter "N/A". In the last column, use the codes from the previous page to indicate hazards to which the asset is vulnerable. Add as many rows as needed. If this information is available in GIS format, please provide.

Critical Facilities

Name of Asset	Address	Area (sq.ft.)	Replacement Value (Insured) (\$)	Co
<u>Essential Facilities</u> such as hospitals and other medical facilities, police and fire stations, Emer				
n/a				
<u>High Potential Loss Facilities</u> such as power plants, dams/levees, military installations, hazard centers, nursing homes, main government buildings (Do not include schools—they will be repc				

n/a				
Transportation and Lifelines such as highways, bridges, and tunnels; railroads and facilities, bi				
facilities, natural gas facilities and pipelines, oil facilities, oil facilities and pipelines, communica				
n/a				

***If replacement cost data is not available, use the best available data (assessed valuation or other method for estimating cost) and explain any data deficiencies.**

Economic Assets (Major Employers, etc)

Asset	Address	Product/ Service	Va (if kn
n/a			

HISTORIC HAZARD EVENTS

Please fill out the sheet on the next page for each significant hazard event that affected **Your Jurisdiction**. **Make as many copies as necessary to record all events** and complete with as much detail as possible. This includes all events associated with the hazards listed below that have caused previous damage in your jurisdiction. It is especially important to capture events that either were not included in the previous Hazard Mitigation Plan or occurred since the plan was completed. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Jurisdiction	n/a
Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	

Deaths	n/a
Property damage	n/a
Infrastructure damage	n/a
Crop damage	n/a
Business/economic impacts	n/a
Road/school/other closures	n/a
Other damage	n/a
Insured losses	n/a
Federal/state disaster relief funding	n/a
Source of information	n/a
Comments	

HISTORIC HAZARD EVENTS (continued)

Please fill out the sheet on the next page for each significant hazard event that affected **Your Jurisdiction**. **Make as many copies as necessary to record all events** and complete with as much detail as possible. This includes all events associated with the hazards listed below that have caused previous damage in your jurisdiction. It is especially important to capture events that either were not included in the previous Hazard Mitigation Plan or occurred since the plan was completed. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Jurisdiction	n/a
Type of event	

Nature and magnitude of event	n/a
Location	n/a
Date of event	n/a
Injuries	n/a
Deaths	n/a
Property damage	n/a
Infrastructure damage	n/a
Crop damage	n/a
Business/economic impacts	n/a
Road/school/other closures	n/a
Other damage	n/a
Insured losses	n/a
Federal/state disaster relief funding	n/a
Source of information	n/a
Comments	

ASSESSMENT OF PREVIOUSLY PROPOSED ACTIONS

Jurisdiction:

The contractor/plan development facilitator has provided a list of actions proposed in the previously approved plan for each jurisdiction. Use the

worksheet below to evaluate whether each action is still current, feasible, desirable, and/or creates benefit that outweighs the cost.

The worksheet should include information on the status of the action and progress made in implementation, if any. This includes:

- For **completed actions** provide a description of the implementation process. This may be a success story you would like to publicize in your community.
- Some of the actions might have been **ongoing** in nature, such public information and education programs. When this is the case, indicate what activity has occurred during the previous five years, and indicate if this program is still viable enough that it should be carried on into the future.
- If **no progress** has been made in the implementation of a given action, discuss why. Note that implementation is not a requirement. However, if no progress has been made, perhaps this is an action that would be appropriate to delete in the updated plan.

During review of the previously approved actions, consider whether any new actions should be proposed. Perhaps damages from a recent hazard event have indicated the need for new approaches to protect property and life. Review the problem statements from the updated plan for ideas. Also review the FEMA publication *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* (January 2013).

#	Action	Status			Description of Ir or Reasons f
		Comple s	Ongoing	No Progress	
	n/a				

Multi-Jurisdictional Hazard Mitigation Plan

Data Collection Questionnaire

For Local Governments

Pemiscot

County: _____

Jurisdiction: _____

Return by: 8/15/23

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not** be eligible applicants for FEMA mitigation funding programs. Please note: School Districts and other Educational Institutions should complete the Data Collection Questionnaire indicated "For School Districts and Educational Institutions".

Prepared by: Jess Cagle _____

Phone: 573-333-4101 _____

Email: jess.cagle@pemcosheriff.org _____

Date: 09-26-23 _____

Please return questionnaires by email or fax to:

Name: Christy LeGrand Christine Young

Email: clegrand@bootrpc.com cyoung@bootrpc.com

Fax: 573-614-5182

CAPABILITY ASSESSMENT & INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan. Although some of this information may have been captured in your previous mitigation plan, it is important to ensure this information is current in the plan update

Please indicate which of the following your jurisdiction has in place. For elements that do not pertain to your type of public entity, please indicate with "N/A". If applicable, please provide a completion date for the element. If your jurisdiction does not have a particular element, and a higher level of government has the authority pertaining to your jurisdiction, please indicate this in the comments column. If your jurisdiction has any of the **underlined and bolded** elements, please provide a copy of the document to the contact listed on the front and indicate method in the comments column (i.e. available on the web, will email or mail).

Element	Yes, No, N/A	Comments and/or Weblink
Planning Capabilities		
<u>Comprehensive Plan</u>	Date: N/A	
Builder's Plan	Date: N/A	
Capital Improvement Plan	Date: N/A	
City Emergency Operations Plan	Date: N/A	
County Emergency Operations Plan	Date: Yes	Updates Each Year
Local Recovery Plan	Date:	
County Recovery Plan	Date: Yes	Emergency Operations Plan
City Mitigation Plan	Date: N/A	
County Mitigation Plan	Date: N/A	
Debris Management Plan	Date: Yes	See operations plan
<u>Economic Development Plan</u>	Date: Yes	
Transportation Plan	Date: Yes	See operations plan
Land-use Plan	Date: N/A	
Flood Mitigation Assistance (FMA) Plan	Date: Yes	See Flood Admin
<u>Watershed Plan</u>	Date: N/A	
Firewise or other fire mitigation plan	Date: N/A	
Critical Facilities Plan (Mitigation/Response/Recovery)	Date: Yes	Emergency Operations Plan

Element	Yes, No, N/A	Comments and/or Weblink
Policies/Ordinance		
Zoning Ordinance	N/A	
Building Code	Version: N/A	
Floodplain Ordinance	Date: N/A	
Subdivision Ordinance	N/A	
Tree Trimming Ordinance	N/A	
Nuisance Ordinance	N/A	
Stormwater Ordinance	N/A	
Drainage Ordinance	N/A	
Site Plan Review Requirements	N/A	
Historic Preservation Ordinance	N/A	
Landscape Ordinance	N/A	
Program		
Zoning/Land Use Restrictions	N/A	
Codes Building Site/Design	N/A	
Hazard Awareness Program	N/A	
National Flood Insurance Program (NFIP)	Yes	See Flood Admin
NFIP Community Rating System (CRS) program	N/A	If so, what is your current level rating?
National Weather Service (NWS) Storm Ready Certification	No	
Firewise Community Certification	N/A	
Building Code Effectiveness Grading (BCEGs)	N/A	
ISO Fire Rating	Rating: N/A	Only Cities
Economic Development Program		
Land Use Program	N/A	
Public Education/Awareness	N/A	
Property Acquisition	N/A	
Planning/Zoning Boards	N/A	
Stream Maintenance Program	N/A	
Tree Trimming Program	N/A	
Engineering Studies for Streams (Local/County/Regional)	N/A	

Element	Yes, No, N/A	Comments and/or Weblink
Mutual Aid Agreements	NO	
Studies/Reports/Maps		
<u>Hazard Analysis/Risk Assessment (City)</u>		
<u>Hazard Analysis/Risk Assessment (County)</u>		
Evacuation Route Map	Yes	State plan
<u>Critical Facilities Inventory</u>	Yes	Emergency Operations Plan
<u>Vulnerable Population Inventory</u>	No	
<u>Land Use Map</u>	No	
Staff/Department		Full Time or Part Time?
Building Code Official	N/A	
Building Inspector	N/A	
Mapping Specialist (GIS)	Yes	Jess Cagle
Engineer		
Development Planner		
Public Works Official	Yes	County Maintenance, Kevin Forest
Emergency Management Coordinator	Yes	Jess Cagle
NFIP Floodplain Administrator	Yes	Josh Bost
Emergency Response Team	Yes	Jess Cagle
Hazardous Materials Expert	No	
Local Emergency Planning Committee	Yes	Bootheel LEPC
County Emergency Management Commission	No	
Sanitation Department	No	
Transportation Department	Yes	County Maintenance, Kevin Forest
Economic Development Department		
Housing Department	No	
Historic Preservation	No	
Non-Governmental Organizations (NGOs)	Is there a local chapter? Yes or No	
American Red Cross	Yes	
Salvation Army	Yes	
Veterans Groups	Yes	American Legion

Element	Yes, No, N/A	Comments and/or Weblink
Local Environmental Organization	No	
Homeowner Associations	No	
Neighborhood Associations	No	
Chamber of Commerce	No	Cities
Community Organizations (Lions, Kiwanis, etc.)	Yes	
Financial Resources		Is your jurisdiction able to? Yes or No
Apply for Community Development Block Grants		Yes
Fund projects thru Capital Improvements funding		Yes
Authority to levy taxes for specific purposes		Yes
Fees for water, sewer, gas, or electric services		No
Impact fees for new development		No
Incur debt through general obligation bonds		Yes
Incur debt through special tax bonds		Yes
Incur debt through private activities		No
Withhold spending in hazard prone areas		Yes

For plan updates, the plan maintenance process outlined in your previous plan requires all participating jurisdictions to incorporate the requirements of the mitigation plan into other planning mechanisms, when appropriate. A key element of effective implementation of mitigation is for the mitigation plan to be incorporated in existing authorities, policies, programs, and resources. Next to each applicable planning mechanism, indicate how your jurisdiction incorporated the previous mitigation plan. If no incorporation has occurred, please explain, including background information detailing any challenges preventing incorporation.

Planning Capabilities	Method of Incorporation Since Previous Plan or Challenges Preventing Incorporation
Comprehensive Plan	
Builder's Plan	
Capital Improvement Plan	
Local Recovery Plan	
County Recovery Plan	
Debris Management Plan	
Economic Development Plan	
Transportation Plan	
Land-use Plan	
Watershed Plan	
Firewise or other Fire Mitigation Plan such as Community Wildfire Protection Plan	

Additional Questions

1. How is your government structure organized? (Commission, Mayor/City Council, how many members)

County Commission Three Members

2. List any past or ongoing public education or information programs, such as for responsible water use, fire safety, household preparedness, or environmental education.

Public information forwarded to residents via media, local publication and in person for emergency preparedness

3. List any other past or ongoing projects or programs designed to reduce disaster losses, these may include projects to protect critical facilities. Be sure to include pending or approved projects submitted for FEMA mitigation grants.

4. Describe any hazard-related concerns or issues regarding the vulnerability of special needs populations, such as the elderly, disabled, low-income, or migrant farm workers.

5. How many outdoor warning sirens are in your community? N/A, only in cities

How are they activated (indicate responsible department/personnel)?

6. Does your community utilize any other warning systems such as Cable Override, Reverse 911, etc? If so, please describe.

7. Does your community have designated public tornado shelters/saferooms? If so, are they constructed in accordance with FEMA standards?

Please provide address locations: only in cities

8. List residential, commercial and industrial development in your jurisdiction since last plan update.

9. Describe development trends and expected growth areas. Is any new development expected to occur in the 100-year floodplain? Is any new development expected to occur in any other known hazard areas? If possible, please provide a map indicating potential/planned growth areas.

N/A

10. Are any new facilities or infrastructure planned for construction during the next five years? If so, please provide facility name and purpose along with proposed locations, if known.

None Kown

11. Please list major employers in your jurisdiction with an estimated number of employees.

Arcosa Marine, 200 . Schools, 350, County Hospital 150, County Government 150

12. Please list Mitigation Planning Committee members who served during the development of the previously approved plan. Was the process set forth for monitoring the implementation of the previously approved mitigation plan adhered to? Did the Committee meet as was specified in the previously approved plan? Why or why not?

13. Describe your jurisdiction's participation in the NFIP. Include information about how compliance with the NFIP is enforced locally. Yes, County Has a Flood Plain Manager and follows permitting new structures.

VULNERABILITY ASSESSMENT

The purpose of this worksheet is to assess the vulnerable buildings, populations, critical facilities, infrastructure, and other important assets in your community by using the best available data to complete the table. Use the table on the next page to compile a detailed inventory of specific assets at risk including critical facilities and infrastructure; natural, cultural, and historical assets; and economic assets. In the natural hazard column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Natural Hazards	
Flooding (Major & Flash) - RF	Drought - D
Levee Failure - LF	Extreme Temperature - ET
Dam Failure - DF	Severe Thunderstorm (incl. winds, hail, lightning) - ST
Earthquake - EQ	Severe Winter Weather (incl. snow, ice, severe cold) - SWW
Land Subsidence / Sinkholes - LSS	Tornadoes - T
Drought - D	Wildfire - WF

Critical Facilities and Infrastructure

A critical facility may be defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. FEMA's HAZUS-MH loss estimation software uses the following three categories of critical assets. 'Essential facilities' are those that if damaged would have devastating impacts on disaster response and/or recovery. 'High potential loss facilities' are those that would have a high loss or impact on the community. Transportation and lifeline facilities are third category of critical assets; examples are provided below.

Essential Facilities

Hospitals and other medical facilities
Police stations
Fire station
Emergency Operations Centers

High Potential Loss Facilities

Power plants
Dams/levees
Military installations
Hazardous material sites
Schools
Shelters
Day care centers
Nursing homes
Main government buildings

Transportation and Lifeline

Highways, bridges, and tunnels
Railroads and facilities
Bus facilities
Airports
Water treatment facilities
Natural gas facilities and pipelines
Oil facilities and pipelines
Communications facilities

Economic Assets

Economic assets at risk may include major employers or primary economic sectors, such as agriculture, whose losses or inoperability would have severe impacts on the community and its ability to recover from disaster.

Asset Inventory

Please list critical facilities and other community assets, the square feet, values, and occupancy/capacity. If not applicable, enter "N/A". In the last column, use the codes from the previous page to indicate hazards to which the asset is vulnerable. Add as many rows as needed. If this information is available in GIS format, please provide.

Critical Facilities

Name of Asset	Address	Area (sq.ft.)	Replacement Value (Insured) (\$)	Contents Value (\$)	Occupancy/ Capacity (#)	Natural Hazards
Essential Facilities such as hospitals and other medical facilities, police and fire stations, Emergency Operations Centers						
Pemiscot Memorial Hospital	946 East Reed Hayti					
Pemiscot County Sheriff's	800 Ward Ave Caruthersville					
Pemiscot County Courthouse	610 Ward Ave Caruthersville					
Hayti Fire Dept	101 Delta Ln Hayti					
Caruthersville Fire Department	1400 ward Ave Caruthersville					
Wardell Fire Department	106 East Broad Wardell					
Steele Fire Department	117 South Walnut Steele					
Cooter Fire Department	1800 Hwy E Cooter					
Pemiscot Co Health Department	810 East Reed Hayti					

Name of Asset	Address	Area (sq.ft.)	Replacement Value (Insured) (\$)	Contents Value (\$)	Occupancy/ Capacity (#)	Natural Hazards
High Potential Loss Facilities such as power plants, dams/levees, military installations, hazardous materials sites, shelters, day care centers, nursing homes, main government buildings (Do not include schools—they will be reported by the school districts)						
St Francis Levee	900 West 3 rd Caruthersville					
Pemiscot County Courthouse	610 Ward Ave Caruthersville					
River Oaks Care Center	1001 N Walnut Steele					
Southgate Living Center	Truman Blvd Caruthersville					
<u>Transportation and Lifelines</u> such as highways, bridges, and tunnels; railroads and facilities, bus facilities, airports, water treatment facilities, natural gas facilities and pipelines, oil facilities, oil facilities and pipelines, communications facilities						
BNSF Rail Road						
I-55	Modot					
Us 412	Modot					
I-155	Modot					
Us 61	Modot					
Tenn MO Bridge	Modot/Tdot					
Natural Gas Pipeline	Liberty					
Electric	Ameren/ Pemiscot Dunklin Coop					

***If replacement cost data is not available, use the best available data (assessed valuation or other method for estimating cost) and explain any data deficiencies.**

Economic Assets (Major Employers, etc)

Asset	Address	Product/ Service	Value (if known)	Number of Employees	Hazards
Arcosa	Caruthersville	Barges			

HISTORIC HAZARD EVENTS

Please fill out the sheet on the next page for each significant hazard event that affected **Your Jurisdiction**. **Make as many copies as necessary to record all events** and complete with as much detail as possible. This includes all events associated with the hazards listed below that have caused previous damage in your jurisdiction. It is especially important to capture events that either were not included in the previous Hazard Mitigation Plan or occurred since the plan was completed. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Jurisdiction	Pemiscot County
Type of event	Tornado
Nature and magnitude of event	Large long lasting tornado
Location	Rural Pemiscot County
Date of event	Dec 10 th 2021
Injuries	Yes
Deaths	Yes
Property damage	Yes
	Yes
Crop damage	No
Business/economic impacts	Yes
Road/school/other closures	Yes
Other damage	
Insured losses	Yes
Federal/state disaster relief funding	Yes
Source of information	
Comments	F4 Tornado entered Pemiscot County at the South West corner of the county and traveled across to the North East corner of the county.

HISTORIC HAZARD EVENTS (continued)

Please fill out the sheet on the next page for each significant hazard event that affected **Your Jurisdiction**. **Make as many copies as necessary to record all events** and complete with as much detail as possible. This includes all events associated with the hazards listed below that have caused previous damage in your jurisdiction. It is especially important to capture events that either were not included in the previous Hazard Mitigation Plan or occurred since the plan was completed. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Jurisdiction	
Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Source of information	
Comments	

ASSESSMENT OF PREVIOUSLY PROPOSED ACTIONS

Jurisdiction: _____

The contractor/plan development facilitator has provided a list of actions proposed in the previously approved plan for each jurisdiction. Use the worksheet below to evaluate whether each action is still current, feasible, desirable, and/or creates benefit that outweighs the cost.

The worksheet should include information on the status of the action and progress made in implementation, if any. This includes:

- For **completed actions** provide a description of the implementation process. This may be a success story you would like to publicize in your community.
- Some of the actions might have been **ongoing** in nature, such public information and education programs. When this is the case, indicate what activity has occurred during the previous five years, and indicate if this program is still viable enough that it should be carried on into the future.
- If **no progress** has been made in the implementation of a given action, discuss why. Note that implementation is not a requirement. However, if no progress has been made, perhaps this is an action that would be appropriate to delete in the updated plan.

During review of the previously approved actions, consider whether any new actions should be proposed. Perhaps damages from a recent hazard event have indicated the need for new approaches to protect property and life. Review the problem statements from the updated plan for ideas. Also review the FEMA publication *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards (January 2013)*.

#	Action	Status			Description of Implementation Activities or Reasons for Lack of Progress	Keep – ✓ Delete – X Modify – M
		Complete	Ongoing	No Progress		

#	Action	Status			Description of Implementation Activities or Reasons for Lack of Progress	Keep – ✓ Delete – X Modify – M
		Complete	Ongoing	No Progress		

Multi-Jurisdictional Hazard Mitigation Plan

Data Collection Questionnaire

For School Districts and Educational Institutions

County: Pemiscot _____

School District /
Educational Institution Name: Caruthersville School District 18 _____

Return by: 2/28/23

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not** be eligible applicants for FEMA mitigation funding programs.

Prepared by: Brad Gerling _____

Phone: 573-333-6100 ext. 3 _____

Email: bgerling@cps18.org _____

Date: 3/10/23 _____

Please return questionnaires by email or fax to:

Name: Christy LeGrand Christine Young

Email: clegrand@bootrpc.com cyoung@bootrpc.com

Fax: 573-614-5182

CAPABILITY ASSESSMENT & INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan.

Please indicate which of the following your school district / institution has in place. For elements that do not pertain to you, please indicate with "N/A". If applicable, please provide a completion date for the element. If your school district / institution has any of the **underlined and bolded** elements, please provide a copy of the document to the contact indicated on the front of this questionnaire and indicate method in the comments column (i.e. available on the web, will email or mail).

Planning Elements	Yes/No	Date of Latest Version	Comments
Master Plan	Yes	1/12/23	Ongoing
Capital Improvement Plan	Yes	1/14/21	
<u>School Emergency Plan</u> Shelter in place protocols Evacuation protocols	Yes	8/1/22	
Weapons Policy	Yes	6/28/07	

Administrative/Technical

Identify the technical and personnel resources responsible for activities related to hazard mitigation/loss prevention within your school district / institution.

Personnel Resources	Yes/No	Department/Position	Comments
Full-time building official (i.e. Principal)	Yes	Admin	
Emergency Manager	Yes	Director	
Grant Writer	Yes	Admin	
Public Information Officer	Yes	Superintendent	

Financial Resources

Identify whether your school district /institution has access to or is eligible to use the following financial resources for hazard mitigation.

Financial Resources	Accessible/Eligible to Use (Y/N)	Comments
Capital improvements project funding	Y	
Local funds	Y	
General obligation bonds	Y	
Special tax bonds	Y	
Private activities/donations	Y	
State and federal funds	y	

Additional Capabilities Questions

1. Are your buildings equipped with a public address (PA) system or other emergency alert system?
Please describe.
PA in each building
2. Does your school buildings' have NOAA Weather Radios?
Handheld and base station
3. List any past or ongoing projects or programs designed to reduce disaster losses, these may include projects to protect facilities or provide education regarding hazards that could occur.
Fema shelters on each campus
4. List any other past or ongoing projects or programs designed to reduce disaster losses, these may include projects to protect critical facilities.
Generator installation at each safe room
5. Do any of your buildings have designated tornado shelters or "saferooms"? If so, are they constructed in accordance with FEMA standards?

Yes, at each campus.
6. Did your school district / institution make any additions to buildings or construction new buildings since the last plan update (2010)? Please list the buildings and the improvement.

Yes, addition of saferoom at high school campus, and board room addition to admin building.
7. Does your school district / institution plan to remodel or construct any buildings in the next 5 years? If so, please list the building or proposed building and planned improvements. Are any planned construction activities in known hazard areas?

No planned construction at this time.
8. What percentage is your projected enrollment expected to increase or decrease in the next five years?

10 percent decrease.
9. Do you have your own campus police? Please explain your police department or who you rely on for security needs.

2 SRO's are contracted through the city police department.

VULNERABILITY ASSESSMENT

Asset Inventory

The purpose of this worksheet is to assist in the assessment of the vulnerable populations and facilities owned by your school district / institution. Use the table below to compile a detailed inventory of specific assets at risk. In the natural hazard column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Natural Hazards	
Flooding (Major & Flash) - RF	Drought - D
Levee Failure - LF	Extreme Temperature - ET
Dam Failure - DF	Severe Thunderstorm (incl. winds, hail, lightning) - ST
Earthquake - EQ	Severe Winter Weather (incl. snow, ice, severe cold) - SWW
Land Subsidence / Sinkholes - LSS	Tornadoes - T
Drought - D	Wildfire - WF

Please list buildings owned by your school district / institution including the square feet, values, and occupancy/capacity. If not applicable or not available, enter "N/A". Add as many rows as needed. **If you have this data in GIS formats, or other formats, please provide in lieu of this.**

Name of Asset	Address	Area (sq.ft.)	Replacement Value (Insured) (\$)	Contents Value (\$)	Occupancy/ Capacity (#)	Natural Hazards

HISTORIC HAZARD EVENTS

Please fill out one sheet for each significant hazard event that affected **your school district / institution** with as much detail as possible. This includes all hazard events listed on the Vulnerability Assessment page that have caused previous damage. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Type of event	Tornado
Nature and magnitude of event	F3
Location	High school and middle school campus
Date of event	April 2, 2006
Injuries	None
Deaths	None
Property damage	Substantial
Infrastructure damage	Substantial
Crop damage	None
Business/economic impacts	Substantial
Road/school/other closures	School closed for 2 weeks
Other damage	High school building, middle school café destroyed.
Insured losses	Millions
Federal/state disaster relief funding	Millions
Source of information	Personal account
Comments	This tornado came directly through town and had a devastating impact. Many homes and buildings were destroyed or had to be demolished. We didn't have a high school for over 4 years. An entire class of graduates went through high school without a building.

HISTORIC HAZARD EVENTS (continued)

Please fill out one sheet for each significant hazard event that affected **your school district /institution** with as much detail as possible. This includes all hazard events listed on the Vulnerability Assessment page that have caused previous damage. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Type of event	Tornado
Nature and magnitude of event	F4
Location	Outside of town
Date of event	Dec. 10, 2021
Injuries	Several staff members and students
Deaths	2, one student and one alumna
Property damage	Substantial
Infrastructure damage	Power outage for a few days
Crop damage	None
Business/economic impacts	Minimal
Road/school/other closures	School closed for 1 day
Other damage	none
Insured losses	None
Federal/state disaster relief funding	None
Source of information	Personal account
Comments	This tornado was a part of the "Quad state tornado" that ripped across 4 states having major impact on Mayfield KY. We lost an elementary student and her mother, a kindergarten teacher, was severely injured. Another teacher was injured at another location.

Multi-Jurisdictional Hazard Mitigation Plan

Data Collection Questionnaire

For School Districts and Educational Institutions

County: Pemiscot

School District /
Educational Institution Name: Cooter R-IV School District

Return by: 3/24/23

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not** be eligible applicants for FEMA mitigation funding programs.

Prepared by: Clay Snider

Phone: 573-695-3312

Email: csnider@cooter.k12.mo.us

Date: 6/6/23

Please return questionnaires by email or fax to:

Name: Christy LeGrand Christine Young

Email: clegrand@bootrpc.com cyoung@bootrpc.com

Fax: 573-614-5182

CAPABILITY ASSESSMENT & INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan.

Please indicate which of the following your school district / institution has in place. For elements that do not pertain to you, please indicate with "N/A". If applicable, please provide a completion date for the element. If your school district / institution has any of the **underlined and bolded** elements, please provide a copy of the document to the contact indicated on the front of this questionnaire and indicate method in the comments column (i.e. available on the web, will email or mail).

Planning Elements	Yes/No	Date of Latest Version	Comments
Master Plan	No		
Capital Improvement Plan	No		
<u>School Emergency Plan</u>			
Shelter in place protocols	Yes	8/1/2022	
Evacuation protocols	Yes	8/1/2022	
Weapons Policy	Yes		

Administrative/Technical

Identify the technical and personnel resources responsible for activities related to hazard mitigation/loss prevention within your school district / institution.

Personnel Resources	Yes/No	Department/Position	Comments
Full-time building official (i.e. Principal)	Yes	Superintendent/Principal	
Emergency Manager	No		
Grant Writer	No		
Public Information Officer	No		

Financial Resources

Identify whether your school district /institution has access to or is eligible to use the following financial resources for hazard mitigation.

Financial Resources	Accessible/Eligible to Use (Y/N)	Comments
Capital improvements project funding	Yes	
Local funds	Yes	
General obligation bonds	Yes	
Special tax bonds	Yes	
Private activities/donations	Yes	
State and federal funds	Yes	

Additional Capabilities Questions

1. Are your buildings equipped with a public address (PA) system or other emergency alert system?
Please describe. *Yes*

2. Does your school buildings' have NOAA Weather Radios?
No

3. List any past or ongoing projects or programs designed to reduce disaster losses, these may include projects to protect facilities or provide education regarding hazards that could occur.

None

4. List any other past or ongoing projects or programs designed to reduce disaster losses, these may include projects to protect critical facilities.

None

5. Do any of your buildings have designated tornado shelters or "saferooms"? If so, are they constructed in accordance with FEMA standards?

No

6. Did your school district / institution make any additions to buildings or construction new buildings since the last plan update (2010)? Please list the buildings and the improvement.

No

7. Does your school district / institution plan to remodel or construct any buildings in the next 5 years? If so, please list the building or proposed building and planned improvements. Are any planned construction activities in known hazard areas?

No

8. What percentage is your projected enrollment expected to increase or decrease in the next five years?

10% Decrease

9. Do you have your own campus police? Please explain your police department or who you rely on for security needs.

No

VULNERABILITY ASSESSMENT

Asset Inventory

The purpose of this worksheet is to assist in the assessment of the vulnerable populations and facilities owned by your school district / institution. Use the table below to compile a detailed inventory of specific assets at risk. In the natural hazard column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Natural Hazards	
Flooding (Major & Flash) - RF	Drought - D
Levee Failure - LF	Extreme Temperature - ET
Dam Failure - DF	Severe Thunderstorm (incl. winds, hail, lightning) - ST
Earthquake - EQ	Severe Winter Weather (incl. snow, ice, severe cold) - SWW
Land Subsidence / Sinkholes - LSS	Tornadoes - T
Drought - D	Wildfire - WF

Please list buildings owned by your school district / institution including the square feet, values, and occupancy/capacity. If not applicable or not available, enter "N/A". Add as many rows as needed. **If you have this data in GIS formats, or other formats, please provide in lieu of this.**

Name of Asset	Address	Area (sq.ft.)	Replacement Value (Insured) (\$)	Contents Value (\$)	Occupancy/ Capacity (#)	Natural Hazards
3 Story High School Building	1807 State Highway E					All
Gymnasium	"					"
Cafeteria	"					"
Administration Building	"					"
Science Building	"					"
Elementary Building	"					"
Trailer #1	"					"

Name of Asset	Address	Area (sq.ft.)	Replacement Value (Insured) (\$)	Contents Value (\$)	Occupancy/ Capacity (#)	Natural Hazards
Trailer #2	//					//
Shop	//					//
Baseball Field	//					//
Softball Field	//					//

VULNERABILITY ASSESSMENT

Asset Inventory

The purpose of this worksheet is to assist in the assessment of the vulnerable populations and facilities owned by your school district / institution. Use the table below to compile a detailed inventory of specific assets at risk. In the natural hazard column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Natural Hazards	
Flooding (Major & Flash) - RF	Drought - D
Levee Failure - LF	Extreme Temperature - ET
Dam Failure - DF	Severe Thunderstorm (incl. winds, hail, lightning) - ST
Earthquake - EQ	Severe Winter Weather (incl. snow, ice, severe cold) - SWW
Land Subsidence / Sinkholes - LSS	Tornadoes - T
Drought - D	Wildfire - WF

Please list buildings owned by your school district / institution including the square feet, values, and occupancy/capacity. If not applicable or not available, enter "N/A". Add as many rows as needed. If you have this data in GIS formats, or other formats, please provide in lieu of this.

