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SECTION 1

INTRODUCTION

This section provides a general introduction to the Mississippi Emergency Management Agency (MEMA) District 2 Regional Hazard Mitigation Plan. It consists of the following five subsections:

- ◆ 1.1 Background
- ◆ 1.2 Purpose
- ◆ 1.3 Scope
- ◆ 1.4 Authority
- ◆ 1.5 Summary of Plan Contents

1.1 BACKGROUND

Natural hazards, such as hurricanes, floods, and tornadoes, are a part of the world around us. Their occurrence is natural and inevitable, and there is little we can do to control their force and intensity. We must consider these hazards to be legitimate and significant threats to human life, safety, and property.

The MEMA District 2 Region is located in the northeastern corner of Mississippi and includes the counties of Alcorn, Benton, Itawamba, Lafayette, Lee, Marshall, Pontotoc, Prentiss, Tippah, Tishomingo, and Union. This area is vulnerable to a wide range of natural hazards such as floods, drought, hurricanes, severe thunderstorms, and wildfires. It is also vulnerable to human-caused hazards, including chemical releases and hazardous material spills. These hazards threaten the life and safety of residents in the MEMA District 2 Region and have the potential to damage or destroy both public and private property, disrupt the local economy, and impact the overall quality of life of individuals who live, work, and vacation in the MEMA District 2 Region.

While the threat from hazardous events may never be fully eliminated, there is much we can do to lessen their potential impact upon our community and our citizens. By minimizing the impact of hazards upon our built environment, we can prevent such events from resulting in disasters. The concept and practice of reducing risks to people and property from known hazards is generally referred to as *hazard mitigation*.



FEMA Definition of Hazard Mitigation:

“Any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards.”

Hazard mitigation techniques include both structural measures (such as strengthening or protecting buildings and infrastructure from the destructive forces of potential hazards) and non-structural measures (such as the adoption of sound land use policies and the creation of public awareness programs). It is widely accepted that the most effective mitigation measures are implemented at the local government level, where decisions on the regulation and control of development are ultimately

made. A comprehensive mitigation approach addresses hazard vulnerabilities that exist today and in the foreseeable future. Therefore, it is essential that projected patterns of future development are evaluated and considered in terms of how that growth will increase or decrease a community's overall hazard vulnerability.

A key component in the formulation of a comprehensive approach to hazard mitigation is to develop, adopt, and update a local hazard mitigation plan as needed. A hazard mitigation plan establishes the broad community vision and guiding principles for reducing hazard risk, and further proposes specific mitigation actions to eliminate or reduce identified vulnerabilities.

Each of the 11 counties participating in the development of the MEMA District 2 Hazard Mitigation Plan has an existing hazard mitigation plan that has evolved over the years, as described in Section 2: *Planning Process*. This regional plan draws from each of the county plans and documents the region's sustained efforts to incorporate hazard mitigation principles and practices into routine government activities and functions. At its core, the Plan recommends specific actions to minimize hazard vulnerability and protect residents from losses to those hazards that pose the greatest risk. These mitigation actions go beyond simply recommending structural solutions to reduce existing vulnerability, such as elevation, retrofitting, and acquisition projects. Local policies on community growth and development, incentives for natural resource protection, and public awareness and outreach activities are examples of other actions considered to reduce the MEMA District 2 Region's vulnerability to identified hazards. The Plan remains a living document, with implementation and evaluation procedures established to help achieve meaningful objectives and successful outcomes over time.

1.1.1 The Disaster Mitigation Act and the Flood Insurance Reform Act

In an effort to reduce the Nation's mounting natural disaster losses, the U.S. Congress passed the Disaster Mitigation Act of 2000 (DMA 2000) in order to amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act. Section 322 of DMA 2000 emphasizes the need for state, local, and Tribal government entities to closely coordinate on mitigation planning activities and makes the development of a hazard mitigation plan a specific eligibility requirement for any local or Tribal government applying for federal mitigation grant funds. In short, if a jurisdiction is not covered by an approved mitigation plan, it will not be eligible for mitigation grant funds. These funds include the Hazard Mitigation Grant Program (HMGP) and the Building Resilient Infrastructure and Communities (BRIC) program which replaced the Pre-Disaster Mitigation (PDM) Grant program as a result of amendments by the Disaster Relief and Recovery Act of 2018; both of which are administered by the Federal Emergency Management Agency (FEMA) under the Department of Homeland Security. Communities with an adopted and federally-approved hazard mitigation plan thereby become pre-positioned and more apt to receive available mitigation funds before and after the next disaster strikes.

Additionally, the Flood Insurance Reform Act of 2004 (P.L. 108-264) created two new grant programs, Severe Repetitive Loss (SRL) and Repetitive Flood Claim (RFC), and modified the existing Flood Mitigation Assistance (FMA) program. One of the requirements of this Act is that a FEMA-approved Hazard Mitigation Plan is now required if communities wish to be eligible for these FEMA mitigation programs. However, as of early 2014, these programs have been folded into a single Flood Mitigation Assistance (FMA) program.

This change was brought on by new, major federal flood insurance legislation that was passed in 2012 under the Biggert-Waters Flood Insurance Reform Act (P.L. 112-141) and the subsequent Homeowner Flood Insurance Affordability Act in 2014 which revised Biggert-Waters. These acts made several changes to the way the National Flood Insurance Program is to be run, including raises in rates to reflect

true flood risk and changes in how Flood Insurance Rate Map (FIRM) updates impact policyholders. These acts further emphasize Congress' focus on mitigating vulnerable structures.

The MEMA District 2 Regional Hazard Mitigation Plan has been prepared in coordination with FEMA Region IV and the Mississippi Emergency Management Agency (MEMA) to ensure that the Plan meets all applicable FEMA and state requirements for hazard mitigation plans. A *Local Mitigation Plan Review Tool*, found in Appendix C, provides a summary of federal and state minimum standards and notes the location where each requirement is met within the Plan.

1.2 PURPOSE

The purpose of the MEMA District 2 Regional Hazard Mitigation Plan is to:

- ◆ Merge the existing Alcorn, Benton, Itawamba, Lafayette, Lee, Marshall, Pontotoc, Prentiss, Tippah, Tishomingo, and Union County hazard mitigation plans into one regional plan;
- ◆ Complete update of existing plans to demonstrate progress and reflect current conditions;
- ◆ Increase public awareness and education about the plan and planning process;
- ◆ Maintain grant eligibility for participating jurisdictions; and
- ◆ Maintain compliance with state and federal legislative requirements for local hazard mitigation plans.

1.3 SCOPE

The focus of the MEMA District 2 Regional Hazard Mitigation Plan is on those hazards determined to be “high” or “moderate” risks to the MEMA District 2 Region, as determined through a detailed hazard risk assessment. Other hazards that pose a “low” or “negligible” risk will also be evaluated, but they may not be fully addressed until they are determined to be of high or moderate risk. This enables the participating jurisdictions to prioritize mitigation actions based on those hazards which are understood to present the greatest risk to lives and property.

The geographic scope (i.e., the planning area) for the Plan includes 11 counties and 48 incorporated jurisdictions. **Table 1.1** lists the participating areas.

**TABLE 1.1: PARTICIPATING JURISDICTIONS IN THE MEMA DISTRICT 2
REGIONAL HAZARD MITIGATION PLAN**

Alcorn County		Pontotoc County	
Corinth	Kossuth	Algoma	Sherman
Farmington	Rienzi	Ecru	Thaxton
Glen		Pontotoc (city)	Toccopola
Benton County		Prentiss County	
Ashland	Snow Lake Shores	Booneville	Marietta
Hickory Flat		Jumpertown	
Itawamba County		Tippah County	
Fulton	Tremont	Blue Mountain	Ripley
Mantachie		Dumas	Walnut
Lafayette County		Falkner	
Abbeville	Taylor	Tishomingo County	
Oxford		Belmont	Iuka
Lee County		Burnsville	Paden
Baldwyn	Saltillo	Golden	Tishomingo (town)
Guntown	Shannon	Union County	
Nettleton	Tupelo	Blue Springs	New Albany
Plantersville	Verona	Myrtle	
Marshall County			
Byhalia	Potts Camp		
Holly Springs			

1.4 AUTHORITY

The MEMA District 2 Regional Hazard Mitigation Plan has been developed in accordance with current state and federal rules and regulations governing local hazard mitigation plans and has been adopted by each participating county and local jurisdiction in accordance with standard local procedures. Copies of the adoption resolutions for each participating jurisdiction are provided in Appendix A. The Plan shall be routinely monitored and revised to maintain compliance with the following provisions, rules, and legislation:

- ◆ Section 322, Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as enacted by Section 104 of the Disaster Mitigation Act of 2000 (P.L. 106-390);
- ◆ FEMA's Final Rule published in the Federal Register, at 44 CFR Part 201 (201.6 for local mitigation planning requirements and 201.7 for Tribal planning requirements); and
- ◆ Flood Insurance Reform Act of 2004 (P.L. 108-264), Biggert-Waters Flood Insurance Reform Act of 2012 (P.L. 112-141) and the Homeowner Flood Insurance Affordability Act.

1.5 SUMMARY OF PLAN CONTENTS

The contents of this Plan are designed and organized to be as reader-friendly and functional as possible. While significant background information is included on the processes used and studies completed (i.e., risk assessment, capability assessment), this information is separated from the more meaningful planning outcomes or actions (i.e., mitigation strategy, mitigation action plan).

Section 2, **Planning Process**, provides a complete narrative description of the process used to prepare the Plan. This includes the identification of participants on the hazard mitigation council and describes how the public and other stakeholders were involved. It also includes a detailed summary for each of the key meetings held, along with any associated outcomes.

The **Community Profile**, located in Section 3, provides a general overview of the MEMA District 2 Region, including prevalent geographic, demographic, and economic characteristics. In addition, building characteristics and land use patterns are discussed. This baseline information provides a snapshot of the planning area and helps local officials recognize those social, environmental, and economic factors that ultimately play a role in determining the region's vulnerability to hazards.

The Risk Assessment is presented in three sections: Section 4, **Hazard Identification**; Section 5, **Hazard Profiles**; and Section 6, **Vulnerability Assessment**. Together, these sections serve to identify, analyze, and assess hazards that pose a threat to the MEMA District 2 Region. The risk assessment also attempts to define any hazard risks that may uniquely or exclusively affect specific areas of the MEMA District 2 Region.

The Risk Assessment begins by identifying hazards that threaten the MEMA District 2 Region. Next, detailed profiles are established for each hazard, building on available historical data from past hazard occurrences, spatial extent, and probability of future occurrence. This section culminates in a hazard risk ranking based on conclusions regarding the frequency of occurrence, spatial extent, and potential impact highlighted in each of the hazard profiles. In the vulnerability assessment, FEMA's HAZUS^{®MH} loss estimation methodology is used to evaluate known hazard risks by their relative long-term cost in expected damages. In essence, the information generated through the risk assessment serves a critical function as the MEMA District 2 Region seeks to determine the most appropriate mitigation actions to pursue and implement—enabling it to prioritize and focus its efforts on those hazards of greatest concern and those structures or planning areas facing the greatest risk(s).

The **Capability Assessment**, found in Section 7, provides a comprehensive examination of the MEMA District 2 Region's capacity to implement meaningful mitigation strategies and identifies opportunities to increase and enhance that capacity. Specific capabilities addressed in this section include planning and regulatory capability, staff and organizational (administrative) capability, technical capability, fiscal capability, and political capability. Information was obtained through the use of a detailed survey questionnaire and an inventory and analysis of existing plans, ordinances, and relevant documents. The purpose of this assessment is to identify any existing gaps, weaknesses, or conflicts in programs or activities that may hinder mitigation efforts and to identify those activities that should be built upon in establishing a successful and sustainable local hazard mitigation program.

The *Community Profile*, *Risk Assessment*, and *Capability Assessment* collectively serve as a basis for determining the goals for the MEMA District 2 Regional Hazard Mitigation Plan, each contributing to the

development, adoption, and implementation of a meaningful and manageable *Mitigation Strategy* that is based on accurate background information.

The ***Mitigation Strategy***, found in Section 8, consists of broad goal statements as well as an analysis of hazard mitigation techniques for the jurisdictions participating in the MEMA District 2 Regional Hazard Mitigation Plan to consider in reducing hazard vulnerabilities. The strategy provides the foundation for a detailed ***Mitigation Action Plan***, found in Section 9, which links specific mitigation actions for each county and municipal department or agency to locally-assigned implementation mechanisms and target completion dates. Together, these sections are designed to make the Plan both strategic, through the identification of long-term goals, and functional, through the identification of immediate and short-term actions that will guide day-to-day decision-making and project implementation.

In addition to the identification and prioritization of possible mitigation projects, emphasis is placed on the use of program and policy alternatives to help make the MEMA District 2 Region less vulnerable to the damaging forces of hazards while improving the economic, social, and environmental health of the community. The concept of multi-objective planning was emphasized throughout the planning process, particularly in identifying ways to link, where possible, hazard mitigation policies and programs with complimentary community goals related to disaster recovery, housing, economic development, recreational opportunities, transportation improvements, environmental quality, land development, and public health and safety.

Plan Maintenance, found in Section 10, includes the measures that the jurisdictions participating in the MEMA District 2 Regional plan will take to ensure the Plan's continuous long-term implementation. The procedures also include the manner in which the Plan will be regularly evaluated and updated to remain a current and meaningful planning document.

County-specific ***Annexes*** have been created for each of the counties participating in this plan. Each Annex contains information relevant to the county and the participating municipal jurisdictions in the county. Information included in each county-level Annex includes Community Profile, Risk Assessment and Capability Assessment information. The Mitigation Actions identified for that county and its municipal jurisdictions are also included in the county's Annex. This allows each county and jurisdiction to quickly locate the information contained in the plan that is most relevant for them.

SECTION 2

PLANNING PROCESS

This section describes the planning process undertaken by the Mississippi Emergency Management Agency (MEMA) District 2 counties and jurisdictions in the development of its 2021 Regional Hazard Mitigation Plan. It consists of the following eight subsections:

- ◆ 2.1 Overview of Hazard Mitigation Planning
- ◆ 2.2 History of Hazard Mitigation Planning in the MEMA District 2 Region
- ◆ 2.3 The MEMA District 2 Regional Hazard Mitigation Planning Team
- ◆ 2.4 Community Meetings and Workshops
- ◆ 2.5 Involving the Public
- ◆ 2.6 Involving the Stakeholders
- ◆ 2.7 Documentation of Plan Progress

44 CFR Requirement

44 CFR Part 201.6(c)(1): The plan shall include documentation of 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.

2.1 OVERVIEW OF HAZARD MITIGATION PLANNING

Local hazard mitigation planning is the process of organizing community resources, identifying and assessing hazard risks, and determining how to best minimize or manage those risks. This process culminates in a hazard mitigation plan that identifies specific mitigation actions, each designed to achieve both short-term planning objectives and a long-term community vision.

To ensure the functionality of a hazard mitigation plan, responsibility is assigned for each proposed mitigation action to a specific individual, department, or agency along with a schedule or target completion date for its implementation (see Section 10: *Plan Maintenance*). Plan maintenance procedures are established for the routine monitoring of implementation progress, as well as the evaluation and enhancement of the mitigation plan itself. These plan maintenance procedures ensure that the Plan remains a current, dynamic, and effective planning document over time that becomes integrated into the routine local decision-making process.

Communities that participate in hazard mitigation planning have the potential to accomplish many benefits, including:

- ◆ saving lives and property,
- ◆ saving money,
- ◆ speeding up recovery following disasters,

- ◆ reducing future vulnerability through wise development and post-disaster recovery and reconstruction,
- ◆ expediting the receipt of pre-disaster and post-disaster grant funding, and
- ◆ demonstrating a firm commitment to improving community health and safety.

Typically, communities that participate in mitigation planning are described as having the potential to produce long-term and recurring benefits by breaking the repetitive cycle of disaster loss. A core assumption of hazard mitigation is that the investments made before a hazard event will significantly reduce the demand for post-disaster assistance by lessening the need for emergency response, repair, recovery, and reconstruction. Furthermore, mitigation practices will enable local residents, businesses, and industries to re-establish themselves in the wake of a disaster, getting the community economy back on track sooner and with less interruption.

The benefits of mitigation planning go beyond solely reducing hazard vulnerability. Mitigation measures such as the acquisition or regulation of land in known hazard areas can help achieve multiple community goals, such as preserving open space, maintaining environmental health, and enhancing recreational opportunities. Thus, it is vitally important that any local mitigation planning process be integrated with other concurrent local planning efforts, and any proposed mitigation strategies must take into account other existing community goals or initiatives that will help complement or hinder their future implementation.

2.2 HISTORY OF HAZARD MITIGATION PLANNING IN MEMA DISTRICT 2 REGION

In 2012, all counties within the Regional Hazard Mitigation Plan were consolidated from previous county-level plans.

For this plan, no new jurisdictions have joined the process and all of the jurisdictions that participated in previous planning efforts have participated in the development of this regional plan.

2.3 THE MEMA DISTRICT 2 REGIONAL HAZARD MITIGATION PLANNING TEAM

In order to guide the development of this Plan, the counties in MEMA District 2 (Alcorn, Benton, Itawamba, Lafayette, Lee, Marshall, Pontotoc, Prentiss, Tippah, Tishomingo, and Union) and representatives from their participating municipal jurisdictions created the MEMA District 2 Regional Hazard Mitigation Planning Team (RHMPT). The RHMPT represents a community-based planning team made up of representatives from various county departments and municipalities and other key stakeholders identified to serve as critical partners in the planning process.

Beginning in January 2021, the RHMPT members engaged in regular discussions as well as local planning workshops to discuss and complete tasks associated with preparing the Plan. This working group coordinated on all aspects of plan preparation and provided valuable input to the process. In addition to regular meetings, committee members routinely communicated and were kept informed through an e-mail distribution list.

Specifically, the tasks assigned to the RHMPT members included:

- ◆ participate in RHMPT meetings and workshops
- ◆ provide best available data as required for the Risk Assessment portion of the Plan
- ◆ help review the local Capability Assessment information and provide copies of any mitigation or hazard-related documents for review and incorporation into the Plan
- ◆ support the development of the Mitigation Strategy, including the design and adoption of regional goal statements
- ◆ help design and propose appropriate mitigation actions for their department/agency for incorporation into the Mitigation Action Plan
- ◆ review and provide timely comments on all study findings and draft plan deliverables
- ◆ support the adoption of the *2021 MEMA District 2 Hazard Mitigation Plan*

Table 2.1 lists the designated county representatives and members of the RHMPT who were responsible for participating in the development of the Plan.

**Table 2.1: MEMBERS OF THE MEMA DISTRICT 2
REGIONAL HAZARD MITIGATION PLANNING TEAM**

NAME	TITLE	DEPARTMENT / AGENCY
Henderson, Jana	Mitigation Office Director	MEMA
Hill, Frank	Mitigation Planner	MEMA
Williams, Myrl	Area Coordinator	MEMA
Buchanan, Erin	Director	Witt O’Brien’s
Gibens, Ricky	Director	Alcorn County EMA
Gresham, Jimmy*	Director	Benton County EMA
Homan, Patrick*	Director	Itawamba County EMA
Quarles, Steve*	Director	Lafayette County EMA
Bowdry, Lee*	Director	Lee County EMA
Reed, Leland*	Director	Marshall County EMA
Bain, Allen*	Director	Pontotoc County EMA
Lindsey, Bud	Director	Prentiss County EMA
Lindsey, Tom	Director	Tippah County EMA
Berklite, Payton*	Director	Tishomingo County EMA
Clayton, Curt*	Director	Union County EMA
Lindley, Chris*	Mayor	City of Booneville
Grisham, Jon	Mayor	City of Ripley
Welch, Todd	Fire Chief	City of Corinth
Fortenberry, Dale	Mayor	Town of Farmington
White, Tony	Alderman	Town of Glen

SECTION 2: PLANNING PROCESS

Pace, Don	Mayor	Town of Kossuth
Williams, Walter	Mayor	Town of Rienzi
Irby, Doug	Mayor	Town of Snow Lake Shore
Robyn Tannehill	Mayor	City of Oxford
Allgood, Jimmy	Director	City of Oxford Emergency Mgt.
Reanna Mayoral	City Engineer	City of Oxford
Conrad, Don	Mayor	City of Taylor
Rodgers, B	Mayor	Town of Byhalia
Craine, Rodney	Mayor	City of Holly Springs
Alderso, Marie	Mayor	Town of Potts Camp
Norton, Doug	Mayor	Town of Blue Mountain
Lawson, B	Mayor	Town of Dumas
Gay, Ross	Mayor	Town of Falkner
Skinner, Vicki	Mayor	Town of Walnut
Tennyson, James	Mayor	Town of Belmont
Shannon, Shelton	Mayor	Town of Plantersville
Grissom, Brian	Mayor	City of Saltillo
Hallmark, R	Mayor	Town of Shannon
Williams, B	Mayor	City of Verona

* Served as the county's main point of contact

Some of the Regional Hazard Mitigation Council Members listed above were designated to represent more than one jurisdiction. Specifically:

- ◆ Jimmy Gresham represented Benton County and the Town of Ashland, Town of Snow Lake Shores, and Town of Hickory Flat.
- ◆ Patrick Homan represented Itawamba County and the City of Fulton, Town of Mantachie, and Town of Tremont.
- ◆ Steve Quarles represented Lafayette County and the Town of Abbeville, City of Oxford, and Town of Taylor. However, Jimmy Allgood also acted as the city representative to the planning council via phone calls and email communications.
- ◆ Lee Bowdry represented Lee County and the Town of Baldwyn, Town of Guntown, City of Nettleton, Town of Plantersville, City of Saltillo, Town of Shannon, and City of Tupelo, and City of Verona.
- ◆ Allen Bain represented Pontotoc County and the Town of Algoma, Town of Ecu, City of Pontotoc, Town of Sherman, Town of Thaxton, and Town of Toccopola.
- ◆ Chris Lindley represented Prentiss County and the City of Booneville, Town of Jumpertown and Town of Marietta.
- ◆ Payton Berklite represented Tishomingo County, Town of Burnsville, Town of Golden, City of Iuka, Village of Paden, and Town of Tishomingo.
- ◆ Curt Clayton represented Union County and the Village of Blue Springs, Town of Myrtle, and City of New Albany.

This authorized representation is documented in signed letters that were provided to MEMA from each of these municipalities that designated these persons as their representatives. Copies of these letters

can be obtained by contacting MEMA. Moreover, it is important to note that each of the municipalities participated in the planning process through county-level meetings and calls with their respective county's emergency management agency director, who discussed the risk assessment with them and helped them update their mitigation actions accordingly.

Additional participation and input from other identified stakeholders and the general public was sought by the MEMA District 2 counties during the planning process through phone calls and the distribution of e-mails, advertisements, and public notices aimed at informing people of the development of the Hazard Mitigation Plan (public and stakeholder involvement is further discussed later in this section). It should be noted that many neighboring communities were offered the opportunity to participate in the planning process through phone conversations and remote discussions utilizing Microsoft Teams.

2.3.1 Multi-Jurisdictional Participation

The MEMA District 2 Hazard Mitigation Plan includes eleven counties and forty-eight incorporated municipalities. To satisfy multi-jurisdictional participation requirements, each county and its participating jurisdictions were required to perform the following tasks:

- ◆ Participate in mitigation planning workshops or designate a representative to do so;
- ◆ Identify completed/new mitigation projects, if applicable; and
- ◆ Develop and adopt (or update) their local Mitigation Action Plan.

Each jurisdiction participated in the planning process and has developed a local Mitigation Action Plan unique to their jurisdiction. Each jurisdiction will adopt their Mitigation Action Plan separately. This provides the means for jurisdictions to monitor and update their Plan on a regular basis.

2.4 COMMUNITY MEETINGS AND WORKSHOPS

The preparation of this Plan required a series of meetings and workshops for facilitating discussion, gaining consensus and initiating data collection efforts with local government staff, community officials, and other identified stakeholders. More importantly, the meetings and workshops prompted continuous input and feedback from relevant participants throughout the drafting stages of the Plan. The following is a summary of the key meetings and community workshops held during the development of the plan update.¹ In many cases, routine discussions and additional meetings were held by local staff to accomplish planning tasks specific to their department or agency, such as the approval of specific mitigation actions for their department or agency to undertake and include in the Mitigation Action Plan.

Project Kickoff Meeting February 3, 2021

Following the contractual Notice to Proceed, Witt O'Brien's staff arranged for a project kickoff meeting. An email invitation was distributed on January 27, 2021 which invited representatives from the

Copies of agendas, sign-in sheets, minutes, and handout materials for all meetings and workshops can be found in Appendix D.

participating counties and municipalities, external stakeholders, and other local organizations to the virtual meeting on Zoom. This planning process was conducted remotely due to the ongoing COVID-19 pandemic and restrictions on public gatherings. The regional participants are collectively known as the Regional Hazard Mitigation Planning Team (“RHMP” or “Team”). The meeting was held virtually on Zoom, and included a PowerPoint presentation and open discussion of the planning process.

Erin Buchanan, Project Manager and Senior Planner with Witt O’Brien’s, started the meeting by welcoming the representatives from each county, participating municipal jurisdictions, and other stakeholders.

Ms. Buchanan presented the key objectives and structure of the planning process, explaining the specific tasks to be accomplished for this project, including the planning process, risk assessment, vulnerability assessment, capability assessment, mitigation strategy and action plan, plan maintenance procedures, and documentation. The project schedule was presented along with the project staffing chart, which demonstrates the number of experienced individuals that would be working on the HMP. The data collection needs and public outreach efforts were also discussed.

Ms. Buchanan then reviewed the roles and responsibilities of Witt O’Brien’s, participating jurisdictions, and stakeholders. The presentation concluded with a discussion of the next steps to be taken in the project development, which included discussing data collection efforts, continuing public outreach, and the next meeting for the RHMP.

The meeting was opened for questions and comments, but nothing of note was brought up other than to discuss when the next meeting might take place.

Ms. Buchanan thanked everyone for attending and identified himself as the point of contact for any questions or issues. The meeting was adjourned.

Mitigation HIRA Meeting

September 23, 2021

Microsoft Teams

Erin Buchanan initiated the meeting with a review of the meeting agenda, presentation slides, proposed goals for the plan. Ms. Buchanan reviewed the project schedule and stated that a draft of the Hazard Mitigation Plan would be presented to the Hazard Mitigation Planning team at the end of October.

Steven Foss, Hazard Mitigation Planner for Witt O’Brien’s, then presented the findings of the risk assessment, starting with a review of the Presidential Disaster Declarations that have impacted the region. Since the last plan update, there have been seven Presidential Disaster Declaration. He then explained the process for preparing Hazard Profiles and discussed how each hazard falls into one of five categories: Flood-related, Fire-related, Geologic, Wind-related, and Other. He indicated that each hazard must be evaluated and then profiled and assessed to determine a relative risk for each hazard.

Mr. Foss reviewed the Hazard Profiles and the following bullets summarize the information presented:

Flood-Related Hazards

- ◆ **FLOOD.** There have been 42 flood events recorded in MEMA District 2 from April 2015 to April

2020, resulting in \$712,500 in property damage. According to the National Centers for Environmental Information (NCEI), there has been an overall reduction in reported property damage for the time period April 1, 2015 – April 1, 2020 in comparison to the time period April 1, 2010 – April 1, 2015.

- ◆ **EROSION.** There have not been any instances of major erosion reported, however, some HMPT members pointed out that there might be some cases as a result of flood events previously mentioned.
- ◆ **DAM/LEVEE FAILURE.** Since the last plan update, there have been two instances of dam failures in the region, one at Biddle Lake Dam in Itawamba County and the other at Trace State Park in Pontotoc County. There are 58 high hazard dams in the region. Future occurrences are unlikely.
- ◆ **WINTER STORM.** There have been 319 recorded winter weather events in the region since 1996 resulting in \$1.5 million in reported property damages, including the February 2021 winter storm that saw \$1.2 million in damages alone. Future occurrences are likely.

Fire-Related Hazards

- ◆ **WILDFIRE.** From 2015 – 2020 an average of 150 fires annually and 1,963 acres burned annually. Future occurrences are highly likely.

Geologic Hazards

- ◆ **EARTHQUAKES.** There have been 99 recorded earthquake events in MEMA District 2 since 1886. The strongest had a recorded magnitude of VI MMI. Future occurrences are possible.
- ◆ **LANDSLIDE.** No known occurrences of landslides and USGS mapping shows a very low risk for the region in general. Future occurrences unlikely.

Wind-Related Hazards

- ◆ **THUNDERSTORM/HIGH WIND.** There have been 199 severe thunderstorm/high wind events reported during the time period April 2015 – April 2020 with \$3.57 million in reported property damages. Future occurrences are highly likely.
- ◆ **TORNADOES.** There have been 38 recorded tornado events reported in the region between April 2015 – April 2020 resulting in \$21.725 million in property damages. 9 deaths and 38 injuries have been reported. Future occurrences are likely.

Other Hazards

- ◆ **Pandemic.** The MEMA District 2 Region has been, and continues to be impacted by the COVID-19 Pandemic. As of 9/21/2021 there have been a total of 64,454 cases reported, along with 1,122 deaths in the MEMA D2 Region. Future occurrences possible.

SECTION 2: PLANNING PROCESS

The results of the hazard identification process were used to generate a Priority Risk Index (PRI), which categorizes and prioritizes potential hazards as high, moderate or low risk based on probability, impact, spatial extent, warning time, and duration. The highest PRI was assigned to Thunderstorm/High Wind followed by Tornado, Hailstorm, and Flood.

In concluding the review of Hazard Profiles, Mr. Foss stated if anyone had additional information for the hazard profiles, or had concerns with any of the data presented, they should call or email him.

Beginning in October 2021, individual mitigation action strategy meetings were held to discuss specific actions and updates. The summary of the meetings is below.

Table 2.2: MITIGATION ACTION STRATEGY MEETINGS²

Jurisdiction	Participants	Meeting Date
Alcorn County	Ricky Gibens, Alcorn Co. EMA; Frank Hill, MEMA; Tammera Catchings, MEMA; Steven Foss, Witt O'Brien's	October 1st, 2021 2pm
Benton County	Jimmy Gresham, Benton Co. EMA; Myrl Williams, MEMA; Frank Hill, MEMA; Tammera Catchings, MEMA; Steven Foss, Witt O'Brien's	October 4th, 2021 9am
Itawamba County	Patrick Homan, Itawamba Co. EMA; Frank Hill, MEMA; Tammera Catchings, MEMA; Steven Foss, Witt O'Brien's	October 4th, 2021 1pm
Lafayette County	Steve Quarles, Lafayette Co. EMA; Jimmy Allgood, City of Oxford Frank Hill, MEMA; Tammera Catchings, MEMA; Steven Foss, Witt O'Brien's	October 5th, 2021 9am
Lee County	Lee Bowdry, Lee Co. EMA, Brian Grissom, Saltillo, MS; Frank Hill, MEMA Tammera Catchings, MEMA; Steven Foss, Witt O'Brien's	October 8th, 2021 1pm
Marshall County	Leland Reed, Marshall Co. EMA; Frank Hill, MEMA; Tammera Catchings, MEMA; Steven Foss, Witt O'Brien's	September 29th, 2021 9am
Pontotoc County	Allen Bain, Pontotoc Co. EMA; Frank Hill, MEMA; Tammera Catchings, MEMA; Steven Foss, Witt O'Brien's	October 14th, 2021 9am
Prentiss County	Bud Lindsey, Prentiss Co. EMA;	October 11th, 2021 9am

² All meetings were held virtually with Microsoft Teams.

Jurisdiction	Participants	Meeting Date
	Frank Hill, MEMA; Tammera Catchings, MEMA; Steven Foss, Witt O'Brien's	
Tippah County	Tom Lindsey, Tippah Co. EMA Frank Hill, MEMA; Tammera Catchings, MEMA; Steven Foss, Witt O'Brien's	October 7th, 2021 9am
Tishomingo County	Payton Berklite, Tishomingo Co. EMA; Frank Hill, MEMA; Tammera Catchings, MEMA; Steven Foss, Witt O'Brien's	October 7th, 2021 1pm
Union County	Curt Clayton, Union Co. EMA; Frank Hill, MEMA; Tammera Catchings, MEMA; Steven Foss, Witt O'Brien's	October 8th, 2021 9am

Each county in the MEMA District 2 Region participated in virtual meetings on Microsoft Teams led by Mr. Foss between October 1, 2021 and October 14, 2021. Designated county representatives along with those representing individual jurisdictions were invited to attend these meetings. Each representative received a copy of their individual county annex and were asked to review it prior to their scheduled meeting.

Mr. Foss reviewed the Relevant Plans and Ordinances, Relevant Staff/Personnel Resources, and Relevant Fiscal Resources. All of these categories were used to rate the overall capability of the participating counties and jurisdictions. Most jurisdictions are in the limited to moderate range for Planning and Regulatory Capability and in the limited range for Fiscal Capability.

During the individual county meetings, Mr. Foss gave an overview of Mitigation Strategy Development and presented the existing goals for the plan. Each county was asked to provide objectives to meet their 10 goals. Mr. Foss then provided an overview and examples of suggested mitigation actions tailored for MEMA District 2 counties and their municipalities. Mr. Foss then asked each county and the municipalities to provide a status update for their existing mitigation actions (completed, deleted, or deferred), along with any new mitigation actions.

Mr. Foss thanked the group for taking the time to attend and explained that if team members had any issues or questions about the planning process or their next steps, they could contact him.

2.5 INVOLVING THE PUBLIC

44 CFR Requirement
44 CFR Part 201.6(b)(1): The planning process shall include an opportunity for the public to comment on the plan during the drafting stage and prior to plan approval.

An important component of the mitigation planning process involves public participation. Individual citizen and community-based input provides the entire Planning Team with a greater understanding of

local concerns and increases the likelihood of successfully implementing mitigation actions by developing community “buy-in” from those directly affected by the decisions of public officials. As citizens become more involved in decisions that affect their safety, they are more likely to gain a greater appreciation of the hazards present in their community and take the steps necessary to reduce their impact. Public awareness is a key component of any community’s overall mitigation strategy aimed at making a home, neighborhood, school, business or entire city safer from the potential effects of hazards.

Public involvement in the development of the *MEMA District 2 Hazard Mitigation Plan* was sought using two methods: (1) public survey instruments (hard copy and web-based) were made available, and (2) copies of draft Plan deliverables were made available for public review on county websites and at government offices. The Public was provided two opportunities to be involved in the actual plan development at two distinct periods during the planning process: (1) during the drafting stage of the Plan; and (2) upon completion of a final draft, but prior to official plan approval and adoption. A public participation survey (discussed in greater detail in Section 2.6.1) was made available during the planning process at various locations throughout the MEMA District 2 Region and at various locations on the internet.

It should be noted that many local officials explained that the best way to reach members of the public in their jurisdiction was often not through the internet and that many local governments do not have official websites on which to advertise an online survey link. Therefore, Witt O’Brien’s provided hard copies of the survey for all local governments and these were distributed to members of the public in the way each county felt would be most conducive to receiving responses. For instance, some communities brought hard copies to local community events and encouraged citizens to fill out the survey and send it directly to Witt O’Brien’s or to their local Emergency Management office.

Additionally, each of the participating jurisdictions will hold public meetings before the final plan is officially adopted by the local governing bodies. These meetings will occur at different times once FEMA has granted conditional approval of the plan. Adoption resolutions will be included in Appendix A.

2.5.1 Public Participation Survey

The MEMA District 2 Region was successful in getting citizens to provide input to the mitigation planning process through the use of the *Public Participation Survey*. The *Public Participation Survey* was designed to capture data and information from residents of the Region that might not be able to participate through other means in the mitigation planning process, such as attending a public meeting at a specific time and location.

As mentioned above, hard copies of the *Public Participation Survey* were distributed to the RHMPT to be made available for residents to complete at local public offices. A link to an electronic version of the survey was also posted at various locations on the internet.

The public survey was open for responses from June 4th until July 30th, 2021, and provided valuable input for the RHMPT to consider in the development of the plan update. Selected survey results are presented below.

- 2.5.1.1 Approximately 38 percent of survey respondents had been impacted by a disaster, mainly tornadoes and thunderstorms.
- 2.5.1.2 Respondents ranked Tornado as the highest perceived threat to their neighborhood (95 percent), followed by thunderstorms (38 percent).
- 2.5.1.3 Approximately 68 percent of respondents answered that incentives such as insurance discounts, property tax breaks, or low-interest loans would motivate them to take additional steps to protect their home or business from natural disasters.
- 2.5.1.4 42 percent of respondents feel that their community is somewhat prepared for a natural disaster.
- 2.5.1.5 Emergency Services and Public Education and Awareness were ranked as the most important activities for communities to pursue in reducing risks.

Public survey results were presented to the RHMPPT at the September 23, 2021 Microsoft Teams meeting. A copy of the survey and a detailed summary of the survey results are provided in Appendix B and Appendix D, respectively

2.6 INVOLVING THE STAKEHOLDERS

44 CFR Requirement

44 CFR Part 201.6(b)(2): The planning process shall include 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 non-profit interests to be involved in the planning process.

At the beginning of the planning process for the development of this plan, the project consultant worked with MEMA mitigation staff, the MEMA District 2 Area Coordinator, and each of the eleven County Emergency Management leads to initiate outreach to stakeholders to be involved in the planning process. Additionally, we engaged other stakeholders such as the Mississippi Forestry Commission.

In addition to the efforts described above, the participating jurisdictions in the MEMA District 2 plan went above and beyond the minimum requirements for stakeholder outreach by designing and distributing the *Public Participation Survey* described earlier in this section. In addition to collecting public input for the plan, the survey was generated to allow those stakeholders that could not attend Regional Hazard Mitigation Planning Team meetings the opportunity to provide input to the plan and the planning process. All survey results were shared with the Regional Hazard Mitigation Planning Team and represented input from citizens, local officials, businesses, academia, and other private interests in the Region. Several of these organizations contacted the consultant directly with comments as well.

2.7 DOCUMENTATION OF PLAN PROGRESS

Progress in hazard mitigation planning for the participating jurisdictions in the MEMA District 2 Region is documented in this plan update. Since hazard mitigation planning efforts officially began in the

SECTION 2: PLANNING PROCESS

participating counties with the development of the initial Hazard Mitigation Plans in the late 1990's/early 2000s, many mitigation actions have been completed and implemented in the participating jurisdictions. These actions will help reduce the overall risk to natural hazards for the people and property in the Region. The actions that have been completed are documented in the Mitigation Action Plan found in Section 9.

In addition, community capability continues to improve with the implementation of new plans, policies, and programs that help to promote hazard mitigation at the local level. The current state of local capabilities for the participating jurisdictions is captured in Section 7: *Capability Assessment*. The participating jurisdictions continue to demonstrate their commitment to hazard mitigation and hazard mitigation planning and have proven this by reconvening the Hazard Mitigation Planning Team to update the Plan and by continuing to involve the public in the hazard mitigation planning process.

SECTION 3

COMMUNITY PROFILE

This section of the Plan provides a general overview of the Mississippi Emergency Management Agency (MEMA) District 2 Region. It consists of the following four subsections:

- ◆ 3.1 Geography and the Environment
- ◆ 3.2 Population and Demographics
- ◆ 3.3 Housing, Infrastructure, and Land Use
- ◆ 3.4 Employment and Industry

The county-specific annexes provide more detailed community profile information about each county.

3.1 GEOGRAPHY AND THE ENVIRONMENT

The MEMA District 2 Region was named based on the Mississippi Emergency Management Agency districts lines and is one of nine MEMA regions throughout the state. The Region is located in the north eastern portion of the state. It is bounded by the Mississippi/Alabama State Line to the east and Mississippi/Tennessee State Line to the north. Interstate 72 runs east to west through the region, passing through Alcorn, Benton, Marshall, Tippah, and Tishomingo Counties. Interstate 45 runs north to south, passing through Alcorn, Prentiss, and Lee Counties. U.S. Route 78, which crosses north and south traveling through the Benton, Itawamba, Lee, Marshall, and Union Counties. The MEMA District 2 Region includes the counties of Alcorn, Benton, Itawamba, Lafayette, Lee, Marshall, Pontotoc, Prentiss, Tippah, Tishomingo, and Union. An orientation map is provided as **Figure 3.1**.

The MEMA District 2 Region is well known for being the home to University of Mississippi in Lafayette County with satellite campuses in Lee and Prentiss Counties. The region is also known for many historic sites including the birthplace of Elvis Presley in Tupelo of Lee County and Tammy Wynette in Itawamba County. There are several Civil War sites and historical geological locations throughout the region. In addition, multiple state parks are located within Tishomingo County and a National Forest in Benton County.

The total area of each of the participating counties is presented in **Table 3.1**.

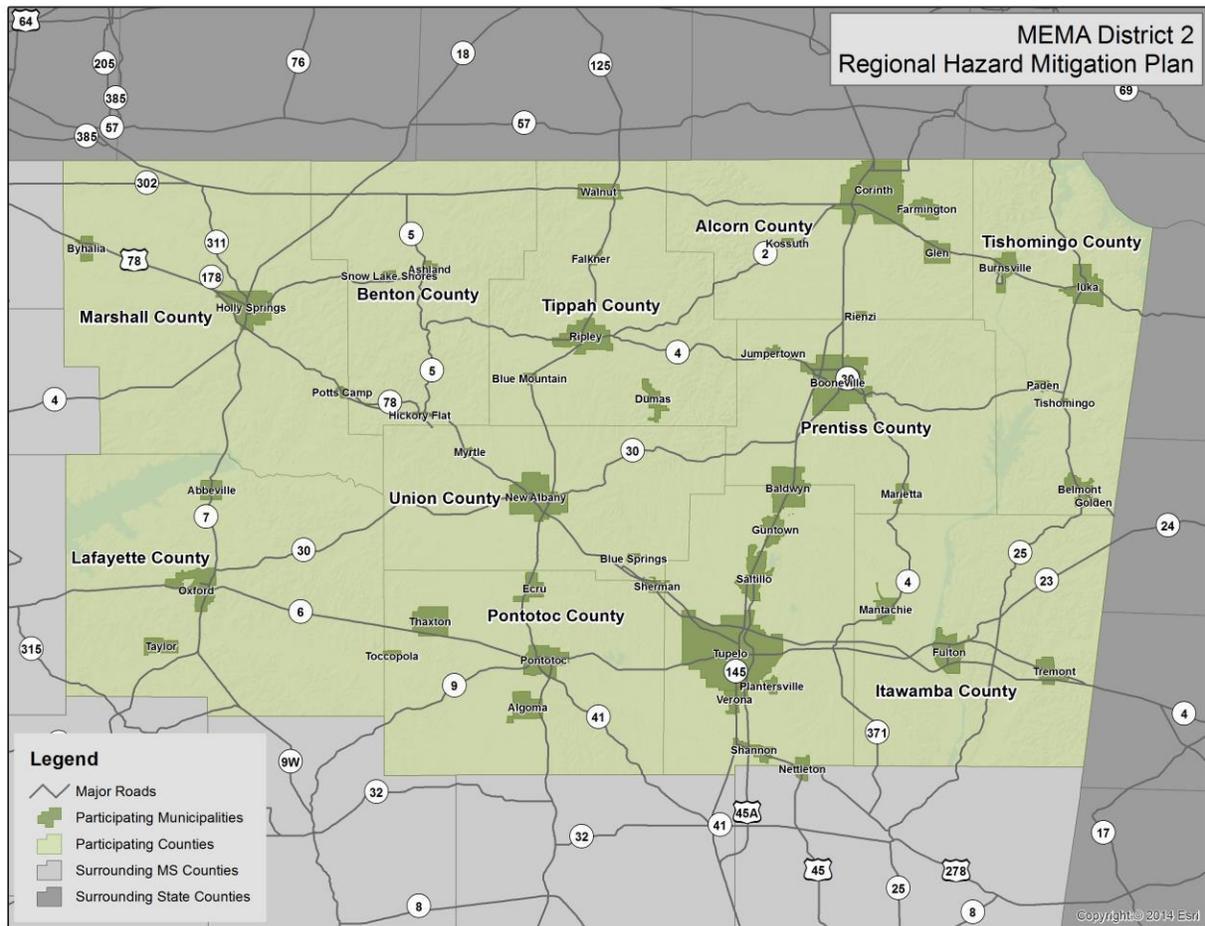
TABLE 3.1: TOTAL AREA OF PARTICIPATING COUNTIES

County	Land Area (sq. mi.)	Water Area (sq. mi.)	Total Area (sq. mi.)
Alcorn County	400	1	401
Benton County	407	2	409
Itawamba County	533	7	540
Lafayette County	632	47	679
Lee County	450	3	453
Marshall County	706	4	710
Pontotoc County	498	3	501
Prentiss County	415	3	418
Tippah County	458	2	460
Tishomingo County	424	21	445
Union County	416	1	417

Source: United States Census Bureau

The MEMA District 2 Region enjoys four distinct seasons but the climate in the region is generally hot and humid compared to the rest of the United States given its latitude and relative proximity to the Gulf Coast. Precipitation is generally highest in winter months when the temperatures are moderately lower, but the likelihood of precipitation remains relatively constant throughout the year. Summers in the region can become fairly hot with average highs in the nineties and lows in the seventies. The region is also often susceptible to turbulent weather when warm, wet air from the Gulf of Mexico is pushed up into the region to mix with cooler air coming down from across the continent which can result in severe weather conditions. This is particularly true in the spring when seasons are changing and diverse weather patterns interact.

FIGURE 3.1: MEMA DISTRICT 2 REGION ORIENTATION MAP



3.2 POPULATION AND DEMOGRAPHICS

Although Marshall County is the largest participating county by area, the largest population is found in Lee County. Between 2010 and 2019, the majority of participating jurisdictions experienced population growth, with Benton, Marshall, Prentiss, Tippah, and Tishomingo Counties seeing a decline. The Lafayette County and Pontotoc County had the highest rates of growth, though it is notable that the Town of Oxford in Lafayette County is the home to the University of Mississippi which experienced the most growth. Population counts from the U.S. Census Bureau for 2000, 2010, and 2019 for each of the participating counties and jurisdictions are presented in **Table 3.2**.

TABLE 3.2: POPULATION COUNTS FOR PARTICIPATING COUNTIES

Jurisdiction	2000 Census Population	2010 Census Population	2019 Census Population	% Change 2010-2019
Alcorn County	34,558	37,057	37,090	0.1%
Benton County	8,026	8,729	8,232	-6.0%
Itawamba County	22,770	23,401	23,462	0.3%
Lafayette County	38,744	47,351	53,590	11.6%

Jurisdiction	2000 Census Population	2010 Census Population	2019 Census Population	% Change 2010-2020
Lee County	75,755	82,910	85,072	2.5%
Marshall County	34,993	37,144	35,599	-4.3%
Pontotoc County	26,726	29,957	31,618	5.3%
Prentiss County	25,556	25,276	25,255	-0.1%
Tippah County	20,826	22,232	22,018	-1.0%
Tishomingo County	19,163	19,593	19,441	-0.8%
Union County	25,362	27,134	28,507	4.8%

Source: United States Census Bureau

Based on the 2019 Census, the median age for residents of the participating counties ranges from 30 to 42 years. The racial characteristics of the participating counties are presented in **Table 3.3**. Generally, whites make up the majority of the population in the region, however there is a substantial black population in every county that represents the majority in some cases.

TABLE 3.3: DEMOGRAPHICS OF PARTICIPATING COUNTIES

Jurisdiction	White, Percent (2019)	Black or African American, Percent (2019)	American Indian or Alaska Native, Percent (2019)	Asian, Percent (2019)	Native Hawaiian or Other Pacific Islander, Percent (2019)	Other Race, Percent (2019)	Two or More Races, percent (2019)	Persons of Hispanic Origin, Percent (2019)*
Alcorn County	84.4%	12.1%	0.2%	0.3%	0.0%	1.2%	1.8%	3.2%
Benton County	61.4%	34.2%	0.0%	0.0%	0.2%	1.3%	3.0%	2.6%
Itawamba County	91.1%	7.3%	0.4%	0.0%	0.0%	0.5%	0.8%	1.6%
Lafayette County	71.4%	23.6%	0.2%	2.1%	0.0%	1.5%	1.1%	2.6%
Lee County	66.9%	29.5%	0.3%	1.0%	0.0%	1.3%	1.1%	2.6%
Marshall County	49.5%	47.8%	0.1%	0.0%	0.0%	1.8%	0.9%	3.7%
Pontotoc County	77.7%	16.0%	0.0%	0.1%	0.0%	4.9%	1.3%	6.9%
Prentiss County	83.6%	10.0%	0.1%	2.2%	0.0%	0.4%	3.7%	1.5%
Tippah County	77.4%	16.7%	0.1%	0.3%	0.0%	3.8%	1.7%	4.8%
Tishomingo County	96.1%	2.7%	0.2%	0.0%	0.0%	0.1%	1.0%	3.2%
Union County	79.1%	15.5%	0.0%	0.4%	0.0%	3.3%	1.7%	4.4%

*Hispanics may be of any race, so also are included in applicable race categories

Source: United States Census Bureau

3.3 HOUSING, INFRASTRUCTURE, AND LAND USE

3.3.1 Housing

According to the 2019 U.S. Census, there are 164,662 housing units in the MEMA District 2 Region, most of which are single family homes. Housing information for the eleven participating counties is presented in **Table 3.4**. As shown in the table, most counties have a very low percentage of seasonal housing units.

TABLE 3.4: HOUSING CHARACTERISTICS OF PARTICIPATING COUNTIES

Jurisdiction	Housing Units (2010)	Housing Units (2019)	Median Home Value (2014-2019)
Alcorn County	17,077	17,268	\$102,700
Benton County	4,186	4,256	\$78,000
Itawamba County	10,126	10,298	\$87,600
Lafayette County	22,729	25,653	\$199,700
Lee County	35,872	36,790	\$133,700
Marshall County	14,881	15,547	\$107,900
Pontotoc County	12,440	12,895	\$106,500
Prentiss County	11,054	11,206	\$92,700
Tippah County	9,696	9,893	\$86,900
Tishomingo County	10,295	10,428	\$88,100
Union County	11,520	11,997	\$100,600

Source: United States Census Bureau

3.3.2 Infrastructure

TRANSPORTATION

There are several major thoroughfares that traverse the MEMA District 2 Region. U.S. Highway 45 runs roughly north-south through Alcorn, Lee, and Prentiss Counties connecting many towns in those counties to Corinth and Tupelo. It is intersected by U.S. Highway 72 which travels east west across Alcorn, Benton, Marshall, Tippah, and Tishomingo Counties, ultimately leading to Memphis, Tennessee to the west. U.S. Route 78, which crosses north and south traveling through the Benton, Itawamba, Lee, Marshall, and Union Counties to Birmingham, Alabama to the east and Memphis, Tennessee to the west. Mississippi Highway 6/U.S. Route 278 is an east west highway servicing the City of Oxford and additional communities throughout Lafayette and Pontotoc Counties. Several other U.S. Highways also run through the region, connecting many of the towns to each other and municipalities outside the region. In addition, the Natchez Trace Parkway runs through Lee, Pontotoc, Tishomingo, and other Counties. The Natchez Trace Parkway is a National Parkway that is highly regarded for its scenic views, hiking trails, picnic areas, camp sites, and exhibits.

There are several small general aviation airports within the MEMA District 2 Region, including one in nearly every county. Tupelo Regional Airport is a public use airport west of the City of Tupelo in Lee County that is used for general aviation and serves one commercial airline with scheduled passenger service. The Roscoe Turner Airport is located within Alcorn County and provides limited local service. Benton County contains a private airport, John Farese Airpark Airport, which provides access to a wide variety of services such as hangar space, pilot license lessons, local aerial tours, helicopter rides, and skydiving classes. The Fulton-Itawamba County Airport provides public use to local service and regional air travel. University-Oxford Airport is a non-commercial airport that serves local businesses, private pilots, and charters near the University of Mississippi. Marshall County contains the Holly-Spring- Marshall County Airport which operates as a public use airport. Ripley Airport, a public use airport, operates within Tippah County. The closest international airport is in Memphis, approximately 100 miles away from the most Counties within the MEMA District 2 Region.

Multiple freight rail lines operate within the MEMA District 2 Region. Norfolk Southern and Kansas City Southern travel throughout the area. Redmont Railway Rail connects Corinth City within Alcorn County with Red Bay, Alabama. Business and industries rely on and are severed by these various rail lines with the MEMA District 2 Region. Port Itawamba located in the City of Fulton within Itawamba County is on the Tennessee-Tombigbee Waterway, halfway between Memphis and Birmingham. The port is used for warehouse, logistics, and cargo handling.

UTILITIES

Electric power in the MEMA District 2 Region is provided by several electricity cooperatives. Tombigbee Power Association serves Alcorn, Lee, and Itawamba Counties. Pontotoc Electric Power Association provides power to Pontotoc and Union Counties, as well as several other nearby counties and unincorporated areas. Benton, Lafayette, and Marshall Counties use North East Mississippi Electrical Power Association for electric service needs among several other associations. Multiple County based electric power agencies provide service to many counties in the region including Pontotoc, Prentiss, Tippah, Tishomingo, and Union Counties.

Water and sewer service is provided by all of the participating towns and/or community-based associations, but unincorporated areas often rely on septic systems and wells in the MEMA District 2 Region.

COMMUNITY FACILITIES

There are a number of public buildings and community facilities located throughout the MEMA District 2 Region. According to the data collected for the vulnerability assessment (Section 6.4.1), there are 73 fire stations, 50 police stations, 9 hospitals, and 151 schools located within the study area.

Nine hospitals are located in the MEMA District 2 Region. Baptist Memorial Hospital-North Mississippi is a 217-bed acute care facility serving the northern third of Mississippi with more than 90 medical and surgical specialists representing more than 30 specialty areas located within Lafayette County. Magnolia Regional Health Center is a 163-bed medical-surgical hospital located in Corinth City of Alcorn County. Tippah County Hospital is a 110-bed facility within Tippah County. There are also several additional medical care facilities located throughout the region as outlined in the vulnerability assessment (Section 6.4.1).

There are parks distributed throughout the MEMA District 2 Region. State and regional parks, historic sites, trails, golf courses, wildlife areas, and a sportsplex provide recreational opportunities through the MEMA District 2 Region. Part of Holly Springs National Forest is available for exploration within Benton and Tippah Counties. The national forest contains Chewalla, Puskus, and Choctaw Lake recreation areas offering various facilities and services such as campgrounds, picnic areas, swimming beaches, and/or hiking trails. The San-Lee Parks within Lee County offer park facilities, hiking trails, a mountain bike trail, and a nature center. There are picnic facilities, campgrounds and two stocked lakes for fishing, with paddle boat rentals available seasonally. There are seven parks and one pool open to residents within Lafayette County at various times throughout the year. Ross B. Pharr Park and Kidstown allow Prentiss County residents' outdoor recreational opportunities. Kid's World is a kid playground park within Tippah County that can accommodate over 150 kids with educational, safe, and fun playground equipment.

Tishomingo State Park is a large park within Tishomingo County including canyons and rock outcrops with a scenic creek throughout. Recreational activities such as canoeing, rock climbing, fishing, and hiking are available within the park. Natchez Trace Parkway runs through the park facility.

There sportsplex within Alcorn County which has an arena, interpretive center, bowling center, and skating rink which also provides indoor alternatives. Benton County contains multiple city and local parks offering recreational and picnic facilities for residents. Fulton City Park in Itawamba County provides opportunities for residents to enjoy and participate in baseball, basketball, football, soccer, softball, and additional recreational activities. There are multiple recreation centers, a community garden, and tennis facility also available within Lafayette County. Lee County provides family parks, walking & bike trails, outdoor education programs, camps, adult and youth recreational activities, aquatics classes, and sports for all residents within the county. A baseball facility is available within the City of New Albany of Union County available to players ranging from College to Junior High.

Snow Lake, within Snow Lake Shores in Benton County, was created by building a dam on a local stream. It is accessed year-round for recreational opportunities. Fishing opportunities are available in Marshall County along the banks at Chewalla Lake, Sardis Lake, and Wall Doxey State Park. John Bell Williams Game Management Area and Bay Spring Lake within Prentiss County allow fishing and/or hunting activities. Within Pontotoc County there are two large parks: Howard Stafford Park and Trace State Park. Howard Stafford Park is along an 80-acre lake with fishing opportunities and additional park amenities such as recreational facilities, picnic areas, and campsite. Trace State Park has cabins available for rent along with fishing, boating, hiking, horseback riding, and biking capabilities. Tippah County State Fishing Lake is a 145-acre lake within Tippah County providing lake-based recreation opportunities. Campground services are provided in certain areas. Within the City of New Albany in Union County various parks are located along the River, along with an animal preserve, heritage museum, and Ingomar Indian Mounds.

3.3.3 Land Use

The MEMA District 2 Region has a blend of old and new development that contributes to physical, cultural, and economic attributes throughout the Region. As shown in **Figure 3.1** above, there are many small incorporated municipalities located throughout the study area, with a few larger city-specific economic hubs interspersed. These areas are where the region's population is generally concentrated. The incorporated areas are also where many of the businesses, commercial uses, and institutional uses are located. Land uses in the balance of the study area generally consist of residential development, agricultural uses, historic areas, and recreational areas, although there are some notable exceptions in larger municipalities. There are multiple County and Regional based agencies that serve to coordinate growth and promote economic development.

Local land use and associated regulations are further discussed in *Section 7: Capability Assessment*.

3.4 EMPLOYMENT AND INDUSTRY

Like many other parts of Mississippi, the MEMA District 2 Region's economy has traditionally been heavily reliant on the manufacturing industries. However, the region has suffered from numerous plant closings during the 1990s and 2000s. As a result, many of the communities are now have worked to develop place-based economies that will rely on the MEMA District 2 Region's areas of comparative

advantage. Manufacturing jobs have recently become available with the relocation of larger company manufacturing plants to the area including car manufacturing plants and furniture based manufacture. The University of Mississippi acts as a major employer in this region and supports four campuses through the region and sub-region. Agriculture and livestock based operations continues to play a major role in the local economy and throughout the region.

According to the U.S. Census Bureau's American Community Survey (ACS), in 2019, Alcorn County had an average annual employment rate of 51.9 percent and an average unemployment rate of 4.9 percent (compared to 5.8 percent for the state). In 2019, the largest industries in Alcorn County were Manufacturing, Health Care and Social Assistance and Retail Trade. The median household income in 2019 for Alcorn County was \$40,180 compared to \$39,056 in the state of Mississippi.

In 2019, Benton County had an average annual employment rate of 45.1 percent and an average unemployment rate of 20.2 percent. In 2019, the largest industries in Benton County were Manufacturing (23.8%), Educational services, health care and social assistance (15.9%), and Transportation and warehousing, and utilities (13.5%). The median household income in 2019 for Benton County was \$31,060.

Itawamba County had an average annual employment rate of 53.3 percent rate of 4.8 percent in 2019. According to the ACS, in 2019 the largest industries are Manufacturing (27.6%), Educational services, health care and social assistance (23%), and Retail Trade (8.4%). The average annual wage in Itawamba County was \$44,567.

In 2019, Lafayette County had an average annual employment rate of 55.9 percent and an average unemployment rate of 4.5 percent. According to the ACS in 2019, the largest industries in Lafayette County are Educational services, health care and social assistance industry (36%) and accommodation/food services (12.9%). The average annual wage in Lafayette County was \$50,272.

Lee County had an average annual employment rate of 58.8 percent and an average unemployment rate of 4.5 percent in 2019. An estimated 72.1 percent of the people employed were private wage and salary workers; 11.2 percent were federal, state, or local government workers; and 5.2 percent were self-employed in their own (not incorporated) business. According to the ACS, in 2019, the largest industries are Manufacturing (21.6%), educational services, health care and social assistance industry (24%) and retail trade (11.8%). The average annual wage in Lee County was \$50,559.

In 2019, Marshall County had an average annual employment rate of 49.7 percent workers and an average unemployment rate of 6.0 percent. An estimated 76.4 percent of the people employed were private wage and salary workers; 11.4 percent were federal, state, or local government workers; and 6.4 percent were self-employed in their own (not incorporated) business. In 2019, according to the ACS, the largest industries are Manufacturing (21.2%), educational services, health care and social assistance (20.1%) and Retail Trade (12.7%). The average annual wage in Marshall County was \$42,233.

Pontotoc County, in 2019, had an average annual employment rate of 55.2 percent and average unemployment rate of 4.4 percent. An estimated 72.2 percent of the people employed were private wage and salary workers; 14.0 percent were federal, state, or local government workers; and 5.4 percent were self-employed in their own (not incorporated) business. In 2019, according to the ACS, the largest industries were Manufacturing (28.6%), educational services, health care and social assistance (21.3%), and Retail Trade (13.5%). The average annual wage in Pontotoc County was \$44,759.