Name of Asset	Address	Area (sq.ft.)	Replacement Value (Insured) (\$)	Contents Value (\$)	Occupancy/ Capacity (#)	Natural Hazards
High School/Cafeteria, Gym	1867 State Highway E, Centerville, MO 64533	31,816	\$5,679,162	\$935,595	N/A	All
Administration Building	"	2,400	\$274,778	\$79,475	N/A	"
Science Building	"	2,000	\$693,095	\$73,899	N/A	"
Elementary Building	"	15,880	\$3,970,484	\$935,595	N/A	"
Trailer #1	"	1,008	\$97,468	\$16,732	N/A	"
Trailer #2	"	1,008	\$98,164	\$17,428	N/A	"
Shop	"	40,000	\$376,489	\$85,510	N/A	"

Multi-Jurisdictional Hazard Mitigation Plan

Data Collection Questionnaire

For School Districts and Educational Institutions

County: Pemiscot _____

School District /
Educational Institution Name: Pemiscot County R-3 School District _____

Return by: 2/28/23

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not** be eligible applicants for FEMA mitigation funding programs.

Prepared by: Joey Watkins _____

Phone: 573-724-1733 _____

Email: jwatkins@r3.k12.mo.us _____

Date: 3/13/23 _____

Please return questionnaires by email or fax to:

Name: Christy LeGrand Christine Young

Email: clegrand@bootrpc.com cyoung@bootrpc.com

Fax: 573-614-5182

CAPABILITY ASSESSMENT & INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan.

Please indicate which of the following your school district / institution has in place. For elements that do not pertain to you, please indicate with "N/A". If applicable, please provide a completion date for the element. If your school district / institution has any of the **underlined and bolded** elements, please provide a copy of the document to the contact indicated on the front of this questionnaire and indicate method in the comments column (i.e. available on the web, will email or mail).

Planning Elements	Yes/No	Date of Latest Version	Comments
Master Plan	yes	2014	
Capital Improvement Plan			
<u>School Emergency Plan</u> Shelter in place protocols Evacuation protocols	yes	2017	
Weapons Policy	yes	2013	

Administrative/Technical

Identify the technical and personnel resources responsible for activities related to hazard mitigation/loss prevention within your school district / institution.

Personnel Resources	Yes/No	Department/Position	Comments
Full-time building official (i.e. Principal)	Yes	Administration	
Emergency Manager	Yes	Administration	
Grant Writer	Yes	Administration	
Public Information Officer	Yes	Administration	

Financial Resources

Identify whether your school district /institution has access to or is eligible to use the following financial resources for hazard mitigation.

Financial Resources	Accessible/Eligible to Use (Y/N)	Comments
Capital improvements project funding	Yes	
Local funds	Yes	
General obligation bonds	No	
Special tax bonds	No	
Private activities/donations	No	
State and federal funds	Yes	

Additional Capabilities Questions

1. Are your buildings equipped with a public address (PA) system or other emergency alert system? Please describe. Yes, voip speakers are in each building and outside that all phones can access
2. Does your school buildings' have NOAA Weather Radios? No, just cellular phones which alert
3. List any past or ongoing projects or programs designed to reduce disaster losses, these may include projects to protect facilities or provide education regarding hazards that could occur. NA
4. List any other past or ongoing projects or programs designed to reduce disaster losses, these may include projects to protect critical facilities. NA
5. Do any of your buildings have designated tornado shelters or "saferooms"? If so, are they constructed in accordance with FEMA standards? No
6. Did your school district / institution make any additions to buildings or construction new buildings since the last plan update (2010)? Please list the buildings and the improvement. No
7. Does your school district / institution plan to remodel or construct any buildings in the next 5 years? If so, please list the building or proposed building and planned improvements. Are any planned construction activities in known hazard areas? No
8. What percentage is your projected enrollment expected to increase or decrease in the next five years? Probably about a 1-2% increase
9. Do you have your own campus police? Please explain your police department or who you rely on for security needs. No, we share a DARE officer between other districts in the county.

VULNERABILITY ASSESSMENT

Asset Inventory

The purpose of this worksheet is to assist in the assessment of the vulnerable populations and facilities owned by your school district / institution. Use the table below to compile a detailed inventory of specific assets at risk. In the natural hazard column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Natural Hazards	
Flooding (Major & Flash) - RF	Drought - D
Levee Failure - LF	Extreme Temperature - ET
Dam Failure - DF	Severe Thunderstorm (incl. winds, hail, lightning) - ST
Earthquake - EQ	Severe Winter Weather (incl. snow, ice, severe cold) - SWW
Land Subsidence / Sinkholes - LSS	Tornadoes - T
Drought - D	Wildfire - WF

Please list buildings owned by your school district / institution including the square feet, values, and occupancy/capacity. If not applicable or not available, enter "N/A". Add as many rows as needed. **If you have this data in GIS formats, or other formats, please provide in lieu of this.**

Name of Asset	Address	Area (sq.ft.)	Replacement Value (Insured) (\$)	Contents Value (\$)	Occupancy/ Capacity (#)	Natural Hazards
Main Building	1727 County Hwy 536, Caruthersville	23448	3,443,835	590,780		LF, EQ, ST, SWMM
Junior High	1727 County Hwy 536, Caruthersville	12114	1,880,775	310,239		LF, EQ, ST, SWMM
Preschool Trailer	1727 County Hwy 536, Caruthersville	1008	74,6626	57,755		LF, EQ, ST, SWMM
Bus Barn	1727 County Hwy 536, Caruthersville	6000	257,890	127,068		LF, EQ, ST, SWMM
Gym	1727 County Hwy 536, Caruthersville	12433	1,830,319	738,242		LF, EQ, ST, SWMM

HISTORIC HAZARD EVENTS

Please fill out one sheet for each significant hazard event that affected **your school district / institution** with as much detail as possible. This includes all hazard events listed on the Vulnerability Assessment page that have caused previous damage. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Source of information	
Comments	

HISTORIC HAZARD EVENTS (continued)

Please fill out one sheet for each significant hazard event that affected **your school district /institution** with as much detail as possible. This includes all hazard events listed on the Vulnerability Assessment page that have caused previous damage. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Source of information	
Comments	

Multi-Jurisdictional Hazard Mitigation Plan

Data Collection Questionnaire

For School Districts and Educational Institutions

Pemiscot County

County: _____

School District /
Educational Institution Name: South Pemiscot R-5 Schools _____

Return by: 2/28/23

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not** be eligible applicants for FEMA mitigation funding programs.

Prepared by :Chris Moore _____

Phone: 573-695-4426 _____

Email: cmoore@southpemiscot.com _____

Date: 4-21-23 _____

Please return questionnaires by email or fax to:

Name: Christy LeGrand Christine Young

Email: clegrand@bootrpc.com cyoung@bootrpc.com

Fax: 573-614-5182

CAPABILITY ASSESSMENT & INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan.

Please indicate which of the following your school district / institution has in place. For elements that do not pertain to you, please indicate with "N/A". If applicable, please provide a completion date for the element. If your school district / institution has any of the **underlined and bolded** elements, please provide a copy of the document to the contact indicated on the front of this questionnaire and indicate method in the comments column (i.e. available on the web, will email or mail).

Planning Elements	Yes/No	Date of Latest Version	Comments
Master Plan	NO	N/A	N/A
Capital Improvement Plan	NO	N/A	N/A
<u>School Emergency Plan</u> Shelter in place protocols Evacuation protocols	Yes	8-15-22	N/A
Weapons Policy	Yes	11-13-2014	N/A

Administrative/Technical

Identify the technical and personnel resources responsible for activities related to hazard mitigation/loss prevention within your school district / institution.

Personnel Resources	Yes/No	Department/Position	Comments
Full-time building official (i.e. Principal)	Yes	Administration / Principal	N/A
Emergency Manager	Yes	Administration / Superintendent / Principal	N/A
Grant Writer	Yes	HS	N/A
Public Information Officer	Yes	Administration/ Superintendent	N/A

Financial Resources

Identify whether your school district /institution has access to or is eligible to use the following financial resources for hazard mitigation.

Financial Resources	Accessible/Eligible to Use (Y/N)	Comments
Capital improvements project funding	Yes	N/A
Local funds	Yes	N/A
General obligation bonds	No	N/A
Special tax bonds	No	N/A
Private activities/donations	No	N/A

State and federal funds	Yes	N/A
-------------------------	-----	-----

Additional Capabilities Questions

1. Are your buildings equipped with a public address (PA) system or other emergency alert system? Please describe. Yes all buildings have a PA system.

2. Does your school buildings' have NOAA Weather Radios?
Yes

3. List any past or ongoing projects or programs designed to reduce disaster losses, these may include projects to protect facilities or provide education regarding hazards that could occur.

The District added a FEMA building at East Elementary for students and staff and the community after hours for a tornado safe room.

4. List any other past or ongoing projects or programs designed to reduce disaster losses, these may include projects to protect critical facilities. See question 3

5. Do any of your buildings have designated tornado shelters or "saferooms"? If so, are they constructed in accordance with FEMA standards? Yes, see question 3

6. Did your school district / institution make any additions to buildings or construction new buildings since the last plan update (2010)? Please list the buildings and the improvement. Yes, we added a FEMA tornado safe room at East Elementary.

7. Does your school district / institution plan to remodel or construct any buildings in the next 5 years? If so, please list the building or proposed building and planned improvements. Are any planned construction activities in known hazard areas? No.

8. What percentage is your projected enrollment expected to increase or decrease in the next five years?

1. 1% decrease in the next 5 years.

2. Do you have your own campus police? Please explain your police department or who you rely on for security needs.

No we have a contractual agreement with Pemiscot County Sheriff's Office for one deputy on campus each day.

VULNERABILITY ASSESSMENT

Asset Inventory

The purpose of this worksheet is to assist in the assessment of the vulnerable populations and facilities owned by your school district / institution. Use the table below to compile a detailed inventory of specific assets at risk. In the natural hazard column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Natural Hazards	
Flooding (Major & Flash) - RF	Drought - D
Levee Failure - LF	Extreme Temperature - ET
Dam Failure - DF	Severe Thunderstorm (incl. winds, hail, lightning) - ST
Earthquake - EQ	Severe Winter Weather (incl. snow, ice, severe cold) - SWW
Land Subsidence / Sinkholes - LSS	Tornadoes - T
Drought - D	Wildfire - WF

Please list buildings owned by your school district / institution including the square feet, values, and occupancy/capacity. If not applicable or not available, enter "N/A". Add as many rows as needed. **If you have this data in GIS formats, or other formats, please provide in lieu of this.**

Name of Asset	Address	Area (sq.ft.)	Replacement Value (Insured) (\$)	Contents Value (\$)	Occupancy/ Capacity (#)	Natural Hazards
High School & Gymnasium	611 Beasley Rd. Steele, MO	33801	5,490,982	776,266	1200	
Vocational Agri Building	611 Beasley Rd. Steele, MO	10456	1,367,672	543,460	60	
Bus Repair Shop	611 Beasley Rd, Steele, MO	1584	89,987	36,386	15	
Bus Storage/Garage	611 Beasley Rd, Steele, MO	5600	235,775	152,328	5	
East Elem. Building	706 E. Main St. Steele, MO	21700	3,431,478	573,536	120	
Central Elem. Building	612 Beasley Rd, Steele, MO	34657	6,380,462	916,616	320	
Multipurpose & Admin Building	612 Beasley Rd, Steele, MO	21904	3,904,924	1,486,687	500	

HISTORIC HAZARD EVENTS

Please fill out one sheet for each significant hazard event that affected **your school district / institution** with as much detail as possible. This includes all hazard events listed on the Vulnerability Assessment page that have caused previous damage. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Source of information	
Comments	

HISTORIC HAZARD EVENTS (continued)

Please fill out one sheet for each significant hazard event that affected **your school district /institution** with as much detail as possible. This includes all hazard events listed on the Vulnerability Assessment page that have caused previous damage. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Source of information	
Comments	

APPENDIX E

Appendix E - Pemiscot County Critical Facilities and Infrastructure (Full List) Page 1

Name of Asset	Address	Jurisdiction	Category
Caruthersville City Police Dept	1400 Ward Ave. Caruthersville, MO 63830	Caruthersville	Police/Emer. Ops
Caruthersville Fire Station	1400 Ward Ave. Caruthersville, MO 63830	Caruthersville	Fire Service
SEMO Health Network	109 E 5th st. Caruthersville, MO 63830	Caruthersville	Health Care
Boothel Primary Care Clinic	1502 Ward Ave. Caruthersville, MO 63830	Caruthersville	Health Care
Southgate Living Center	500 Truman Blvd. Caruthersville, MO 63830	Caruthersville	Nursing Home
Family First Home Services	501 Ward Ave. Caruthersville, MO 63830	Caruthersville	Nursing Home
Caruthersville Elementary School	900 Washington Ave. Caruthersville, MO 63830	Caruthersville	School Facilities
Caruthersville Middle School	1705 Ward Ave. Caruthersville, MO 63830	Caruthersville	School Facilities
Caruthersville Memorial Airport	2204 Airport Dr. Caruthersville, MO 63830	Caruthersville	Airport
Public Works	200 West Third Caruthersville, MO 63830	Caruthersville	Water/wastewater
City Hall	200 West Third Caruthersville, MO 63830	Caruthersville	City Government
Caruthersville Head Start	710 E 18th St. Caruthersville, MO 63830	Caruthersville	Childcare
McAeoc Migrant Head Start	1104 Ward Ave. Caruthersville, MO 63830	Caruthersville	Childcare
Hayti City Police Department	300 East Main St. Hayti, MO 63851	Hayti	Police/Emer. Ops
Hayti City Fire Station	218 North Martin Luther King Dr. Hayti, MO 63851	Hayti	Fire Service
City Hall	300 East Broadway St. Hayti, MO 63851	Hayti	Government
Pemiscot Memorial Hospital	946 Reed St. Hayti, MO 63851	Hayti	Hospital/Health Care
Hayti R-ii School District	500 North 4th St. Hayti, Mo 63851	Hayti	School Facilities
City Hall	292 Rapoport Hayti Heights, MO 63851	Hayti Heights	Government
Pemiscot County Courthouse	610 Ward ave. Caruthersville, MO 63830	Caruthersville	Government
Pemiscot County Sheriff's Office	800 Ward Ave. Caruthersville, MO 63830	Caruthersville	Police/Government/Emer. Ops
Pemiscot County Juvenile Office	800 Ward Ave. Caruthersville, MO 63830	Caruthersville	Police/Government/Emer. Ops
Pemiscot County Justice Building	801 Ward Ave. Caruthersville, MO 63830	Caruthersville	Police/Government/Emer. Ops
South Pemiscot School District	611 Beasley Rd. Steele, MO 63877	Steele	School Facility

Appendix E - Pemiscot County Economic Assets (Full List) Page 2

Name of Asset	Address	Jurisdiction	Category
Pemiscot County ARC	315 E. Broadway	Hayti	Disability Service
United States Post Office	607 E. Washington St.	Hayti	Postal Service
United States Post Office	300 Carleton Ave.	Caruthersville	Postal Service
FEMA Gym	611 Beasley Rd. Steele, MO 63877	Steele	Shelter
Helena Chemical	500 E. Main St.	Hayti	Chemical/Hazmat
Century Casino Caruthersville	777 E 3rd St.	Caruthersville	Major Employer

Arcosa Marine Products	265 County Hwy 346	Caruthersville	Major Employer
Pemiscot Memorial Hospital	946 E. Reed St	Hayti	Hospital/Health Care

APPENDIX F

Goal 1: Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.

Action 1.1: Adopt most current IRC (residential), IBC (commercial building), and ICC 600 (high wind Areas) codes to withstand high winds and possible tornado.

Action Worksheet	
Name of Jurisdiction:	Caruthersville
Risk / Vulnerability	
Problem being Mitigated:	Damage to residential and commercial property will be decreased in any new homes or buildings.
Hazard(s) Addressed:	High Winds and/or Tornado
Action or Project	
Action/Project Number:	Action 1.1
Name of Action or Project:	Action 1.1
Action or Project Description:	Each jurisdiction will establish a policy or ordinance for building recommendations for all future construction projects. The policy will refer to newest building codes provided by ICC.
Applicable Goal Statement:	Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.
Estimated Cost:	This action will have minimal cost involved.
Benefits:	This will save money for insurers and owners of properties. Will also reduce chances of building occupants being injured if building integrity is compromised.
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	High - 37
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing Not Started
Report of Progress	

Goal 1: Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.

Action 1.2: Host safety workshops annually with a focus on all natural hazards.

Action Worksheet	
Name of Jurisdiction:	Canthorsville
Risk / Vulnerability	
Problem being Mitigated:	<i>Prevention / Public Outreach / Education</i>
Hazard(s) Addressed:	<i>Tornadoes / Severe Thunderstorms</i>
Action/Project Number:	Action 1.2
Name of Action or Project:	Action 1.2
Action or Project Description:	The jurisdiction will host an annual workshop that will educate the public on safety during a hazardous event with emphasis on tornado.
Applicable Goal Statement:	Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.
Estimated Cost:	This action will have minimal cost involved.
Benefits:	This action will educate the public on safety tips on how to respond in a tornado scenario. It will provide the public with knowledge of how safety personnel would respond in these scenarios. Education could be a major component in saving a life.
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	Medium - 27
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing Not Started
Report of Progress	

Goal 1: Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.

Action 1.5: Construct a FEMA safe room as funding comes available

Action Worksheet	
Name of Jurisdiction:	Caruthersville
Risk / Vulnerability	
Problem being Mitigated:	Public safety in severe storms/tornado. Providing shelter to residents.
Hazard(s) Addressed:	Severe Thunderstorm/High Winds/Tornado
Action or Project	
Action/Project Number:	Action 1.5
Name of Action or Project:	Action 1.5
Action or Project Description:	The city is applying for funding to construct a FEMA safe room.
Applicable Goal Statement:	Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.
Estimated Cost:	\$300,000 - \$1,000,000
Benefits:	This action will provide shelter in severe storms and tornadoes
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	High - 34
Timeline for Completion:	5 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing
Report of Progress:	

Goal 2: Minimize property damage due to flooding

Action 2.1: Adopt roadway drainage design policy referencing MoDOT Engineering Policy Guide "748 Hydraulics and Drainage"

Action Worksheet	
Name of Jurisdiction:	Caruthersville
Risk / Vulnerability	
Problem being Mitigated:	Flooding of roadways
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	Action 2.1
Name of Action or Project:	Action 2.1
Action or Project Description:	The Jurisdiction will add an ordinance/policy for roadway designs to refer to MoDot Engineering Policy Guide when creating a design for drainage. 748 Hydraulics and Drainage is the section of the guide that should be referenced.
Applicable Goal Statement:	Minimize property damage due to flooding.
Estimated Cost:	This action will have minimal cost involved.
Benefits:	This will ensure all new street projects will use "best practices" to ensure the project does not create new flooding potential.
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	High - 35
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing Not Started
Reason for Progress	

Goal 3: Minimize injuries and property damage due to seismic events.

Action 3.1: Adopt additional building codes for new construction or improvements of any critical facilities to reflect the NEHRP Seismic Provisions.

Action Worksheet	
Name of Jurisdiction:	Caruthersville
Risk / Vulnerability	
Problem being Mitigated:	Earthquake impact on future buildings.
Hazard(s) Addressed:	Earthquake
Action or Project	
Action/Project Number:	Action 3.1
Name of Action or Project:	Action 3.1
Action or Project Description:	The jurisdiction will adopt an ordinance/policy for all new critical facilities be designed/built according to the NEHRP Seismic provisions.
Applicable Goal Statement:	Minimize property damage due to earthquakes.
Estimated Cost:	N/A.
Benefits:	This will help to reduce damage to the facilities that are crucial during emergency events.
Plan for Implementation	
Responsible Organisation/Department:	Mayor
Action/Project Priority:	High - 34
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing Not-Started
Report of Progress:	

Goal 3: Minimize injuries and property damage due to seismic events.

Action 3.2: Designate an Emergency Operations Center and conduct an annual coordination exercise with all city officials.

Action Worksheet	
Name of Jurisdiction:	Caruthersville
Risk / Vulnerability	
Problem being Mitigated:	Earthquake preparedness.
Hazard(s) Addressed:	Earthquake
Action or Project	
Action/Project Number:	Action 3.2
Name of Action or Project:	Action 3.2
Action or Project Description:	The county will assign an EOC and then do annually coordination exercises with county officials and emergency management officials.
Applicable Goal Statement:	Minimize injury or death due to earthquake.
Estimated Cost:	N/A.
Benefits:	Keeping earthquake safety and procedures fresh in emergency official minds.
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	High - 34
Timeline for Completion:	2 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action/Status	Continuing, Ongoing
Report of Progress	

Goal 3: Minimize injuries and property damage due to seismic events.

Action 3.3: Create an earthquake awareness program to create brochures on earthquake preparedness and distribute to the public.

Action Worksheet	
Name of Jurisdiction:	Caruthersville
Risk / Vulnerability	
Problem being Mitigated:	Education for public on Safety tips and procedures during an earthquake.
Hazard(s) Addressed:	Earthquake
Action or Project	
Action/Project Number:	Action 3.3
Name of Action or Project:	Action 3.3
Action or Project Description:	The jurisdiction will create/acquire brochures on earthquake awareness and preparedness and distribute in local facilities for the public.
Applicable Goal Statement:	Minimize injury due to earthquake.
Estimated Cost:	N/A.
Benefits:	This education can educate the public on how to respond during a seismic event and possibly save lives.
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	Medium - 29
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing Not Started
Report of Progress	

Goal 3: Minimize injuries and property damage due to seismic events.

Action 3.5: Install bracing and stabilizing components to shelving, cabinets and other equipment inside fire station.

Action Worksheet	
Name of Jurisdiction:	Caruthersville
Risk / Vulnerability	
Problem being Mitigated:	Reduce damage to property and/or reduce possible injury from falling debris from effects of earthquake.
Hazard(s) Addressed:	Earthquake
Action or Project	
Action/Project Number:	Action 3.5
Name of Action or Project:	Action 3.5
Action or Project Description:	Install bracing and stabilizing components to shelving, cabinets and other equipment inside fire station
Applicable Goal Statement:	Minimize injuries/death due to earthquake.
Estimated Cost:	\$500 - \$5,000
Benefits:	Creates a safer environment and prevent shutdown of facility in time of emergency
Plan for Implementation	
Responsible Organization/Department:	Fire Chief
Action/Project Priority:	High - 33
Timeline for Completion:	5 year
Potential Fund Sources:	FEMA & City
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing
Report of Progress	

Goal 4: Minimize the impact to natural and human resources caused by drought and/or heat wave.

Action 4.1: Adopt "best practices" policy in conjunction with the Soil and Water Conservation Commission during periods of drought. Print in brochure and distribute to educate public.

Action Worksheet	
Name of Jurisdiction:	Caruthersville
Risk / Vulnerability	
Problem being Mitigated:	Educating public on water conservation.
Hazard(s) Addressed:	Drought, Extreme Heat
Action or Project	
Action/Project Number:	Action 4.1
Name of Action or Project:	Action 4.1
Action or Project Description:	Jurisdiction with the guidance of the Department of Soil and Water Conservation Commission will create a water conservation brochure to distribute.
Applicable Goal Statement:	Minimize injuries due to drought
Estimated Cost:	N/A.
Benefits:	This will ensure no water shortage when wells are at their lowest points.
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	Medium - 2B
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing Not Started
Report of Progress	

Goal 4: Minimize the impact to natural and human resources caused by drought and/or heat wave.

Action 4.2: Adopt "best practices" policy in conjunction with the Public Electric Utility Companies during periods of heatwave. Print in brochure and distribute to educate public.

Action Worksheet	
Name of Jurisdiction:	Caruthersville
Risk / Vulnerability	
Problem being Mitigated:	Educating public on power conservation.
Hazard(s) Addressed:	Drought, Extreme Heat + Wild Fire
Action or Project	
Action/Project Number:	Action 4.2
Name of Action or Project:	Action 4.2
Action or Project Description:	Jurisdiction with the guidance of the Public Electric Utility Companies will create a power conservation brochure to distribute.
Applicable Goal Statement:	Minimize injuries extreme heat/drought.
Estimated Cost:	N/A.
Benefits:	-
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	Medium - 28
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	Power conservation will ensure that power stations do not get overloaded due to excess usage of A/C, irrigation pumps and other cooling or watering devices.
Progress Report	
Activity Status:	Continuing Not Started
Report of Progress:	

Goal 5: Maintain public services to minimize the risk and reduce property damage caused by severe winter weather.

Action 5.2: Meet annually with critical facilities administrators to develop severe winter weather strategies.

Action Worksheet	
Name of Jurisdiction:	Caruthersville
Risk / Vulnerability	
Problem being Mitigated:	Impacts of Severe winter weather
Hazard(s) Addressed:	Severe winter weather
Action or Project	
Action/Project Number:	Action 5.2
Name of Action or Project:	Action 5.2
Action or Project Description:	Once a year the mayor association meeting may include winter weather strategies into its agenda.
Applicable Goal Statement:	Minimize injuries/death due to severe winter weather
Estimated Cost:	N/A.
Benefits:	All communities will coordinate on decreasing the impact of severe winter weather
Plan for Implementation	
Responsible Organisation/Department:	Mayor
Action/Project Priority:	Medium - 27
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing Not started
Report of Progress:	

Goal 5: Maintain public services to minimize the risk and reduce property damage caused by severe winter weather.