Prentiss County had an average annual employment rate of 48.6 percent and an average unemployment rate of 5.0 percent in 2019. An estimated 71.9 percent of the people employed were private wage and salary workers; 17.7 percent were federal, state, or local government workers; and 6.9 percent were self-employed in their own (not incorporated) business. According to the ACS, in 2019, the largest industries are manufacturing (26.6%), educational services, health care and social assistance industry (24.1%), and then Retail Trade (9.8%). The average annual wage in Prentiss County was \$39,256.

In 2019, Tippah County had an average annual employment rate of 51.4 percent and an average unemployment rate of 5.2 percent. An estimated 75.3 percent of the people employed were private wage and salary workers; 10.9 percent were federal, state, or local government workers; and 0.1 percent were self-employed in their own (not incorporated) business. In 2019, according to the ACS, the largest industries in Tippah County were Manufacturing (24.5%), educational services, health care and social assistance (23.5%), and Retail Trade (15.1%). The average annual wage in Tippah County was \$39,246.

Tishomingo County had an average annual employment rate of 48.9 percent and an average unemployment rate of 5.2 percent in 2019. An estimated 73.1 percent of the people employed were private wage and salary workers; 17.7 percent were federal, state, or local government workers; and 2.9 percent were self-employed in their own (not incorporated) business. According to the ACS, in 2019, the largest industries in Tishomingo County were Manufacturing (28.4%), educational services health care and social assistance (18.1%), and retail trade (15.3%). The average annual wage in Tishomingo County was \$37,681.

In 2019, Union County had an average annual employment rate of 55.4% and an average unemployment rate of 4.3 percent. An estimated 73.5 percent of the people employed were private wage and salary workers; 14.5 percent were federal, state, or local government workers; and 2.7 percent were self-employed in their own (not incorporated) business. According to the ACS, in 2019, the largest industries were Manufacturing (26.3%), educational services, health care and social assistance (21.2%), and retail trade. The average annual wage in Union County was \$45,754.

SECTION 4

HAZARD IDENTIFICATION

This section describes how the Hazard Mitigation Council identified the hazard to be included this plan. It consists of the following five subsections:

- ◆ 4.1 Overview
- ◆ 4.2 Description of Full Range of Hazards
- ◆ 4.3 Disaster Declarations
- ◆ 4.4 Hazard Evaluation
- ◆ 4.5 Hazard Identification Results

44 CFR Requirement

44 CFR Part 201.6(c)(2)(i): The risk assessment shall include a description of the type, 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.

4.1 OVERVIEW

The MEMA District 2 Region is vulnerable to a wide range of natural and human-caused hazards that threaten life and property. Current FEMA regulations and guidance under the Disaster Mitigation Act of 2000 (DMA 2000) require, at a minimum, an evaluation of a full range of natural hazards. An evaluation of human-caused (i.e., terrorism) and technological hazards (i.e., hazardous materials incident) is encouraged, though not required, for plan approval. The MEMA District 2 Region has included a comprehensive assessment of all hazards. It should be noted however, that this list may not be all-inclusive and will be revisited with each plan update.

Upon a review of the full range of natural hazards suggested under FEMA planning guidance, the participating jurisdictions in the MEMA District 2 Regional Hazard Mitigation Plan have identified a number of hazards that are to be addressed in this Regional Hazard Mitigation Plan. These hazards were identified through an extensive process that utilized input from the MEMA District 2 Region Hazard Mitigation Council members, research of past disaster declarations in the participating counties¹, and review of the Mississippi State Hazard Mitigation Plan (2018). Readily available information from reputable sources (such as federal and state agencies) was also evaluated to supplement information from these key sources.

Table 4.1 lists the full range of hazards initially identified for inclusion in the Plan and provides a brief description for each. This table includes 28 individual hazards. Some of these hazards are considered to be interrelated or cascading (one hazard event may cause another, i.e. – hurricanes cause flooding), but for preliminary hazard identification purposes these individual hazards are broken out separately.

Table 4.2 lists the disaster declarations that have impacted the MEMA District 2 Region.

¹ A complete list of disaster declarations for the MEMA District 2 Region can be found below in Section 4.3.

Table 4.3 documents the evaluation process used for determining which of the initially identified hazards are considered significant enough to warrant further evaluation in the risk assessment. For each hazard considered, the table indicates whether or not the hazard was identified as a significant hazard to be further assessed, how this determination was made, and why this determination was made. The table works to summarize not only those hazards that *were* identified (and why) but also those that *were not* identified (and why not). Hazard events not identified for inclusion at this time may be addressed during future evaluations and updates of the risk assessment if deemed necessary by the MEMA District 2 RHMC during the plan update process.

Lastly, **Table 4.4** provides a summary of the hazard identification and evaluation process noting that 22 of the 28 initially identified hazards are considered significant enough for further evaluation through this Plan’s risk assessment (marked with a “☑”). It should be noted that two hazards (Land Subsidence and Sinkhole) were combined in the previous update and will continue to be addressed as one hazard.

4.2 DESCRIPTION OF FULL RANGE OF HAZARDS

In this section, hazards are classified into groups including flood-related hazards, fire-related hazards, geologic hazards, wind-related hazards, and other hazards (a catch-all category of hazards that typically includes human-caused and technological hazards). As noted above, several sources were consulted to determine a list of hazards to be considered by MEMA District 2. These include the MEMA District 2 RHMC members, research of past disaster declarations in the participating counties², review of FEMA’s Multi-Hazard Identification and Risk Assessment (1997) and review of the State of Mississippi Hazard Mitigation Plan (2018). Readily available information from reputable sources (such as federal and state agencies) was also evaluated to supplement information from these key sources.

TABLE 4.1: DESCRIPTIONS OF THE FULL RANGE OF INITIALLY IDENTIFIED HAZARDS

Hazard	Description
FLOOD-RELATED HAZARDS	
Avalanche	A rapid fall or slide of a large mass of snow down a mountainside.
Dam and Levee Failure	Dam failure is the collapse, breach, or other failure of a dam structure resulting in downstream flooding. In the event of a dam failure, the energy of the water stored behind even a small dam is capable of causing loss of life and severe property damage if development exists downstream of the dam. Dam failure can result from natural events, human-induced events, or a combination of the two. The most common cause of dam failure is prolonged rainfall that produces flooding. Failures due to other natural events such as hurricanes, earthquakes or landslides are significant because there is generally little or no advance warning.
Erosion	Erosion is the gradual breakdown and movement of land due to both physical and chemical processes of water, wind, and general meteorological conditions. Natural, or geologic, erosion has occurred since the Earth’s formation and continues at a very slow and uniform rate each year.

² A complete list of disaster declarations for the MEMA District 2 Region can be found below in Section 4.3.

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<p>Flood</p>	<p>The accumulation of water within a water body which results in the overflow of excess water onto adjacent lands, usually floodplains. The floodplain is the land adjoining the channel of a river, stream ocean, lake or other watercourse or water body that is susceptible to flooding. Most floods fall into the following three categories: riverine flooding, coastal flooding, or shallow flooding (where shallow flooding refers to sheet flow, ponding and urban drainage).</p>
<p>Storm Surge</p>	<p>A storm surge is a large dome of water often 50 to 100 miles wide and rising anywhere from four to five feet in a Category 1 hurricane up to more than 30 feet in a Category 5 storm. Storm surge heights and associated waves are also dependent upon the shape of the offshore continental shelf (narrow or wide) and the depth of the ocean bottom (bathymetry). A narrow shelf, or one that drops steeply from the shoreline and subsequently produces deep water close to the shoreline, tends to produce a lower surge but higher and more powerful storm waves. Storm surge arrives ahead of a storm’s actual landfall and the more intense the hurricane is, the sooner the surge arrives. Storm surge can be devastating to coastal regions, causing severe beach erosion and property damage along the immediate coast. Further, water rise caused by storm surge can be very rapid, posing a serious threat to those who have not yet evacuated flood-prone areas.</p>
<p>Winter Storm and Freeze</p>	<p>Winter storms may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation. Blizzards, the most dangerous of all winter storms, combine low temperatures, heavy snowfall, and winds of at least 35 miles per hour, reducing visibility to only a few yards. Ice storms occur when moisture falls and freezes immediately upon impact on trees, power lines, communication towers, structures, roads and other hard surfaces. Winter storms and ice storms can down trees, cause widespread power outages, damage property, and cause fatalities and injuries to human life.</p>
<p>FIRE-RELATED HAZARDS</p>	
<p>Drought / Heat Wave</p>	<p>A prolonged period of less than normal precipitation such that the lack of water causes a serious hydrologic imbalance. Common effects of drought include crop failure, water supply shortages, and fish and wildlife mortality. High temperatures, high winds, and low humidity can worsen drought conditions and also make areas more susceptible to wildfire. Human demands and actions have the ability to hasten or mitigate drought-related impacts on local communities.</p> <p>A heat wave may occur when temperatures hover 10 degrees or more above the average high temperature for the region and last for several weeks. Humid or muggy conditions, which add to the discomfort of high temperatures, occur when a “dome” of high atmospheric pressure traps hazy, damp air near the ground. Excessively dry and hot conditions can provoke dust storms and low visibility. A heat wave combined with a drought can be very dangerous and have severe economic consequences on a community.</p>
<p>Wildfire</p>	<p>An uncontrolled fire burning in an area of vegetative fuels such as grasslands, brush, or woodlands. Heavier fuels with high continuity, steep slopes, high temperatures, low humidity, low rainfall, and high winds all work to increase risk for people and property located within wildfire hazard areas or along the urban/wildland interface. Wildfires are part of the natural management of forest ecosystems, but most are caused by human factors. Over 80 percent of forest fires are started by negligent human behavior such as smoking in wooded areas or improperly extinguishing campfires. The second most common cause for wildfire is lightning.</p>

GEOLOGIC HAZARDS	
Earthquake	A sudden, rapid shaking of the Earth caused by the breaking and shifting of rock beneath the surface. This movement forces the gradual building and accumulation of energy. Eventually, strain becomes so great that the energy is abruptly released, causing the shaking at the earth's surface which we know as an earthquake. Roughly 90 percent of all earthquakes occur at the boundaries where plates meet, although it is possible for earthquakes to occur entirely within plates. Earthquakes can affect hundreds of thousands of square miles; cause damage to property measured in the tens of billions of dollars; result in loss of life and injury to hundreds of thousands of persons; and disrupt the social and economic functioning of the affected area.
Expansive Soils	Soils that will exhibit some degree of volume change with variations in moisture conditions. The most important properties affecting degree of volume change in a soil are clay mineralogy and the aqueous environment. Expansive soils will exhibit expansion caused by the intake of water and, conversely, will exhibit contraction when moisture is removed by drying. Generally speaking, they often appear sticky when wet, and are characterized by surface cracks when dry. Expansive soils become a problem when structures are built upon them without taking proper design precautions into account with regard to soil type. Cracking in walls and floors can be minor or can be severe enough for the home to be structurally unsafe.
Landslide	The movements of a mass of rock, debris, or earth down a slope when the force of gravity pulling down the slope exceeds the strength of the earth materials that comprise to hold it in place. Slopes greater than 10 degrees are more likely to slide, as are slopes where the height from the top of the slope to its toe is greater than 40 feet. Slopes are also more likely to fail if vegetative cover is low and/or soil water content is high.
Land Subsidence	The gradual settling or sudden sinking of the Earth's surface due to the subsurface movement of earth materials. Causes of land subsidence include groundwater pumpage, aquifer system compaction, drainage of organic soils, underground mining, hydrocompaction, natural compaction, sinkholes, and thawing permafrost.
Sinkhole	Sinkholes are a natural and common geologic feature in areas with underlying limestone and other rock types that are soluble in natural water. Most limestone is porous, allowing the acidic water of rain to percolate through their strata, dissolving some limestone and carrying it away in solution. Over time, this persistent erosional process can create extensive underground voids and drainage systems in much of the carbonate rocks. Collapse of overlying sediments into the underground cavities produces sinkholes.
Tsunami	A series of waves generated by an undersea disturbance such as an earthquake. The speed of a tsunami traveling away from its source can range from up to 500 miles per hour in deep water to approximately 20 to 30 miles per hour in shallower areas near coastlines. Tsunamis differ from regular ocean waves in that their currents travel from the water surface all the way down to the sea floor. Wave amplitudes in deep water are typically less than one meter; they are often barely detectable to the human eye. However, as they approach shore, they slow in shallower water, basically causing the waves from behind to effectively "pile up", and wave heights to increase dramatically. As opposed to typical waves which crash at the shoreline, tsunamis bring with them a continuously flowing 'wall of water' with the potential to cause devastating damage in coastal areas located immediately along the shore.

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<p>Volcano</p>	<p>A mountain that opens downward to a reservoir of molten rock below the surface of the earth. While most mountains are created by forces pushing up the earth from below, volcanoes are different in that they are built up over time by an accumulation of their own eruptive products: lava, ash flows, and airborne ash and dust. Volcanoes erupt when pressure from gases and the molten rock beneath becomes strong enough to cause an explosion.</p>
<p>WIND-RELATED HAZARDS</p>	
<p>Hurricane and Tropical Storm</p>	<p>Hurricanes and tropical storms are classified as cyclones and defined as any closed circulation developing around a low-pressure center in which the winds rotate counter-clockwise in the Northern Hemisphere (or clockwise in the Southern Hemisphere) and with a diameter averaging 10 to 30 miles across. When maximum sustained winds reach or exceed 39 miles per hour, the system is designated a tropical storm, given a name, and is closely monitored by the National Hurricane Center. When sustained winds reach or exceed 74 miles per hour the storm is deemed a hurricane. The primary damaging forces associated with these storms are high-level sustained winds, heavy precipitation and tornadoes. Coastal areas are also vulnerable to the additional forces of storm surge, wind-driven waves and tidal flooding which can be more destructive than cyclone wind. The majority of hurricanes and tropical storms form in the Atlantic Ocean, Caribbean Sea and Gulf of Mexico during the official Atlantic hurricane season, which extends from June through November.</p>
<p>Nor'easter</p>	<p>Similar to hurricanes, nor'easters are ocean storms capable of causing substantial damage to coastal areas in the Eastern United States due to their associated strong winds and heavy surf. Nor'easters are named for the winds that blow in from the northeast and drive the storm up the East Coast along the Gulf Stream, a band of warm water that lies off the Atlantic coast. They are caused by the interaction of the jet stream with horizontal temperature gradients and generally occur during the fall and winter months when moisture and cold air are plentiful. Nor'easters are known for dumping heavy amounts of rain and snow, producing hurricane-force winds, and creating high surf that causes severe beach erosion and coastal flooding.</p>
<p>Severe Thunderstorm (wind, hail, lightning)</p>	<p>Thunderstorms are caused by air masses of varying temperatures meeting in the atmosphere. Rapidly rising warm moist air fuels the formation of thunderstorms. Thunderstorms may occur singularly, in lines, or in clusters. They can move through an area very quickly or linger for several hours. Thunderstorms may result in hail, tornadoes, or straight-line winds. Windstorms pose a threat to lives, property, and vital utilities primarily due to the effects of flying debris and can down trees and power lines.</p> <p>A hailstorm is any storm that produces hailstones that fall to the ground; usually used when the amount or size of the hail is considered significant. Hail is formed when updrafts in thunderstorms carry raindrops into parts of the atmosphere where the temperatures are below freezing.</p> <p>Lightning is a discharge of electrical energy resulting from the buildup of positive and negative charges within a thunderstorm, creating a "bolt" when the buildup of charges becomes strong enough. This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning can reach temperatures approaching 50,000 degrees Fahrenheit. Lightning rapidly heats the sky as it flashes, but the surrounding air cools following the bolt. This rapid heating and cooling of the surrounding air causes thunder. On average, 73 people are killed each year by lightning strikes in the United States.</p>

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<p>Tornado</p>	<p>A tornado is a violently rotating column of air that has contact with the ground and is often visible as a funnel cloud. Its vortex rotates cyclonically with wind speeds ranging from as low as 40 mph to as high as 300 mph. Tornadoes are most often generated by thunderstorm activity when cool, dry air intersects and overrides a layer of warm, moist air forcing the warm air to rise rapidly. The destruction caused by tornadoes ranges from light to catastrophic depending on the intensity, size and duration of the storm.</p>
<p>OTHER HAZARDS</p>	
<p>Active Shooter</p>	<p>The Occupational Safety and Health Administration describes workplace/school/university violence as violence or the threat of violence against workers or students that can occur at or outside of the workplace or school environment. It can range from verbal abuse to physical assaults and homicides, but in the context of this plan, the focus will be on the physical aspect of this violence which can manifest itself in a number of forms including active shooters.</p>
<p>Civil Unrest</p>	<p>Public unrest has been evident in society from the earliest recordings of civilization. Most of these disturbances have been related to political or social issues. Insurrection has framed much of history, dictating the governance and progression of society. In recent years, most of the publicized disturbances have been protests and riots. Rioting does not occur very often in the United States; however, marches and protests are common and could subsequently lead to riots.</p>
<p>Cyber Terror</p>	<p>Cyberterrorism is a deliberate attack on an individual or group using the internet. In the past few decades, society has become dependent on computers and internet connections for much of daily life. This dependence has opened up the avenue for crime to be committed from afar, often from a different country. Some common examples of cyberterrorism include a hacker accessing bank accounts by hacking into a bank's website, infecting a computer system with a virus, Trojan horse, or worm to inflict damage to the information in the system, or disseminating incorrect or otherwise flawed information, also called "misinformation." Also, denial-of-service attacks could occur against prominent websites, which prevent legitimate users from accessing information or services</p>
<p>Hazardous Materials Incident</p>	<p>Hazardous material (HAZMAT) incidents can apply to fixed facilities as well as mobile, transportation-related accidents in the air, by rail, on the nation's highways and on the water. HAZMAT incidents consist of solid, liquid and/or gaseous contaminants that are released from fixed or mobile containers, whether by accident or by design as with an intentional terrorist attack. A HAZMAT incident can last hours to days, while some chemicals can be corrosive or otherwise damaging over longer periods of time. In addition to the primary release, explosions and/or fires can result from a release, and contaminants can be extended beyond the initial area by persons, vehicles, water, wind and possibly wildlife as well.</p>
<p>Human Trafficking</p>	<p>The U.S. Department of Homeland Security defines human trafficking as a modern-day form of slavery and involves the illegal trade of people for exploitation or commercial gain. Human trafficking affects millions of people throughout the world and is a hidden crime that is difficult to track because victims rarely come forward.</p>
<p>Pandemic</p>	<p>Pandemics are infectious and contagious outbreaks typically caused by a virus that originated in animals and spreads to humans. Common sources are swine and avian. There are several definitions of pandemic depending on the severity of the outbreak. It can be defined generally as an epidemic occurring over a large geographic area. Pandemic viruses reproduce and mutate rapidly. Unlike seasonal influenza, humans have no immunity to the mutated strains, making it especially deadly in populations.</p>

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Pipelines	In the case of this plan, a pipeline incident generally refers to a spill, explosion, or fire caused in the transport of flammable liquid or gas being carried by fixed pipes across the United States. These pipes often carry petroleum-based products that are dangerous to health and safety of people as well as the environment if exposed in large quantities.
Terror Threat	Terrorism is defined by FEMA as, “the use of force or violence against persons or property in violation of the criminal laws of the United States for purposes of intimidation, coercion, or ransom.” Terrorist acts may include assassinations, kidnappings, hijackings, bomb scares and bombings, cyber attacks (computer-based), and the use of chemical, biological, nuclear and radiological weapons.
Water Supply / System Failure	A water supply/system failure occurs whenever supplies of water have been depleted to the point that there is very little to none of the resource available to the public. Most commonly water shortages occur when there has been a steady decrease in the amount of available resource over time, but these shortages can also be the result of a major event or failure that quickly reduces supply.

4.3 DISASTER DECLARATIONS

Disaster declarations provide initial insight into the hazards that may impact the MEMA District 2 Regional planning area. Since 1971, 20 presidential disaster declarations have occurred in the region. This includes 12 events related to tornadoes, 10 events related to flooding, 2 events related to hurricane and tropical storm, and 2 events related to winter storm events. It should be noted that several events were declared as disasters as a result of multiple hazards.

TABLE 4.2: MEMA DISTRICT 2 REGION DISASTER DECLARATIONS BY COUNTY

Year	Disaster Number	Description	Alcorn	Benton	Itawamba	Lafayette	Le	Marshall	Pontotoc	Prentiss	Tippah	Tishomingo	Union
1971	302	STORMS & TORNADOES		X		X		X	X		X		
1973	368	HEAVY RAINS, TORNADOES & FLOODING	X		X	X	X	X	X	X	X	X	X
1984	703	TORNADOES				X							X
1990	859	SEVERE STORMS, TORNADOES & FLOODING	X	X				X		X	X		X
1991	888	SEVERE STORMS, TORNADOES & FLOODING			X								
1991	895	SEVERE STORMS & FLOODING			X							X	
1991	906	SEVERE STORMS, TORNADOES & FLOODING	X	X	X		X	X	X	X	X	X	X
1994	1009	SEVERE WINTER STORM, FREEZING RAIN AND SLEET	X	X	X	X	X	X	X	X	X	X	X
1999	1265	SEVERE WINTER STORMS, ICE AND FREEZING RAIN			X		X		X	X		X	X
2001	1360	SEVERE STORMS AND TORNADOES	X		X	X	X		X	X	X	X	X

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Year	Disaster Number	Description	Alcorn	Benton	Itawamba	Lafayette	Le	Marshall	Pontotoc	Prentiss	Tippah	Tishomingo	Union
2001	1365	SEVERE STORMS AND FLOODING					X		X				
2001	1398	SEVERE STORMS, TORNADOES AND FLOODING		X		X		X		X	X		
2002	1443	SEVERE STORMS AND TORNADOES				X							
2003	1470	SEVERE STORMS, TORNADOES AND HIGH WINDS			X		X		X				
2005	1594	HURRICANE DENNIS			X		X		X				
2005	1064	HURRICANE KATRINA	X	X	X	X	X	X	X	X	X	X	X
2010	1906	SEVERE STORMS, TORNADOES, AND FLOODING											X
2010	1916	SEVERE STORMS, TORNADOES, AND FLOODING	X	X		X		X		X	X	X	X
2011	1972	SEVERE STORMS, TORNADOES, STRAIGHT-LINE WINDS, AND ASSOCIATED FLOODING	X	X	X	X	X	X		X	X	X	X
2014	4175	SEVERE STORMS, TORNADOES, AND FLOODING			X		X						
2016	4248	SEVERE STORMS, TORNADOES, STRAIGHT-LINE WINDS, AND FLOODING		X	X			X		X	X		
2019	4429	SEVERE STORMS, STRAIGHT-LINE WINDS, TORNADOES, AND FLOODING	X		X	X	X		X	X		X	X
2019	4450	SEVERE STORMS, TORNADOES, STRAIGHT-LINE WINDS, AND FLOODING			X								
2019	4470	SEVERE STORM, STRAIGHT-LINE WINDS, AND FLOODING	X		X		X		X	X	X		
2020	4528	COVID-19 PANDEMIC	X	X	X	X	X	X	X	X	X	X	X
2020	4536	SEVERE STORMS, TORNADOES, STRAIGHT-LINE WINDS, AND FLOODING				X							
2021	4598	SEVERE WINTER STORMS				X							
TOTAL NUMBER OF DISASTERS:			11	10	17	14	14	11	13	14	13	11	13

4.4 HAZARD EVALUATION

TABLE 4.3: DOCUMENTATION OF THE HAZARD EVALUATION PROCESS

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
FLOOD-RELATED HAZARDS			
Avalanche	NO	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans • Review of US Forest Service National Avalanche Center web site 	<ul style="list-style-type: none"> • The United States avalanche hazard is limited to mountainous western states including Alaska, as well as some areas of low risk in New England. • Avalanche was not considered in the State of Mississippi Hazard Mitigation Plan since it poses no threat to the state. • Avalanche is not included in any of previous MEMA District 2 Region hazard mitigation plans. • There is no risk or history of avalanche events in Mississippi.
Dam and Levee Failure	YES	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans • Review of MS Department of Environmental Quality dam inventory 	<ul style="list-style-type: none"> • The National Inventory of Dams shows dams are located in every state. • Dam/levee failure is identified in the state plan as a limited hazard. • The previous MEMA District 2 Region hazard mitigation plans address dam failure. • 59 dams in the region are classified as high-hazard (high hazard is defined where dam failure may cause loss of life or serious damage).

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Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Erosion	YES	<ul style="list-style-type: none"> • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans 	<ul style="list-style-type: none"> • Coastal erosion was excluded from the State of MS Hazard Mitigation Plan as a hazard; however, it is addressed under the hurricane hazard. Riverine erosion is not addressed in the plan. • Erosion is not identified as a hazard in any of the previous MEMA District 2 Region hazard mitigation plans. • Erosion is a natural process and continuous process that impacts the region.
Flood	YES	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans • Review of NOAA NCDC Storm Events Database • Review of historical disaster declarations • Review of FEMA DFIRM data • Review of FEMA’s NFIP Community Status Book and Community Rating System (CRS) 	<ul style="list-style-type: none"> • Floods occur in all 50 states and in the U.S. territories. • The flood hazard is thoroughly discussed in the state plan. Much of the state is located in the 100-year floodplain. Further, flash floods are a common occurrence during rain storms. • The previous MEMA District 2 Region hazard mitigation plans address the flood hazard. • NCDC reports that MEMA District 2 Region counties have been affected by 265 flood events since 1996. In total, these events caused 5 recorded deaths and an estimated \$14.6 million in property damages. • 16 out of 27 disaster declarations were flood-related and an additional 2 were hurricane or tropical storm-related which caused flooding issues. • 37 of the 59 MEMA District 2 jurisdictions participate in the NFIP and 1 municipality also participates in the CRS.

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Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Storm Surge	NO	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans • Review of NOAA NCDC Storm Events Database 	<ul style="list-style-type: none"> • Given the inland location of the MEMA District 2 Region, storm surge would not affect the area. • Storm surge is discussed in the state plan under the hurricane hazard and indicates that only the costal shoreline counties are subject to storm surge. • None the previous hazard mitigation plans in the MEMA District 2 Region identify storm surge as a potential hazard. • No historical events were reported by NCDC.
Winter Storm and Freeze	YES	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans • Review of NOAA NCDC Storm Events Database • Review of historical presidential disaster declarations 	<ul style="list-style-type: none"> • Winter storms affect every state in the continental U.S. and Alaska. • Extreme winter weather is identified in the state plan as a limited hazard. • Winter storm events are addressed in the previous MEMA District 2 Region hazard mitigation plans. • NCDC reports that the MEMA District 2 Region counties have been affected by 305 winter weather events since 1996. These events resulted in nearly \$265,600 in property damages. • 3 out of 27 disaster declarations were directly related to winter storm events.

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Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
FIRE-RELATED HAZARDS			
Drought / Heat Wave	YES	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans • Review of US Drought Monitor website • Review of NOAA NCDC Storm Events Database 	<ul style="list-style-type: none"> • Drought is a normal part of virtually all climatic regimes, including areas with high and low average rainfall. Also, many areas of the United States are susceptible to heat wave, including Mississippi. • Droughts are identified in the State of MS Hazard Mitigation Plan as a moderate hazard. Drought/excessive heat is addressed in the previous MEMA District 2 Region hazard mitigation plans. • There are reports of the most extreme (exceptional) drought in each of the MEMA District 2 Region counties according to the US Drought Monitor. • NCDC reports that the MEMA District 2 Region counties have been affected by 136 drought events since 2007 and 92 extreme heat events since 2000. The extreme heat events resulted in 2 fatalities.

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Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Wildfire	YES	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans • Review of Southern Wildfire Risk Assessment (SWRA) Data • Review of Mississippi Forestry Commission website 	<ul style="list-style-type: none"> • Wildfires occur in virtually all parts of the United States. Wildfire hazard risks will increase as low-density development along the urban/wildland interface increases. • The State of MS Hazard Mitigation Plan identifies wildfire as a significant hazard and regular occurrence. • The previous MEMA District 2 Region hazard mitigation plans address wildfire. • A review of SWRA data indicates that there are areas of concern in the MEMA District 2 Region. Wildfire hazard risks will increase as low-density development along the urban/wildland interface increases. • According to the Mississippi Forestry Commission, the MEMA District 2 Region experiences an average of 194.4 fires each year which burn a combined 2,312.9 acres annually.

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Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
GEOLOGIC HAZARDS			
Earthquake	YES	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans • Review of National Geophysical Data Center • USGS Earthquake Hazards Program website 	<ul style="list-style-type: none"> • Although the zone of greatest seismic activity in the United States is along the Pacific Coast, eastern and central regions have experienced significant earthquakes. • Earthquake events are identified as low risk in the State of MS Hazard Mitigation Plan, and all counties in MS are considered to be susceptible to the effects of earthquakes. • Earthquakes have occurred in and around the State of Mississippi in the past. The state is affected by the New Madrid (near Missouri) and White River Fault lines which have generated a magnitude 8.0 earthquake in the last 200 years. • The previous MEMA District 2 Region hazard mitigation plans address earthquake. • 99 events are known to have occurred in the region according to the National Geophysical Data Center. The greatest MMI reported was a 6.

SECTION 4: HAZARD IDENTIFICATION

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Expansive Soils	YES	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans • Review of USGS Swelling Clays Map 	<ul style="list-style-type: none"> • The effects of expansive soils are most prevalent in parts of the Southern, Central, and Western U.S. • Expansive soils are addressed in the previous MEMA District 2 Region hazard mitigation plans. • According to USGS, the MEMA District 2 Region is predominately located in an area that is underlain with “generally less than 50%” clay having high swelling potential. However, there is a portion of the region underlain with abundant clay having high swelling potential.
Landslide	YES	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans • Review of USGS Landslide Incidence and Susceptibility Hazard Map 	<ul style="list-style-type: none"> • Landslides occur in every state in the U.S., and they are most common in the coastal ranges of California, the Colorado Plateau, the Rocky Mountains, and the Appalachian Mountains. • The State of MS Hazard Mitigation Plan excludes the landslide hazard because there is no extensive history of landslides in Mississippi. • The previous MEMA District 2 Region hazard mitigation plans do not address landslides. • USGS landslide hazard maps indicate “low incidence” (less than 1.5% of the area is involved in landsliding) for all counties in the region. • However, local conditions may become more favorable for landslides due to heavy rain, for example.

SECTION 4: HAZARD IDENTIFICATION

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Land Subsidence	YES (combined with Sinkhole)	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans 	<ul style="list-style-type: none"> • Land subsidence affects at least 45 states, including Mississippi. However, because of the broad range of causes and impacts, there has been limited national focus on this hazard. • The state plan addresses land subsidence in the earthquake section • The previous MEMA District 2 Region hazard mitigation plans identify land subsidence as a potential hazard but determined that significant subsidence is not very likely due to geology of the region.
Sinkhole	YES (combined with Land Subsidence)	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans 	<ul style="list-style-type: none"> • The states with the greatest number of active sinkholes are Alabama, Florida, Georgia, Indiana, Missouri, Pennsylvania, and Tennessee. • The state plan does not identify sinkholes as a hazard because it did not identify any significant historical record of the hazard in the region. • Sinkholes are addressed with the land subsidence hazard in the previous MEMA District 2 Region hazard mitigation plans when addressed. Substantial sinkholes were found to be possible but not likely in most

SECTION 4: HAZARD IDENTIFICATION

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Tsunami	NO	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans • Review of USGS Regional Assessment of Tsunami potential in the Gulf of Mexico • Review of FEMA “How-to” mitigation planning guidance (Publication 386-2, “Understanding Your Risks – Identifying Hazards and Estimating Losses) 	<ul style="list-style-type: none"> • No record exists of a catastrophic tsunami impacting the Gulf of Mexico coast. • Tsunami inundation zone maps are not available for communities located along the U.S. Gulf Coast. • The tsunami hazard is excluded from the state plan. There is no historical record of tsunamis in the Gulf of Mexico. • None of the previous MEMA District 2 Region hazard mitigation plans address tsunami. • FEMA mitigation planning guidance suggests that locations along the U.S. Gulf Coast have a relatively low tsunami risk and need not conduct a tsunami risk assessment at this time.
Volcano	NO	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of USGS Volcano Hazards Program website 	<ul style="list-style-type: none"> • More than 65 potentially active volcanoes exist in the United States and most are located in Alaska. The Western states and Hawaii are also potentially affected by volcanic hazards. • There are no active volcanoes in Mississippi. • The volcano hazard is excluded from the state plan. There is no historical record of this hazard in the region.

SECTION 4: HAZARD IDENTIFICATION

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
WIND-RELATED HAZARDS			
Hurricane and Tropical Storm	YES	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans • Analysis of NOAA historical tropical cyclone tracks and National Hurricane Center Website • Review of NOAA NCDC Storm Events Database • Review of historical presidential disaster declarations 	<ul style="list-style-type: none"> • The Atlantic and Gulf regions are most prone to landfall by hurricanes and tropical storms. • The State Hazard Mitigation Plan profiles the hurricane hazard and identifies it as a significant hazard, noting its devastating impacts on the state. • The hurricane and tropical storm hazard are addressed in the previous MEMA District 2 Region hazard mitigation plans. • NOAA historical records indicate 15 hurricanes and tropical storms have impacted MEMA District 2 Region since 1860. • 2 out of 27 disaster declarations in the MEMA District 2 Region are directly related to hurricane and tropical storm events.
Nor’easter	NO	<ul style="list-style-type: none"> • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans • Review of NOAA NCDC Storm Events Database 	<ul style="list-style-type: none"> • Nor’easters are not profiled or discussed in the state plan. • Nor’easters are not identified in the previous MEMA District 2 Region hazard mitigation plans. • NCDC does not report any nor’easter activity for the MEMA District 2 Region counties.

SECTION 4: HAZARD IDENTIFICATION

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Severe Thunderstorm (wind, hail, lightning)	YES	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans • Review of NOAA NCDC Storm Events Database • Review of historical presidential disaster declarations 	<ul style="list-style-type: none"> • Over 1,000 thunderstorms are estimated to occur each year or the U.S. mainland, and they are experienced in nearly every region. • Severe thunderstorm events were not profiled in the State Hazard Mitigation Plan because they do not typically impact the entire state, invoking a state response. However, severe thunderstorms were identified as a significant concern at the local level. • High winds, hail, and lightning events are addressed as individual hazards in the previous MEMA District 2 Region hazard mitigation plans. • NCDC reports over 1,953 thunderstorm events in the MEMA District 2 Region counties since 1955. These events have resulted in 4 deaths, 24 injuries, and \$14.6 million in property damage. • 20 of 27 disaster declarations in the MEMA District 2 Region are related to severe storm and high wind events.

SECTION 4: HAZARD IDENTIFICATION

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Tornado	YES	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans • Review of NOAA NCDC Storm Events Database • Review of historical presidential disaster declarations 	<ul style="list-style-type: none"> • From 1991 to 2010, Mississippi experienced 9.2 tornadoes per 10,000 miles, making it the 5th ranked “tornado state” in the U.S. • Tornado events are listed in the State of MS Hazard Mitigation Plan as a high risk and are referenced as a common disaster. • Tornado events are addressed in all of the previous MEMA District 2 Region hazard mitigation plans. • NCDC reports 209 tornado events in MEMA District 2 Region counties since 1950. These events have resulted in 32 recorded deaths, 376 injuries, and \$175.1 million in property damage with the most severe being an EF5. • 18 out of 27 disaster declarations in the MEMA District 2 Region are related to tornado events.
OTHER HAZARDS			
Active Shooter	YES	<ul style="list-style-type: none"> • Review of previous MEMA District 2 Region hazard mitigation plans • Discussions with local officials 	<ul style="list-style-type: none"> • There have been no major active shooter events in the region, however, these kinds of events are often unpredictable and the region could be affected.

SECTION 4: HAZARD IDENTIFICATION

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Civil Unrest	YES	<ul style="list-style-type: none"> • Review of previous MEMA District 2 Region hazard mitigation plans • Discussions with local officials 	<ul style="list-style-type: none"> • There have been no major civil unrest events in the region, however, several small protests have been held within the region that constitute a need for its inclusion in the plan as a hazard.
Cyber Terror	YES	<ul style="list-style-type: none"> • Review of previous MEMA District 2 Region hazard mitigation plans • Discussions with local officials 	<ul style="list-style-type: none"> • There have been no cyber terror events in the region, however, these kinds of events are often unpredictable and the region could be affected.
Hazardous Materials Incident	YES	<ul style="list-style-type: none"> • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of State of MS Hazard Mitigation Plan • Review of previous MEMA District 2 Region hazard mitigation plans • Review of EPA TRI sites inventory • Review of PHMSA HAZMAT Incident Statistics database 	<ul style="list-style-type: none"> • Cities, counties, and towns where hazardous materials fabrication, processing, and storage sites are located, and those where hazardous waste treatment, storage, or disposal facilities operate are at risk for hazardous materials events. • Hazardous materials incidents are not discussed in the state plan. • There are 68TRI sites located in the MEMA District 2 Region. • According to the PHMSA, there have been 93 reported hazardous materials incidents in the region.

SECTION 4: HAZARD IDENTIFICATION

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Human Trafficking	YES	<ul style="list-style-type: none"> Review of previous MEMA District 2 Region hazard mitigation plans Discussions with local officials 	<ul style="list-style-type: none"> There have been no major human trafficking events in the region, however, these kinds of events are often unpredictable and the region could be affected.
Pandemic	YES	<ul style="list-style-type: none"> Review of State of MS Hazard Mitigation Plan Review of previous MEMA District 2 Region hazard mitigation plans 	<ul style="list-style-type: none"> Pandemic is not discussed in the state plan. The MEMA District 2 RHMC voted to include this hazard at the kick-off meeting due to the prevalence of farms (particularly poultry) in the area as well as the ongoing COVID-19 Pandemic DR-4528 declared April 5th, 2020.
Terror Threat	YES	<ul style="list-style-type: none"> Review of State of MS Hazard Mitigation Plan Review of previous MEMA District 2 Region hazard mitigation plans 	<ul style="list-style-type: none"> Terrorism is included in 17% of local plans. None of the previous MEMA District 2 Region hazard mitigation plans include terrorism as a hazard. The potential for a terrorism event is
Water Supply / System Failure	YES	<ul style="list-style-type: none"> Review of previous MEMA District 2 Region hazard mitigation plans Discussions with local officials 	<ul style="list-style-type: none"> There have been no major water supply/system failure events in the region, however, these kinds of events are often unpredictable and the region could be affected.

4.5 HAZARD IDENTIFICATION RESULTS

TABLE 4.4: SUMMARY RESULTS OF THE HAZARD IDENTIFICATION AND EVALUATION PROCESS

FLOOD-RELATED HAZARDS	WIND-RELATED HAZARDS
<input type="checkbox"/> Avalanche	<input checked="" type="checkbox"/> Hurricane and Tropical Storm
<input checked="" type="checkbox"/> Dam and Levee Failure	<input type="checkbox"/> Nor'easter
<input checked="" type="checkbox"/> Erosion	<input checked="" type="checkbox"/> Severe Thunderstorm (Wind, Hail, Lightning)
<input checked="" type="checkbox"/> Flood	<input checked="" type="checkbox"/> Tornado
<input type="checkbox"/> Storm Surge	OTHER HAZARDS
<input checked="" type="checkbox"/> Winter Storm and Freeze	<input checked="" type="checkbox"/> Active Shooter
FIRE-RELATED HAZARDS	<input checked="" type="checkbox"/> Civil Unrest
<input checked="" type="checkbox"/> Drought / Heat Wave	<input checked="" type="checkbox"/> Cyberterrorism
<input checked="" type="checkbox"/> Wildfire	<input checked="" type="checkbox"/> Hazardous Materials Incident
GEOLOGIC HAZARDS	<input checked="" type="checkbox"/> Human Trafficking
<input checked="" type="checkbox"/> Earthquake	<input checked="" type="checkbox"/> Pandemic
<input checked="" type="checkbox"/> Expansive Soils	<input checked="" type="checkbox"/> Pipelines
<input checked="" type="checkbox"/> Landslide / Land Subsidence	<input checked="" type="checkbox"/> Terror Threat
<input checked="" type="checkbox"/> Land Subsidence / Sinkhole	<input checked="" type="checkbox"/> Water Supply / System Failure
<input type="checkbox"/> Tsunami	
<input type="checkbox"/> Volcano	

= Hazard considered significant enough for further evaluation in the MEMA District 2 Region hazard risk assessment.

SECTION 5

HAZARD PROFILES

This section includes detailed hazard profiles for each of the hazards identified in the previous section (*Hazard Identification*) as significant enough for further evaluation in the MEMA District 2 Regional Hazard Mitigation Plan. It contains the following subsections:

- ◆ 5.1 Overview
- ◆ 5.2 Study Area
- Flood-Related Hazards
 - ◆ 5.3 Flood
 - ◆ 5.4 Erosion
 - ◆ 5.5 Dam and Levee Failure
 - ◆ 5.6 Winter Storm and Freeze
- Fire-Related Hazards
 - ◆ 5.7 Drought / Heat Wave
 - ◆ 5.8 Wildfire
- Geologic Hazards
 - ◆ 5.9 Earthquake
 - ◆ 5.10 Expansive Soils
 - ◆ 5.11 Landslide
 - ◆ 5.12 Land Subsidence / Sinkhole
- Wind-Related Hazards
 - ◆ 5.13 Hurricane and Tropical Storm
 - ◆ 5.14 Thunderstorm (wind, hail, lightning)
 - ◆ 5.15 Tornado
- Other Hazards
 - ◆ 5.16 Hazardous Materials Incident
 - ◆ 5.17 Pipelines
 - ◆ 5.18 Water Supply / System Failure
 - ◆ 5.19 Active Shooter
 - ◆ 5.20 Civil Unrest
 - ◆ 5.21 Cyberterrorism
 - ◆ 5.22 Human Trafficking
 - ◆ 5.23 Pandemic
 - ◆ 5.24 Terror Threat
 - ◆ 5.25 Conclusions on Hazard Risk
 - ◆ 5.26 Final Determinations

44 CFR Requirement

44 CFR Part 201.6(c)(2)(i): The risk assessment shall include a description of the type, 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

5.1 OVERVIEW

This section includes detailed hazard profiles for each of the hazards identified in the previous section (*Hazard Identification*) as significant enough for further evaluation in the MEMA District 2 Region hazard risk assessment by creating a hazard profile. Each hazard profile includes a general description of the hazard including its location, extent (or severity), historical occurrences, and probability of future occurrences. Each profile also includes specific items noted by members of the MEMA District 2 Regional Hazard Mitigation Council (RHMC) as it relates to unique historical or anecdotal hazard information for the counties in the MEMA District 2 Region or a participating municipality within them.

The following hazards were identified:

- ◆ **Flood-related Hazards**
 - ◆ Flood / Flash Flood
 - ◆ Erosion
 - ◆ Dam and Levee Failure
 - ◆ Winter Storm and Freeze
- ◆ **Fire-related Hazards**
 - ◆ Drought / Heat Wave
 - ◆ Wildfire
- ◆ **Geologic Hazards**
 - ◆ Earthquake
 - ◆ Expansive Soils
 - ◆ Landslide
 - ◆ Land Subsidence / Sinkhole
- ◆ **Wind-related Hazards**
 - ◆ Hurricane and Tropical Storm
 - ◆ Thunderstorm (including wind, hail, and lightning)
 - ◆ Tornado
- ◆ **Other Hazards**
 - ◆ Hazardous Materials Incident
 - ◆ Pipelines
 - ◆ Water Supply / System Failure
 - ◆ Active Shooter
 - ◆ Civil Unrest
 - ◆ Cyberterrorism
 - ◆ Human Trafficking
 - ◆ Pandemic
 - ◆ Terror Threat

5.2 STUDY AREA

The MEMA District 2 Region includes 11 counties and 48 incorporated jurisdictions. **Table 5.1** provides a summary table of the participating jurisdictions within each county. In addition, **Figure 5.1** provides a base map, for reference, of the MEMA District 2 Region.

**Table 5.1: PARTICIPATING JURISDICTIONS IN THE MEMA DISTRICT 2
REGIONAL HAZARD MITIGATION PLAN**

Alcorn County		Pontotoc County	
Corinth	Kossuth	Algoma	Sherman
Farmington	Rienzi	Ecru	Thaxton
Glen		Pontotoc (city)	Toccopola
Benton County		Prentiss County	
Ashland	Snow Lake Shores	Booneville	Marietta
Hickory Flat		Jumpertown	
Itawamba County		Tippah County	
Fulton	Tremont	Blue Mountain	Ripley
Mantachie		Dumas	Walnut
Lafayette County		Falkner	
Abbeville	Taylor	Tishomingo County	
Oxford		Belmont	Iuka
Lee County		Burnsville	Paden
Baldwyn	Saltillo	Golden	Tishomingo (town)
Guntown	Shannon	Union County	
Nettleton	Tupelo	Blue Springs	New Albany
Plantersville	Verona	Myrtle	
Marshall County			
Byhalia	Potts Camp		
Holly Springs			

Figure 5.1: MEMA DISTRICT 2 REGION BASE MAP

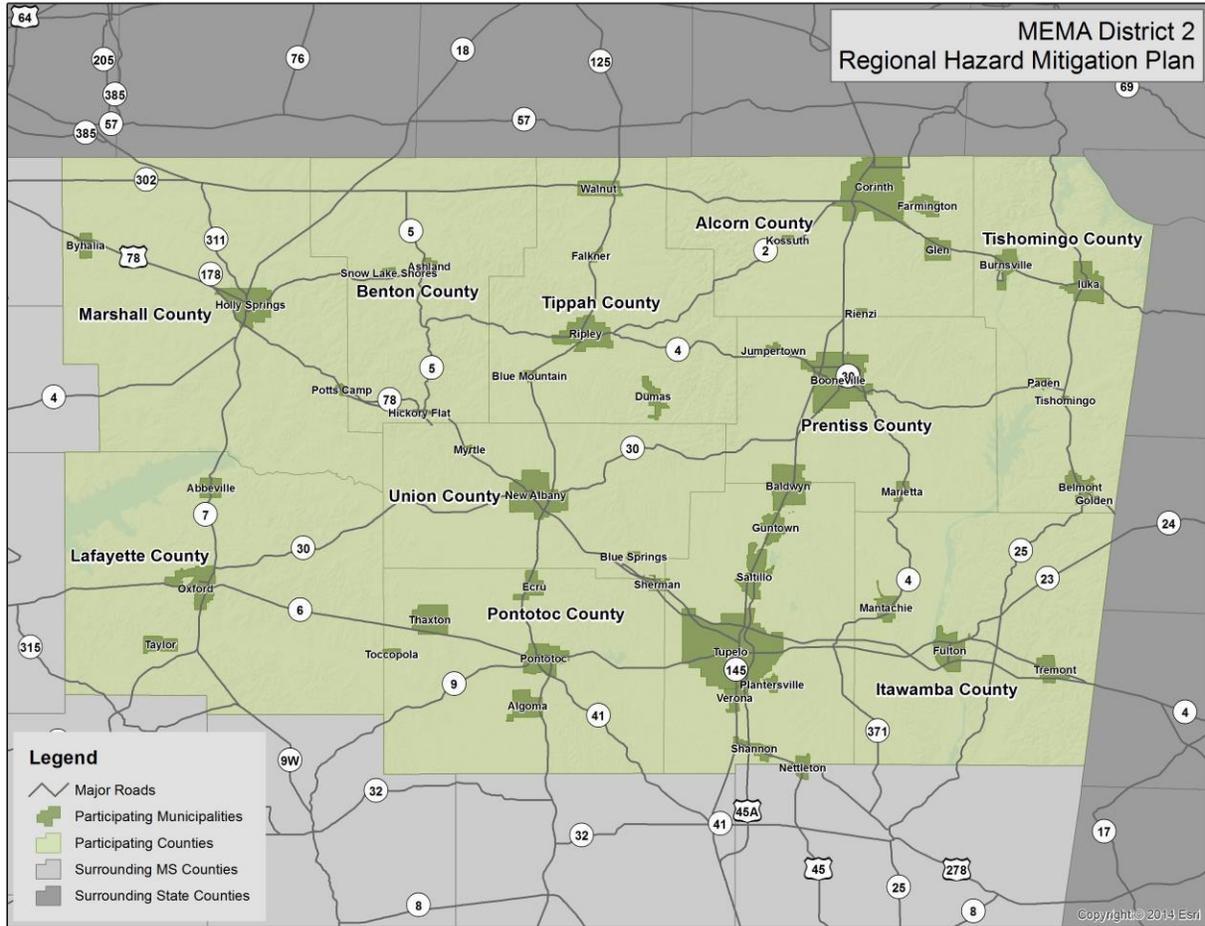


Table 5.2 lists each significant hazard for the MEMA District 2 Region and identifies whether or not it has been determined to be a specific hazard of concern for the municipal jurisdictions and the unincorporated areas of the counties. This is based on the best available data and information from the MEMA District 2 Regional Hazard Mitigation Council. (● = hazard of concern)

Table 5.2: SUMMARY OF IDENTIFIED HAZARD EVENTS IN THE MEMA DISTRICT 2 REGION

Jurisdiction	Flood-related		Fire-related		Geologic		Wind-related			Other				
	Dam / Levee	Winter Storm /	Drought /	Wildfire	Landslide	Land Subsidence /	Hurricane	Thunderstorm	Tornado	Water Supply /			Human Trafficking	Terror Threat
Alcorn County														
Corinth	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Farmington	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Glen	●	●	●	●	●	●	●	●	●	●	●	●	●	●

SECTION 5: HAZARD PROFILES

Jurisdiction	Flood-related			Fire-related		Geologic			Wind-related			Other							
			Dam / Levee	Winter Storm /	Drought /	Wildfire		Landslide	Land Subsidence /	Hurricane	Thunderstorm	Tornado		Water Supply /				Human Trafficking	Terror Threat
Kossuth	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Rienzi	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Unincorporated Area	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Benton County																			
Ashland	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Hickory Flat	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Snow Lake Shores	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Unincorporated Area	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Itawamba County																			
Fulton	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Mantachie	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tremont	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Unincorporated Area	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Lafayette County																			
Abbeville	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Oxford	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Taylor	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Unincorporated Area	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Lee County																			
Baldwyn	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Guntown	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Nettleton	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Plantersville	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Saltillo	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Shannon	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tupelo	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Verona	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Unincorporated Area	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Marshall County																			
Byhalia	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Holly Springs	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Potts Camp	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Unincorporated Area	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Pontotoc County																			
Algoma	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Ecu	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Pontotoc (city)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Sherman	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Thaxton	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Toccopola	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Unincorporated Area	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

SECTION 5: HAZARD PROFILES

Jurisdiction	Flood-related			Fire-related		Geologic			Wind-related			Other						
		Dam / Levee	Winter Storm /	Drought /	Wildfire		Landslide	Land Subsidence /	Hurricane	Thunderstorm	Tornado		Water Supply /				Human Trafficking	Terror Threat
Prentiss County																		
Booneville	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Jumpertown	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Marietta	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Unincorporated Area	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tippah County																		
Blue Mountain	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Dumas	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Falkner	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Ripley	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Walnut	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Unincorporated Area	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tishomingo County																		
Belmont	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Burnsville	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Golden	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Iuka	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Paden	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tishomingo (town)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Unincorporated Area	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Union County																		
Blue Springs	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Myrtle	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
New Albany	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Unincorporated Area	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

FLOOD-RELATED HAZARDS

5.3 FLOOD

5.3.1 Background

Flooding is the most frequent and costly natural hazard in the United States and is a hazard that has caused more than 10,000 deaths since 1900. Nearly 90 percent of presidential disaster declarations result from natural events where flooding was a major component.

Floods generally result from excessive precipitation and can be classified under two categories: general floods, precipitation over a given river basin for a long period of time along with storm-induced wave action, and flash floods, the product of heavy localized precipitation in a short time period over a given

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location. The severity of a flooding event is typically determined by a combination of several major factors, including stream and river basin topography and physiography, precipitation and weather patterns, recent soil moisture conditions, and the degree of vegetative clearing and impervious surface.

General floods are usually long-term events that may last for several days. The primary types of general flooding include riverine, coastal, and urban flooding. Riverine flooding is a function of excessive precipitation levels and water runoff volumes within the watershed of a stream or river. Coastal flooding is typically a result of storm surge, wind-driven waves, and heavy rainfall produced by hurricanes, tropical storms, and other large coastal storms. Urban flooding occurs where manmade development has obstructed the natural flow of water and decreased the ability of natural groundcover to absorb and retain surface water runoff.

Flash flooding is another type of flooding that can be associated with urban flooding. It is common in urbanized areas where much of the ground is covered by impervious surfaces. Most flash flooding occurs along mountain streams and is caused by slow-moving thunderstorms in a local area or by heavy rains associated with hurricanes and tropical storms. However, flash-flooding events may also occur from a dam or levee failure within minutes or hours of heavy amounts of rainfall, or from a sudden release of water held by retention basin or other stormwater control facility.

The periodic flooding of lands adjacent to rivers, streams, and shorelines (land known as floodplain) is a natural and inevitable occurrence that can be expected to take place based upon established recurrence intervals. Floodplains are designated by the frequency of the flood that is large enough to cover them. For example, the 10-year floodplain will be covered by the 100-year flood and the 100-year floodplain by the 1,000-year flood. Flood frequencies such as the 100-year flood are determined by plotting a graph of the size of all known floods for an area and determining how often floods of a particular size occur. Another way of expressing the flood frequency is the chance of occurrence in a given year, which is the percentage of the probability of flooding each year. For example, the 100-year flood has a 1-percent annual chance of occurring in any given year, and the 500-year flood has a 0.2-percent annual chance of occurring in any given year.

5.3.2 Location and Spatial Extent

There are areas in the MEMA District 2 Region that are susceptible to flood events. Special flood hazard areas in the Region were mapped using Geographic Information System (GIS) and FEMA Digital Flood Insurance Rate Maps (DFIRM). This includes Zone A (1-percent annual chance floodplain), Zone AE (1-percent annual chance floodplain with elevations), and Zone X500 (0.2-percent annual chance floodplain). According to GIS analysis, of the 5,339 square miles that make up the MEMA District 2 Region, there are approximately 762.9 square miles of land in zones A and AE (1-percent annual chance floodplain/100-year floodplain) and 3.5 square miles of land in zone X500 (0.2-percent annual chance floodplain/500-year floodplain). The county totals are presented below in **Table 5.3**.

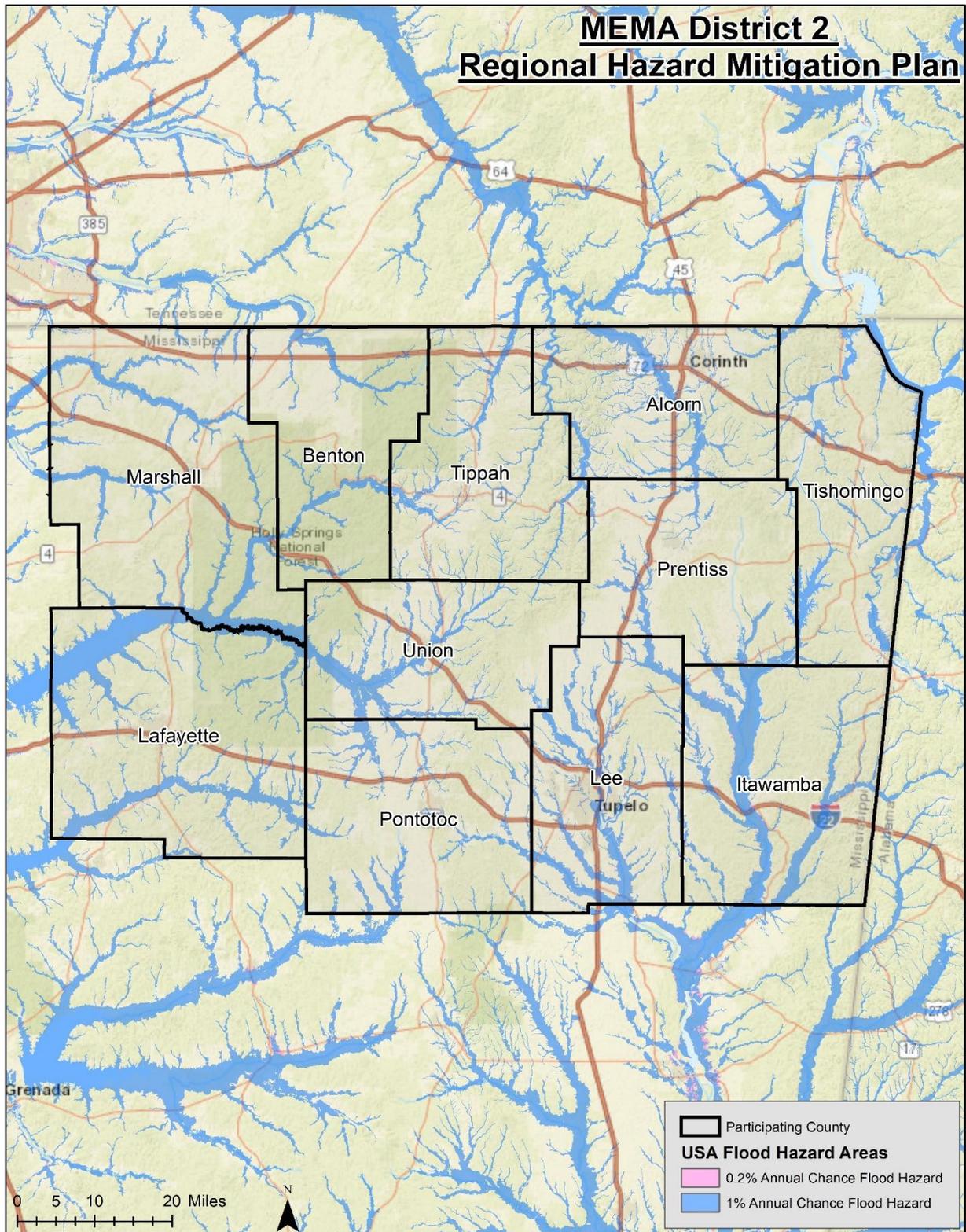
Table 5:3A: SUMMARY OF FLOODPLAIN AREAS IN THE MEMA DISTRICT 2 REGION

Location (DFIRM date)	100-year area (square miles)	500-year area (square miles)
Alcorn County (2010)	73.3	0.4
Benton County (2010)	72.6	0.0
Itawamba County (2007)*	--	--
Lafayette County (2011)	162.4	0.4
Lee County (2011)	96.1	1.2
Marshall County (N/A)	96.7	0.4
Pontotoc County (2011)	49.1	0.0
Prentiss County (2010)	37.7	0.3
Tippah County (2010)	46.3	0.0
Tishomingo County (2010)	64.9	0.8
Union County (2010)	63.8	0.0
MEMA District 2 Region Total	762.9	3.5

*Digital flood maps were unavailable

These flood zone values account for approximately 14.4 percent of the total land area in the MEMA District 2 Region. It is important to note that while FEMA digital flood data is recognized as best available data for planning purposes, it does not always reflect the most accurate and up-to-date flood risk. Flooding and flood-related losses often do occur outside of delineated special flood hazard areas. **Figure 5.2** illustrates the location and extent of currently mapped special flood hazard areas for the Region based on best available FEMA Digital Flood Insurance Rate Map (DFIRM) data.

Figure 5.2: SPECIAL FLOOD HAZARD AREAS IN MEMA DISTRICT 2 REGION



Source: Federal Emergency Management Agency

Flood extent can be measured by the amount of land and property in the floodplain as well as flood height and velocity. The amount of land in the floodplain accounts for 14.4 percent of the total land area in the MEMA District 2 Region.

Flood depth and velocity are recorded via United States Geological Survey stream gages throughout the region. While a gage does not exist for each participating jurisdiction, there is one at or near many areas. The greatest peak discharge recorded for the region was near Fulton in Itawamba County in 1955. Water reached a discharge of 82,200 cubic feet per second and the stream gage height was recorded at 25.75 feet. Additional peak discharge readings and gage heights are in the table below.