Action 5.3: Educate the public utility and user on preventive measures to reduce the risk to public and private property

Action Worksheet	
Name of Jurisdiction:	Caruthersville
Risk / Vulnerability	
Problem being Mitigated:	Impacts of Severe winter weather
Hazard(s) Addressed:	Severe winter weather
Action or Project	
Action/Project Number:	Action 5.3
Name of Action or Project:	Action 5.3
Action or Project Description:	Meet with health care officials and local veterinarians to develop "best practices" brochures on techniques to protect human life and domesticated animals during periods of severe cold weather and power outages.
Applicable Goal Statement:	Minimize injuries/death due to severe winter weather
Estimated Cost:	N/A.
Benefits:	Education is always a key component in reducing risks of injury or death in hazard situations.
Plan for Implementation	
Responsible Organisation/Department:	Mayor
Action/Project Priority:	Medium - 29
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing Not started
Report of Progress:	

ACTION WORKSHEET

Name of Jurisdiction	North Heights City Hall
Hazard(s) Addressed	1.1 Eliminate loss of life
Problem Being Mitigated	Public Safety high winds tornado
Applicable Goal Statement	Reduce property damage
Action/Project Number	Action 1.1
Name of Action or Project	Fema
Mitigation Category	
Action or Project Description	The city will apply for funding for Fema grants?
Estimated Cost	\$10,000 - \$20,000
Benefits	Life + Safety
Responsible Department	Mayor
Supporting Department	FEMA
Action Category	High
Time to Implement	5-10 YEAR
Potential Public Impact	N/A
Local Government Funding	
Status	NEW
Report on Progress	

ACTION WORKSHEET

Name of Jurisdiction	Harris Heights C.T.D. Hall
Hazard(s) Addressed	Flooding of Roadways
Problem Being Mitigated	Flooding
Applicable Goal Statement	Minimize property damage/roadways
Action/Project Number	action 2.1
Name of Action/Project	Action 2.1
MRF/Action Category	
Action or Project Description	Adopt roadway drainage design policy referencing MDOT Engineering creating a design for drainage
Estimated Cost	Action will involve minimal cost
Benefits	This will ensure all new street projects will use "best practices" to ensure the project does not create new flooding potential
Responsible Organization/Department	Mayor
Supporting Organization/Department	
ADP/Project STAPLES Score/Priority	High - 35
Timeline for Completion	1 year
Potential Funding Source	n/a
Local Planning Model(s) to be Used	Unknown
Status	Continuing not started
Report on Progress	

ACTION WORKSHEET	
Name of Jurisdiction	<i>Hauti Heights</i>
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Flood Related Hazards: Flooding; Levee Failure; Dam Failure
Problem Being Mitigated	Riverine flood impacts on the community
Action or Project	Action or Project
Applicable Goal Statement	Goal 2: Minimize property damage due to flooding, levee failure, dam failure
Action/Project Number	<i>2.7</i>
Name of Action or Project	NFIP Compliance
Mitigation Category	Prevention
Action or Project Description	Continued compliance with, participation in, and implementation of NFIP requirement to reduce flood risks within flood hazard areas by seeking grant funds for flood buyouts, elevation projects, etc. (1) Adopt new effective FIRMs and update floodplain ordinance accordingly
Estimated Cost	Less than \$10,000
Benefits	Life / Safety; Flood mitigation; compliance with NFIP Largely administrative costs for implementation and coordination
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Mayor / City Council
Supporting Organization/Department	EMD
Action / Project STAPLEE Score/Priority	High (36 Points)
Timeline for Completion	Within the next 1 -2 years
Potential Funding Source	Staff Time; General Fund
Local Planning Mechanism to be Used	Stormwater/Floodplain/Development Permit
Action Status	Action Status
Status	Ongoing
Report on Progress	Adopt new effective FIRMs and update floodplain ordinance accordingly

ACTION WORKSHEET	
Name of Jurisdiction	Hayti Heights
Hazard(s) Addressed	Public education for safety tips & procedures for Earthquake.
Problem Being Mitigated	Earthquake
Applicable Goal Statement	Minimize injury due to earthquake
Action/Project Number	3.3
Name of Action or Project	Earthquake education
Mitigation Category	Earthquake - Education + Outreach
Action or Project Description	Create or acquire brochures about earthquake awareness and preparedness. Distribute to public.
Estimated Cost	unknown
Benefits	Educating public on how to respond to significant seismic events can possibly save lives
Responsible Organization/Department	city administration
Supporting Organization/Department	
Action/Project START/END Score/Priority	3A high
Timeline for Completion	ongoing; annually
Potential Funding Source	local funds
Local Funding Mechanism to be Used	
Status	Now
Report on Progress	

ACTION WORKSHEET	Hayti Heights
Name of Jurisdiction	
Hazard(s) Addressed	Drought / Extreme Heat
Problem Being Mitigated	Educating public on water conservation during periods of drought and extreme heat.
Applicable Goal Statement	Heat / Drought water conservation education + Wild fire
Action/Project Number	4.1
Name of Action or Project	Water Conservation
Mitigation Category	
Action or Project Description	Create or obtain water conservation brochure to distribute to public and educate public on heat/drought + wild fire
Estimated Cost	
Benefits	ensure water availability during periods of drought and extreme heat.
Responsible Organization / Department	city administration
Supporting Organization/Department	Mrs Dept of Soil + Water Conserv.
Action / Project STAPLEE Score/Priority	29 medium
Timeline for Completion	annual - ongoing
Potential Funding Source	local
Local Planning Mechanism to be Used	
Status	New
Report on Progress	

ACTION WORKSHEET

Name of Jurisdiction	Houti Heights City Hall
Hazard(s) Addressed	Severe Winter Weather
Problem Being Mitigated	Maintain public services to minimize the risk and reduce property damage caused by severe winter weather
Applicable Goal Statement	5.1 Create emergency snow routes
Action/Project Number	5.1 Snow routes - establish priority
Name of Program or Project	5.1
Mitigation Category	Emergency Services
Action or Project Description	Create emergency snow routes in conjunction with County officials.
Estimated Cost	n/a
Benefits	Safe roadways + street Emergency Routes
Priority	High
Timeline	5-10 weeks
Funding Source	Grants / FEMA
Status	new
Report on Progress	

Goal 1: Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.

Action 1.1: Adopt most current IRC (residential), IBC (commercial building), and ICC 600 (High Wind Areas) codes to withstand high winds and possible tornado.

Action Worksheet	
Name of Jurisdiction:	Hayti
Risk / Vulnerability	
Problem being Mitigated:	Damage to residential and commercial property will be decreased in any new homes or buildings.
Hazard(s) Addressed:	High Winds and/or Tornado
Action or Project	
Action/Project Number:	Action 1.1
Name of Action or Project:	Action 1.1
Action or Project Description:	Each jurisdiction will establish a policy or ordinance for building recommendations for all future construction projects. The policy will refer to newest building codes provided by ICC.
Applicable Goal Statement:	Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.
Estimated Cost:	This action will have minimal cost involved.
Benefits:	This will save money for insurers and owners of properties. Will also reduce chances of building occupants being injured if building integrity is compromised.
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	High - 45
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing Not Started
Report of Progress	

Goal 1: Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.

Action 1.2: Host safety workshops annually with a focus on all natural hazards.

Action Worksheet	
Name of Jurisdiction:	Haiti
Problem being Mitigated:	Risk / Vulnerability Education / Outreach + Prevention
Hazard(s) Addressed:	Tornadoes / Severe Thunderstorms Action or Project
Action/Project Number:	Action 1.2
Name of Action or Project:	Action 1.2
Action or Project Description:	The jurisdiction will host an annual workshop that will educate the public on safety during a hazardous event with emphasis on tornado.
Applicable Goal Statement:	Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.
Estimated Cost:	This action will have minimal cost involved.
Benefits:	This action will educate the public on safety tips on how to respond in a tornado scenario. It will provide the public with knowledge of how safety personnel would respond in these scenarios. Education could be a major component in saving a life.
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	Medium - 27
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing Not Started
Report of Progress:	

Goal 2: Minimize property damage due to flooding

Action 2.1: Adopt roadway drainage design policy referencing MoDOT Engineering Policy Guide "748 Hydraulics and Drainage"

Action Worksheet	
Name of Jurisdiction:	Hayti
Risk / Vulnerability	
Problem being Mitigated:	Flooding of roadways
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	Action 2.1
Name of Action or Project:	Action 2.1
Action or Project Description:	The Jurisdiction will add an ordinance/policy for roadway designs to refer to MoDOT Engineering Policy Guide when creating a design for drainage. 748 Hydraulics and Drainage is the section of the guide that should be referenced.
Applicable Goal Statement:	Minimize property damage due to flooding.
Estimated Cost:	This action will have minimal cost involved.
Benefits:	This will ensure all new street projects will use "best practices" to ensure the project does not create new flooding potential.
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	High - 47
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing Not Started
Report of Progress:	

Goal 3: Minimize injuries and property damage due to seismic events.

Action 3.1: Adopt additional building codes for new construction or improvements of any critical facilities to reflect the NEHRP Seismic Provisions.

Action Worksheet	
Name of Jurisdiction:	Haiti
Risk / Vulnerability	
Problem being Mitigated:	Earthquake impact on future buildings.
Hazard(s) Addressed:	Earthquake
Action or Project	
Action/Project Number:	Action 3.1
Name of Action or Project:	Action 3.1
Action or Project Description:	The jurisdiction will adopt an ordinance/policy for all new critical facilities to be designed/built according to the NEHRP Seismic provisions.
Applicable Goal Statement:	Minimize property damage due to earthquake.
Estimated Cost:	N/A.
Benefits:	This will help to reduce damage to the facilities that are crucial during emergency events.
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	High - 44
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing Not Started
Report of Progress:	

Goal 3: Minimize injuries and property damage due to seismic events.

Action 3.2: Designate an Emergency Operations Center and conduct an annual coordination exercise with all city officials.

Action Worksheet	
Name of Jurisdiction:	Hayti
Risk / Vulnerability	
Problem being Mitigated:	Earthquake preparedness.
Hazard(s) Addressed:	Earthquake
Action or Project	
Action/Project Number:	Action 3.2
Name of Action or Project:	Action 3.2
Action or Project Description:	The county will assign an EOC and then do annually coordination exercises with county officials and emergency management officials.
Applicable Goal Statement:	Minimize injury or death due to earthquake.
Estimated Cost:	N/A.
Benefits:	Keeping earthquake safety and procedures fresh in emergency official minds.
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	High - 34
Timeline for Completion:	2 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing, Ongoing
Report of Progress	

Goal 3: Minimize injuries and property damage due to seismic events.

Action 3.3: Create an earthquake awareness program to create brochures on earthquake preparedness and distribute to the public.

Action Worksheet	
Name of Jurisdiction:	Hayti
Risk / Vulnerability	
Problem being Mitigated:	Education for public on Safety tips and procedures during an earthquake.
Hazard(s) Addressed:	Earthquake
Action or Project	
Action/Project Number:	Action 3.3
Name of Action or Project:	Action 3.3
Action or Project Description:	The jurisdiction will create/acquire brochures on earthquake awareness and preparedness and distribute in local facilities for the public.
Applicable Goal Statement:	Minimize injury due to earthquake.
Estimated Cost:	N/A.
Benefits:	This education can educate the public on how to respond during a seismic event and possibly save lives.
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	Medium - 29
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing/Not Started
Report of Progress	

Goal 3: Minimize injuries and property damage due to seismic events.

Action 3.5: Install bracing and stabilizing components to shelving, cabinets and other equipment inside fire station.

Action Worksheet	
Name of Jurisdiction:	Hayti
Risk / Vulnerability	
Problem being Mitigated:	Reduce damage to property and/or reduce possible injury from falling debris from effects of earthquake.
Hazard(s) Addressed:	Earthquake
Action or Project	
Action/Project Number:	Action 3.5
Name of Action or Project:	Action 3.5
Action or Project Description:	Install bracing and stabilizing components to shelving, cabinets and other equipment inside fire station
Applicable Goal Statement:	Minimize injuries/death due to earthquake.
Estimated Cost:	\$500 - \$5,000
Benefits:	Creates a safer environment and prevent shutdown of facility in time of emergency
Plan for Implementation	
Responsible Organization/Department:	Fire Chief
Action/Project Priority:	High - 33
Timeline for Completion:	5 year
Potential Fund Sources:	FEMA & City
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Ongoing
Report of Progress	

Goal 4: Minimize the impact to natural and human resources caused by drought and/or heat wave.

Action 4.1: Adopt "best practices" policy in conjunction with the Soil and Water Conservation Commission during periods of drought. Print in brochure and distribute to educate public.

Action Worksheet	
Name of Jurisdiction:	Hayti
Risk / Vulnerability	
Problem being Mitigated:	Educating public on water conservation.
Hazard(s) Addressed:	Drought, Extreme Heat • <i>wild fire</i>
Action or Project	
Action/Project Number:	Action 4.1
Name of Action or Project:	Action 4.1
Action or Project Description:	Jurisdiction with the guidance of the Department of Soil and Water Conservation Commission will create a water conservation brochure to distribute. <i>to educate public on drought, heat • wild fire</i>
Applicable Goal Statement:	Minimize injuries due to drought
Estimated Cost:	N/A
Benefits:	This will ensure no water shortage when wells are at their lowest points.
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	Medium - 28
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing Not Started
Report of Progress	

Goal 4: Minimize the impact to natural and human resources caused by drought and/or heat wave.

Action 4.2: Adopt "best practices" policy in conjunction with the Public Electric Utility Companies during periods of heatwave. Print in brochure and distribute to educate public.

Action Worksheet	
Name of Jurisdiction:	Hayti
Risk / Vulnerability	
Problem being Mitigated:	Educating public on power conservation.
Hazard(s) Addressed:	Drought, Extreme Heat
Action or Project	
Action/Project Number:	Action 4.2
Name of Action or Project:	Action 4.2
Action or Project Description:	Jurisdiction with the guidance of the Public Electric Utility Companies will create a power conservation brochure to distribute.
Applicable Goal Statement:	Minimize injuries extreme heat/drought.
Estimated Cost:	N/A.
Benefits:	-
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	Medium - 28
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	Power conservation will ensure that power stations do not get overloaded due to excess usage of A/C, irrigation pumps and other cooling or watering devices.
Progress Report	
Action Status:	Continuing Not Started
Report of Progress:	

Goal 5: Maintain public services to minimize the risk and reduce property damage caused by severe winter weather.

Action 5.2: Meet annually with critical facilities administrators to develop severe winter weather strategies.

Action Worksheet	
Name of Jurisdiction:	Hayti
Risk / Vulnerability	
Problem being Mitigated:	Impacts of Severe winter weather
Hazard(s) Addressed:	Severe winter weather
Action or Project	
Action/Project Number:	Action 5.2
Name of Action or Project:	Action 5.2
Action or Project Description:	Once a year the mayor association meeting may include winter weather strategies into its agenda.
Applicable Goal Statement:	Minimize injuries/death due to severe winter weather
Estimated Cost:	N/A.
Benefits:	All communities will coordinate on decreasing the impact of severe winter weather
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	Medium - 27
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing Not started
Report of Progress	

Goal 5: Maintain public services to minimize the risk and reduce property damage caused by severe winter weather.

Action 5.3: Educate the public utility end user on preventive measures to reduce the risk to public and private property

Action Worksheet	
Name of Jurisdiction:	Hayti
Risk / Vulnerability	
Problem being Mitigated:	Impacts of Severe winter weather
Hazard(s) Addressed:	Severe winter weather
Action or Project	
Action/Project Number:	Action 5.3
Name of Action or Project:	Action 5.3
Action or Project Description:	Meet with health care officials and local veterinarians to develop "best practices" brochures on techniques to protect human life and domesticated animals during periods of severe cold weather and power outages.
Applicable Goal Statement:	Minimize injuries/death due to severe winter weather
Estimated Cost:	N/A.
Benefits:	Education is always a key component in reducing risks of injury or death in hazard situations.
Plan for Implementation	
Responsible Organization/Department:	Mayor
Action/Project Priority:	Medium - 29
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing Not started
Report of Progress	

Goal 1: Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.

Action 1.1: Adopt most current IRC (residential), IBC (commercial building), and ICC 800 (high wind Areas) codes to withstand high winds and possible tornado.

Action Worksheet	
Name of Jurisdiction:	Pemiscot County
Risk / Vulnerability	
Problem being Mitigated:	Damage to residential and commercial property will be decreased in any new homes or buildings.
Hazard(s) Addressed:	High Winds and/or Tornado
Action or Project	
Action/Project Number:	Action 1.1
Name of Action or Project:	Action 1.1
Action or Project Description:	Each jurisdiction will establish a policy or ordinance for building recommendations for all future construction projects. The policy will refer to newest building codes provided by ICC.
Applicable Goal Statement:	Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.
Estimated Cost:	This action will have minimal cost involved.
Benefits:	This will save money for insurers and owners of properties. Will also reduce chances of building occupants being injured if building integrity is compromised.
Plan for Implementation	
Responsible Organization/Department:	County Commission
Action/Project Priority:	High - 34
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing Not Started
Report of Progress:	

C

Goal 1: Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.

Action 1.4: Purchase storm siren as funding comes available.

Action Worksheet	
Name of Jurisdiction:	Pemiscot County
Risk / Vulnerability	
Problem being Mitigated:	Public safety in severe storms/tornado. Alerting residents of severe weather and tornadoes.
Hazard(s) Addressed:	Severe Thunderstorm/High Winds/Tornado
Action or Project	
Action/Project Number:	Action 1.4
Name of Action or Project:	Action 1.4
Action or Project Description:	The County will apply for funding to purchase warning sirens in multiple rural areas of the county.
Applicable Goal Statement:	Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.
Estimated Cost:	\$10,000 - \$20,000 / siren
Benefits:	This action will alert residents of oncoming weather and/or tornadoes
Plan for Implementation	
Responsible Organization/Department:	County EMD
Action/Project Priority:	High - 34
Timeline for Completion:	5 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Ongoing
Report of Progress	

c

Goal 2: Minimize property damage due to flooding

Action 2.1: Adopt roadway drainage design policy referencing MoDOT Engineering Policy Guide "748 Hydraulics and Drainage"

Action Worksheet	
Name of Jurisdiction:	Pemiscot County
Risk / Vulnerability	
Problem being Mitigated:	Flooding of roadways
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	Action 2.1
Name of Action or Project:	Action 2.1
Action or Project Description:	The Jurisdiction will add an ordinance/policy for roadway designs to refer to MoDOT Engineering Policy Guide when creating a design for drainage. 748 Hydraulics and Drainage is the section of the guide that should be referenced.
Applicable Goal Statement:	Minimize property damage due to flooding.
Estimated Cost:	This action will have minimal cost involved.
Benefits:	This will ensure all new street projects will use "best practices" to ensure the project does not create new flooding potential.
Plan for Implementation	
Responsible Organization/Department:	County Commission
Action/Project Priority:	High - 35
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing Not Started
Report of Progress	

C

Goal 2: Minimize property damage due to flooding

Action 2.6: Raise elevation on county roads throughout county that repeatedly flood and wash out. (Specifically CR 238, 274, 337, 340, 362, 363, 470, 473, 474)

Action Worksheet	
Name of Jurisdiction:	Pemiscot County
Risk / Vulnerability	
Problem being Mitigated:	Flooding of Roads
Hazard(s) Addressed:	Flooding + <i>Levee Failure</i>
Action or Project	
Action/Project Number:	Action 2.6
Name of Action or Project:	Action 2.6
Action or Project Description:	County will elevate county roads to prevent future flooding.
Applicable Goal Statement:	Minimize property damage due to flooding.
Estimated Cost:	\$100,000 - \$400,000
Benefits:	This will prevent repetitive repairs and allow safe travel during times of heavy rains.
Plan for Implementation	
Responsible Organization/Department:	County Commission
Action/Project Priority:	Medium - 29
Timeline for Completion:	5 year
Potential Fund Sources:	FBMA, CDBG, County
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	<i>Continuing</i>
Report of Progress	

2

Goal 3: Minimize injuries and property damage due to seismic events.

Action 3.1: Adopt additional building codes for new construction or improvements of any critical facilities to reflect the NEHRP Seismic Provisions.

Action Worksheet	
Name of Jurisdiction:	Pemiscot County
Risk / Vulnerability	
Problem being Mitigated:	Earthquake impact on future buildings.
Hazard(s) Addressed:	Earthquake
Action or Project	
Action/Project Number:	Action 3.1
Name of Action or Project:	Action 3.1
Action or Project Description:	The jurisdiction will adopt an ordinance/policy for all new critical facilities be designed/built according to the NEHRP Seismic provisions.
Applicable Goal Statement:	Minimize property damage due to earthquake.
Estimated Cost:	N/A.
Benefits:	This will help to reduce damage to the facilities that are crucial during emergency events.
Plan for Implementation	
Responsible Organization/Department:	County Commission
Action/Project Priority:	High - 34
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing Not Started
Report of Progress:	

2

Goal 3: Minimize injuries and property damage due to seismic events.

Action 3.2: Designate an Emergency Operations Center and conduct an annual coordination exercise with all county officials.

Action Worksheet	
Name of Jurisdiction:	Pemiscot County
Risk / Vulnerability	
Problem being Mitigated:	Earthquake preparedness.
Hazard(s) Addressed:	Earthquake
Action or Project	
Action/Project Number:	Action 3.2
Name of Action or Project:	Action 3.2
Action or Project Description:	The county will assign an EOC and then do annually coordination exercises with county officials and emergency management officials.
Applicable Goal Statement:	Minimize injury or death due to earthquakes.
Estimated Cost:	N/A.
Benefits:	Keeping earthquake safety and procedures fresh in emergency official minds.
Plan for Implementation	
Responsible Organization/Department:	Pemiscot County Commission
Action/Project Priority:	High - 34
Timeline for Completion:	2 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing, Ongoing
Report of Progress	

C

ACTION WORKSHEET

Name of Jurisdiction	Hamilton Co.
Hazard(s) Addressed	DROUGHT
Problem Being Mitigated	DROUGHT
Applicable Goal Statement	IF DECLARED DISASTER APPLY FOR FUNDS TO SUPPORT WATER SYSTEMS IN AREA AND ASK CITIZENS TO CONSERVE WATER. WORK WITH SOIL CONSERVATION ON BEST PRACTICE POLICIES
Action/Project Number	4.1
Name of Action or Project	DROUGHT
Mitigation Category	DROUGHT
Action or Project Description	WORK WITH SOIL CONSERVATION ON BEST PRACTICES. WORK WITH OTHER GOVERNMENT AGENCIES FOR FURTHER FUNDING AND EDUCATION.
Estimated Cost	\$10,000
Benefits	KEEP EVERYONE WELL SUPPLIED WITH WATER.
Responsible Organization / Department	Hamilton County
Supporting Organization/Department	
Action / Project STAPLE Score	31 High
Timeframe/Duration	2 YEARS
Potential Funding Source	
Local Plan/Policy/Regulation/Ordinance	
Priority	NEW
Report on Progress	

Goal 4: Minimize the impact to natural and human resources caused by drought and/or heat wave.

Action 4.2: Adopt "best practices" policy in conjunction with the Public Electric Utility Companies during periods of heatwave. Print in brochure and distribute to educate public.

Action Worksheet	
Name of Jurisdiction:	Pemiscot County
Risk / Vulnerability	
Problem being Mitigated:	Educating public on power conservation.
Hazard(s) Addressed:	Drought, Extreme Heat + wild fire
Action or Project	
Action/Project Number:	Action 4.2
Name of Action or Project:	Action 4.2
Action or Project Description:	Jurisdiction with the guidance of the Public Electric Utility Companies will create a power conservation brochure to distribute & educate public on drought, heat + wild fire
Applicable Goal Statement:	Minimize injuries extreme heat/drought.
Estimated Cost:	N/A.
Benefits:	.
Plan for Implementation	
Responsible Organization/Department:	County Commission
Action/Project Priority:	Medium - 28
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	Power conservation will ensure that power stations do not get overloaded due to excess usage of A/C, Irrigation pumps and other cooling or watering devices.
Progress Report	
Action/Status:	Continuing Not Started
Report of Progress:	

c

Goal 6: Maintain public services to minimize the risk and reduce property damage caused by severe winter weather.

Action 5.1: Create an emergency snow route map for the county road system and coordinate snow removal activities with state and local officials in September of each year.

Action Worksheet	
Name of Jurisdiction:	Pemiscot County
Risk / Vulnerability	
Problem being Mitigated:	Transportation in snow and icy conditions
Hazard(s) Addressed:	Severe winter weather
Action or Project	
Action/Project Number:	Action 5.1
Name of Action or Project:	Action 5.1
Action or Project Description:	Snow Route Maps will need to be completed along with coordinating mutual aid agreements
Applicable Goal Statement:	Minimize injuries/death due to severe winter weather
Estimated Cost:	N/A
Benefits:	Communication and coordination will ensure the roads will be cleared and maintained in a sensible order of priority.
Plan for Implementation	
Responsible Organization/Department:	County Commission
Action/Project Priority:	Medium - 29
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing ongoing
Report of Progress:	

2

ACTION WORKSHEET

Name of Jurisdiction	Pemiscot County
Hazard(s) Addressed	SEVERE WINTER WEATHER
Problem Being Mitigated	WINTER WEATHER
Applicable Goal Statement	KEEP UP WITH SEVERE WINTER WEATHER REPORTS AND BROADCAST TO COMMUNITY
Action/Project Number	6.2
Name of Action or Project	SEVERE WINTER WEATHER WARNING EDUCATION
Mitigation Category	SEVERE WINTER WEATHER
Action or Project Description	NOTIFY PEOPLE OF IMPENDING SEVERE WINTER WEATHER THROUGH RADIO AND SOCIAL MEDIA.
Estimated Cost	\$ 5,000
Benefits	WARN PEOPLE OF SEVERE WEATHER SO THEY CAN PREPARE FOR IT - GENERATORS, FOOD, ETC.
Responsible Organization / Department	PEMISCOT COUNTY
Supporting Organization/Department	
Action / Project STAPLEX Score/Priority	33 High
Timeline for Completion	5 YEARS
Potential Funding Source	GENERAL REVENUES
Local Planning Mechanism to be Used	SEVERE WEATHER ALERTS
Status	New
Report on Progress	

2

ACTION WORKSHEET	
Name of Jurisdiction	Fernisco County
Hazard(s) Addressed	Tornadoes / Sev. Thunderstorm / Flood / Earthquake / Drought / Extreme Temp / Severe winter weather
Problem Being Mitigated	Update 2023 Hazard Mitigation Plan periodically
Applicable Goal Statement	Update Haz. Mit. Plan
Action/Project Number	6.1
Name of Action or Project	6.1
Mitigation Category	Education / Outreach
Action or Project Description	Appoint person or committee to review plan periodically to ensure execution and suggest updates.
Estimated Cost	
Benefits	Complete and update the various action items across all schools and jurisdictions
Responsible Organization/Department	County Administration
Supporting Organization/Department	
Action / Project START/ END Score / Priority	
Timeframe of Completion	Annually / Bi annually
Potential Funding Source	local
Local Funding Mechanism to be Used	
Status	New
Report on Progress	

2

Goal 1: Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.

Action 1.3: School districts will re-evaluate their crisis plans and conduct preparedness drills on a regularly scheduled basis.

Action Worksheet	
Name of Jurisdiction:	Caruthersville CPS 18 School District
Risk / Vulnerability	
Problem being Mitigated:	Public safety in severe storms/tornado. Educating students and staff.
Hazard(s) Addressed:	Severe Thunderstorm/High Winds/Tornado
Action or Project	
Action/Project Number:	Action 1.3
Name of Action or Project:	Action 1.3
Action or Project Description:	The school district will re-evaluate crisis plan and conduct preparedness drills on a regularly scheduled basis.
Applicable Goal Statement:	Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.
Estimated Cost:	N/A
Benefits:	This action will educate student and staff on hazard preparedness.
Plan for Implementation	
Responsible Organization/Department:	Superintendent
Action/Project Priority:	<i>High 47</i>
Timeline for Completion:	5 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing
Report of Progress	

Goal 1: Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.

Action 1.6: Purchase generator for existing safe room as funding comes available.

Action Worksheet	
Name of Jurisdiction:	Caruthersville CPS 18
Risk / Vulnerability	
Problem being Mitigated:	Public safety in severe storms/tornado. Providing electric in available shelter to residents and students of community.
Hazard(s) Addressed:	<i>Tornadoes + Severe Thunderstorms</i>
Action or Project	
Action/Project Number:	Action 1.6
Name of Action or Project:	Action 1.6
Action or Project Description:	Apply for funding to purchase safe room generators.
Applicable Goal Statement:	Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.
Estimated Cost:	\$50,000 - \$100,000
Benefits:	Provide power during severe storm and/or tornado event.
Plan for Implementation	
Responsible Organization/Department:	Superintendent
Action/Project Priority:	Medium - 29
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	NEW <i>Continue</i>
Report of Progress	

Goal 2: Minimize property damage due to flooding

Action 2.2: School districts will seek funding for storm water control projects.

Action Worksheet	
Name of Jurisdiction:	Caruthersville CPS 18 School District
Risk / Vulnerability	
Problem being Mitigated:	Flooding
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	Action 2.2
Name of Action or Project:	Action 2.2
Action or Project Description:	The school district will seek funding for storm water control projects.
Applicable Goal Statement:	Minimize property damage due to flooding.
Estimated Cost:	Cost varies with size of district
Benefits:	This will minimize flooding by controlling storm water flow.
Plan for Implementation	
Responsible Organization/Department:	Superintendent
Action/Project Priority:	Medium - 29
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing
Report of Progress	

Goal 2: Minimize property damage due to flooding

Action 2.3: School districts will alter bus routes and school schedule to accommodate flooded bus routes.

Action Worksheet	
Name of Jurisdiction:	Caruthersville CPS 18 School District
Risk / Vulnerability	
Problem being Mitigated:	Flooding
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	Action 2.3
Name of Action or Project:	Action 2.3
Action or Project Description:	School districts will alter bus routes and school schedule to accommodate flooded bus routes.
Applicable Goal Statement:	Minimize property damage due to flooding.
Estimated Cost:	No cost
Benefits:	This will ensure students safety when traveling to school.
Plan for Implementation	
Responsible Organization/Department:	Superintendent
Action/Project Priority:	<i>High 47</i>
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing
Report of Progress	

Goal 2: Minimize property damage due to flooding

Action 2.4: School districts will keep parents informed of the impact of flooding on the school schedule.

Action Worksheet	
Name of Jurisdiction:	Caruthersville CPS 18 School District
Risk / Vulnerability	
Problem being Mitigated:	Flooding
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	Action 2.4
Name of Action or Project:	Action 2.4
Action or Project Description:	School districts will keep parents informed of the impact of flooding on the school schedule.
Applicable Goal Statement:	Minimize property damage due to flooding.
Estimated Cost:	No cost
Benefits:	This will inform parents and ensure students safety when traveling to school.
Plan for Implementation	
Responsible Organization/Department:	Superintendent
Action/Project Priority:	High 47
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing
Report of Progress	

Goal 3: Minimize injuries and property damage due to seismic events.

Action 3.3: Create an earthquake awareness program to create brochures on earthquake preparedness and distribute.

Action Worksheet	
Name of Jurisdiction:	Caruthersville CPS 18 School District
Risk / Vulnerability	
Problem being Mitigated:	Education for public on Safety tips and procedures during an earthquake.
Hazard(s) Addressed:	Earthquake
Action or Project	
Action/Project Number:	Action 3.3
Name of Action or Project:	Action 3.3
Action or Project Description:	The school district will create/acquire brochures on earthquake awareness and preparedness and distribute to the students.
Applicable Goal Statement:	Minimize injury due to earthquake.
Estimated Cost:	N/A.
Benefits:	This education can educate students on how to respond during a seismic event and possibly save lives.
Plan for Implementation	
Responsible Organization/Department:	Superintendent
Action/Project Priority:	Medium - 29
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing Not Started
Report of Progress	

Goal 3: Minimize injuries and property damage due to seismic events.