Table 5:3B: Extent of MEMA District 2 Flood

County	Location/Jurisdiction	Date	Peak Discharge (cfs)	Gage Height (ft)
Alcorn County	Tuscumbia River Canal near Corinth	03/15/1973	30,300	15.72
Benton County	Weasley Branch near Walnut	07/05/1967	755	6.84
Itawamba County	Tombigbee River near Fulton	03/22/1955	82,200	25.75
	Bull Mountain Creek at Tremont	03/13/1975	15,000	9.80
Lafayette County	Yocona River near Oxford	03/21/1955	44,100	23.72
Lee County	Twentymile Creek near Guntown	02/03/1990	22,200	27.95
	Euclautubba Creek at Saltillo	03/21/1955	5,750	14.53
	Chiwapa Creek at Shannon	03/21/1955	35,500	15.72
	Town Creek at Eason Boulevard at Tupelo	05/27/1991	37,900	27.80
	Town Creek near Verona	03/21/1955	70,000	29.40
Marshall County	Tippah Creek near Potts Camp	02/16/1948	24,000	20.78
Pontotoc County	Cracker Ditch near Pontotoc	04/11/1962	213	7.08
Prentiss County	Big Brown Creek near Booneville	04/17/1970	3,900	99.97
Tippah County	North Tippah Creek near Ripley	11/28/1968	7,100	21.17
	Hurricane Creek near Walnut	02/04/1956	1,650	20.83
Tishomingo County	Rock Creek near Belmont	05/08/1978	1,900	13.40
	Little Yellow Creek East near Burnsville	12/26/1982	5,180	21.74
	Pollard Mill Branch at Paden	08/25/2004	2,350	13.53
Union County	Cane Creek near New Albany	03/21/1955	8,680	9.08

Additional, more detailed county-level maps can be found in the annexes.

5.3.3 Historical Occurrences

Floods were at least partially responsible for 16 disaster declarations in the MEMA District 2 Region between 1971 and 2020.¹ Information from the National Centers for Environmental Information was used to ascertain additional historical flood events. The National Centers for Environmental Information reported a total of 265 events throughout the MEMA District 2 Region since 1996.² A summary of these events is presented in **Table 5.4**.

5.4. These events accounted for \$14.6 million in property damage and five fatalities throughout the region. Specific information on flood events for each county, including date, type of flooding, and deaths and injuries, can be found in the county-specific annexes.

Table 5.4: SUMMARY OF FLOOD OCCURRENCES IN THE MEMA DISTRICT 2 REGION

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Alcorn County	35	1/0	\$5,652,000
Corinth	23	0/0	\$71,000
Farmington	0	0/0	\$0
Glen	0	0/0	\$0
Kossuth	1	0/0	\$0
Rienzi	2	0/0	\$0
Unincorporated Area	11	1/0	\$5,581,000
Benton County	6	0/0	\$762,000
Ashland	1	0/0	\$10,000
Hickory Flat	1	0/0	\$1,000
Snow Lake Shores	0	0/0	\$0
Unincorporated Area	4	0/0	\$751,000
Itawamba County	17	0/0	\$295,000
Fulton	2	0/0	\$50,000
Mantachie	4	0/0	\$11,000
Tremont	4	0/0	\$1,000
Unincorporated Area	7	0/0	\$188,000
Lafayette County	23	0/0	\$1,210,000
Abbeville	1	0/0	\$0
Oxford	15	0/0	\$1,089,000
Taylor	2	0/0	\$20,000
Unincorporated Area	5	0/0	\$101,000
Lee County	56	0/0	\$804,500

¹ Not all of the participating counties were declared disaster areas for these events. A complete listing of historical disaster declarations, including the affected counties, can be found in Section 4: *Hazard Identification*.

² These flood events are only inclusive of those reported by the National Centers for Environmental Information (NCEI) from 1996 through April 2020. It is likely that additional occurrences have occurred and have gone unreported. As additional local data becomes available, this hazard profile will be amended.

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Location	Number of Occurrences	Deaths / Injuries	Property Damage
Baldwyn	6	0/0	\$2,500
Guntown	2	0/0	\$5,000
Nettleton	2	0/0	\$100,000
Plantersville	1	0/0	\$0
Saltillo	2	0/0	\$5,000
Shannon	5	0/0	\$0
Tupelo	19	0/0	\$331,000
Verona	5	0/0	\$150,000
Unincorporated Area	6	0/0	\$136,000
Marshall County	18	1/0	\$1,092,000
Byhalia	2	1/0	\$501,000
Holly Springs	6	0/0	\$21,000
Potts Camp	2	0/0	\$50,000
Unincorporated Area	8	0/0	\$520,000
Pontotoc County	26	0/0	\$345,000
Algoma	0	0/0	\$0
Ecru	1	0/0	\$200,000
Pontotoc (city)	6	0/0	\$47,000
Sherman	1	0/0	\$1,000
Thaxton	0	0/0	\$0
Toccopola	0	0/0	\$0
Unincorporated Area	9	0/0	\$110,352
Prentiss County	23	0/0	\$423,000
Booneville	13	0/0	\$87,000
Jumpertown	0	0/0	\$0
Marietta	1	0/0	\$1,000
Unincorporated Area	9	0/0	\$335,000
Tippah County	19	0/0	\$1,593,000
Blue Mountain	1	0/0	\$0
Dumas	0	0/0	\$0
Falkner	3	0/0	\$750,000
Ripley	7	0/0	\$26,000
Walnut	3	0/0	\$36,000
Unincorporated Area	3	0/0	\$781,000
Tishomingo County	16	3/0	\$1,054,000
Belmont	2	0/0	\$10,000
Burnsville	2	0/0	\$0
Golden	1	0/0	\$1,000
Iuka	4	0/0	\$11,000
Paden	0	0/0	\$0
Tishomingo (town)	0	0/0	\$0
Unincorporated Area	7	3/0	\$1,032,000
Union County	26	0/0	\$1,367,000
Blue Springs	2	0/0	\$0
Myrtle	2	0/0	\$0
New Albany	9	0/0	\$73,000

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Unincorporated Area	14	0/0	\$1,294,000
MEMA DISTRICT 2 REGIONAL TOTAL	265	5/0	\$14,597,500

Source: National Centers for Environmental Information

5.3.4 Historical Summary of Insured Flood Losses

According to FEMA flood insurance policy records as of June 2015, there have been 192 flood losses reported in the MEMA District 2 Region through the National Flood Insurance Program (NFIP) since 1978, totaling nearly \$6.9 million in claims payments. A summary of these figures for each MEMA District 2 county is provided in **Table 5.5**. It should be emphasized that these numbers include only those losses to structures that were insured through the NFIP policies, and for losses in which claims were sought and received. It is likely that many additional instances of flood loss in the MEMA District 2 Region were either uninsured, denied claims payment, or not reported.

Table 5.5: SUMMARY OF INSURED FLOOD LOSSES IN MEMA DISTRICT 2 REGION

Location	Flood Losses	Claims Payments
Alcorn County	49	\$4,181,034
Corinth	43	\$4,039,493
Farmington*	--	--
Glen*	--	--
Kossuth*	--	--
Rienzi	0	\$0
Unincorporated Area	6	\$141,541
Benton County	0	\$0
Ashland	0	\$0
Hickory Flat	0	\$0
Snow Lake Shores*	--	--
Unincorporated Area	0	\$0
Itawamba County	2	\$51,649
Fulton	0	\$0
Mantachie	2	\$51,649
Tremont*	--	--
Unincorporated Area	0	\$0
Lafayette County	18	\$213,847
Abbeville	0	\$0
Oxford	16	\$200,687
Taylor	0	\$0
Unincorporated Area	2	\$13,160
Lee County	82	\$1,604,315
Baldwyn	1	\$32,438
Guntown	0	\$0
Nettleton	0	\$0
Plantersville	0	\$0
Saltillo	6	\$106,820

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Location	Flood Losses	Claims Payments
Shannon	0	\$0
Tupelo	69	\$1,378,770
Verona	0	\$0
Unincorporated Area	6	\$86,287
Marshall County	7	\$109,615
Byhalia	1	\$32,147
Holly Springs	0	\$0
Potts Camp	3	\$27,670
Unincorporated Area	3	\$49,798
Pontotoc County	3	\$8,914
Algoma*	--	--
Ecro	0	\$0
Pontotoc (city)	0	\$0
Sherman	1	\$2,100
Thaxton	0	\$0
Toccopola*	--	--
Unincorporated Area	2	\$6,814
Prentiss County	1	\$13,574
Booneville	1	\$13,574
Jumpertown*	--	--
Marietta*	--	--
Unincorporated Area	0	\$0
Tippah County	2	\$50,028
Blue Mountain	1	\$25,892
Dumas*	--	--
Falkner*	--	--
Ripley	1	\$24,136
Walnut	0	\$0
Unincorporated Area	0	\$0
Tishomingo County	14	\$203,307
Belmont	0	\$0
Burnsville	2	\$12,148
Golden	0	\$0
Iuka	3	\$91,388
Paden	0	\$0
Tishomingo (town)*	--	--
Unincorporated Area	9	\$99,771
Union County	14	\$456,218
Blue Springs*	--	--
Myrtle	0	\$0
New Albany	14	\$456,218
Unincorporated Area	0	\$0
MEMA DISTRICT 2 REGION TOTAL	192	\$6,892,501

*These communities do not participate in the National Flood Insurance Program. Therefore, no values are reported.

Source: Federal Emergency Management Agency, National Flood Insurance Program

5.3.5 Repetitive Loss Properties

Current NFIP and Repetitive Loss Properties data was not available for this plan update. FEMA defines a repetitive loss property as any insurable building for which two or more claims of more than \$1,000 were paid by the NFIP within any rolling 10-year period, since 1978. A repetitive loss property may or may not be currently insured by the NFIP. Currently there are over 140,000 repetitive loss properties nationwide.

According to the Mississippi Emergency Management Agency, there are 24 non-mitigated repetitive loss properties located in the MEMA District 2 Region, which accounted for 56 losses and more than \$2.8 million in claims payments under the NFIP. The average claim amount for these properties is \$50,382. Of the 24 properties, 17 are single family and 7 are non-residential. Without mitigation, these properties will likely continue to experience flood losses. **Table 5.6** presents a summary of these figures for the MEMA District 2 Region. Detailed information on repetitive loss properties and NFIP claims and policies can be found in the county-specific annexes.

Table 5.6: SUMMARY OF REPETITIVE LOSS PROPERTIES IN THE MEMA DISTRICT 2 REGION

Location	Number of Properties	Number of Losses	Total Payments
Alcorn County	7	14	\$1,852,120
Corinth	7	14	\$1,852,120
Farmington*	--	--	--
Glen*	--	--	--
Kossuth*	--	--	--
Rienzi	0	0	\$0
Unincorporated Area	0	0	\$0
Benton County	0	0	\$0
Ashland	0	0	\$0
Hickory Flat	0	0	\$0
Snow Lake Shores*	--	--	--
Unincorporated Area	0	0	\$0
Itawamba County	0	0	\$0
Fulton	0	0	\$0
Mantachie	0	0	\$0
Tremont*	--	--	--
Unincorporated Area	0	0	\$0
Lafayette County	3	6	\$47,926
Abbeville	0	0	\$0
Oxford	3	6	\$47,926
Taylor	0	0	\$0
Unincorporated Area	0	0	\$0
Lee County	8	23	\$729,660
Baldwyn	0	0	\$0
Guntown	0	0	\$0
Nettleton	0	0	\$0
Plantersville	0	0	\$0
Saltillo	1	3	\$45,172
Shannon	0	0	\$0

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Location	Number of Properties	Number of Losses	Total Payments
Tupelo	7	20	\$684,488
Verona	0	0	\$0
Unincorporated Area	0	0	\$0
Marshall County	1	3	\$27,670
Byhalia	0	0	\$0
Holly Springs	0	0	\$0
Potts Camp	1	3	\$27,670
Unincorporated Area	0	0	\$0
Pontotoc County	1	2	\$6,814
Algoma*	--	--	--
Ecru	0	0	\$0
Pontotoc (city)	0	0	\$0
Sherman	0	0	\$0
Thaxton	0	0	\$0
Toccopola*	--	--	--
Unincorporated Area	1	2	\$6,814
Prentiss County	0	0	\$0
Booneville	0	0	\$0
Jumpertown*	--	--	--
Marietta*	--	--	--
Unincorporated Area	0	0	\$0
Tippah County	0	0	\$0
Blue Mountain	0	0	\$0
Dumas*	--	--	--
Falkner*	--	--	--
Ripley	0	0	\$0
Walnut	0	0	\$0
Unincorporated Area	0	0	\$0
Tishomingo County	1	2	\$11,166
Belmont	0	0	\$0
Burnsville	0	0	\$0
Golden	0	0	\$0
Iuka	0	0	\$0
Paden	0	0	\$0
Tishomingo (town)*	--	--	--
Unincorporated Area	1	2	\$11,166
Union County	3	6	\$146,019
Blue Springs*	--	--	--
Myrtle	0	0	\$0
New Albany	3	6	\$146,019
Unincorporated Area	0	0	\$0
MEMA DISTRICT 2 REGIONAL TOTAL	24	56	\$2,821,374

* These communities do not participate in the National Flood Insurance Program. Therefore, no values are reported.

Source: Federal Emergency Management Agency, National Flood Insurance Program

5.3.6 Probability of Future Occurrences

Flood events will remain a threat in the MEMA District 2 Region, and the probability of future occurrences will remain likely (between 50 and 100 percent annual probability). The probability of future flood events based on magnitude and according to best available data is illustrated in the figures above, which indicates those areas susceptible to the 1-percent annual chance flood (100-year floodplain) and the 0.2-percent annual chance flood (500-year floodplain).

It can be inferred from the floodplain location maps, previous occurrences, and repetitive loss properties that risk varies throughout the region. For example, areas in northern Lafayette and western Union Counties have more floodplain and thus a higher risk of experiencing a flood than the rest of the region. Flood is not the greatest hazard of concern but will continue to occur and cause damage. Therefore, mitigation actions may be warranted, particularly for repetitive loss properties.

5.4 EROSION

5.4.1 Background

Erosion is the gradual breakdown and movement of land due to both physical and chemical processes of water, wind, and general meteorological conditions. Natural, or geologic, erosion has occurred since the Earth's formation and continues at a very slow and uniform rate each year.

There are two types of soil erosion: wind erosion and water erosion. Wind erosion can cause significant soil loss. Winds blowing across sparsely vegetated or disturbed land can pick up soil particles and carry them through the air, thus displacing them. Water erosion, the hazard of topic here, can occur over land or in streams and channels. Water erosion that takes place over land may result from raindrops, shallow sheets of water flowing off the land, or shallow surface flow, which becomes concentrated in low spots. Stream channel erosion may occur as the volume and velocity of water flow increases enough to cause movement of the streambed and bank soils. Major storms, such as hurricanes in coastal areas, may cause significant erosion by combining high winds with heavy surf and storm surge to significantly impact the shoreline.

An area's potential for erosion is determined by four factors: soil characteristics, vegetative cover, topography, climate or rainfall, and topography. Soils composed of a large percentage of silt and fine sand are most susceptible to erosion. As the clay and organic content of these soils increases, the potential for erosion decreases. Well-drained and well-graded gravels and gravel-sand mixtures are the least likely to erode. Coarse gravel soils are highly permeable and have a good capacity for absorption, which can prevent or delay the amount of surface runoff. Vegetative cover can be very helpful in controlling erosion by shielding the soil surface from falling rain, absorbing water from the soil, and slowing the velocity of runoff. Runoff is also affected by the topography of the area including size, shape, and slope. The greater the slope length and gradient, the more potential an area has for erosion. Climate can affect the amount of runoff, especially the frequency, intensity, and duration of rainfall and storms. When rainstorms are frequent, intense, or of long duration, erosion risks are high. Seasonal changes in temperature and rainfall amounts define the period of highest erosion risk of the year.

During the past 20 years, the importance of erosion control has gained the increased attention of the public. Implementation of erosion control measures consistent with sound agricultural and construction

operations are needed to minimize the adverse effects associated with harmful chemicals run-off due to wind or water events. The increase in government regulatory programs and public concern has resulted in a wide range of erosion control products, techniques, and analytical methodologies in the United States. The preferred method of erosion control in recent years has been the restoration of vegetation.

5.4.2 Location and Spatial Extent

Erosion in the MEMA District 2 Region is typically caused by flash flooding events. Unlike coastal areas, areas of concern for erosion in the MEMA District 2 Region are primarily rivers and streams. Generally, vegetation also helps to prevent erosion in the area, and it is not an extreme threat to any of the participating counties and jurisdictions.

At this time, there is no data available on localized areas of erosion so it is not possible to depict extent on a map. No major areas of concern were reported by the hazard mitigation council.

5.4.3 Historical Occurrences

Several sources were vetted to identify areas of erosion in the MEMA District 2 Region. This includes searching local newspapers, interviewing local officials, and reviewing previous hazard mitigation plans. No historical erosion occurrences were found in these sources.

5.4.4 Probability of Future Occurrences

Erosion remains a natural, dynamic, and continuous process for the MEMA District 2 Region, and it will continue to occur. The annual probability level assigned for erosion is likely (between 50 and 100 percent annually). However, given the lack of historical events, location, and threat to life or property, no further analysis will be done in Section 6: *Vulnerability Assessment*.

5.5 DAM AND LEVEE FAILURE

5.5.1 Background

Worldwide interest in dam and levee safety has risen significantly in recent years. Aging infrastructure, new hydrologic information, and population growth in floodplain areas downstream from dams and near levees have resulted in an increased emphasis on safety, operation, and maintenance.

There are approximately 80,000 dams in the United States today, the majority of which are privately owned. Other owners include state and local authorities, public utilities, and federal agencies. The benefits of dams are numerous: they provide water for drinking, navigation, and agricultural irrigation. Dams also provide hydroelectric power, create lakes for fishing and recreation, and save lives by preventing or reducing floods.

Though dams have many benefits, they also can pose a risk to communities if not designed, operated, and maintained properly. In the event of a dam failure, the energy of the water stored behind even a small dam is capable of causing loss of life and great property damage if development exists downstream. If a levee breaks, scores of properties may become submerged in floodwaters and

residents may become trapped by rapidly rising water. The failure of dams and levees has the potential to place large numbers of people and great amounts of property in harm’s way.

5.5.2 Location and Spatial Extent

The Mississippi Department of Environmental Quality provides information on dams including a hazard potential classification. There are three hazard classifications—high, significant, and low—that correspond to qualitative descriptions. **Table 5.7** explains these classifications.

TABLE 5.7: MISSISSIPPI DAM HAZARD CLASSIFICATIONS

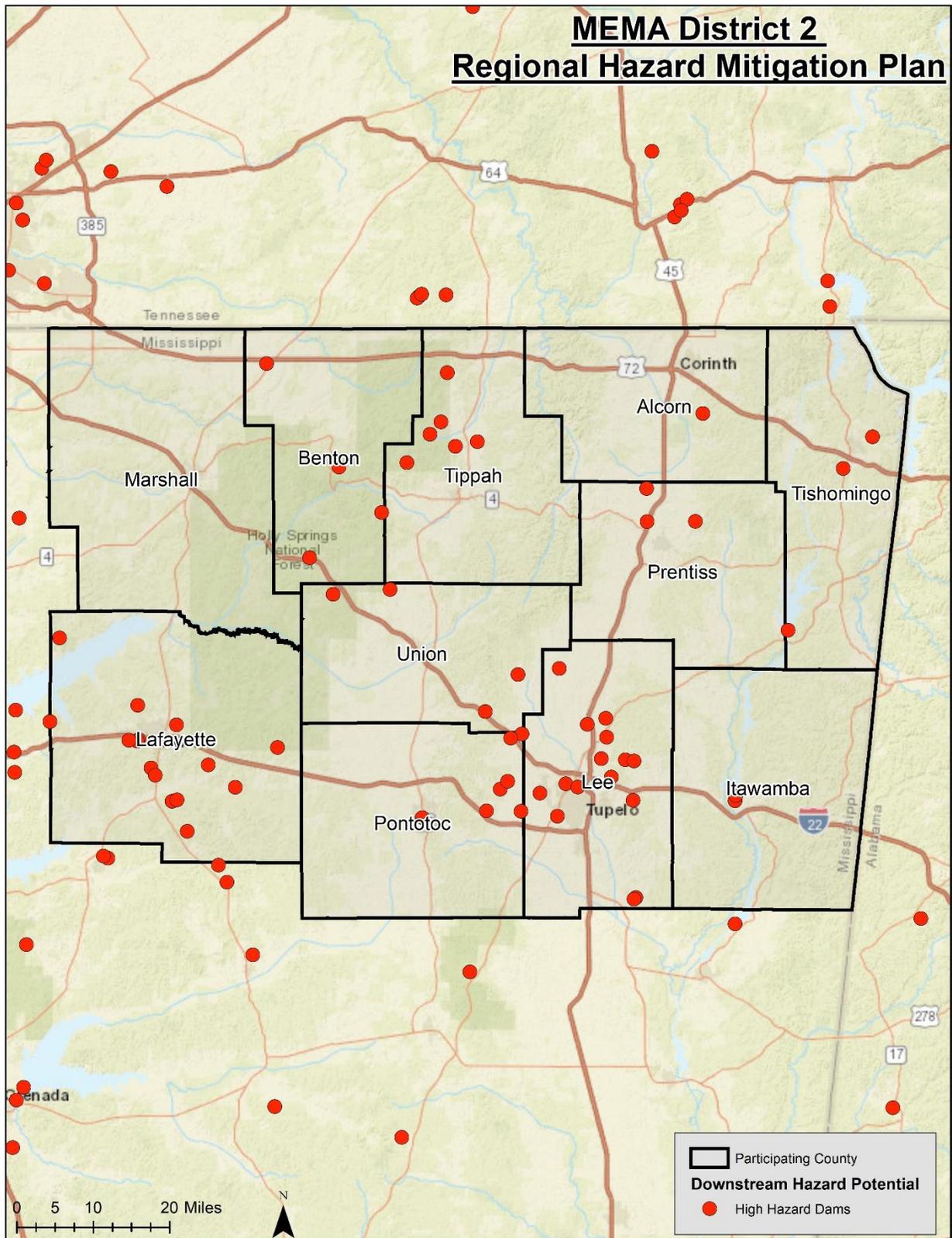
Hazard Classification	Description
Low	Dam failure may cause damage to farm buildings (excluding residences), agricultural land, or county or minor roads.
Significant	Dam failure may cause significant damage to main roads, minor railroads, or cause interruption of use or service of relatively important public utilities.
High	Dam failure may cause loss of life, serious damage to homes, industrial or commercial buildings, important public utilities, main highways or railroads. Dams constructed in existing or proposed residential, commercial or industrial areas will be classified as high hazard dams, unless the applicant presents clear and convincing evidence to the contrary.

Source: Mississippi Department of Environmental Quality

According to the Mississippi Department of Environmental Quality, there are 44 high hazard dams in the MEMA District 2 Region.³ **Figure 5.3** shows the location of each of these high hazard dams and **Table 5.8** lists them by name.

³ U.S. Army Corps of Engineers – National Inventory of Dams April 2021

Figure 5.3: MEMA DISTRICT 2 REGION HIGH HAZARD DAM LOCATIONS



Source: U.S. Army Corps of Engineers – National Inventory of Dams

Table 5.7: MEMA DISTRICT 2 REGION HIGH HAZARD DAMS

Dam Name	Hazard Potential
Alcorn County	
TUSCUMBIA WS STR NUMBER 8 DAM	High
Benton County	
GRAYS CREEK WS STR G-6-2 DAM	High
OAKLIMETER CREEK WATERSHED STR LT-8-17 DAM	High
TIPPAH RIVER WS STR LT-7-05 DAM	High
TIPPAH RIVER WS STR LT-7-07 DAM	High
Itawamba County	
NONE	N/A
Lafayette County	
UPPER YOCONA WS STR Y-14-01 DAM	High
GREASY CREEK WS STR LT-1A-11 DAM	High
MURRAY CREEK WS STR Y-13A-5 DAM	High
MURRAY CREEK WS STR Y-13A-1 DAM	High
ROYAL OAKS DAM	High
CROWN POINTE DAM	High
SPRING LAKE DAM	High
LAKE TARA DAM	High
AVANT LAKE DAM	High
EAST AND WEST GOOSE STR R-9-1 DAM	High
EAST AND WEST GOOSE STR R-9-2 DAM	High
BROWN LAKE DAM	High
BIG JONES LAKE DAM	High
REAGAN LAKE DAM	High
OTOUCALOFA CREEK STRUCTURE Y-15B-8 DAM	High
Lee County	
TOWN CREEK WS STR 24 DAM	High
TOWN CREEK WS STR 16 DAM	High
TOWN CREEK WATERSHED DAM #9	High
TOWN CREEK WS STR 46A DAM	High
LAKE LAMAR BRUCE DAM	High
LAKE PIOMINGO DAM	High
TOWN CREEK WS STR 59 DAM	High
ED BURGESS LAKE DAM	High
TOWN CREEK WS STR 15B DAM	High
LAKE ELVIS PRESLEY	High
TOWN CREEK WATERSHED STRUCTURE 48 DAM	High
TOWN CREEK WS STR 39 DAM	High
TOWN CREEK DAM NUMBER 8 DAM	High
SHOOK LAKE DAM	High
SPRING LAKE DAM	High
RICKY INMON LAKE DAM	High

Dam Name	Hazard Potential
Marshall County	
NONE	N/A
Pontotoc County	
CHIWAPA WATERSHED STRUCTURE 65 DAM	High
CHIWAPA WS STR 29 DAM	High
CHIWAPA WS STR 3 DAM	High
TRACE STATE PARK DAM	High
TOWN CREEK WS STR 14 DAM	High
TOWN CREEK WS STR 13 DAM	High
TOWN CREEK WS STR 26A DAM	High
Prentiss County	
TUSCUMBIA WS STR 39 DAM	High
TUSCUMBIA WS STR NUMBER 36 DAM	High
TUSCUMBIA WS STR NUMBER 34 DAM	High
Tippah County	
MUDDY CREEK WS STR 14 DAM	High
MUDDY CREEK WS STR 5 DAM	High
MUDDY CREEK WATERSHED STRUCTURE 4 DAM	High
MUDDY CREEK WS STR 2 DAM	High
UPPER TIPPAH WS STR LT-6-17 DAM	High
MUDDY CREEK WS STR 24A DAM	High
Tishomingo County	
BRINKLEY LAKE DAM	High
CRADDOCK LAKE DAM	High
JAMIE L WHITTEN LOCK AND DAM	High
Union County	
OKONATIE WS STR UT-25-1 DAM	High
MILL CREEK WS STR LT-14B-1 DAM	High
HELL CREEK WS STR LT-9B-2 DAM	High
TOWN CREEK WS STR 19 DAM	High
ARROWHEAD LAKE DAM	High

Source: U.S. Army Corps of Engineers – National Inventory of Dams

5.5.3 Historical Occurrences

According to the Mississippi State Hazard Mitigation Plan, there have been five dam failures reported in the MEMA District 2 Region, one in Benton County, two in Lafayette County, one in Pontotoc, and one in Itawamba. Although no damage was reported with these events, several breach scenarios in the region could be catastrophic.

Table 5.8 below provides a brief description of the three reported dam failures.

Table 5.8: MEMA DISTRICT 2 REGION DAM FAILURES (1990-2019)

Date	County	Structure	Cause of Failure
December 1991	Benton	Porter Creek	Breached
July 2002	Lafayette	Horseshoe Lake	Massive slides, erosion on downstream slope, leading to dam breach
December 2002	Lafayette	Royal Oaks	Piping
July 2015	Pontotoc	Trace State Park	Major Slide on the downstream slope just to the left of the outlet
December 2015	Itawamba	Biddle Lake Dam	Overtopping

Source: Mississippi Department of Environmental Quality

5.5.4 Probability of Future Occurrence

Given the current dam inventory and historic data, a dam breach is unlikely (less than 1 percent annual probability) in the future. However, as has been demonstrated in the past, regular monitoring is necessary to prevent these events. No further analysis will be completed in Section 6: *Vulnerability Assessment* as more sophisticated dam breach plans (typically completed by the U.S. Army Corp of Engineers) have been completed for dams of concern in the region.

5.6 WINTER STORM AND FREEZE

5.6.1 Background

A winter storm can range from a moderate snow over a period of a few hours to blizzard conditions with blinding wind-driven snow that lasts for several days. Events may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation. Some winter storms might be large enough to affect several states, while others might affect only localized areas. Occasionally, heavy snow might also cause significant property damages, such as roof collapses on older buildings.

All winter storm events have the potential to present dangerous conditions to the affected area. Larger snowfalls pose a greater risk, reducing visibility due to blowing snow and making driving conditions treacherous. A heavy snow event is defined by the National Weather Service as an accumulation of 4 or more inches in 12 hours or less. A blizzard is the most severe form of winter storm. It combines low temperatures, heavy snow, and winds of 35 miles per hour or more, which reduces visibility to a quarter mile or less for at least 3 hours. Winter storms are often accompanied by sleet, freezing rain, or an ice storm. Such freeze events are particularly hazardous as they create treacherous surfaces.

Ice storms are defined as storms with significant amounts of freezing rain and are a result of cold air damming (CAD). CAD is a shallow, surface-based layer of relatively cold, stably-stratified air entrenched against the eastern slopes of the Appalachian Mountains. With warmer air above, falling precipitation in the form of snow melts, then becomes either super-cooled (liquid below the melting point of water) or re-freezes. In the former case, super-cooled droplets can freeze on impact (freezing rain), while in the latter case, the re-frozen water particles are ice pellets (or sleet). Sleet is defined as partially frozen raindrops or refrozen snowflakes that form into small ice pellets before reaching the ground. They typically bounce when they hit the ground and do not stick to the surface. However, it does accumulate like snow, posing similar problems and has the potential to accumulate into a layer of ice on surfaces. Freezing rain, conversely, usually sticks to the ground, creating a sheet of ice on the roadways and other surfaces. All of the winter storm elements – snow, low temperatures, sleet, ice, etcetera – have the

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potential to cause significant hazard to a community. Even small accumulations can down power lines and tree limbs and create hazardous driving conditions. Furthermore, communication and power may be disrupted for days.

5.6.2 Location and Spatial Extent

Nearly the entire continental United States is susceptible to winter storm and freeze events. Some ice and winter storms may be large enough to affect several states, while others might affect limited, localized areas. The degree of exposure typically depends on the normal expected severity of local winter weather. The MEMA District 2 Region is not accustomed to severe winter weather conditions and rarely receives severe winter weather, even during the winter months. Events tend to be mild in nature; however, even relatively small accumulations of snow, ice, or other wintry precipitation can lead to losses and damage due to the fact that these events are not commonplace. Given the atmospheric nature of the hazard, the entire region has uniform exposure to a winter storm.

5.6.3 Historical Occurrences

Winter weather has resulted in three disaster declarations in the MEMA District 2 Region in 1994 and 1999 and 2021.⁴ According to the National Centers for Environmental Information, there have been a total of 333 recorded winter storm events in the MEMA District 2 Region since 1994 (Table 5.9).⁵ These events resulted in more than \$185.4 million in damages. Detailed information on the recorded winter storm events can be found in the county-specific annexes.

**Table 5.9: SUMMARY OF WINTER STORM EVENTS IN THE
MEMA DISTRICT 2 REGION**

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Alcorn County	32	0/0	\$18,539,540
Benton County	39	0/0	\$18,541,840
Itawamba County	25	0/0	\$18,540,440
Lafayette County	28	1/0	\$18,539,440
Lee County	22	0/0	\$18,560,440
Marshall County	40	0/0	\$18,541,540
Pontotoc County	26	0/0	\$18,544,440
Prentiss County	28	0/0	\$18,549,440
Tippah County	37	0/0	\$18,551,840
Tishomingo County	27	0/0	\$18,549,540

⁴ Not all of the participating counties were declared disaster areas for these events. A complete listing of historical disaster declarations, including the affected counties, can be found in Section 4: *Hazard Identification*.

⁵ These ice and winter storm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI) from 1996 through April 2020. It is likely that additional winter storm conditions have affected the MEMA District 2 Region. For example, although it is not accounted for in the NCEI records, the February 1994 ice storm was added to these results since it was a major event that impacted the region. The National Weather Service reported that the storm resulted in \$481,453,441 in damages across 26 counties in Mississippi; therefore, there was approximately \$18,517,440 of damage in each impacted county.

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Union County	29	0/0	\$18,544,540
MEMA DISTRICT 2 REGION TOTAL	333	1/0	\$185,442,600

Source: National Centers for Environmental Information

There have been several severe winter weather events in the MEMA District 2 Region. The text below describes three of the major events and associated impacts on the region. Similar impacts can be expected with severe winter weather.

February 1994

A damaging ice storm with freezing rain accumulations of 3 to 6 inches occurred across north Mississippi from February 9-11. Most estimates calculate this storm as the worst on record since 1951 with damages occurring across parts of Arkansas, Tennessee, Alabama, Louisiana, and Texas, as well as 26 counties in Mississippi, which sustained damages of roughly \$300 million. According to power companies, more than 200,000 homes were left without power at the height of the storm, and water provides estimate nearly 175,000 homes were without water during this time period. Agriculture also took an especially hard hit as nearly 5 percent of the state's pecan trees were destroyed.⁶

December 1998

Much of north Mississippi was hit with an ice storm. Most counties reported between 0.25 to 0.5 inches of ice on their roads with some locations in the southern part of the region reporting as much as 3 inches of ice. The ice caused numerous power outages and brought down many trees and power lines. Thousands of people in north Mississippi were without power, some for as long as one week. Christmas travel was severely hampered for several days with motorists stranded at airports, bus stations, and truck stops. Travel did not return to normal until after Christmas in some locations.

January 2000

A winter storm brought a swath of heavy snow across north central Mississippi. The snow began falling over western portions of the area during the early morning of the 27th and spread eastward during the day. The snow was heavy at times and did not end until the morning of the 28th. Snowfall amounts generally ranged from 4 to 10 inches. The heaviest amounts fell along the Highway 82 corridor from Greenville to Starkville where isolated snow depths of 12 inches were reported. Damage from the heavy snow was relatively minimal with reports limited to a few collapsed roofs and downed trees. Power outages were sporadic, but travelling was more than just an inconvenience as numerous reports of vehicles running off the road were received.

Winter storms throughout the planning area have several negative externalities including hypothermia, cost of snow and debris cleanup, business and government service interruption, traffic accidents, and power outages. Furthermore, citizens may resort to using inappropriate heating devices that could to fire or an accumulation of toxic fumes.

5.6.4 Probability of Future Occurrences

⁶ Pfof, Russell L. Disastrous Mississippi Ice Storm of 1994. National Weather Service Forecast Office. Jackson, Mississippi.

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Winter storm events will continue to occur in the MEMA District 2 Region. Based on historical information, the probability is likely (between 50 and 100 percent annual probability).

FIRE-RELATED HAZARDS

5.7 DROUGHT / HEAT WAVE

5.7.1 Background

DROUGHT

Drought is a normal part of virtually all climatic regions, including areas with high and low average rainfall. Drought is the consequence of a natural reduction in the amount of precipitation expected over an extended period of time, usually a season or more in length. High temperatures, high winds, and low humidity can exacerbate drought conditions. In addition, human actions and demands for water resources can hasten drought-related impacts. Droughts may also lead to more severe wildfires.

Droughts are typically classified into one of four types: 1) meteorological, 2) hydrologic, 3) agricultural, or 4) socioeconomic. **Table 5.10** presents definitions for these types of drought.

Table 5.10: DROUGHT CLASSIFICATION DEFINITIONS

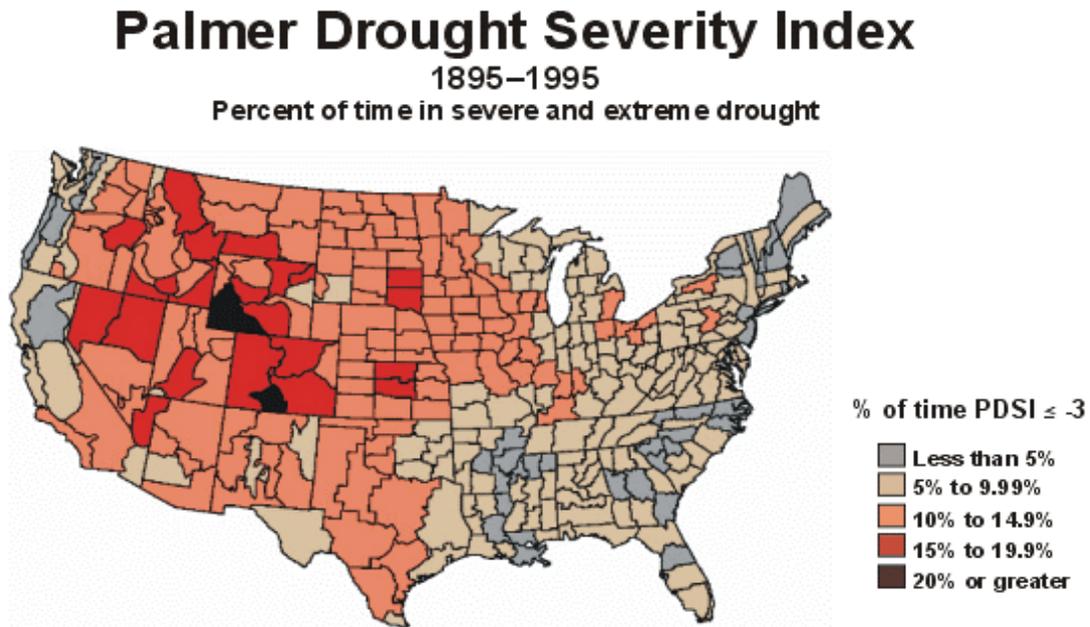
Meteorological Drought	The degree of dryness or departure of actual precipitation from an expected average or normal amount based on monthly, seasonal, or annual time scales.
Hydrologic Drought	The effects of precipitation shortfalls on stream flows and reservoir, lake, and groundwater levels.
Agricultural Drought	Soil moisture deficiencies relative to water demands of plant life, usually crops.
Socioeconomic Drought	The effect of demands for water exceeding the supply as a result of a weather-related supply shortfall.

Source: Multi-Hazard Identification and Risk Assessment: A Cornerstone of the National Mitigation Strategy, FEMA

Droughts are slow-onset hazards, but, over time, can have very damaging affects to crops, municipal water supplies, recreational uses, and wildlife. If drought conditions extend over a number of years, the direct and indirect economic impact can be significant.

The Palmer Drought Severity Index (PDSI) is based on observed drought conditions and range from -0.5 (incipient dry spell) to -4.0 (extreme drought). Evident in **Figure 5.4**, the Palmer Drought Severity Index Summary Map for the United Stated, drought affects most areas of the United States, but is less severe in the Eastern and Southeastern United States.

Figure 5.4: PALMER DROUGHT SEVERITY INDEX SUMMARY MAP FOR THE UNITED STATES



Source: National Drought Mitigation Center

The U.S. Drought Monitor also records information on historical drought occurrence. The U.S. Drought Monitor categorizes drought on a D0-D4 scale as **Table 5.12** presents definitions for these classifications.

Table 5.11: U.S. DROUGHT MONITOR

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

Source: United States Drought Monitor, <http://droughtmonitor.unl.edu/classify.htm>

HEAT WAVE

Extreme heat is defined as temperatures that hover 10 degrees or more above the average high temperature for the region and that last for an extended period of time. A heat wave may occur when temperatures hover 10 degrees or more above the average high temperature for the region and last for a prolonged number of days or several weeks. Humid conditions may also add to the discomfort of high

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temperatures.

While extreme heat does not typically affect buildings, the impact to the population can have grave effects. Health risks from extreme heat include heat cramps, heat fainting, heat exhaustion and heat stroke. According to the National Weather Service (which compiles data from the National Climatic Data Center), heat is the leading weather-related killer in the United States. During the ten-year period between 2000 and 2009 heat events killed 162 people - more people than lightning, tornado, flood, cold, winter storm, wind and hurricane hazards. However, most deaths are attributed to prolonged heat waves in large cities that rarely experience hot weather. The elderly and the ill are most at-risk, along with those who exercise outdoors in hot, humid weather.

The National Weather Service devised the Heat Index as a mechanism to better inform the public of heat dangers. The Heat Index Chart, shown in **Figure 5.12**, uses air temperature and humidity to determine the heat index or apparent temperature. **Table 5.13** shows the dangers associated with different heat index temperatures. Some populations, such as the elderly and young, are more susceptible to heat danger than other segments of the population.

Table 5.12: HEAT INDEX CHART

		Relative Humidity (in percent)																						
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100		
Air Temp (in F)	140	125																						
	135	120	128																					
	130	117	122	131																				
	125	111	116	123	131	141																		
	120	107	111	116	123	130	139	148																
	115	103	107	111	115	120	127	135	143	151														
	110	99	102	105	108	112	117	123	130	137	143	150												
	105	95	97	100	102	105	109	113	118	123	129	135	142	149										
	100	91	93	95	97	99	101	104	107	110	115	120	126	132	138	144								
	95	87	88	90	91	93	94	96	98	101	104	107	110	114	119	124	130	136						
	90	83	84	85	86	87	88	90	91	93	95	96	98	100	102	106	109	113	117	122				
	85	78	79	80	81	82	83	84	85	86	87	88	89	90	91	93	95	97	99	102	105	108		
	80	73	74	75	76	77	77	78	79	79	80	81	81	82	83	85	86	86	87	88	89	91		
	75	69	69	70	71	72	72	73	73	74	74	75	75	76	76	77	77	78	78	79	79	80		
70	64	64	65	65	66	66	67	67	68	68	69	69	70	70	70	70	71	71	71	71	71			

Source: National Oceanic and Atmospheric Administration

Table 5.13: HEAT DISORDERS ASSOCIATED WITH HEAT INDEX TEMPERATURE

Heat Index Temperature (Fahrenheit)	Description of Risks
80°- 90°	Fatigue possible with prolonged exposure and/or physical activity
90°- 105°	Sunstroke, heat cramps, and heat exhaustion possible with prolonged exposure and/or physical activity
105°- 130°	Sunstroke, heat cramps, and heat exhaustion likely, and heatstroke possible with prolonged exposure and/or physical activity
130° or higher	Heatstroke or sunstroke is highly likely with continued exposure

Source: National Weather Service, National Oceanic and Atmospheric Administration

5.7.2 Location and Spatial Extent

DROUGHT

Drought typically covers a large area and cannot be confined to any geographic or political boundaries. Furthermore, it is assumed that the MEMA District 2 Region would be uniformly exposed to drought, making the spatial extent potentially widespread. It is also notable that drought conditions typically do not cause significant damage to the built environment but may exacerbate wildfire conditions.

HEAT WAVE

Heat waves typically impact a large area and cannot be confined to any geographic or political boundaries.

5.7.3 Historical Occurrences

DROUGHT

Data from the U.S. Drought Monitor and National Centers for Environmental Information (NCEI) were used to ascertain historical drought events in the MEMA District 2 Region. The U.S. Drought Monitor reports data at the county level on a weekly basis throughout the county. It classifies drought conditions on a scale of D0 to D4, as described in **Table 5.13** above.

According to the U.S. Drought Monitor, all of the counties in the MEMA District 2 Region had drought levels (including abnormally dry) in at least 12 of the last 16 years (2005-2020) (**Table 5.14**). The most severe drought classification reported for each year, according to U.S. Drought Monitor classifications, is listed in the county-specific annexes. It should be noted that the U.S. Drought Monitor also estimates what percentage of the county is in each classification of drought severity. For example, the most severe classification reported may be exceptional, but a majority of the county may actually be in a less severe condition.

Table 5.14: SUMMARY OF DROUGHT OCCURRENCES IN THE MEMA DISTRICT 2 REGION

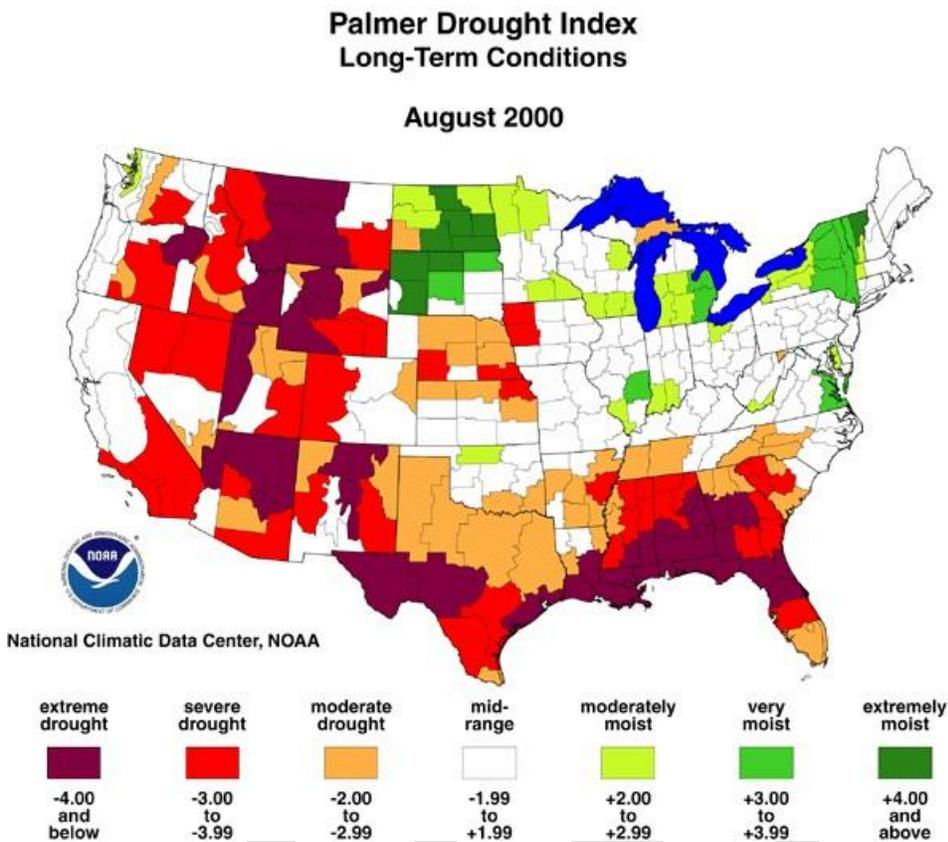
Location	Number Years with Drought Occurrences	Number of years with Exceptional Drought Occurrences
Alcorn County	16	1
Benton County	14	1
Itawamba County	15	2
Lafayette County	14	1
Lee County	15	2
Marshall County	14	3
Pontotoc County	14	2
Prentiss County	15	2
Tippah County	16	2
Tishomingo County	15	2
Union County	16	2

Source: United States Drought Monitor

Some additional anecdotal information was provided from the National Centers for Environmental Information on droughts in the MEMA District 2 Region.

Summer 2000 Drought – As shown in **Figure 5.5** below, drought conditions were pronounced throughout much of the south and western areas of the nation.

Figure 5.5: PALMER DROUGHT INDEX FOR AUGUST 2000



Summer 2007 – Drought conditions began in early April across portions of Northeast Mississippi and expanded to North Central Mississippi by the end of April. Drought conditions continued throughout the summer months through October and at times reached exceptional conditions. The drought impacted agricultural and hydrological interests of the area. Burn bans in some locations were issued due to the lack of rainfall.

Summer 2012 – Below normal rainfall fell during the month of July across North Mississippi. Many crops that were planted during the spring struggled to grow due to lack of water. Many pastures were in poor condition forcing farmers to feed cattle baled hay. Lake and river levels dropped to low levels. Burn bans were issued for many counties as a result of the dry conditions. Drought conditions improved during the month of October.

HEAT WAVE

The National Centers for Environmental Information was used to determine historical heat wave occurrences in the region.

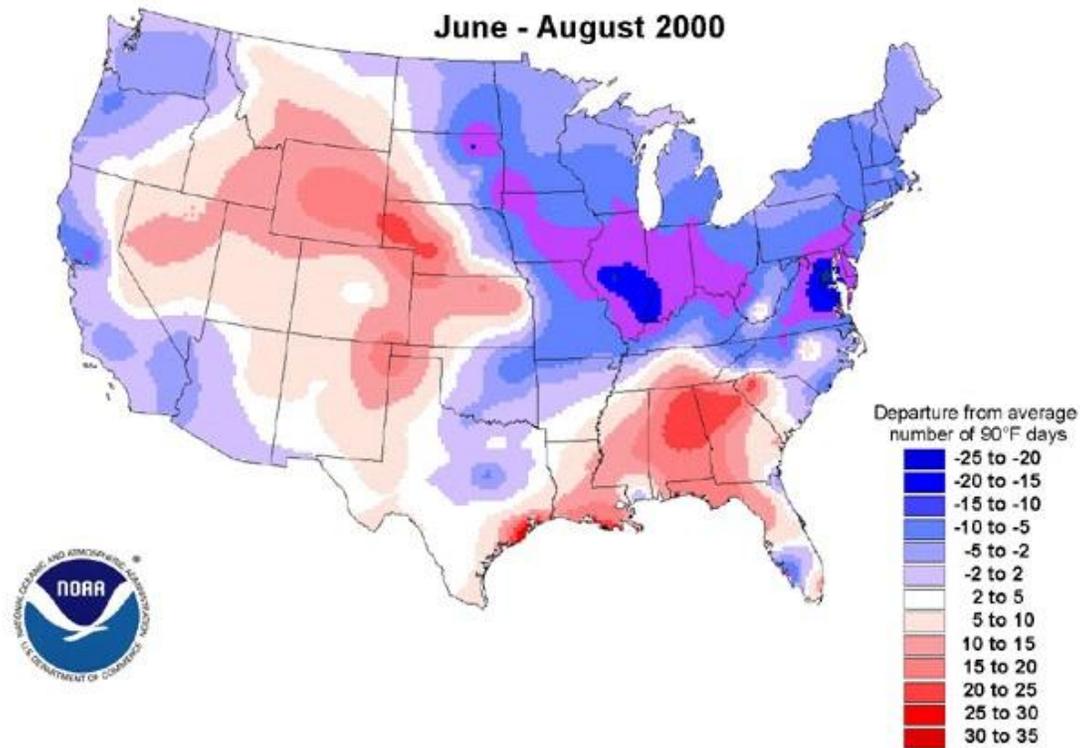
Summer of 2000 Heat Wave – Hot temperatures persisted from July to September across the South and Plains. Known as the Summer of 2000 Heat Wave, high temperatures commonly peaked over 100 degrees.

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As shown in **Figure 5.6** below, there were several days over 90 degree than the typical average. This was the fourth warmest July-August on record.

Figure 5.6: DEPARTURE FROM AVERAGE NUMBER OF 90 DEGREE DAYS

**Departure from 1961-90 average number of days
with maximum temperature greater than or equal to 90°F**



Source: <http://www.NCEI.noaa.gov/sotc/drought/2000/16#Heat>

August 2007 – A severe heat wave brought high temperatures near or above the 100 degree mark during most of the month of August. The unusually warm temperatures combined with high dew points produced heat index values of 105 degrees or greater during the heat wave.

July 2008 – A heat wave produced temperatures near or above 100 degrees during the late part of July. Those temperatures combined with high humidity produced heat index values of over 100 degrees during this time frame as well.

June/July/August 2010 – The combination of high humidity and above normal temperatures produced brutal heat indices of 105-120 degrees.

July/August 2011 – The combination of the hot and humid conditions allowed heat indices to reach between 105 and 118 degrees during the afternoon hours.

July 2012 – The combination of heat and humidity produced heat indices above 110 degrees.

5.7.4 Probability of Future Occurrences

DROUGHT

According to the Palmer Drought Severity Index (**Figure 5.4**), MEMA District 2 has a relatively low risk for drought hazard (less than 5%). However, local areas may experience much more severe and/or frequent drought events than what is represented on the Palmer Drought Severity Index map.

Based on historical occurrence information, it is assumed that all of the MEMA District 2 Region has a probability level of likely (between 50 and 100 percent annual probability) for future drought events. However, the extent (or magnitude) of drought and the amount of geographic area covered by drought, varies with each year. Historic information indicates that there is a much lower probability for extreme, long-lasting drought conditions.

HEAT WAVE

Based on historical occurrence information, it is assumed that all of the MEMA District 2 Region has a probability level of likely (between 50 and 100 percent annual probability) for future heat wave events.

5.8 WILDFIRE

5.8.1 Background

A wildfire is any outdoor fire (i.e. grassland, forest, brush land) that is not under control, supervised, or prescribed.⁷ Wildfires are part of the natural management of forest ecosystems, but may also be caused by human factors. Nationally, over 80 percent of forest fires are started by negligent human behavior such as smoking in wooded areas or improperly extinguishing campfires. The second most common cause for wildfire is lightning. In Mississippi, a majority of fires are caused by debris burning.

There are three classes of wildland fires: surface fire, ground fire, and crown fire. A surface fire is the most common of these three classes and burns along the floor of a forest, moving slowly and killing or damaging trees. A ground fire (muck fire) is usually started by lightning or human carelessness and burns on or below the forest floor. Crown fires spread rapidly by wind and move quickly by jumping along the tops of trees. Wildfires are usually signaled by dense smoke that fills the area for miles around.

Wildfire probability depends on local weather conditions, outdoor activities such as camping, debris burning, and construction, and the degree of public cooperation with fire prevention measures. Drought conditions and other natural hazards (such as tornadoes, hurricanes, etc.) increase the probability of wildfires by producing fuel in both urban and rural settings.

Many individual homes and cabins, subdivisions, resorts, recreational areas, organizational camps, businesses, and industries are located within high wildfire hazard areas. Furthermore, the increasing demand for outdoor recreation places more people in wildlands during holidays, weekends, and vacation periods. Unfortunately, wildland residents and visitors are rarely educated or prepared for wildfire events

⁷ Prescription burning, or “controlled burn,” undertaken by land management agencies is the process of igniting fires under selected conditions, in accordance with strict parameters.

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that can sweep through the brush and timber and destroy property within minutes.

Wildfires can result in severe economic losses as well. Businesses that depend on timber, such as paper mills and lumber companies, experience losses that are often passed along to consumers through higher prices and sometimes jobs are lost. The high cost of responding to and recovering from wildfires can deplete state resources and increase insurance rates. The economic impact of wildfires can also be felt in the tourism industry if roads and tourist attractions are closed due to health and safety concerns.

State and local governments can impose fire safety regulations on home sites and developments to help curb wildfire. Land treatment measures such as fire access roads, water storage, helipads, safety zones, buffers, firebreaks, fuel breaks, and fuel management can be designed as part of an overall fire defense system to aid in fire control. Fuel management, prescribed burning, and cooperative land management planning can also be encouraged to reduce fire hazards.

5.8.2 Location and Spatial Extent

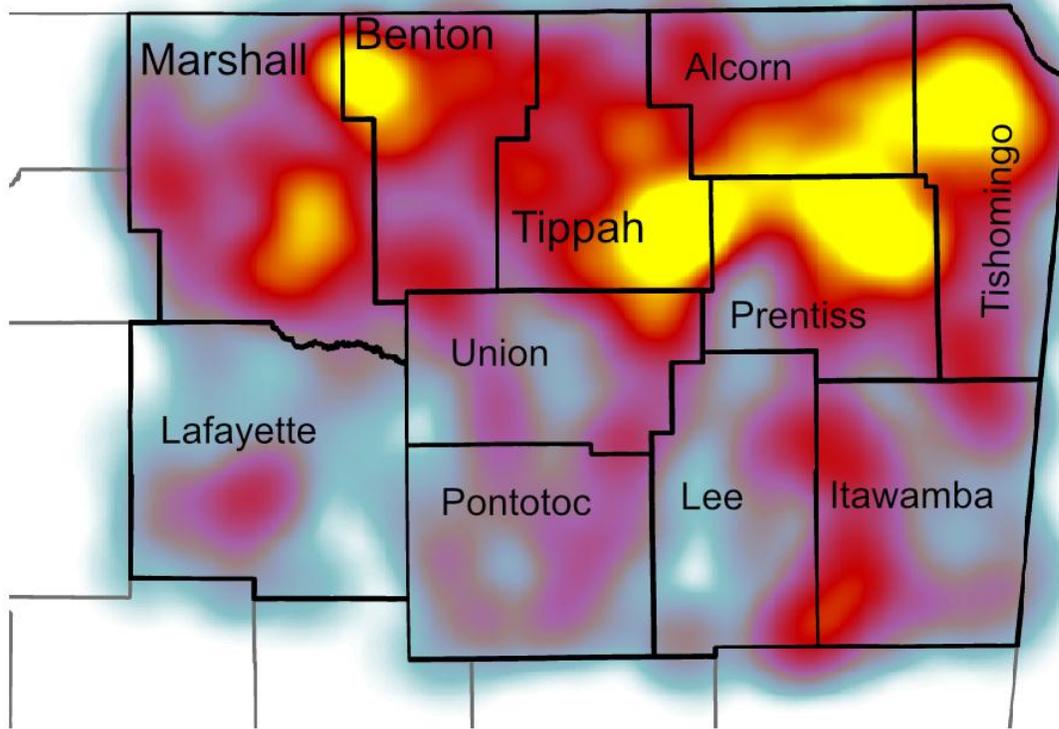
The entire region is at risk to a wildfire occurrence. However, several factors such as drought conditions or high levels of fuel on the forest floor, may make a wildfire more likely. Furthermore, areas in the urban-wildland interface are particularly susceptible to fire hazard as populations abut formerly undeveloped areas. The Wildfire Ignition Density data shown in the figure below give an indication of historic location.

5.8.3 Historical Occurrences

Figure 5.7 shows the Wildfire Ignition Density in the MEMA District 2 Region based on data from the Southern Wildfire Risk Assessment. This data is based on historical fire ignitions and the likelihood of a wildfire igniting in an area. Occurrence is derived by modeling historic wildfire ignition locations to create an average ignition rate map. This is measured in the number of fires per year per 1,000 acres.⁸

⁸ Southern Wildfire Risk Assessment, 2021

Figure 5.7: WILDFIRE IGNITION DENSITY IN THE MEMA DISTRICT 2 REGION



Source: Southern Wildfire Risk Assessment

Based on data from the Mississippi Forestry Commission from 2011 to 2020, the MEMA District 2 Region experiences an average of 194 wildfires annually which burn a combined 2,312 acres, on average per year. The data indicates that most of these fires are small, averaging about 13 acres per fire. **Table 5.15** provides a summary table for wildfire occurrences in the MEMA District 2 Region. The number of reported wildfire occurrences in the participating counties between the years 2011 and 2020 is listed in the county-specific annexes to this plan. Jurisdiction specific information is not available due to Mississippi Forestry Commission providing only county level data.

Table 5.15: SUMMARY TABLE OF ANNUAL WILDFIRE OCCURRENCES (2011-2020)*

	Alcorn County	Benton County	Itawamba County	Lafayette County	Lee County	Marshall County
Average Number of Fires per year	14.5	18.7	17.2	8.6	8.8	27
Average Number of Acres Burned per year	149.5	232.1	126.1	141.1	84.9	523.7
Average Number of Acres Burned per fire	6	12.4	7.3	16.4	32.3	19.3

*These values reflect averages over a 10 year period.

Source: Mississippi Forestry Commission

TABLE 5.15 (CONT.): SUMMARY TABLE OF ANNUAL WILDFIRE OCCURRENCES (2011-2020)*

	Pontotoc County	Prentiss County	Tippah County	Tishomingo County	Union County	MEMA D2 Region Total
Average Number of Fires per year	12	23.4	24.7	28.5	11	194.4
Average Number of Acres Burned per year	133.6	188.6	388.7	214.9	129.7	2,312.9
Average Number of Acres Burned per fire	11.21	8	15.7	7.5	11.7	13.4

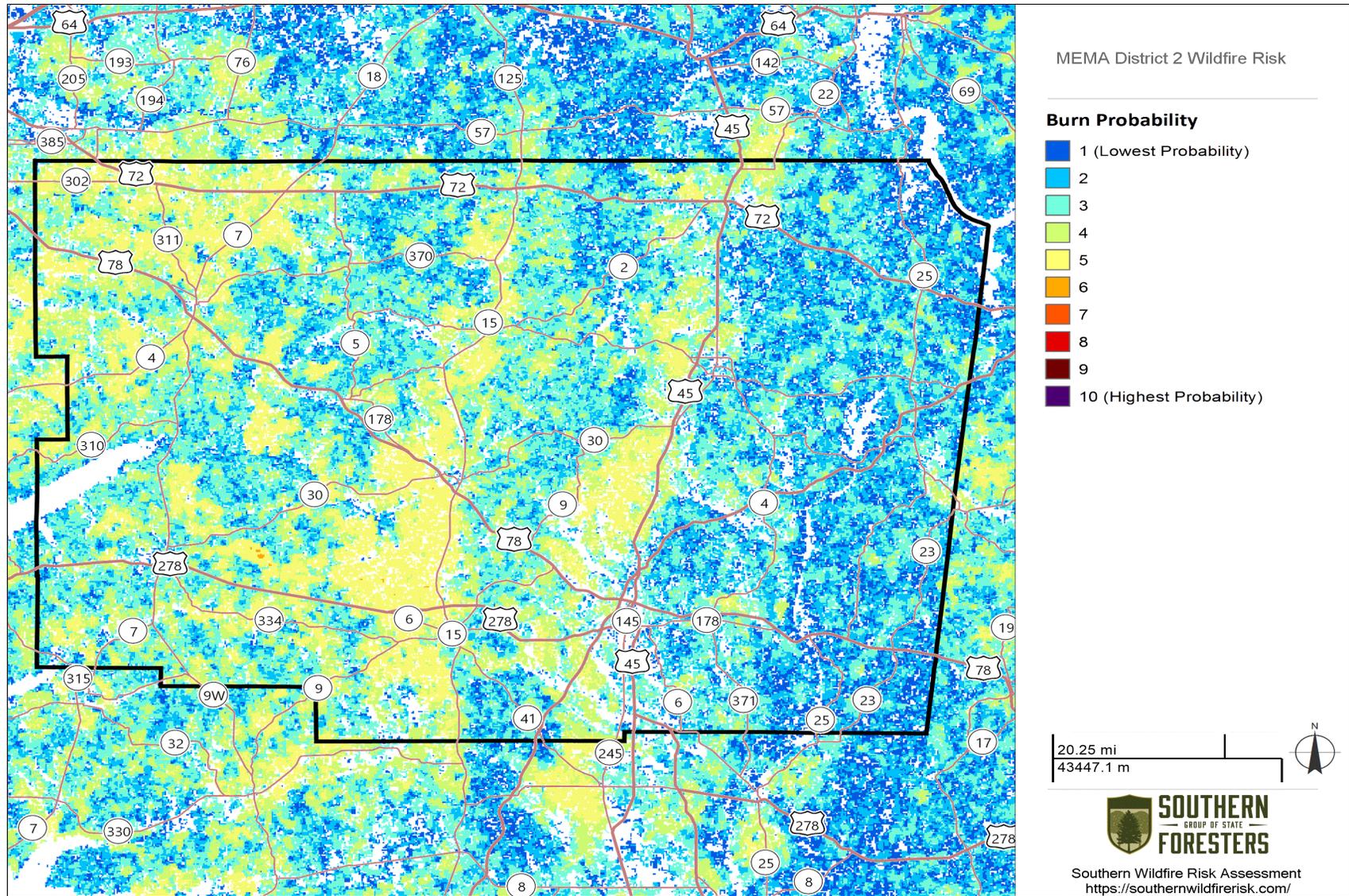
*These values reflect averages over a 10 year period.