Action 3.4: Inform Parents of crisis plan and how it affects the students

Action Worksheet	
Name of Jurisdiction:	Caruthersville CPS 18 School District.
Risk / Vulnerability	
Problem being Mitigated:	Educating parents on district crisis plan.
Hazard(s) Addressed:	Earthquake
Action or Project	
Action/Project Number:	Action 3.4
Name of Action or Project:	Action 3.4
Action or Project Description:	The school districts will inform parents of crisis plan and its effects on the students
Applicable Goal Statement:	Minimize injuries/death due to earthquake.
Estimated Cost:	N/A.
Benefits:	This will educate parents on their child's safety in school.
Plan for Implementation	
Responsible Organization/Department:	School Superintendent.
Action/Project Priority:	Medium - 29
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing Not Started
Report of Progress	

ACTION WORKSHEET

Name of Jurisdiction	Caruthersville School District #18
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Earthquake
Problem Being Mitigated	Earthquake
Action or Project	Action or Project
Applicable Goal Statement	Minimize injuries and property damage due to seismic events.
Action/Project Number	Action 3.5
Name of Action or Project	Action 3.5
Mitigation Category	Earthquake
Action or Project Description	Installing bracing and stabilizing components to shelving, cabinets and other equipment inside the schools.
Estimated Cost	
Benefits	This action plan will create a safer environment and prevent a shutdown of the district in time of emergency.
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Superintendent
Supporting Organization/Department	
Action / Project STAPLEE Score/Priority	46 High
Timeline for Completion	
Potential Funding Source	
Local Planning Mechanism to be Used	
Action Status	Action Status
Status	NEW
Report on Progress	

Goal 4: Minimize the impact to natural and human resources caused by drought and/or heat wave.

Action 4.3: Alter school and extracurricular activities to accommodate periods of extreme heat.

Action Worksheet	
Name of Jurisdiction:	Caruthersville CPS 18 School District.
Risk / Vulnerability	
Problem being Mitigated:	Extreme heat effects on children
Hazard(s) Addressed:	Extreme Heat
Action or Project	
Action/Project Number:	Action 4.3
Name of Action or Project:	Action 4.3
Action or Project Description:	The school districts will set a guideline of procedures for the staff during periods of extreme heat.
Applicable Goal Statement:	Minimize injuries/death due to extreme heat
Estimated Cost:	N/A.
Benefits:	This will ensure no child or staff member will be unnecessarily exposed to extreme temperatures.
Plan for Implementation	
Responsible Organization/Department:	School Superintendent.
Action/Project Priority:	44 High
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing Not Started
Report of Progress	

ACTION WORKSHEET

Name of Jurisdiction	Caruthersville School District #18
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Severe Winter Weather
Problem Being Mitigated	Severe Winter Weather
Action or Project	Action or Project
Applicable Goal Statement	Maintain public services to minimize the risk and reduce property damage caused by severe winter weather.
Action/Project Number	Action 5.2
Name of Action or Project	Action 5.2
Mitigation Category	Severe Winter Weather
Action or Project Description	Meet annually with critical facilities administrators to develop severe winter weather strategies.
Estimated Cost	
Benefits	This action plan will allow the district to have strategies in place in the event of severe winter weather.
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Superintendent
Supporting Organization/Department	
Action / Project STAPLEE Score/Priority	<i>High 47</i>
Timeline for Completion	
Potential Funding Source	
Local Planning Mechanism to be Used	
Action Status	Action Status
Status	NEW
Report on Progress	

Goal 5: Maintain public services to minimize the risk and reduce property damage caused by severe winter weather.

Action 5.4: Meet with state and county road officials to set priorities for snow removal.

Action Worksheet	
Name of Jurisdiction:	Caruthersville CPS 18 School District.
Risk / Vulnerability	
Problem being Mitigated:	Impacts of Severe winter weather
Hazard(s) Addressed:	Severe winter weather
Action or Project	
Action/Project Number:	Action 5.4
Name of Action or Project:	Action 5.4
Action or Project Description:	Set priorities of roads to clear in order to ensure bus routes get proper attention.
Applicable Goal Statement:	Minimize injuries/death due to severe winter weather
Estimated Cost:	N/A.
Benefits:	Bus routes will be safe for travel.
Plan for Implementation	
Responsible Organization/Department:	School Superintendent
Action/Project Priority:	Medium - 29
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing Not started
Report of Progress	

ACTION WORKSHEET

Name of Jurisdiction	Caruthersville School District #18
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Pemiscot County Hazard Mitigation
Problem Being Mitigated	Pemiscot County Hazard Mitigation
Action or Project	Action or Project
Applicable Goal Statement	To put actions into place to ensure that the Pemiscot County Hazard Mitigation is a living, evolving plan, maintained and updated as necessary.
Action/Project Number	Action 6.1
Name of Action or Project	Action 6.1
Mitigation Category	Pemiscot County Hazard Mitigation
Action or Project Description	Appoint a person or committee to review the plan periodically to ensure execution and suggest updates needed.
Estimated Cost	
Benefits	This action plan will ensure that the district along with the Pemiscot County Hazard Mitigation is a living, evolving plan, maintained and updated as necessary.
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Superintendent
Supporting Organization/Department	
Action / Project STAPLEE Score/Priority	<i>High 47</i>
Timeline for Completion	
Potential Funding Source	
Local Planning Mechanism to be Used	
Action Status	Action Status
Status	NEW
Report on Progress	

ACTION WORKSHEET

Name of Jurisdiction	Cooter R-IV School District
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Severe Thunderstorms/High Winds/Tornadoes
Problem Being Mitigated	Public safety in severe storms. Providing shelter to residents and students.
Action or Project	Action or Project
Applicable Goal Statement	Eliminate loss of life, minimize injuries and reduce property damage caused by severe thunderstorms and tornadoes.
Action/Project Number	Action 1.3
Name of Action or Project	Action 1.3
Mitigation Category	Structure and Infrastructure Projects
Action or Project Description	The Cooter R-IV School District will apply for funding to construct a FEMA safe room.
Estimated Cost	\$500,000 - \$1,000,000
Benefits	This action will provide shelter in severe storms and tornadoes.
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Cooter R-IV School District Superintendent
Supporting Organization/Department	Cooter R-IV School District Board of Education
Action / Project STAPLEE Score/Priority	38
Timeline for Completion	5 years
Potential Funding Source	N/A
Local Planning Mechanism to be Used	N/A
Action Status	Action Status
Status	New
Report on Progress	

ACTION WORKSHEET

Name of Jurisdiction	Cooter R-IV School District
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Flooding
Problem Being Mitigated	Flooding
Action or Project	Action or Project
Applicable Goal Statement	Create a program to clean and maintain current drainage systems.
Action/Project Number	Action 2.2
Name of Action or Project	Action 2.2
Mitigation Category	Structure and Infrastructure Projects
Action or Project Description	The Cooter R-IV School District will create a program to clean and maintain current drainage systems.
Estimated Cost	\$5,000 - \$10,000
Benefits	This action will help with drainage and help to prevent flooding.
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Cooter R-IV School District Superintendent
Supporting Organization/Department	Cooter R-IV School District Board of Education
Action / Project STAPLEE Score/Priority	38
Timeline for Completion	5 years
Potential Funding Source	N/A
Local Planning Mechanism to be Used	N/A
Action Status	Action Status
Status	New
Report on Progress	

ACTION WORKSHEET

Name of Jurisdiction	Cooter R-IV School District
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Earthquake
Problem Being Mitigated	Earthquake
Action or Project	Action or Project
Applicable Goal Statement	Inform parents of school children regarding crisis plan and how it affects their students in case of a disaster.
Action/Project Number	Action 3.3
Name of Action or Project	Action 3.3
Mitigation Category	Education and Outreach
Action or Project Description	The Cooter R-IV School District will educate students and parents in regards to our earthquake crisis plan.
Estimated Cost	\$100 - \$500
Benefits	This action will help educate and inform students and parents of our crisis plan for earthquakes to become better prepared in the event of an earthquake.
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Cooter R-IV School District Superintendent
Supporting Organization/Department	Cooter R-IV School District Board of Education
Action / Project STAPLEE Score/Priority	38
Timeline for Completion	1 year
Potential Funding Source	N/A
Local Planning Mechanism to be Used	N/A
Action Status	Action Status
Status	New
Report on Progress	

ACTION WORKSHEET	
Name of Jurisdiction	Cooler R-IV School District
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Heat wave; Min. impact to natural + human resources caused by drought +/or heat wave.
Problem Being Mitigated	Protect students and staff from extreme heat and conserve water when needed
Action or Project	Action or Project
Applicable Goal Statement	Goal # 4
Action/Project Number	4.3
Name of Action or Project	Heatwave
Mitigation Category	Prevention; Emergency Services
Action or Project Description	Take actions during periods of extreme heat to safeguard the health of students and staff by altering school activities.
Estimated Cost	Minimal
Benefits	Potential life saving during extreme heat events.
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Administration
Supporting Organization/Department	
Action / Project STAPLEE Score/Priority	High
Timeline for Completion	Ongoing
Potential Funding Source	Local
Local Planning Mechanism to be Used	School Plan
Action Status	Action Status
Status	New
Report on Progress	

ACTION WORKSHEET

Name of Jurisdiction	Cooter R-IV School District
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Severe Winter Weather
Problem Being Mitigated	Severe Winter Weather
Action or Project	Action or Project
Applicable Goal Statement	Purchase a generator or apply for funding to purchase a generator.
Action/Project Number	Action 5.5
Name of Action or Project	Action 5.5
Mitigation Category	Structure and Infrastructure
Action or Project Description	The Cooter R-IV School District will apply for funding to purchase a generator.
Estimated Cost	\$1,000 - \$10,000
Benefits	This action will provide electricity to the school in case of a power outage.
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Cooter R-IV School District Superintendent
Supporting Organization/Department	Cooter R-IV School District Board of Education
Action / Project STAPLEE Score/Priority	38
Timeline for Completion	1 year
Potential Funding Source	N/A
Local Planning Mechanism to be Used	N/A
Action Status	Action Status
Status	New
Report on Progress	

ACTION WORKSHEET

Name of Jurisdiction	Cooter R-IV School District
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Maintain and Update Hazard Mitigation Plan
Problem Being Mitigated	Maintain and Update Hazard Mitigation Plan
Action or Project	Action or Project
Applicable Goal Statement	Appoint a person or committee to review the plan periodically to ensure execution and suggest updates needed.
Action/Project Number	Action 6.1
Name of Action or Project	Action 6.1
Mitigation Category	Education and Outreach
Action or Project Description	The Cooter R-IV School District will appoint a person or develop a committee to review the Hazard Mitigation Plan periodically to ensure execution and suggest updates.
Estimated Cost	\$100 - \$500
Benefits	This action will help us reach and maintain our goals of the Hazard Mitigation Plan.
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Cooter R-IV School District Superintendent
Supporting Organization/Department	Cooter R-IV School District Board of Education
Action / Project STAPLEE Score/Priority	38
Timeline for Completion	1 year
Potential Funding Source	N/A
Local Planning Mechanism to be Used	N/A
Action Status	Action Status
Status	New
Report on Progress	

ACTION WORKSHEET

Name of Jurisdiction	Pemiscot County R-3 School District
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Tornado, Thunderstorm/HighWinds/Lightning
Problem Being Mitigated	Our district does not have a safe location for our students or community in the event of storms or tornadoes
Action or Project	Action or Project
Applicable Goal Statement	Goal #1 – Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.
Action/Project Number	1.3
Name of Action or Project	Apply for funding for a FEMA safe room.
Mitigation Category	Structure and Infrastructure Projects
Action or Project Description	Apply for funding for a FEMA safe room.
Estimated Cost	
Benefits	Help save lives and give our school district a safe place to go during a severe storm event
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Superintendent
Supporting Organization/Department	
Action / Project STAPLEE Score/Priority	High (33 points)
Timeline for Completion	within 5 years
Potential Funding Source	federal state funds
Local Planning Mechanism to be Used	School Crisis Plan
Action Status	Action Status
Status	New
Report on Progress	

ACTION WORKSHEET

Name of Jurisdiction	Pemiscot County R-3 School District
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Flooding
Problem Being Mitigated	Prevent flooding from our ditches and surrounding fields
Action or Project	Action or Project
Applicable Goal Statement	Goal #2 – Minimize property damage due to flooding.
Action/Project Number	2.2
Name of Action or Project	Drainage systems.
Mitigation Category	Prevention, Structure and Infrastructure Projects, Natural Systems
Action or Project Description	Create a program to clean and maintain current drainage systems.
Estimated Cost	time and local resources
Benefits	Prevent property damage
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Superintendent/County and State Road Maintenance
Supporting Organization/Department	County and State Road Maintenance
Action / Project STAPLEE Score/Priority	High (30 points)
Timeline for Completion	ongoing
Potential Funding Source	local
Local Planning Mechanism to be Used	School Crisis Plan
Action Status	Action Status
Status	New
Report on Progress	

ACTION WORKSHEET

Name of Jurisdiction	Pemiscot County R-3 School District
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Earthquake
Problem Being Mitigated	Minimize injuries and property damage due to seismic events.
Action or Project	Action or Project
Applicable Goal Statement	Goal #3 – Minimize injuries and property damage due to seismic events.
Action/Project Number	3.3
Name of Action or Project	Earthquake Awareness
Mitigation Category	Education and Outreach
Action or Project Description	Educate students and community about safety prodedures in regards to earthquakes.
Estimated Cost	time and local resources
Benefits	Potentially save lives by preparing everyone of best practices
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Superintendent
Supporting Organization/Department	
Action / Project STAPLEE Score/Priority	High (34 points)
Timeline for Completion	this school year
Potential Funding Source	local
Local Planning Mechanism to be Used	School Crisis Plan
Action Status	Action Status
Status	<i>New</i>
Report on Progress	

ACTION WORKSHEET

Name of Jurisdiction	Pemiscot County R-3 School District
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Heatwave
Problem Being Mitigated	Protect students and staff from extreme heat and conserve water when needed.
Action or Project	Action or Project
Applicable Goal Statement	Goal #4 – Minimize the impact to natural and human resources caused by drought and/or heat wave.
Action/Project Number	4.3
Name of Action or Project	Heatwave
Mitigation Category	Prevention, Emergency Services
Action or Project Description	Take actions during periods of extreme heat to safeguard the health of students and staff by altering school activities.
Estimated Cost	time and local resources
Benefits	Potentially save lives during extreme heat events
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Superintendent
Supporting Organization/Department	
Action / Project STAPLEE Score/Priority	High (34 points)
Timeline for Completion	ongoing
Potential Funding Source	local
Local Planning Mechanism to be Used	School Crisis Plan
Action Status	Action Status
Status	<i>New</i>
Report on Progress	

ACTION WORKSHEET

Name of Jurisdiction	Pemiscot County R-3 School District
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Severe Winter Weather, Tornado, Severe Storms
Problem Being Mitigated	Maintain public services to minimize the risk and reduce property damage causes by severe weather
Action or Project	Action or Project
Applicable Goal Statement	Goal #5 – Maintain public services to minimize the risk and reduce property damage caused by severe winter weather.
Action/Project Number	5.5
Name of Action or Project	Generator For Building
Mitigation Category	Prevention, Structure and Infrastructure Projects
Action or Project Description	Seek funding to purchase a generator for our campus
Estimated Cost	less than \$20,000
Benefits	Potentially save lives and prevent loss or damage of property
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Superintendent
Supporting Organization/Department	
Action / Project STAPLEE Score/Priority	High (31 points)
Timeline for Completion	2-4 years
Potential Funding Source	federal/state/private
Local Planning Mechanism to be Used	School Crisis Plan
Action Status	Action Status
Status	New
Report on Progress	

Goal 1: Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.

Action 1.3: School districts will re-evaluate their crisis plans and conduct preparedness drills on a regularly scheduled basis.

Action Worksheet	
Name of Jurisdiction:	South Pemiscot County R-V School District
Risk / Vulnerability	
Problem being Mitigated:	Public safety in severe storms/tornado. Educating students and staff.
Hazard(s) Addressed:	Severe Thunderstorm/High Winds/Tornado
Action or Project	
Action/Project Number:	Action 1.3
Name of Action or Project:	Action 1.3
Action or Project Description:	The school district will re-evaluate crisis plan and conduct preparedness drills on a regularly scheduled basis.
Applicable Goal Statement:	Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.
Estimated Cost:	N/A
Benefits:	This action will educate student and staff on hazard preparedness.
Plan for Implementation	
Responsible Organization/Department:	Superintendent
Action/Project Priority:	Medium - 29
Timeline for Completion:	5 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing
Report of Progress	

ACTION WORKSHEET

Name of Jurisdiction	South Pemiscot R-5
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Heatwave/Tornado/Thunderstorm
Problem Being Mitigated	Public safety in severe storms/tornados when these events take place during extreme heat. Provide continuous electric and cooling to FEMA shelter when it is being used as an emergency shelter
Action or Project	Action or Project
Applicable Goal Statement	Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.
Action/Project Number	1.6
Name of Action or Project	Generator(s) for FEMA safe room
Mitigation Category	Structure and Infrastructure Project
Action or Project Description	Apply for funding to purchase generators for FEMA safe room.
Estimated Cost	50000 to 100000
Benefits	Provide continuous source of power to FEMA building during a severe weather event. This will allow lights and cooling units to stay on, which during extreme heat conditions can potentially save lives.
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Superintendent
Supporting Organization/Department	
Action / Project STAPLEE Score/Priority	Medium-29
Timeline for Completion	1 year
Potential Funding Source	N/A
Local Planning Mechanism to be Used	
Action Status	Action Status
Status	New
Report on Progress	

Goal 2: Minimize property damage due to flooding

Action 2.2: School districts will seek funding for storm water control projects.

Action Worksheet	
Name of Jurisdiction:	South Pemiscot R-V School District
Risk / Vulnerability	
Problem being Mitigated:	Flooding
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	Action 2.2
Name of Action or Project:	Action 2.2
Action or Project Description:	The school district will seek funding for storm water control projects.
Applicable Goal Statement:	Minimize property damage due to flooding.
Estimated Cost:	Cost varies with size of district
Benefits:	This will minimize flooding by controlling storm water flow.
Plan for Implementation	
Responsible Organization/Department:	Superintendent
Action/Project Priority:	Medium - 29
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing
Report of Progress	

Goal 2: Minimize property damage due to flooding

Action 2.3: School districts will alter bus routes and school schedule to accommodate flooded bus routes.

Action Worksheet	
Name of Jurisdiction:	South Pemiscot County R-V School District
Risk / Vulnerability	
Problem being Mitigated:	Flooding
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	Action 2.3
Name of Action or Project:	Action 2.3
Action or Project Description:	School districts will alter bus routes and school schedule to accommodate flooded bus routes.
Applicable Goal Statement:	Minimize property damage due to flooding.
Estimated Cost:	No cost
Benefits:	This will ensure students safety when traveling to school.
Plan for Implementation	
Responsible Organization/Department:	Superintendent
Action/Project Priority:	Medium - 29
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing
Report of Progress	

Goal 2: Minimize property damage due to flooding

Action 2.4: School districts will keep parents informed of the impact of flooding on the school schedule.

Action Worksheet	
Name of Jurisdiction:	South Pemiscot County R-V School District
Risk / Vulnerability	
Problem being Mitigated:	Flooding
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	Action 2.4
Name of Action or Project:	Action 2.4
Action or Project Description:	School districts will keep parents informed of the impact of flooding on the school schedule.
Applicable Goal Statement:	Minimize property damage due to flooding.
Estimated Cost:	No cost
Benefits:	This will inform parents and ensure students safety when traveling to school.
Plan for Implementation	
Responsible Organization/Department:	Superintendent
Action/Project Priority:	Medium - 29
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing
Report of Progress	

ACTION WORKSHEET

Name of Jurisdiction	South Pemiscot R-5
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Flooding (flash)
Problem Being Mitigated	Flooding of roadways and campus and prevention of sewer backup in these waters.
Action or Project	Action or Project
Applicable Goal Statement	Minimize property damage to flooding.
Action/Project Number	2.5
Name of Action or Project	Action 2.5
Mitigation Category	Structure and Infrastructure Project
Action or Project Description	Water control project- Install sewer grinders as needed in waste water piping to help facilitate water flow and prevent water backup.
Estimated Cost	\$10,000
Benefits	Minimize flooding and related health issues associated with waste in stormwater by helping control flow.
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Superintendent
Supporting Organization/Department	
Action / Project STAPLEE Score/Priority	High-30
Timeline for Completion	1 year
Potential Funding Source	N/A
Local Planning Mechanism to be Used	
Action Status	Action Status
Status	New
Report on Progress	

ACTION WORKSHEET

Name of Jurisdiction	South Pemiscot R-5
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Earthquake
Problem Being Mitigated	Minimize injuries due to seismic events by being properly prepared.
Action or Project	Action or Project
Applicable Goal Statement	Minimize injuries and property damage due to seismic events.
Action/Project Number	3.3
Name of Action or Project	3.3
Mitigation Category	Education and Outreach
Action or Project Description	Will continue with drills and modify earthquake procedures by developing a brochure on the school's earthquake preparedness program and distributing this to appropriate stakeholders in the community.
Estimated Cost	Zero to very minimal
Benefits	Help save lives by bringing attention to and being prepared in the event of a catastrophic seismic activity.
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Superintendent
Supporting Organization/Department	
Action / Project STAPLEE Score/Priority	High-34
Timeline for Completion	ongoing
Potential Funding Source	N/A
Local Planning Mechanism to be Used	School Crisis Plan
Action Status	Action Status
Status	ongoing
Report on Progress	

Goal 3: Minimize injuries and property damage due to seismic events.

Action 3.4: Inform Parents of crisis plan and how it affects the students

Action Worksheet	
Name of Jurisdiction:	South Pemiscot County R-V School District.
Risk / Vulnerability	
Problem being Mitigated:	Educating parents on district crisis plan.
Hazard(s) Addressed:	Earthquake
Action or Project	
Action/Project Number:	Action 3.4
Name of Action or Project:	Action 3.4
Action or Project Description:	The school districts will inform parents of crisis plan and its effects on the students
Applicable Goal Statement:	Minimize <u>injuries/death</u> due to <u>earthquake</u> .
Estimated Cost:	N/A.
Benefits:	This will educate <u>parents</u> on their child's <u>safety</u> in school.
Plan for Implementation	
Responsible Organization/Department:	School Superintendent.
Action/Project Priority:	Medium - 29
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing Not Started
Report of Progress	

ACTION WORKSHEET

Name of Jurisdiction	South Pemiscot R-5
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Heatwave
Problem Being Mitigated	Pemiscot County is likely to experience weather extremes. During extreme heat, the health of students and staff will be top priority and activities will be altered when required.
Action or Project	Action or Project
Applicable Goal Statement	Minimize the impact to natural and human resources caused by drought and/or heatwave.
Action/Project Number	4.3
Name of Action or Project	4.3
Mitigation Category	Emergency Services
Action or Project Description	Activities will be altered and adequate water and safety measures will be in place during extreme heat.
Estimated Cost	Zero to very minimal
Benefits	Help save lives or harm of staff and students during periods of extreme heat.
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Superintendent
Supporting Organization/Department	
Action / Project STAPLEE Score/Priority	High-34
Timeline for Completion	ongoing
Potential Funding Source	N/A
Local Planning Mechanism to be Used	
Action Status	Action Status
Status	
Report on Progress	ongoing

Goal 5: Maintain public services to minimize the risk and reduce property damage caused by severe winter weather.

Action 5.4: Meet with state and county road officials to set priorities for snow removal.

Action Worksheet	
Name of Jurisdiction:	South Pemiscot County R-V School District.
Risk / Vulnerability	
Problem being Mitigated:	Impacts of Severe winter weather
Hazard(s) Addressed:	Severe winter weather
Action or Project	
Action/Project Number:	Action 5.4
Name of Action or Project:	Action 5.4
Action or Project Description:	Set priorities of roads to clear in order to ensure bus routes get proper attention.
Applicable Goal Statement:	Minimize injuries/death due to severe winter weather
Estimated Cost:	N/A.
Benefits:	Bus routes will be safe for travel.
Plan for Implementation	
Responsible Organization/Department:	School Superintendent
Action/Project Priority:	Medium - 29
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Continuing Not started
Report of Progress	

ACTION WORKSHEET

Name of Jurisdiction	South Pemiscot R-5
Risk / Vulnerability	Risk / Vulnerability
Hazard(s) Addressed	Severe Winter Weather/Levee Failure/Heatwave
Problem Being Mitigated	Pemiscot County is likely to experience weather extremes. These extreme situations can cause power loss to homes and subject families to hazardous conditions. Levee failure would result in family displacement and a need for temporary shelter.
Action or Project	Action or Project
Applicable Goal Statement	Maintain Public services to minimize the risk and reduce property damage caused by severe winter weather.
Action/Project Number	5.5
Name of Action or Project	5.5
Mitigation Category	Structure and Infrastructure Projects
Action or Project Description	Apply for purchase of generators to be placed at each campus of the school
Estimated Cost	Zero to very minimal
Benefits	Help save lives by providing the necessary infrastructure to allow the school to function as an emergency shelter for the individuals in the community.
Plan for Implementation	Plan for Implementation
Responsible Organization / Department	Superintendent
Supporting Organization/Department	
Action / Project STAPLEE Score/Priority	High-30
Timeline for Completion	1-3 yrs
Potential Funding Source	N/A
Local Planning Mechanism to be Used	
Action Status	Action Status
Status	New
Report on Progress	

STAPLEE Worksheet		
Name of Jurisdiction of School District:		City of Carthage, MO
Action or Project:		
Action/Project Number: Action # from Goals Sheet	1.1	
Hazard (s) to be Addressed:	High Winds / Tornadoes	
Name of Action or Project:	Action 1.1	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Prevention, Structure & Infrastructure Projects	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Probably NO = 1 Maybe YES = 2 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		1
F: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		3
Could it be implemented quickly?		3
STAPLEE SCORE		24
Will the implemented action result in lives saved?		5
Will the implemented action result in a reduction of disaster damages?		7
MITIGATION EFFECTIVENESS SCORE		13
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		37
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: Edwin Title: Code Officer Building Inspector Date: 6-8-23

STAPLEE Worksheet

Name of Jurisdiction of School District: Caruthersville

Action or Project

Action/Project-Number: Action # from Goals Sheet 1.2

Hazard (s) to be Addressed: Tornado + Severe Thunderstorm

Name of Action or Project: 1.2 Annual Workshop

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services
Education and Outreach/Prevention

STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3	Maybe YES = 2	
Probably NO = 1	Definitely NO = 0	
S: Is it Socially Acceptable?		2
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		1
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		1
Could it be implemented quickly?		2
STAPLEE SCORE		15

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.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	6
MITIGATION EFFECTIVENESS SCORE		12
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		27

High Priority (30+ points)
 Medium Priority (25-29 points)
 Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Caruthersville	
Action or Project		
Action/Project-Number: Action # from Goals Sheet	1.5	
Hazard(s) to be Addressed:	Tornado / Severe Thunderstorm	
Name of Action or Project:	1.5	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Structure and Infrastructure Proj.	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3	Maybe YES = 2	
Probably NO = 1	Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment?		2
Will historic structures be saved or protected?		0
Could it be implemented quickly?		0
STAPLEE SCORE		20
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.	9
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		14
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		34

<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
--	---	--

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet

Name of Jurisdiction of School District: City of Catfharville, MO.