Source: Mississippi Forestry Commission

5.8.4 Probability of Future Occurrences

Wildfire events will be an ongoing occurrence in the MEMA District 2 Region. **Figure 5.8** shows that there is some probability a wildfire will occur throughout the region. However, the likelihood of wildfires increases during drought cycles and abnormally dry conditions. Fires are likely to stay small in size but could increase due to local climate and ground conditions. Dry, windy conditions with an accumulation of forest floor fuel (potentially due to ice storms or lack of fire) could create conditions for a large fire that spreads quickly. It should also be noted that some areas do vary somewhat in risk. For example, highly developed areas are less susceptible unless they are located near the urban-wildland boundary. The risk will also vary due to assets. Areas in the urban-wildland interface will have much more property at risk, resulting in increased vulnerability and need to mitigate compared to rural, mainly forested areas. The probability assigned to the MEMA District 2 Region for future wildfire events is highly likely (100 percent annual probability).

Figure 5.8: BURN PROBABILITY IN THE MEMA DISTRICT 2 REGION



Source: Southern Wildfire Risk Assessment

GEOLOGIC HAZARDS

5.9 EARTHQUAKE

5.9.1 Background

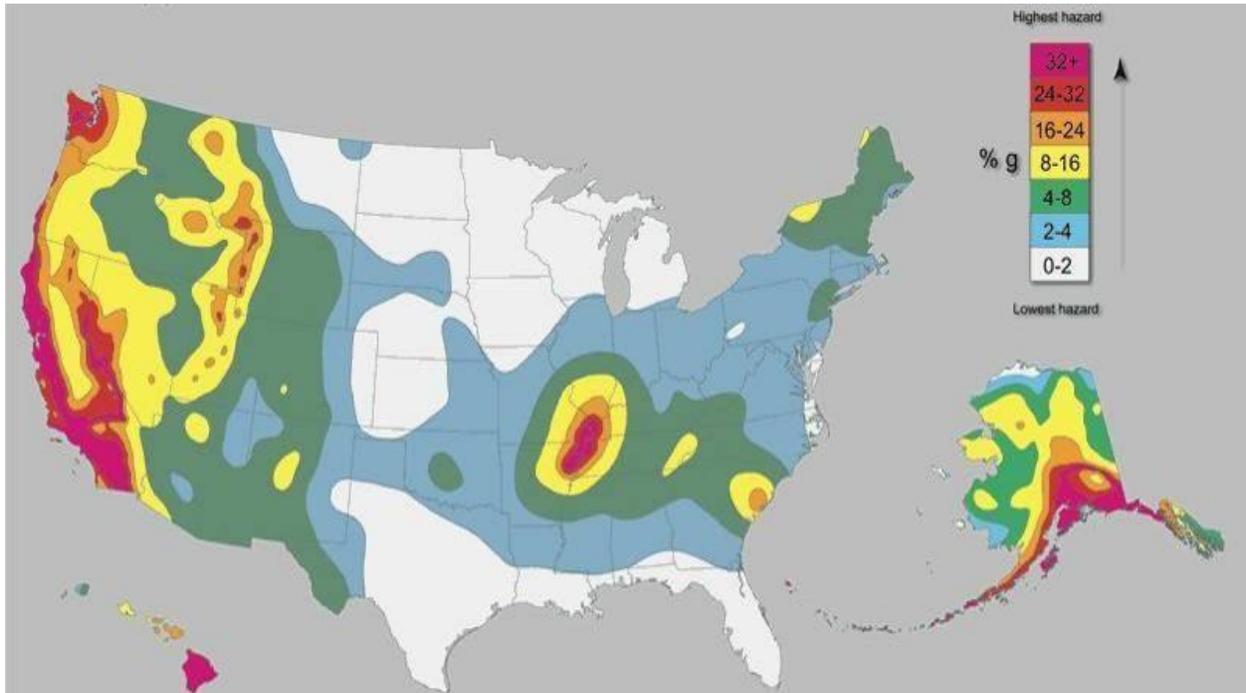
An earthquake is movement or trembling of the ground produced by sudden displacement of rock in the Earth's crust. Earthquakes result from crustal strain, volcanism, landslides, or the collapse of caverns. Earthquakes can affect hundreds of thousands of square miles, cause damage to property measured in the tens of billions of dollars, result in loss of life and injury to hundreds of thousands of persons, and disrupt the social and economic functioning of the affected area.

Most property damage and earthquake-related deaths are caused by the failure and collapse of structures due to ground shaking. The level of damage depends upon the amplitude and duration of the shaking, which are directly related to the earthquake size, distance from the fault, site, and regional geology. Other damaging earthquake effects include landslides, the down-slope movement of soil and rock (mountain regions and along hillsides), and liquefaction, in which ground soil loses the ability to resist shear and flows much like quick sand. In the case of liquefaction, anything relying on the substrata for support can shift, tilt, rupture, or collapse.

Most earthquakes are caused by the release of stresses accumulated as a result of the rupture of rocks along opposing fault planes in the Earth's outer crust. These fault planes are typically found along borders of the Earth's 10 tectonic plates. The areas of greatest tectonic instability occur at the perimeters of the slowly moving plates, as these locations are subjected to the greatest strains from plates traveling in opposite directions and at different speeds. Deformation along plate boundaries causes strain in the rock and the consequent buildup of stored energy. When the built-up stress exceeds the rocks' strength a rupture occurs. The rock on both sides of the fracture is snapped, releasing the stored energy and producing seismic waves, generating an earthquake.

The greatest earthquake threat in the United States is along tectonic plate boundaries and seismic fault lines located in the central and western states; however, the Eastern United State does face moderate risk to less frequent, less intense earthquake events. **Figure 5.9** shows relative seismic risk for the United States.

Figure 5.9: UNITED STATES EARTHQUAKE HAZARD MAP



Source: United States Geological Survey

Earthquakes are measured in terms of their magnitude and intensity. Magnitude is measured using the Richter Scale, an open-ended logarithmic scale that describes the energy release of an earthquake through a measure of shock wave amplitude (Table 5.16). Each unit increase in magnitude on the Richter Scale corresponds to a 10-fold increase in wave amplitude, or a 32-fold increase in energy. Intensity is most commonly measured using the Modified Mercalli Intensity (MMI) Scale based on direct and indirect measurements of seismic effects. The scale levels are typically described using roman numerals, ranging from “I” corresponding to imperceptible (instrumental) events to “XII” for catastrophic (total destruction). A detailed description of the Modified Mercalli Intensity Scale of earthquake intensity and its correspondence to the Richter Scale is given in Table 5.17.

Table 5.16: RICHTER SCALE

RICHTER MAGNITUDES	EARTHQUAKE EFFECTS
< 3.5	Generally not felt, but recorded.
3.5 - 5.4	Often felt, but rarely causes damage.
5.4 - 6.0	At most slight damage to well-designed buildings. Can cause major damage to poorly constructed buildings over small regions.
6.1 - 6.9	Can be destructive in areas up to about 100 kilometers across where people live.
7.0 - 7.9	Major earthquake. Can cause serious damage over larger areas.
8 or >	Great earthquake. Can cause serious damage in areas several hundred kilometers across.

Source: Federal Emergency Management Agency

Table 5.17: MODIFIED MERCALLI INTENSITY SCALE FOR EARTHQUAKES

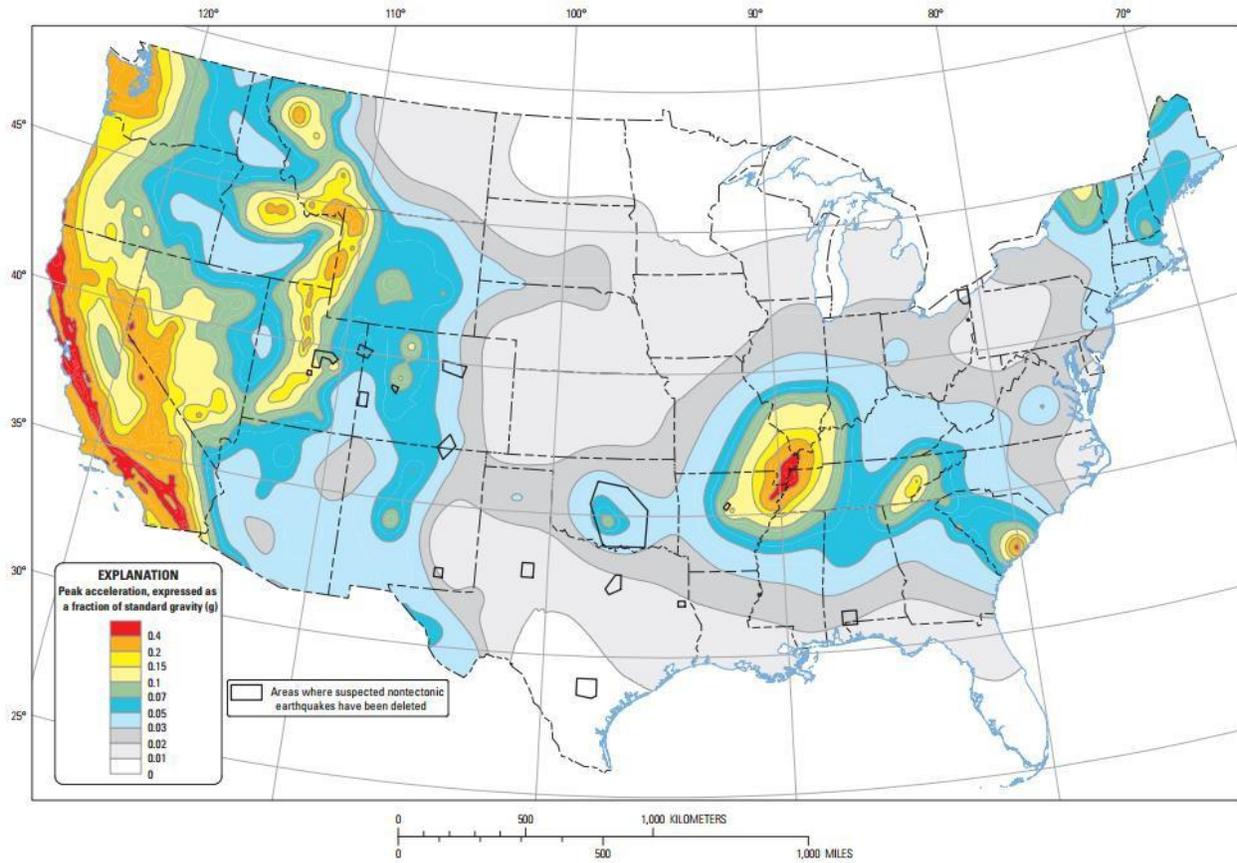
SCALE	INTENSITY	DESCRIPTION OF EFFECTS	CORRESPONDING RICHTER SCALE MAGNITUDE
I	INSTRUMENTAL	Detected only on seismographs.	
II	FEEBLE	Some people feel it.	< 4.2
III	SLIGHT	Felt by people resting; like a truck rumbling by.	
IV	MODERATE	Felt by people walking.	
V	SLIGHTLY STRONG	Sleepers awake; church bells ring.	< 4.8
VI	STRONG	Trees sway; suspended objects swing, objects fall off shelves.	< 5.4
VII	VERY STRONG	Mild alarm; walls crack; plaster falls.	< 6.1
VIII	DESTRUCTIVE	Moving cars uncontrollable; masonry fractures, poorly constructed buildings damaged.	
IX	RUINOUS	Some houses collapse; ground cracks; pipes break open.	< 6.9
X	DISASTROUS	Ground cracks profusely; many buildings destroyed; liquefaction and landslides widespread.	< 7.3
XI	VERY DISASTROUS	Most buildings and bridges collapse; roads, railways, pipes and cables destroyed; general triggering of other hazards.	< 8.1
XII	CATASTROPHIC	Total destruction; trees fall; ground rises and falls in waves.	> 8.1

Source: Federal Emergency Management Agency

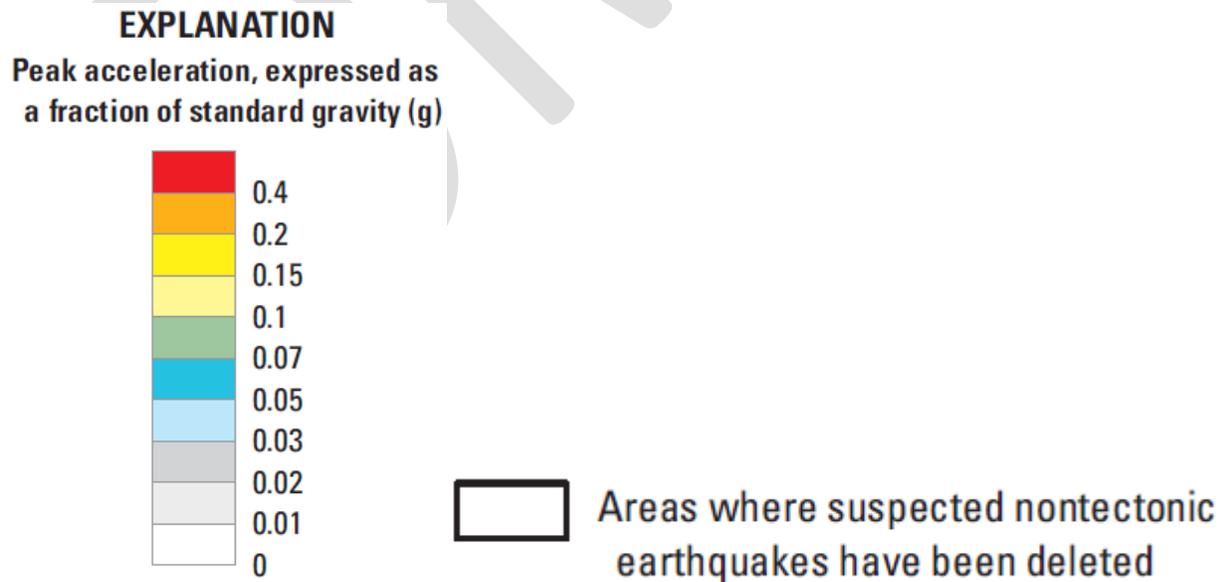
5.9.2 Location and Spatial Extent

Figure 5.10 shows the intensity level associated with the MEMA District 2 Region, based on the national USGS map of peak acceleration with 10 percent probability of exceedance in 50 years. It is the probability that ground motion will reach a certain level during an earthquake. The data show peak horizontal ground acceleration (the fastest measured change in speed, for a particle at ground level that is moving horizontally due to an earthquake) with a 10 percent probability of exceedance in 50 years. The map was compiled by the U.S. Geological Survey (USGS) Geologic Hazards Team, which conducts global investigations of earthquake, geomagnetic, and landslide hazards. According to this map, all of the MEMA District 2 Region lies within an approximate zone of level “5” to “15” ground acceleration. This indicates that the region as a whole exists within an area of moderate seismic risk.

Figure 5.10: PEAK ACCELERATION WITH 10 PERCENT PROBABILITY OF EXCEEDANCE IN 50 YEARS



Ten-percent probability of exceedance in 50 years map of peak ground acceleration



Source: United States Geological Survey, 2014

The primary source of potential damage to the MEMA District 2 Region from an earthquake is the New Madrid Seismic Zone (NMSZ). Historically, a series of earthquakes in 1811 and 1812 demonstrated that this fault zone can produce high magnitude seismic events, sometimes on the scale of a 7.5-8.0 on the Richter scale. The biggest challenge with earthquakes that occur in this area of seismic activity is predicting the recurrence of earthquakes emanating from this zone. Although the magnitude of earthquakes from the NMSZ can be large, they occur very irregularly and fairly infrequently. This makes it extremely difficult to project when they will occur.

5.9.3 Historical Occurrences

At least 99 earthquakes are known to have affected the MEMA District 2 Region since 1865. The strongest of these measured a VI on the Modified Mercalli Intensity (MMI) scale. **Table 5.18** provides a summary of earthquake events reported by the National Geophysical Data Center between 1638 and 1985. A detailed occurrence of each event including the date, distance from the epicenter, magnitude, and Modified Mercalli Intensity (if known) can be found in the county-specific annexes.⁹

⁹ Due to reporting mechanisms, not all earthquakes events were recorded during this time. Furthermore, some are missing data, such as the epicenter location, due to a lack of widely used technology. In these instances, a value of “unknown” is reported.

Table 5.18: SUMMARY OF SEISMIC ACTIVITY IN THE MEMA DISTRICT 2 REGION

Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
Alcorn County	12	V	< 4.8
Corinth	9	V	< 4.8
Farmington	0	--	--
Glen	0	--	--
Kossuth	0	--	--
Rienzi	3	V	< 4.8
Unincorporated Area	0	--	--
Benton County	10	VI	< 5.4
Ashland	5	V	< 4.8
Hickory Flat	3	V	< 4.8
Snow Lake Shores	0	--	--
Unincorporated Area	2	VI	< 5.4
Itawamba County	3	IV	< 4.8
Fulton	3	IV	< 4.8
Mantachie	0	--	--
Tremont	0	--	--
Unincorporated Area	0	--	--
Lafayette County	14	VI	< 5.4
Abbeville	3	VI	< 5.4
Oxford	5	V	< 4.8
Taylor	2	V	< 4.8
Unincorporated Area	4	V	< 4.8
Lee County	8	VI	< 5.4
Baldwyn	1	IV	< 4.8
Guntown	1	III	< 4.8
Nettleton	1	III	< 4.8
Plantersville	0	--	--

SECTION 5: HAZARD PROFILES

Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
Saltillo	0	--	--
Shannon	0	--	--
Tupelo	5	VI	< 5.4
Verona	0	--	--
Unincorporated Area	0	--	--
Marshall County	14	V	< 4.8
Byhalia	2	IV	< 4.8
Holly Springs	4	V	< 4.8
Potts Camp	3	V	< 4.8
Unincorporated Area	5	V	< 4.8
Pontotoc County	8	V	< 4.8
Algoma	0	--	--
Ecru	1	V	< 4.8
Pontotoc (city)	2	IV	< 4.8
Sherman	2	V	< 4.8
Thaxton	1	V	< 4.8
Toccopola	1	V	< 4.8
Unincorporated Area	1	IV	< 4.8
Prentiss County	7	IV	< 4.8
Booneville	4	IV	< 4.8
Jumpertown	0	--	--
Marietta	1	III	< 4.8
Unincorporated Area	2	II	< 4.2
Tippah County	11	VI	< 5.4
Blue Mountain	2	V	< 4.8
Dumas	1	V	< 4.8
Falkner	1	VI	< 5.4
Ripley	5	IV	< 4.8
Walnut	1	IV	< 4.8
Unincorporated Area	1	V	< 4.8
Tishomingo County	5	IV	< 4.8
Belmont	0	--	--
Burnsville	1	III	< 4.8
Golden	0	--	--
Iuka	3	IV	< 4.8
Paden	0	--	--
Tishomingo (town)	0	--	--
Unincorporated Area	1	III	< 4.8
Union County	7	V	< 4.8
Blue Springs	1	V	< 4.8
Myrtle	1	IV	< 4.8
New Albany	3	IV	< 4.8
Unincorporated Area	2	V	< 4.8
MEMA DISTRICT 2 REGIONAL TOTAL	99	VI	< 5.4

Source: National Geophysical Data Center

In addition to those earthquakes specifically affecting the MEMA District 2 Region, a list of earthquakes that have affected Mississippi is presented below in **Table 5.19**.

Table 5.19: EARTHQUAKES WHICH HAVE AFFECTED MISSISSIPPI

Date	Origin	Richter Scale (Magnitude)	MMI (Intensity)	MMI in Mississippi	MEMA District 2 Counties Affected
1811-1812	New Madrid Seismic Zone	7.8-8.1	XI	Not available	Affected counties as far as the Gulf Coast
3/29/1972	New Madrid Seismic Zone	Not available	IV	I, II, III, IV	--
4/29/2003	8 miles ENE of Ft. Payne, AL	4.6	V	I, II, III, IV	Alcorn, Itawamba, Lafayette, Lee, Prentiss, and Tishomingo
11/7/2004	25 miles SW of Tuscaloosa, AL	4.0	V	I, II, III, IV	--
2/10/2005	22 miles WSW of Blytheville, AR	4.1	V	I, II, III	Alcorn, Benton, Itawamba, Lafayette, Lee, Marshall, Pontotoc, Prentiss, Tippah, Tishomingo, and Union
5/1/2005	15 miles WSW of Blytheville, AR	4.1	IV	I, II, III	--
6/2/2005	10 miles NNW of Dyersburg, TN	4.0	III	I	Alcorn and Tishomingo
9/10/2006	253 miles SSW of Apalachicola, FL	6.0	VI	I, II, III, IV	Alcorn and Lee

Source: State of Mississippi Standard Mitigation Plan (2018 Update)

5.9.4 Probability of Future Occurrences

The probability of significant, damaging earthquake events affecting the MEMA District 2 Region is unlikely. However, it is possible that future earthquakes resulting in light to moderate perceived shaking and damages ranging from none to very light will affect the region. The annual probability level for the region is estimated to be between 1 and 50 percent (possible).

5.10 EXPANSIVE SOILS

5.10.1 Background

Expansive soils, also called shrink-swell soils, are soils that will exhibit some degree of volume change with variations in moisture conditions. Depending upon the supply of moisture in the ground, expansive soils will experience changes in volume of up to thirty percent or more. The most important properties affecting degree of volume change in a soil are clay mineralogy and the aqueous environment. Generally speaking, expansive soils often appear sticky when wet and are characterized by surface cracks when dry.

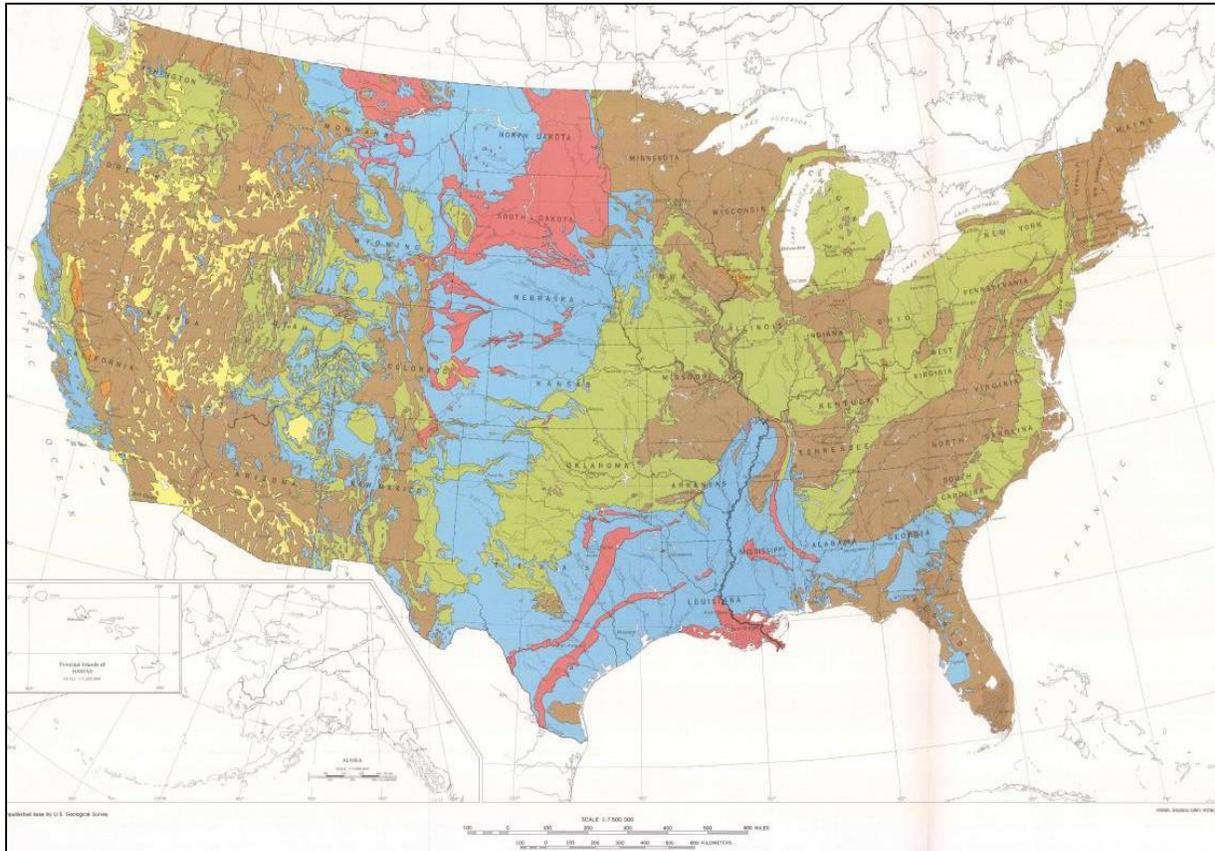
SECTION 5: HAZARD PROFILES

The effects of expansive soils are typically experienced in regions of moderate to high precipitation, where periods of drought are followed by periods of rainfall. Expansive soils become a problem when structures are built upon them without taking proper design precautions into account with regard to soil

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type. Cracking in walls and floors can be minor, or can be severe enough for the home to be structurally unsafe. Expansive soils are known to cause adverse effects on structures and infrastructure throughout the United States. **Figure 5.11** delineates areas underlain by soils with swelling potential in the conterminous United States.¹⁰

Figure 5.11: SWELLING CLAYS MAP OF THE CONTERMINOUS UNITED STATES



COLOR-CODE EXPLANATION FOR SWELLING-CLAY MAP	
	Unit contains abundant clay having high swelling potential
	Part of unit, generally less than 50 percent, consists of clay having high swelling potential
	Unit contains abundant clay having slight to moderate swelling potential
	Part of unit, generally less than 50 percent, consists of clay having slight to moderate swelling potential
	Unit contains little or no swelling clay
	Data insufficient to indicate clay content of unit and (or) swelling potential of clay. Shown in westernmost States only

Source: United States Geological Survey

¹⁰ This map layer is provided in the U.S. Geological Survey Investigation Series Map 1940, Swelling Clays Map of the Conterminous United States, available online at: http://ngmdb.usgs.gov/Prodesc/proddesc_10014.htm.

5.10.2 Location and Spatial Extent

Much of the MEMA D2 Region is located in an area where the soil is substantially clay, causing a shrink and swell effect depending on the current conditions. Indeed, much of the area underlain by calcareous clay which, when combined with sand and marl, is highly susceptible to expansion when wet and shrinking when dry.

Due to the amount of clay minerals present in the MEMA District 2 Region, expansive soils present a threat to the region. Areas underlain by soils with swelling potential are shown in **Figure 5.12**. The areas in red contain abundant clay having high swelling potential, the areas in blue are underlain with generally less than 50 percent clay having high swelling potential, the areas in green are underlain with generally less than 50 percent clay having slight to moderate swelling potential, and the areas in brown contain little or no swelling clays.

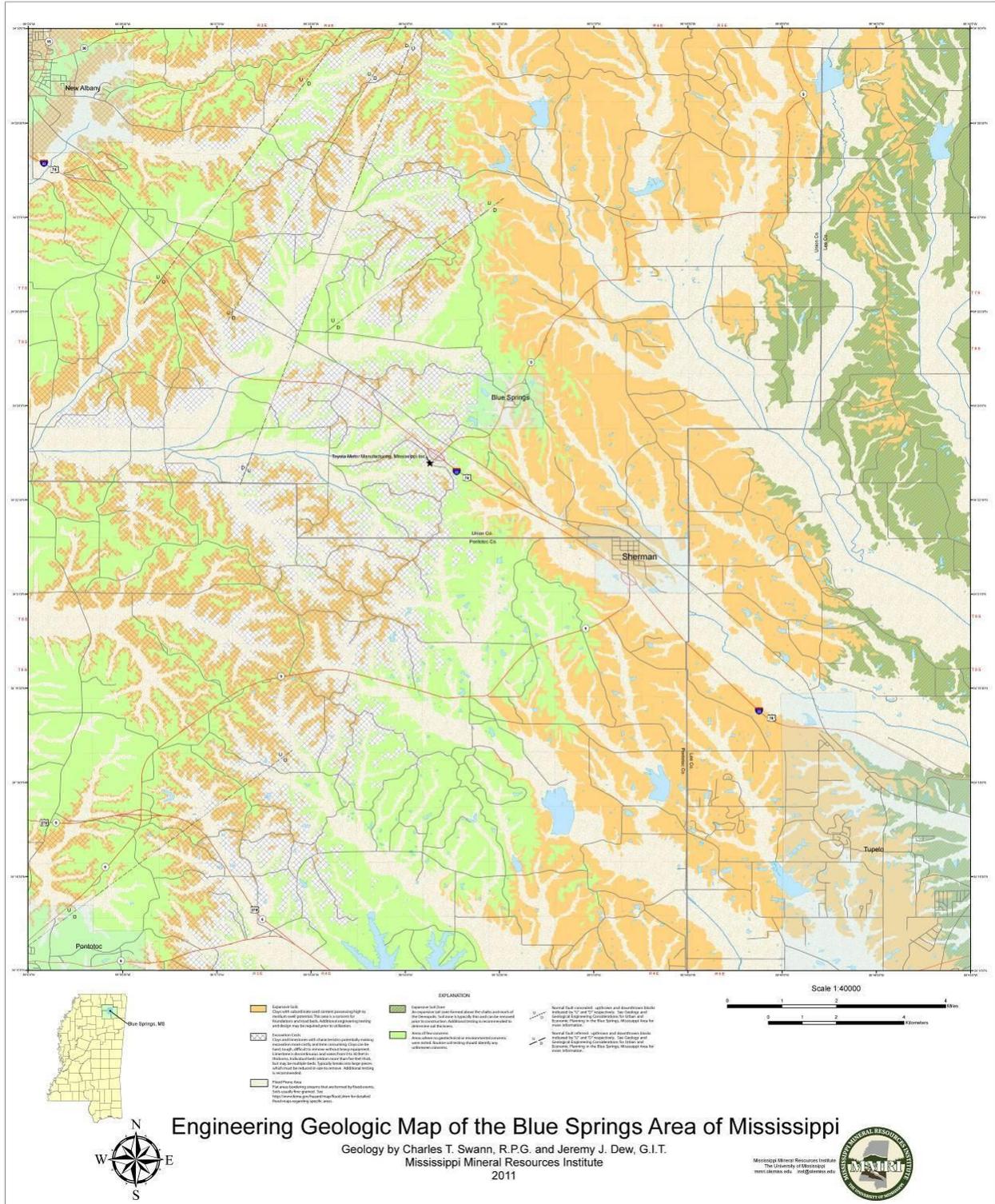
Figure 5.12: SWELLING CLAYS IN MISSISSIPPI



Source: United States Geological Survey

Moreover, the Mississippi Mineral Resources Institute developed some detailed mapping of expansive soils in certain areas in the state and provided mapping for those areas that were located within the MEMA District 2 Region. **Figure 5.13** shows the Blue Springs area of the region which is located within Union, Lee, and Pontotoc Counties. The map shows areas where expansive soils are present in orange and dark green. This map reiterates that expansive soils are present throughout much of the MEMA District 2 Region.

Figure 5.13: EXPANSIVE SOILS IN BLUE SPRINGS AREA



Source: Mississippi Mineral Resources Institute

5.10.3 Historical Occurrences

Although there is a relatively substantial potential for expansive soils to impact the region, diligent records of past events have not been kept. Nevertheless, local officials have pointed to several localized incidents that have occurred in the region in the past and had impacts on infrastructure as well as individual homeowners. Exact locational information could not be provided in most cases, but this knowledge of historic events occurring is evidence that there is some cause for concern for future events.

5.10.4 Probability of Future Occurrences

Given the potential for future impacts based on mapping and past historical events, it is likely (between 50 and 100 percent annual probability) that future expansive soil events will occur.

5.11 LANDSLIDE

5.11.1 Background

A landslide is the downward and outward movement of slope-forming soil, rock, and vegetation, which is driven by gravity. Landslides may be triggered by both natural and human-caused changes in the environment, including heavy rain, rapid snow melt, steepening of slopes due to construction or erosion, earthquakes, volcanic eruptions, and changes in groundwater levels.

There are several types of landslides: rock falls, rock topple, slides, and flows. Rock falls are rapid movements of bedrock, which result in bouncing or rolling. A topple is a section or block of rock that rotates or tilts before falling to the slope below. Slides are movements of soil or rock along a distinct surface of rupture, which separates the slide material from the more stable underlying material. Mudflows, sometimes referred to as mudslides, mudflows, lahars or debris avalanches, are fast-moving rivers of rock, earth, and other debris saturated with water. They develop when water rapidly accumulates in the ground, such as heavy rainfall or rapid snowmelt, changing the soil into a flowing river of mud or “slurry.” Slurry can flow rapidly down slopes or through channels and can strike with little or no warning at avalanche speeds. Slurry can travel several miles from its source, growing in size as it picks up trees, cars, and other materials along the way. As the flows reach flatter ground, the mudflow spreads over a broad area where it can accumulate in thick deposits.

Landslides are typically associated with periods of heavy rainfall or rapid snow melt and tend to worsen the effects of flooding that often accompanies these events. In areas burned by forest and brush fires, a lower threshold of precipitation may initiate landslides. Some landslides move slowly and cause damage gradually, whereas others move so rapidly that they can destroy property and take lives suddenly and unexpectedly.

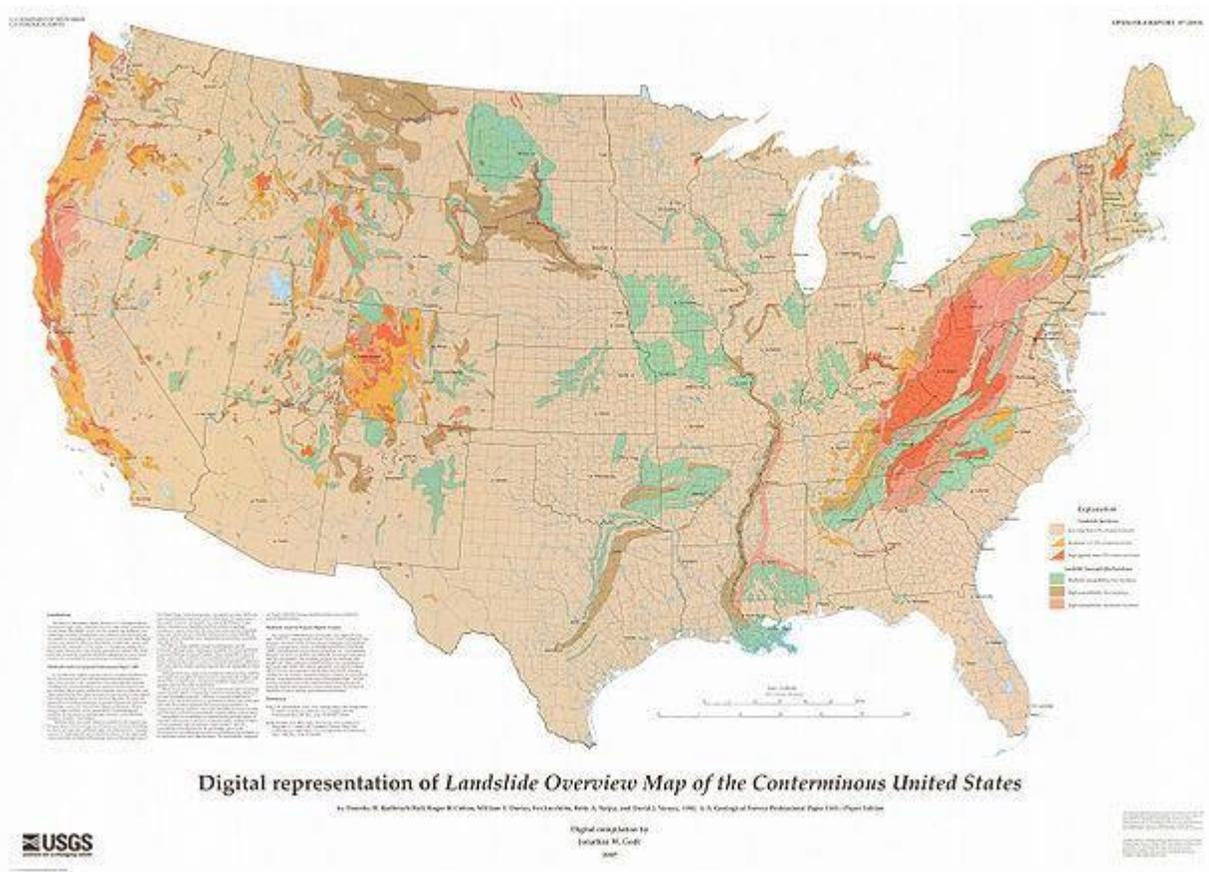
Among the most destructive types of debris flows are those that accompany volcanic eruptions. A spectacular example in the United States was a massive debris flow resulting from the 1980 eruptions of Mount St. Helens, Washington. Areas near the bases of many volcanoes in the Cascade Mountain Range of California, Oregon, and Washington are at risk from the same types of flows during future volcanic eruptions.

SECTION 5: HAZARD PROFILES

Areas that are generally prone to landslide hazards include previous landslide areas, the bases of steep slopes, the bases of drainage channels, and developed hillsides where leach-field septic systems are used. Areas that are typically considered safe from landslides include areas that have not moved in the past, relatively flat-lying areas away from sudden changes in slope, and areas at the top or along ridges set back from the tops of slopes.

According to the United States Geological Survey, each year landslides cause \$5.1 billion in damage and between 25 and 50 deaths in the United States.¹¹ **Figure 5.14** delineates areas where large numbers of landslides have occurred and areas that are susceptible to landsliding in the conterminous United States.¹²

Figure 5.14: LANDSLIDE OVERVIEW MAP OF THE CONTERMINOUS UNITED STATES¹³



¹¹ United States Geological Survey (USGS). United States Department of the Interior. “Landslide Hazards – A National Threat.” 2005.

¹² This map layer is provided in the U.S. Geological Survey Professional Paper 1183, Landslide Overview Map of the Conterminous United States, available online at: http://landslides.usgs.gov/html_files/landslides/nationalmap/national.html.

¹³ Susceptibility not indicated where same or lower than incidence. Susceptibility to landsliding was defined as the probable degree of response of [the areal] rocks and soils to natural or artificial cutting or loading of slopes, or to anomalously high precipitation. High, moderate, and low susceptibility are delimited by the same percentages used in classifying the incidence of landsliding. Some generalization was necessary at this scale, and several small areas of high incidence and susceptibility were slightly exaggerated.

Landslide Incidence		Landslide Susceptibility/Incidence	
	Low Incidence (less than 1.5% of area involved)		Moderate susceptibility/low incidence
	Moderate Incidence (1.5%-15% of area involved)		High susceptibility/low incidence
	High Incidence (greater than 15% of area involved)		High susceptibility/moderate incidence

Source: United States Geological Survey

5.11.2 Location and Spatial Extent

Landslides occur along steep slopes when the pull of gravity can no longer be resisted (often due to heavy rain). Human development can also exacerbate risk by building on previously undevelopable steep slopes. Landslides are possible throughout the MEMA District 2 Region, though the risk is relatively low.

According to **Figure 5.15** below, the entire region falls under a low incidence area. This indicates that less than 1.5 percent of the area is involved in landsliding.

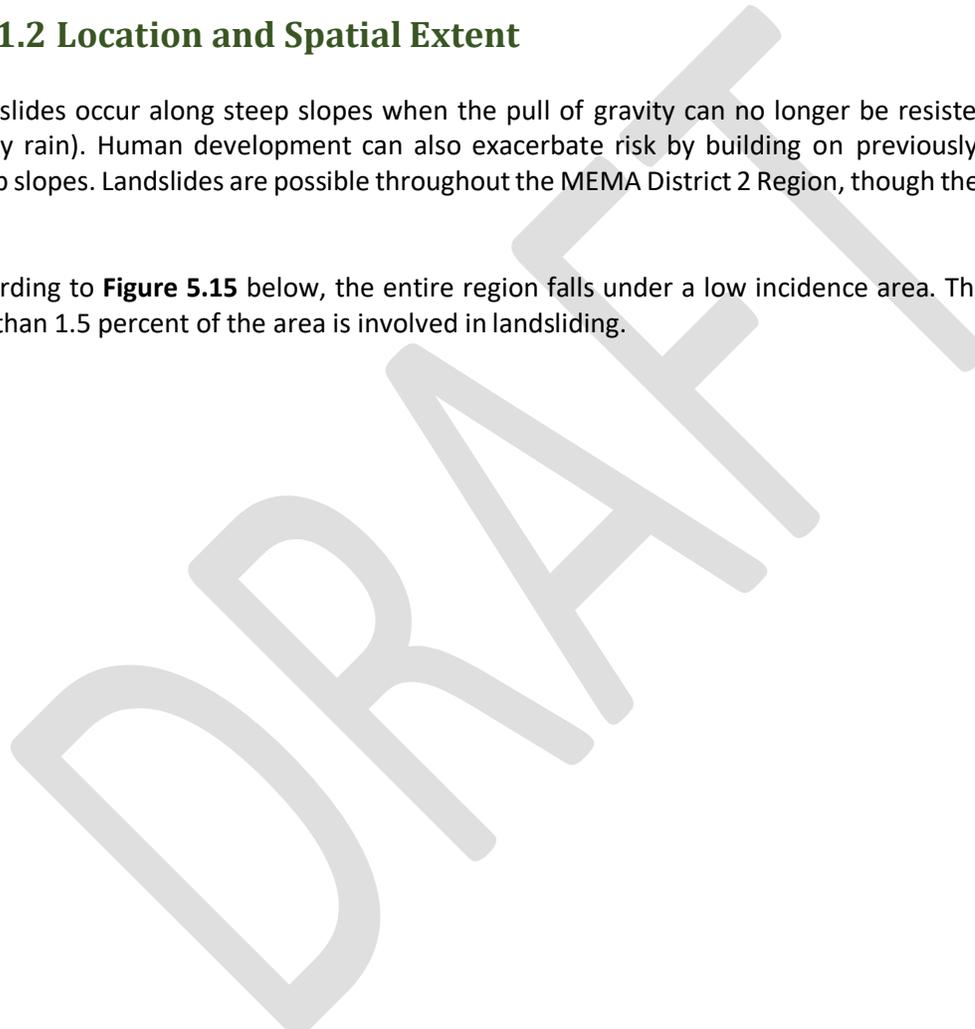
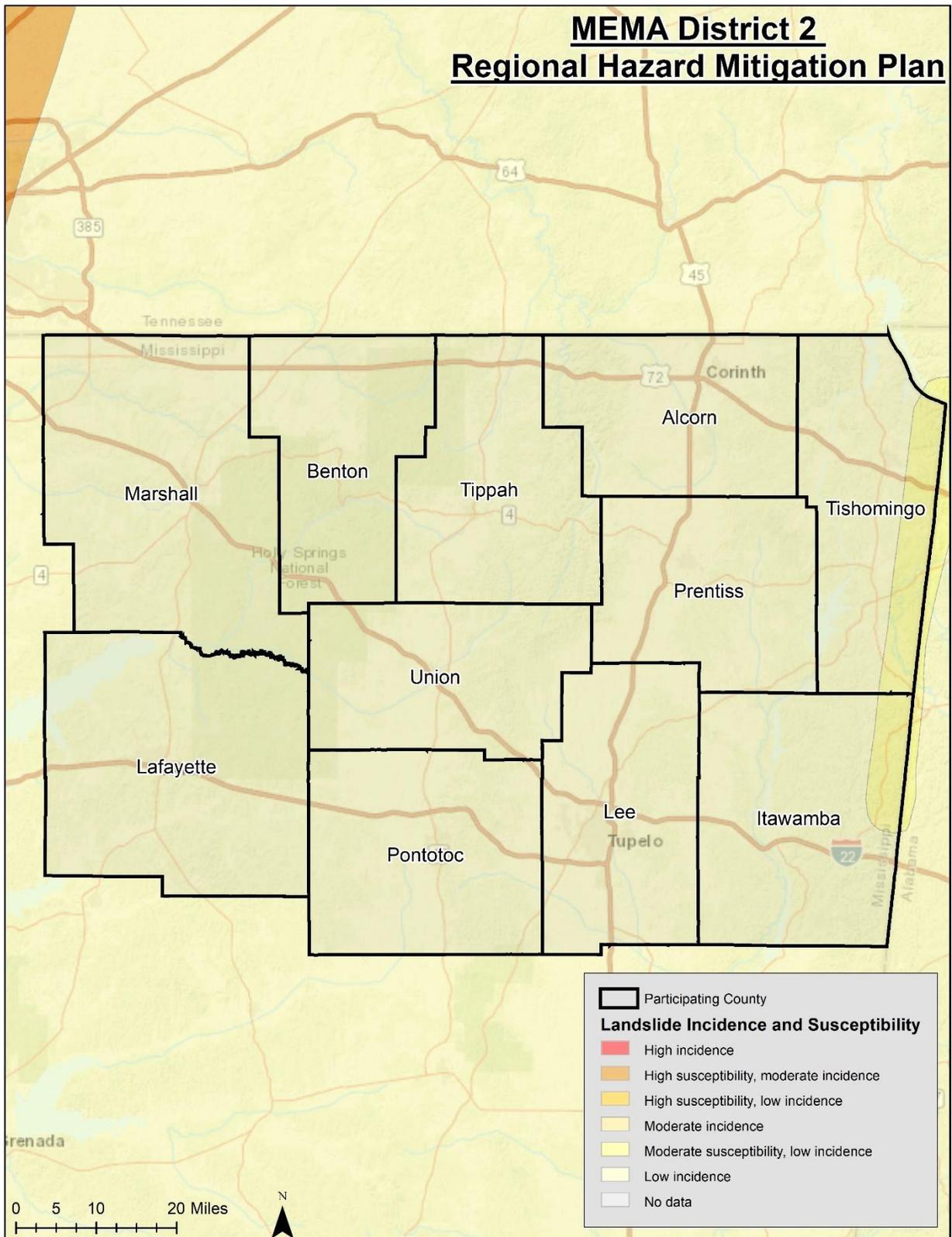


Figure 5.15: LANDSLIDE SUSCEPTIBILITY MAP OF THE MEMA DISTRICT 2 REGION



5.11.3 Historical Occurrences

There is no extensive history of landslides in the MEMA District 2 Region since the last plan update and prior. Landslide events typically occur in isolated areas, but no major landslide events were reported.

5.11.4 Probability of Future Occurrences

Based on historical information and the USGS susceptibility index, the probability of future landslide and land subsidence events is unlikely (less than 1 percent probability). The USGS data indicates that all areas in the MEMA District 2 Region have a low incidence rate and nearly the entire region also has low susceptibility to landsliding activity. There is a small area along the region's eastern border that has moderate susceptibility to landslides. Local conditions may become more favorable for landslides due to heavy rain, for example. This would increase the likelihood of occurrence. It should also be noted that some areas in the MEMA District 2 Region have greater risk than others given factors such as steepness on slope and modification of slopes.

5.12 LAND SUBSIDENCE / SINKHOLE

5.12.1 Background

Land subsidence is the gradual settling or sudden sinking of the Earth's surface due to the subsurface movement of earth materials. This can occur over a large area or a small spot, creating a sinkhole. Causes of land subsidence include groundwater pumpage, aquifer system compaction, drainage of organic soils, underground mining, hydrocompaction, natural compaction, sinkholes, and thawing permafrost.

The geological composition of an area impacts the potential for subsidence. Karst and evaporative rock contribute to land subsidence. Karst is distinctive topography in which the landscape is largely shaped by the dissolving action of water on carbonate bedrock (usually limestone, dolomite, or marble). As groundwater flows, voids are created from dissolving subsurface foundations. Karst topography includes land subsidence in the form of sink holes, which is brought on by sinking soils resulting from caves or cavities below the surface. Evaporative rock (salt and gypsum) is soluble in water and large cavity formations can occur. Sink holes or cavity collapses occur when these underground voids are created naturally, or artificially, and then collapse due to natural or human induced forces.

Underground mining of coal, salt, limestone, and gypsum contribute to subsidence. Most mining is accomplished by direct human action utilizing heavy machinery to remove the material; however, with salt there are cases where pressurized water is used to wash-out the deposit (solution mining). All of these mines create voids under the Earth's surface. Several key factors determining the potential for these voids to collapse include depth, mining technique used, types of rock and or soils, and development on the ground surface. Subsidence causes regional drainage patterns to change. This can impact flooding, back up storm drains, and damage infrastructure. Subsidence can also negatively impact riverine flooding by altering the topography and rupture land surface.

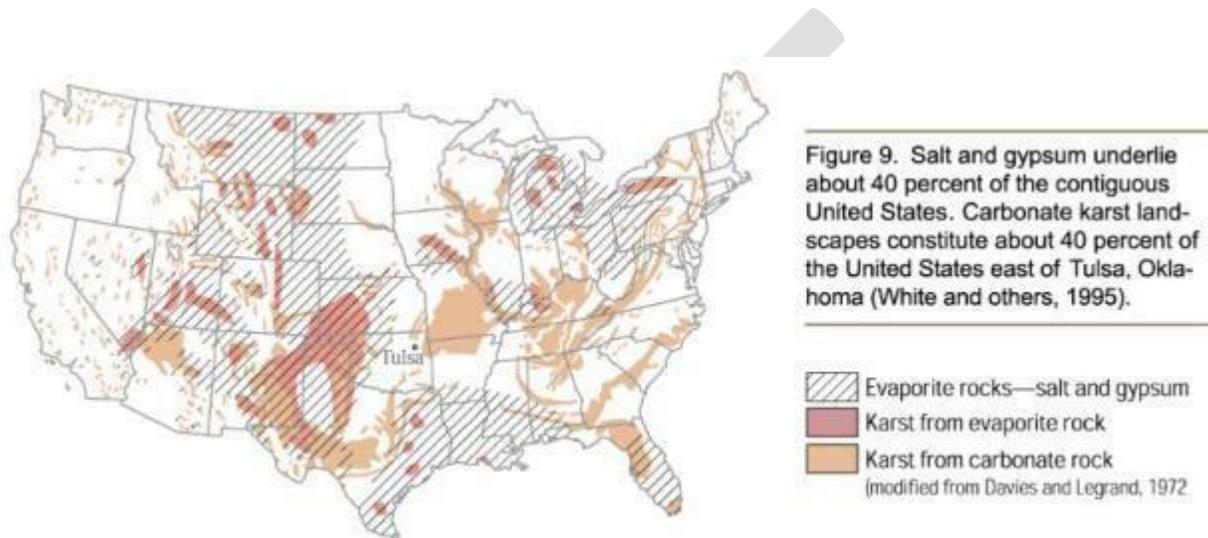
5.12.2 Location and Spatial Extent

SECTION 5: HAZARD PROFILES

According to the U.S. Geological Survey (USGS), subsidence affects an estimated 17,000 square miles in 45 states, including Mississippi. Salt and gypsum underlie about 35 to 40 percent of the United States, though in many areas they are buried at great depths.

Figure 5.16 shows the location of rock types associated with subsidence in the United States. It indicates that there are areas in the MEMA District 2 Region underlain with karst from carbonate rock.

Figure 16: MAP OF ROCK TYPES ASSOCIATED WITH SUBSIDENCE IN THE UNITED STATES



Source: United States Geological Survey

5.12.3 Historical Occurrences

Although there is no extensive recorded history of land subsidence in the MEMA District 2 Region, anecdotal evidence of isolated incidents have been reported. Local county officials have noted the impacts from these swings and changes in soil as roads and other infrastructure have experienced large cracks and breaks, causing stops in daily operations and significant costs to local, state, and federal budgets. Often the cost to repair this infrastructure can be in the range of millions of dollars depending on the degree of damage and necessity for quick repairs.

Lafayette County offers several examples of historical incidents of land subsidence and sinkholes that have occurred. One recent incident occurred on April 29, 2015 on Highway 6 in Oxford where a sinkhole formed beneath the road, creating a large hole in the right lane of the eastbound section of the highway. The erosion itself was extensive, reaching across both lanes. This incident caused traffic delays, but could have caused serious injuries and/or fatalities if a vehicle had hit the hole in the road. A photo of the hole can be seen below.

Another example of an historic incident was at Sneed's Ace Hardware on University Drive. Although local officials couldn't recall the exact date, there was a significant impact to the parking lot.

5.12.4 Probability of Future Occurrences

The probability of future land subsidence events in the region is possible (between 1 and 50 percent annual probability). The potential for land subsidence may be impacted by local conditions such as heavy rain or extremely dry periods.

WIND-RELATED HAZARDS

5.13 HURRICANE AND TROPICAL STORM

5.13.1 Background

Hurricanes and tropical storms are classified as cyclones and defined as any closed circulation developing around a low-pressure center in which the winds rotate counter-clockwise in the Northern Hemisphere (or clockwise in the Southern Hemisphere) and whose diameter averages 10 to 30 miles across. A tropical cyclone refers to any such circulation that develops over tropical waters. Tropical cyclones act as a “safety-valve,” limiting the continued build-up of heat and energy in tropical regions by maintaining the atmospheric heat and moisture balance between the tropics and the pole-ward latitudes. The primary damaging forces associated with these storms are high-level sustained winds, heavy precipitation, and tornadoes.

The key energy source for a tropical cyclone is the release of latent heat from the condensation of warm water. Their formation requires a low-pressure disturbance, warm sea surface temperature, rotational force from the spinning of the earth, and the absence of wind shear in the lowest 50,000 feet of the atmosphere. The majority of hurricanes and tropical storms form in the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico during the official Atlantic hurricane season, which encompasses the months of June through November. The peak of the Atlantic hurricane season is in early to mid-September and the average number of storms that reach hurricane intensity per year in the Atlantic basin is about six.

As an incipient hurricane develops, barometric pressure (measured in millibars or inches) at its center falls and winds increase. If the atmospheric and oceanic conditions are favorable, it can intensify into a tropical depression. When maximum sustained winds reach or exceed 39 miles per hour, the system is designated a tropical storm, given a name, and is closely monitored by the National Hurricane Center in Miami, Florida. When sustained winds reach or exceed 74 miles per hour the storm is deemed a hurricane. Hurricane intensity is further classified by the Saffir-Simpson Scale (**Table 5.20**), which rates hurricane intensity on a scale of 1 to 5, with 5 being the most intense.

Table 5.20: SAFFIR-SIMPSON SCALE

Category	Maximum Sustained Wind Speed (MPH)
1	74–95
2	96–110
3	111–129
4	130–156
5	157 +

Source: National Hurricane Center

SECTION 5: HAZARD PROFILES

The Saffir-Simpson Scale categorizes hurricane intensity linearly based upon maximum sustained winds, barometric pressure and storm surge potential, which are combined to estimate potential damage. Categories 3, 4, and 5 are classified as “major” hurricanes and, while hurricanes within this range comprise only 20 percent of total tropical cyclone landfalls, they account for over 70 percent of the damage in the United States. **Table 5.21** describes the damage that could be expected for each category of hurricane. Damage during hurricanes may also result from spawned tornadoes, storm surge, and inland flooding associated with heavy rainfall that usually accompanies these storms.

Table 5.21: HURRICANE DAMAGE CLASSIFICATIONS

Storm Category	Damage Level	Description of Damages	Photo Example
1	MINIMAL	No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Also, some coastal flooding and minor pier damage.	
2	MODERATE	Some roofing material, door, and window damage. Considerable damage to vegetation, mobile homes, etc. Flooding damages piers and small craft in unprotected moorings may break their moorings.	
3	EXTENSIVE	Some structural damage to small residences and utility buildings, with a minor amount of curtainwall failures. Mobile homes are destroyed. Flooding near the coast destroys smaller structures, with larger structures damaged by floating debris. Terrain may be flooded well inland.	
4	EXTREME	More extensive curtainwall failures with some complete roof structure failure on small residences. Major erosion of beach areas. Terrain may be flooded well inland.	
5	CATASTROPHIC	Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. Flooding causes major damage to lower floors of all structures near the shoreline. Massive evacuation of residential areas may be required.	

Source: National Hurricane Center; Federal Emergency Management Agency

5.13.2 Location and Spatial Extent

Hurricanes and tropical storms threaten the entire Atlantic and Gulf seaboard of the United States. While coastal areas are most directly exposed to the brunt of landfalling storms, their impact is often felt hundreds of miles inland and they can affect the MEMA District 2 Region. All areas in the MEMA District 2 Region are equally susceptible to hurricane and tropical storms.

5.13.3 Historical Occurrences

According to the National Hurricane Center’s historical storm track records, 48 hurricane or tropical storm/depression tracks have passed within 75 miles of the MEMA District 2 Region since 1860. This includes: 1 Category 1 hurricane, 2 Category 4 hurricanes, 1 Category 5 hurricane, 27 tropical storms, and 17 tropical depressions.¹⁴

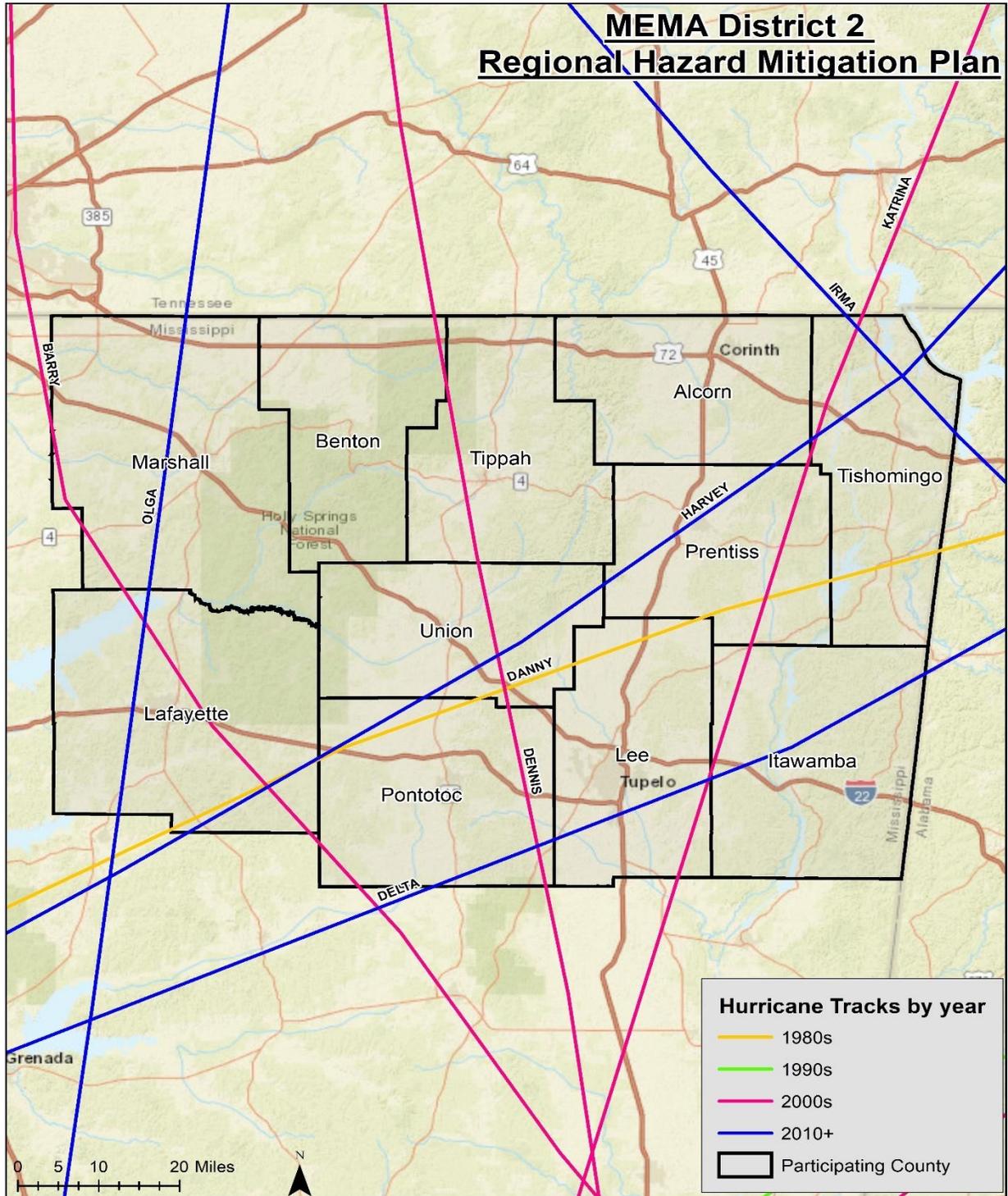
¹⁴ These storm track statistics include tropical depressions, tropical storms, and hurricanes. Lesser events may still cause significant local impact in terms of rainfall and high winds.