Action/Project Number: Action # from Goals Sheet: 2.1

Hazard (s) to be Addressed: Flooding

Name of Action or Project: Action 2.1

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services
Prevention

STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?	Yes	3
T: Is it Technically feasible and potentially successful?	Yes	3
A: Does the jurisdiction have the Administrative capacity to execute this action?	Yes	3
P: Is it Politically acceptable?	Yes	3
L: Is there Legal authority to implement?	Yes	3
E: Is it Economically beneficial?	Yes	3
E: Will the project have either a neutral or positive impact on the natural Environment?	Yes	3
Will historic structures be saved or protected?	Yes	3
Could it be implemented quickly?	Probably No	1
STAPLEE SCORE		25

Question	Evaluation Rating	Score
Will the implemented action result in lives saved? <u>Yes</u>	Assign from 0-10 points based on the likelihood that lives will be saved.	5
Will the implemented action result in a reduction of disaster damages? <u>Yes</u>	Assign from 0-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		10
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		35

High Priority (30+ points)
 Medium Priority (25-29 points)
 Low Priority (<25 points)

Completed by: Charles Jones Title: EMD Date: 6-7-2022

STAPLEE Worksheet		
Name of Jurisdiction of School District:	City of Caruthersville, Mo.	
Action/Project Number: Action # from Goals Sheet	31	
Hazard (s) to be Addressed:	Earthquake	
Name of Action or Project:	Action J.1	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services		
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?	Yes	3
T: Is it Technically feasible and potentially successful?	Yes	3
A: Does the Jurisdiction have the Administrative capacity to execute this action?	Yes	3
P: Is it Politically acceptable?	Yes	3
L: Is there Legal authority to implement?	Yes	3
E: Is it Economically beneficial?	Yes	3
E: Will the project have either a neutral or positive impact on the natural Environment? Yes	Yes	3
Will historic structures be saved or protected?	Yes	3
Could it be implemented quickly?	Probably No	1
STAPLEE SCORE		25
Evaluation Rating		
Will the implemented action result in lives saved? Yes	Assign from 8-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages? Yes	Assign from 8-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		15
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		40
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (23-29 points)	<input type="checkbox"/> Low Priority (15 points)

Completed by: Charlie Jones Title: EMD Date: 6-6-2023

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Caruthersville	
Action or Project		
Action/Project Number: Action # from Goals Sheet	3.2	
Hazard(s) to be Addressed:	Earthquake	
Name of Action or Project:	Assign EOC for County + Conduct Exercises	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Emergency Services	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		2
Will historic structures be saved or protected?		2
Could it be implemented quickly?		1
STAPLEE SCORE		18
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.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
MITIGATION EFFECTIVENESS SCORE		16
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		34
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet

Name of Jurisdiction of School District: Caruthersville

Action or Project

Action/Project Number: Action # from Goals Sheet 33

Hazard (s) to be Addressed: Earthquake

Name of Action or Project: 3.30

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services
Education and Outreach

STAPLEE Criteria Evaluation Rating	Score
Definitely YES = 3 Probably NO = 1	
Maybe YES = 2 Definitely NO = 0	

S: Is it Socially Acceptable?	2
T: Is it Technically feasible and potentially successful?	2
A: Does the jurisdiction have the Administrative capacity to execute this action?	2
P: Is it Politically acceptable?	2
L: Is there Legal authority to implement?	2
E: Is it Economically beneficial?	1
E: Will the project have either a neutral or positive impact on the natural Environment?	1
Will historic structures be saved or protected?	1
Could it be implemented quickly?	2
STAPLEE SCORE	15

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.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
MITIGATION EFFECTIVENESS SCORE		14
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		29

<input type="checkbox"/> High Priority (30+ points)	<input checked="" type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
---	--	--

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Caruthersville	
Action or Project		
Action/Project Number: Action # from Goals Sheet	3.5	
Hazard(s) to be Addressed:	Earthquake	
Name of Action or Project:	3.5	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Structures + Infrastructures	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Probably NO = 1 Maybe YES = 2 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		2
Could it be implemented quickly?		1
STAPLEE SCORE		17
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.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
MITIGATION EFFECTIVENESS SCORE		16
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		33
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:		<i>Caruthersville</i>
Action or Project		
Action/Project Number: Action # from Goals Sheet	<i>4.1</i>	
Hazard (s) to be Addressed:	<i>Drought and Extreme Heat</i>	
Name of Action or Project:	<i>4.1</i>	
Mitigation Category: Prevention, Structure and Infrastructure Projects; Natural Systems Protection, Education and Outreach, Emergency Services	<i>Educate and Outreach</i>	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		Score
S: Is it Socially Acceptable?		<i>2</i>
T: Is it Technically feasible and potentially successful?		<i>2</i>
A: Does the jurisdiction have the Administrative capacity to execute this action?		<i>2</i>
P: Is it Politically acceptable?		<i>2</i>
L: Is there Legal authority to implement?		<i>2</i>
E: Is it Economically beneficial?		<i>2</i>
E: Will the project have either a neutral or positive impact on the natural Environment?		<i>1</i>
Will historic structures be saved or protected?		<i>1</i>
Could it be implemented quickly?		<i>2</i>
STAPLEE SCORE		<i>16</i>
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.	<i>6</i>
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	<i>6</i>
MITIGATION EFFECTIVENESS SCORE		<i>12</i>
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		<i>28</i>
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet

Name of Jurisdiction of School District: Caruthersville

Action or Project

Action/Project Number: Action # from Goals Sheet 4.2

Hazard (s) to be Addressed: Drought + Extreme Heat + wild fires

Name of Action or Project: 4.2

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services
Education + Outreach

STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is It Socially Acceptable?		2
T: Is It Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		1
Could it be implemented quickly?		2
STAPLEE SCORE		<u>16</u>

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.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	6
MITIGATION EFFECTIVENESS SCORE		<u>12</u>
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		<u>28</u>

High Priority (30+ points)
 Medium Priority (25-29 points)
 Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:		Caruthersville
Action or Project		
Action/Project Number: Action # from Goals Sheet	5.2	
Hazard(s) to be Addressed:	Severe Winter Weather	
Name of Action or Project:	5.2	
Mitigation Category: (Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services)	Emergency Services	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		Score
S: Is it Socially Acceptable?		2
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		1
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		1
Could it be implemented quickly?		1
STAPLEE SCORE		14
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.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	6
MITIGATION EFFECTIVENESS SCORE		13
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		27
<input type="checkbox"/> High Priority (30+ points) <input checked="" type="checkbox"/> Medium Priority (25-29 points) <input type="checkbox"/> Low Priority (<25 points)		

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Caruthersville	
Action or Project		
Action/Project Number: Action # from Goals Sheet	5.3	
Hazard (s) to be Addressed:	Severe Winter Weather	
Name of Action or Project:	5.3	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Education and Outreach	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		Score
S: Is it Socially Acceptable?		2
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		1
Could it be implemented quickly?		1
STAPLEE SCORE		15
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.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
MITIGATION EFFECTIVENESS SCORE		14
TOTAL SCORE (STAPLEE + MITIGATION EFFECTIVENESS)		29
<input type="checkbox"/> High Priority (30+ points) <input checked="" type="checkbox"/> Medium Priority (25-29 points) <input type="checkbox"/> Low Priority (<25 points)		

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet

Name of Jurisdiction of School District: High Heights City Hall

Action/Project Number: Action # from Goals Sheet 1.1 Adopt most current building code high wind and possible tornado

Hazard (s) to be Addressed: Weather - high winds, tornadoes.

Name of Action or Project: Eliminate loss of life ^{severe thunderstorms}

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services Natural System protection

STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3	Maybe YES = 2	
Probably NO = 1	Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		n/a
A: Does the jurisdiction have the Administrative capacity to execute this action?		
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment?		3
Will historic structures be saved or protected?		n/a
Could it be implemented quickly?		0
STAPLEE SCORE		13
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.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
MITIGATION EFFECTIVENESS SCORE		14
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		27

High Priority (30+ points)
 Medium Priority (25-29 points)
 Low Priority (<25)

Completed by: Jacquelyn Davis Title: _____ Date: Sept 8, 2023

Name of Jurisdiction of School District:		Hart Heights City Hall
Action/Project Number: Action # from Goals Sheet		2.1 Adopt roadway drainage policy
Measure of Success/Impacted		Minimize property damage due to flooding
Name of Action or Project		Reduce damage due to storm
Mitigation Measure: Prevention, Structure and Infrastructure, Hazardous Materials Protection, Education and Outreach, Emergency Services		2.1
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		n/a
A: Does the jurisdiction have the Administrative capacity to execute this action?		1
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment?		3
Will historic structures be saved or protected?		n/a
Could it be implemented quickly?		0
STAPLEE SCORE		15
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
MITIGATION EFFECTIVENESS SCORE		20
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		35
<input checked="" type="checkbox"/> High Priority (100+ points)		<input type="checkbox"/> Low Priority (1-99)

Completed by: Gregory Davis Title: _____ Date: Sept 8, 2023

STAPLEE Worksheet		
Name of Jurisdiction of School District:		Hayti Heights
Action or Project		
Action/Project Number: Insert a unique action number for future tracking purposes. This can be a combination of the jurisdiction name, followed by the goal number and action number (i.e. Esx 1.1)		2.7
Name of Action or Project:		NFIP compliance
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services		prevention
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment?		3
Will historic structures be saved or protected?		2
Could it be implemented quickly?		2
STAPLEE SCORE		24
Mitigation Effectiveness Criteria		Evaluation Rating
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 3-10 points based on the relative reduction of disaster damages.	6
MITIGATION EFFECTIVENESS SCORE		12
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		36
<input checked="" type="checkbox"/> High Priority (30+ points) <input type="checkbox"/> Medium Priority (25-29 points) <input type="checkbox"/> Low Priority (<25 points)		

STAPLEE Worksheet

Name of Jurisdiction of School District: Hayti Heights
Action of Project

Action/Project Number: Action # from Goals Sheet
33

Hazard(s) to be Addressed:
Earthquakes

Name of Action or Project:
Earthquake preparedness/education

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services
Education and Outreach

STAPLEE Criteria		Score
Evaluation Rating		
Definitely YES = 3	Maybe YES = 2	
Probably NO = 1	Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment?		2
Will historic structures be saved or protected?		0
Could it be implemented quickly?		2

STAPLEE SCORE 24

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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		<u>15</u>
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		<u>39</u>

High Priority (30+ points)

 Medium Priority (25-29 points)

 Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Hayti Heights	
Action of Project		
Action/Project Number: Action # from Goals Sheet	4.1	
Hazard (s) to be Addressed:	Drought / Extreme Heat + wild fires	
Name of Action or Project:	Educating public on water conservation, drought, heat + wild fires	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Education, + Outreach	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Probably NO = 1 Maybe YES = 2 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is It Technically feasible and potentially successful?		3
A: Does the Jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is It Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment?		2
Will historic structures be saved or protected?		0
Could it be implemented quickly?		2
STAPLEE SCORE		22
Mitigation Effectiveness Criteria Will the Implemented action result in lives saved? Assign from 5-10 points based on the likelihood that lives will be saved.		5
Will the Implemented action result in a reduction of disaster damages? Assign from 5-10 points based on the relative reduction of disaster damages.		2
MITIGATION EFFECTIVENESS SCORE		7
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		29
<input type="checkbox"/> High Priority (30+ points) <input checked="" type="checkbox"/> Medium Priority (25-29 points) <input type="checkbox"/> Low Priority (<25 points)		

Completed by: _____ Title: _____ Date: _____

Name of Jurisdiction of School District:		North Heights
Action/Project Number: Action # from Goals Sheet:		5.1
Hazard(s) to be Addressed:		Action 5.1
Name of Action or Project:		Severe Winter Weather Emergency Services
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services		
STAPLEE Criteria Evaluation Rating		
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		n/a
A: Does the jurisdiction have the Administrative capacity to execute this action?		
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment?		3
Will historic structures be saved or protected?		n/a
Could it be implemented quickly?		0
STAPLEE SCORE		16
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
MITIGATION EFFECTIVENESS SCORE		20
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		36

High Priority (30+ points)
 Medium Priority (25-29 points)
 Low Priority (<25)

Completed by: Opalyn Davis Date: 9/8/23

STAPLEE Worksheet		
Name of Jurisdiction of School District:		Hwy 71
Action or Project		
Action/Project Number: Action # from Goals Sheet	1.1	
Hazard (s) to be Addressed:	High winds and/or Tornado	
Name of Action or Project:	Community Storm Awareness	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Emergency Systems	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment?		3
Will historic structures be saved or protected?		2
Could it be implemented quickly?		2
STAPLEE SCORE		25
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
MITIGATION EFFECTIVENESS SCORE		20
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		45
<input type="checkbox"/> High Priority (30+ points) <input type="checkbox"/> Medium Priority (25-29 points) <input type="checkbox"/> Low Priority (<25 points)		

Completed by: Frank Rose Title: Code Enforcement Date: 6-14-2023

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Havre	
Action or Project		
Action/Project Number: Action # from Goals Sheet	1.2	
Hazard(s) to be Addressed:	Severe Thunderstorms/Tornadoes	
Name of Action or Project:	1.2	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Education + Outreach + Prevention	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		0
Will historic structures be saved or protected?		0
Could it be implemented quickly?		0
STAPLEE SCORE		14
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.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		13
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		27
<input type="checkbox"/> High Priority (30+ points)	<input checked="" type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet

Name of Jurisdiction of School District: <u>Havt</u>		
Action or Project		
Action/Project Number: Action # from Goals Sheet	<u>2.1</u>	
Hazard (s) to be Addressed:	<u>Flooding</u>	
Name of Action or Project:	<u>Drainage Upgrade</u>	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	<u>Structure + Infrastructure Project</u>	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment?		3
Will historic structures be saved or protected?		3
Could it be implemented quickly?		3
STAPLEE SCORE		27
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
MITIGATION EFFECTIVENESS SCORE		20
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		47
High Priority (30+ points) Medium Priority (25-29 points) Low Priority (25 points)		

Completed by: Frank Rose Title: Code Enforcement Date: 6-14-2023

STAPLEE Worksheet		
Name of Jurisdiction of School District:		Hays
Action or Project		
Action/Project Number: Action # from Goals Sheet	3.1	
Hazard (s) to be Addressed:	Earthquake	
Name of Action or Project:	Community Earthquake Readiness	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Structure & Infrastructure Projects	
STAPLEE Criteria Evaluation Rating		
Definitely YES = 3 Probably NO = 1		Maybe YES = 2 Definitely NO = 0
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment?		3
Will historic structures be saved or protected?		2
Could it be implemented quickly?		3
STAPLEE SCORE		26
Mitigation Effectiveness Criteria Evaluation Rating		
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		18
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		44
c High Priority (30+ points)	c Medium Priority (25-29 points)	c Low Priority (<25 points)

Completed by: Frank Rose Title: Code Enforcement Date: 6-14-2023

STAPLEE Worksheet		
Name of Jurisdiction of School District:		Hasti
Action or Project		
Action/Project Number: Action # from Goals Sheet	3.2	
Hazard (s) to be Addressed:	Earthquake	
Name of Action or Project:	3.2	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Emergency Services	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Probably NO = 1 Maybe YES = 2 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		2
Will historic structures be saved or protected?		1
Could it be implemented quickly?		1
STAPLEE SCORE		17
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.	9
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
MITIGATION EFFECTIVENESS SCORE		17
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		34
<input checked="" type="checkbox"/> High Priority (30+ points) <input type="checkbox"/> Medium Priority (25-29 points) <input type="checkbox"/> Low Priority (<25 points)		

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Havert	
Action/Project Number: Action # from Goals Sheet	33	
Hazard (s) to be Addressed:	Earthquake	
Name of Action or Project:	033	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Education and Outreach	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		2
Will historic structures be saved or protected?		0
Could it be implemented quickly?		0
STAPLEE SCORE		15
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.	9
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		14
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		29
<input type="checkbox"/> High Priority (30+ points)	<input checked="" type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Hayti	
Action/Project Number: Action # from Goals Sheet	35	
Hazard (s) to be Addressed:	Earthquake	
Name of Action or Project:	0.35	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Structure and Infrastructure	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES - 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		1
Could it be implemented quickly?		2
STAPLEE SCORE		19
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.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
MITIGATION EFFECTIVENESS SCORE		16
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		35

<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
--	---	--

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Hayti	
Action or Project		
Action/Project Number: Action # from Goals Sheet	4.1	
Hazard (s) to be Addressed:	Drought ; Extreme Heat & wild fires	
Name of Action or Project:	4.1 Create & distribute water cons. brochure + educate public on drought, heat & wild fires	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Education and Outreach	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?		2
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		1
Could it be implemented quickly?		2
STAPLEE SCORE		16
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.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		12
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		28
<input type="checkbox"/> High Priority (30+ points)	<input checked="" type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Haiti	
Action or Project		
Action/Project Number: Action # from Goals Sheet	4.2	
Hazard (s) to be Addressed:	Drought + Extreme Heat	
Name of Action or Project:	4.2	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Education and Outreach	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3	Maybe YES = 2	
Probably NO = 1	Definitely NO = 0	
S: Is it Socially Acceptable?		2
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		2
Will historic structures be saved or protected?		1
Could it be implemented quickly?		2
STAPLEE SCORE		17
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.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		11
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		28

<input type="checkbox"/> High Priority (30+ points)	<input checked="" type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
---	--	--

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Hayti	
Action or Project		
Action/Project Number: Action # from Goals Sheet	52	
Hazard(s) to be Addressed:	Severe Winter Weather	
Name of Action or Project:	5.2 Develop severe winter weather strategies	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Emergency Services	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3	Maybe YES = 2	
Probably NO = 1	Definitely NO = 0	
S: Is it Socially Acceptable?		2
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		0
Could it be implemented quickly?		1
STAPLEE SCORE		14
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.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		13
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		27
<input type="checkbox"/> High Priority (30+ points)	<input checked="" type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Haystack	
Action/Project Number: Action # from Goals Sheet	5.3	
Hazard(s) to be Addressed:	Severe Winter Weather	
Name of Action or Project:		
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Education and Outreach	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		Score
S: Is It Socially Acceptable?		2
T: Is It Technically feasible and potentially successful?		2
A: Does the Jurisdiction have the Administrative capacity to execute this action?		2
P: Is It Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is It Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		1
Could it be implemented quickly?		1
STAPLEE SCORE		15
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.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	6
MITIGATION EFFECTIVENESS SCORE		14
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		29
<input type="checkbox"/> High Priority (30+ points)	<input checked="" type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet

Name of Jurisdiction of School District: Pemiscot County

Action or Project

Action/Project Number: Action # from Goals Sheet 1.1

Hazard(s) to be Addressed: Tornado, High Winds, Severe Thunder Storm

Name of Action or Project: 1.1

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services
Structure & Infrastructure

STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the Jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		2
Could it be implemented quickly?		1
STAPLEE SCORE		<u>18</u>

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.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
MITIGATION EFFECTIVENESS SCORE		<u>16</u>
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		<u>34</u>

High Priority (30+ points)
 Medium Priority (25-29 points)
 Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:		PEMISCOT COUNTY
Action or Project		
Action/Project Number: Action # from Goals Sheet	1.4	
Hazard(s) to be Addressed:	STORMS, FIRES, FLOODS	
Name of Action or Projects:	STORM SIREN	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	PREVENTION, EMERGENCY SERVICES	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3	Maybe YES = 2	
Probably NO = 1	Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the Jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		0
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		2
Will historic structures be saved or protected?		3
Could it be implemented quickly?		0
STAPLEE SCORE		19
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.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
MITIGATION EFFECTIVENESS SCORE		15
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		34
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25)

Completed by: MARK CARTER Title: BOARDING COMMISSIONER Date: 6-1-23
Mark Carter

STAPLEE Worksheet

Name of Jurisdiction of School District: Pemiscot County
Action or Project

Action/Project Number: Action # from Goals Sheet
Flooding 2.1

Hazard (s) to be Addressed:
Floods

Name of Action or Project:
2.1

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services
Prevention

STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?		2
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		2
Could it be implemented quickly?		1
STAPLEE SCORE		<u>19</u>

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.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
MITIGATION EFFECTIVENESS SCORE		<u>16</u>
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		<u>35</u>

High Priority (30+ points)

 Medium Priority (25-29 points)

 Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:		Pemiscot County
Action or Project		
Action/Project Number: Action # from Goals Sheet	2.6	
Hazard (s) to be Addressed:	Flooding + Levee Failure	
Name of Action or Project:	2.6	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Prevention	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3	Maybe YES = 2	
Probably NO = 1	Definitely NO = 0	
S: Is it Socially Acceptable?		2
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		1
Could it be implemented quickly?		1
STAPLEE SCORE		15
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.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
MITIGATION EFFECTIVENESS SCORE		14
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		29
<input type="checkbox"/> High Priority (30+ points)	<input checked="" type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Remiscot County	
Action or Project		
Action/Project Number: Action # from Goals Sheet	31	
Hazard (s) to be Addressed:	Earthquake	
Name of Action or Project:	310	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Structure and Infrastructure	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the Jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		1
Could it be implemented quickly?		1
STAPLEE SCORE		18
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.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
MITIGATION EFFECTIVENESS SCORE		16
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		34
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:		Pemiscot County
Action or Project		
Action/Project Number: Action # from Goals Sheet	3.2	
Hazard(s) to be Addressed:	Earthquake	
Name of Action or Project:	3.2	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Emergency Services	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		1
Could it be implemented quickly?		1
STAPLEE SCORE		18
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.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
MITIGATION EFFECTIVENESS SCORE		16
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		34
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:		Pennington County
Action or Project		
Action/Project Number: Action # from Goals Sheet	4.1	
Hazard (s) to be Addressed:	DROUGHT - extreme heat + wildfire	
Name of Action or Project:	WORK WITH SOIL CONSERVATION OR BEST PRACTICES	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	or drought, heat (extreme), wild FIRES EDUCATION AND OUTREACH	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3	Maybe YES = 2	
Probably NO = 1	Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		0
Will historic structures be saved or protected?		2
Could it be implemented quickly?		0
STAPLEE SCORE		17
Mitigation Effectiveness Score		
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	6
MITIGATION EFFECTIVENESS SCORE		12
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		31
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25)

Completed by: MARK CARTER Title: Fire Risk Commissioner Date: 6-1-23
Mark Carter

STAPLEE Worksheet

Name of Jurisdiction of School District: Pemiscot County

Action/Project Number: Action # from Goals Sheet: 4.2

Hazard(s) to be Addressed: Drought and Extreme Heat

Name of Action or Project: 4.2

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services
Education and Outreach

STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3	Maybe YES = 2	
Probably NO = 1	Definitely NO = 0	
S: Is it Socially Acceptable?		2
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		2
Will historic structures be saved or protected?		1
Could it be implemented quickly?		2
STAPLEE SCORE		<u>17</u>

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.	<u>6</u>
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	<u>5</u>
MITIGATION EFFECTIVENESS SCORE		<u>11</u>
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		<u>28</u>

High Priority (30+ points)
 Medium Priority (25-29 points)
 Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:		Pemiscot County
Action or Project		
Action/Project Number: Action # from Goals Sheet	51	
Hazard (s) to be Addressed:	Severe Winter Weather	
Name of Action or Project:	5.1	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Emergency Services	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		0
E: Will the project have either a neutral or positive impact on the natural Environment?		0
Will historic structures be saved or protected?		0
Could it be implemented quickly?		2
STAPLEE SCORE		16
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.	8
Will the Implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		13
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		29
<input type="checkbox"/> High Priority (30+ points)	<input checked="" type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:		
Action or Project		
Action/Project Number: Action # from Goals Sheet	5.2	
Hazard (s) to be Addressed:	SEVERE WINTER WEATHER	
Name of Action or Project:	ANNUAL STRATEGY MEETINGS	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	EDUCATION AND OUTREACH EMERGENCY SERVICES	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		0
Will historic structures be saved or protected?		2
Could it be implemented quickly?		0
STAPLEE SCORE		19
Mitigation Effectiveness Criteria	Relative Risk	Score
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
MITIGATION EFFECTIVENESS SCORE		14
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		33
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25)

Completed by: MARK CARTEE Title: PRESIDENT-COMMISSIONER Date: 6-1-23
Mark Cartee

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Pemiscot County	
Action or Project		
Action/Project Number: Action # from Goals Sheet	6.1	
Hazard(s) to be Addressed:	Tornadoes/Sev. Thunderstorm/Flood/Earthquake/Drought/Extreme Temp/Severe winter weather	
Name of Action or Project:	6.1	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Education/Outreach	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		1
Could it be implemented quickly?		1
STAPLEE SCORE		17
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.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	6
MITIGATION EFFECTIVENESS SCORE		12
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		29
<input type="checkbox"/> High Priority (30+ points)	<input checked="" type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:		Caruthersville School District #18
Action or Project		
Action/Project Number: Action # from Goals Sheet	Action 1.3	
Hazard (s) to be Addressed:	Severe Thunderstorm/High Winds/Tornado	
Name of Action or Project:	Action 1.3	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Re-evaluating crisis plans and conducting preparedness drills on a regularly scheduled basis.	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Probably NO = 1 Maybe YES = 2 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment?		3
Will historic structures be saved or protected?		3
Could it be implemented quickly?		3
STAPLEE SCORE		27
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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
MITIGATION EFFECTIVENESS SCORE		20
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		47
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: Brad Gerling Title: Superintendent Date: 6/5/2023

STAPLEE Worksheet

Name of Jurisdiction of School District:	<i>Caruthersville C.P.S 18</i>
Action or Project	
Action/Project Number: Action # from Goals Sheet	<i>1.6</i>
Hazard (s) to be Addressed:	<i>Tornado + Severe Thunderstorms</i>
Name of Action or Project:	<i>1.6</i>
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	<i>Prevention</i>

STAPLEE Criteria Evaluation Rating	Score
Definitely YES = 3 Probably NO = 1	
Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?	<i>3</i>
T: Is it Technically feasible and potentially successful?	<i>3</i>
A: Does the jurisdiction have the Administrative capacity to execute this action?	<i>2</i>
P: Is it Politically acceptable?	<i>3</i>
L: Is there Legal authority to implement?	<i>2</i>
E: Is it Economically beneficial?	<i>1</i>
E: Will the project have either a neutral or positive impact on the natural Environment ?	<i>1</i>
Will historic structures be saved or protected?	<i>1</i>
Could it be implemented quickly?	<i>1</i>
STAPLEE SCORE	<i>17</i>

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.	<i>6</i>
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	<i>6</i>
MITIGATION EFFECTIVENESS SCORE		<i>12</i>
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		<i>29</i>

<input type="checkbox"/> High Priority (30+ points)	<input checked="" type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
---	--	--

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet

Name of Jurisdiction of School District:

Caruthersville @PS School Distr.

Action or Project

Action/Project Number: Action # from Goals Sheet

2-2

Hazard (s) to be Addressed:

Flooding

Name of Action or Project:

2-2

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services

Prevention

STAPLEE Criteria Evaluation Rating

Definitely YES = 3
Probably NO = 1

Maybe YES = 2
Definitely NO = 0

Score

S: Is it **Socially** Acceptable?

3

T: Is it **Technically** feasible and potentially successful?

3

A: Does the jurisdiction have the **Administrative** capacity to execute this action?

2

P: Is it **Politically** acceptable?

3

L: Is there **Legal** authority to implement?

2

E: Is it **Economically** beneficial?

1

E: Will the project have either a neutral or positive impact on the natural Environment?

1

Will historic structures be saved or protected?

1

Could it be implemented quickly?

1

STAPLEE SCORE

17

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.

6

Will the implemented action result in a reduction of disaster damages?

Assign from 5-10 points based on the relative reduction of disaster damages.

6

MITIGATION EFFECTIVENESS SCORE

12

TOTAL SCORE (STAPLEE + Mitigation Effectiveness)

29

High Priority (30+ points)

Medium Priority (25-29 points)

Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet

Name of Jurisdiction of School District:	Caruthersville School District #18	
Action or Project		
Action/Project Number: Action # from Goals Sheet	Action 2.3	
Hazard (s) to be Addressed:	Flooding/Levee Failure	
Name of Action or Project:	Action 2.3	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	The school district will alter bus routes and school schedules to accommodate flooded bus routes,	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment ?		3
Will historic structures be saved or protected?		3
Could it be implemented quickly?		3
STAPLEE SCORE		27
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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
MITIGATION EFFECTIVENESS SCORE		20
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		47

<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
---	--	--

Completed by: Brad Gerling Title: Superintendent Date: 6/5/2023

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Caruthersville School District #18	
Action or Project		
Action/Project Number: Action # from Goals Sheet	Action 2.4	
Hazard (s) to be Addressed:	Flooding/Levee Failure	
Name of Action or Project:	Action 2.4	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	The school district will alter bus routes and school schedules to accommodate flooded bus routes, and keep staff, parents/guardians informed of the impact of flooding on the school.	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Probably NO = 1 Maybe YES = 2 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment?		3
Will historic structures be saved or protected?		3
Could it be implemented quickly?		3
STAPLEE SCORE		27
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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
MITIGATION EFFECTIVENESS SCORE		20
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		47
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: Brad Gerling Title: Superintendent Date: 6/5/2023

STAPLEE Worksheet

Name of Jurisdiction of School District: Caruthersville CPS 18 School District

Action or Project

Action/Project Number: Action # from Goals Sheet

3.3

Hazard (s) to be Addressed:

Earthquake

Name of Action or Project:

3.30

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services

Education and Outreach

STAPLEE Criteria Evaluation Rating

Definitely YES = 3
Probably NO = 1

Maybe YES = 2
Definitely NO = 0

Score

S: Is it **Socially** Acceptable?

3

T: Is it **Technically** feasible and potentially successful?

2

A: Does the jurisdiction have the **Administrative** capacity to execute this action?

2

P: Is it **Politically** acceptable?

3

L: Is there **Legal** authority to implement?

2

E: Is it **Economically** beneficial?

1

E: Will the project have either a neutral or positive impact on the natural **Environment**?

1

Will historic structures be saved or protected?

1

Could it be implemented quickly?

1

STAPLEE SCORE

16

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.

7

Will the implemented action result in a reduction of disaster damages?

Assign from 5-10 points based on the relative reduction of disaster damages.

6

MITIGATION EFFECTIVENESS SCORE

13

TOTAL SCORE (STAPLEE + Mitigation Effectiveness)

29

High Priority (30+ points)

Medium Priority (25-29 points)

Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet

Name of Jurisdiction of School District: Carrithersville OPS 18 School District

Action or Project

Action/Project Number: Action # from Goals Sheet

3.4

Hazard (s) to be Addressed:

Earthquake

Name of Action or Project:

3.4.0

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services

Education and Outreach

STAPLEE Criteria Evaluation Rating

Definitely YES - 3
Probably NO = 1

Maybe YES = 2
Definitely NO = 0

Score

S: Is it **Socially** Acceptable?

3

T: Is it **Technically** feasible and potentially successful?

3

A: Does the jurisdiction have the **Administrative** capacity to execute this action?

2

P: Is it **Politically** acceptable?

3

L: Is there **Legal** authority to implement?

2

E: Is it **Economically** beneficial?

1

E: Will the project have either a neutral or positive impact on the natural **Environment**?