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A total of 24 tracks passed directly through the region as shown in **Figure 5.17**. These events were all tropical storm or tropical depression strength at the time they traversed the region. **Table 5.22** provides the date of occurrence, name (if applicable), maximum wind speed (as recorded within 75 miles of the MEMA District 2 Region) and category of the storm based on the Saffir-Simpson Scale for each event.

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Figure 5.17: HISTORICAL HURRICANE STORM TRACKS WITHIN 75 MILES OF THE MEMA DISTRICT 2 REGION



Source: National Oceanic and Atmospheric Administration, National Hurricane Center

Table 5.22: HISTORICAL STORM TRACKS WITHIN 75 MILES OF THE MEMA 2 DISTRICT REGION (1850–2020)

Date of Occurrence	Storm Name	Maximum Wind Speed (knots)	Storm Category
10/3/1860	UNNAMED	40	Tropical Storm
7/13/1872	UNNAMED	30	Tropical Depression
7/7/1891	UNNAMED	30	Tropical Depression
7/8/1891	UNNAMED	25	Tropical Depression
8/20/1888	UNNAMED	60	Tropical Storm
8/28/1890	UNNAMED	35	Tropical Storm
8/29/1881	UNNAMED	40	Tropical Storm
9/2/1879	UNNAMED	40	Tropical Storm
9/1/1880	UNNAMED	30	Tropical Depression
9/9/1893	UNNAMED	35	Tropical Storm
8/16/1901	UNNAMED	35	Tropical Storm
10/10/1905	UNNAMED	30	Tropical Depression
9/28/1906	UNNAMED	40	Tropical Storm
9/15/1912	UNNAMED	35	Tropical Storm
9/30/1915	UNNAMED	50	Tropical Storm
7/7/1916	UNNAMED	40	Tropical Storm
10/19/1916	UNNAMED	45	Tropical Storm
10/18/1923	UNNAMED	40	Tropical Storm
9/2/1932	UNNAMED	35	Tropical Storm
9/20/1932	UNNAMED	35	Tropical Storm
6/17/1934	UNNAMED	35	Tropical Storm
6/17/1939	UNNAMED	25	Tropical Depression
9/5/1948	UNNAMED	40	Tropical Storm
9/5/1949	UNNAMED	40	Tropical Storm
8/31/1950	BAKER	35	Tropical Storm
9/8/1950	EASY	25	Tropical Depression
6/28/1957	AUDREY	40	Tropical Storm
9/16/1960	ETHEL	30	Tropical Depression
8/18/1969	CAMILLE	50	Tropical Storm
7/12/1979	BOB	30	Tropical Depression
9/13/1979	FREDERIC	65	Category 1
8/16/1985	DANNY	30	Tropical Depression
8/27/1992	ANDREW	30	Tropical Depression
8/4/1995	ERIN	20	Tropical Depression
8/7/2001	BARRY	15	Tropical Depression
9/27/2002	ISIDORE	20	Tropical Depression
6/12/2005	ARLENE	25	Tropical Depression
7/11/2005	DENNIS	30	Tropical Depression
8/30/2005	KATRINA	50	Tropical Storm
9/12/2007	HUMBERTO	20	Tropical Depression
8/15/2008	FAY	60	Tropical Storm
8/16/2009	CLAUDETTE	50	Tropical Storm
6/20/2017	CINDY	60	Tropical Storm
8/17/2017	HARVEY	125	Category 4
8/30/2017	IRMA	160	Category 5
5/25/2018	ALBERTO	50	Tropical Storm
9/17/2020	BETA	50	Tropical Storm
10/4/2020	DELTA	120	Category 4

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Source: National Hurricane Center

Federal records indicate that two disaster declarations were made in 2005 (Hurricane Dennis and Hurricane Katrina) in the MEMA District 2 Region.¹⁵ Hurricane and tropical storm events can cause substantial damage in the area due to high winds and flooding.

The National Centers for Environmental Information also reported three hurricane or tropical storm events in the MEMA District 2 Region since 2004.¹⁶ These storms are listed in **Table 5.23** and are generally representative of storms with the greatest impact on the region over that time period.

**Table 5.23: HISTORICAL HURRICANE/TROPICAL STORM OCCURRENCES IN THE
MEMA DISTRICT 2 REGION**

Date of Occurrence	Storm Name	Deaths/Injuries	Property Damage
9/16/2004	Hurricane Ivan	1/0	\$25,266
7/11/2005	Hurricane Dennis	0/0	\$30,548
8/29/2005	Hurricane Katrina	0/0	\$219,943

Source: National Centers for Environmental Information

Flooding and high winds from hurricanes and tropical storms can cause damage throughout the region. Anecdotes are available from NCEI for the major storms that have impacted the region as found below:

Hurricane Ivan – September 16, 2004

Hurricane Ivan had weakened to a tropical storm before bringing strong winds to northeast Mississippi. Some trees and power lines were blown down. One person was killed in Lee County when he came in contact with an antenna loaded with wires after the antenna had been knocked down.

Hurricane Dennis – July 10, 2005

The remnants of Hurricane Dennis brought windy conditions to northeast Mississippi. A church under construction was damaged in Calhoun County. Several trees were blown down in the area. A light pole was broken in Lee County. A fallen tree damaged a house in Itawamba County.

Hurricane Katrina – August 29, 2005

Hurricane Katrina had weakened to tropical storm strength when it reached north Mississippi. An electrical transformer was blown down on a house in Oxford (Lafayette County). Some awnings were ripped off in Ripley (Tippah County). Several buildings were damaged in Calhoun County due to the winds. Numerous trees and power lines along with some telephone poles were blown down. Some trees fell on cars, mobile homes and apartment buildings. Four to eight inches of rain fell in some parts of northeast Mississippi producing some flash flooding. Overall at least 100,000 customers lost power.

¹⁵ Not all of the participating counties were declared disaster areas for these storms. A complete listing of historical disaster declarations, including the affected counties, can be found in Section 4: *Hazard Identification*.

¹⁶ These flood events are only inclusive of those reported by the National Centers for Environmental Information (NCEI) from 1996 through April 2020. It is likely that additional occurrences have occurred and have gone unreported. As additional local data becomes available, this hazard profile will be amended.

5.13.4 Probability of Future Occurrences

Given the inland location of the region, it is more likely to be affected by remnants of hurricane and tropical storm systems (as opposed to a major hurricane) which may result in flooding or high winds. The probability of being impacted is less than coastal areas, but still remains a real threat to the MEMA District 2 Region due to induced events like flooding. Based on historical evidence, the probability level of future occurrence is possible (between 1 and 50 percent annual probability). Given the regional nature of the hazard, all areas in the region are equally exposed to this hazard. However, when the region is impacted, the damage could be significant, threatening lives and property throughout the planning area.

5.14 THUNDERSTORM (WIND, HAIL, LIGHTNING)

5.14.1 Background

THUNDERSTORM / HIGH WIND

Thunderstorms can produce a variety of accompanying hazards including wind (discussed here), hail, and lightning. Although thunderstorms generally affect a small area, they are very dangerous may cause substantial property damage.

Three conditions need to occur for a thunderstorm to form. First, it needs moisture to form clouds and rain. Second, it needs unstable air, such as warm air that can rise rapidly (this often referred to as the “engine” of the storm). Third, thunderstorms need lift, which comes in the form of cold or warm fronts, sea breezes, mountains, or the sun’s heat. When these conditions occur simultaneously, air masses of varying temperatures meet, and a thunderstorm is formed. These storm events can occur singularly, in lines, or in clusters. Furthermore, they can move through an area very quickly or linger for several hours.

According to the National Weather Service, more than 100,000 thunderstorms occur each year, though only about 10 percent of these storms are classified as “severe.” A severe thunderstorm occurs when the storm produces at least one of these three elements: 1) hail of three-quarters of an inch, 2) a tornado, or 3) winds of at least 58 miles per hour.

Downbursts are also possible with thunderstorm events. Such events are an excessive burst of wind in excess of 125 miles per hour. They are often confused with tornadoes. Downbursts are caused by down drafts from the base of a convective thunderstorm cloud. It occurs when rain-cooled air within the cloud becomes heavier than its surroundings. Thus, air rushes towards the ground in a destructive yet isolated manner. There are two types of downbursts. Downbursts less than 2.5 miles wide, duration less than 5 minutes, and winds up to 168 miles per hour are called “microbursts.” Larger events greater than 2.5 miles at the surface and longer than 5 minutes with winds up to 130 miles per hour are referred to as “macrobursts.”

HAILSTORM

Hailstorms are a potentially damaging outgrowth of severe thunderstorms. Early in the developmental stages of a hailstorm, ice crystals form within a low-pressure front due to the rapid rising of warm air into the upper atmosphere and the subsequent cooling of the air mass. Frozen droplets gradually

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accumulate on the ice crystals until they develop to a sufficient weight and fall as precipitation. Hail typically takes the form of spheres or irregularly-shaped masses greater than 0.75 inches in diameter. The size of hailstones is a direct function of the size and severity of the storm. High velocity updraft winds are required to keep hail in suspension in thunderclouds. The strength of the updraft is a function of the intensity of heating at the Earth’s surface. Higher temperature gradients relative to elevation above the surface result in increased suspension time and hailstone size. **Table 5.24** shows the TORRO Hailstorm Intensity Scale which is a way of measuring hail severity.

Table 5.24: TORRO HAILSTORM INTENSITY SCALE

	Intensity Category	Typical Hail Diameter (mm)*	Probable Kinetic Energy, J-m²	mm to inch conversion (inches)	Typical Damage Impacts
H0	Hard Hail	5	0-20	0 - 0.2	No damage
H1	Potentially Damaging	5-15	>20	0.2 - 0.6	Slight general damage to plants, crops
H2	Significant	10-20	>100	0.4 - 0.8	Significant damage to fruit, crops, vegetation
H3	Severe	20-30	>300	0.8 - 1.2	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
H4	Severe	25-40	>500	1.0 - 1.6	Widespread glass damage, vehicle bodywork damage
H5	Destructive	30-50	>800	1.2 - 2.0	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
H6	Destructive	40-60		1.6 - 2.4	Bodywork of grounded aircraft dented, brick walls pitted
H7	Destructive	50-75		2.0 - 3.0	Severe roof damage, risk of serious injuries
H8	Destructive	60-90		1.6 - 3.5	(Severest recorded in the British Isles) Severe damage to aircraft bodywork
H9	Super Hailstorms	75-100		3.0 - 3.9	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
H10	Super Hailstorms	>100			Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

Source: <http://www.torro.org.uk/site/hscale.php>

LIGHTNING

Lightning is a discharge of electrical energy resulting from the buildup of positive and negative charges within a thunderstorm, creating a “bolt” when the buildup of charges becomes strong enough. This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning can reach temperatures approaching 50,000 degrees Fahrenheit. Lightning rapidly heats the sky as it flashes but the surrounding air cools following the bolt. This rapid heating and cooling of the surrounding air

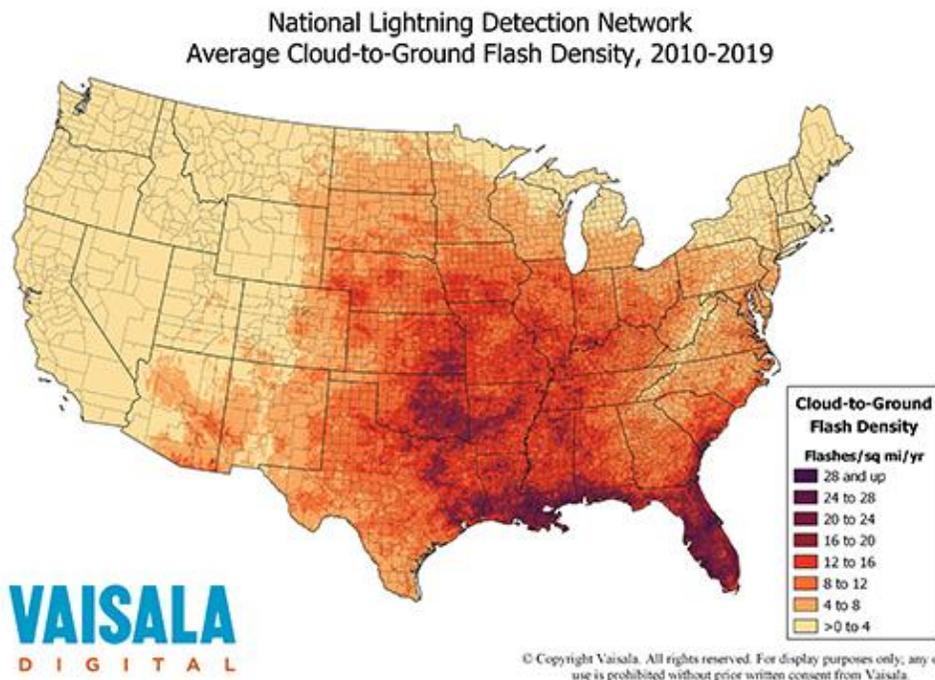
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causes the thunder which often accompanies lightning strikes. While most o f t e n affiliated with severe thunderstorms, lightning may also strike outside of heavy rain and might occur as far as 10 miles away from any rainfall.

Lightning strikes occur in very small, localized areas. For example, they may strike a building, electrical transformer, or even a person. According to FEMA, lightning injures an average of 300 people and kills 80 people each year in the United States. Direct lightning strikes also have the ability to cause significant damage to buildings, critical facilities, and infrastructure largely by igniting a fire. Lightning is also responsible for igniting wildfires that can result in widespread damages to property.

Figure 5.18 shows the Vaisala’s U.S. National Lightning Detection Network which indicates the average flash density per foot per square kilometer per year.

Figure 5.18: LIGHTNING FLASH DENSITY IN THE UNITED STATES



Source: Vaisala United States National Lightning Detection Network

5.14.2 Location and Spatial Extent

THUNDERSTORM / HIGH WIND

A thunderstorm event is an atmospheric hazard, and thus has no geographic boundaries. It is typically a widespread event that can occur in all regions of the United States. However, thunderstorms are most common in the central and southern states because atmospheric conditions in those regions are favorable for generating these powerful storms. It is assumed that the MEMA District 2 Region has uniform exposure to an event and the spatial extent of an impact could be large.

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The following Beaufort scale is an empirical measure for the intensity of the wind associated with windstorms.

Table 5.25A: Beaufort Wind Scale

Beaufort Scale					
NUMBER	WIND SPEED (MPH)	DESCRIPTION	WAVE HEIGHT (FT)	SEA CONDITIONS	LAND CONDITIONS
0	<1	Calm	0	Flat.	Calm. Smoke rises vertically.
1	1-3	Light air	0.33	Ripples without crests.	Wind motion visible in smoke.
2	3-7	Light breeze	0.66	Small wavelets.	Wind felt on exposed skin. Leaves rustle.
3	8-12	Gentle breeze	2	Large wavelets.	Leaves and smaller twigs in constant motion.
4	13-17	Moderate breeze	3.3	Small waves.	Dust and loose paper rise. Small branches begin to move.
5	18-24	Fresh breeze	6.6	Moderate (1.2 m) longer waves. Some foam and spray.	Small trees sway.
6	25-30	Strong breeze	9.9	Large waves with foam crests and some spray.	Large branches in motion. Whistling heard in overhead wires. Umbrella use difficult.
7	31-38	High wind, Moderate Gale, Near Gale	13.1	Sea heaps up and foam begins to streak.	Whole trees in motion. Effort needed to walk against the wind.
8	39-46	Fresh Gale	18	Moderately high waves with breaking crests forming spindrift.	Twigs broken from trees. Cars veer on road.
9	47-54	Strong Gale	23	High waves (6-7 m) with dense foam. Wave crests start to roll over. Considerable spray.	Larger branches break off trees, and some small trees blow over. Construction/temporary signs and barricades blow over. Damage to circus tents and canopies.

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Beaufort Scale					
NUMBER	WIND SPEED (MPH)	DESCRIPTION	WAVE HEIGHT (FT)	SEA CONDITIONS	LAND CONDITIONS
10	55-63	Whole Gale/Storm	29.5	Very high waves. The sea surface is white and there is considerable tumbling.	Trees uprooted. Considerable structural damage.
11	64-72	Violent storm	37.7	Exceptionally high waves.	Widespread vegetation and structural damage.
12	≥73	Hurricane-force	≥46	Huge waves. Sea is completely white with foam and spray. Air is filled with driving	Massive and widespread damage to structures.

Source: www.spc.noaa.gov

Although wind damage associated with thunderstorms is normally minor, the extent to which MEMA District 2 could be affected by high winds is not insignificant. As an example of the intensity of winds that MEMA District 2 may experience, a thunderstorm on record in Nettleton in Lee County indicated damage associated with 70 kts, which equates to 80 mile per hour straight line winds and a Number 12 on the Beaufort Scale. In this scenario, building damage would be significant, power lines downed, trees uprooted, and loss of life possible. This same category of thunderstorm wind could also occur in Benton County. Historically, windstorms in the region fall within the 35-50kts, which equates to 40-57 miles per hour and a Number 8-10 on the Beaufort Scale.

HAILSTORM

Hailstorms frequently accompany thunderstorms, so their locations and spatial extents coincide. It is assumed that the MEMA District 2 Region is uniformly exposed to severe thunderstorms; therefore, all areas of the region are equally exposed to hail which may be produced by such storms.

LIGHTNING

Lightning occurs randomly, therefore it is impossible to predict where and with what frequency it will strike. It is assumed that all of the MEMA District 2 Region is uniformly exposed to lightning.

5.14.3 Historical Occurrences

THUNDERSTORM / HIGH WIND

Severe storms were at least partially responsible for 19 disaster declarations in the MEMA District 2 Region in between 1971 and 2021.¹⁷ According to NCEI, there have been 1,427 reported thunderstorm and high wind events since 1955 in the MEMA District 2 Region.¹⁸ These events caused over \$10.5 million in damages. There were also reports of 3 fatalities and 18 injuries. **Table 5.25** summarizes this information. Detailed thunderstorm and high wind event reports including date, magnitude, and associated damages for each event are presented in the county-specific annexes.

Table 5.26: SUMMARY OF THUNDERSTORM / HIGH WIND OCCURRENCES IN THE

MEMA DISTRICT 2 REGION

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Alcorn County	122	0/0	\$796,000
Benton County	44	0/0	\$606,500
Itawamba County	145	0/1	\$671,100
Lafayette County	135	1/2	\$935,100
Lee County	282	0/3	\$1,538,000
Marshall County	113	0/4	\$552,600
Pontotoc County	155	1/1	\$1,179,000
Prentiss County	91	0/0	\$612,000
Tippah County	94	0/2	\$727,500
Tishomingo County	143	0/1	\$1,375,000
Union County	103	1/4	\$1,510,000
MEMA DISTRICT 2 REGIONAL TOTAL	1,427	3/18	\$10,502,800

Source: National Centers for Environmental Information

HAILSTORM

According to the National Centers for Environmental Information, 891 recorded hailstorm events have affected the MEMA District 2 Region since 1958.¹⁹ **Table 5.26** is a summary of the hail events in the MEMA District 2 Region. Detailed information about each event that occurred in the region is provided in the

¹⁷ Not all of the participating counties were declared disaster areas for these storms. A complete listing of historical disaster declarations, including the affected counties, can be found in Section 4: *Hazard Identification*.

¹⁸ These thunderstorm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI) from 1955 through September 2021 and these high wind events are only inclusive of those reported by NCEI from 1996 through September 2021. It is likely that additional thunderstorm and high wind events have occurred in the MEMA District 2 Region. As additional local data becomes available, this hazard profile will be amended.

¹⁹ These hail events are only inclusive of those reported by the National Centers for Environmental Information (NCEI) from 1955 through September 2021. It is likely that additional hail events have affected the MEMA District 2 Region. As additional local data becomes available, this hazard profile will be amended.

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county-specific annexes. In all, hail occurrences resulted in over \$2.6 million in property damages, with significantly higher damages reported in Lee County and Pontotoc County. Hail ranged in diameter from 0.75 inches to 5.0 inches. It should be noted that hail is notorious for causing substantial damage to cars, roofs, and other areas of the built environment that may not be reported to the National Centers for Environmental Information. Furthermore, high losses in Lee County and Pontotoc County indicate that neighboring counties may also be subject to additional, unreported losses. Therefore, it is likely that damages are greater than the reported value. Additionally, a single storm event may have affected multiple counties.

Table 5.27: SUMMARY OF HAIL OCCURRENCES IN THE MEMA DISTRICT 2 REGION

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Alcorn County	75	0/0	\$38,550
Benton County	24	0/0	\$478,220
Itawamba County	78	0/0	\$131,590
Lafayette County	90	0/0	\$38,750
Lee County	207	0/0	\$807,090
Marshall County	57	0/0	\$27,420
Pontotoc County	93	0/0	\$735,600
Prentiss County	59	0/0	\$124,910
Tippah County	61	0/0	\$149,650
Tishomingo County	64	0/0	\$85,300
Union County	83	0/0	\$20,170
MEMA DISTRICT 2 REGIONAL TOTAL	891	0/0	\$2,637,250

Source: National Centers for Environmental Information

LIGHTNING

According to the National Centers for Environmental Information, there have been a total of 48 recorded lightning events in the MEMA District 2 Region since 1996.²⁰ These events resulted in almost \$1.8 million in damages, as listed in summary **Table 5.27**. Furthermore, lightning has caused ten injuries in the MEMA District 2 Region. Detailed information on historical lightning events can be found in the county-specific annexes.

It is certain that more than 48 events have impacted the region. Many of the reported events are those that cause damage, and it should be expected that damages are likely much higher for this hazard than what is reported.

Table 5.28: SUMMARY OF LIGHTNING OCCURRENCES IN THE MEMA DISTRICT 2 REGION

Location	Number of Occurrences	Deaths / Injuries	Property Damage
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²⁰ These lightning events are only inclusive of those reported by the National Centers for Environmental Information (NCEI) from 1996 through April 2020. It is certain that additional lightning events have occurred in the MEMA District 2 Region. As additional local data becomes available, this hazard profile will be amended.

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Alcorn County	6	0/1	\$85,000
Corinth	3	0/1	\$15,000
Farmington	0	0/0	\$0
Glen	1	0/0	\$15,000
Kossuth	1	0/0	\$50,000
Rienzi	0	0/0	\$0
Unincorporated Area	1	0/0	\$5,000
Benton County	2	0/0	\$75,000
Ashland	1	0/0	\$50,000
Hickory Flat	0	0/0	\$0
Snow Lake Shores	0	0/0	\$0
Unincorporated Area	1	0/0	\$25,000
Itawamba County	2	1/0	\$10,010
Fulton	0	0/0	\$0
Mantachie	1	0/0	\$10,000
Tremont	1	0/0	\$10
Unincorporated Area	0	0/0	\$0
Lafayette County	10	0/0	\$630,000
Abbeville	1	0/0	\$50,000
Oxford	7	0/0	\$560,000
Taylor	1	0/0	\$5,000
Unincorporated Area	1	0/0	\$15,000
Lee County	7	0/5	\$211,000
Baldwyn	0	0/0	\$0
Guntown	0	0/0	\$0
Nettleton	0	0/0	\$0
Plantersville	0	0/0	\$0
Saltillo	2	0/0	\$25,000
Shannon	0	0/0	\$0
Tupelo	3	0/5	\$106,000
Verona	1	0/0	\$50,000
Unincorporated Area	1	0/0	\$30,000
Marshall County	2	0/0	\$261,000
Byhalia	1	0/0	\$250,000
Holly Springs	2	0/0	\$11,000
Potts Camp	0	0/0	\$0
Unincorporated Area	0	0/0	\$0
Pontotoc County	3	0/0	\$166,000
Algoma	1	0/0	\$150,000
Ecru	0	0/0	\$0
Pontotoc (city)	2	0/0	\$16,000
Sherman	0	0/0	\$0
Thaxton	0	0/0	\$0
Toccopola	0	0/0	\$0
Unincorporated Area	0	0/0	\$0
Prentiss County	1	0/0	\$25,000
Booneville	1	0/0	\$25,000
Jumpertown	0	0/0	\$0

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Marietta	0	0/0	\$0
Unincorporated Area	0	0/0	\$0
Tippah County	5	0/0	\$26,000
Blue Mountain	0	0/0	\$0
Dumas	1	0/0	\$1,000
Falkner	0	0/0	\$0
Ripley	3	0/0	\$15,000
Walnut	1	0/0	\$10,000
Unincorporated Area	0	0/0	\$0
Tishomingo County	7	0/1	\$275,000
Belmont	0	0/0	\$0
Burnsville	2	0/0	\$160,000
Golden	0	0/0	\$0
Iuka	2	0/0	\$55,000
Paden	0	0/0	\$0
Tishomingo (town)	0	0/0	\$0
Unincorporated Area	3	0/1	\$60,000
Union County	3	0/0	\$51,000
Blue Springs	0	0/0	\$0
Myrtle	0	0/0	\$0
New Albany	1	0/0	\$1,000
Unincorporated Area	2	0/0	\$50,000
MEMA DISTRICT 2 REGIONAL TOTAL	48	1/7	1,815,000

Source: National Centers for Environmental Information

5.14.4 Probability of Future Occurrences

THUNDERSTORM / HIGH WIND

Given the high number of previous events, it is certain that thunderstorm events, including straight-line wind events, will occur in the future. This results in a probability level of highly likely (100 percent annual probability) for the entire planning area.

HAILSTORM

Based on historical occurrence information, it is assumed that the probability of future hail occurrences is highly likely (100 percent annual probability). Since hail is an atmospheric hazard, it is assumed that the entire MEMA District 2 Region has equal exposure to this hazard. It can be expected that future hail events will continue to cause minor damage to property and vehicles throughout the region.

LIGHTNING

Although there was not a high number of historical lightning events reported throughout the MEMA District 2 Region via NCEI data, it is a regular occurrence accompanied by thunderstorms. In fact, lightning events will assuredly happen on an annual basis, though all events will not cause damage.

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According to Vaisala’s U.S. National Lightning Detection Network (NLDN), the MEMA District 2 Region is located in an area of the country that experienced an average of 6 to 8 lightning flashes per square kilometer per year between 1997 and 2010. Therefore, the probability of future events is highly likely (100 percent annual probability). It can be expected that future lightning events will continue to threaten life and cause minor property damages throughout the region.

5.15 TORNADO

5.15.1 Background

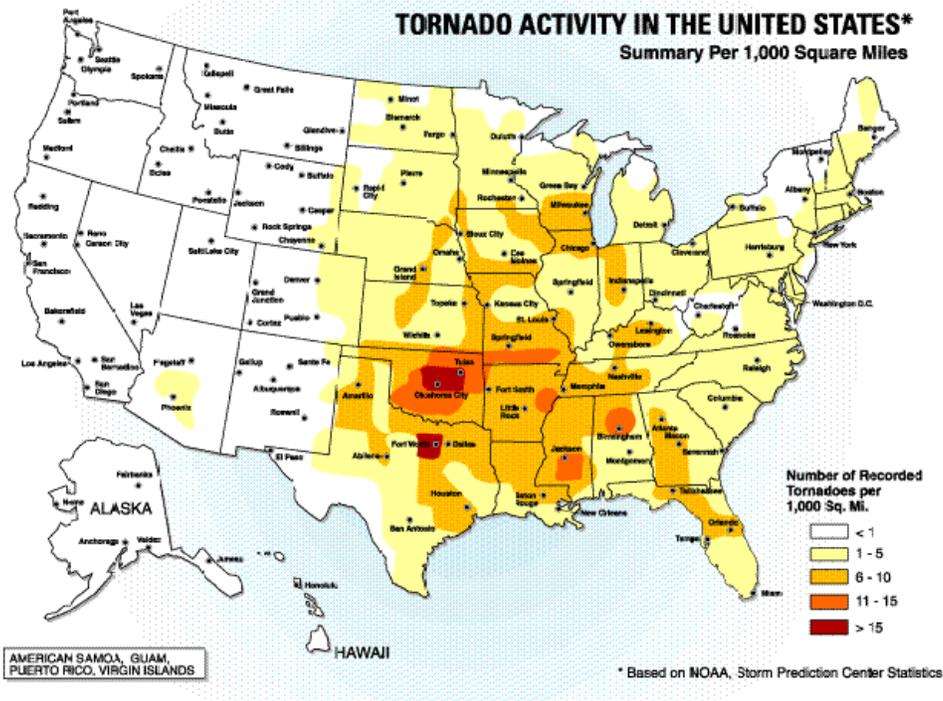
A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud extending to the ground. Tornadoes are most often generated by thunderstorm activity (but sometimes result from hurricanes and other tropical storms) when cool, dry air intersects and overrides a layer of warm, moist air forcing the warm air to rise rapidly. The damage caused by a tornado is a result of the high wind velocity and wind-blown debris, also accompanied by lightning or large hail. According to the National Weather Service, tornado wind speeds normally range from 40 miles per hour to more than 300 miles per hour. The most violent tornadoes have rotating winds of 250 miles per hour or more and are capable of causing extreme destruction and turning normally harmless objects into deadly missiles.

Each year, an average of over 800 tornadoes is reported nationwide, resulting in an average of 80 deaths and 1,500 injuries.²¹ According to the NOAA Storm Prediction Center (SPC), the highest concentration of tornadoes in the United States has been in Oklahoma, Texas, Kansas, and Florida respectively. Although the Great Plains region of the Central United States does favor the development of the largest and most dangerous tornadoes (earning the designation of “tornado alley”), Florida experiences the greatest number of tornadoes per square mile of all U.S. states (SPC, 2002). **Figure 5.19** shows tornado activity in the United States based on the number of recorded tornadoes per 1,000 square miles.

Figure 5.19: TORNADO ACTIVITY IN THE UNITED STATES

²¹ NOAA

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Source: Federal Emergency Management Agency

Tornadoes are more likely to occur during the months of March through May and are most likely to form in the late afternoon and early evening. Most tornadoes are a few dozen yards wide and touch down briefly, but even small short-lived tornadoes can inflict tremendous damage. Highly destructive tornadoes may carve out a path over a mile wide and several miles long.

The destruction caused by tornadoes ranges from light to inconceivable depending on the intensity, size, and duration of the storm. Typically, tornadoes cause the greatest damage to structures of light construction, including residential dwellings (particularly mobile homes). Tornadoic magnitude is reported according to the Fujita and Enhanced Fujita Scales. Tornado magnitudes prior to 2005 were determined using the traditional version of the Fujita Scale (**Table 5.28**). Tornado magnitudes that were determined in 2005 and later were determined using the Enhanced Fujita Scale (**Table 5.29**).

Table 5.29: THE FUJITA SCALE (EFFECTIVE PRIOR TO 2005)

F-SCALE NUMBER	INTENSITY	WINDSPEED	TYPE OF DAMAGE DONE
F0	GALE TORNADO	40–72 MPH	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages to sign boards.
F1	MODERATE TORNADO	73–112 MPH	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
F2	SIGNIFICANT TORNADO	113–157 MPH	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.
F3	SEVERE TORNADO	158–206 MPH	Roof and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted.
F4	DEVASTATING TORNADO	207–260 MPH	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
F5	INCREDIBLE TORNADO	261–318 MPH	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel re-enforced concrete structures badly damaged.
F6	INCONCEIVABLE TORNADO	319–379 MPH	These winds are very unlikely. The small area of damage they might produce would probably not be recognizable along with the mess produced by F4 and F5 wind that would surround the F6 winds. Missiles, such as cars and refrigerators would do serious secondary damage that could not be directly identified as F6 damage. If this level is ever achieved, evidence for it might only be found in some manner of ground swirl pattern, for it may never be identifiable through engineering studies.

Source: National Weather Service

Table 5.30: THE ENHANCED FUJITA SCALE (EFFECTIVE 2005 AND LATER)

EF-SCALE NUMBER	INTENSITY PHRASE	3 SECOND GUST (MPH)	TYPE OF DAMAGE DONE
EF0	GALE	65–85	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages to sign boards.
EF1	MODERATE	86–110	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
EF2	SIGNIFICANT	111–135	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.
EF3	SEVERE	136–165	Roof and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted.
EF4	DEVASTATING	166–200	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
EF5	INCREDIBLE	Over 200	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel re-enforced concrete structures badly damaged.

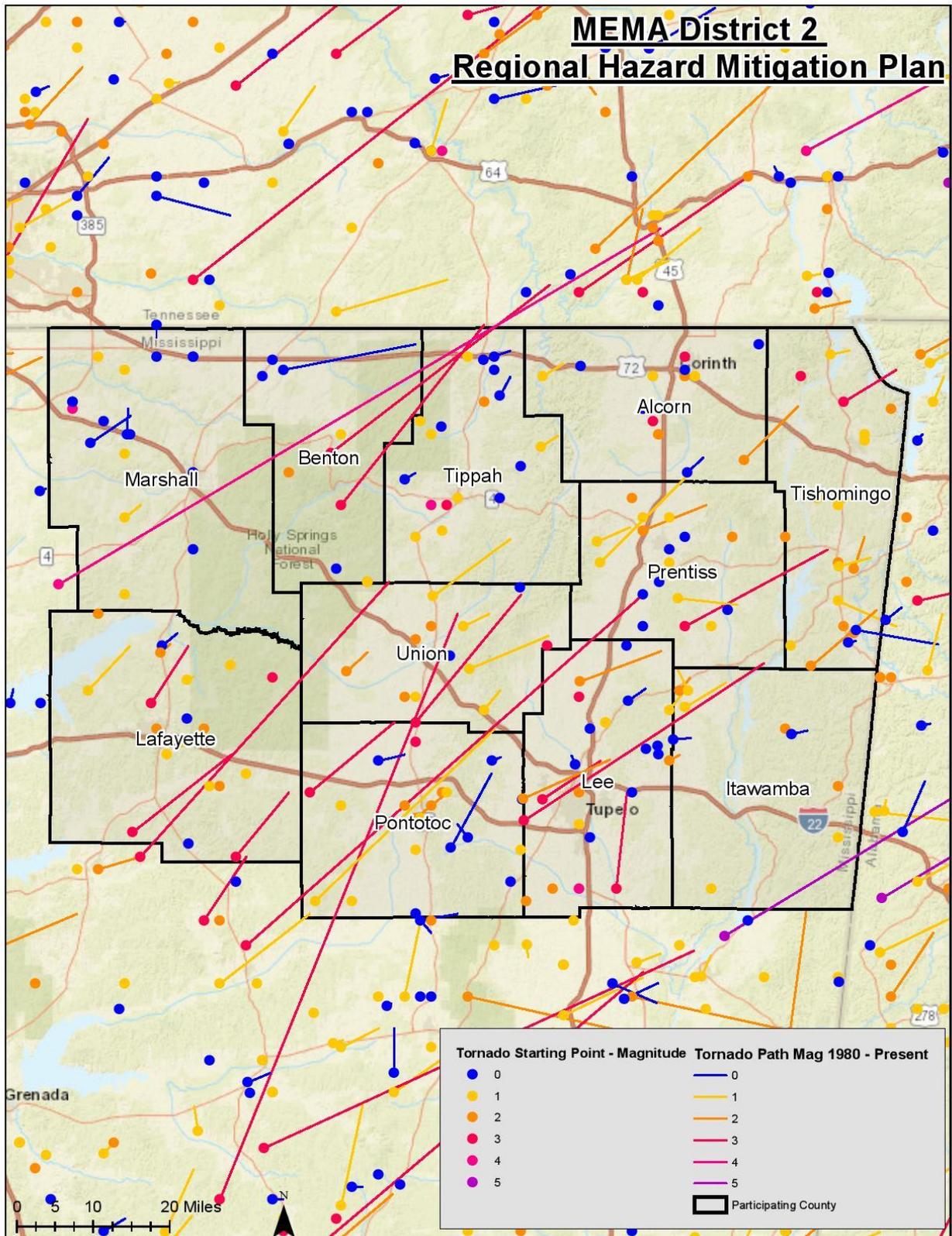
Source: National Weather Service

5.15.2 Location and Spatial Extent

Tornadoes occur throughout the state of Mississippi, and thus the MEMA District 2 Region. Tornadoes typically impact a relatively small area, but damage may be extensive. Event locations are completely random and it is not possible to predict specific areas that are more susceptible to tornado strikes over time. Therefore, it is assumed that the MEMA District 2 Region is uniformly exposed to this hazard. With that in mind, **Figure 5.20** shows tornado track data for many of the major tornado events that have impacted the region. While no definitive pattern emerges from this data, some areas that have been impacted in the past may be potentially more susceptible in the future.

DRAFT

Figure 5.20: HISTORICAL TORNADO TRACKS IN THE MEMA DISTRICT 2 REGION



Source: National Weather Service Storm Prediction Center

5.15.3 Historical Occurrences

Tornadoes were at least partially responsible for 18 disaster declarations in the MEMA District 2 Region between 1971 and 2021.²² According to the National Centers for Environmental Information, there have been a total of 229 recorded tornado events in the MEMA District 2 Region since 1950 (**Table 5.30**), resulting in more than \$209.2 million in property damages.²³ In addition, 42 fatalities and 405 injuries were reported. The magnitude of these tornadoes ranges from F0 to EF5 in intensity. Detailed information on historical tornado events can be found in the county-specific annexes.

Table 5.31: SUMMARY OF TORNADO OCCURRENCES IN THE MEMA DISTRICT 2 REGION

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Alcorn County	21	4/91	\$4,306,000
Benton County	10	8/8	\$3,526,000
Itawamba County	14	0/6	\$4,620,000
Lafayette County	23	1/33	\$62,367,000
Lee County	29	5/96	\$25,921,000
Marshall County	22	11/59	\$6,441,000
Pontotoc County	20	7/55	\$30,116,000
Prentiss County	29	2/42	\$4,248,000
Tippah County	20	1/8	\$4,361,000
Tishomingo County	22	0/5	\$8,100,000
Union County	19	1/28	\$27,573,000
MEMA DISTRICT 2 REGIONAL TOTAL	229	42/405	\$209,237,000

Source: National Centers for Environmental Information

There have been several significant tornado events in the MEMA District 2 Region. The text below describes one of the major events and associated impacts on the region.

From April 25 to 28, 2011, the largest tornado outbreak ever recorded affected the Southern, Midwestern, and Northeastern U.S., leaving catastrophic destruction in its wake, especially across the states of Alabama and Mississippi. On April 27, six tornadoes were reported in the MEMA District 2 region that ranged in magnitude from EF0 to EF5. These tornadoes resulted in 9 injuries and \$2,376,418 (2015 dollars) in property damages across the region.

5.15.4 Probability of Future Occurrences

According to historical information, tornado events pose a significant threat to the MEMA District 2 Region. The probability of future tornado occurrences affecting MEMA District 2 Region is likely (between 50 and 100 percent annual probability).

²² Not all of the participating counties were declared disaster areas for these storms. A complete listing of historical disaster declarations, including the affected counties, can be found in Section 4: *Hazard Identification*.

²³ These tornado events are only inclusive of those reported by the National Centers for Environmental Information (NCEI) from 1950 through April 2020. It is likely that additional tornadoes have occurred in the MEMA District 2 Region. As additional local data becomes available, this hazard profile will be amended.

OTHER HAZARDS

5.16 HAZARDOUS MATERIALS INCIDENTS

5.16.1 Background

Hazardous materials can be found in many forms and quantities that can potentially cause death; serious injury; long-lasting health effects; and damage to buildings, homes, and other property in varying degrees. Such materials are routinely used and stored in many homes and businesses and are also shipped daily on the nation's highways, railroads, waterways, and pipelines. This subsection on the hazardous material hazard is intended to provide a general overview of the hazard, and the threshold for identifying fixed and mobile sources of hazardous materials is limited to general information on rail, highway, and fixed HAZMAT sites determined to be of greatest significance as appropriate for the purposes of this plan.

Hazardous material (HAZMAT) incidents can apply to fixed facilities as well as mobile, transportation-related accidents in the air, by rail, on the nation's highways, and on the water. Approximately 6,774 HAZMAT events occur each year, 5,517 of which are highway incidents, 991 are railroad incidents, and 266 are due to other causes.²⁴ In essence, HAZMAT incidents consist of solid, liquid, and/or gaseous contaminants that are released from fixed or mobile containers, whether by accident or by design as with an intentional terrorist attack. A HAZMAT incident can last hours to days, while some chemicals can be corrosive or otherwise damaging over longer periods of time. In addition to the primary release, explosions and/or fires can result from a release, and contaminants can be extended beyond the initial area by persons, vehicles, water, wind, and possibly wildlife as well.

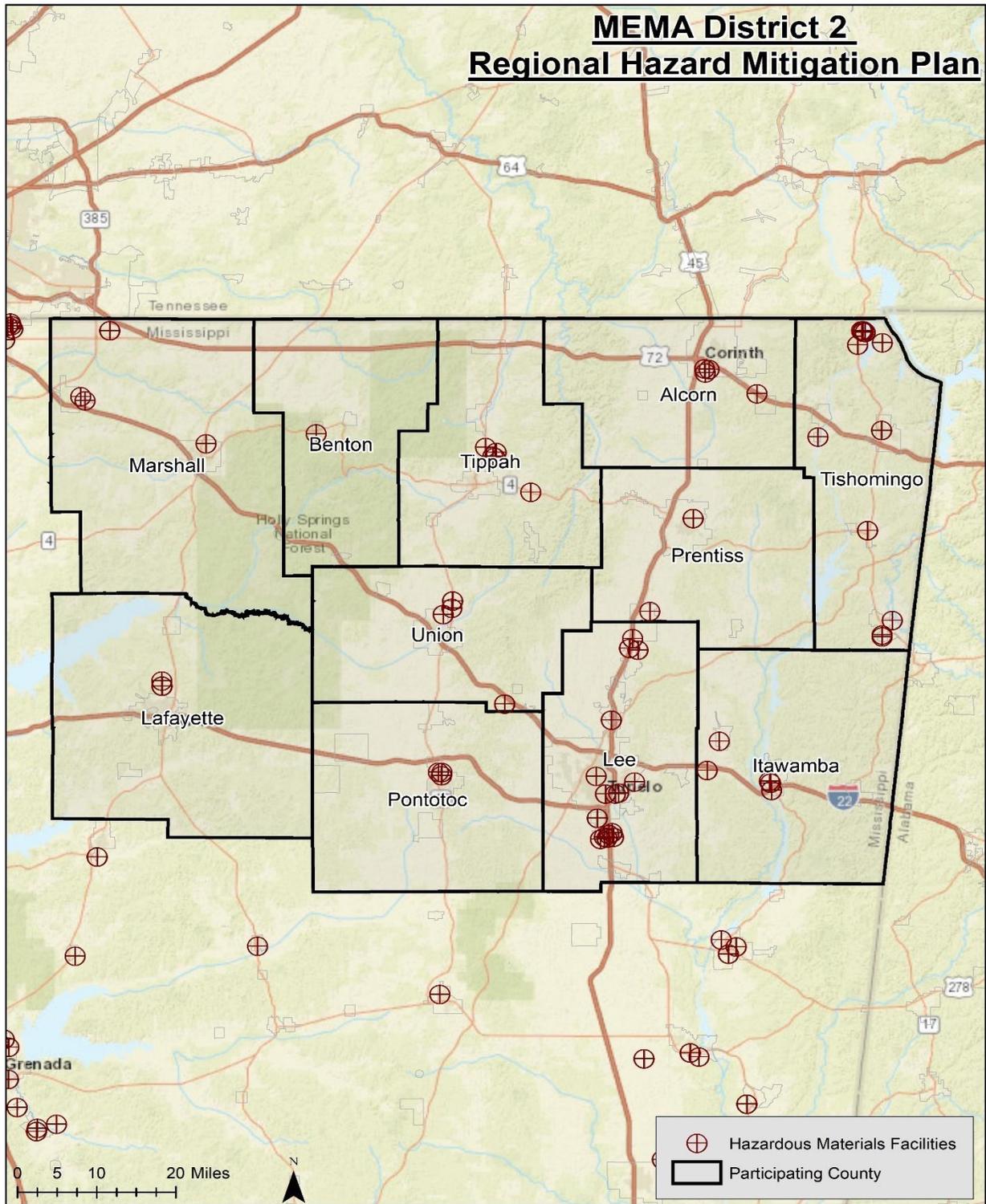
Hazardous material incidents can include the spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of a hazardous material, but exclude: (1) any release which results in exposure to poisons solely within the workplace with respect to claims which such persons may assert against the employer of such persons; (2) emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel or pipeline pumping station engine; (3) release of source, byproduct, or special nuclear material from a nuclear incident; and (4) the normal application of fertilizer.

5.16.2 Location and Spatial Extent

As a result of the 1986 Emergency Planning and Community Right to Know Act (EPCRA), the Environmental Protection Agency provides public information on hazardous materials. One facet of this program is to collection information from industrial facilities on the releases and transfers of certain toxic agents. This information is then reported in the Toxic Release Inventory (TRI). TRI sites indicate where such activity is occurring. The MEMA District 2 Region has 44 TRI sites. These sites are shown in **Figure 5.21**.

²⁴ U.S. DOT PHMSA

Figure 5.21: TOXIC RELEASE INVENTORY (TRI) SITES IN THE MEMA DISTRICT 2 REGION



Source: Environmental Protection Agency

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In addition to “fixed” hazardous materials locations, hazardous materials may also impact the region via roadways and rail. Many roads in the region are subject to hazardous materials transport and all roads that permit hazardous material transport are considered potentially at risk to an incident.

5.16.3 Historical Occurrences

The U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) lists historical occurrences throughout the nation. A “serious incident” is a hazardous materials incident that involves:

- ◆ a fatality or major injury caused by the release of a hazardous material,
- ◆ the evacuation of 25 or more persons as a result of release of a hazardous material or exposure to fire,
- ◆ a release or exposure to fire which results in the closure of a major transportation artery,
- ◆ the alteration of an aircraft flight plan or operation,
- ◆ the release of radioactive materials from Type B packaging,
- ◆ the release of over 11.9 galls or 88.2 pounds of a severe marine pollutant, or
- ◆ the release of a bulk quantity (over 199 gallons or 882 pounds) of a hazardous material.

However, prior to 2002, a hazardous materials “serious incident” was defined as follows:

- ◆ a fatality or major injury due to a hazardous material,
- ◆ closure of a major transportation artery or facility or evacuation of six or more person due to the presence of hazardous material, or
- ◆ a vehicle accident or derailment resulting in the release of a hazardous material.

There have been a total of 326 recorded HAZMAT incidents in the MEMA District 2 Region since 1971. These events resulted in over \$2.6 million (2015 dollars) in property damages as well as 1 fatality and 14 injuries.²³ **Table 5.31** summarizes the HAZMAT incidents reported in the MEMA District 2 Region. Detailed information on these events is presented in the county-specific annexes.

Table 5.32: SUMMARY OF HAZMAT INCIDENTS IN THE MEMA DISTRICT 2 REGION

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Alcorn County	37	0/0	\$17,240
Corinth	35	0/0	\$17,240
Farmington	0	0/0	\$0
Glen	0	0/0	\$0
Kossuth	1	0/0	\$0
Rienzi	1	0/0	\$0
Unincorporated Area	0	0/0	\$0
Benton County	7	0/0	\$0
Ashland	0	0/0	\$0
Hickory Flat	7	0/0	\$0
Snow Lake Shores	0	0/0	\$0
Unincorporated Area	0	0/0	\$0
Itawamba County	6	0/0	\$159,391
Fulton	4	0/0	\$131,675
Mantachie	0	0/0	\$0
Tremont	2	0/0	\$27,716
Unincorporated Area	0	0/0	\$0
Lafayette County	4	0/0	\$0
Abbeville	1	0/0	\$0
Oxford	3	0/0	\$0
Taylor	0	0/0	\$0
Unincorporated Area	0	0/0	\$0
Lee County	210	1/7	\$1,467,209
Baldwyn	2	0/0	\$0
Guntown	0	0/0	\$0
Nettleton	1	0/0	\$0
Plantersville	0	0/0	\$0

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Location	Number of Occurrences	Deaths / Injuries	Property Damage
Saltillo	1	0/0	\$3
Shannon	5	0/0	\$117,396
Tupelo	171	1/7	\$1,348,482
Verona	30	0/0	\$1,328
Unincorporated Area	0	0/0	\$0
Marshall County	16	0/6	\$218,541
Byhalia	6	0/0	\$138,678
Holly Springs	4	0/6	\$0
Potts Camp	1	0/0	\$0
Unincorporated Area	5	0/0	\$79,863
Pontotoc County	2	0/0	\$140,469
Algoma	0	0/0	\$0
Ecro	0	0/0	\$0
Pontotoc (city)	1	0/0	\$0
Sherman	1	0/0	\$140,469
Thaxton	0	0/0	\$0
Toccopola	0	0/0	\$0
Unincorporated Area	0	0/0	\$0
Prentiss County	7	0/0	\$193,266
Booneville	7	0/0	\$193,266
Jumpertown	0	0/0	\$0
Marietta	0	0/0	\$0
Unincorporated Area	0	0/0	\$0
Tippah County	12	0/1	\$210,342
Blue Mountain	1	0/0	\$0
Dumas	0	0/0	\$0
Falkner	1	0/1	\$122,620
Ripley	6	0/0	\$4,296
Walnut	4	0/0	\$83,425
Unincorporated Area	0	0/0	\$0
Tishomingo County	12	0/0	\$149
Belmont	6	0/0	\$149
Burnsville	2	0/0	\$0
Golden	1	0/0	\$0
Iuka	2	0/0	\$0
Paden	0	0/0	\$0
Tishomingo (town)	1	0/0	\$0
Unincorporated Area	0	0/0	\$0
Union County	13	0/0	\$199,257
Blue Springs	3	0/0	\$199,219
Myrtle	0	0/0	\$0
New Albany	10	0/0	\$38
Unincorporated Area	0	0/0	\$0
MEMA DISTRICT 2 REGIONAL TOTAL	326	1/14	\$2,605,863

Source: United States Department of Transportation Pipeline and Hazardous Materials Safety Administration

5.16.4 Probability of Future Occurrence

Given the location of more than 40 toxic release inventory sites in the MEMA District 2 Region and prior roadway and railway incidents, it is likely (between 50 and 100 percent annual probability) that a hazardous material incident may occur in the region. County and town officials are mindful of this possibility and take precautions to prevent such an event from occurring. Furthermore, there are detailed plans in place to respond to an occurrence.

5.17 PIPELINES

5.17.1 Background

Pipelines in the United States are used to transport and distribute a number of products from their extraction point to sites where those materials are utilized throughout the country. Pipelines are most commonly used to transport energy sources such as natural gas and petroleum products, but are also often used in the transportation of other hazardous liquids. Transportation of these products via pipeline is abundant in the United States due to the cost-effectiveness of the process which allows quick movement with relatively minimal cost.

Generally pipelines are safe and effective, transporting materials where they are needed without incident. However, many pipelines in the United States were installed over 60 years ago and were made with materials such as cast and wrought iron or bare steel which degrade over time. This presents a definitive danger to people and property as a leak or spill of hazardous products from a degraded pipeline could prove disastrous, causing costly damage to property and injury or death.

As a result, there has been a recent movement to replace many of these older pipelines with newer materials such as plastics that can reduce the risk of a pipeline failure and a hazard incident. In 2011, the Pipeline Safety, Regulatory Certainty, and Job Creation Act was passed and called for the US Department of Transportation to conduct a state-by-state survey of pipelines and accelerate repairs of aging infrastructure. The following website provides a state by state update of the progress of this initiative: <http://primis.phmsa.dot.gov/comm/states.htm?nocache=4496>.

Not only do pipelines present potential damage to an area and its residents but infrastructure related to pipeline functioning contributes to vulnerability considerations. Pumps, compressor stations, breakout tanks, tank farms, and valves can cause possible negative impacts related to the overall pipeline hazard.

To determine the potential vulnerability to pipelines and other energy infrastructure, site-specific analysis is required. Due to lack of availability of the exact location of pipelines (which not released to the public for reasons of confidentiality), this kind of site-specific analysis was not performed in this plan. Local officials interested in performing site-specific analysis should note that the PHMSA recommends that consultation zones be delineated along major pipelines to restrict construction and safely develop in these areas. Although the buffer distance utilized for a pipeline should be based on site-specific characteristics, if insufficient information is available, a standard consultation zone of 660 feet on either side of the pipe centerline should be used for natural gas transmission pipelines and a range of 660 to 1,000 feet should be used for hazardous liquid pipelines.²³

5.17.2 Location and Spatial Extent

Pipeline impacts can vary when it comes to people and the environment, ranging from personal injuries such as inhalation of toxins to ecological damage and water contamination. Pipeline incidents can affect local and regional economies resulting in potential shortages and/or increases in energy costs. A vulnerability assessment of pipeline impacts greatly depends on various factors such as location, severity of incident, environmental factors, proximity to waterways, and infrastructure operation. However, as mentioned above, due to the unavailability of precise location data for pipelines across the county, a thorough analysis of pipeline incidents was not carried out in this plan.

Figures found in the county-specific annexes of this plan illustrate the location of several types of pipeline infrastructure including gas transmission lines, hazardous liquid lines, liquefied natural gas (LNG) plants, and breakout tanks.

5.17.3 Historical Occurrences

Pipeline accidents can originate in a number of different ways. According to the Pipeline and Hazardous Materials Safety Administration (PHMSA), some of the most prominent causes of pipeline accidents include: corrosion, excavation damage, incorrect operation, material/weld/equipment failure, natural force damage, and other outside force damage.

Table 5.32 describes pipeline incidents throughout Mississippi from 2001 to 2020. On average, ten pipeline incidents resulting in \$2.1 million in damages occur annually in the State of Mississippi.²⁵

²⁵ United States Department of Transportation Pipeline and Hazardous Materials Safety Administration, 2015. Hazard Mitigation Planning: Practices for Land Use Planning and Development near Pipelines.

**Table 5.33: HAZARDOUS LIQUID PIPELINE INCIDENTS CAUSED BY NATURAL FORCES
(2001-2020)**

Year	Incidents	Fatalities	Injuries	Cost
2001	5	1	2	\$496,000
2002	10	0	1	\$588,397
2003	11	0	0	\$516,624
2004	8	0	1	\$294,899
2005	10	0	0	\$1,173,585
2006	10	2	0	\$1,517,176
2007	17	2	8	\$4,093,859
2008	12	0	2	\$1,256,450
2009	12	0	0	\$1,851,029
2010	6	0	0	\$2,702,520
2011	8	0	2	\$1,867,519
2012	6	0	0	\$1,652,156
2013	14	0	0	\$7,965,328
2014	13	0	0	\$974,894
2015	13	0	0	\$3,342,998
2016	11	0	0	\$2,923,621
2017	12	0	0	\$1,762,609
2018	4	0	0	\$1,344,223
2019	7	0	1	\$1,201,788
2020	6	0	0	\$5,617,695
	195	5	17	\$43,143,370

Source: United States Department of Transportation Pipeline and Hazardous Materials Safety Administration, 2015. Hazard Mitigation Planning: Practices for Land Use Planning and Development near Pipelines.

5.17.4 Probability of Future Occurrences

Given that there have been some occurrences of pipeline incidents in the United States, the probability of future occurrences in the MEMA District 2 Region is possible (between 1 and 50 percent annual probability).

5.18 WATER SUPPLY / SYSTEM FAILURE

5.18.1 Background

A water supply or system failure can have widespread impacts on the public in terms of the availability of fresh, clean water. In this scenario, some breakdown of the water supply system has caused an immediate shortage in available water which can create dangers to life, health, and safety of all citizens that are impacted. Impacts to hospitals and health care facilities may be especially notable in this scenario as these facilities require a clean water supply to treat patients and carry out everyday operations. Moreover, localized residents and businesses could be left without water and emergency management officials may have to locate and bring in alternative sources of water to meet demand. The State of Mississippi's Comprehensive Emergency Management Plan outlines many of the strategies and activities that would need to be carried out in the case of many different scenarios and this plan will be used as guidance for dealing with a water supply/system failure.

5.18.2 Location and Spatial Extent

This type of hazard could occur anywhere that water supply lines run which encompasses many areas of the region. Most of the incorporated jurisdictions have many water supply lines running throughout their jurisdictional boundaries, so the extent of this type of hazard is large.

5.18.3 Historical Occurrences

Although there have not been any major instances of water supply system failure in the region since the last plan update and prior, there have been some small-scale incidents and it should be noted that there have been many drought incidents (recorded in an earlier section) which would have similar impacts in terms of supply shortage, although these impacts would be much easier to recognize in advance of serious issues than the impacts from a system failure.

5.18.4 Probability of Future Occurrences

Based on the limited number of incidents of water supply failure that have occurred historically, the likelihood of this hazard is considered possible (between 1 and 50 percent annual probability).

5.19 ACTIVE SHOOTER

5.19.1 Background

The Occupational Safety and Health Administration describes workplace/school/university violence as violence or the threat of violence against workers or students that can occur at or outside of the workplace or school environment. It can range from verbal abuse to physical assaults and homicides, but in the context of this plan, the focus will be on the physical aspect of this violence which can manifest itself in a number of forms including active shooters.

An active shooter incident is perhaps the most threatening type of violence that can take place in a public area. Though this type of incident could potentially take place in any location, it often happens in areas with high volumes of people such as at schools.

In any case, violence at education centers and places of work is extremely detrimental to the community

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and the people who learn and work in this location. Whether the threat is from an active shooter or from a threat that a student makes towards another student, this type of action has consequences on the well-being of the community overall.

The State of Mississippi's Comprehensive Emergency Management Plan outlines many of the strategies and activities that would need to be carried out in the case of many different scenarios and this plan will be used as guidance for dealing with an active shooter.

5.19.2 Location and Spatial Extent

As mentioned above, the exact location and spatial extent of an active shooter could be throughout the region, though there is a higher likelihood this type of event will occur in a public place with relatively high volumes of people present.

5.19.3 Historical Occurrences

Although there have not been any active shooter incidents to make national news within the MEMA District 2 Region, there have been some incidents around the state of Mississippi that indicate this type of incident could occur within the region. Most recently in August of 2015, a suspect was taken in to custody on the Mississippi State University campus in Starkville.²⁶ There were no fatalities or injuries, but this incident reveals that there is some threat to local universities and schools of an active shooter and this type of event would be difficult to predict.

5.19.4 Probability of Future Occurrences

Although there have not been any major active shooter incidents in the region since the last plan update and prior, there have been some incidents in other areas of the United States. Therefore, the likelihood of this type of incident is considered possible (between 1 and 50 percent annual probability).

5.20 CIVIL UNREST

5.20.1 Background

Public unrest has been evident in society from the earliest recordings of civilization. Most of these disturbances have been related to political or social issues. Insurrection has framed much of history, dictating the governance and progression of society. In recent years, most of the publicized disturbances have been protests and riots. Rioting does not occur very often in the United States; however, marches and protests are common and could subsequently lead to riots. The State of Mississippi's Comprehensive Emergency Management Plan outlines many of the strategies and activities that would need to be carried out in the case of many different scenarios and this plan will be used as guidance for dealing with civil unrest.