1

Will historic structures be saved or protected?

1

Could it be implemented quickly?

1

STAPLEE SCORE

17

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.

6

Will the implemented action result in a reduction of disaster damages?

Assign from 5-10 points based on the relative reduction of disaster damages.

6

MITIGATION EFFECTIVENESS SCORE

12

TOTAL SCORE (STAPLEE + Mitigation Effectiveness)

29

High Priority (30+ points)

Medium Priority (25-29 points)

Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet

Name of Jurisdiction of School District:

Caruthersville School District #18

Action or Project

Action/Project Number: Action # from Goals Sheet

Action 3.5

Hazard (s) to be Addressed:

Earthquake

Name of Action or Project:

Action 3.5

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services

Installing bracing and stabilizing components to shelving, cabinets and other equipment inside the schools.

STAPLEE Criteria Evaluation Rating

Definitely YES = 3

Maybe YES = 2

Probably NO = 1

Definitely NO = 0

Score

S: Is it Socially Acceptable?

3

T: Is it Technically feasible and potentially successful?

3

A: Does the jurisdiction have the Administrative capacity to execute this action?

3

P: Is it Politically acceptable?

3

L: Is there Legal authority to implement?

3

E: Is it Economically beneficial?

2

E: Will the project have either a neutral or positive impact on the natural Environment?

3

Will historic structures be saved or protected?

3

Could it be implemented quickly?

3

STAPLEE SCORE

26

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.

10

Will the implemented action result in a reduction of disaster damages?

Assign from 5-10 points based on the relative reduction of disaster damages.

10

MITIGATION EFFECTIVENESS SCORE

20

TOTAL SCORE (STAPLEE + Mitigation Effectiveness)

46

High Priority (30+ points)

Medium Priority (25-29 points)

Low Priority (<25 points)

Completed by: Brad Gerling

Title: Superintendent

Date: 6/5/2023

STAPLEE Worksheet

Name of Jurisdiction of School District:	Caruthersville School District #18	
Action or Project		
Action/Project Number: Action # from Goals Sheet	Action 4.3	
Hazard (s) to be Addressed:	Drought / Heatwave	
Name of Action or Project:	Action 4.3	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	After school and extracurricular activities to accommodate periods of extreme heat.	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1		
Maybe YES = 2 Definitely NO = 0		
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment ?		3
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
STAPLEE SCORE		24
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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
MITIGATION EFFECTIVENESS SCORE		20
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		44

<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
---	--	--

Completed by: Brad Gerling Title: Superintendent Date: 6/5/2023

STAPLEE Worksheet

Name of Jurisdiction of School District:	Caruthersville School District #18	
Action or Project		
Action/Project Number: Action # from Goals Sheet	Action 5.2	
Hazard (s) to be Addressed:	Severe Winter Weather	
Name of Action or Project:	Action 5.2	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Meet annually with critical facilities administrators to develop severe winter weather strategies.	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment ?		3
Will historic structures be saved or protected?		3
Could it be implemented quickly?		3
STAPLEE SCORE		27
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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
MITIGATION EFFECTIVENESS SCORE		20
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		47

<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
---	--	--

Completed by: Brad Gerling Title: Superintendent Date: 6/5/2023

STAPLEE Worksheet

Name of Jurisdiction of School District: Caruthersville School District #18

Action or Project

Action/Project Number: Action # from Goals Sheet

5.4

Hazard (s) to be Addressed:

Severe Winter Weather

Name of Action or Project:

5.4

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services

Emergency Services

STAPLEE Criteria

Evaluation Rating

Definitely YES = 3

Maybe YES = 2

Probably NO = 1

Definitely NO = 0

Score

S: Is it **Socially** Acceptable?

3

T: Is it **Technically** feasible and potentially successful?

3

A: Does the jurisdiction have the **Administrative** capacity to execute this action?

2

P: Is it **Politically** acceptable?

3

L: Is there **Legal** authority to implement?

2

E: Is it **Economically** beneficial?

1

E: Will the project have either a neutral or positive impact on the natural Environment?

1

Will historic structures be saved or protected?

1

Could it be implemented quickly?

1

STAPLEE SCORE

17

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.

6

Will the implemented action result in a reduction of disaster damages?

Assign from 5-10 points based on the relative reduction of disaster damages.

6

MITIGATION EFFECTIVENESS SCORE

12

TOTAL SCORE (STAPLEE + Mitigation Effectiveness)

29

High Priority (30+ points)

Medium Priority (25-29 points)

Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Caruthersville School District #18	
Action or Project		
Action/Project Number: Action # from Goals Sheet	Action 6.1	
Hazard (s) to be Addressed:	Pemiscot County Hazard Mitigation	
Name of Action or Project:	Action 6.1	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Appoint a person or committee to review the plan periodically to ensure execution and suggest updates needed.	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment ?		3
Will historic structures be saved or protected?		3
Could it be implemented quickly?		3
STAPLEE SCORE		27
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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
MITIGATION EFFECTIVENESS SCORE		20
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		47
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: Brad Gerling Title: Superintendent Date: 6/5/2023

STAPLEE Worksheet

Name of Jurisdiction of School District:	Cooter R-IV School District	
Action or Project		
Action/Project Number: Action # from Goals Sheet	Action 1.3	
Hazard (s) to be Addressed:	Severe Thunderstorms/High Winds/Tornado	
Name of Action or Project:	Action 1.3	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Structure and Infrastructure Projects	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1		
Maybe YES = 2 Definitely NO = 0		
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive Impact on the natural Environment?		3
Will historic structures be saved or protected?		3
Could it be implemented quickly?		1
STAPLEE SCORE		23
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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		15
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		38

<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
--	---	--

Completed by: Clay Snider Title: Superintendent Date: 6/19/23

STAPLEE Worksheet

Name of Jurisdiction of School District:	Cooter R-IV School District
Action or Project	
Action/Project Number: Action # from Goals Sheet	Action 2.2
Hazard (s) to be Addressed:	Flooding
Name of Action or Project:	Action 2.2
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Structure and Infrastructure Projects

STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		3
Will historic structures be saved or protected?		3
Could it be implemented quickly?		1
STAPLEE SCORE		23
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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		15
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		38

<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
--	---	--

Completed by: Clay Snider Title: Superintendent Date: 6/19/23

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Cooter R-IV School District	
Action or Project		
Action/Project Number: Action # from Goals Sheet	Action 3 3.3	
Hazard (s) to be Addressed:	Earthquake	
Name of Action or Project:	Action X 3.3	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Education and Outreach	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		1
E: Will the project have either a neutral or positive impact on the natural Environment?		3
Will historic structures be saved or protected?		3
Could it be implemented quickly?		3
STAPLEE SCORE		25
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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		15
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		40
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: Clay Snider Title: Superintendent Date: 6/19/23

STAPLEE Worksheet

Name of Jurisdiction of School District: Cooter R-IV School District

Action or Project

Action/Project Number: Action # from Goals Sheet 4.3

Hazard (s) to be Addressed: Heat wave

Name of Action or Project: 4.3 Safety of students and staff during high heat

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services
Prevention, Emergency Services

STAPLEE Criteria Evaluation Rating	Score
Definitely YES = 3 Probably NO = 1	
Maybe YES = 2 Definitely NO = 0	
S: Is it S ocially Acceptable?	3
T: Is it T echnically feasible and potentially successful?	2
A: Does the jurisdiction have the A dministrative capacity to execute this action?	3
P: Is it P olitically acceptable?	3
L: Is there L egal authority to implement?	3
E: Is it E conomically beneficial?	3
E: Will the project have either a neutral or positive impact on the natural Environment?	2
Will historic structures be saved or protected?	2
Could it be implemented quickly?	3
STAPLEE SCORE	24

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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		10
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		34

High Priority (30+ points)
 Medium Priority (25-29 points)
 Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Cooter R-IV School District	
Action or Project		
Action/Project Number: Action # from Goals Sheet	Action 5.5	
Hazard (s) to be Addressed:	Severe Winter Weather	
Name of Action or Project:	Action 5.5	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Structure and Infrastructure Projects	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3	Maybe YES = 2	
Probably NO = 1	Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		3
Will historic structures be saved or protected?		3
Could it be implemented quickly?		1
STAPLEE SCORE		23
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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		15
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		38
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: Clay Snider Title: Superintendent Date: 6/19/23

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Cooter R-IV School District	
Action or Project		
Action/Project Number: Action # from Goals Sheet	Action 6.1	
Hazard (s) to be Addressed:	Maintain and Update Hazard Mitigation Plan	
Name of Action or Project:	Action 6.1	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Education and Outreach	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1		
Maybe YES = 2 Definitely NO = 0		
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment?		0
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
STAPLEE SCORE		21
Mitigation Effectiveness Criteria		Score
Evaluation Rating		
Will the Implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		10
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		31
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: Clay Snider Title: Superintendent Date: 6/19/23

STAPLEE Worksheet

Name of Jurisdiction of School District: Pemiscot County R-3 School District

Action or Project

Action/Project Number: Action # from Goals Sheet
1.3

Hazard (s) to be Addressed: Tornado, Thunderstorm/HighWinds/Lightning

Name of Action or Project: Apply for funding for a FEMA safe room.

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services
Structure and Infrastructure Projects

STAPLEE Criteria Evaluation Rating	Score
Definitely YES = 3 Probably NO = 1	
Maybe YES = 2 Definitely NO = 0	

S: Is it **Socially** Acceptable? 3

T: Is it **Technically** feasible and potentially successful? 2

A: Does the jurisdiction have the **Administrative** capacity to execute this action? 2

P: Is it **Politically** acceptable? 3

L: Is there **Legal** authority to implement? 3

E: Is it **Economically** beneficial? 2

E: Will the project have either a neutral or positive impact on the natural **Environment**? 1

Will historic structures be saved or protected? 2

Could it be implemented quickly? 2

STAPLEE SCORE 20

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. 8

Will the implemented action result in a reduction of disaster damages? Assign from 5-10 points based on the relative reduction of disaster damages. 5

MITIGATION EFFECTIVENESS SCORE 13

TOTAL SCORE (STAPLEE + Mitigation Effectiveness) 33

<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
---	--	--

Completed by: Joey Watkins Title: Superintendent Date: 6/14/23

STAPLEE Worksheet		
Name of Jurisdiction of School District:		Pemiscot County R-3 School District
Action or Project		
Action/Project Number: Action # from Goals Sheet		2.2
Hazard (s) to be Addressed:		Flooding
Name of Action or Project:		Clean and maintain drainage systems
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services		Prevention, Structure and Infrastructure Projects, Natural Systems Protection
STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1		Maybe YES = 2 Definitely NO = 0
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment ?		2
Will historic structures be saved or protected?		3
Could it be implemented quickly?		1
STAPLEE SCORE		23
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.	1
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	6
MITIGATION EFFECTIVENESS SCORE		7
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		30

<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
---	--	--

Completed by: Joey Watkins Title: Superintendent Date: 6/14/23

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Pemiscot County R-3 School District	
Action or Project		
Action/Project Number: Action # from Goals Sheet	3.3	
Hazard (s) to be Addressed:	Earthquake	
Name of Action or Project:	Create an earthquake preparedness program and brochure	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Education and Outreach	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Probably NO = 1 Maybe YES = 2 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment ?		2
Will historic structures be saved or protected?		2
Could it be implemented quickly?		3
STAPLEE SCORE		24
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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		10
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		34

<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
--	---	--

Completed by: Joey Watkins Title: Superintendent Date: 6/14/23

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Pemiscot County R-3 School District	
Action or Project		
Action/Project Number: Action # from Goals Sheet	4.3	
Hazard (s) to be Addressed:	Heatwave	
Name of Action or Project:	Safety of students and staff during high heat events	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Prevention, Emergency Services	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment?		2
Will historic structures be saved or protected?		2
Could it be implemented quickly?		3
STAPLEE SCORE		24
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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		10
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		34
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: Joey Watkins Title: Superintendent Date: 6/14/23

STAPLEE Worksheet		
Name of Jurisdiction of School District:	Pemiscot County R-3 School District	
Action or Project		
Action/Project Number: Action # from Goals Sheet	5.5	
Hazard (s) to be Addressed:	Severe Winter Weather, Tornado, Severe Storms	
Name of Action or Project:	Generator for Building	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Prevention, Structure and Infrastructure Projects	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		2
A: Does the Jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment ?		2
Will historic structures be saved or protected?		2
Could it be implemented quickly?		2
STAPLEE SCORE		21
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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		10
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		31

<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
--	---	--

Completed by: Joey Watkins Title: Superintendent Date: 6/14/23

STAPLEE Worksheet

Name of Jurisdiction of School District: South Pemiscot Co. R-V School

Action or Project

Action/Project Number: Action # from Goals Sheet

1, 3

Hazard (s) to be Addressed:

Severe Thunderstorm / High Winds / Tornado

Name of Action or Project:

1, 3

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services

Education and Outreach

STAPLEE Criteria Evaluation Rating

Definitely YES = 3
Probably NO = 1

Maybe YES = 2
Definitely NO = 0

Score

S: Is it Socially Acceptable?

3

T: Is it Technically feasible and potentially successful?

3

A: Does the jurisdiction have the Administrative capacity to execute this action?

3

P: Is it Politically acceptable?

3

L: Is there Legal authority to implement?

2

E: Is it Economically beneficial?

0

E: Will the project have either a neutral or positive impact on the natural Environment?

0

Will historic structures be saved or protected?

0

Could it be implemented quickly?

1

STAPLEE SCORE

15

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.

9

Will the implemented action result in a reduction of disaster damages?

Assign from 5-10 points based on the relative reduction of disaster damages.

5

MITIGATION EFFECTIVENESS SCORE

14

TOTAL SCORE (STAPLEE + Mitigation Effectiveness)

29

High Priority (30+ points)

Medium Priority (25-29 points)

Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet

Name of Jurisdiction of School District:	South Pemiscot R-V	
Action or Project		
Action/Project Number: Action # from Goals Sheet	1.6	
Hazard (s) to be Addressed:	Heatwave/Tornado/Thunderstorm	
Name of Action or Project:	Generator(s) for FEMA safe room.	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Structure and Infrastructure Projects	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES - 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?		2
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		2
Could it be implemented quickly?		2
STAPLEE SCORE		18
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.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		11
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		29

<input type="checkbox"/> High Priority (30+ points)	<input checked="" type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
---	--	--

Completed by: Glenn Carter Title: Assistant Superintendent Date: 6/8/2023

STAPLEE Worksheet

Name of Jurisdiction of School District: South Amisot R-V School District
 Action or Project

Action/Project Number: Action # from Goals Sheet 2.2

Hazard (s) to be Addressed: Flooding

Name of Action or Project: 2.2

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services
Structure and Infrastructure Projects

STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		2
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		1
Will historic structures be saved or protected?		2
Could it be implemented quickly?		0
STAPLEE SCORE		<u>16</u>

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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
MITIGATION EFFECTIVENESS SCORE		<u>13</u>
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		<u>29</u>

High Priority (30+ points)
 Medium Priority (25-29 points)
 Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet

Name of Jurisdiction of School District:	<i>South Permisco Co. R-V School District</i>
Action or Project	
Action/Project Number: Action # from Goals Sheet	<i>2.3</i>
Hazard (s) to be Addressed:	<i>Flooding</i>
Name of Action or Project:	<i>Alter bus routes / school schedule due to flooded bus routes</i>
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	<i>Prevention</i>

STAPLEE Criteria Evaluation Rating	Score
Definitely YES = 3 Probably NO = 1	
Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?	<i>2</i>
T: Is it Technically feasible and potentially successful?	<i>2</i>
A: Does the jurisdiction have the Administrative capacity to execute this action?	<i>2</i>
P: Is it Politically acceptable?	<i>2</i>
L: Is there Legal authority to implement?	<i>2</i>
E: Is it Economically beneficial?	<i>2</i>
E: Will the project have either a neutral or positive impact on the natural Environment?	<i>2</i>
Will historic structures be saved or protected?	<i>0</i>
Could it be implemented quickly?	<i>2</i>
STAPLEE SCORE	<i>16</i>

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.	<i>7</i>
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	<i>6</i>
MITIGATION EFFECTIVENESS SCORE		<i>13</i>
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		<i>29</i>

<input type="checkbox"/> High Priority (30+ points)	<input checked="" type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
---	--	--

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet

Name of Jurisdiction of School District:

South Pemiscot County R-V School District

Action or Project

Action/Project Number: Action # from Goals Sheet

2.4

Hazard (s) to be Addressed:

Flooding

Name of Action or Project:

2.4

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services

Education and Outreach

STAPLEE Criteria Evaluation Rating		Score
Definitely YES - 3	Maybe YES = 2	
Probably NO = 1	Definitely NO = 0	
S: Is it Socially Acceptable?		<i>2</i>
T: Is it Technically feasible and potentially successful?		<i>2</i>
A: Does the jurisdiction have the Administrative capacity to execute this action?		<i>2</i>
P: Is it Politically acceptable?		<i>2</i>
L: Is there Legal authority to implement?		<i>2</i>
E: Is it Economically beneficial?		<i>2</i>
E: Will the project have either a neutral or positive impact on the natural Environment?		<i>1</i>
Will historic structures be saved or protected?		<i>0</i>
Could it be implemented quickly?		<i>2</i>
STAPLEE SCORE		<i>15</i>

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.	<i>9</i>
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	<i>5</i>
MITIGATION EFFECTIVENESS SCORE		<i>14</i>
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		<i>29</i>

High Priority (30+ points)

Medium Priority (25-29 points)

Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet

Name of Jurisdiction of School District: South Pemiscot R-V

Action or Project

Action/Project Number: Action # from Goals Sheet 2.5

Hazard (s) to be Addressed: Flooding

Name of Action or Project: Water control project installing grinder pumps in wastewater

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services
Structure and Infrastructure Projects

STAPLEE Criteria Evaluation Rating		Score
Definitely YES = 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		2
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		2
Will historic structures be saved or protected?		2
Could it be implemented quickly?		2
STAPLEE SCORE		20
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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		10
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		30

High Priority (30+ points)

Medium Priority (25-29 points)

Low Priority (<25 points)

Completed by: Glenn Carter Title: Assistant Superintendent Date: 6/8/2023

STAPLEE Worksheet		
Name of Jurisdiction of School District:	South Pemiscot R-V	
Action or Project		
Action/Project Number: Action # from Goals Sheet	3.3	
Hazard (s) to be Addressed:	Earthquake	
Name of Action or Project:	Create earthquake preparedness program and brochure	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Education and Outreach	
STAPLEE Criteria Evaluation Rating		Score
Definitely YES - 3	Maybe YES = 2	
Probably NO = 1	Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		2
E: Will the project have either a neutral or positive impact on the natural Environment?		2
Will historic structures be saved or protected?		2
Could it be implemented quickly?		3
STAPLEE SCORE		24
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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		10
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		34
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: Glenn Carter Title: Assistant Superintendent Date: 6/8/2023

STAPLEE Worksheet

Name of Jurisdiction of School District: South Pomisicot R-V School District

Action or Project

Action/Project Number: Action # from Goals Sheet

34

Hazard (s) to be Addressed:

Earthquake

Name of Action or Project:

Educate parents on child's safety at school

Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services

Education and Outreach

STAPLEE Criteria

Evaluation Rating

Definitely YES = 3

Maybe YES = 2

Probably NO = 1

Definitely NO = 0

Score

S: Is it **Socially** Acceptable?

2

T: Is it **Technically** feasible and potentially successful?

2

A: Does the jurisdiction have the **Administrative** capacity to execute this action?

2

P: Is it **Politically** acceptable?

2

L: Is there **Legal** authority to implement?

2

E: Is it **Economically** beneficial?

2

E: Will the project have either a neutral or positive impact on the natural Environment?

0

Will historic structures be saved or protected?

0

Could it be implemented quickly?

3

STAPLEE SCORE

15

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.

9

Will the Implemented action result in a reduction of disaster damages?

Assign from 5-10 points based on the relative reduction of disaster damages.

5

MITIGATION EFFECTIVENESS SCORE

14

TOTAL SCORE (STAPLEE + Mitigation Effectiveness)

29

High Priority (30+ points)

Medium Priority (25-29 points)

Low Priority (<25 points)

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet		
Name of Jurisdiction of School District:		South Pemiscot R-V
Action or Project		
Action/Project Number: Action # from Goals Sheet	4.3	
Hazard (s) to be Addressed:	Heatwave	
Name of Action or Project:	Safety of students and staff during heatwave by altering activities	
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Emergency Services	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		Score
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
E: Will the project have either a neutral or positive impact on the natural Environment?		2
Will historic structures be saved or protected?		2
Could it be implemented quickly?		3
STAPLEE SCORE		24
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.	5
Will the Implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		10
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		34
<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)

Completed by: Glenn Carter Title: Assistant Superintendent Date: 6/8/2023

STAPLEE Worksheet

Name of Jurisdiction of School District:	South Pomisnot R-V School District
Action or Project	
Action/Project Number: Action # from Goals Sheet	5.4
Hazard (s) to be Addressed:	Severe winter weather
Name of Action or Project:	Set priorities for bus routes to clear
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Emergency Services

STAPLEE Criteria Evaluation Rating	Score
Definitely YES = 3 Probably NO = 1	
Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?	2
T: Is it Technically feasible and potentially successful?	2
A: Does the jurisdiction have the Administrative capacity to execute this action?	3
P: Is it Politically acceptable?	2
L: Is there Legal authority to implement?	2
E: Is it Economically beneficial?	1
E: Will the project have either a neutral or positive impact on the natural Environment ?	0
Will historic structures be saved or protected?	0
Could it be implemented quickly?	2
STAPLEE SCORE	14

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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		15
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		29

<input type="checkbox"/> High Priority (30+ points)	<input checked="" type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
---	--	--

Completed by: _____ Title: _____ Date: _____

STAPLEE Worksheet

Name of Jurisdiction of School District:	South Pemiscot R-V
Action or Project	
Action/Project Number: Action # from Goals Sheet	5.5
Hazard (s) to be Addressed:	Severe Winter Weather/Levee Failure/Heatwave
Name of Action or Project:	Generator(s) for campus buildings
Mitigation Category: Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	Structure and Infrastructure Projects

STAPLEE Criteria Evaluation Rating		Score
Definitely YES - 3 Probably NO = 1	Maybe YES = 2 Definitely NO = 0	
S: Is it Socially Acceptable?		3
T: Is it Technically feasible and potentially successful?		2
A: Does the jurisdiction have the Administrative capacity to execute this action?		3
P: Is it Politically acceptable?		2
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		1
E: Will the project have either a neutral or positive impact on the natural Environment?		2
Will historic structures be saved or protected?		2
Could it be implemented quickly?		2
STAPLEE SCORE		20
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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		10
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		30

<input checked="" type="checkbox"/> High Priority (30+ points)	<input type="checkbox"/> Medium Priority (25-29 points)	<input type="checkbox"/> Low Priority (<25 points)
---	--	--

Completed by: Glenn Carter Title: Assistant Superintendent Date: 6/8/2023

Appendix G

Article IV Administration

Section 415.130 **Establishment of a Development Permit.**

Section 415.140 **Administration.**

Section 415.150 **Application for Permit.**

Section 415.160 **Establishment of Zoning Districts.**

Section 415.130 **Establishment of a Development Permit.**

[Ord. No. 678 §3.0, 2-1-1988]

No person, firm, or corporation shall initiate any development or **substantial** improvement or cause the same to be done without first obtaining a separate permit for development as defined in Section **415.040**.

Section 415.140 **Administration.**

[Ord. No. 678 §3.2, 2-1-1988; Ord. No. 920 §§2, 4, 12-15-2003]

A.

The Floodplain Administrator is hereby appointed to administer and implement the provisions of this Chapter.

B.

Duties of the Floodplain Administrator shall include, but not be limited to:

1.

Review all development permits to assure that sites are reasonably safe from flooding and that the permit requirements of this Chapter have been satisfied.

2.

Review permits for proposed development to assure that all necessary permits have been obtained from those Federal, State or local governmental agencies from which prior approval is required.

3.

Notify adjacent communities and the Missouri State Emergency Management Agency (SEMA) prior to any alteration or relocation of a watercourse and submit evidence of such notification to the Federal Emergency Management Agency.

4.

Assure that the flood-carrying capacity is not diminished and shall be maintained within the altered or relocated portion of any watercourse.

5.

Verify, record and maintain record of the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures.

6.

Verify, record and maintain record of the actual elevation (in relation to mean sea level) to which the new or substantially improved structures have been floodproofed.

7.

When floodproofing is utilized for a particular structure the Floodplain Administrator shall be presented certification from a registered professional engineer or architect.

Section 415.150 Application for Permit.

[Ord. No. 678 §3.3, 2-1-1988; Ord. No. 920 §2, 12-15-2003]

A.

To obtain a permit, the applicant shall first file an application in writing on a form furnished for that purpose. Every such application shall:

1.

Identify and describe the work to be covered by the permit.

2.

Describe the land on which the proposed work is to be done by lot, block tract and house and street address, or similar description that will readily identify and definitely locate the proposed building or work.

3.

Indicate the use or occupancy for which the proposed work is intended.

4.

Be accompanied by plans and specifications for proposed construction.

5.

Be signed by the permittee or his/her authorized agent who may be required to submit evidence to indicate such authority.

6.

Give such other information as reasonably may be required by the Floodplain Administrator.

Section 415.160 Establishment of Zoning Districts.

[Ord. No. 678 §4.0, 2-1-1988]

The mapped flood plain areas within the jurisdiction of this Chapter are hereby divided into the two (2) following districts: A Floodway Overlay District (FW) and a Floodway Fringe Overlay District (FF) identified in the Flood Insurance Study and accompanying map(s). Within these Districts all uses not meeting the standards of this Chapter and those standards of the underlying Zoning District shall be prohibited. These zones shall be consistent with the numbered and unnumbered A Zones (including AE, AO and AH Zones) as identified on the official FIRM and identified in the Flood Insurance Study provided by the Federal Emergency Management Agency.

Chapter 415

FLOOD DAMAGE PREVENTION

ARTICLE I

Statutory Authorization, Findings of Fact and Purposes

Section 415.010. Statutory Authorization.

Section 415.020. Findings of Fact.

Section 415.030. Statement of Purpose.

ARTICLE II

General Provisions

Section 415.040. Lands To Which
Chapter Applies.

Section 415.050. Floodplain
Administrator.

Section 415.060. Compliance.

Section 415.070. Abrogation and Greater
Restrictions.

Section 415.080. Interpretation.

Section 415.090. Warning and Disclaimer
of Liability.

Section 415.100. Severability.

ARTICLE III

Administration

Section 415.110. Floodplain Development
Permit Required.

Section 415.120. Designation of
Floodplain
Administrator.

Section 415.130. Duties and
Responsibilities of
Floodplain
Administrator.

Section 415.140. Application For
Floodplain Development
Permit.

ARTICLE IV

Provisions For Flood Hazard Reduction

Section 415.150. General Standards.

Section 415.160. Specific Standards.

Section 415.170. Manufactured Homes.

Section 415.180. Areas of Shallow
Flooding (Ao and Ah
Zones).

Section 415.190. Floodway.

Section 415.200. Recreational Vehicles.

ARTICLE V

Floodplain Management Variance Procedures

Section 415.210. Establishment of Appeal
Board.

Section 415.220. Responsibility of Appeal
Board.

Section 415.230. Further Appeals.

Section 415.240. Floodplain Management
Variance Criteria.

Section 415.250. Conditions For
Approving Floodplain
Management Variances.

Section 415.260. Conditions For
Approving Variances
For Accessory
Structures.

ARTICLE VI

Penalties For Violation

Section 415.270. Penalties For Violation.

ARTICLE VII
AmendmentsARTICLE VIII
Definitions

Section 415.280. Amendments.

Section 415.290. Definitions.

Editor's Note — Ord. no. 2004-11 §1, adopted December 13, 2004, repealed ch. 415 and enacted new provisions set out herein. Former ch. 415 derived from ord. no. 643 art. 1 — 7, 11-7-1988.

ARTICLE I
Statutory Authorization, Findings of Fact and Purposes

Section 415.010. Statutory Authorization.

[Ord. No. 2004-11 §1, 12-13-2004]

The General Assembly of the State of Missouri has in Chapter 89, RSMo., delegated the responsibility to local government units to adopt regulations to promote the public health, safety and general welfare of its citizenry. Therefore, the Board of Aldermen of the City of Hayti, Missouri, does ordain as follows.

Section 415.020. Findings of Fact.

[Ord. No. 2004-11 §1, 12-13-2004]

- A. *Flood Losses Resulting From Periodic Inundation.* The special flood hazard areas of the City of Hayti, Missouri, are subject to inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
- B. *General Causes Of The Flood Losses.* These flood losses are caused by:
1. The cumulative effect of development in any delineated floodplain causing increases in flood heights and velocities; and
 2. The occupancy of flood hazard areas by uses vulnerable to floods, hazards to others, inadequately elevated or otherwise unprotected from flood damages.
- C. *Methods Used To Analyze Flood Hazards.* The Flood Insurance Study (FIS) that is the basis of this Chapter uses a standard engineering method of analyzing flood hazards which consist of a series of interrelated steps.
1. Selection of a base flood that is based upon engineering calculations which permit a consideration of such flood factors as its expected frequency of occurrence, the area inundated and the depth of inundation. The base flood selected for this Chapter is representative of large floods which are characteristic of what can be expected to occur on the particular streams subject to this Chapter. It is in the general order of a flood which could be expected to have a one percent (1%)

- chance of occurrence in any one (1) year as delineated on the Federal Insurance Administrator's FIS and illustrative materials dated June 3, 1988, as amended, and any future revisions thereto.
2. Calculation of water surface profiles are based on a standard hydraulic engineering analysis of the capacity of the stream channel and overbank areas to convey the regulatory flood.
 3. Computation of a floodway required to convey this flood without increasing flood heights more than one (1) foot at any point.
 4. Delineation of floodway encroachment lines within which no development is permitted that would cause any increase in flood height.
 5. Delineation of flood fringe, i.e., that area outside the floodway encroachment lines but still subject to inundation by the base flood.

Section 415.030. Statement of Purpose.

[Ord. No. 2004-11 §1, 12-13-2004]

- A. It is the purpose of this Chapter to promote the public health, safety and general welfare; to minimize those losses described in Article I, Section 415.020(A); to establish or maintain the community's eligibility for participation in the National Flood Insurance Program (NFIP) as described in 44 Code of Federal Regulations (CFR) 59.22(a)(3); and to meet the requirements of 44 CFR 60.3(d) by applying the provisions of this Chapter to:
1. Restrict or prohibit uses that are dangerous to health, safety or property in times of flooding or cause undue increases in flood heights or velocities;
 2. Require uses vulnerable to floods, including public facilities that serve such uses, be provided with flood protection at the time of initial construction; and
 3. Protect individuals from buying lands that are unsuited for the intended development purposes due to the flood hazard.

ARTICLE II General Provisions

Section 415.040. Lands To Which Chapter Applies.

[Ord. No. 2004-11 §1, 12-13-2004]

This Chapter shall apply to all lands within the jurisdiction of the City of Hayti, Missouri, identified as numbered and unnumbered A Zones, AE, AO and AH Zones on the Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) dated June 3, 1988, as amended, and any future revisions thereto. In all areas covered by this Chapter, no development shall be permitted except through the issuance of a floodplain development permit granted by the Board of Aldermen or its duly designated representative under such

safeguards and restrictions as the Board of Aldermen or the designated representative may reasonably impose for the promotion and maintenance of the general welfare, health of the inhabitants of the community and as specifically noted in Article IV.

Section 415.050. Floodplain Administrator.

[Ord. No. 2004-11 §1, 12-13-2004]

The Building Code Enforcement Officer is hereby designated as the Floodplain Administrator under this Chapter.

Section 415.060. Compliance.

[Ord. No. 2004-11 §1, 12-13-2004]

No development located within the special flood hazard areas of this community shall be located, extended, converted or structurally altered without full compliance with the terms of this Chapter and other applicable regulations.

Section 415.070. Abrogation and Greater Restrictions.

[Ord. No. 2004-11 §1, 12-13-2004]

It is not intended by this Chapter to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this Chapter imposes greater restrictions, the provisions of this Chapter shall prevail. All other ordinances inconsistent with this Chapter are hereby repealed to the extent of the inconsistency only.

Section 415.080. Interpretation.

[Ord. No. 2004-11 §1, 12-13-2004]

In their interpretation and application, the provisions of this Chapter shall be held to be minimum requirements, shall be liberally construed in favor of the Governing Body and shall not be deemed a limitation or repeal of any other powers granted by State Statutes.

Section 415.090. Warning and Disclaimer of Liability.

[Ord. No. 2004-11 §1, 12-13-2004]

The degree of flood protection required by this Chapter is considered reasonable for regulatory purposes and is based on engineering and scientific methods of study. Larger floods may occur on rare occasions or the flood heights may be increased by manmade or natural causes such as ice jams and bridge openings restricted by debris. This Chapter does not imply that areas outside the floodway and flood fringe or land uses permitted within such areas will be free from flooding or flood damages. This Chapter shall not create liability on the part of the City of Hayti, Missouri, any officer or employee thereof for any flood damages that result from reliance on this Chapter or any administrative decision lawfully made thereunder.

Section 415.100. Severability.**[Ord. No. 2004-11 §1, 12-13-2004]**

If any Section, clause, provision or portion of this Chapter is adjudged unconstitutional or invalid by a court of appropriate jurisdiction, the remainder of this Chapter shall not be affected thereby.

**ARTICLE III
Administration****Section 415.110. Floodplain Development Permit Required.****[Ord. No. 2004-11 §1, 12-13-2004]**

A floodplain development permit shall be required for all proposed construction or other development, including the placement of manufactured homes in the areas described in Article II, Section 415.040. No person, firm, corporation or unit of government shall initiate any development or substantial improvement or cause the same to be done without first obtaining a separate floodplain development permit for each structure or other development.

Section 415.120. Designation of Floodplain Administrator.**[Ord. No. 2004-11 §1, 12-13-2004]**

The Building Code Enforcement Officer is hereby appointed to administer and implement the provisions of this Chapter.

Section 415.130. Duties and Responsibilities of Floodplain Administrator.**[Ord. No. 2004-11 §1, 12-13-2004]**

- A. Duties of the Building Code Enforcement Officer (hereinafter referred to as the "Floodplain Administrator") shall include, but not be limited to:
1. Review of all applications for floodplain development permits to assure that sites are reasonably safe from flooding and that the floodplain development permit requirements of this Chapter have been satisfied;
 2. Review of all applications for floodplain development permits for proposed development to assure that all necessary permits have been obtained from Federal, State or local governmental agencies from which prior approval is required by Federal, State or local law;
 3. Review all subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from flooding;
 4. Issue floodplain development permits for all approved applications;

5. Notify adjacent communities and the State of Missouri Emergency Management Agency prior to any alteration or relocation of a watercourse and submit evidence of such notification to the Federal Emergency Management Agency (FEMA);
6. Assure that the flood-carrying capacity is not diminished and shall be maintained within the altered or relocated portion of any watercourse;
7. Verify and maintain a record of the actual elevation (in relation to mean sea level) of the lowest flood, including basement, of all new or substantially improved structures;
8. Verify and maintain a record of the actual elevation (in relation to mean sea level) that the new or substantially improved non-residential structures have been floodproofed;
9. When floodproofing techniques are utilized for a particular non-residential structure, the floodplain administrator shall require certification from a registered professional engineer or architect.

Section 415.140. Application For Floodplain Development Permit.

[Ord. No. 2004-11 §1, 12-13-2004]

- A. To obtain a floodplain development permit, the applicant shall first file an application in writing on a form furnished for that purpose. Every floodplain development permit application shall:
1. Describe the land on which the proposed work is to be done by lot, block and tract, house and street address or similar description that will readily identify and specifically locate the proposed structure or work;
 2. Identify and describe the work to be covered by the floodplain development permit;
 3. Indicate the use or occupancy for which the proposed work is intended;
 4. Indicate the assessed value of the structure and the fair market value of the improvement;
 5. Specify whether development is located in designated flood fringe or floodway;
 6. Identify the existing base flood elevation and the elevation of the proposed development;
 7. Give such other information as reasonably may be required by the Floodplain Administrator;
 8. Be accompanied by plans and specifications for proposed construction; and
 9. Be signed by the permittee or his authorized agent who may be required to submit evidence to indicate such authority.

ARTICLE IV
Provisions For Flood Hazard Reduction

Section 415.150. General Standards.**[Ord. No. 2004-11 §1, 12-13-2004]**

- A. No permit for floodplain development shall be granted for new construction, substantial improvements and other improvements, including the placement of manufactured homes, within any numbered or unnumbered A Zones, AE, AO and AH Zones, unless the conditions of this Section are satisfied.
- B. All areas identified as unnumbered A Zones on the FIRM are subject to inundation of the 100-year flood; however, the base flood elevation is not provided. Development within unnumbered A Zones is subject to all provisions of this Chapter. If Flood Insurance Study data is not available, the community shall obtain, review and reasonably utilize any base flood elevation or floodway data currently available from Federal, State or other sources.
- C. Until a floodway is designated, no new construction, substantial improvements or other development, including fill, shall be permitted within any numbered A Zone or AE Zone on the FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community.
- D. All new construction, subdivision proposals, substantial improvements, prefabricated structures, placement of manufactured homes and other developments shall require:
 1. Design or adequate anchorage to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
 2. Construction with materials resistant to flood damage;
 3. Utilization of methods and practices that minimize flood damages;
 4. All electrical, heating, ventilation, plumbing, air-conditioning equipment and other service facilities be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
 5. New or replacement water supply systems and/or sanitary sewage systems be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters and on-site waste disposal systems be located so as to avoid impairment or contamination; and
 6. Subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, located within special flood hazard areas are required to assure that:

- a. All such proposals are consistent with the need to minimize flood damage;
- b. All public utilities and facilities, such as sewer, gas, electrical and water systems, are located and constructed to minimize or eliminate flood damage;
- c. Adequate drainage is provided so as to reduce exposure to flood hazards; and
- d. All proposals for development, including proposals for manufactured home parks and subdivisions of five (5) acres or fifty (50) lots, whichever is lesser, include within such proposals base flood elevation data.

E. *Storage, Material And Equipment.*

1. The storage or processing of materials within the special flood hazard area that are in time of flooding buoyant, flammable, explosive or could be injurious to human, animal or plant life is prohibited.
2. Storage of other material or equipment may be allowed if not subject to major damage by floods, if firmly anchored to prevent flotation, or if readily removable from the area within the time available after a flood warning.

F. *Accessory Structures.* Structures used solely for parking and limited storage purposes, not attached to any other structure on the site, of limited investment value and not larger than four hundred (400) square feet may be constructed at-grade and wet-floodproofed provided there is no human habitation or occupancy of the structure; the structure is of single-wall design; a variance has been granted from the standard floodplain management requirements of this Chapter; and a floodplain development permit has been issued.

Section 415.160. Specific Standards.

[Ord. No. 2004-11 §1, 12-13-2004]

- A. In all areas identified as numbered and unnumbered A Zones, AE and AH Zones, where base flood elevation data have been provided, as set forth in Article IV, Section 415.150(B), the following provisions are required:
1. *Residential construction.* New construction or substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to one (1) foot above the base flood elevation.
 2. *Non-residential construction.* New construction or substantial improvement of any commercial, industrial or other non-residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to one (1) foot above the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this Subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in Article III, Section 415.130.

3. Require for all new construction and substantial improvements that fully enclosed areas below the lowest floor used solely for parking of vehicles, building access or storage in an area other than a basement and that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
 - a. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided; and
 - b. The bottom of all openings shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

Section 415.170. Manufactured Homes.

[Ord. No. 2004-11 §1, 12-13-2004]

- A. All manufactured homes to be placed within all unnumbered and numbered A Zones, AE and AH Zones on community's FIRM shall be required to be installed using methods and practices that minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors.
- B. Required manufactured homes that are placed or substantially improved within unnumbered or numbered A Zones, AE and AH Zones on the community's FIRM on sites:
 1. Outside of manufactured home park or subdivision;
 2. In a new manufactured home park or subdivision;
 3. In an expansion to an existing manufactured home park or subdivision; or
 4. In an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as the result of a flood

be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to one (1) foot above the base flood elevation and be securely attached to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

- C. Require that manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within all unnumbered and numbered A

Zones, AE and AH Zones on the community's FIRM, that are not subject to the provisions of Article IV, Section 415.170(B) of this Chapter, be elevated so that either:

1. The lowest floor of the manufactured home is at one (1) foot above the base flood level; or
2. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height above grade and be securely attached to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

Section 415.180. Areas of Shallow Flooding (Ao and Ah Zones).

[Ord. No. 2004-11 §1, 12-13-2004]

A. Located within the areas of special flood hazard established in Section 415.040 are areas designated as AO Zones. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. The following provisions apply:

1. *AO Zones.*

- a. All new construction and substantial improvements of residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two (2) feet if no depth number is specified).
- b. All new construction and substantial improvements of commercial, industrial or other non-residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two (2) feet if no depth number is specified) or, together with attendant utility and sanitary facilities, be completely floodproofed to that so that the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
- c. Adequate drainage paths shall be required around structures on slopes in order to guide floodwaters around and away from proposed structures.

2. *AH Zones.*

- a. The specific standards for all areas of special flood hazard where base flood elevation has been provided shall be required as set forth in Article IV, Section 415.160.
- b. Adequate drainage paths shall be required around structures on slopes in order to guide floodwaters around and away from proposed structures.

Section 415.190. Floodway.**[Ord. No. 2004-11 §1, 12-13-2004]**

- A. Located within areas of special flood hazard established in Article II, Section 415.040 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters that carry debris and potential projectiles, the following provisions shall apply:
1. The community shall select and adopt a regulatory floodway based on the principle that the area chosen for the regulatory floodway must be designed to carry the waters of the base flood without increasing the water surface elevation of that flood more than one (1) foot at any point.
 2. The community shall prohibit any encroachments, including fill, new construction, substantial improvements and other development, within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.
 3. If Article IV, Section 415.190(2) is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Article IV.
 4. In unnumbered A Zones, the community shall obtain, review and reasonably utilize any base flood elevation or floodway data currently available from Federal, State or other sources as set forth in Article IV, Section 415.150(B).

Section 415.200. Recreational Vehicles.**[Ord. No. 2004-11 §1, 12-13-2004]**

- A. Require that recreational vehicles placed on sites within all unnumbered and numbered A Zones, AO, AE and AH Zones on the community's FIRM either:
1. Be on the site for fewer than one hundred eighty (180) consecutive days; or
 2. Be fully licensed and ready for highway use*; or
 3. Meet the permitting, elevation and the anchoring requirements for manufactured homes of this Chapter.

* A recreational vehicle is ready for highway use if it is on wheels or jacking system, is attached to the site only by quick-disconnect type utilities and security devices and has no permanently attached additions.

ARTICLE V
Floodplain Management Variance Procedures

Section 415.210. Establishment of Appeal Board.

[Ord. No. 2004-11 §1, 12-13-2004]

The Board of Adjustment as established by the City of Hayti, Missouri, shall hear and decide appeals and requests for variances from the floodplain management requirements of this Chapter.

Section 415.220. Responsibility of Appeal Board.

[Ord. No. 2004-11 §1, 12-13-2004]

- A. Where an application for a floodplain development permit or request for a variance from the floodplain management regulations is denied by the Floodplain Administrator, the applicant may apply for such floodplain development permit or variance directly to the Appeal Board as defined in Article V, Section 415.210.
- B. The Board of Adjustment shall hear and decide appeals when it is alleged that there is an error in any requirement, decision or determination made by the Floodplain Administrator in the enforcement or administration of this Chapter.

Section 415.230. Further Appeals.

[Ord. No. 2004-11 §1, 12-13-2004]

Any person aggrieved by the decision of the Board of Adjustment or any taxpayer may appeal such decision to the Pemiscot County Circuit Court as provided in Chapter 536, RSMo.

Section 415.240. Floodplain Management Variance Criteria.

[Ord. No. 2004-11 §1, 12-13-2004]

- A. In passing upon such applications for variances, the Board of Adjustment shall consider all technical data and evaluations, all relevant factors, standards specified in other Sections of this Chapter and the following criteria:
 - 1. The danger to life and property due to flood damage;
 - 2. The danger that materials may be swept onto other lands to the injury of others;
 - 3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - 4. The importance of the services provided by the proposed facility to the community;
 - 5. The necessity to the facility of a waterfront location, where applicable;

6. The availability of alternative locations, not subject to flood damage, for the proposed use;
7. The compatibility of the proposed use with existing and anticipated development;
8. The relationship of the proposed use to the Comprehensive Plan and floodplain management program for that area;
9. The safety of access to the property in times of flood for ordinary and emergency vehicles;
10. The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters, if applicable, expected at the site; and
11. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, streets and bridges.

Section 415.250. Conditions For Approving Floodplain Management Variances.

[Ord. No. 2004-11 §1, 12-13-2004]

- A. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half (½) acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing Subsections (B) through (F) below have been fully considered. As the lot size increases beyond the one-half (½) acre, the technical justification required for issuing the variance increases.
- B. Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places, the State inventory of historic places or local inventory of historic places upon determination provided the proposed activity will not preclude the structure's continued historic designation.
- C. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
- D. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- E. Variances shall only be issued upon:
 1. A showing of good and sufficient cause;
 2. A determination that failure to grant the variance would result in exceptional hardship to the applicant; and
 3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.

- F. A community shall notify the applicant in writing over the signature of a community official that:
1. The issuance of a variance to construct a structure below base flood level will result in increased premium rates for flood insurance up to amounts as high as twenty-five dollars (\$25.00) for one hundred dollars (\$100.00) of insurance coverage; and
 2. Such construction below the base flood level increases risks to life and property. Such notification shall be maintained with the record of all variance actions as required by the Chapter.

Section 415.260. Conditions For Approving Variances For Accessory Structures.

[Ord. No. 2004-11 §1, 12-13-2004]

- A. Any variance granted for an accessory structure shall be decided individually based on a case-by-case analysis of the building's unique circumstances. Variances granted shall meet the following conditions as well as those criteria and conditions set forth in Article V, Sections 415.240 and 415.250 of this Chapter.
- B. In order to minimize flood damages during the 100-year flood and the threat to public health and safety, the following conditions shall be included for any variance issued for accessory structures that are constructed at-grade and wet-floodproofed.
1. Use of the accessory structures must be solely for parking and limited storage purposes in Zone A only as identified on the community's Flood Insurance Rate Map (FIRM).
 2. For any new or substantially damaged accessory structures, the exterior and interior building components and elements (i.e., foundation, wall framing, exterior and interior finishes, flooring, etc.) below the base flood elevation must be built with flood-resistant materials in accordance with Article IV, Section 415.150(D)(2) of this Chapter.
 3. The accessory structures must be adequately anchored to prevent flotation, collapse or lateral movement of the structure in accordance with Article IV, Section 415.150(D)(1) of this Chapter. All of the buildings's structural components must be capable of resisting specific flood-related forces including hydrostatic, buoyancy and hydrodynamic and debris impact forces.
 4. Any mechanical, electrical or other utility equipment must be located above the base flood elevation or floodproofed so that they are contained within a watertight, floodproofed enclosure that is capable of resisting damage during flood conditions in accordance with Article IV, Section 415.150(D)(4) of this Chapter.
 5. The accessory structures must meet all National Flood Insurance Program (NFIP) opening requirements. The NFIP requires that enclosure or foundation walls, subject to the 100-year flood, contain openings that will permit the automatic entry

and exit of floodwaters in accordance with Article IV, Section 415.160(3) of this Chapter.

6. The accessory structures must comply with the floodplain management floodway encroachment provisions of Article IV, Section 415.180(2) of this Chapter. No variances may be issued for accessory structures within any designated floodway, if any increase in flood levels would result during the 100-year flood.
7. Equipment, machinery or other contents must be protected from any flood damage.
8. No disaster relief assistance under any program administered by any Federal agency shall be paid for any repair or restoration costs of the accessory structures.
9. A community shall notify the applicant in writing over the signature of a community official that:
 - a. The issuance of a variance to construct a structure below base flood level will result in increased premium rates for flood insurance up to amounts as high as twenty-five dollars (\$25.00) for one hundred dollars (\$100.00) of insurance coverage, and
 - b. Such construction below the base flood level increases risks to life and property.

Such notification shall be maintained with the record of all variance actions as required by this Chapter.

10. Wet-floodproofing construction techniques must be reviewed and approved by the community and registered professional engineer or architect prior to the issuance of any floodplain development permit for construction.

ARTICLE VI Penalties For Violation

Section 415.270. Penalties For Violation.

[Ord. No. 2004-11 §1, 12-13-2004]

Violation of the provisions of this Chapter or failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with granting of variances) shall constitute a misdemeanor. Any person who violates this Chapter or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than five hundred dollars (\$500.00) and, in addition, shall pay all costs and expenses involved in the case. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the City of Hayti, Missouri, or other appropriate authority from taking such other lawful action as is necessary to prevent or remedy any violation.

ARTICLE VII
Amendments

Section 415.280. Amendments.

[Ord. No. 2004-11 §1, 12-13-2004]

- A. The regulations, restrictions and boundaries set forth in this Chapter may from time to time be amended, supplemented, changed or repealed to reflect any and all changes in the National Flood Disaster Protection Act of 1973, provided however, that no such action may be taken until after a public hearing in relation thereto at which parties of interest and citizens shall have an opportunity to be heard.
- B. Notice of the time and place of such hearing shall be published in a newspaper of general circulation in the City of Hayti, Missouri. At least twenty (20) days shall elapse between the date of this publication and the public hearing. A copy of such amendments will be provided to the Region VII office of the Federal Emergency Management Agency (FEMA). The regulations of this Chapter are in compliance with the National Flood Insurance Program (NFIP) regulations.

ARTICLE VIII
Definitions

Section 415.290. Definitions.

[Ord. No. 2004-11 §1, 12-13-2004]

Unless specifically defined below, words or phrases used in this Chapter shall be interpreted so as to give them the same meaning they have in common usage and to give this Chapter its most reasonable application.

100-YEAR FLOOD — See "*BASE FLOOD*".

ACCESSORY STRUCTURE — The same as "*APPURTENANT STRUCTURE*".

ACTUARIAL RATES — See "*RISK PREMIUM RATES*".

ADMINISTRATOR — The Federal Insurance Administrator.

AGENCY — The Federal Emergency Management Agency (FEMA).

APPEAL — A request for review of the Floodplain Administrator's interpretation of any provision of this Chapter or a request for a variance.

APPURTENANT STRUCTURE — A structure that is on the same parcel of property as the principal structure to be insured and the use of which is incidental to the use of the principal structure.

AREA OF SHALLOW FLOODING — A designated AO or AH Zone on a community's Flood Insurance Rate Map (FIRM) with a one percent (1%) or greater annual chance of flooding to an average depth of one (1) to three (3) feet where a clearly defined channel does

not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

AREA OF SPECIAL FLOOD HAZARD — The land in the floodplain within a community subject to a one percent (1%) or greater chance of flooding in any given year.

BASE FLOOD — The flood having a one percent (1%) chance of being equaled or exceeded in any given year.

BASEMENT — Any area of the structure having its floor subgrade (below ground level) on all sides.

BUILDING — See "**STRUCTURE**".

CHIEF EXECUTIVE OFFICER OR CHIEF ELECTED OFFICIAL — The official of the community who is charged with the authority to implement and administer laws, ordinances and regulations for that community.

COMMUNITY — Any State or area or political subdivision thereof which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction.

DEVELOPMENT — Any manmade change to improved or unimproved real estate including, but not limited to, buildings or other structures, levees, levee systems, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

ELEVATED BUILDING — For insurance purposes, a non-basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings or columns.

ELIGIBLE COMMUNITY OR PARTICIPATING COMMUNITY — A community for which the Administrator has authorized the sale of flood insurance under the National Flood Insurance Program (NFIP).

EXISTING CONSTRUCTION — For the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of the FIRM or before January 1, 1975 for FIRMs effective before that date. "*Existing construction*" may also be referred to as "*existing structures*".

EXISTING MANUFACTURED HOME PARK OR SUBDIVISION — A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION — The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads).

FLOOD OR FLOODING — A general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland waters and/or
2. The unusual and rapid accumulation or runoff of surface waters from any source.

FLOOD BOUNDARY AND FLOODWAY MAP (FBFM) — An official map of a community on which the Administrator has delineated both special flood hazard areas and the designated regulatory floodway.

FLOOD ELEVATION DETERMINATION — A determination by the Administrator of the water surface elevations of the base flood, that is, the flood level that has a one percent (1%) or greater chance of occurrence in any given year.

FLOOD ELEVATION STUDY — An examination, evaluation and determination of flood hazards.

FLOOD FRINGE — The area outside the floodway encroachment lines but still subject to inundation by the regulatory flood.

FLOOD HAZARD BOUNDARY MAP (FHBM) — An official map of a community issued by the Administrator where the boundaries of the flood areas having special flood hazards have been designated as (unnumbered or numbered) A zones.

FLOOD INSURANCE RATE MAP (FIRM) — An official map of a community on which the Administrator has delineated both the special flood hazard areas and the risk premium zones applicable to the community.

FLOOD INSURANCE STUDY (FIS) — An examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations.

FLOODPLAIN OR FLOOD-PRONE AREA — Any land area susceptible to being inundated by water from any source (see "FLOODING").

FLOODPLAIN MANAGEMENT — The operation of an overall program of corrective and preventive measures for reducing flood damage including, but not limited to, emergency preparedness plans, flood control works and floodplain management regulations.

FLOODPLAIN MANAGEMENT REGULATIONS — Zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as floodplain and grading ordinances) and other applications of Police power. The term describes such State or local regulations in any combination thereof that provide standards for the purpose of flood damage prevention and reduction.

FLOODPROOFING — Any combination of structural and non-structural additions, changes or adjustments to structures that reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities or structures and their contents.

FLOODWAY OR REGULATORY FLOODWAY — The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot.

FLOODWAY ENCROACHMENT LINES — The lines marking the limits of floodways on Federal, State and local floodplain maps.

FREEBOARD — A factor of safety usually expressed in feet above a flood level for purposes of floodplain management. Freeboard tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions such as bridge openings and the hydrological effect of urbanization of the watershed.

FUNCTIONALLY DEPENDENT USE — A use that cannot perform its intended purpose unless it is located or carried out in close proximity to water. This term includes only docking facilities and facilities that are necessary for the loading and unloading of cargo or passengers, but does not include long-term storage or related manufacturing facilities.

HIGHEST ADJACENT GRADE — The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

HISTORIC STRUCTURE — Any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
3. Individually listed on a State inventory of historic places in States with historic preservation programs which have been approved by the Secretary of the Interior; or
4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - a. By an approved State program as determined by the Secretary of the Interior, or
 - b. Directly by the Secretary of the Interior in States without approved programs.

LOWEST FLOOR — The lowest floor of the lowest enclosed areas, including basement. An unfinished or flood-resistant enclosure usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable floodproofing design requirements of this Chapter.

MANUFACTURED HOME — A structure, transportable in one (1) or more sections, that is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "*manufactured home*" does not include a "*recreational vehicle*".

MANUFACTURED HOME PARK OR SUBDIVISION — A parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.

MAP — The Flood Hazard Boundary Map (FHBM), Flood Insurance Rate Map (FIRM) or the Flood Boundary and Floodway Map (FBFM) for a community issued by the Federal Emergency Management Agency (FEMA).

MARKET VALUE OR FAIR MARKET VALUE — An estimate of what is fair, economic, just and equitable value under normal local market conditions.

MEAN SEA LEVEL — For purposes of the National Flood Insurance Program (NFIP), the National Geodetic Vertical Datum (NGVD) of 1929 or other datum to which base flood elevations shown on a community's Flood Insurance Rate Map (FIRM) are referenced.

NEW CONSTRUCTION — For the purposes of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial FIRM or after December 31, 1974, which is later, and includes any subsequent improvements to such structures. For floodplain management purposes, "new construction" means structures for which the "start of construction" commenced on or after the effective date of the floodplain management regulations adopted by a community and includes any subsequent improvements to such structures.

NEW MANUFACTURED HOME PARK OR SUBDIVISION — A manufactured home park or subdivision for which the construction of facilities for servicing the lot on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by the community.

NFIP — The National Flood Insurance Program (NFIP).

PARTICIPATING COMMUNITY (ALSO KNOWN AS AN ELIGIBLE COMMUNITY) — A community in which the Administrator has authorized the sale of flood insurance.

PERSON — Includes any individual or group of individuals, corporation, partnership, association or any other entity, including Federal, State and local governments and agencies.

PRINCIPALLY ABOVE GROUND — At least fifty-one percent (51%) of the actual cash value of the structures, less land value, is above ground.

RECREATIONAL VEHICLE — A vehicle which is:

1. Built on a single chassis;
2. Four hundred (400) square feet or less when measured at the largest horizontal projections;
3. Designed to be self-propelled or permanently towable by a light-duty truck; and
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use.

REMEDY A VIOLATION — To bring the structure or other development into compliance with Federal, State or local floodplain management regulations or, if this is not possible, to reduce the impacts of its non-compliance.

RISK PREMIUM RATES — Those rates established by the Administrator pursuant to individual community studies and investigations which are undertaken to provide flood insurance in accordance with Section 1307 of the National Flood Disaster Protection Act of 1973 and the accepted actuarial principles. "*Risk premium rates*" include provisions for operating costs and allowances.

SPECIAL FLOOD HAZARD AREA — See "*AREA OF SPECIAL FLOOD HAZARD*".

SPECIAL HAZARD AREA — An area having special flood hazards and shown on an FHBM, FIRM or FBFM as Zones (unnumbered or numbered) A, AO, AE or AH.

START OF CONSTRUCTION — Includes substantial improvements and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement or other improvements were within one hundred eighty (180) days of the permit date. The "*actual start*" means either the first (1st) placement of permanent construction of a structure on a site, such as the pouring of slabs or footings, the installation of piles, the construction of columns, any work beyond the stage of excavation or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation such as clearing, grading and filling, the installation of streets and/or walkways, excavation for a basement, footings, piers, foundations, the erection of temporary forms nor installation on the property of accessory structures such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the "*actual start of construction*" means the first (1st) alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

STATE COORDINATING AGENCY — The agency of the State Government or other office designated by the Governor of the State or by State Statute at the request of the Administrator to assist in the implementation of the National Flood Insurance Program (NFIP) in that State.