²⁶ Mosendz, Polly. Suspect in Custody After Active Shooter Incident Reported at Mississippi State University. Newsweek. <http://www.newsweek.com/report-active-shooter-mississippi-state-university-campus-366246>

5.20.2 Location and Spatial Extent

Civil disturbance or unrest can occur in any location in the region but is more likely to take place in or near prominent locations such as government buildings or significant landmarks.

5.20.3 Historical Occurrences

In the MEMA District 2 Region, there have not been any major instances of civil unrest in many years, though it should be noted that the constantly changing political and social climate is difficult to predict and often changes occur rapidly and without much warning. This has happened in other areas of the country and local officials have had to respond quickly to these types of incidents.

5.20.4 Probability of Future Occurrences

Civil unrest has occurred occasionally within the region, although there have not been any major incidents in the past several years so the likelihood of this type of incident is considered possible (between 1 and 50 percent annual probability).

5.21 CYBERTERRORISM

5.21.1 Background

Cyberterrorism is a deliberate attack on an individual or group using the internet. In the past few decades, society has become dependent on computers and internet connections for much of daily life. This dependence has opened up the avenue for crime to be committed from afar, often from a different country. Some common examples of cyberterrorism include a hacker accessing bank accounts by hacking into a bank's website, infecting a computer system with a virus, Trojan horse, or worm to inflict damage to the information in the system, or disseminating incorrect or otherwise flawed information, also called "misinformation." Also, denial-of-service attacks could occur against prominent websites, which prevent legitimate users from accessing information or services. The State of Mississippi's Comprehensive Emergency Management Plan outlines many of the strategies and activities that would need to be carried out in the case of many different scenarios and this plan will be used as guidance for dealing with cyberterrorism.

5.21.2 Location and Spatial Extent

Cyber-attacks could occur anywhere within the MEMA District 2 Region and, indeed, could originate from outside of the region while still having an impact on it.

5.21.3 Historical Occurrences

At least four Mississippi school districts or universities have been targeted in ransomware attacks since 2013, according to a database compiled by StateScoop, though others may not have been publicly disclosed. The Oxford School District was targeted in 2016, though officials said they did not pay a ransom.

²⁷ Also, in May 2021, Colonial Pipeline fell victim to a ransomware attack that completely shut down their

²⁷ Mississippi Today. *Mississippi Schools Targeted by Ransomware*. Retrieved 8.19.2021 from: <https://mississippitoday.org/2021/06/11/school-district-ransomware-attack-mississippi/>

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pipeline. The 5,500-mile Colonial system which runs from Texas to New Jersey carries over 100 million gallons of gasoline, diesel, jet fuel and home heating oil to the East Coast from refineries along the Gulf Coast. It delivers about 45% of the fuel for the East Coast. The pipeline traverses Mississippi.²⁸

5.21.4 Probability of Future Occurrences

Cyberterrorism has generally not occurred within the MEMA District 2 Region historically, but the issue is becoming much larger and incidents that occur outside of the region may still have impacts inside of it. Therefore, the likelihood of this type of incident is considered possible (between 1 and 50 percent annual probability).

5.22 HUMAN TRAFFICKING

5.22.1 Background

According to the Mississippi Office of the Attorney General, human trafficking is broadly defined as the recruitment, harboring, transportation, provision or obtaining of a person, through the use of force, fraud or coercion, for the purposes of subjection to involuntary servitude or forced labor or services.²⁶ There are many forms of human trafficking, but generally it is considered a modern form of slavery. The office provides a hotline for reporting of potential human trafficking which is: 1-800-829-6766.

5.22.2 Location and Spatial Extent

While unfortunate, human trafficking is likely happening throughout the region and there is no definitive boundary to define the areas in which it is most likely to occur.

5.22.3 Historical Occurrences

There have been many incidents of human trafficking in the state, though this type of incident occurs in a covert manner and so many incidents are not reported and the problem is much larger than most people understand.

5.22.4 Probability of Future Occurrences

Although it is difficult to account for and to determine because it is covert by nature, this type of incident occurs often and the future threat to the region is considered to remain likely (between 50 and 100 percent annual probability).

5.23 PANDEMIC

5.23.1 Background

Pandemics begin as influenza (such as H5N1) but once the infection reaches global proportions it becomes a pandemic. A pandemic result when a virus mutates from an animal to a strain that can be passed to

²⁸ Clarion Ledger. Colonial Pipeline Attack. Retrieved 8.19.2021 from: <https://www.clarionledger.com/story/news/2021/05/11/colonial-pipeline-hack-mississippi-gas-prices-collins-ms-shortage-outage-impacts/5036923001/>

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humans. Humans have no immunity to these new strains, making them especially deadly. The strain may ultimately mutate to a form where it can be passed from human-to-human. Given the lack of immunity, the virus spreads quickly and can have devastating effects on the population. When the virus spreads globally, it is deemed a pandemic.

The World Health Organization (WHO) constantly monitors flu cases throughout the world. WHO has developed a system of identifying where the world stands with regard to pandemic flu. The system has six phases²⁹:

- ◆ **Phase 1:** No new influenza virus has been found in people or animals.
- ◆ **Phase 2:** New virus has appeared in animals, but no human cases.
- ◆ **Phase 3:** A new strain of animal influenza virus infects humans, but there have not been human-to-human infections.
- ◆ **Phase 4:** The new virus passes from person to person, but transmission is limited and confined to a certain location.
- ◆ **Phase 5:** There is frequent transmission of the virus between people in a particular place, but it hasn't spread to the rest of the world.
- ◆ **Phase 6:** Pandemic. The virus is widespread worldwide.
- ◆ **Post-Peak Period:** Levels of pandemic influenza in most countries have dropped below peak levels.
- ◆ **Possible New Wave:** Level of pandemic influenza activity in most counties rising again.
- ◆ **Post-Pandemic Period:** Levels of influenza activity have returned to levels seen for seasonal influenza.

Pandemics are also known to occur in waves. For example, initial wave of infected persons may be those first to contract the virus. These people may subsequently pass it to health officials or family members. For this reason, the duration of pandemic outbreaks tends to last weeks or even months.

5.23.2 Location and Spatial Extent

Pandemics are global in nature. However, they may start anywhere. The MEMA District 2 Region chose to analyze this hazard given the agriculture in the area and the current and ongoing COVID-19 Public Health Emergency.

All populations should be considered at risk to pandemic. Buildings and infrastructure are not directly impacted by the virus/pathogen but could be indirectly impacted if people are not able to operate and maintain them due to illness. Many buildings may be shutdown, at least temporarily, as a result. Employers may initiate work from home procedures for non-essential workers in order to help stop infection. Commerce activities, and thus the economy, may suffer greatly during this time.

5.23.3 Historical Occurrences

Several pandemics have been reported throughout history. A short history of the flu/Spanish Flu was collected from The Historical Text Archive and is described below.³⁰

²⁹ WebMD: <http://www.webmd.com/cold-and-flu/features/what-is-pandemic?page=2>

³⁰ <http://historicaltextarchive.com/sections.php?action=read&artid=773>

The first known pandemic dates back to 430 B.C. with the Plague of Athens. It reportedly killed a quarter of the population over four years due to typhoid fever. In 165-180 A.D., the Antonine Plague killed nearly 5 million people. Next, the Plague of Justinian (the first bubonic plague pandemic) occurred from 541 to 566. It killed 10,000 people a day at its peak and resulted in a 50 percent drop in Europe's population.

Since the 1500s, influenza pandemics have occurred about three times every century or roughly every 10-50 years. The Black Death devastated European populations in the 14th century. Nearly a third of the population (20-30 million) was killed over six years. From 1817 to present, seven Cholera Pandemics have impacted to the world and killed millions. Perhaps most severe, was the Third Cholera Pandemic (1852-1959) which started in China. Isolated cases can still be found in the Western U.S. today. There were three major pandemics in the 20th century (1918-1919, 1957-1958, and 1968-1969). The most infamous pandemic flu of the 20th century, however, was that of 1918-1919. Since the 1960s, there has only been one pandemic, the 2009 H1N1 influenza. The pandemics of the 20th and 21st centuries that impacted the United States are detailed below.

1918 Spanish Flu: This was the most devastating flu of the 20th century. This pandemic spread across the world in three waves between 1918 and 1919. It typically impacted areas for around twelve weeks and then would largely disappear. However, it would frequently reemerge several months later. Worldwide, approximately 50 million persons died and over a quarter of the population was infected. Nearly 675,000 people died in the United States. The illness came on suddenly and could cause death within a few hours. The virus impacted those aged 15 to 35 especially hard. The movement of troops during World War I is thought to have facilitated the spread of the virus.

In Mississippi, state officials noted that "epidemics have been reported from a number of places in the State," on October 4th, 1918. By the 18th, twenty-six localities reported 1,934 cases (the real number of cases was likely much higher). West Point, Mississippi was hit especially hard and quarantine was established. Throughout the state, African Americans were impacted at a greater rate than white populations. This is thought to be partly caused from a shortage of caretakers. It is estimated that over 6,000 people died in Mississippi, though that number may be much higher as death records were not widely recorded.

1957 Asian Flu: It is estimated that the Asian Flu caused 2 million deaths worldwide. Approximately 70,000 deaths were in the U.S. However, the proportion of people impacted was substantially higher than that of the Spanish Flu. This flu was characterized as having much milder effects than the Spanish Flu and greater survivability. Similar to other pandemics, this pandemic has two waves. Elderly and infant populations were more likely to succumb to death. This flu is thought to have originated from a genetic mutation of a bird virus.

1968 Hong Kong Flu: The Hong Kong Flu is thought to have caused one million deaths worldwide. It was milder than both the Asian and Spanish influenza viruses. It was similar to the Asian Flu, which may have provided some immunity to the virus. It had the most severe impact on elderly populations.

2009 H1N1 Influenza: This flu was derived from human, swine, and avian virus strains. It was initially reported in Mexico in April 2009. On April 26, the U.S. government declared H1N1 a public health emergency. A vaccine was developed and over 80 million were vaccinated which helped minimize the impacts. The virus had mild impacts on most of the population but did cause death (usually from viral pneumonia) in high risk populations such as pregnant women, obese persons, indigenous people, and those with chronic respiratory, cardiac, neurological, or immunity conditions. Worldwide, it is estimated

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that 43 million to 89 million people contracted H1N1 between April 2009 and April 2010, and between 8,870 and 18,300 H1N1 cases resulted in death.

2019 SARS-CoV-2 (COVID-19): Coronavirus Disease 2019 (COVID-19) was declared as pandemic by the World Health Organization on March 11th, 2020 mainly due to the speed and scale of the transmission of the disease. Before that, it started as an epidemic in mainland China with the focus being firstly reported in the city of Wuhan, Hubei province in February 26th. The etiologic agent of COVID-19 was isolated and identified as a novel coronavirus, initially designated as 2019-nCoV. Later, the virus genome was sequenced and because it was genetically related to the coronavirus outbreak responsible for the SARS outbreak of 2003, the virus was named as severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) by the International Committee for Taxonomy of Viruses.

As of May 2021, the COVID-19 pandemic has resulted in over 156 million confirmed cases and over 3.6 million deaths globally, with 32.6 million confirmed cases and 579,000 deaths in the United States alone. It has also sparked fears of an impending economic crisis and recession. Social distancing, self-isolation and travel restrictions have led to a reduced workforce across all economic sectors and caused many jobs to be lost. Schools closed down, and the need for commodities and manufactured products had decreased. In contrast, the need for medical supplies had significantly increased. The food sector also faced increased demand due to panic-buying and stockpiling of food products. No industry or sector was left untouched by COVID-19.

- **Agriculture** - A global crash in demand from hotels and restaurants saw prices of agricultural commodities drop by 20%
- **Petroleum & Oil** - During a meeting at the Organization of the Petroleum Exporting Countries (OPEC) in Vienna on March 6th, 2020 a refusal by Russia to slash oil production triggered Saudi Arabia to retaliate with extraordinary discounts to buyers and a threat to pump more crude. Saudi, regarded as the de facto leader of OPEC, increased its provision of oil by 25% compared to February – taking production volume to an unprecedented level. This caused the steepest one-day price crash seen in nearly 30 years
- **Education** - COVID-19 has affected all levels of the education system, from pre-school to post-secondary education. Different countries introduced various policies, ranging from complete closure in Germany, Italy, and the United States to targeted closure in the United Kingdom for all but the children of workers in key industries.
- **Finance Industry** - COVID-19 has affected communities, businesses and organizations globally, inadvertently affecting the financial markets and the global economy. Uncoordinated governmental responses and lockdowns have led to a disruption in the supply chain. In China, lockdown restrictions significantly reduced the production of goods from factories, while quarantine and self-isolation policies decreased consumption, demand and utilization of products and services

In addition to the pandemics above, there have been several cases of pandemic threats, some of which reached epidemic levels. They were contained before spreading globally. Examples include Smallpox, Polio, Tuberculosis, Malaria, AIDS, SARS and Yellow Fever. Advances in medicine and technology have been instrumental in containing the spread of viruses in recent history.

5.23.4 Probability of Future Occurrences

Based on historical occurrence information, it is assumed that all of the MEMA District 2 Region has a probability level of unlikely (less than 1 percent annual probability) for future pandemics events.

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The massive increase in globalization and connectivity has meant that a virus can spread from one side of the world to another in mere hours. In 2020, people around the world were as used to hopping on an international flight as they were catching a bus or a train. Air travel makes it possible for someone to travel halfway across the globe in less time than it takes for many diseases to incubate, making it extremely difficult to prevent their spread. In 1990, 1 billion people travelled by air, a number that has since increased to more than 4.2 billion in 2018. While pandemic can have devastating impacts, they are relatively rare.

The Mississippi State Department of Health maintains a state pandemic plan which can be found here: <http://www.msdh.state.ms.us/msdhsite/index.cfm/44,1136,122,154,pdf/SNSPlan.pdf>

It should also be noted that several counties in the region maintain Pandemic Incident Response Plans.

5.24 TERROR THREAT

5.24.1 Background

Terrorism is defined in the United States by the Code of Federal Regulations as: “the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives.”³¹ Academic literature identifies some overarching political goals that terrorism seeks to achieve, including spreading anxiety and alarm among immediate victims, families, and the general public; eliminating opponents and destroying symbolic targets; and generating direct damage on society, such as affecting business confidence. In the following sections, some general background information about terrorism is presented prior to the county’s hazard identification and risk assessment findings.

There are two general types of terrorist groups: network and hierarchical. The type of organization a group adopts largely depends on how long the group has existed. More recently developed groups tend to organize or adapt to the possibilities of the network model. Older, more established groups lean toward the hierarchical structure and are often more associated with violence of a political nature.³² Terrorist acts can be committed by large, formally organized groups with terrorist cells in different parts of the world, or they can originate from smaller groups or individuals from a small city or domestic “homegrown” location. In the United States, terrorists that are “homegrown” do not belong to a defined group, may operate very effectively “under the radar,” and may pose the biggest threat initially at the local level.³¹

5.24.2 Location and Spatial Extent

A terror threat could potentially occur at any location in the region. However, the very definition of a terrorist event indicates that it is most likely to be targeted at a critical or symbolic resource/location/event. Ensuring and protecting the continuity of critical infrastructure and key resources (CIKR) of the United States is essential to the Nation’s security, public health and safety, economic vitality, and way of life. CIKR includes physical and/or virtual systems or assets that, if damaged, would have a detrimental impact on national security, including large-scale human casualties, property destruction, economic disruption, and significant damage to morale and public confidence.

³¹ U.S. Code of Federal Regulations. 23 C.F.R. Section 0.85

³² Terrorism Research. *Terrorist groups*. Retrieved December 27, 2011, from <http://www.terrorism-research.com/groups/>

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Table 5.33 lists the U.S. Department of Homeland Security’s (DHS) identified main critical infrastructure sectors.

Table 5.34: U.S. DEPARTMENT OF HOMELAND SECURITY CRITICAL INFRASTRUCTURE SECTORS

▪ Agriculture and Food	▪ Government Facilities
▪ Banking and Finance	▪ Healthcare and Public Health
▪ Chemical	▪ Information Technology
▪ Commercial Facilities	▪ National Monuments and Icons
▪ Communications	▪ Nuclear Reactors, Materials, and Waste
▪ Critical Manufacturing	▪ Postal and Shipping
▪ Dams	▪ Transportation Systems
▪ Defense Industrial Base	▪ Water
▪ Emergency Services	
▪ Energy	

5.24.3 Historical Occurrences

Perhaps the most notable terrorist incident in recent memory was the attacks on the World Trade Center and Pentagon on September 11, 2001. These events resulted in more than an estimated 3,000 deaths and caused destruction of many buildings including both of the World Trade Center buildings. Prior to this, in 1995, the bombing of the federal office building in Oklahoma City was one of the most devastating attacks on U.S. soil, causing more than 150 deaths and damage to more than 200 buildings.

Although there have been no recorded incidents of a major terror attack occurring in the region since the last plan update and prior, there have been several instances where attacks were thwarted or discovered in advance. These kinds of events are indicative of the fact that future terror threats could impact the region.

Additionally, it is possible that locally-targeted terrorist incidents could occur in the future and there are several facilities/events in the region that could be potential targets.

5.24.4 Probability of Future Occurrences

The region has had no recorded major terrorist events. However, given the historic attempts to carry out attacks that were thwarted and the existence of government complexes, notable structures, and significant landmarks, there is a possibility that a terrorist incident might occur. Due to few recorded incidents against the region, the probability of future occurrences of a terrorist attack is unlikely (less than 1 percent annual probability).

5.25 CONCLUSIONS ON HAZARD RISK

The hazard profiles presented in this section were developed using best available data and result in what may be considered principally a qualitative assessment as recommended by FEMA in its “How-to”

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guidance document titled *Understanding Your Risks: Identifying Hazards and Estimating Losses* (FEMA Publication 386-2). It relies heavily on historical and anecdotal data, stakeholder input, and professional and experienced judgment regarding observed and/or anticipated hazard impacts. It also carefully considers the findings in other relevant plans, studies, and technical reports.

5.25.1 Hazard Extent

Table 5.34 describes the extent of each natural hazard identified for the MEMA District 2 Region. The extent of a hazard is defined as its severity or magnitude, as it relates to the planning area.

Table 5.35: EXTENT OF MEMA DISTRICT 2 REGION HAZARDS

Flood-related Hazards				
Flood	<p>Flood extent can be measured by the amount of land and property in the floodplain as well as flood height and velocity. The amount of land in the floodplain accounts for 14.3 percent of the total land area in the MEMA District 2 Region.</p> <p>Flood depth and velocity are recorded via United States Geological Survey stream gages throughout the region. While a gage does not exist for each participating jurisdiction, there is one at or near many areas. The greatest peak discharge recorded for the region was near Fulton in Itawamba County in 1955. Water reached a discharge of 82,200 cubic feet per second and the stream gage height was recorded at 25.75 feet. Additional peak discharge readings and gage heights are in the table below.</p>			
	Location/ Jurisdiction	Date	Peak Discharge (cfs)	Gage Height (ft)
	Alcorn County			
	Tuscumbia River Canal near Corinth	3/15/1973	30,300	15.72
	Benton County			
	Wesley Branch near Walnut	7/5/1967	755	6.84
	Itawamba County			
	Tombigbee River near Fulton	3/22/1955	82,200	25.75
	Bull Mountain Creek at Tremont	3/13/1975	15,000	9.80
	Lafayette County			
	Yocona River near Oxford	3/21/1955	44,100	23.72
	Lee County			
	Twentymile Creek near Guntown	2/3/1990	22,200	27.95
	Euclautubba Creek at Saltillo	3/21/1955	5,750	14.53
Chiwapa Creek at Shannon	3/21/1955	35,500	15.72	

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	Town Creek at Eason Boulevard at Tupelo	5/27/1991	37,900	27.80
	Town Creek near Verona	3/21/1955	70,000	29.40
	Marshall County			
	Tippah Creek near Potts Camp	2/16/1948	24,000	20.78
	Pontotoc County			
	Cracker Ditch near Pontotoc	4/11/1962	213	7.08
	Prentiss County			
	Big Brown Creek near Booneville	4/17/1970	3,900	99.97
	Tippah County			
	North Tippah Creek near Ripley	11/28/1968	7,100	21.17
	Hurricane Creek near Walnut	2/4/1956	1,650	20.83
	Tishomingo County			
	Rock Creek near Belmont	5/8/1978	1,900	13.40
	Little Yellow Creek East near Burnsville	12/26/1982	5,180	21.74
	Pollard Mill Branch at Paden	8/25/2004	2,350	13.53
	Union County			
	Cane Creek near New Albany	3/21/1955	8,680	9.08

Erosion	The extent of erosion can be defined by the measurable rate of erosion that occurs. There are no erosion rate records located in the MEMA District 2 Region.
Dam and Levee Failure	<p>Dam Failure extent is defined using the Mississippi Department of Environmental Quality criteria (Table 5.7). Forty-four dams are classified as high-hazard in the MEMA District 2 Region.</p> <ul style="list-style-type: none"> • Alcorn County: 1 high hazard dam • Benton County: 4 high hazard dams • Itawamba County: 2 high hazard dams • Lafayette County: 14 high hazard dams • Lee County: 15 high hazard dams • Marshall County: 0 high hazard dams • Pontotoc County: 7 high hazard dams • Prentiss County: 3 high hazard dams • Tippah County: 6 high hazard dams • Tishomingo County: 3 high hazard dams • Union County: 4 high hazard dams
Winter Storm and Freeze	The extent of winter storms can be measured by the amount of snowfall received (in inches). Official long term snow records are not kept for any areas in the MEMA District 2 Region. However, the greatest snowfall reported in Meridian (south of the region) was 14.0 inches in 1963.

Fire-related Hazards	
Drought / Heat Wave	<p>Drought extent is defined by the U.S. Drought Monitor Classifications which include Abnormally Dry, Moderate Drought, Severe Drought, Extreme Drought, and Exceptional Drought. According to the U.S. Drought Monitor Classifications, the most severe drought condition is Exceptional. All of the participating counties have received this ranking at least once over the 15-year reporting period.</p> <p>The extent of extreme heat can be measured by the record high temperature recorded. Official long term temperature records are not kept for any areas in the MEMA District 2 Region. However, the highest recorded temperature in Greenwood (southwest of the region) was 106°F in 2007 and in Meridian (south of the region) was 107°F in 1980.</p>
Wildfire	<p>Wildfire data was provided by the Mississippi Forestry Commission and is reported annually by county from 2005-2014. The greatest number of fires in one year occurred in Tippah County and the greatest number of acres burned in year occurred in Marshall County.</p> <p>Analyzing the data by county indicates the following wildfire hazard extent for each county.</p> <p>Alcorn County</p> <ul style="list-style-type: none"> • The greatest number of fires to occur in any year was 82 in 2007. • The great number of acres to burn in a single year occurred in 2007 when 1,339 acres were burned. <p>Benton County</p> <ul style="list-style-type: none"> • The greatest number of fires to occur in any year was 82 in 2007. • The great number of acres to burn in a single year occurred in 2007 when 1,820 acres were burned. <p>Itawamba County</p> <ul style="list-style-type: none"> • The greatest number of fires to occur in any year was 65 in 2007. • The great number of acres to burn in a single year occurred in 2007 when 706 acres were burned. <p>Lafayette County</p> <ul style="list-style-type: none"> • The greatest number of fires to occur in any year was 44 in 2007. • The great number of acres to burn in a single year occurred in 2007 when 836 acres were burned. <p>Lee County</p> <ul style="list-style-type: none"> • The greatest number of fires to occur in any year was 29 in 2007. • The great number of acres to burn in a single year occurred in 2011 when 416 acres were burned. <p>Marshall County</p> <ul style="list-style-type: none"> • The greatest number of fires to occur in any year was 89 in 2007. • The great number of acres to burn in a single year occurred in 2006 when 2,442 acres were burned. <p>Pontotoc County</p>

	<ul style="list-style-type: none"> The greatest number of fires to occur in any year was 26 in 2011. The great number of acres to burn in a single year occurred in 2006 when 401 acres were burned. <p>Prentiss County</p> <ul style="list-style-type: none"> The greatest number of fires to occur in any year was 81 in 2007. The great number of acres to burn in a single year occurred in 2007 when 857 acres were burned. <p>Tippah County</p> <ul style="list-style-type: none"> The greatest number of fires to occur in any year was 96 in 2007. The great number of acres to burn in a single year occurred in 2006 and 2007 when 1,279 acres were burned. <p>Tishomingo County</p> <ul style="list-style-type: none"> The greatest number of fires to occur in any year was 81 in 2007. The great number of acres to burn in a single year occurred in 2007 when 1,723 acres were burned. <p>Union County</p> <ul style="list-style-type: none"> The greatest number of fires to occur in any year was 52 in 2007. The great number of acres to burn in a single year occurred in 2007 when 700 acres were burned.
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Geologic Hazards

Earthquake	<p>Earthquake extent can be measured by the Richter Scale (Table 5.16), the Modified Mercalli Intensity (MMI) scale (Table 5.17), and the distance of the epicenter from the MEMA District 2 Region. According to data provided by the National Geophysical Data Center, the greatest earthquake to impact the region was reported in Benton, Lafayette, Lee and Tippah County with an MMI of VI (strong) and a correlating Richter Scale measurement of approximately 4.9.</p> <ul style="list-style-type: none"> Alcorn County: MMI of V; 4.9 magnitude; 199.0 km to epicenter Benton County: MMI of VI; 4.9 magnitude; 130.0 km to epicenter Itawamba County: MMI of IV; 3.6 magnitude; 226.0 km to epicenter Lafayette County: MMI of VI; 4.9 magnitude; 150.0 km to epicenter Lee County: MMI of VI; 4.9 magnitude; 218.0 km to epicenter Marshall County: MMI of V; 4.9 magnitude; 113 km to epicenter Pontotoc County: MMI of V; 4.9 magnitude; 185 km to epicenter Prentiss County: MMI of IV; 5.3 magnitude; 371.0 km to epicenter Tippah County: MMI of VI; 4.9 magnitude; 162.0 km to epicenter Tishomingo County: MMI of IV; 5.3 magnitude; 355.0 km to epicenter Union County: MMI of V; 4.9 magnitude; 68.0 km to epicenter
Expansive Soils	<p>Expansive Soils can have large scale impacts depending on the nature of the soil and the soil conditions (wet vs. dry). Expansive soil extent is difficult to quantify, but it is possible that the volume of soil could increase by as much as 50% saturation.</p>
Landslide	<p>As noted above in the landslide profile, there is no extensive history of landslides in the MEMA District 2 Region and landslide events typically occur in isolated areas. This provides a challenge when trying to determine an accurate extent for the landslide hazard. However, when using USGS landslide susceptibility index, extent can be measured with incidence, which is low throughout the region.</p>

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	There is also low susceptibility throughout nearly the entire region, except for a small area along the eastern border which has moderate susceptibility.
Land Subsidence / Sinkhole	The extent of land subsidence can be defined by the measurable rate of subsidence that occurs. There are no subsidence rate records located in the MEMA District 2 Region nor is there any significant historical record of events. The largest potential event might be as large as 10,000 cubic yards.
Wind-related Hazards	
Hurricane and Tropical Storm	<p>Hurricane extent is defined by the Saffir-Simpson Scale which classifies hurricanes into Category 1 through Category 5 (Table 5.20). The greatest classification of hurricane to traverse directly through the MEMA District 2 Region was Hurricane Frederic, which was a Category 1 hurricane when it passed through the region.</p> <ul style="list-style-type: none"> • Alcorn County: Hurricane Audrey, Tropical Storm (35 knots) • Benton County: Unnamed 1923 Storm, Tropical Storm (40 knots) • Itawamba County: Hurricane Katrina, Tropical Storm (40 knots) • Lafayette County: Hurricane Audrey, Tropical Storm (40 knots) • Lee County: Hurricane Katrina, Tropical Storm (50 knots) • Marshall County: Hurricane Audrey, Tropical Storm (35 knots) • Pontotoc County: Unnamed 1948 Storm, Tropical Storm (40 knots) • Prentiss County: Hurricane Katrina, Tropical Storm (40 knots) • Tippah County: Hurricane Audrey, Tropical Storm (35 knots) • Tishomingo County: Hurricane Katrina, Tropical Storm (40 knots) • Union County: Unnamed 1948 Storm, Tropical Storm (40 knots)
Thunderstorm / Hail / Lightning	<p>Thunderstorm extent is defined by the number of thunder events and wind speeds reported. According to a 66-year history from the National Centers for Environmental Information, the strongest recorded wind event in the MEMA District 2 Region was reported on May 6, 1961 at 90 knots (approximately 104 mph). It should be noted that future events may exceed these historical occurrences.</p> <ul style="list-style-type: none"> • Alcorn County: 70 knots • Benton County: 65 knots • Itawamba County: 55 knots • Lafayette County: 80 knots • Lee County: 90 knots • Marshall County: 70 knots • Pontotoc County: 85 knots • Prentiss County: 87 knots • Tippah County: 65 knots • Tishomingo County: 75 knots • Union County: 84 knots <p>Hail extent can be defined by the size of the hail stone. The largest hail stone reported in the MEMA District 2 Region was 5.0 inches (reported on April 10, 1962). It should be noted that future events may exceed this.</p> <ul style="list-style-type: none"> • Alcorn County: 3.0 inches • Benton County: 1.75 inches • Itawamba County: 2.75 inches • Lafayette County: 5.00 inches • Lee County: 2.75 inches • Marshall County: 1.75 inches • Pontotoc County: 2.75 inches

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	<ul style="list-style-type: none"> • Tippah County: 2.75 inches • Tishomingo County: 3.0 inches • Union County: 3.0 inches <p>According to the Vaisala’s flash density map (Figure 5.26), the MEMA District 2 Region is located in an area that experiences 6 to 8 lightning flashes per square kilometer per year. It should be noted that future lightning occurrences may exceed these figures.</p>
Tornado	<p>Tornado hazard extent is measured by tornado occurrences in the US provided by FEMA (Figure 5.27) as well as the Fujita/Enhanced Fujita Scale (Tables 5.28 and 5.29). The greatest magnitude reported was an EF5 (last reported on April 27, 2011).</p> <ul style="list-style-type: none"> • Alcorn County: F4 • Benton County: F3 • Itawamba County: EF5 • Lafayette County: F3 • Lee County: F4 • Marshall County: F4 • Pontotoc County: F3 • Prentiss County: F3 • Tippah County: F4 • Tishomingo County: F3 • Union County: F3
Other Hazards	
Hazardous Materials Incident	<p>According to USDOT PHMSA, the largest hazardous materials incident reported in the region was 44,625 SLB released on the highway on April 13, 2005. It should be noted that larger events are possible.</p> <ul style="list-style-type: none"> • Alcorn County: 40,100 SLB • Benton County: 18,880 SLB • Itawamba County: 6,653 LGA • Lafayette County: 0.125 LGA • Lee County: 44,625 SLB • Marshall County: 8,500 LGA • Pontotoc County: 10 LGA • Prentiss County: 3,400 LGA • Tippah County: 8,800 LGA • Tishomingo County: 10,000 LGA • Union County: 7,000 LGA
Pipelines	<p>A pipeline failure could be caused in several different ways. If an explosion or fire were the cause of the incident, the impacts might include fatalities or injuries as well as loss of a fuel source and damage to personal property. However, the impacts could also be less fatal in which case the more immediate effects might be down time for services and significant price hikes for consumers.</p>
Water Supply / System Failure	<p>There are many impacts that would occur as a result of water system failure. Among other impacts, residents might lose water supply, medical equipment and operations may not be able to be carried out, and access to clean water will be limited for business operations. These failures could potentially leave many homes and businesses without water service.</p>
Active Shooter	<p>The potential impacts of an active shooter might be that there are fatalities or significant injuries to members of the public. Additionally, there would likely be a</p>

	negative impact on the community emotionally.
Civil Unrest	Often one of the greatest impacts from civil unrest is collateral damage to people and property. During civil unrest, property can be destroyed or stolen and citizens can be injured due to violence that erupts. First responders may also be targeted and many times are more likely to be injured as a result of civil unrest than the average citizen.
Cyberterrorism	While there is seldom physical damage inflicted from a cyberterrorism event, the effects of such an event are often damaging in other ways. For example, theft, denial of service attacks, and dissemination of misinformation can all result from a cyberterror event. Moreover, these events are often aimed at shutting down IT systems which can result in loss of productivity and damage to IT infrastructure.
Human Trafficking	There is a significant emotional and physical toll on victims of human trafficking and this extends to their families and communities as well. This can cause long-term impacts on communities that are affected and has an overall negative impact on our culture.
Pandemic	The extent of a pandemic impacting the region is difficult to estimate. It could result in thousands of deaths and extreme disruption of commerce and everyday life.
Terror Threat	Although there is a low probability of one these events, if one were to take place, the magnitude of the event could range on the scale of critical damage with many fatalities and injuries to the population.

5.25.2 Priority Risk Index

In order to draw some meaningful planning conclusions on hazard risk for the MEMA District 2 Region, the results of the hazard profiling process were used to generate region-wide hazard classifications according to a “Priority Risk Index” (PRI). The purpose of the PRI is to categorize and prioritize all potential hazards for the MEMA District 2 Region as high, moderate, or low risk. Combined with the asset inventory and quantitative vulnerability assessment provided in the next section, the summary hazard classifications generated through the use of the PRI allows for the prioritization of those high hazard risks for mitigation planning purposes and, more specifically, the identification of hazard mitigation opportunities for the MEMA District 2 Region to consider as part of their proposed mitigation strategy.

The prioritization and categorization of identified hazards for the MEMA District 2 Region is based principally on the PRI, a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI is used to assist the MEMA District 2 Regional Hazard Mitigation Council in gaining consensus on the determination of those hazards that pose the most significant threat to the MEMA District 2 counties based on a variety of factors. The PRI is not scientifically based, but is rather meant to be utilized as an objective planning tool for classifying and prioritizing hazard risks in the MEMA District 2 Region based on standardized criteria.

The application of the PRI results in numerical values that allow identified hazards to be ranked against one another (the higher the PRI value, the greater the hazard risk). PRI values are obtained by assigning varying degrees of risk to five categories for each hazard (probability, impact, spatial extent, warning time, and duration). Each degree of risk has been assigned a value (1 to 4) and an agreed upon weighting factor, as summarized in **Table 5.35**. To calculate the PRI value for a given hazard, the assigned risk value for each category is multiplied by the weighting factor. The sum of all five categories equals the final PRI value, as demonstrated in the example equation below:

SECTION 5: HAZARD PROFILES

$$\text{PRI VALUE} = [(\text{PROBABILITY} \times .30) + (\text{IMPACT} \times .30) + (\text{SPATIAL EXTENT} \times .20) + (\text{WARNING TIME} \times .10) + (\text{DURATION} \times .10)]$$

According to the weighting scheme and point system applied, the highest possible value for any hazard is 4.0. When the scheme is applied for the MEMA District 2 Region, the highest PRI value is 3.1 (thunderstorm wind / high wind). Prior to being finalized, PRI values for each identified hazard were reviewed and accepted by the members of the MEMA District 2 Regional Hazard Mitigation Council.

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Table 5.36: PRIORITY RISK INDEX FOR THE MEMA DISTRICT 2 REGION

PRI Category	Degree of Risk			Assigned Weighting Factor
	Level	Criteria	Index Value	
Probability	Unlikely	Less than 1% annual probability	1	30%
	Possible	Between 1 and 50% annual probability	2	
	Likely	Between 50 and 100% annual probability	3	
	Highly Likely	100% annual probability	4	
Impact	Minor	Very few injuries, if any. Only minor property damage and minimal disruption on quality of life. Temporary shutdown of critical facilities.	1	30%
	Limited	Minor injuries only. More than 10% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one day.	2	
	Critical	Multiple deaths/injuries possible. More than 25% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one week.	3	
	Catastrophic	High number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.	4	
Spatial Extent	Negligible	Less than 1% of area affected	1	20%
	Small	Between 1 and 10% of area affected	2	
	Moderate	Between 10 and 50% of area affected	3	
	Large	Between 50 and 100% of area affected	4	
Warning Time	More than 24 hours	Self explanatory	1	10%
	12 to 24 hours	Self explanatory	2	
	6 to 12 hours	Self explanatory	3	
	Less than 6 hours	Self explanatory	4	
Duration	Less than 6 hours	Self explanatory	1	10%
	Less than 24 hours	Self explanatory	2	
	Less than oneweek	Self explanatory	3	
	More than one week	Self explanatory	4	

5.25.3 Priority Risk Index Results

Table 5.37 summarizes the degree of risk assigned to each category for all initially identified hazards based on the application of the PRI. Assigned risk levels were based on the detailed hazard profiles developed for this section, as well as input from the Regional Hazard Mitigation Council. The results were then used in calculating PRI values and making final determinations for the risk assessment.

Table 5.37: SUMMARY OF PRI RESULTS FOR THE MEMA DISTRICT 2 REGION

Hazard	Category/Degree of Risk					
	Probability	Impact	Spatial Extent	Warning Time	Duration	PRI Score
Flood-related Hazards						
Flood	Likely	Limited	Moderate	6 to 12 hours	Less than 24 hours	2.6
Erosion	Likely	Minor	Moderate	More than 24 hours	More than 1 week	2.3
Dam Failure and Levee Failure	Unlikely	Critical	Small	Less than 6 hours	Less than 6 hours	2.1
Winter Storm and Freeze	Likely	Limited	Moderate	More than 24 hours	Less than 1 week	2.5
Fire-related Hazards						
Drought / Heat Wave	Likely	Minor	Large	More than 24 hours	More than 1 week	2.5
Wildfire	Highly Likely	Minor	Small	Less than 6 hours	Less than 1 week	2.6
Geologic Hazards						
Earthquake	Possible	Critical	Large	Less than 6 hours	Less than 6 hours	2.8
Expansive Soils	Likely	Minor	Small	More than 24 hours	More than 1 week	2.1
Landslide	Unlikely	Minor	Small	Less than 6 hours	Less than 6 hours	1.5
Land Subsidence / Sinkhole	Possible	Minor	Small	Less than 6 hours	More than 1 week	2.1
Wind-related Hazards						
Hurricane and Tropical Storm	Possible	Limited	Large	More than 24 hours	Less than 24 hours	2.3
Thunderstorm Wind / High Wind	Highly Likely	Critical	Moderate	6 to 12 hours	Less than 6 hours	3.1
Hailstorm	Highly Likely	Limited	Moderate	6 to 12 hours	Less than 6 hours	2.8
Lightning	Highly Likely	Limited	Small	6 to 12 hours	Less than 6 hours	2.6
Tornado	Likely	Catastrophic	Small	Less than 6 hours	Less than 6 hours	3.0
Other Hazards						
Hazardous Materials Incident	Likely	Critical	Small	Less than 6 hours	Less than 24 hours	2.8
Pipelines	Possible	Critical	Small	Less than 6 hours	Less than 24 hours	2.5
Water Supply / System Failure	Possible	Limited	Moderate	Less than 6 hours	Less than 24 hours	2.4
Active Shooter	Possible	Critical	Negligible	Less than 6 hours	Less than 24 hours	2.3
Civil Unrest	Possible	Minor	Small	Less than 6 hours	Less than 24 hours	1.9
Cyberterrorism	Possible	Limited	Negligible	Less than 6 hours	Less than 24 hours	2.0
Human Trafficking	Likely	Limited	Negligible	Less than 6 hours	Less than 24 hours	2.3
Pandemic	Unlikely	Limited	Large	More than 24 hours	More than 1 week	2.2

Hazard	Category/Degree of Risk					
	Probability	Impact	Spatial Extent	Warning Time	Duration	PRI Score
Terror Threat	Unlikely	Critical	Small	Less than 6 hours	Less than 1 week	2.3

5.26 FINAL DETERMINATIONS

The conclusions drawn from the hazard profiling process for the MEMA District 2 Region, including the PRI results and input from the Regional Hazard Mitigation Council, resulted in the classification of risk for each identified hazard according to three categories: High Risk, Moderate Risk, and Low Risk (**Table 5.38**). For purposes of these classifications, risk is expressed in relative terms according to the estimated impact that a hazard will have on human life and property throughout all of the MEMA District 2 Region. A more quantitative analysis to estimate potential dollar losses for each hazard has been performed separately and is described in Section 6: *Vulnerability Assessment*. It should be noted that although some hazards are classified below as posing low risk, their occurrence of varying or unprecedented magnitudes is still possible in some cases and their assigned classification will continue to be evaluated during future plan updates. In most cases, the hazards of greatest concern did not change much since the last plan update, indicating that the priorities remained relatively stable and there were few changes in priorities.

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TABLE 5.38: CONCLUSIONS ON HAZARD RISK FOR THE MEMA DISTRICT 2 REGION

HIGH RISK	<ul style="list-style-type: none"> Thunderstorm Wind / High Wind Tornado Earthquake Hazardous Materials Incident Hailstorm
MODERATE RISK	<ul style="list-style-type: none"> Flood Wildfire Lightning Winter Storm and Freeze Pipelines Drought / Heat Wave Water Supply / System Failure
LOW RISK	<ul style="list-style-type: none"> Hurricane and Tropical Storm Erosion Terror Threat Active Shooter Human Trafficking Pandemic Expansive Soils Land Subsidence / Sinkhole Dam and Levee Failure Cyberterrorism Civil Unrest Landslide

SECTION 6

VULNERABILITY ASSESSMENT

This section identifies and quantifies the vulnerability of the MEMA District 2 Region to the significant hazards identified in the previous sections (*Hazard Identification and Profiles*). It consists of the following subsections:

- ◆ 6.1 Overview
- ◆ 6.2 Methodology
- ◆ 6.3 Explanation of Data Sources
- ◆ 6.4 Asset Inventory
- ◆ 6.5 Vulnerability Assessment Results
- ◆ 6.6 Conclusions on Hazard Vulnerability

44 CFR Requirement

44 CFR Part 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. The description shall include an overall summary of each hazard and its impact on the community. The plan should describe vulnerability in terms of: (A) The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas; (B) An estimate of the potential losses to vulnerable structures identified in paragraph (c)(2)(ii)(A) of this section and a description of the methodology used to prepare the estimate; (C) 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.

6.1 OVERVIEW

This section builds upon the information provided in Section 4: *Hazard Identification* and Section 5: *Hazard Profiles* by identifying and characterizing an inventory of assets in the MEMA District 2 Region. In addition, the potential impact and expected amount of damages caused to these assets by each identified hazard event is assessed. The primary objective of the vulnerability assessment is to quantify exposure and the potential loss estimates for each hazard. In doing so, the MEMA District 2 counties and their participating jurisdictions may better understand their unique risks to identified hazards and be better prepared to evaluate and prioritize specific hazard mitigation actions.

This section begins with an explanation of the methodology applied to complete the vulnerability assessment, followed by a summary description of the asset inventory as compiled for the MEMA District 2 Region. The remainder of this section focuses on the results of the assessment conducted.

6.2 METHODOLOGY

This vulnerability assessment was conducted using three distinct methodologies: (1) A stochastic risk assessment; (2) a geographic information system (GIS)-based analysis; and (3) a risk modeling software analysis. Each approach provides estimates for the potential impact of hazards by using a common, systematic framework for evaluation, including historical occurrence information provided in the *Hazard*

SECTION 6: VULNERABILITY ASSESSMENT

Identification and *Analysis* sections. A brief description of the three different approaches is provided on the following pages.

6.2.1 Stochastic Risk Assessment

The stochastic risk assessment methodology was applied to analyze hazards of concern that were outside the scope of hazard risk models and the GIS-based risk assessment. This includes hazards that do not have geographically-definable boundaries and are therefore excluded from spatial analysis through GIS. A stochastic risk methodology was used for the following hazards:

- ◆ Erosion
- ◆ Dam and Levee Failure
- ◆ Winter Storm and Freeze
- ◆ Drought / Heat Wave
- ◆ Expansive Soils
- ◆ Landslide
- ◆ Land Subsidence / Sinkhole
- ◆ Thunderstorm (wind, hail, lightning)
- ◆ Tornado
- ◆ Pipelines
- ◆ Water Supply / System Failure
- ◆ Active Shooter
- ◆ Civil Unrest
- ◆ Cyberterrorism
- ◆ Human Trafficking
- ◆ Pandemic
- ◆ Terror Threat

Many of the hazards listed above are considered atmospheric and have the potential to affect all buildings and all populations. For many of these hazards listed above, no additional analysis was performed. When possible, annualized loss estimates were determined using the best available data on historical losses from sources including NOAA's National Climatic Data Center records, MEMA District 2 Region county hazard mitigation plans, and local knowledge. Annualized loss is the estimated long-term weighted average value of losses to property in any single year in a specified geographic area (i.e., municipal jurisdiction or county). Annualized loss estimates were generated by totaling the amount of property damage over the period of time for which records were available, and calculating the average annual loss. Given the standard weighting analysis, losses can be readily compared across hazards providing an objective approach for evaluating mitigation alternatives.

For the erosion, dam and levee failure¹, expansive soils, landslide, land subsidence / sinkhole, pipelines, water supply / system failure, active shooter, civil unrest, cyberterrorism, human trafficking, pandemic, and terror threat hazards no data with historical property damages was available. Therefore, annualized

¹ As noted in Section 5: *Hazard Profiles*, Dam failure could be catastrophic to areas in the inundation area. Due to a lack of a data, no additional analysis was performed. Further, local MEMA District 2 officials indicate that separate dam failure plans have been completed for their counties to identify risk and response measures. There was no local knowledge of critical facilities being at risk to dam failure.

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potential losses for these hazards are presumed to be negligible. Winter storm and freeze, drought / heat wave, thunderstorm (wind, hail, lightning), and tornado have the potential to impact the entire MEMA District 2 Region. The results for these hazards are found near the end of this section.

6.2.2 GIS-Based Analysis

Other hazards have specified geographic boundaries that permit additional using Geographic Information Systems (GIS). These hazards include:

- ◆ Flood
- ◆ Wildfire
- ◆ Hazardous Material Incident

The objective of the GIS-based analysis was to determine the estimated vulnerability of critical facilities and populations for the identified hazards in the MEMA District 2 Region using best available geospatial data. Digital data was collected from local, regional, state, and national sources for hazards and buildings. Jurisdictions in the MEMA District 2 Region generally did not have readily available geospatial parcel or building footprint data. Despite this lack of data, the HMC wanted to have some estimate of potential building and dollar losses, so Census block data was extracted from Hazus MH 2.2 that included building counts and potential exposure of property in the region. Additionally, geo-referenced point locations for identified assets (critical facilities and infrastructure, special populations, etc.) were identified via Hazus MH 2.2 and used in this vulnerability analysis. ESRI® ArcGIS™ 10.2.2 was used to assess hazard vulnerability utilizing digital hazard data, as well as local building and exposure data described above.

Using these data layers, hazard vulnerability can be quantified by estimating the number and dollar value of Census blocks determined to be located in identified hazard areas. To estimate vulnerable populations in hazard areas, digital Census 2010 data by census tract was obtained. This was intersected with hazard areas to determine exposed population counts. The results of the analysis provided an estimate of the number of people and critical facilities, as well as the value of buildings determined to be potentially at risk to those hazards with delineable geographic hazard boundaries.

6.2.3 Risk Modeling Software Analysis

A risk modeling software was used for the following hazards:

- ◆ Earthquake
- ◆ Hurricane and Tropical Storm

There are several models that exist to model hazards. Hazus-MH was used in this vulnerability assessment to address the aforementioned hazards.

HAZUS-MH

Hazus-MH (“Hazus”) is a standardized loss estimation software program developed by FEMA. It is built upon an integrated GIS platform to conduct analysis at a regional



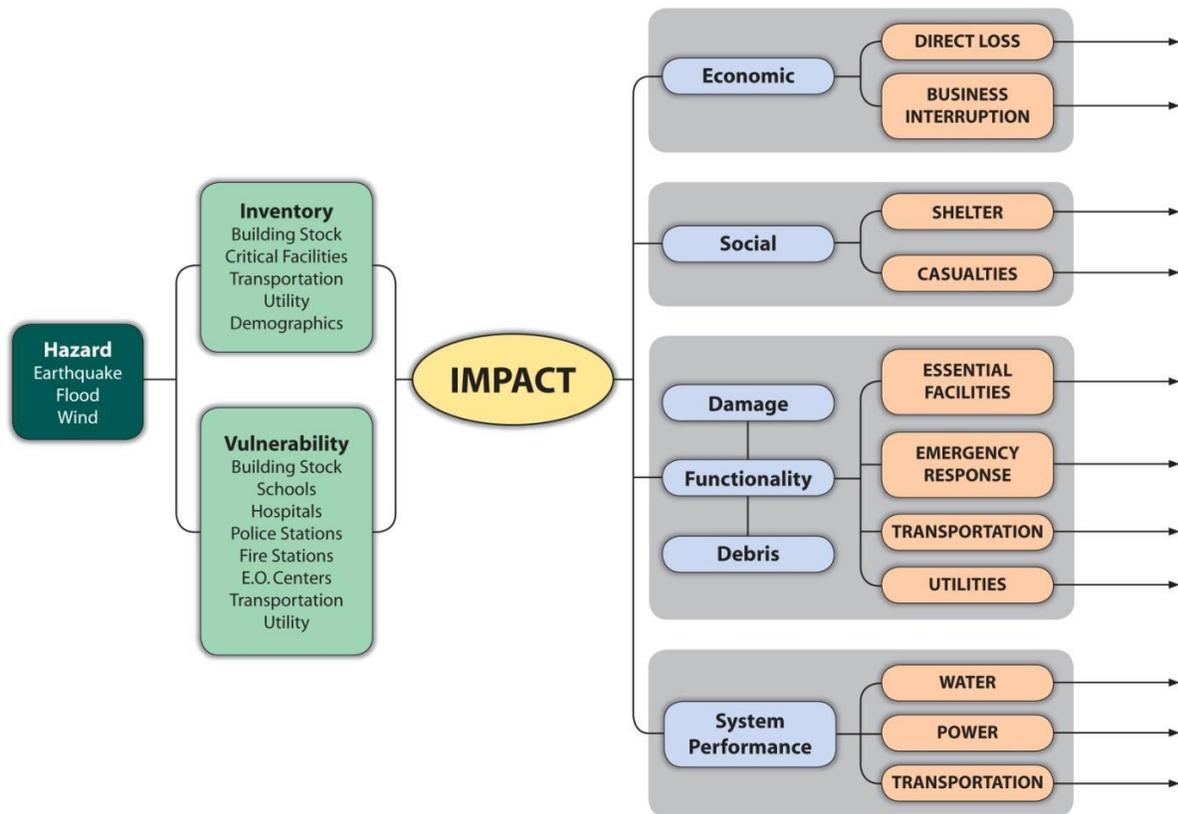
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level (i.e., not on a structure-by-structure basis). The Hazus risk assessment methodology is parametric, in that distinct hazard and inventory parameters (e.g., wind speed and building types) can be modeled using the software to determine the impact (i.e., damages and losses) on the built environment.

The MEMA District 2 Regional Risk Assessment utilized Hazus-MH to produce hazard damage loss estimations for hazards for the planning area. At the time this analysis was completed, Hazus-MH 2.2 was used to estimate potential damages from hurricane winds earthquake hazards using Hazus-MH methodology. Although the program can also model losses for flood and storm surge, it was not used in this Risk Assessment.

Figure 6.1 illustrates the conceptual model of the Hazus-MH methodology.

Figure 6.1: CONCEPTUAL MODEL OF HAZUS-MH METHODOLOGY



Hazus-MH is capable of providing a variety of loss estimation results. In order to be consistent with other hazard assessments, annualized losses are presented when possible. Some additional results based on location-specific scenarios may also be presented to provide a complete picture of hazard vulnerability.

Loss estimates provided in this vulnerability assessment are based on best available data and methodologies. The results are an approximation of risk. These estimates should be used to understand

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relative risk from hazards and potential losses. Uncertainties are inherent in any loss estimation methodology, arising in part from incomplete scientific knowledge concerning natural hazards and their effects on the built environment. Uncertainties also result from approximations and simplifications that are necessary for a comprehensive analysis (e.g., incomplete inventories, non-specific locations, demographics, or economic parameters).

All conclusions are presented in “Conclusions on Hazard Vulnerability” at the end of this section.

6.3 EXPLANATION OF DATA SOURCES

FLOOD

FEMA Digital Flood Rate Insurance Maps (DFIRM) flood data was used to determine flood vulnerability. DFIRM data can be used in ArcGIS for mapping purposes, and they identify several features including floodplain boundaries and base flood elevations. Identified areas on the DFIRM represent some features of a Flood Insurance Rate Maps including the 100-year flood areas (1.0-percent annual chance flood), and the 500-year flood areas (0.2-percent annual chance flood). For the vulnerability assessment, local improved property data and critical facilities were overlaid on the 1.0-percent annual chance floodplains (ACF) and 0.2-percent annual chance floodplain areas for counties that had digital parcel data available. It should be noted that such an analysis does not account for building elevation.

WILDFIRE

The data used to determine vulnerability to wildfire in the MEMA District 2 Region is based on GIS data called the Southern Wildfire Risk Assessment (SWRA). This data is available on the Southern Wildfire Risk Assessment website and can be downloaded and imported into ArcGIS. A specific layer, known as “Wildland Urban Interface Risk Index” (WUIRI) was used to determine vulnerability of people and property. The WUIRI is presented on a scale of 0 to -9. It combines data on housing density with the data on the impact and likelihood of a wildfire occurring in a specific area. The primary purpose of the data is to highlight areas of concern that may be conducive to mitigation actions. Due to assumptions made, it is not true probability. However, it does provide a comparison of risk throughout the region.

EARTHQUAKE

Hazus-MH 2.2 (as described above) was used to assess earthquake vulnerability. A level 1, probabilistic scenario to estimate average annualized loss was utilized. In this scenario, several return periods (events of varying intensities) are run to determine annualized loss. Default Hazus earthquake damage functions and methodology were used to determine the probability of damage. Results are calculated at the 2010 U.S. Census tract level in Hazus and presented at the county level.

LANDSLIDE

As a result of the low susceptibility and low incidence of landslide for counties in the MEMA District 2 Region, a GIS-based vulnerability analysis was not carried out for this plan. USGS Landslide Susceptibility Index data was evaluated along with historic occurrences to determine landslide vulnerability and vulnerability was determined to be consistently low throughout the region.

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HURRICANE AND TROPICAL STORM WIND

Hazus-MH 2.2 (as described above) was used to assess wind vulnerability. For the hurricane wind analysis, a probabilistic scenario was created to estimate the annualized loss damage in the MEMA District 2 Region. Default Hazus wind speed data, damage functions, and methodology were used in to determine the probability of damage for 100-year frequency events (also known as a return period) in the scenario. Results are calculated in Hazus at the 2010 U.S. Census tract level and presented at the county level.

HAZARDOUS MATERIALS INCIDENT

For the fixed hazardous materials incident analysis, Toxic Release Inventory (TRI) data was used. The Toxics Release Inventory is a publicly available database from the federal Environmental Protection Agency (EPA) that contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. This inventory was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and expanded by the Pollution Prevention Act of 1990. Each year, facilities that meet certain activity thresholds must report their releases and other waste management activities for listed toxic chemicals to EPA and to their state or tribal entity. A facility must report if it meets the following three criteria:

- ◆ The facility falls within one of the following industrial categories: manufacturing; metal mining; coal mining; electric generating facilities that combust coal and/or oil; chemical wholesale distributors; petroleum terminals and bulk storage facilities; RCRA Subtitle C treatment, storage, and disposal (TSD) facilities; and solvent recovery services;
- ◆ Has 10 or more full-time employee equivalents; and
- ◆ Manufactures or processes more than 25,000 pounds or otherwise uses more than 10,000 pounds of any listed chemical during the calendar year. Persistent, bioaccumulative, and toxic (PBT) chemicals are subject to different thresholds of 10 pounds, 100 pounds, or 0.1 grams depending on the chemical.

For the mobile hazardous materials incident analysis, transportation data including major highways and railroads were obtained from the National Atlas. This data is ArcGIS compatible, lending itself to buffer analysis to determine risk.

6.4 ASSET INVENTORY

An inventory of geo-referenced assets within the MEMA District 2 counties and jurisdictions was compiled in order to identify and characterize those properties potentially at risk to the identified hazards.² By understanding the type and number of assets that exist and where they are located in relation to known hazard areas, the relative risk and vulnerability for such assets can be assessed. Under this assessment, two categories of physical assets were created and then further assessed through GIS analysis. Additionally, social assets are addressed to determine population at risk to the identified hazards. These are presented below in Section 6.4.1.

² While potentially not all-inclusive for MEMA District 2, “georeferenced” assets include those assets for which specific location data is readily available for connecting the asset to a specific geographic location for purposes of GIS analysis.

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6.4.1 Physical and Improved Assets

The two categories of physical assets consist of:

1. **Building Stock:** Unfortunately, building footprint and parcel data was not available for any of the participating areas. It should be noted that this data produced less accurate information concerning the number of buildings at risk than parcel data because the Hazus data was aggregated at a much larger geographic area, the Census Block level.

Hazus inventory data provides an estimate of the number of buildings in the study region. The economic exposure is also presented to be referenced with any Hazus-related results.

2. **Critical Facilities:** Critical facilities vary by jurisdiction. For this Vulnerability Assessment, facilities were used from Hazus-MH which includes fire stations, police station, hospitals, schools, and emergency operation centers. When provided, local data was used to supplement the Hazus data. It should be noted that this listing is not all-inclusive for assets located in the region, but it is anticipated that it will be expanded during future plan updates as more geo- referenced data becomes available for use in GIS analysis.

The following tables provide a detailed listing of the geo-referenced assets that have been identified for inclusion in the vulnerability assessment for the MEMA District 2 Region.

The following table lists the estimated number of improved properties and the total value of improvements for participating areas of the MEMA District 2 Region (study area of vulnerability assessment). Because digital parcel data was not available, data obtained from Hazus-MH 2.2 inventory was utilized to complete the analysis.

Table 6.1: BUILDING STOCK VALUES IN THE MEMA DISTRICT 2 REGION

County	Building Value		
	Residential	Non-Residential	Total
Alcorn	\$2,108,000,000	\$1,130,000,000	\$3,239,000,000
Benton	\$476,000,000	\$110,000,000	\$586,000,000
Itawamba	\$1,374,000,000	\$553,000,000	\$1,927,000,000
Lafayette	\$3,384,000,000	\$876,000,000	\$4,260,000,000
Lee	\$5,264,000,000	\$3,427,000,000	\$8,691,000,000
Marshall	\$1,651,000,000	\$577,000,000	\$2,228,000,000
Pontotoc	\$1,441,000,000	\$696,000,000	\$2,138,000,000
Prentiss	\$1,422,000,000	\$647,000,000	\$2,070,000,000
Tippah	\$1,125,000,000	\$527,000,000	\$,1652,000,000
Tishomingo	\$1,184,000,000	\$489,000,000	\$1,673,000,000
Union	\$1,440,000,000	\$650,000,000	\$2,091,000,000
Total	\$20,869,000,000	\$9,682,000,000	\$30,555,000,000

Source: Hazus-MH 2.2

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BUILDING INVENTORY

There are an estimated 159,000 buildings in the region with a total building replacement value (excluding contents) of \$30.561 billion. Approximately 92.00 % of the buildings (and 68.00% of the building value) are associated with residential housing. In terms of building construction types found in the region, wood frame construction makes up 72% of the building inventory. The remaining percentage is distributed between the other general building types.

TRANSPORTATION AND UTILITY LIFELINE INVENTORY

Within Hazus, the lifeline inventory is divided between transportation and utility lifeline systems. There are seven (7) transportation systems that include highways, railways, light rail, bus, ports, ferry and airports. There are six (6) utility systems that include potable water, wastewater, natural gas, crude & refined oil, electric power and communications. The lifeline inventory data are provided in the table below.

The total value of the lifeline inventory is over \$28.385 billion. This inventory includes over 1,191.79 miles of highways, 2,345 bridges, 36,544.69 miles of pipes.