STRUCTURE — For floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home. "*Structure*", for insurance purposes, means a walled and roofed building, other than a gas or liquid storage tank, that is principally above ground and affixed to a permanent site, as well as a manufactured home on a permanent foundation. For the latter purpose, the term includes a building while in the course of construction, alteration or repair, but does not include building materials or supplies intended for use in such construction, alteration or repair, unless such materials or supplies are within an enclosed building on the premises.

SUBSTANTIAL DAMAGE — Damage of any origin sustained by a structure whereby the cost of restoring the structure to pre-damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT — Any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure before start of construction of the improvement. This term

includes structures which have incurred substantial damage regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a structure to correct existing violations of State or local health, sanitary or safety code specifications that have been identified by the local Code Enforcement Official and which are the minimum necessary to assure safe living conditions, or
2. Any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure".

VARIANCE — A grant of relief by the community from the terms of a floodplain management regulation. Flood insurance requirements remain in place for any varied use or structure and cannot be varied by the community.

VIOLATION — The failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications or other evidence of compliance required by this Chapter is presumed to be in violation until such time as that documentation is provided.

WATER SURFACE ELEVATION — The height in relation to the National Geodetic Vertical Datum (NGVD) of 1929 (or other datum where specified) of floods of various magnitudes and frequencies in the floodplain.

FLOODPLAIN MANAGEMENT ORDINANCE
60.3(c)

ARTICLE 1 STATUTORY AUTHORIZATION, FINDINGS OF FACT, AND PURPOSES

SECTION A. STATUTORY AUTHORIZATION

The Legislature of the State of Missouri has in 60.3 (section of statutes) delegated the responsibility to local governmental units to adopt floodplain management regulations designed to protect the health, safety, and general welfare. Therefore, the County Commission of Pemiscot County, Missouri ordains as follows:

SECTION B. FINDINGS OF FACT

1. *Flood Losses Resulting from Periodic Inundation*

The special flood hazard areas of Pemisot County, Missouri are subject to inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base; all of which adversely affect the public health, safety and general welfare.

2. *General Causes of the Flood Losses*

These flood losses are caused by (1) the cumulative effect of development in any delineated floodplain causing increases in flood heights and velocities; and (2) the occupancy of flood hazard areas by uses vulnerable to floods, hazardous to others, inadequately elevated, or otherwise unprotected from flood damages.

3. *Methods Used To Analyze Flood Hazards*

The Flood Insurance Study (FIS) that is the basis of this ordinance uses a standard engineering method of analyzing flood hazards which consist of a series of interrelated steps.

- a. Selection of a base flood that is based upon engineering calculations which permit a consideration of such flood factors as its expected frequency of occurrence, the area inundated, and the depth of inundation. The base flood selected for this ordinance is representative of large floods which are characteristic of what can be expected to occur on the particular streams subject to this ordinance. It is the general order of a flood which could be expected to have a one percent chance of occurrence in any one year as delineated on the Federal Insurance Administrator's FIS, and illustrative materials dated 1982 & 2003 as amended, and any future revisions thereto.

[Article 1, Section B (3b)]

- b. Calculation of water surface profiles are based on a standard hydraulic engineering analysis of the capacity of the stream channel and overbank areas to convey the regulatory flood.

SECTION C. STATEMENT OF PURPOSE

It is the purpose of this ordinance to promote the public health, safety, and general welfare; to minimize those losses described in Article 1, Section B (1); to establish or maintain the community's eligibility for participation in the National Flood Insurance Program (NFIP) as defined in 44 Code of Federal Regulations (CFR) 59.22(a)(3); and to meet the requirements of 44 CFR 60.3(c) by applying the provisions of this ordinance to:

1. restrict or prohibit uses that are dangerous to health, safety, or property in times of flooding or cause undue increases in flood heights or velocities;
2. require uses vulnerable to floods, including public facilities that serve such uses, be provided with flood protection at the time of initial construction; and
3. protect individuals from buying lands that are unsuited for the intended development purposes due to the flood hazard.

ARTICLE 2 GENERAL PROVISIONS

SECTION A. LANDS TO WHICH ORDINANCE APPLIES

This ordinance shall apply to all lands within the jurisdiction of the Pemiscot County identified as unnumbered and numbered A zones, AE, AO, and AH Zones, on the Flood Insurance Rate Map (FIRM) dated 1982 & 2003 as amended, and any future revisions thereto. In all areas covered by this ordinance, no development shall be permitted except through the issuance of a floodplain development permit, granted by the Pemiscot County Commission or its duly designated representative under such safeguards and restrictions as the County Commission or the designated representative may reasonably impose for the promotion and maintenance of the general welfare, health of the inhabitants of the community, and as specifically noted in Article 4.

SECTION B. FLOODPLAIN ADMINISTRATOR

The Pemiscot County Clerk is hereby designated as the Floodplain Administrator under this ordinance.

[Article 2, Section C]

SECTION C. COMPLIANCE

No development located within the special flood hazard areas of this community shall be located, extended, converted, or structurally altered without full compliance with the terms of this ordinance and other applicable regulations.

SECTION D. ABROGATION AND GREATER RESTRICTIONS

It is not intended by this ordinance to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance imposes greater restrictions, the provisions of this ordinance shall prevail. All other ordinances inconsistent with this ordinance are hereby repealed to the extent of the inconsistency only.

SECTION E. INTERPRETATION

In their interpretation and application, the provisions of this ordinance shall be held to be minimum requirements, shall be liberally construed in favor of the governing body, and shall not be deemed a limitation or repeal of any other powers granted by State statutes.

SECTION F. WARNING AND DISCLAIMER OF LIABILITY

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on engineering and scientific methods of study. Larger floods may occur on rare occasions or the flood heights may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. This ordinance does not imply that areas outside the floodplain or land uses permitted within such areas will be free from flooding or flood damage. This ordinance shall not create a liability on the part of Pemiscot County Commission, any officer or employee thereof, for any flood damages that may result from reliance on this ordinance or any administrative decision lawfully made thereunder.

SECTION G. SEVERABILITY

If any section, clause, provision, or portion of this ordinance is adjudged unconstitutional or invalid by a court of appropriate jurisdiction, the remainder of this ordinance shall not be affected thereby.

ARTICLE 3 ADMINISTRATION

SECTION A. FLOODPLAIN DEVELOPMENT PERMIT (**REQUIRED**)

A floodplain development permit shall be required for all proposed construction or other development, including the placement of manufactured homes, in the areas described in Article 2, Section A. No person, firm, corporation, or unit of government shall initiate any development or substantial-improvement or cause the same to be done without first obtaining a separate floodplain development permit for each structure or other development.

[Article 3, Section B]

SECTION B. DESIGNATION OF FLOODPLAIN ADMINISTRATOR

The Pemiscot County Clerk is hereby appointed to administer and implement the provisions of this ordinance.

SECTION C. DUTIES AND RESPONSIBILITIES OF FLOODPLAIN ADMINISTRATOR

Duties of the Pemiscot County Clerk shall include, but not be limited to:

1. The review of all applications for floodplain development permits to assure that sites are reasonably safe from flooding and that the floodplain development permit requirements of this ordinance have been satisfied;
2. The review of all applications for floodplain development permits for proposed development to assure that all necessary permits have been obtained from Federal, State, or local governmental agencies from which prior approval is required by Federal, State, or local law;
3. The review all subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from flooding;
4. The issuance of floodplain development permits for all approved applications;
5. The notification of adjacent communities and the State Emergency Management Agency (SEMA) prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency (FEMA);
6. The assurance of the flood carrying capacity is not diminished and shall be maintained within the altered or relocated portion of any watercourse.
7. The verification and retention of records of the actual elevation (in relation to mean sea level) of the lowest floor, including basement, of all new or substantially improved structures;
8. The verification and retention of records of the actual elevation (in relation to mean sea level) that the new or substantially improved non-residential structures have been floodproofed;
9. When flood-roofing techniques are utilized for a particular non-residential structure, the County Clerk shall require certification from a registered professional engineer or architect.

SECTION D. APPLICATION FOR FLOODPLAIN DEVELOPMENT PERMIT

To obtain a floodplain development permit, the applicant shall first file an application in writing on a form furnished for that purpose. Every floodplain development permit application shall:

1. describe the land on which the proposed work is to be done by lot, block and tract, house and street address, or similar description that will readily identify and specifically locate the proposed structure or work;
2. identify and describe the work to be covered by the floodplain development permit;
3. indicate the use or occupancy for which the proposed work is intended;
4. indicate the assessed value of the structure and the fair market value of the improvement;
5. identify the existing base flood elevation and the elevation of the proposed development;
6. give such other information as reasonably may be required by the County Clerk;
7. be accompanied by plans and specifications for proposed construction; and
8. be signed by the permittee or his authorized agent who may be required to submit evidence to indicate such authority.

ARTICLE 4 PROVISIONS FOR FLOOD HAZARD REDUCTION

SECTION A. GENERAL STANDARDS

1. No permit for floodplain development shall be granted for new construction, substantial-improvements, and other improvements, including the placement of manufactured homes, within any unnumbered or numbered A zones, AE, AO, and AH zones, unless the conditions of this section are satisfied.
2. All areas identified as unnumbered A zones on the FIRM are subject to inundation of the 100-year flood; however, the base flood elevation is not provided. Development within unnumbered A zones is subject to all provisions of this ordinance. If Flood Insurance Study data is not available, the community shall obtain, review, and reasonably utilize any base flood elevation or floodway data currently available from Federal, State, or other sources.
3. Until a floodway is designated, no new construction, substantial-improvements, or other development, including fill, shall be permitted within any numbered A zone or AE zone on the FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

[Article 4, Section A(4)]

4. All new construction, subdivision proposals, substantial-improvements, prefabricated structures, placement of manufactured homes, and other developments shall require:
 - a. design or adequate anchorage to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
 - b. construction with materials resistant to flood damage;
 - c. utilization of methods and practices that minimize flood damages;
 - d. all electrical, heating, ventilation, plumbing, air-conditioning equipment, and other service facilities be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
 - e. new or replacement water supply systems and/or sanitary sewage systems be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters, and on-site waste disposal systems be located so as to avoid impairment or contamination; and
 - f. subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, located within special flood hazard areas are required to assure that:
 - (1) all such proposals are consistent with the need to minimize flood damage;
 - (2) all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage;
 - (3) adequate drainage is provided so as to reduce exposure to flood hazards; and
 - (4) all proposals for development, including proposals for manufactured home parks and subdivisions, greater than five (5) acres or fifty (50) lots, whichever is lesser, include within such proposals base flood elevation data.

5. *Accessory Structures*

Structures used solely for parking and limited storage purposes, not attached to any other structure on the site, of limited investment value, and not larger than 400 square feet, may be constructed at-grade and wet-floodproofed provided there is no human habitation or occupancy of the structure; the structure is of single-wall design; a variance has been granted from the standard floodplain management requirements of this ordinance; and a floodplain development permit has been issued.

6. *Storage, material, and equipment*

- a. The storage or processing of materials within the special flood hazard area that are in time of flooding buoyant, flammable, explosive, or could be injurious to human, animal, or plant life is prohibited.
- b. Storage of other material or equipment may be allowed if not subject to major damage by floods, if firmly anchored to prevent flotation, or if readily removable from the area within the time available after a flood warning.

SECTION B. SPECIFIC STANDARDS

1. In all areas identified as unnumbered and numbered A zones, AE, and AH Zones, where **base flood elevation** data have been provided, as set forth in Article 4, Section A(2), the following provisions are required:

- a. *Residential Construction*

New construction or substantial-improvement of any residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to or 1 foot above base flood level.

*[*In all unnumbered and numbered A zones and AE zones, the FEMA, Region VII office recommends elevating to one foot above the base flood elevation to accommodate any floodway conditions when the floodplain is fully developed.]*

- b. *Non-Residential Construction*

New construction or substantial-improvement of any commercial, industrial, or other non-residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to or 1 foot above the base flood level or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in Article 3, Section C(9).

*[*The FEMA, Region VII office recommends elevating to one foot above the base flood elevation to qualify for flood insurance rates based upon floodproofing.]*

- c. Require, for all new construction and substantial-improvements, that fully enclosed areas below lowest floor used solely for parking of vehicles, building access, or storage in an area other than a basement and that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
 - (1) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided; and
 - (2) the bottom of all opening shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

SECTION C. MANUFACTURED HOMES

1. All manufactured homes to be placed within all unnumbered and numbered A zones, AE, and AH zones, on the community's FIRM shall be required to be installed using methods and practices that minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors.
2. Require manufactured homes that are placed or substantially improved within unnumbered or numbered A zones, AE, and AH zones, on the community's FIRM on sites:
 - a. outside of a manufactured home park or subdivision;
 - b. in a new manufactured home park or subdivision;
 - c. in an expansion to an existing manufactured home park or subdivision; or
 - d. in an existing manufactured home park or subdivision on which a manufactured home has incurred substantial-damage as the result of a flood,

be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or 1 foot above the base flood elevation and be securely attached to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
3. Require that manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within all unnumbered and numbered A zones, AE and AH zones on the community's FIRM, that are not subject to the provisions of Article 4, Section C(2) of this ordinance, be elevated so that either:
 - a. the lowest floor of the manufactured home is at or 1 foot the base flood elevation; or [Article 4, Section D (1)]
 - b. the manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height above grade

and be securely attached to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

*[*In all unnumbered and numbered A zones and AE zones, the FEMA, Region VII office recommends elevating to one foot above the base flood elevation to accommodate any floodway conditions when the floodplain is fully developed.]*

SECTION D. AREAS OF SHALLOW FLOODING (AO and AH zones)

Located within the areas of special flood hazard as described in Article 2, Section A are areas designated as AO zones. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. The following provisions apply:

1. *AO Zones*

- a. All new construction and substantial-improvements of residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified).
- b. All new construction and substantial-improvements of any commercial, industrial, or other non-residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community FIRM (at least two feet if no depth number is specified) or together with attendant utilities and sanitary facilities be completely floodproofed to that so that the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
- c. Adequate drainage paths shall be required around structures on slopes, in order to guide floodwaters around and away from proposed structures.

2. *AH Zones*

- a. The specific standards for all areas of special flood hazard where base flood elevation has been provided shall be required as set forth in Article 4, Section B and Section C.
- b. Adequate drainage paths shall be required around structures on slopes, in order to guide floodwaters around and away from proposed structures.

SECTION E. FLOODWAY *(as determined from data available from other sources)*

If a community determines there are areas of special flood hazard that may be defined as floodway, through the use of base flood elevation and floodway data available from a Federal, State, or other source, including data developed pursuant to Article 4, Section A(4)f(4), and determines this data is suitable as criteria for requiring that new construction, substantial improvements, or other development in Zone A, the community must meet the standards below:

- 1) Adopt a regulatory floodway based on the principle that the area chosen for the regulatory floodway must be designed to carry the waters of the base flood without increasing the water surface elevation of that flood more than one foot at any point.
- 2) Prohibit encroachments, including fill, new construction, substantial-improvements, and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in **any** increase in flood levels within the community during the occurrence of the base flood discharge.

SECTION F. RECREATIONAL VEHICLES

1. Require that recreational vehicles placed on sites within all unnumbered and numbered A zones, AO, AE, and AH zones on the community's FIRM either:
 - a. be on the site for fewer than 180 consecutive days, **or**
 - b. be fully licensed and ready for highway use*; **or**
 - c. meet the permitting, elevation, and anchoring requirements for manufactured homes of this ordinance.

*A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect type utilities and security devices, and has no permanently attached additions.

ARTICLE 5 FLOODPLAIN MANAGEMENT VARIANCE PROCEDURES

SECTION A. ESTABLISHMENT OF APPEAL BOARD

The County Commission Appeal Board) as established by the Pemiscot County Commission shall hear and decide appeals and requests for variances from the floodplain management requirements of this ordinance.

SECTION B. RESPONSIBILITY OF APPEAL BOARD

Where an application for a floodplain development permit or request for a variance from the floodplain management regulations is denied by the County Clerk / Floodplain Manager), the applicant may apply for such floodplain development permit or variance directly to the Appeal Board, as defined in Article 5, Section A.

The County Commission Appeal Board shall hear and decide appeals when it is alleged that there is an error in any requirement, decision, or determination made by the County Clerk/ Floodplain Manager in the enforcement or administration of this ordinance.

SECTION E. CONDITIONS FOR APPROVING FLOODPLAIN MANAGEMENT VARIANCES

1. Generally, variances may be issued for new construction and substantial-improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood elevation, providing items 2 through 6 below have been fully considered. As the lot size increases beyond the one-half acre, the technical justification required for issuing the variance increases.
2. Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places, the State Inventory of Historic Places, or local inventory of historic places upon determination provided the proposed activity will not preclude the structure's continued historic designation.
3. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
4. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
5. Variances shall only be issued upon (a) a showing of good and sufficient cause, (b) a determination that failure to grant the variance would result in exceptional hardship to the applicant, and (c) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
6. A community shall notify the applicant in writing over the signature of a community official that (1) the issuance of a variance to construct a structure below base flood elevation will result in increased premium rates for flood insurance up to amounts as high as \$25.00 for \$100.00 of insurance coverage and (2) such construction below the base flood elevation increases risks to life and property. Such notification shall be maintained with the record of all variance actions as required by this ordinance.

SECTION F. CONDITIONS FOR APPROVING VARIANCES FOR ACCESSORY STRUCTURES

Any variance granted for an accessory structure shall be decided individually based on a case by case analysis of the building's unique circumstances. Variances granted shall meet the following conditions as well as those criteria and conditions set forth in Article 5, Sections D and E of this ordinance.

[Article 5, Section F]

In order to minimize flood damages during the 100-year flood and the threat to public health and safety, the following conditions shall be included for any variance issued for accessory structures that are constructed at-grade and wet-floodproofed.

1. Use of the accessory structures must be solely for parking and limited storage purposes in zone A only as identified on the community's Flood Insurance Rate Map (FIRM).
2. For any new or substantially damaged accessory structures, the exterior and interior building components and elements (i.e., foundation, wall framing, exterior and interior finishes, flooring, etc.) below the base flood elevation, must be built with flood-resistant materials in accordance with Article 4, Section A (4)(b) of this ordinance.
3. The accessory structures must be adequately anchored to prevent flotation, collapse, or lateral movement of the structure in accordance with Article 4, Section A (4)(a) of this ordinance. All of the building's structural components must be capable of resisting specific flood-related forces including hydrostatic, buoyancy, and hydrodynamic and debris impact forces.
4. Any mechanical, electrical, or other utility equipment must be located above the base flood elevation or floodproofed so that they are contained within a watertight, floodproofed enclosure that is capable of resisting damage during flood conditions in accordance with Article 4, Section A (4)(d) of this ordinance.
5. The accessory structures must meet all National Flood Insurance Program (NFIP) opening requirements. The NFIP requires that enclosure or foundation walls, subject to the 100-year flood, contain openings that will permit the automatic entry and exit of floodwaters in accordance with Article 4, Section B (1)(c) of this ordinance.
6. The accessory structures must comply with the floodplain management floodway encroachment provisions of Article 4, Section E of this ordinance. No variances may be issued for accessory structures within any designated floodway, if any increase in flood levels would result during the 100-year flood.
7. Equipment, machinery, or other contents must be protected from any flood damage.
8. No disaster relief assistance under any program administered by any Federal agency shall be paid for any repair or restoration costs of the accessory structures.
9. A community shall notify the applicant in writing over the signature of a community official that (1) the issuance of a variance to construct a structure below base flood elevation will result in increased premium rates for flood insurance up to amounts as high as \$25.00 for \$100.00 of insurance coverage and (2) such construction below the base flood elevation increases risks to life and property. Such notification shall be maintained with the record of all variance actions as required by this ordinance.

[Article 5, Section F(10)]

10. Wet-floodproofing construction techniques must be reviewed and approved by the community and registered professional engineer or architect prior to the issuance of any floodplain development permit for construction.

ARTICLE 6 PENALTIES FOR VIOLATION

Violation of the provisions of this ordinance or failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with granting of variances) shall constitute a misdemeanor. Any person who violates this ordinance or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than \$ 50.00 , and in addition, shall pay all costs and expenses involved in the case. Each day the violation continues shall be considered a separate offense. Nothing herein contained shall prevent the County Commission) or other appropriate authority from taking such other lawful action as is necessary to prevent or remedy any violation.

ARTICLE 7 AMENDMENTS

The regulations, restrictions, and boundaries set forth in this ordinance may from time to time be amended, supplemented, changed, or appealed to reflect any and all changes in the National Flood Disaster Protection Act of 1973, provided, however, that no such action may be taken until after a public hearing in relation thereto, at which parties of interest and citizens shall have an opportunity to be heard. Notice of the time and place of such hearing shall be published in a newspaper of general circulation in Pemiscot County. At least 20 days shall elapse between the date of this publication and the public hearing. A copy of such amendments will be provided to the Region VII office of the Federal Emergency Management Agency (FEMA). The regulations of this ordinance are in compliance with the National Flood Insurance Program (NFIP) regulations.

ARTICLE 8 DEFINITIONS

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the same meaning they have in common usage and to give this ordinance its most reasonable application.

"100-year Flood" *see "base flood."*

"Accessory Structure" the same as *"appurtenant structure."*

"Actuarial Rates" *see "risk premium rates."*

"Administrator" means the Federal Insurance Administrator.

"Agency" means the Federal Emergency Management Agency (FEMA).

"Appeal" means a request for review of the Floodplain Administrator's interpretation of any provision of this ordinance or a request for a variance.

"Appurtenant Structure" means a structure that is on the same parcel of property as the principle structure to be insured and the use of which is incidental to the use of the principal structure.

"Area of Shallow Flooding" means a designated AO or AH zone on a community's Flood Insurance Rate Map (FIRM) with a one percent or greater annual chance of flooding to an average depth of one (1) to three

(3) feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

"Area of Special Flood Hazard" is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year.

"Base Flood" means the flood having a one percent chance of being equaled or exceeded in any given year.

"Basement" means any area of the structure having its floor subgrade (below ground level) on all sides.

"Building" *see "structure."*

"Chief Executive Officer" or "Chief Elected Official" means the official of the community who is charged with the authority to implement and administer laws, ordinances, and regulations for that community.

"Community" means any State or area or political subdivision thereof, which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction.

"Development" means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, levees, levee systems, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

"Elevated Building" means for insurance purposes, a non-basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

"Eligible Community" or "Participating Community" means a community for which the Administrator has authorized the sale of flood insurance under the National Flood Insurance Program (NFIP).

"Existing Construction" means for the purposes of determining rates, structures for which the *"start of construction"* commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date. *"existing construction"* may also be referred to as *"existing structures."*

"Existing Manufactured Home Park or Subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

"Expansion to an Existing Manufactured Home Park or Subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

"Flood" or "Flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from (1) the overflow of inland and/or (2) the unusual and rapid accumulation or runoff of surface waters from any source.

"Flood Elevation Determination" means a determination by the Administrator of the water surface elevations of the base flood, that is, the flood level that has a one percent or greater chance of occurrence in any given year.

"Flood Elevation Study" means an examination, evaluation and determination of flood hazards.

"Flood Insurance Rate Map (FIRM)" means an official map of a community, on which the Administrator has delineated both the special flood hazard areas and the risk premium zones applicable to the community.

"Flood Insurance Study (FIS)" means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations.

"Floodplain" or "Flood-prone Area" means any land area susceptible to being inundated by water from any source (*see "flooding"*).

"Floodplain Management" means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works, and floodplain management regulations.

"Floodplain Management Regulations" means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as floodplain and grading ordinances) and other applications of police power. The term describes such state or local regulations, in any combination thereof, that provide standards for the purpose of flood damage prevention and reduction.

"Floodproofing" means any combination of structural and nonstructural additions, changes, or adjustments to structures that reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, or structures and their contents.

"Floodway" or "Regulatory Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

"Freeboard" means a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. *"Freeboard"* tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway, as determined from data available from other sources, conditions, such as bridge openings and the hydrological effect of urbanization of the watershed.

"Functionally Dependent Use" means a use that cannot perform its intended purpose unless it is located or carried out in close proximity to water. This term includes only docking facilities and facilities that are necessary for the loading and unloading of cargo or passengers, but does not include long-term storage or related manufacturing facilities.

"Highest Adjacent Grade" means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

"Historic Structure" means any structure that is (a) listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register; (b) certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district; (c) individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or (d) individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either (1) by an approved state program as determined by the Secretary of the Interior or (2) directly by the Secretary of the Interior in states without approved programs.

"Lowest Floor" means the lowest floor of the lowest enclosed area, including basement. An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access, or storage, in an area other than a basement area, is not considered a building's lowest floor, **provided** that such enclosure is not built so as to render the structure in violation of the applicable floodproofing design requirements of this ordinance.

"Manufactured Home" means a structure, transportable in one or more sections, that is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term *"manufactured home"* **does not include** a *"recreational vehicle."*

"Manufactured Home Park or Subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

"Map" means the Flood Hazard Boundary Map (FHBM), Flood Insurance Rate Map (FIRM), or the Flood Boundary and Floodway Map (FBFM) for a community issued by the Federal Emergency Management Agency (FEMA).

"Market Value" or "Fair Market Value" means an estimate of what is fair, economic, just and equitable value under normal local market conditions.

"Mean Sea Level" means, for purposes of the National Flood Insurance Program (NFIP), the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map (FIRM) are referenced.

"New Construction" means, for the purposes of determining insurance rates, structures for which the *"start of construction"* commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, *"new construction"* means structures for which the *"start of construction"* commenced on or after the effective date of the floodplain management regulations adopted by a community and includes any subsequent improvements to such structures.

"New Manufactured Home Park or Subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lot on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by the community.

"(NFIP)" means the National Flood Insurance Program (NFIP).

"Participating Community" also known as an *"eligible community,"* means a community in which the Administrator has authorized the sale of flood insurance.

"Person" includes any individual or group of individuals, corporation, partnership, association, or any other entity, including Federal, State, and local governments and agencies.

"Principally Above Ground" means that at least 51 percent of the actual cash value of the structure, less land value, is above ground.

"Recreational Vehicle" means a vehicle which is (a) built on a single chassis; (b) 400 square feet or less when measured at the largest horizontal projections; (c) designed to be self-propelled or permanently towable by a light-duty truck; and (d) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

"Remedy A Violation" means to bring the structure or other development into compliance with Federal, State, or local floodplain management regulations; or, if this is not possible, to reduce the impacts of its noncompliance.

"Risk Premium Rates" means those rates established by the Administrator pursuant to individual community studies and investigations which are undertaken to provide flood insurance in accordance with Section 1307 of the National Flood Disaster Protection Act of 1973 and the accepted actuarial principles. *"Risk premium rates"* include provisions for operating costs and allowances.

"Special Flood Hazard Area" *see "area of special flood hazard."*

"Special Hazard Area" means an area having special flood hazards and shown on an FHBM, FIRM or FBFM as zones (unnumbered or numbered) A, AO, AE, or AH.

"Start of Construction" includes substantial-improvements, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvements were within 180 days of the permit date. The *actual start* means either the first placement of permanent construction of a structure on a site, such as the pouring of slabs or footings, the installation of piles, the construction of columns, any work beyond the stage of excavation, or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling, the installation of streets and/or walkways, excavation for a basement, footings, piers, foundations, the erection of temporary forms, nor installation on the property of accessory structures, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial-improvement, the *actual start of construction* means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

"State Coordinating Agency" means that agency of the state government, or other office designated by the governor of the state or by state statute at the request of the Administrator to assist in the implementation of the National Flood Insurance Program (NFIP) in that state.

"Structure" means, for floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home. *"Structure"* for insurance purposes, means a walled and roofed building, other than a gas or liquid storage tank, that is principally above ground and affixed to a permanent site, as well as a manufactured home on a permanent foundation. For the latter purpose, the term includes a building while in the course of construction, alteration or repair, but does not include building materials or supplies intended for use in such construction, alteration or repair, unless such materials or supplies are within an enclosed building on the premises.

"Substantial-Damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to pre-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

"Substantial-Improvement" means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before *"start of construction"* of the improvement. This term includes structures which have incurred *"substantial-damage,"* regardless of the actual repair work performed. The term does not, however, include either (1) any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications that have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or (2) any alteration of a *"historic structure,"* provided that the alteration will not preclude the structure's continued designation as a *"historic structure."*

"Variance" means a grant of relief by the community from the terms of a floodplain management regulation. Flood insurance requirements remain in place for any varied use or structure and cannot be varied by the community.

"Violation" means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required by this ordinance is presumed to be in violation until such time as that documentation is provided.

"Water Surface Elevation" means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929 (or other datum where specified) of floods of various magnitudes and frequencies in the floodplain.

ARTICLE 9 CERTIFICATE OF ADOPTION

This Floodplain Management Ordinance for the community of Pemiscot County

ADOPTED AND APPROVED by the County Commission of Pemiscot County, Missouri

This 2ND day of May, 2006

Place seal here.



Charles Moss

Chief Executive Officer/Chief Elected Official (Signature)

CHARLES MOSS Presiding Commissioner
Name Title

Chief Executive Officer/Chief Elected Official (Typed/printed)

ATTEST:

[Signature]

Signature of Recording Clerk

LARRY RAY COUNTY CLERK
Name Title

Recording Clerk (Typed/printed)