Table 6.2: TRANSPORTATION SYSTEM LIFELINE INVENTORY

System	Component	# Locations/ # Segments	Replacement value (millions of dollars)
Highway	Bridges	2,345	4018.8880
	Segments	366	8217.3122
	Tunnels	0	0.0000
	Subtotal		12236.2002
Railways	Bridges	319	1276.5835
	Facilities	1	2.6630
	Segments	684	923.9828
	Tunnels	0	0.0000
	Subtotal		2203.2293
Light Rail	Bridges	0	0.0000
	Facilities	0	0.0000
	Segments	0	0.0000
	Tunnels	0	0.0000
	Subtotal		0.0000
Bus	Facilities	1	1.2805
	Subtotal		1.2805
Ferry	Facilities	0	0.0000
	Subtotal		0.0000
Port	Facilities	19	48.0539
	Subtotal		48.0539
Airport	Facilities	10	40.0182
	Runways	10	314.1716
	Subtotal		354.1898
Total			14,843.00

Source: Hazus-MH 2.2

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Table 6.3: UTILITY SYSTEM LIFELINE INVENTORY

System	Component	# Locations / Segments	Replacement value (millions of dollars)
Potable Water	Distribution Lines	NA	587.8702
	Facilities	3	84.9150
	Pipelines	0	0.0000
		Subtotal	672.7852
Waste Water	Distribution Lines	NA	352.7221
	Facilities	58	6638.2343
	Pipelines	0	0.0000
		Subtotal	6990.9564
Natural Gas	Distribution Lines	NA	235.1481
	Facilities	6	8.4038
	Pipelines	105	735.5348
		Subtotal	979.0867
Oil Systems	Facilities	2	0.1700
	Pipelines	0	0.0000
		Subtotal	0.1700
Electrical Power	Facilities	5	2379.4876
		Subtotal	2379.4876
Communication	Facilities	31	2.6350
		Subtotal	2.6350
		Total	11,025.10

Source: Hazus-MH 2.2

The table below lists the fire stations, police stations, emergency operations centers (EOCs), hospitals, and schools located in the MEMA District 2 Region according to Hazus-MH Version 2.2.

In addition, the next figure shows the locations of critical facilities in the MEMA District 2 Region. The table, at the end of this section, shows a complete list of the critical facilities by name, as well as the hazards that affect each facility. As noted previously, this list is not all-inclusive and only includes information provided through Hazus. There are no military installations and no nuclear power plants.

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Table 6.4: CRITICAL FACILITY INVENTORY IN THE MEMA DISTRICT 2 REGION

Location	Fire Stations	Police Stations	Hospitals	EOC	Schools
Alcorn County	12	3	1	1	20
Corinth	4	2	1	0	9
Farmington	1	1	0	0	0
Glen	1	0	0	0	0
Kossuth	1	0	0	0	3
Rienzi	1	0	0	0	1
Unincorporated Area	4	0	0	0	7
Benton County	6	4	0	1	6
Ashland	1	2	0	1	4
Hickory Flat	1	1	0	0	1
Snow Lake Shores	1	1	0	0	0
Unincorporated Area	3	0	0	0	1
Itawamba County	22	4	0	1	9
Fulton	1	2	0	1	5
Mantachie	1	1	0	0	1
Tremont	1	1	0	0	1
Unincorporated Area	19	0	0	0	2
Lafayette County	19	4	1	2	18
Abbeville	1	1	0	0	0
Oxford	4	2	1	1	17
Taylor	1	0	0	0	0
Unincorporated Area	13	1	0	1	1
Lee County	17	10	2	1	41
Baldwyn	1	0	0	0	0
Guntown	2	1	0	0	1
Nettleton	0	0	0	0	4
Plantersville	1	1	0	0	1
Saltillo	2	1	0	0	3
Shannon	2	1	0	0	4
Tupelo	8	5	2	1	23
Verona	0	1	0	0	1
Unincorporated Area	1	0	0	0	4
Marshall County	12	4	2	1	19
Byhalia	4	1	1	0	3
Holly Springs	2	2	1	1	13
Potts Camp	1	1	0	0	3
Unincorporated Area	5	0	0	0	0
Pontotoc County	16	6	1	1	12
Algoma	2	1	0	0	0
Ecru	1	1	0	0	3
Pontotoc (city)	2	2	1	1	6
Sherman	1	1	0	0	0
Thaxton	1	1	0	0	0
Toccopola	1	0	0	0	0
Unincorporated Area	8	0	0	0	3

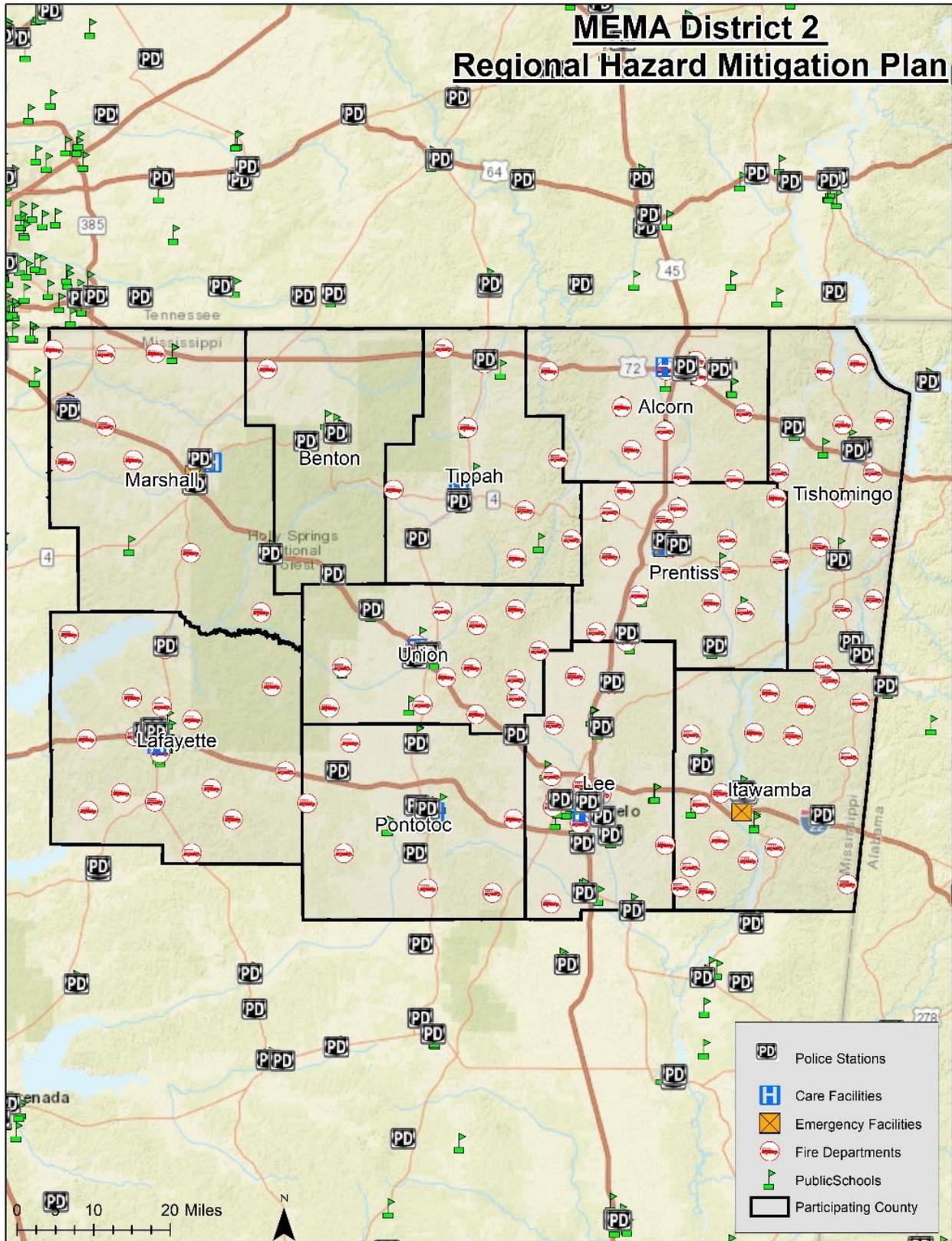
SECTION 6: VULNERABILITY ASSESSMENT

Location	Fire Stations	Police Stations	Hospitals	EOC	Schools
Prentiss County	17	3	1	1	16
Booneville	3	2	1	1	10
Jumpertown	1	0	0	0	0
Marietta	1	1	0	0	1
Unincorporated Area	12	0	0	0	5
Tippah County	10	4	1	1	13
Blue Mountain	1	1	0	0	2
Dumas	1	0	0	0	0
Falkner	1	0	0	0	2
Ripley	1	2	1	1	7
Walnut	1	1	0	0	1
Unincorporated Area	5	0	0	0	1
Tishomingo County	17	6	1	1	9
Belmont	1	1	0	0	1
Burnsville	1	1	0	0	1
Golden	1	1	0	0	0
Iuka	1	2	1	1	3
Paden	1	0	0	0	0
Tishomingo (town)	1	1	0	0	3
Unincorporated Area	11	0	0	0	1
Union County	16	5	1	1	7
Blue Springs	0	1	0	0	0
Myrtle	2	1	0	0	1
New Albany	2	3	1	1	3
Unincorporated Area	12	0	0	0	3
MEMA DISTRICT 2 REGION TOTAL	164	53	11	11	170

Source: Hazus-MH 2.2, Local Officials

SECTION 6: VULNERABILITY ASSESSMENT

Figure 6.2: CRITICAL FACILITY LOCATIONS IN THE MEMA DISTRICT 2 REGION



Source: Hazus-MH 2.2, Local Officials

6.4.2 Social Vulnerability

In addition to identifying those assets potentially at risk to identified hazards, it is important to identify and assess those particular segments of the resident population in the MEMA District 2 Region that are potentially at risk to these hazards.

The table below lists the population by jurisdiction according to U.S. Census 2020 population estimates. The total population in the MEMA District 2 Region according to Census data was 360,801 persons. Additional population estimates are presented in Section 3: *Community Profile*.

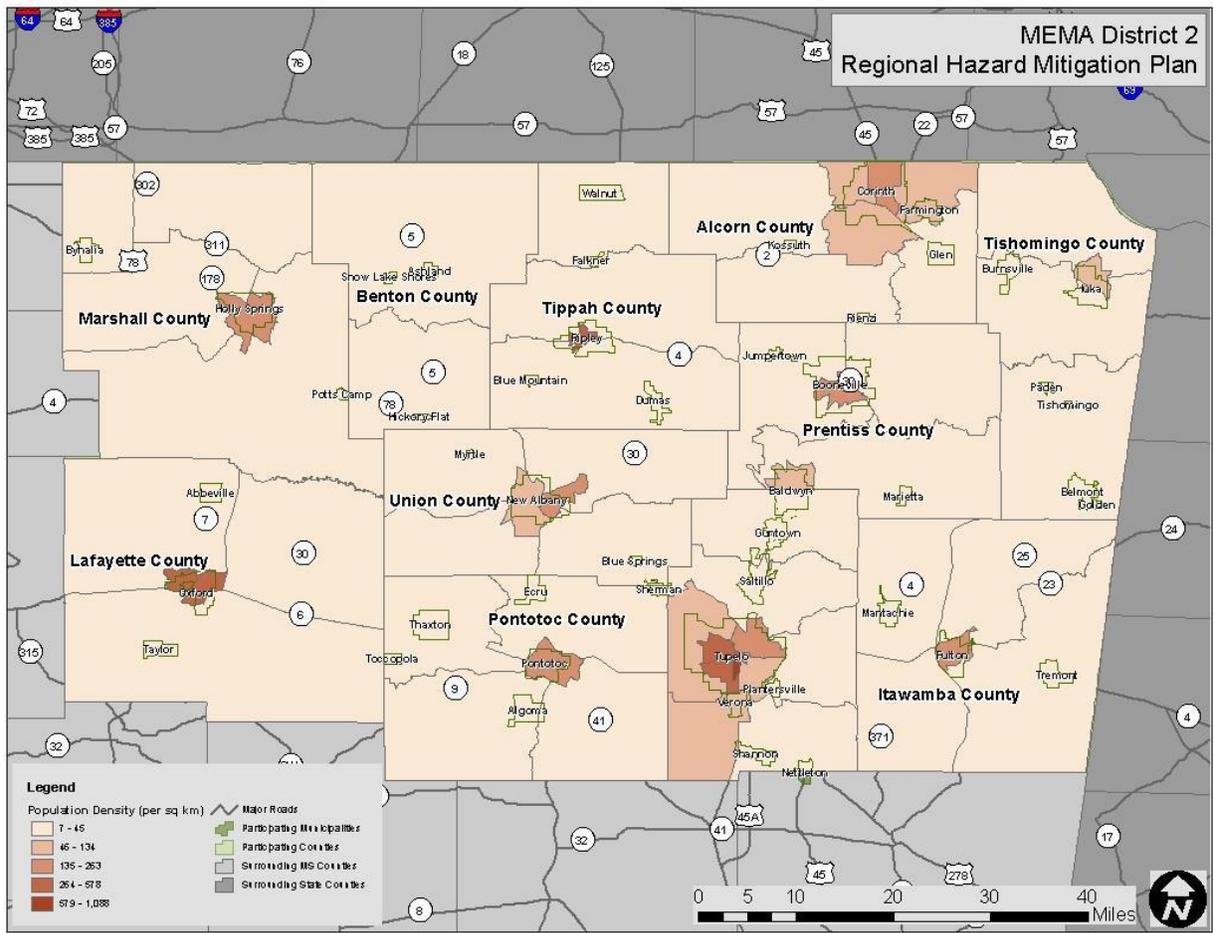
TABLE 6.3: TOTAL POPULATION IN THE MEMA DISTRICT 2 REGION

Location	Total 2020 Population
Alcorn County	34,740
Benton County	7,646
Itawamba County	23,863
Lafayette County	55,813
Lee County	83,343
Marshall County	33,752
Pontotoc County	31,184
Prentiss County	21,815
Tippah County	22,018
Tishomingo County	18,850
Union County	27,777
MEMA DISTRICT 2 REGION TOTAL	360,801

Source: United States Census 2020

In addition, **Figure 6.3** illustrates the population density per square kilometer by census tract as it was reported by the U.S. Census Bureau in 2019. As can be seen in the figure, the population is spread out with concentrations in Oxford, Tupelo, Ripley, Holly Springs, New Albany, Pontotoc (city), Booneville, Baldwyn, Fulton, and Iuka.

Figure 6.3: POPULATION DENSITY IN THE MEMA DISTRICT 2 REGION



Source: United States Census Bureau, 2010

6.4.3 Development Trends and Changes in Vulnerability

Since the previous county hazard mitigation plans were approved (in 2016), the MEMA District 2 Region has experienced limited growth and development. **Table 6.5** shows the number of building units constructed since 2014 according to the U.S. Census American Community Survey 2019.

Table 6.5: BUILDING COUNTS FOR THE MEMA DISTRICT 2 REGION

Jurisdiction	Total Housing Units (2019)	Units Built 2014 or later	% Building Stock Built Post-2014
Alcorn County	17,268	327	1.9%
Corinth	7,160	157	2.2%
Farmington	969	12	1.2%
Glen	204	0	0.0%
Kossuth	124	6	4.8%
Rienzi	147	0	0.0%
Unincorporated Area	8,664	152	1.7%

SECTION 6: VULNERABILITY ASSESSMENT

Jurisdiction	Total Housing Units (2019)	Units Built 2014 or later	% Building Stock Built Post-2014
Benton County	4,256	37	0.9%
Ashland	264	0	0.0%
Hickory Flat	257	0	0.0%
Snow Lake Shores	344	16	4.7%
Unincorporated Area	3,391	21	0.6%
Itawamba County	10,298	408	4.0%
Fulton	1,461	21	1.4%
Mantachie	617	5	0.8%
Tremont	205	19	9.3%
Unincorporated Area	8,015	363	4.52%
Lafayette County	25,266	1,347	5.3%
Abbeville	164	2	1.2%
Oxford ³	13,331	904	6.8%
Taylor	147	10	6.8%
Unincorporated Area	11,624	431	3.7%
Lee County	36,678	499	1.4%
Baldwyn	1,514	0	0.0%
Guntown	945	58	6.1%
Nettleton	972	9	0.9%
Plantersville	422	0	0.0%
Saltillo	1,921	11	0.6%
Shannon	799	0	0.0%
Tupelo	16,861	200	1.2%
Verona	1,674	34	2.0%
Unincorporated Area	11,570	187	1.6%
Marshall County	15,547	523	3.4%
Byhalia	750	7	0.9%
Holly Springs	2,819	32	1.1%
Potts Camp	294	0	0.0%
Unincorporated Area	11,684	484	4.1%
Pontotoc County	12,895	318	2.5%
Algoma	321	1	0.3%
Ecru	533	11	2.1%
Pontotoc (city)	2,277	0	0.0%
Sherman	312	0	0.0%
Thaxton	318	25	7.9%
Toccopola	115	0	0.0%
Unincorporated Area	9,019	281	3.1%
Prentiss County	11,206	116	1.0%
Booneville	3,493	51	1.5%
Jumpertown	237	4	1.7%

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Jurisdiction	Total Housing Units (2019)	Units Built 2014 or later	% Building Stock Built Post-2014
Marietta	102	2	2.0%
Unincorporated Area	7,374	59	0.8%
Tippah County	9,893	199	2.0%
Blue Mountain	430	4	0.9%
Dumas	288	8	2.8%
Falkner	297	8	2.7%
Ripley	2,186	59	2.7%
Walnut	419	2	0.5%
Unincorporated Area	6,273	118	1.8%
Tishomingo County	10,428	28	0.3%
Belmont	1,069	3	0.3%
Burnsville	459	0	0.0%
Golden	130	0	0.0%
Iuka	1,599	0	0.0%
Paden	60	0	0.0%
Tishomingo (town)	200	0	0.0%
Unincorporated Area	6,911	25	0.3%
Union County	11,997	458	3.8%
Blue Springs	124	9	7.3%
Myrtle	250	2	0.8%
New Albany	3,681	91	2.5%
Unincorporated Area	7,942	356	4.4%
MEMA DISTRICT 2 REGION TOTAL	165,732	4,260	26.5%

Source: United States Census Bureau

The table below shows population growth estimates for the region from 2015 to 2019 based on the U.S. Census Annual Estimates of Resident Population.

TABLE 6.5: POPULATION GROWTH FOR THE MEMA DISTRICT 2 REGION

Jurisdiction	Population Estimates (as of July 1)					% Change 2015-2019
	2015	2016	2017	2018	2019	
Alcorn County	37,319	37,039	37,242	37,180	37,090	0.7%
Corinth	14,839	14,832	14,727	14,647	14,562	-1.86%
Farmington	2,333	2,366	2,355	2,532	2,382	2.10%
Glen	461	542	507	541	418	-9.32%
Kossuth	263	237	214	254	229	-12.92%
Rienzi	343	283	315	308	276	-19.53%
Unincorporated Area	19,080	18,779	19,124	18,898	19,223	0.74%
Benton County	8,470	8,378	8,306	8,253	8,232	-4.6%
Ashland	524	546	572	621	619	18.12%
Hickory Flat	729	673	616	587	654	-10.28%
Snow Lake Shores	354	380	316	289	312	-11.86%
Unincorporated Area	6,863	6,779	6,802	6,756	6,647	-3.14%

SECTION 6: VULNERABILITY ASSESSMENT

Jurisdiction	Population Estimates (as of July 1)					% Change 2010-2014
	2015	2016	2017	2018	2019	
Itawamba County	23,451	23,511	23,439	23,480	23,390	-0.26%
Fulton	4,014	4,034	4,010	4,024	4,016	0.04%
Mantachie	1,403	1,439	1,421	1,387	1,414	0.78%
Tremont	477	532	479	466	463	-2.93%
Unincorporated Area	17,557	17,506	17,529	17,603	17,497	-0.34%
Lafayette County	52,736	53,476	50,416	51,993	52,930	0.4%
Abbeville	428	423	427	421	423	-1.2%
Oxford	25,532	26,371	27,058	27,685	28,122	9.2%
Taylor	342	364	387	417	444	23.0%
Unincorporated Area	26,434	26,318	22,544	23,470	23,941	-10.4%
Lee County	84,740	84,837	85,071	85,276	85,436	2.8%
Baldwyn	3,299	3,298	3,284	3,273	3,268	-0.9%
Guntown	2,601	2,710	2,736	2,771	2,792	6.8%
Nettleton	1,954	1,951	1,943	1,928	1,919	-1.8%
Plantersville	1,155	1,151	1,143	1,141	1,137	-1.6%
Salttillo	4,971	4,978	5,000	5,032	5,062	1.8%
Shannon	1,768	1,771	1,782	1,781	1,772	0.2%
Tupelo	34,599	35,141	35,538	35,787	35,688	3.1%
Verona	3,005	3,055	3,077	3,073	3,060	1.8%
Unincorporated Area	31,388	30,782	35,068	30,490	30,738	-2.1%
Marshall County	35,891	35,785	35,590	36,520	35,436	-2.3%
Byhalia	1,256	1,250	1,234	1,216	1,210	-3.8%
Holly Springs	7,654	7,719	7,751	7,776	7,798	1.8%
Potts Camp	492	491	480	475	467	-5.4%
Unincorporated Area	26,489	26,325	27,234	26,125	25,961	-2.0%
Pontotoc County	30,857	31,470	31,709	31,881	32,174	4.1%
Algoma	657	672	677	682	689	4.6%
Ecu	959	971	996	1,027	1,037	7.5%
Pontotoc (city)	5,818	5,961	6,026	6,082	6,169	5.7%
Sherman	668	680	685	690	704	5.1%
Thaxton	661	675	678	681	686	3.6%
Toccopola	250	255	256	257	258	3.1%
Unincorporated Area	21,356	21,162	21,543	21,802	21,871	2.4%
Prentiss County	25,440	25,405	25,215	25,426	25,088	-1.4%
Booneville	8,769	8,742	8,676	8,489	8,497	-3.2%
Jumpertown	487	487	484	486	487	0.0%
Marietta	257	256	255	255	255	-0.8%
Unincorporated Area	15,927	15,920	15,800	16,196	15,849	-0.5%
Tippah County	22,018	22,063	21,953	22,039	22,015	-0.0001%
Blue Mountain	952	954	963	971	948	-0.4%
Dumas	456	459	454	456	456	0.0%
Falkner	492	490	488	489	489	-0.6%
Ripley	5,299	5,317	5,272	5,285	5,273	-0.5%
Walnut	758	761	755	756	754	-0.5%

SECTION 6: VULNERABILITY ASSESSMENT

Jurisdiction	Population Estimates (as of July 1)					% Change 2015-2019
	2015	2016	2017	2018	2019	
Unincorporated Area	14,061	14,082	14,021	14,082	14,095	0.2%
Tishomingo County	19,481	19,442	19,518	19,518	19,383	-0.005%
Belmont	2,009	2,005	2,009	1,992	1,988	-0.010%
Burnsville	935	933	938	932	934	-0.001%
Golden	190	189	189	189	188	-0.01%
Iuka	2,973	2,960	2,964	2,939	2,937	-0.01%
Paden	114	114	114	113	113	-0.008%
Tishomingo (town)	360	358	360	357	356	-0.01%
Unincorporated Area	12,900	12,883	12,944	12,996	12,867	-0.002%
Union County	28,311	28,308	28,486	28,615	28,815	0.017%
Blue Springs	235	234	237	240	241	0.02%
Myrtle	497	495	497	496	498	0.002%
New Albany	8,694	8,668	8,702	8,721	8,753	0.006%
Unincorporated Area	18,885	18,911	19,050	19,158	19,123	0.012%
MEMA DISTRICT 2 REGION TOTAL	368,714	362,799	366,945	370,181	369,989	-0.925%

Source: United States Census Bureau – American Community Survey

Based on the data above, there has been a relatively low rate of residential development and population growth in the region since 2015, and many jurisdictions have actually experienced slight population declines. However, the City of Taylor has experienced a slightly higher rate of development compared to the rest of the region, resulting in an increased number of structures that are vulnerable to the potential impacts of the identified hazards. Additionally, there have been considerably higher rates of population growth in Pontotoc County, the City of Oxford, and the Town of Guntown. Since the population has increased in these jurisdictions, there are now greater numbers of people exposed to the identified hazards. Therefore, development and population growth have impacted the region’s vulnerability since the previous local hazard mitigation plans were approved and there has been a slight increase in the overall vulnerability.

It is also important to note that as development increases in the future, greater populations and more structures and infrastructure will be exposed to potential hazards if development occurs in the floodplains, moderate landside susceptibility areas, high wildfire risk areas, or primary and secondary TRI site buffers.

6.5 VULNERABILITY ASSESSMENT RESULTS

As noted earlier, only hazards with a specific geographic boundary, available modeling tool, or sufficient historical data allow for further analysis in this section. Those results are presented here. All other hazards are assumed to impact the entire planning region (drought / heat wave; thunderstorm—wind, hail, lightning; tornado; and winter storm and freeze) or, due to lack of data, analysis would not lead to credible results (dam and levee failure, erosion, expansive soils, landslide, land subsidence / sinkhole, pipelines, water supply / system failure, active shooter, civil unrest, cyberterrorism, and human trafficking). The total region exposure, and thus risk to these hazards, was presented in **Table 6.1**.

SECTION 6: VULNERABILITY ASSESSMENT

The hazards to be further analyzed in this section include: flood, wildfire, earthquake, hurricane and tropical storm winds, and hazardous materials incident.

The annualized loss estimate for all hazards is presented near the end of this section.

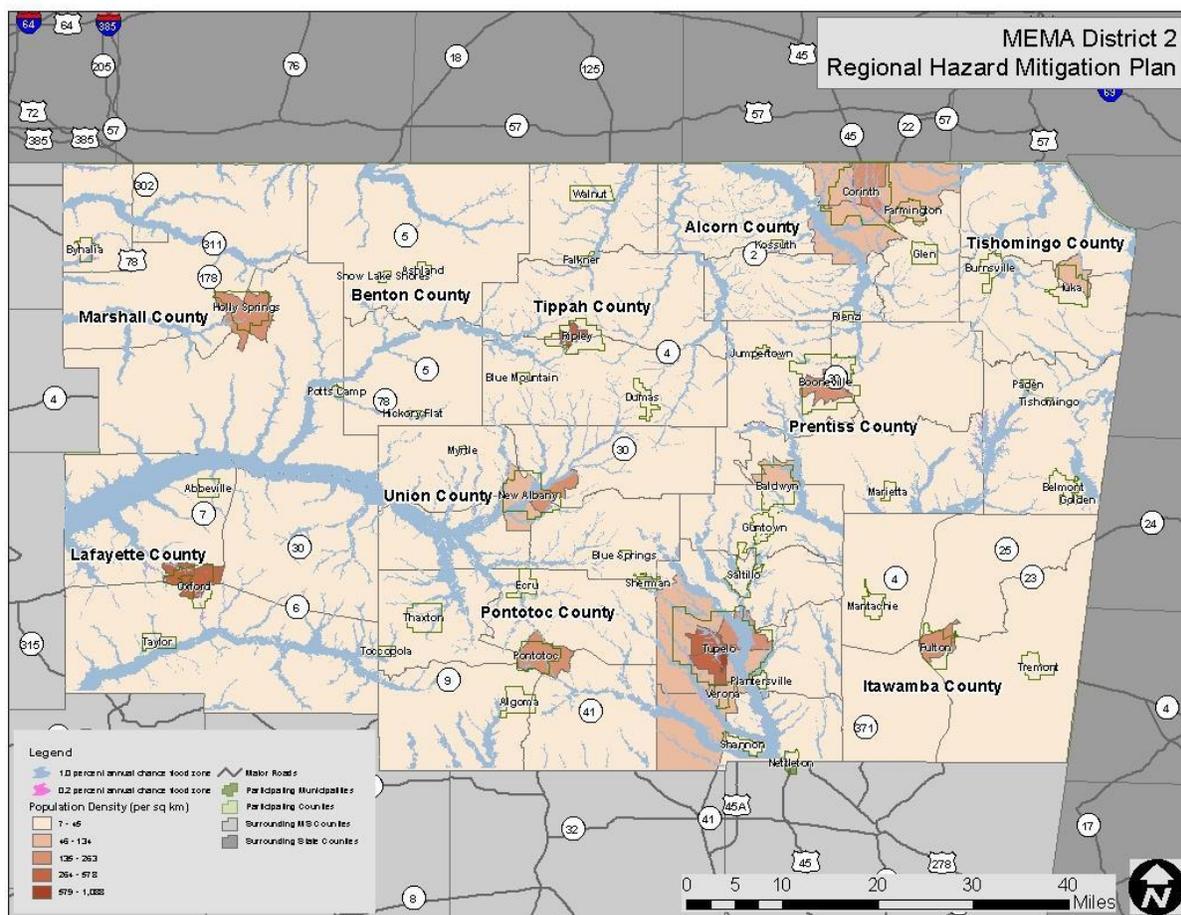
6.5.1 Flood

Historical evidence indicates that the MEMA District 2 Region is susceptible to flood events. A total of 265 flood events have been reported by the National Climatic Data Center resulting in \$14.5 million in property damage as well as five fatalities. On an annualized level, these damages amounted to \$1,152,030 for the MEMA District 2 Region.

SOCIAL VULNERABILITY

The following figure is presented to gain a better understanding of at-risk population by evaluating census tract level population data against mapped floodplains. There are areas of concern in several of the municipal population centers in this region including Tupelo, New Albany, and Corinth. Indeed, nearly every incorporated municipality is potentially at risk of being impacted by flooding in some areas of its jurisdiction. Therefore, further investigation in these areas may be warranted.

Figure 6.4: POPULATION DENSITY NEAR FLOODPLAINS



Source: Federal Emergency Management Agency DFIRM, United States Census 2010

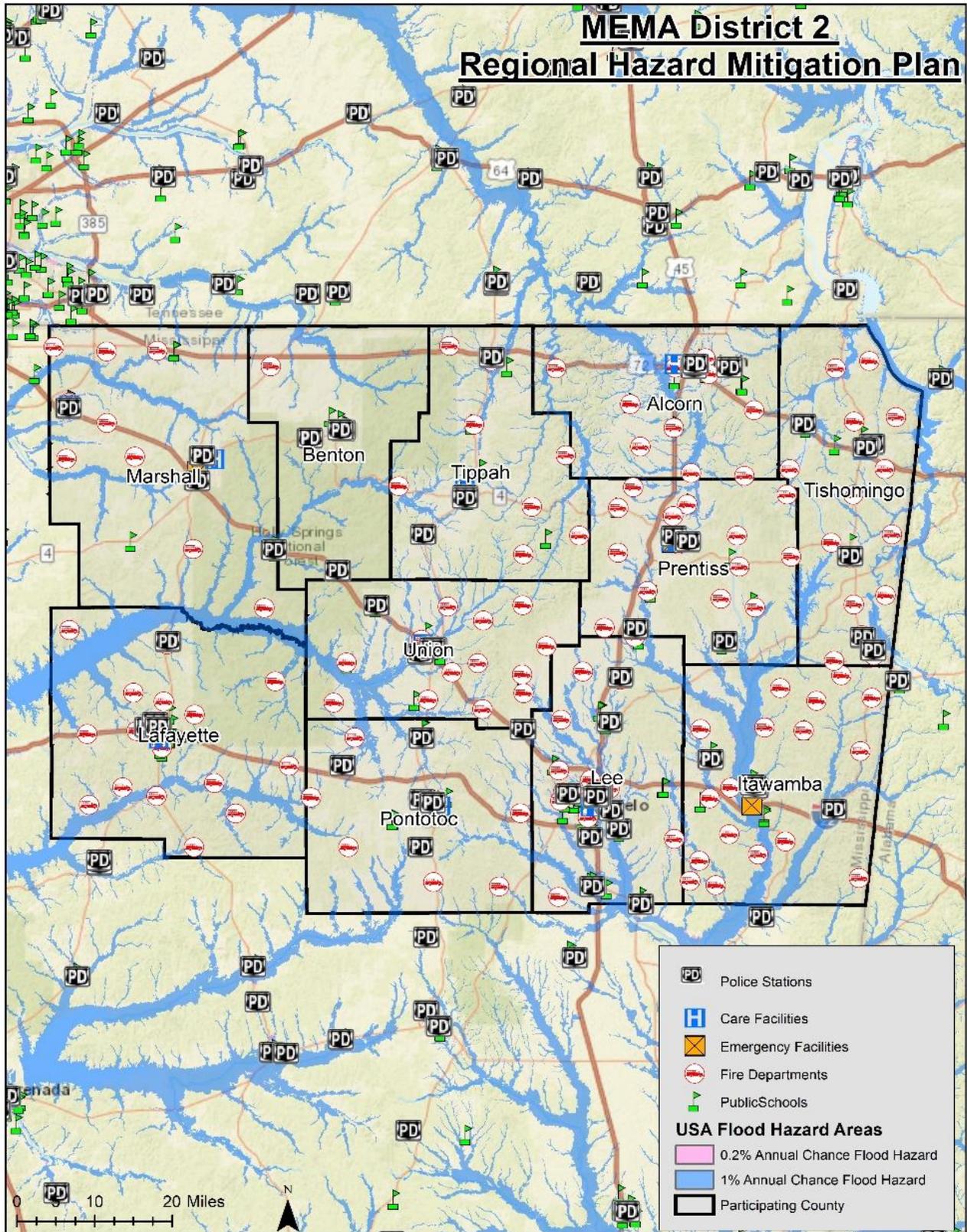
SECTION 6: VULNERABILITY ASSESSMENT

CRITICAL FACILITIES

The following figure shows the critical facility analysis in relation to Special Flood Hazard Areas. (Please note, as previously indicated, this analysis does not consider building elevation, which may negate risk.) A list of specific critical facilities and their associated risk can be found at the end of this section.

In conclusion, a flood has the potential to impact many existing and future buildings, facilities, and populations in the MEMA District 2 Region, though some areas are at a higher risk than others. All types of structures in a floodplain are at-risk, though elevated structures will have a reduced risk. Such site-specific vulnerability determinations are outside the scope of this assessment but will be considered during future plan updates. Furthermore, areas subject to repetitive flooding should be analyzed for potential mitigation actions.

Figure 6.5: Critical Facility Analysis – SFHA



Source: Federal Emergency Management Agency DFIRM, HAZUS

6.5.2 Wildfire

Although historical evidence indicates that the MEMA District 2 Region is susceptible to wildfire events, there are few reports which include information on historic dollar losses. Therefore, it is difficult to calculate a reliable annualized loss figure. Annualized loss is considered negligible though it should be noted that a single event could result in significant damages throughout the region.

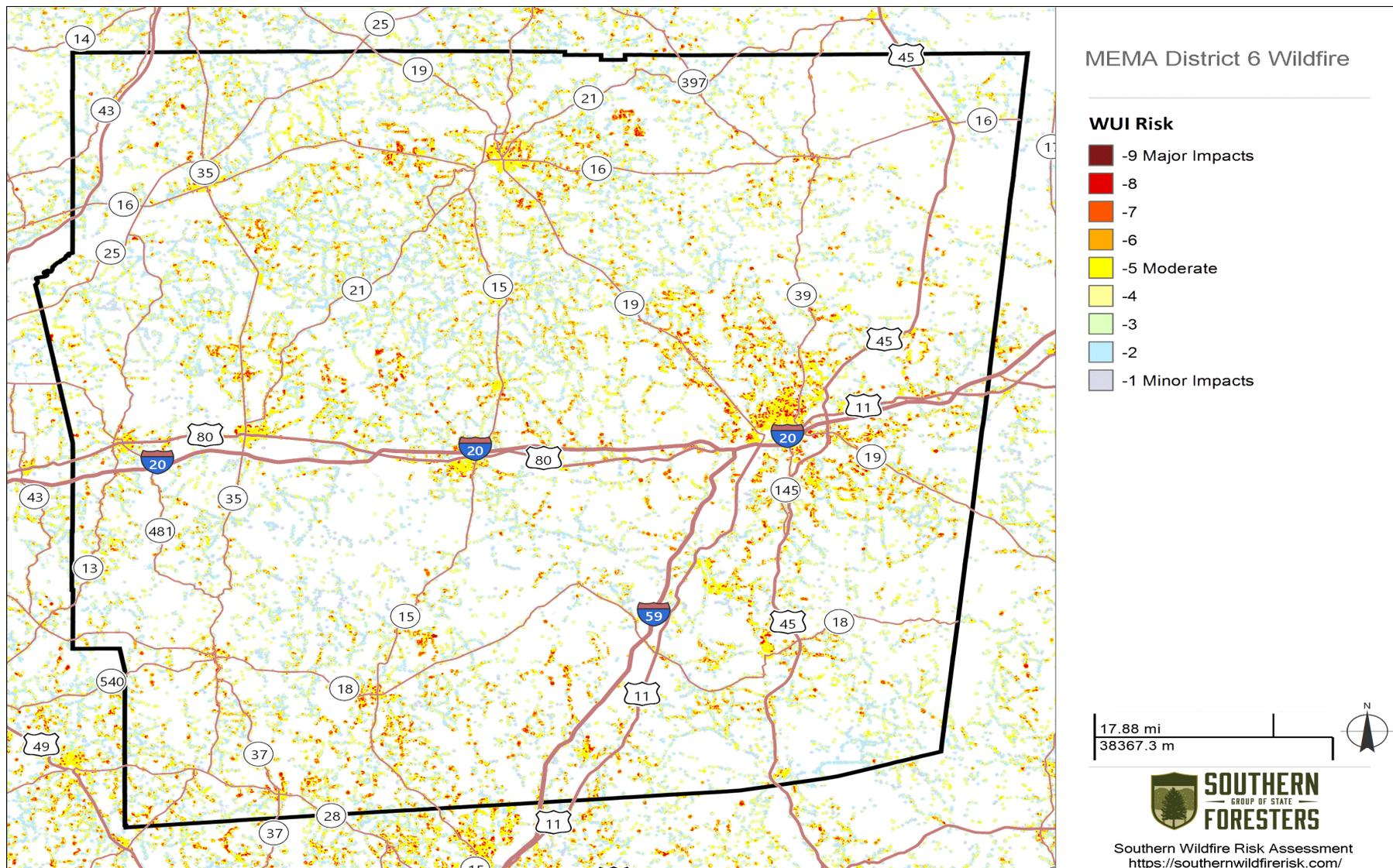
To estimate exposure to wildfire, building data was obtained from Hazus-MH 2.2 which includes information that has been aggregated at the Census block level and which has been deemed useful for analyzing wildfire vulnerability. However, it should be noted that the accuracy of Hazus data is somewhat lower than that of parcel data. For the critical facility analysis, areas of concern were intersected with critical facility locations.

Figure 6.6 shows the Wildland Urban Interface Risk Index (WUIRI) data, which is a data layer that shows a rating of the potential impact of a wildfire on people and their homes. The key input, Wildland Urban Interface (WUI), reflects housing density (houses per acre) consistent with Federal Register National standards. The location of people living in the WUI and rural areas is key information for defining potential wildfire impacts to people and homes. Initially provided as raster data, it was converted to a polygon to allow for analysis. The Wildland Urban Interface Risk Index data ranges from 0 to -9 with lower values being most severe (as noted previously, this is only a measure of relative risk). **Figure 6.7** shows the location of critical facilities in relation to historical burns.

Table 6.6: MEMA District 6 WUI

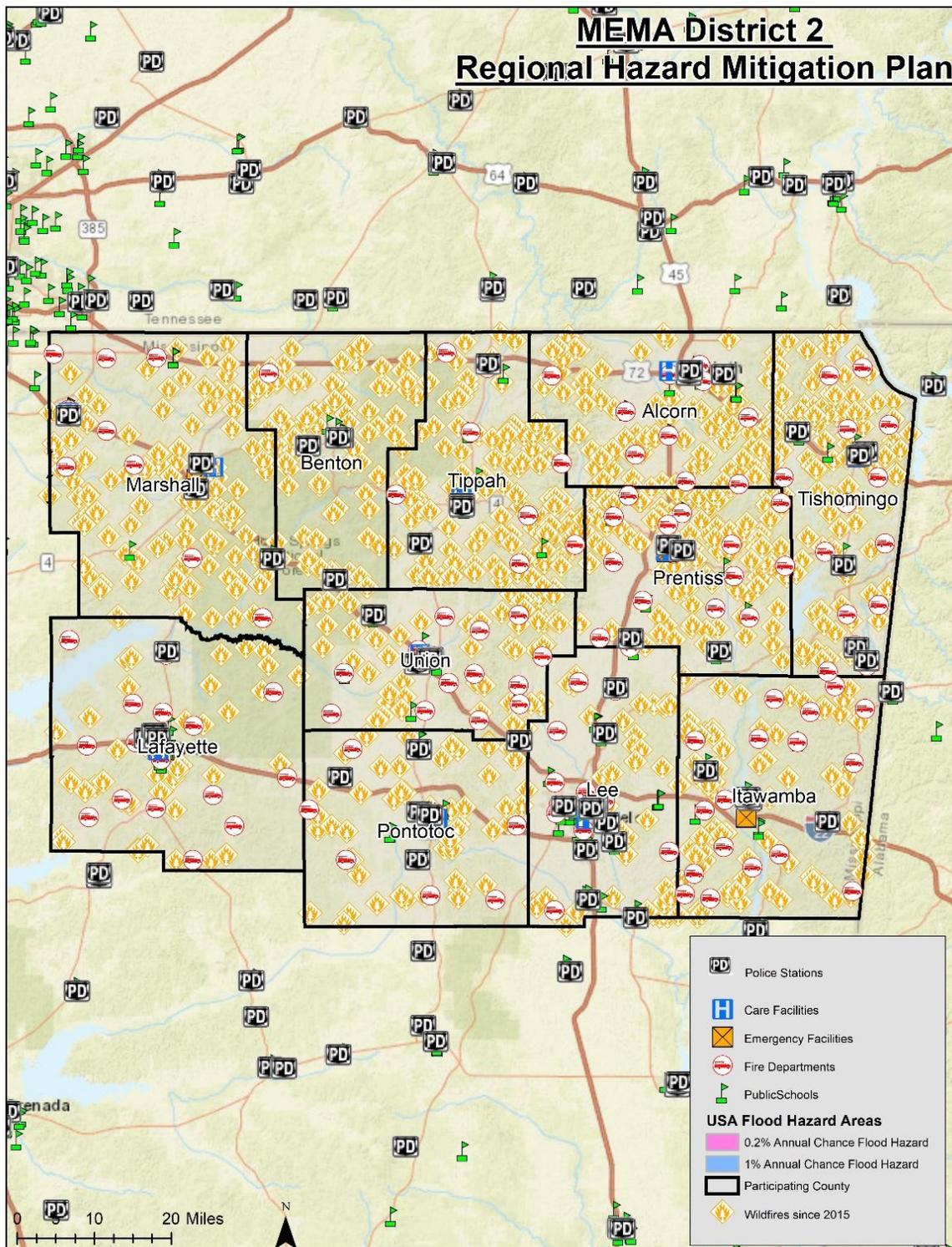
Class	Acres	Percent
-9 Major Impacts	148	0.0 %
-8	13,046	1.0 %
-7	46,442	3.5 %
-6	76,466	5.8 %
-5 Moderate	163,481	12.5 %
-4	356,792	27.2 %
-3	174,198	13.3 %
-2	359,386	27.4 %
-1 Minor Impacts	122,397	9.3 %
Total	1,312,356	100.0 %

Figure 6.6: WUI RISK INDEX AREAS IN THE MEMA DISTRICT 2 REGION



Source: Southern Wildfire Risk Assessment Data

Figure 6.7: CRITICAL FACILITY LOCATIONS - WILDFIRE



Source: Southern Wildfire Risk Assessment Data

SECTION 6: VULNERABILITY ASSESSMENT
SOCIAL VULNERABILITY

Given some level of susceptibility across the entire MEMA District 2 Region, it is assumed that the total population is at risk to the wildfire hazard. Determining the exact number of people in certain wildfire zones is difficult with existing data and could be misleading. In particular, the expansion of residential development from urban centers out into rural landscapes, increases the potential for wildland fire threat to public safety and the potential for damage to forest resources and dependent industries. This increase in population across the region will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire.

For the MEMA District 2 Wildfire Risk project area, it is estimated that 348,999 people or 96.7 % percent of the total project area population (361,065) live within the WUI.

CRITICAL FACILITIES

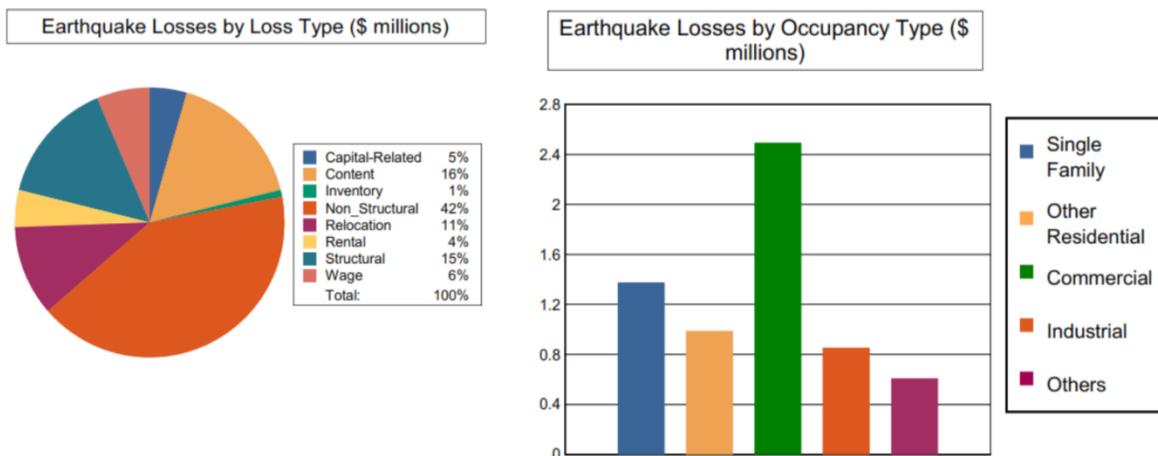
The critical facility analysis was shown in the previous figure. It should be noted, that several factors could impact the spread of a wildfire putting all facilities at risk. A list of specific critical facilities and their associated risk can be found at the end of this section.

In conclusion, a wildfire event has the potential to impact many existing and future buildings, critical facilities, and populations in the MEMA District 2 Region.

6.5.3 Earthquake

A probabilistic earthquake model was performed for the MEMA District 2 Region. As the Hazus-MH model suggests below, and historical occurrences confirm, any earthquake activity in the area is likely to inflict minor damage to the county. Hazus-MH 2.2 estimates the total building-related losses to be \$6.32 Million; 26 % of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 37 % of the total loss. See figure below.

Figure 6.8: MEMA D2 EARTHQUAKE LOSSES BY TYPE



SECTION 6: VULNERABILITY ASSESSMENT

SOCIAL VULNERABILITY

It can be assumed that all existing future populations are at risk to the earthquake hazard. Hazus estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 450 households in the region to be displaced due to the earthquake. Of these, 352 people (out of a total region population of 360,784) will seek temporary shelter in public shelters.³ The total economic loss estimated for the earthquake is \$840.85 Million, which includes building and lifeline related losses based on the region's available inventory.

CRITICAL FACILITIES

The Hazus-MH probabilistic analysis indicated that no critical facilities would sustain measurable damage in an earthquake event. However, all critical facilities should be considered at-risk to minor damage, should an event occur. Before the earthquake, the region had 1,522 hospital beds available for use. On the day of the earthquake, the model estimates that only 907 hospital beds (60.00%) are available for use by patients already in the hospital and those injured by the earthquake. After one week, 79.00% of the beds will be back in service. By 30 days, 94.00% will be operational.

In conclusion, an earthquake has the potential to impact all existing and future buildings, facilities, and populations in the MEMA District 2 Region. The Hazus-MH scenario indicates that minimal to moderate damage is expected from an earthquake occurrence. While the MEMA District 2 Region may not experience a large earthquake (the greatest on record is a magnitude VI MMI), localized damage is possible with an occurrence. A list of specific critical facilities and their associated risk can be found at the end of this section.

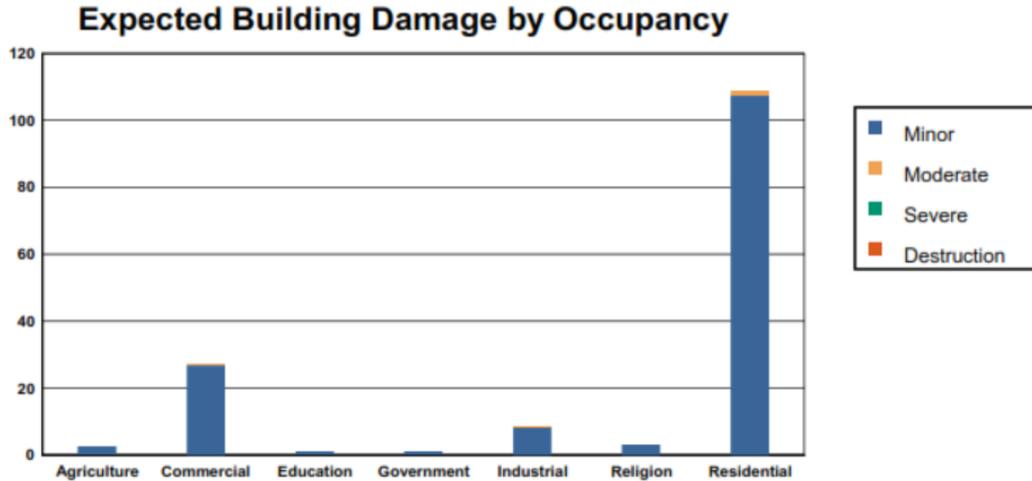
6.5.4 Hurricane and Tropical Storm

Historical evidence indicates that the MEMA District 2 Region has some risk to the hurricane and tropical storm hazard. There have been two disaster declarations due to hurricanes (Hurricane Dennis and Hurricane Katrina). Several tracks have come near or traversed through the MEMA District 2 Region, as shown and discussed in Section 5: *Hazard Profiles*.

A probabilistic 100-year hurricane model was performed for the MEMA District 2. Hazus estimates that about 2 buildings will be at least moderately damaged. This is over 0% of the total number of buildings in the region. There are an estimated 0 buildings that will be completely destroyed. The figure below summarizes the expected damage by general occupancy for the buildings in the region.

³ HAZUS-MH utilizes 2010 Census Data

Figure 6.9: MEMA D2 100-YEAR HURRICANE



Hurricanes and tropical storms can cause damage through numerous additional hazards such as flooding, erosion, tornadoes, and high winds, thus it is difficult to estimate total potential losses from these cumulative effects. The current Hazus-MH hurricane model only analyzes hurricane winds and is not capable of modeling and estimating cumulative losses from all hazards associated with hurricanes; therefore, only hurricane winds are analyzed in this section. It can be assumed that all existing and future buildings and populations are at risk to the hurricane and tropical storm hazard.

The total property damage losses were \$14 million dollars. 0% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 98% of the total loss.

SOCIAL VULNERABILITY

Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the hurricane. Of these, 0 people (out of a total population of 360,784) will seek temporary shelter in public shelters.

CRITICAL FACILITIES

Given equal vulnerability across the MEMA District 2 Region, all critical facilities are considered to be at risk. Some buildings may perform better than others in the face of such an event due to construction and age, among factors. Determining individual building response is beyond the scope of this plan. However, this plan will consider mitigation action for especially vulnerable structures and/or critical facilities to mitigate against the effects of the hurricane hazard. A list of specific critical facilities can be found at the end of this section.

In conclusion, a hurricane event has the potential to impact many existing and future buildings, critical facilities, and populations in the MEMA District 2 Region.

6.5.5 Hazardous Materials Incident

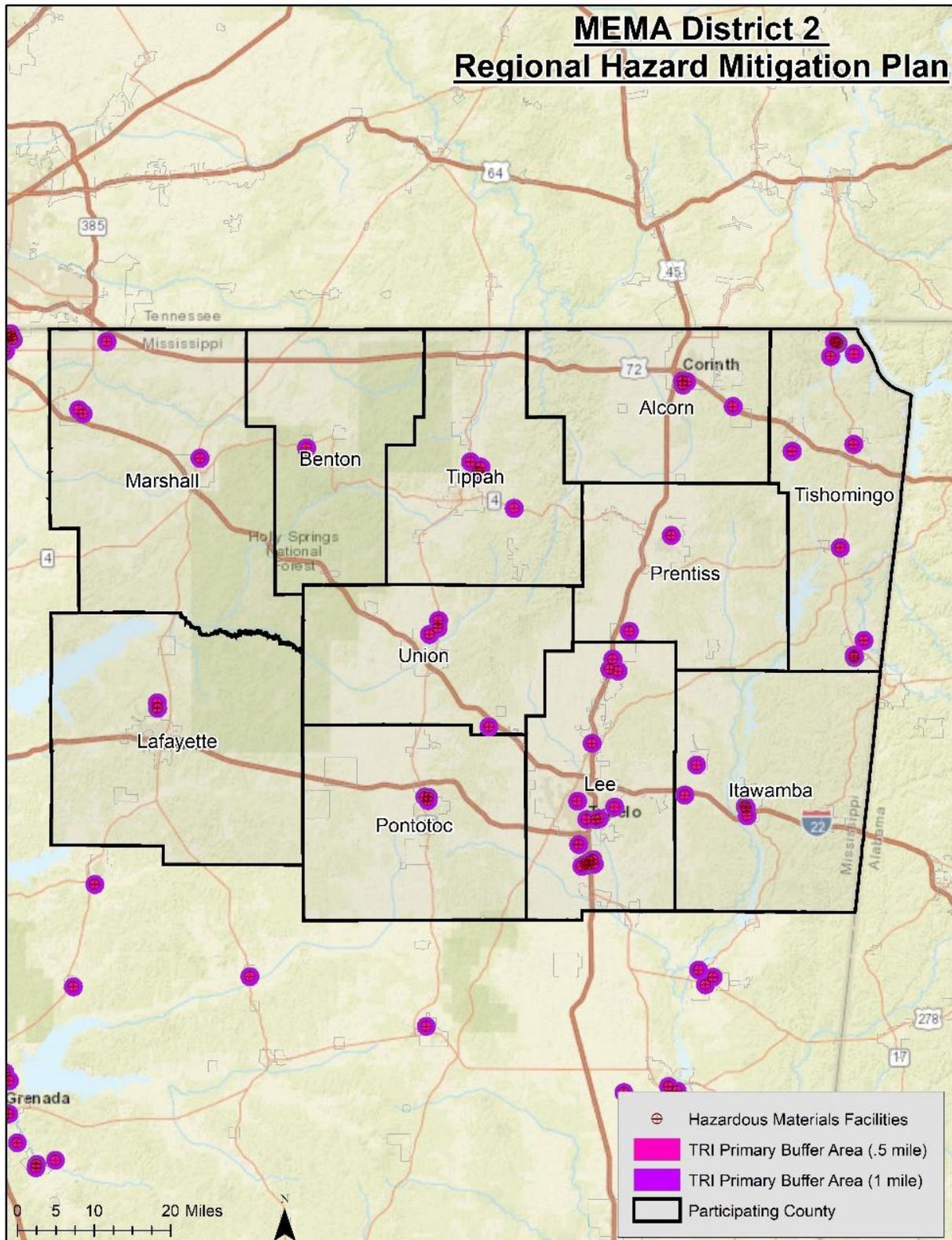
Historical evidence indicates that the MEMA District 2 Region is susceptible to hazardous materials events. A total of 326 HAZMAT incidents have been reported by the Pipeline and Hazardous Materials Safety Administration, resulting in \$2,605,863 (2015 dollars) in property damage as well as 1 fatality and 14 injuries. On an annualized level, these damages amount to \$79,902 for the region.

Most hazardous materials incidents that occur are contained and suppressed before destroying any property or threatening lives. However, they can have a significant negative impact. Such events can cause multiple deaths, completely shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage. In a hazardous materials incident, solid, liquid, and/or gaseous contaminants may be released from fixed or mobile containers. Weather conditions will directly affect how the hazard develops. Certain chemicals may travel through the air or water, affecting a much larger area than the point of the incidence itself. Non-compliance with fire and building codes, as well as failure to maintain existing fire and containment features, can substantially increase the damage from a hazardous materials release. The duration of a hazardous materials incident can range from hours to days. Warning time is minimal to none.

In order to conduct the vulnerability assessment for this hazard, GIS intersection analysis was used for fixed and mobile areas and building footprints/parcels.⁸ In both scenarios, two sizes of buffers—0.5-mile and 1.0-mile—were used. These areas are assumed to represent the different levels of effect: immediate (primary) and secondary. Primary and secondary impact zones were selected based on guidance from the PHMSA Emergency Response Guidebook. For the fixed site analysis, geo-referenced TRI sites in the region, along with buffers, were used for analysis as shown in **Figure 6.10**. For the mobile analysis, the major roads (Interstate highway, U.S. highway, and State highway) and railroads, where hazardous materials are primarily transported that could adversely impact people and buildings, were used for the GIS buffer analysis. **Figure 6.11** shows the areas used for mobile toxic release buffer analysis.

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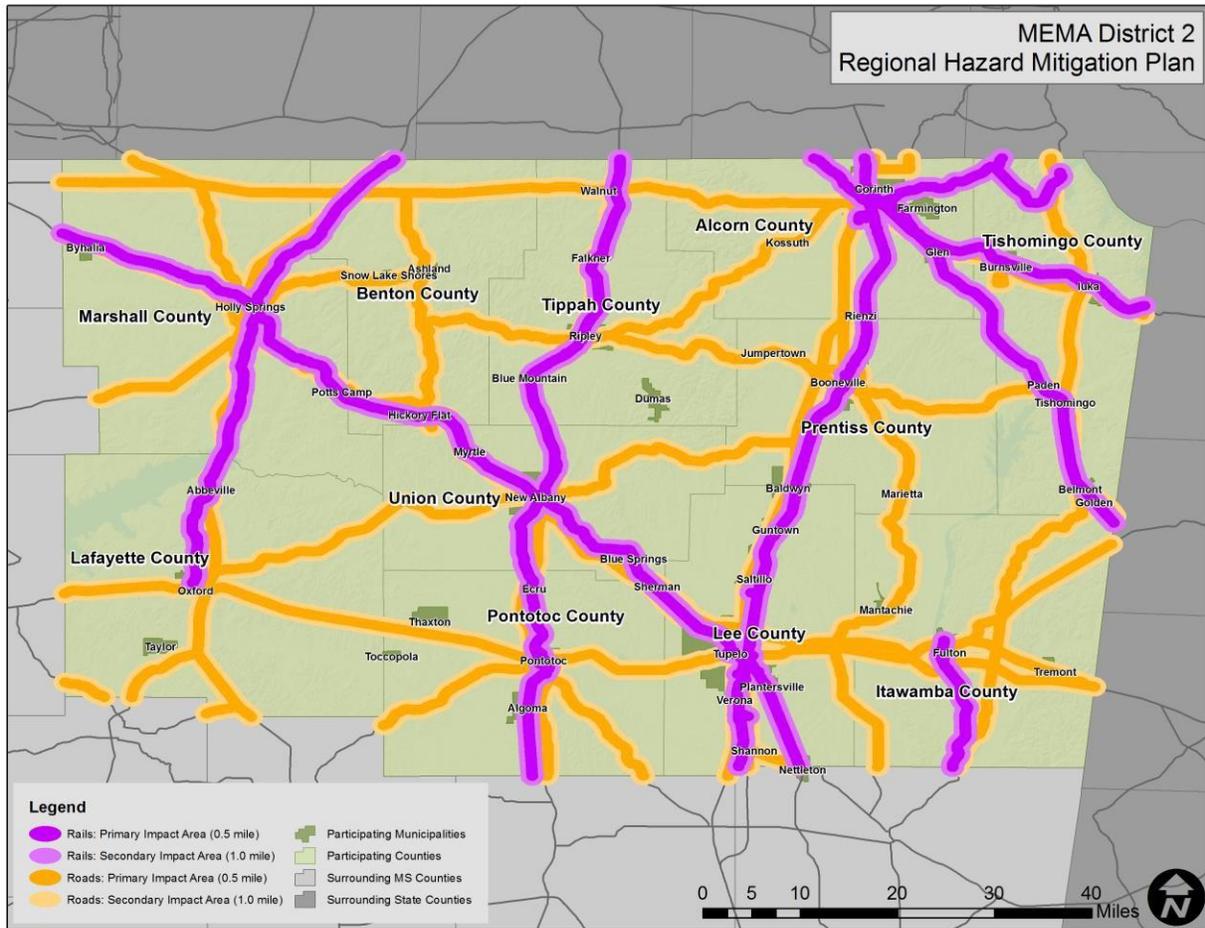
Figure 6.10: TRI SITES WITH BUFFERS IN THE MEMA DISTRICT 2 REGION



Source: Environmental Protection Agency

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Figure 6.11: MOBILE HAZMAT BUFFERS IN THE MEMA DISTRICT 2 REGION



SOCIAL VULNERABILITY

Given high susceptibility across the entire MEMA District 2 Region, it is assumed that the total population is at risk to hazardous materials incident. It should be noted that areas of population concentration may be at an elevated risk due to a greater burden to evacuate population quickly.

CRITICAL FACILITIES

Fixed Site Analysis:

A list of specific critical facilities and their associated risk can be found at the end of this section.

Mobile Analysis:

It should be presumed that any facility located near a public roadway or rail line is susceptible to a potential HAZMAT event. A list of specific critical facilities and their associated risk can be found at the end of this section.

In conclusion, a hazardous material incident has the potential to impact many existing and future buildings, critical facilities, and populations in the MEMA District 2 Region. Those areas in a primary buffer are at the highest risk, though all areas carry some vulnerability due to variations in condition that could alter the impact area (i.e., direction and speed of wind, volume of release, etc.). Further, incidents from neighboring counties could also impact the region.

6.6 CONCLUSIONS ON HAZARD VULNERABILITY

The results of this vulnerability assessment are useful in at least three ways:

- ◆ Improving our understanding of the risk associated with the natural hazards in the MEMA District 2 Region through better understanding of the complexities and dynamics of risk, how levels of risk can be measured and compared, and the myriad of factors that influence risk. An understanding of these relationships is critical in making balanced and informed decisions on managing the risk.
- ◆ Providing a baseline for policy development and comparison of mitigation alternatives. The data used for this analysis presents a current picture of risk in the MEMA District 2 Region. Updating this risk “snapshot” with future data will enable comparison of the changes in risk with time. Baselines of this type can support the objective analysis of policy and program options for risk reduction in the region.
- ◆ Comparing the risk among the natural hazards addressed. The ability to quantify the risk to all these hazards relative to one another helps in a balanced, multi-hazard approach to risk management at each level of governing authority. This ranking provides a systematic framework to compare and prioritize the very disparate natural hazards that are present in the MEMA District 2 Region. This final step in the risk assessment provides the necessary information for local officials to craft a mitigation strategy to focus resources on only those hazards that pose the most threat to the MEMA District 2 counties.

Exposure to hazards can be an indicator of vulnerability. Economic exposure can be identified through values for improvements (buildings), and social exposure can be identified by estimating the population exposed to each hazard. This information is especially important for decision-makers to use in planning for evacuation or other public safety related needs.

The types of assets included in these analyses include all building types in the participating jurisdictions. Specific information about the types of assets that are vulnerable to the identified hazards is included in each hazard subsection (for example all building types are considered at risk to the winter storm hazard and commercial and residential are at risk to repetitive flooding, etc.).

The table below presents a summary of annualized loss for each hazard in the MEMA District 2 Region. Due to the reporting of hazard damages primarily at the county level, it was difficult to determine an accurate annualized loss estimate for each municipality. Therefore, an annualized loss was determined through the damage reported through historical occurrences at the county level. These values should be used as an additional planning tool or measure risk for determining hazard mitigation strategies throughout the region.

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Table 6.7: ANNUALIZED LOSS FOR THE MEMA DISTRICT 2 REGION

Hazard	Alcorn County	Benton County	Itawamba County	Lafayette County	Lee County	Marshall County
Flood-related Hazards						
Flood	\$236,291	\$36,285	\$12,826	\$71,958	\$36,500	\$47,478
Erosion	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Dam and Levee Failure	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Winter Storm & Freeze	\$883,704	\$883,542	\$883,423	\$883,357	\$884,872	\$883,480
Fire-related Hazards						
Drought / Heat Wave	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Wildfire	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Geologic Hazards						
Earthquake	\$459,000	\$99,000	\$123,000	\$481,000	\$676,000	\$512,000
Expansive Soils	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Landslide	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Land Subsidence / Sinkhole	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Wind-related Hazards						
Hurricane & Tropical Storm	\$83,000	\$15,000	\$75,000	\$108,000	\$226,000	\$38,000
Thunderstorm / High Wind	\$32,406	\$30,655	\$23,289	\$33,963	\$25,500	\$8,501
Hail	\$1,821	\$3,720	\$5,065	\$1,796	\$14,946	\$517
Lightning	\$9,695	\$7,599	\$1	\$40,987	\$8,440	\$14,500
Tornado	\$375,507	\$104,845	\$106,154	\$1,610,085	\$408,500	\$94,720
Other Hazards						
HAZMAT Incident	\$420	Negligible	\$4,739	Negligible	\$34,035	\$5,082
Pipelines	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Water Supply / System Failure	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Active Shooter	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Civil Unrest	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Cyberterrorism	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Human Trafficking	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Pandemic	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Terror Threat	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible

**In this table, the term “Negligible” is used to indicate that no records of dollar losses for the particular hazard were recorded. This could be the case either because there were no events that caused dollar damage or because documentation of that particular type of event is not well kept. Annualized losses were calculated based on the total number of years of reporting and damage totals.*

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TABLE 6.7: ANNUALIZED LOSS FOR THE MEMA DISTRICT 2 REGION (CONT.)

Hazard	Pontotoc County	Prentiss County	Tippah County	Tishomingo County	Union County	Region Total
Flood-related Hazards						
Flood	\$16,428	\$18,391	\$63,480	\$45,826	\$62,136	\$625,640
Erosion	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Dam and Levee Failure	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Winter Storm & Freeze	\$883,702	\$884,051	\$883,485	\$884,057	\$883,708	\$9,721,383
Fire-related Hazards						
Drought / Heat Wave	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Wildfire	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Geologic Hazards						
Earthquake	\$182,000	\$206,000	\$249,000	\$152,000	\$235,000	\$3,374,000
Expansive Soils	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Landslide	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Land Subsidence / Sinkhole	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Wind-related Hazards						
Hurricane & Tropical Storm	\$65,000	\$57,000	\$32,000	\$26,000	\$36,000	\$761,000
Thunderstorm / High Wind	\$19,000	\$11,679	\$12,146	\$28,410	\$27,142	\$446,371
Hail	\$11,864	\$2,014	\$2,302	\$1,854	\$320	\$41,640
Lightning	\$9,764	\$1,388	\$1,130	\$11,458	\$2,217	\$62,789
Tornado	\$451,268	\$63,402	\$73,915	\$114,436	\$388,704	\$2,575,464
Other Hazards						
HAZMAT Incident	\$10,034	\$9,203	\$11,000	\$4	\$5,385	\$79,902
Pipelines	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Water Supply / System Failure	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Active Shooter	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Civil Unrest	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Cyberterrorism	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Human Trafficking	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Pandemic	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Terror Threat	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible

**In this table, the term “Negligible” is used to indicate that no records of dollar losses for the particular hazard were recorded. This could be the case either because there were no events that caused dollar damage or because documentation of that particular type of event is not well kept. Annualized losses were calculated based on the total number of years of reporting and damage totals.*

As noted previously, all existing and future buildings and populations (including critical facilities) are vulnerable to atmospheric hazards including drought / heat wave, hurricane and tropical storm, thunderstorm (wind, hail, lightning), tornado, and winter storm and freeze. In addition, all buildings and populations are vulnerable to all of the man-made and technological hazards identified above. Some buildings may be more vulnerable to these hazards based on locations, construction, and building type. **Table 6.14** shows the critical facilities vulnerable to additional hazards analyzed in this section. The table lists those assets that are determined to be exposed to each of the identified hazards (marked with an “X”).

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Table 6.8: AT-RISK CRITICAL FACILITIES IN ALCORN COUNTY

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED				FIRE-RELATED			GEOLOGIC					WIND-RELATED				OTHER												
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat
Alcorn County																														
Biggersville Vfd	Fire Station			X	X	X	X		X	X			X	X	X	X				X	X	X	X	X	X	X	X	X	X	X
Corinth Fire Department #1	Fire Station			X	X	X	X		X	X			X	X	X	X				X	X	X	X	X	X	X	X	X	X	X
Corinth Fire Department #2	Fire Station			X	X	X	X		X	X			X	X	X	X				X	X	X	X	X	X	X	X	X	X	X
Corinth Fire Department #3	Fire Station			X	X	X	X		X	X			X	X	X	X				X	X	X	X	X	X	X	X	X	X	X
Corinth Fire Department #4	Fire Station			X	X	X	X		X	X			X	X	X	X				X	X	X	X	X	X	X	X	X	X	X
Farmington Fire & Rescue	Fire Station			X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X
Glen Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X				X	X	X	X	X	X	X	X	X	X	X
Jacinto Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X
Kossuth Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X		X	X			X	X	X	X	X	X	X	X	X
Town Of Rienzi Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X
Southwest Vfd	Fire Station			X	X	X	X		X	X			X	X	X	X				X	X	X	X	X	X	X	X	X	X	X
Union Center/Theo Vfd	Fire Station			X	X	X	X		X	X			X	X	X	X				X		X	X	X	X	X	X	X	X	X
Wenasoga VFD	Fire Station			X	X	X	X		X	X			X	X	X	X				X		X	X	X	X	X	X	X	X	X

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FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED		GEOLOGIC					WIND-RELATED				OTHER														
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat		
Kossuth Middle School	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X
North Corinth Christian Academy	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X
Northeast Mississippi Community College	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X
Parkway Christian Academy	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X
Rienzi Private School	School			X	X	X	X		X	X			X	X	X	X					X	X	X	X	X	X	X	X	X	X	X	X
Wheeler Grove Learning Center	School			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X	X	X

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Table 6.9: AT-RISK CRITICAL FACILITIES IN BENTON COUNTY

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED			GEOLOGIC					WIND-RELATED				OTHER											
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ³⁷	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat
Benton County																														
Ashland Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Hickory Flat Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
North Benton Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Snow Lake Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Ashland Police Department	Police Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X
Benton County Sheriff	Police Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X
Hickory Flat Police	Police Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X
Snow Lake Shores Police	Police Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X
Ashland Elementary School	School			X	X	X	X		X	X			X	X	X	X			X				X	X	X	X	X	X	X	X
Ashland Middle/High School	School			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X
Benton Co Regional Vocational Cen	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Hickory Flat Attendance Center	School	X		X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Northwest Mississippi Community College	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X

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Table 6.10: AT-RISK CRITICAL FACILITIES IN ITAWAMBA COUNTY

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED				FIRE-RELATED			GEOLOGIC				WIND-RELATED				OTHER													
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ³⁷	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat
Itawamba County																														
Fulton Emergency Management	EOC			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Dorsey Friendship Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Evergreen-Carolina Volunteer Fire Depart	Fire Station			X	X	X	X	X	X	X			X	X	X	X							X	X	X	X	X	X	X	X
Evergreen-Carolina Volunteer Fire Depart	Fire Station			X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X
Fulton- Greater Fulton Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
Greater Mantachie Fire & Rescue	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Fulton Police Dept	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Mantachie Police Dept	Police Station			X	X	X	X	X	X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Sheriff's Office	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Itawamba Community College	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Tremont Police Department	Police Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X

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FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED		GEOLOGIC					WIND-RELATED				OTHER																			
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ⁴	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat							
Dorsey Attendance Center	School			X	X	X	X		X	X			X	X	X	X				X			X	X	X	X	X	X	X	X	X	X	X	X	X		
Fairview Attendance Center	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X		
Itawamba Agricultural High School	School			X	X	X	X		X	X			X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Itawamba Attendance Center	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Itawamba Community College	School			X	X	X	X	X	X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Itawamba Co. Improvement Ctr.	School			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mantachie Attendance Center	School			X	X	X	X	X	X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Tremont Attendance Center	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

⁴ As noted previously, these facilities could be at risk to dam failure if located in an inundation area. Data was not available to conduct such an analysis. There was no local knowledge of these facilities being at risk to dam failure. As additional data becomes available, more in-depth analysis will be conducted.

SECTION 6: VULNERABILITY ASSESSMENT

Table 6.11: AT-RISK CRITICAL FACILITIES IN LAFAYETTE COUNTY

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED			GEOLOGIC					WIND-RELATED				OTHER											
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ⁵	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat
Lafayette County																														
Oxford Emergency Operations Center	EOC			X	X	X	X	X	X	X			X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X
Lafayette County Fire 10	Fire Station			X	X	X	X		X	X			X	X	X	X	X		X		X	X	X	X	X	X	X	X	X	X
Lafayette County Fire Department 16	Fire Station			X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X
Lafayette County Fire Department 9	Fire Station			X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X
Oxford Fire Station #1	Fire Station			X	X	X	X	X	X	X			X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X
Oxford Fire Station #2	Fire Station			X	X	X	X	X	X	X			X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X
Oxford Fire Station #3	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Oxford Fire Station #4	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Lafayette County Fire Station #1	Fire Station			X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X
Lafayette County Fire Station #11	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Lafayette County Fire Station #12	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Lafayette County Fire Station #14	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X

⁵ As noted previously, these facilities could be at risk to dam failure if located in an inundation area. Data was not available to conduct such an analysis. There was no local knowledge of these facilities being at risk to dam failure. As additional data becomes available, more in-depth analysis will be conducted.

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED				FIRE-RELATED			GEOLOGIC				WIND-RELATED			OTHER														
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ⁶	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat
Lafayette County																														
Lafayette County Fire Station #15	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Lafayette County Fire Station #2	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Lafayette County Fire Station #3	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Lafayette County Fire Station #4	Fire Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X
Lafayette County Fire Station #5	Fire Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X
Lafayette County Fire Station #6	Fire Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X
Lafayette County Fire Station #7	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Lafayette County Fire #17	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Baptist Memorial Hospital	Hospital			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Abbeville Police Department	Police Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
University Police and Campus Safety	Police Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Lafayette County Sheriff's Dept. & Jail	Police Station			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
Oxford City Police Dept	Police Station			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED				FIRE-RELATED		GEOLOGIC				WIND-RELATED			OTHER															
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ⁷	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat
Lafayette County																														
Bramlett Elementary School	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Della Davidson Elem	School			X	X	X	X	X	X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Lafayette County Upper Elementary	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Lafayette County Lower Elementary																														
Lafayette County High School	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Lafayette County Middle	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Northwest Mississippi Community College	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Oxf\Laf School Of Applied Tech	School	X		X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Oxford Elementary School	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Oxford High School	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Oxford Intermediate School	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Oxford Learning Center	School			X	X	X	X		X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Oxford Middle School	School			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED				FIRE-RELATED			GEOLOGIC				WIND-RELATED				OTHER															
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ⁸	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat		
Lafayette County																																
Regents School of Oxford	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X
Scott Child Development Center	School			X	X	X	X		X	X			X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X	X	X
Stovall SPED Complex	School	X		X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X
University of Mississippi	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

Table 6.12: AT-RISK CRITICAL FACILITIES IN LEE COUNTY

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED			GEOLOGIC					WIND-RELATED				OTHER											
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat
Lee County																														
Lee County Civil Defense Ofc	EOC			X	X	X	X		X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Baldwyn Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
Birmingham Ridge Volunteer FD	Fire Station			X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X
Cedar Hill Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X
Guntown Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Plantersville Volunteer Fire And Rescue	Fire Station			X	X	X	X		X	X			X	X	X	X		X				X	X	X	X	X	X	X	X	X
Richmond Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Saltillo Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Shannon Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
South Lee Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X		X					X	X	X	X	X	X	X	X
Tupelo Municipal Airport Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
Tupelo Fire Department 1	Fire Station			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED			GEOLOGIC					WIND-RELATED				OTHER																		
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat							
Tupelo Fire Department 2	Fire Station			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Tupelo Fire Department 3	Fire Station			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Tupelo Fire Department 4	Fire Station			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Tupelo Fire Department 5	Fire Station			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Tupelo Fire Department 6	Fire Station			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Tupelo Fire Department 7	Fire Station			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Verona Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
North Mississippi Med Center	Hospital			X	X	X	X		X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
North Mississippi State Hosp	Hospital			X	X	X	X		X	X			X	X	X	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Guntown Police Dept	Police Station			X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Lee County Sheriff's Department	Police Station																																				
North Mississippi Narcotics Task Force	Police Station																																				
Plantersville Police Dept	Police Station			X	X	X	X		X	X			X	X	X	X		X							X	X	X	X	X	X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED		GEOLOGIC					WIND-RELATED				OTHER																		
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat						
Saltillo Police Dept	Police Station			X	X	X	X		X	X			X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Shannon Police Dept	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Tupelo Police Dept	Police Station	X		X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

As noted previously, these facilities could be at risk to dam failure if located in an inundation area. Data was not available to conduct such an analysis. There was no local knowledge of these facilities being at risk to dam failure. As additional data becomes available, more in-depth analysis will be conducted.

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED		GEOLOGIC					WIND-RELATED				OTHER																	
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat					
Verona Police Dept	Police Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X			
Baldwyn Elementary School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Calvary Baptist Kindergarten &	School			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Carver Elementary School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Early Childhood	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X	X		
First UMC Kid’s Pad	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X	X		
Friendship Christian Academy	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	
Guntown School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Joyner Elementary School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Lakeview Bapt Acd	School			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED			GEOLOGIC					WIND-RELATED				OTHER													
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat		
Lawhon Elementary School	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X
Lawndale Elementary School	School			X	X	X	X		X	X			X	X	X	X			X			X	X	X	X	X	X	X	X	X	X	X
Mc Dougal Center	School	X		X	X	X	X		X	X			X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X
Milam Elementary School	School			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Montessori School of Tupelo	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mooreville Elementary School	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X
Mooreville High School	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X
Mooreville Middle School	School			X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X	X	X
Nettleton High School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Nettleton Middle School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Nettleton Primary School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Nettleton Upper Elementary School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Parkway Elementary School	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X
Pierce Street Elementary School	School			X	X	X	X		X	X			X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Plantersville Middle School	School			X	X	X	X		X	X			X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X
Rankin Elementary School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED			GEOLOGIC					WIND-RELATED				OTHER																							
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat												
Saltillo Elementary School	School			X	X	X	X		X	X			X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
Saltillo High School	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X							
Saltillo Primary School	School			X	X	X	X		X	X			X	X	X	X				X			X	X	X	X	X	X	X	X	X	X	X	X	X	X						
Shannon Elementary School	School	X		X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
Shannon High School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Shannon Primary School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Shannon Middle School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Thomas Street Elementary School	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Tupelo Alternative School	School	X		X	X	X	X		X	X			X	X	X	X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Tupelo Christian Academy	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Tupelo High School	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Tupelo Lee Co Voc Tech School	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Tupelo Middle School	School			X	X	X	X		X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
University of Mississippi – Tupelo Campus	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Verona School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

SECTION 6: VULNERABILITY ASSESSMENT

Table 6.13: AT-RISK CRITICAL FACILITIES IN MARSHALL COUNTY

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED			GEOLOGIC					WIND-RELATED				OTHER												
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ³⁶	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat	
Marshall County																															
Marshall County Emergency Operations	EOC			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X
Barton Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X
Byhalia Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X				X		X	X	X	X	X	X	X	X	X	X
Cayce Marshall Co. Volunteer Fire Depart	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X
Holly Springs Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X
Potts Camp Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X
Bethlehem VFD	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X
Red Banks Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X
Slayden-Mount Pleasant Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X
Victoria Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X
Watson Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X	X
Waterford VFD	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X
Wyatt VFD	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED			GEOLOGIC					WIND-RELATED				OTHER																		
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ³⁶	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat							
Marshall County																																					
Alliance Healthcare System	Hospital			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X					
Northeast Mississippi Healthcare Inc.	Clinic			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X					
Byhalia Police	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Holly Springs Police Dept	Police Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X	X	X			
Marshall County Sheriff	Police Station			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Potts Camp Police Department	Police Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Alternative Learning School	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Byhalia Elementary/Middle School				X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Byhalia High School	School			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	
H.W. Byers Middle School	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Potts Camp Middle School	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED			GEOLOGIC					WIND-RELATED				OTHER											
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ⁹	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat
Marshall County																														
Friendship Christian Academy	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Galena Elementary School	School			X	X	X	X	X	X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
H. W. Byers Elementary (K-6)	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
H. W. Byers High School (7-12)	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Holly Springs High School	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Holly Springs Intermediate School	School			X	X	X	X		X	X			X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X
Holly Springs Primary School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Holly Springs Voc Tech	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Holy Family Elem. School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Marshall Academy	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Mary Reid School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Rust College	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X

As noted previously, these facilities could be at risk to dam failure if located in an inundation area. Data was not available to conduct such an analysis. There was no local knowledge of these facilities being at risk to dam failure. As additional data becomes available, more in-depth analysis will be conducted.

SECTION 6: VULNERABILITY ASSESSMENT

Table 6.14: AT-RISK CRITICAL FACILITIES IN PONTOTOC COUNTY

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED				FIRE-RELATED			GEOLOGIC				WIND-RELATED				OTHER													
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ³⁷	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat
Pontotoc County																														
Algoma Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Beckham Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Ecru Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Furrs Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Hurricane Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X
Pontotoc Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Randolph Volunteer Fire Dept.	Fire Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X
Thaxton VFD	Fire Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X
Toccopola VFD	Fire Station	X		X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X
Troy Woodland Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Algoma Police Department	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Ecru Police Dept	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Pontotoc Police Dept	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED				FIRE-RELATED			GEOLOGIC				WIND-RELATED			OTHER														
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ³⁷	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat
Pontotoc County																														
Pontotoc Police Dept	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Sherman City Police	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Thaxton Police Department	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
D T Cox Elementary School	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Ecru Christian School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
KC’s School of Hair Design	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Lee Co. Schools Improvement Center	School			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X
North Pontotoc Elementary School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
North Pontotoc High School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
North Pontotoc Middle School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Pontotoc Co Alternative Program	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Pontotoc High School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED				FIRE-RELATED			GEOLOGIC				WIND-RELATED			OTHER														
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ³⁷	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat
Pontotoc County																														
Pontotoc Junior High School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Pontotoc Middle School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Pontotoc Ridge Career & Tech. Cnt.	School			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
South Pontotoc Elementary School	School			X	X	X	X	X	X	X			X	X	X	X							X	X	X	X	X	X	X	X
South Pontotoc High School	School			X	X	X	X	X	X	X			X	X	X	X							X	X	X	X	X	X	X	X
South Pontotoc Middle School	School			X	X	X	X	X	X	X			X	X	X	X							X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

Table 6.15: AT-RISK CRITICAL FACILITIES IN PRENTISS COUNTY

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED			GEOLOGIC					WIND-RELATED				OTHER													
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ³⁷	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat		
Prentiss County																																
Prentiss County EOC	EOC			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Altitude Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Blackland Vol. Fire	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Booneville Fire Department 1	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Booneville Fire Department 2	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Booneville Fire Department 3	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Bunkom Hill - New Hope VFD	Fire Station			X	X	X	X	X	X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X
Burton VFD	Fire Station			X	X	X	X	X	X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X
Cairo Volunteer Fire Department	Fire Station				X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X
Dry Creek Volunteer Fire Department	Fire Station				X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X
Hobo - Big V Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X
Ingram Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X	X	X
Jumpertown VFD	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED		GEOLOGIC					WIND-RELATED				OTHER													
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ³⁹	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat	
Marietta Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X
New Site Vol. Fire Dept.	Fire Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X	X
Thrasher Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X
Wheeler Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X					X	X	X	X	X	X	X	X	X	X	X
Baptist Mem Hosp-Booneville	Hospital			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X
Baldwyn Police Dept	Police Station			X	X	X	X	X	X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X
Booneville Police Department	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X
Marietta Police Department	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X
Northeast Community College Campus Police	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X
Prentiss County Sheriff	Police Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X
Anderson Elementary School	School			X	X	X	X		X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Baldwyn Elementary School	School			X	X	X	X		X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

Table 6.16: AT-RISK CRITICAL FACILITIES IN TIPPDAH COUNTY

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED				FIRE-RELATED			GEOLOGIC				WIND-RELATED			OTHER														
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ³⁷	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat
Tippah County																														
Tippah County EOC	EOC			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Blue Mountain Volunteer Fire Department	Fire Station	X		X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Dumas Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Faulkner Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Gravestown Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Mitchell Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Ripley Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Spout Springs Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Three Forks Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X				X			X	X	X	X	X	X	X	X
Union Center Theo Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED			GEOLOGIC					WIND-RELATED				OTHER																			
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ³⁸	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat								
Walnut Fire and Rescue	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X	X					
Tippah County Hospital	Hospital			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Blue Mountain Police Dept	Police Station	X		X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Ripley City Police	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Ripley Police Dept	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Tippah County Sheriff	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Walnut Police Dept	Police Station			X	X	X	X		X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Blue Mountain High School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Blue Mountain College	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Chalybeate Elementary				X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Falkner Elementary				X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Falkner High School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Fosters Cosmetology	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED		GEOLOGIC					WIND-RELATED				OTHER																				
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ³⁸	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat								
Northeast Christian Academy	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X			
North South Tippah Voc Tech Center	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Pine Grove High School	School			X	X	X	X	X	X	X			X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Ripley Elementary School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Ripley High School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Ripley Middle School	School			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Walnut Attendance Center	School			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 6.17: AT-RISK CRITICAL FACILITIES IN TISHOMINGO COUNTY

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED				FIRE-RELATED			GEOLOGIC				WIND-RELATED			OTHER															
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ³⁷	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat	
Tishomingo County																															
Tishomingo County Emergency Operations Center	EOC			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	
1st District VFD/ Colman Park Fire Dept	Fire Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X	
Belmont Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	
Burnsville Fire Department	Fire Station			X	X	X	X	X	X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X
Carters Branch Volunteer Fire Department	Fire Station			X	X	X	X	X	X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X
Dennis Volunteer Fire Department	Fire Station			X	X	X	X	X	X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X
Eastport Mill Creek Fire Department	Fire Station			X	X	X	X	X	X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X
Golden Fire Department	Fire Station			X	X	X	X	X	X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X
Harmony/Central Volunteer Fire Dept.	Fire Station			X	X	X	X	X	X	X			X	X	X	X		X	X			X	X	X	X	X	X	X	X	X	X
Holtspur Volunteer Fire Department	Fire Station			X	X	X	X	X	X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED			GEOLOGIC					WIND-RELATED				OTHER											
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ³⁷	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat
Tishomingo County																														
Iuka Fire Dept	Fire Station			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
Midway Dist 3 Vfd	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
North Crossroads	Fire Station			X	X	X	X	X	X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Paden Fire Department	Fire Station			X	X	X	X	X	X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Snowdown Pleasant Hill Fire Department	Fire Station			X	X	X	X	X	X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
South Tishomingo Fire Department	Fire Station			X	X	X	X	X	X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Tishomingo Fire Department	Fire Station			X	X	X	X	X	X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Valley Grove Vfd	Fire Station			X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X
Iuka Hospital	Hospital			X	X	X	X	X	X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Belmont Police Dept	Police Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Burnsville Police Dept	Police Station			X	X	X	X	X	X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Golden Police Dept	Police Station			X	X	X	X	X	X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X

SECTION 6: VULNERABILITY ASSESSMENT

Table 6.18: AT-RISK CRITICAL FACILITIES IN UNION COUNTY

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED			GEOLOGIC					WIND-RELATED				OTHER												
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ³⁷	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat	
Union County																															
Alpine Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X								X	X	X	X	X	X	X	X
Center Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X	
East Union Volunteer Fire Department 1	Fire Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X	
East Union Volunteer Fire Department 2	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	
Ingomar Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	
Ingomar Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	
Myrtle Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	
Myrtle Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	
New Albany Fire Dept	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	
New Albany Fire Dept	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	
North Haven Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	
Northeast Union Rural Fire Department I	Fire Station			X	X	X	X	X	X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	
Northeast Union Rural Fire Department 2	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	
Pinedale Volunteer Fire Department	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	

SECTION 7

CAPABILITY ASSESSMENT

This section of the Plan discusses the capability of the MEMA District 2 Region to implement hazard mitigation activities. It consists of the following four subsections:

- ◆ 7.1 What is a Capability Assessment?
 - ◆ 7.2 Conducting the Capability Assessment
 - ◆ 7.3 Capability Assessment Findings
 - ◆ 7.4 Conclusions on Local Capability
-

7.1 WHAT IS A CAPABILITY ASSESSMENT?

The purpose of conducting a capability assessment is to determine the ability of a local jurisdiction to implement a comprehensive mitigation strategy and to identify potential opportunities for establishing or enhancing specific mitigation policies, programs, or projects¹. As in any planning process, it is important to try to establish which goals, objectives, and/or actions are feasible based on an understanding of the organizational capacity of those agencies or departments tasked with their implementation. A capability assessment helps to determine which mitigation actions are practical, and likely to be implemented over time, given a local government’s planning and regulatory framework, level of administrative and technical support, number of fiscal resources, and current political climate.

A capability assessment has two primary components: 1) an inventory of a local jurisdiction’s relevant plans, ordinances, or programs already in place and 2) an analysis of its capacity to carry them out. Careful examination of local capabilities will detect any existing gaps, shortfalls, or weaknesses with ongoing government activities that could hinder proposed mitigation activities and possibly exacerbate community hazard vulnerability. A capability assessment also highlights the positive mitigation measures already in place or being implemented at the local government level, which should continue to be supported and enhanced through future mitigation efforts.

The capability assessment completed for the MEMA District 2 Region serves as a critical planning step and an integral part of the foundation for designing an effective hazard mitigation strategy. Coupled with the Risk Assessment, the Capability Assessment helps identify and target meaningful mitigation actions for incorporation in the Mitigation Strategy portion of the Hazard Mitigation Plan. It not only helps establish the goals and objectives for the region to pursue under this Plan, but it also ensures that those goals and objectives are realistically achievable under given local conditions.

¹ While the Final Rule for implementing the Disaster Mitigation Act of 2000 does not require a local capability assessment to be completed for local hazard mitigation plans, it is a critical step in developing a mitigation strategy that meets the needs of the region while taking into account their own unique abilities. The Rule does state that a community’s mitigation strategy should be “based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools” (44 CFR, Part 201.6(c)(3)).

7.2 CONDUCTING THE CAPABILITY ASSESSMENT

In order to facilitate the inventory and analysis of local government capabilities within the MEMA District 2 counties, a detailed Capability Assessment Survey was completed for each of the participating jurisdictions based on the information found in existing hazard mitigation plans and local government websites. The survey questionnaire compiled information on a variety of “capability indicators” such as existing local plans, policies, programs, or ordinances that contribute to and/or hinder the region’s ability to implement hazard mitigation actions. Other indicators included information related to the region’s fiscal, administrative, and technical capabilities, such as access to local budgetary and personnel resources for mitigation purposes. The current political climate, an important consideration for any local planning or decision making process, was also evaluated with respect to hazard mitigation.

At a minimum, survey results provide an extensive inventory of existing local plans, ordinances, programs, and resources that are in place or under development in addition to their overall effect on hazard loss reduction. However, the survey instrument can also serve to identify gaps, weaknesses, or conflicts that counties and local jurisdictions can recast as opportunities for specific actions to be proposed as part of the hazard mitigation strategy.

The information collected in the survey questionnaire was incorporated into a database for further analysis. A general scoring methodology was then applied to quantify each jurisdiction’s overall capability.² According to the scoring system, each capability indicator was assigned a point value based on its relevance to hazard mitigation.

Using this scoring methodology, a total score and an overall capability rating of “high,” “moderate,” or “limited” could be determined according to the total number of points received. These classifications are designed to provide nothing more than a general assessment of local government capability. The results of this capability assessment provide critical information for developing an effective and meaningful mitigation strategy.

7.3 CAPABILITY ASSESSMENT FINDINGS

The findings of the capability assessment are summarized in this Plan to provide insight into the relevant capacity of the MEMA District 2 Region to implement hazard mitigation activities. All information is based upon the review of existing hazard mitigation plans and local government websites through the Capability Assessment Survey and input provided by local government officials during meetings of the MEMA District 2 Hazard Mitigation Council.

7.3.1 Planning and Regulatory Capability

Planning and regulatory capability is based on the implementation of plans, ordinances, and programs that demonstrate a local jurisdiction’s commitment to guiding and managing growth, development, and redevelopment in a responsible manner while maintaining the general welfare of the community. It includes emergency response and mitigation planning, comprehensive land use planning, and transportation planning; the enforcement of zoning or subdivision ordinances and building codes that regulate how land is developed and structures are built; as well as protecting environmental, historic, and cultural resources in the community. Although some conflicts can arise, these planning initiatives generally present significant opportunities to integrate hazard mitigation principles and practices into the local decision-making process. This assessment is designed to provide a general overview of the key planning and regulatory tools and programs that are in place or under development for the MEMA District 2 Region along with their potential effect on loss reduction. This information will help identify opportunities to address existing gaps, weaknesses, or conflicts with other

² The scoring methodology used to quantify and rank the region’s capability can be found in Appendix B.

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initiatives in addition to integrating the implementation of this Plan with existing planning mechanisms where appropriate.

Table 7.1 provides a summary of the relevant local plans, ordinances, and programs already in place or under development for the MEMA District 2 Region. A checkmark (✓) indicates that the given item is currently in place and being implemented. An asterisk (*) indicates that the given item is currently being developed for future implementation. Each of these local plans, ordinances, and programs should be considered available mechanisms for incorporating the requirements of the MEMA District 2 Regional Hazard Mitigation Plan.

TABLE 7.1: RELEVANT PLANS, ORDINANCES, AND PROGRAMS

Planning / Regulatory Tool	ALCORN COUNTY	Corinth	Farmington	Glen	Kossuth	Rienzi	BENTON COUNTY	Ashland	Hickory Flat	Snow Lake Shores	ITAWAMBA COUNTY	Fulton	Mantachie	Tremont	LAFAYETTE COUNTY	Abbeville	Oxford	Taylor	LEE COUNTY	Baldwyn	Guntown	Nettleton	Plantersville	Saltito	Shannon	Tupelo	Verona	MARSHALL COUNTY	Byhalia	Holly Springs	Potts Camp
Hazard Mitigation Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Comprehensive Land Use Plan							✓				✓				✓	✓	✓	✓								✓	✓	✓	✓	✓	
Floodplain Management Plan																	✓														
Open Space Management Plan (or Parks & Rec/Greenway Plan)																✓	✓														
Stormwater Management Plan/Ordinance																	✓									✓					
Natural Resource Protection Plan																	✓														
Flood Response Plan																															
Emergency Operations Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Continuity of Operations Plan	✓						✓				✓				✓	✓	✓		✓									✓			
Evacuation Plan																*															
Disaster Recovery Plan																*															
Capital Improvements Plan																											✓				
Economic Development Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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Planning / Regulatory Tool	ALCORN COUNTY		Farmington	Glen	Kossuth	Rienzi	BENTON COUNTY		Hickory Flat	Snow Lake Shores	ITAWAMBA COUNTY		Fulton	Mantachie	Tremont	LAFAYETTE COUNTY		Abbeville	Oxford	Taylor	LEE COUNTY		Baldwyn	Guntown	Nettleton	Plantersville	Saltito	Shannon	Tupelo	Verona	MARSHALL COUNTY		Byhalia	Holly Springs	Potts Camp	
	Corinth																																			
Historic Preservation Plan																	*	✓																		
Flood Damage Prevention Ordinance	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Zoning Ordinance		✓						✓									*	✓	✓					✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		
Subdivision Ordinance		✓						✓								✓	*	✓	✓					✓				✓	✓			✓				
Unified Development Ordinance																		✓	✓									✓								
Post-Disaster Redevelopment Ordinance																																				
Building Code		✓						✓								✓	*	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Fire Code		✓															*	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
National Flood Insurance Program (NFIP)	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NFIP Community Rating System																		✓										✓								

TABLE 7.1: RELEVANT PLANS, ORDINANCES, AND PROGRAMS (CONT.)

Planning / Regulatory Tool	PONTOTOC COUNTY		Algoma	Ecru	Pontotoc (city)	Sherman	Thaxton	Toccopola	PRENTISS COUNTY		Booneville	Jumpertown	Marietta	TIPPAH COUNTY		Blue Mountain	Dumas	Falkner	Ripley	Walnut	TISHOMINGO COUNTY		Belmont	Burnsville	Golden	Iuka	Paden	Tishomingo (town)	UNION COUNTY		Blue Springs	Myrtle	New Albany			
Hazard Mitigation Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Comprehensive Land Use Plan					✓																									✓			✓			
Floodplain Management Plan																																				
Open Space Management Plan (or Parks & Rec/Greenway Plan)																																				
Stormwater Management Plan/Ordinance																																				
Natural Resource Protection Plan																																				
Flood Response Plan																																				

Planning / Regulatory Tool	PONTOTOC COUNTY			PRENTISS COUNTY			TIPPAH COUNTY			TISHOMINGO COUNTY			UNION COUNTY			New Albany							
	Algoma	Ecrú	Pontotoc (city)	Sherman	Thaxton	Toccopola	Booneville	Jumpertown	Marietta	Blue Mountain	Dumas	Falkner	Ripley	Walnut	Belmont	Burnsville	Golden	Iuka	Paden	Tishomingo (town)	Blue Springs	Myrtle	New Albany
Emergency Operations Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Continuity of Operations Plan	✓						✓		✓					✓						✓			
Evacuation Plan																							
Disaster Recovery Plan																							
Capital Improvements Plan																							
Economic Development Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Historic Preservation Plan																							
Flood Damage Prevention Ordinance	✓		✓	✓	✓		✓	✓		✓	✓		✓	✓	✓	✓	✓	✓		✓		✓	✓
Zoning Ordinance				✓								✓					✓		✓				✓
Subdivision Ordinance																							
Unified Development Ordinance																							
Post-Disaster Redevelopment Ordinance																							
Building Code				✓			✓					✓	✓				✓						✓
Fire Code																	✓						
National Flood Insurance Program (NFIP)	✓		✓	✓	✓		✓	✓		✓	✓		✓	✓	✓	✓	✓	✓		✓		✓	✓
NFIP Community Rating System																							

A more detailed discussion on the region’s planning and regulatory capability follows.

7.3.2 Emergency Management

Hazard mitigation is widely recognized as one of the four primary phases of emergency management. The three other phases include preparedness, response, and recovery. In reality, each phase is interconnected with hazard mitigation, as **Figure 7.1** suggests. Opportunities to reduce potential losses through mitigation practices are most often implemented before disaster strikes, such as the elevation of flood prone structures or the continuous enforcement of policies that prevent and regulate development that is vulnerable to hazards due to its location, design, or other characteristics. Mitigation opportunities will also be presented during immediate preparedness or response activities, such as installing storm shutters in advance of a hurricane, and certainly during the long-term recovery and redevelopment process following a hazard event.

FIGURE 7.1: THE FOUR PHASES OF EMERGENCY MANAGEMENT



Planning for each phase is a critical part of a comprehensive emergency management program and a key to the successful implementation of hazard mitigation actions. As a result, the Capability Assessment Survey asked several questions across a range of emergency management plans in order to assess the MEMA District 2 Region's willingness to plan and their level of technical planning proficiency.

Hazard Mitigation Plan: A hazard mitigation plan represents a community's blueprint for how it intends to reduce the impact of natural and human-caused hazards on people and the built environment. The essential elements of a hazard mitigation plan include a risk assessment, capability assessment, and mitigation strategy.

- ◆ Each of the 11 counties participating in this multi-jurisdictional plan has previously adopted a hazard mitigation plan. Each participating municipality was included in its respective county's plan.

Disaster Recovery Plan: A disaster recovery plan serves to guide the physical, social, environmental, and economic recovery and reconstruction process following a disaster. In many instances, hazard mitigation principles and practices are incorporated into local disaster recovery plans with the intent of capitalizing on opportunities to break the cycle of repetitive disaster losses. Disaster recovery plans can also lead to the preparation of disaster redevelopment policies and ordinances to be enacted following a hazard event.

- ◆ None of the counties or municipalities participating in this multi-jurisdictional plan has adopted a disaster recovery plan. The counties should consider developing a plan to guide the recovery and reconstruction process following a disaster.

Emergency Operations Plan: An emergency operations plan outlines responsibilities and the means by which resources are deployed during and following an emergency or disaster.

- ◆ Each of the 11 counties participating in this multi-jurisdictional plan maintains a comprehensive emergency management plan through its respective County Emergency Management Agency. Each participating municipality is covered by its respective county's plan.

Continuity of Operations Plan: A continuity of operations plan establishes a chain of command, line of succession, and plans for backup or alternate emergency facilities in case of an extreme emergency or disaster event.

- ◆ Each of the 11 counties participating in this multi-jurisdictional plan maintains a continuity of operations plan.

Flood Response Plan: A flood response plan establishes procedures for responding to a flood emergency including coordinating and facilitating resources to minimize the impacts of flood.

- ◆ None of the counties or municipalities participating in this multi-jurisdictional plan has adopted a flood response plan.

7.3.3 General Planning

The implementation of hazard mitigation activities often involves agencies and individuals beyond the emergency management profession. Stakeholders may include local planners, public works officials, economic development specialists, and others. In many instances, concurrent local planning efforts will help to achieve or complement hazard mitigation goals, even though they are not designed as such. Therefore, the Capability Assessment Survey also asked questions regarding general planning capabilities and the degree to which hazard mitigation is integrated into other on-going planning efforts in the MEMA District 2 Region.

Comprehensive Land Use Plan: A comprehensive land use plan establishes the overall vision for what a community wants to be and serves as a guide for future governmental decision making. Typically, a comprehensive plan contains sections on demographic conditions, land use, transportation elements, and community facilities. Given the broad nature of the plan and its regulatory standing in many communities, the integration of hazard mitigation measures into the comprehensive plan can enhance the likelihood of achieving risk reduction goals, objectives, and actions.

- ◆ Lafayette County and Marshall County have adopted county comprehensive land use plans.
- ◆ Several of the municipalities participating in this multi-jurisdictional plan have adopted general development plans, comprehensive plans, and land use plans, including the Town of Ashland, City of Fulton, the Town of Abbeville, City of Oxford, Town of Taylor, City of Tupelo, City of Verona, Town of Byhalia, City of Holly Springs, Town of Sherman, Village of Blue Springs, and City of New Albany.

Capital Improvements Plan: A capital improvements plan guides the scheduling of spending on public improvements. A capital improvements plan can serve as an important mechanism for guiding future development away from identified hazard areas. Limiting public spending in hazardous areas is one of the most effective long-term mitigation actions available to local governments.

- ◆ The City of Tupelo is the only jurisdiction participating in this multi-jurisdictional plan that has adopted a capital improvements plan.

Historic Preservation Plan: A historic preservation plan is intended to preserve historic structures or districts within a community. An often-overlooked aspect of the historic preservation plan is the assessment of buildings and sites located in areas subject to natural hazards and the identification of ways to reduce future damages. This may involve retrofitting or relocation techniques that account for the need to protect buildings that do not meet current building standards or are within a historic district that cannot easily be relocated out of harm's way.

- ◆ None of the counties or municipalities participating in this multi-jurisdictional plan has a historic preservation plan.

Zoning Ordinance: Zoning represents the primary means by which land use is controlled by local governments. As part of a community's police power, zoning is used to protect the public health, safety, and welfare of those in a given jurisdiction that maintains zoning authority. A zoning ordinance is the mechanism through which zoning is typically implemented. Since zoning regulations enable municipal governments to limit the type and density of development, a zoning ordinance can serve as a powerful tool when applied in identified hazard areas.

- ◆ The City of Oxford, Town of Taylor, and City of Tupelo include zoning regulations as part of their local development codes.
- ◆ Marshall County has adopted a standalone zoning ordinance.
- ◆ Several of the municipalities participating in this multi-jurisdictional plan have adopted standalone zoning ordinances, including the City of Corinth, Town of Ashland, City of Nettleton, City of Saltillo, Town of Shannon, City of Verona, Town of Byhalia, City of Holly Springs, Town of Sherman, City of Ripley, City of Iuka, Town of Tishomingo, and City of New Albany.

Subdivision Ordinance: A subdivision ordinance is intended to regulate the development of residential, commercial, industrial, or other uses, including associated public infrastructure, as land is subdivided into buildable lots for sale or future development. Subdivision design that accounts for natural hazards can dramatically reduce the exposure of future development.

- ◆ The City of Oxford, Town of Taylor, and City of Tupelo include subdivision regulations as part of their local development codes.
- ◆ Lafayette County has adopted a standalone subdivision ordinance.
- ◆ Several of the participating municipalities have also adopted standalone subdivision ordinances, including the City of Corinth, Town of Ashland, City of Nettleton, City of Verona, and Town of Byhalia.

Building Codes, Permitting, and Inspections: Building codes regulate construction standards. In many communities, permits, and inspections are required for new construction. Decisions regarding the adoption of building codes (that account for hazard risk), the type of permitting process required both before and after a disaster, and the enforcement of inspection protocols all affect the level of hazard risk faced by a community.

- ◆ Effective August 1, 2014, the State of Mississippi has adopted as a minimum any of the last three editions of the International Building Code and any additional codes as adopted by the Mississippi Building Code Council. In December 2019, the Mississippi Building Code Council adopted the 2018 editions of the IBC, IRC, IEBC, IFC, IFGC, IMC, IPC and IECC. The ISPC is adopted by reference in the IBC and IRC. Adopting Mississippi jurisdictions must currently adopt either the 2012, 2015 or the 2018 editions. Jurisdictions had 120 days to opt out of adoptions. Additionally, all state buildings,

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leased or owned, must meet the requirements set forth in the 2012 International Building Code.

- ◆ Lafayette County has adopted a building code.
- ◆ The following participating municipalities have also adopted building codes: the City of Corinth, Town of Ashland, City of Oxford, Town of Taylor, City of Baldwyn, Town of Guntown, City of Nettleton, Village of Plantersville, City of Saltillo, Town of Shannon, City of Tupelo, City of Verona, Town of Byhalia, City of Holly Springs, Town of Sherman, City of Booneville, City of Ripley, Town of Walnut, City of Iuka, and City of New Albany.

The adoption and enforcement of building codes by local jurisdictions is routinely assessed through the Building Code Effectiveness Grading Schedule (BCEGS) program developed by the Insurance Services Office, Inc. (ISO).³ In Mississippi, the Mississippi State Rating Bureau assesses the building codes in effect in a particular community and how the community enforces its building codes *with special emphasis on mitigation of losses from natural hazards*. The results of BCEGS assessments are routinely provided to ISO's member private insurance companies, which in turn may offer ratings credits for new buildings constructed in communities with strong BCEGS classifications. The concept is that communities with well-enforced, up-to-date codes should experience fewer disaster-related losses and, as a result, should have lower insurance rates.

In conducting the assessment, ISO collects information related to personnel qualification and continuing education as well as the number of inspections performed per day. This type of information combined with local building codes is used to determine a grade for that jurisdiction. The grades range from 1 to 10 with a BCEGS grade of 1 representing exemplary commitment to building code enforcement and a grade of 10 indicating less than minimum recognized protection.

7.3.4 Floodplain Management

Flooding represents the greatest natural hazard facing the nation. At the same time, the tools available to reduce the impacts associated with flooding are among the most developed when compared to other hazard-specific mitigation techniques. In addition to approaches that cut across hazards such as education, outreach, and the training of local officials, the *National Flood Insurance Program (NFIP)* contains specific regulatory measures that enable government officials to determine where and how growth occurs relative to flood hazards. Participation in the NFIP is voluntary for local governments; however, program participation is strongly encouraged by FEMA as a first step for implementing and sustaining an effective hazard mitigation program. It is therefore used as part of this assessment as a key indicator for measuring local capability.

In order for a county or municipality to participate in the NFIP, they must adopt a local flood damage prevention ordinance that requires jurisdictions to follow established minimum building standards in the floodplain. These standards require that all new buildings and substantial improvements to existing buildings will be protected from damage by a 100-year flood event and that new development in the floodplain will not exacerbate existing flood problems or increase damage to other properties.

A key service provided by the NFIP is the mapping of identified flood hazard areas. Once completed, the Flood Insurance Rate Maps (FIRMs) are used to assess flood hazard risk, regulate construction practices,

³ Participation in BCEGS is voluntary and may be declined by local governments if they do not wish to have their local building codes evaluated.

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and set flood insurance rates. FIRMs are an important source of information to educate residents, government officials, and the private sector about the likelihood of flooding in their community.

Table 7.2 provides NFIP policy and claim information for each participating jurisdiction in the MEMA District 2 Region. Each of the jurisdictions that are participating in the development of this plan that also participate in the NFIP are committed to maintaining and enforcing their floodplain management ordinances and regulating new development in floodplains.⁴

TABLE 7.2: NFIP POLICY AND CLAIM INFORMATION

Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies in Force	Insurance in Force	Closed Claims	Total Payments to Date
ALCORN COUNTY†	02/27/92	09/17/10	20	\$4,512,700	6	\$141,541
Corinth	03/16/81	09/17/10	100	\$30,130,300	43	\$4,039,493
Farmington*	--	--	--	--	--	--
Glen*	--	--	--	--	--	--
Kossuth*	--	--	--	--	--	--
Rienzi	09/17/10	09/17/10(M)	0	\$0	0	\$0
BENTON COUNTY†	11/03/08	10/02/08	8	\$1,290,300	0	\$0
Ashland	07/15/09	(NSFHA)	0	\$0	0	\$0
Hickory Flat	08/05/85	10/02/08(M)	0	\$0	0	\$0
Snow Lake Shores*	--	--	--	--	--	--
ITAWAMBA COUNTY†	03/12/96	09/04/91	23	\$2,780,800	0	\$0
Fulton	09/04/85	02/03/93	10	\$4,743,700	0	\$0
Mantachie	09/18/85	09/18/85(M)	6	\$438,100	2	\$51,649
Tremont*	--	--	--	--	--	--
LAFAYETTE COUNTY†	12/08/06	11/26/10	103	\$24,102,700	2	\$13,160
Abbeville	11/26/10	11/26/10(M)	0	\$0	0	\$0
Oxford	09/29/78	11/26/10	159	\$41,916,400	16	\$200,687
Taylor	03/15/11	11/26/10(M)	2	\$301,700	0	\$0
LEE COUNTY†	03/05/90	10/16/13	87	\$17,500,900	6	\$86,287
Baldwyn	09/18/87	02/03/10	2	\$560,000	1	\$32,438
Guntown	08/28/07	10/16/13	0	\$0	0	\$0

⁴ NFIP and Severe Repetitive Loss Properties data was not available during this plan update, information is current as of 2015.

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Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies in Force	Insurance in Force	Closed Claims	Total Payments to Date
Nettleton	02/24/10	02/03/10	0	\$0	0	\$0
Plantersville	08/01/86	02/03/10	2	\$171,500	0	\$0
Saltillo	09/18/87	10/16/13	50	\$8,274,700	6	\$106,820
Shannon	02/26/09	10/16/13	0	\$0	0	\$0
Tupelo	04/03/78	10/16/13	441	\$97,396,100	69	\$1,378,770
Verona	06/04/87	10/16/13	5	\$1,002,100	0	\$0
MARSHALL COUNTY†	01/17/91	07/04/11	31	\$6,673,200	3	\$49,798
Byhalia	06/18/87	07/04/11	3	\$1,064,300	1	\$32,147
Holly Springs	08/05/85	07/04/11(M)	9	\$2,460,500	0	\$0
Potts Camp	08/05/85	07/04/11(M)	3	\$408,600	3	\$27,670
PONTOTOC COUNTY†	02/01/87	08/19/10(L)	14	\$3,342,800	2	\$6,814
Algoma*	--	--	--	--	--	--
Ecru	09/04/86	08/19/10	0	\$0	0	\$0
Pontotoc (city)	08/19/10	08/19/10	0	\$0	0	\$0
Sherman	09/04/85	08/19/10(M)	1	\$70,000	1	\$2,100
Thaxton	11/16/10	08/19/10	1	\$70,000	0	\$0
Toccopola*	--	--	--	--	--	--
PRENTISS COUNTY†	07/18/11	07/18/11	0	\$0	0	\$0
Booneville	07/03/86	07/18/11(M)	11	\$2,561,100	1	\$13,574
Jumpertown*	--	--	--	--	--	--
Marietta*	--	--	--	--	--	--
TIPPAH COUNTY†	06/18/10	06/18/10(M)	3	\$370,000	0	\$0
Blue Mountain	07/03/86	06/18/10(M)	1	\$400,000	1	\$25,892
Dumas*	--	--	--	--	--	--
Falkner*	--	--	--	--	--	--
Ripley	06/04/87	06/18/10(M)	7	\$2,712,100	1	\$24,136
Walnut	11/01/07	06/18/10(M)	0	\$0	0	\$0

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Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies in Force	Insurance in Force	Closed Claims	Total Payments to Date
TISHOMINGO COUNTY†	03/15/93	12/17/10	24	\$5,278,100	9	\$99,771
Belmont	12/17/10	12/17/10(M)	1	\$30,000	0	\$0
Burnsville	01/17/91	12/17/10	5	\$850,000	2	\$12,148
Golden	10/11/11	12/17/10(M)	0	\$0	0	\$0
Iuka	06/19/89	12/17/10	9	\$1,157,100	3	\$91,388
Paden	11/02/10	11/02/10	0	\$0	0	\$0
Tishomingo (town)*	--	--	--	--	--	--
UNION COUNTY†	09/03/10	09/03/10(M)	0	\$0	0	\$0
Blue Springs*	--	--	--	--	--	--
Myrtle	08/05/85	(NSFHA)	0	\$0	0	\$0
New Albany	09/04/85	09/03/10(M)	23	\$6,232,400	14	\$456,218

†Includes unincorporated areas of county only

*Community does not participate in the NFIP

(M) – No Elevation Determined, All Zone A, C and X

(NSFHA) – No Special Flood Hazard Area – All Zone C

(L) – Original FIRM by Letter – All Zone A, C and X

Source: NFIP Community Status information as of 8/17/2015; NFIP claims and policy information as of 6/30/2015

All jurisdictions listed above that are participants in the NFIP will continue to comply with all required provisions of the program and will work to adequately comply in the future utilizing a number of strategies. For example, the jurisdictions will coordinate with NCEM and FEMA to develop maps and regulations related to special flood hazard areas within their jurisdictional boundaries and, through a consistent monitoring process, will design and improve their floodplain management program in a way that reduces the risk of flooding to people and property.

As noted above, several jurisdictions are not participants in the NFIP. Farmington, Snow Lake Shores, Jumpertown, Marietta, Tishomingo, and Blue Springs do not participate because there is no land area within their respective jurisdictions that is classified as floodplain, so most residents would be unlikely to purchase flood insurance. Similarly, Glen, Tremont, Algoma, Dumas, and Falkner do not participate because they have very small or negligible land areas classified as floodplain. Kossuth and Toccopola are small communities and do not have the capacity or resources to properly administer and maintain the program.

Community Rating System: An additional indicator of floodplain management capability is the active participation of local jurisdictions in the Community Rating System (CRS). The CRS is an incentive-based program that encourages counties and municipalities to undertake defined flood mitigation activities that go beyond the minimum requirements of the NFIP by adding extra local measures to provide protection from flooding. All of the 18 creditable CRS mitigation activities are assigned a range of point

values. As points are accumulated and reach identified thresholds, communities can apply for an improved CRS class rating. Class ratings, which range from 10 to 1, are tied to flood insurance premium reductions as shown in **Table 7.3**. As class rating improves (the lower the number the better), the percent reduction in flood insurance premiums for NFIP policyholders in that community increases.

TABLE 7.3: CRS PREMIUM DISCOUNTS, BY CLASS

CRS Class	Premium Reduction
1	45%
2	40%
3	35%
4	30%
5	25%
6	20%
7	15%
8	10%
9	5%
10	0

Source: FEMA

Community participation in the CRS is voluntary. Any community that is in full compliance with the rules and regulations of the NFIP may apply to FEMA for a CRS classification better than class 10. The CRS application process has been greatly simplified over the past several years based on community comments. Changes were made with the intent to make the CRS more user-friendly and make extensive technical assistance available for communities who request it.

- ◆ The City of Oxford and the City of Tupelo participate in the CRS and both have a Class 8 rating. Participation in the CRS program should be considered as a mitigation action by the other counties and municipalities. The program would be most beneficial to City of Corinth and Lafayette County, which both have at least 100 NFIP policies in force.

Flood Damage Prevention Ordinance: A flood damage prevention ordinance establishes minimum building standards in the floodplain with the intent to minimize public and private losses due to flood conditions.

- ◆ All communities participating in the NFIP are required to adopt a local flood damage prevention ordinance. All counties and municipalities participating in this hazard mitigation plan, with the exception of Town of Farmington, Town of Glen, Village of Kossuth, Town of Snow Lake Shores, Town of Tremont, Town of Algoma, Town of Toccopola, Town of Jumpertown, Town of Marietta, Town of Dumas, Village of Falkner, Town of Tishomingo, and Village of Blue Springs, also participate in the NFIP and they all have adopted flood damage prevention regulations.

Floodplain Management Plan: A floodplain management plan (or a flood mitigation plan) provides a framework for action regarding corrective and preventative measures to reduce flood-related impacts.

- ◆ None of the participating counties or municipalities has adopted a floodplain management plan to help prevent damages associated with flooding and flood loss.

Open Space Management Plan: An open space management plan is designed to preserve, protect, and restore largely undeveloped lands in their natural state and to expand or connect areas in the public domain such as parks, greenways, and other outdoor recreation areas. In many instances, open space management practices are consistent with the goals of reducing hazard losses, such as the preservation of wetlands or other flood-prone areas in their natural state in perpetuity.

- ◆ None of the participating counties has an open space management plan.
- ◆ The Town of Abbeville has a municipal open space management plan in place.

Stormwater Management Plan: A stormwater management plan is designed to address flooding associated with stormwater runoff. The stormwater management plan is typically focused on design and construction measures that are intended to reduce the impact of more frequently occurring minor urban flooding.

- ◆ None of the participating counties or municipalities has adopted a stormwater management plan.
- ◆ The City of Oxford and the City of Tupelo have adopted local stormwater management ordinances.
- ◆ Several of the participating counties and municipalities include some stormwater regulations in their local subdivision ordinances, including the Town of Ashland, Lafayette County, City of Nettleton, and City of Verona.

7.3.6 Administrative and Technical Capability

The ability of a local government to develop and implement mitigation projects, policies, and programs is directly tied to its ability to direct staff time and resources for that purpose. Administrative capability can be evaluated by determining how mitigation-related activities are assigned to local departments and if there are adequate personnel resources to complete these activities. The degree of intergovernmental coordination among departments will also affect administrative capability for the implementation and success of proposed mitigation activities.

Technical capability can generally be evaluated by assessing the level of knowledge and technical expertise of local government employees, such as personnel skilled in using Geographic Information Systems (GIS) to analyze and assess community hazard vulnerability. The Capability Assessment Survey was used to capture information on administrative and technical capability through the identification of available staff and personnel resources.

Table 7.4 provides a summary of the Capability Assessment Survey results for the MEMA District 2 Region with regard to relevant staff and personnel resources. A checkmark (✓) indicates the presence of a staff member(s) in that jurisdiction with the specified knowledge or skill.

TABLE 7.4: RELEVANT STAFF / PERSONNEL RESOURCES

Staff / Personnel Resource	ALCORN COUNTY	Corinth	Farmington	Glen	Kossuth	Rienzi	BENTON COUNTY	Ashland	Hickory Flat	Snow Lake Shores	ITAWAMBA COUNTY	Fulton	Mantachie	Tremont	LAFAYETTE COUNTY	Abbeville	Oxford	Taylor	LEE COUNTY	Baldwyn	Guntown	Nettleton	Plantersville	Saltito	Shannon	Tupelo	Verona	MARSHALL COUNTY	Byhalia	Holly Springs	Potts Camp
Planners with knowledge of land development / land management practices																	✓		✓	✓	✓	✓	✓	✓	✓	✓					
Engineers or professionals trained in construction practices related to buildings and/or infrastructure		✓						✓							✓		✓							✓	✓	✓		✓	✓	✓	
Planners or engineers with an understanding of natural and/or human-caused hazards																	✓									✓		✓			
Emergency Manager	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Floodplain Manager	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Land Surveyors																															
Scientists familiar with the hazards of the community	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Staff with education or expertise to assess the community's vulnerability to hazards	✓	✓					✓	✓	✓	✓	✓				✓		✓		✓							✓		✓	✓	✓	✓
Personnel skilled in GIS and/or HAZUS	✓	✓	✓	✓	✓	✓	✓	✓	✓						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Resource development staff or grant writers																	✓		✓	✓	✓	✓	✓	✓	✓	✓					

TABLE 7.4: RELEVANT STAFF / PERSONNEL RESOURCES (CONT.)

Staff / Personnel Resource	PONTOTOC COUNTY	Algoma	Ecru	Pontotoc (city)	Sherman	Thaxton	Toccpola	PRENTISS COUNTY	Booneville	Jumpertown	Marietta	TIPPAH COUNTY	Blue Mountain	Dumas	Falkner	Ripley	Walnut	TISHOMINGO COUNTY	Belmont	Burnsville	Golden	Iuka	Paden	Tishomingo (town)	UNION COUNTY	Blue Springs	Myrtle	New Albany		
Planners with knowledge of land development / land management practices																														

Staff / Personnel Resource	PONTOTOC COUNTY	Algoma	Ecru	Pontotoc (city)	Sherman	Thaxton	Toccopola	PRENTISS COUNTY	Booneville	Jumpertown	Marietta	TIPPAH COUNTY	Blue Mountain	Dumas	Falkner	Ripley	Walnut	TISHOMINGO COUNTY	Belmont	Burnsville	Golden	Iuka	Paden	Tishomingo (town)	UNION COUNTY	Blue Springs	Myrtle	New Albany
Engineers or professionals trained in construction practices related to buildings and/or infrastructure					✓				✓			✓				✓	✓											✓
Planners or engineers with an understanding of natural and/or human-caused hazards																												
Emergency Manager	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Floodplain Manager	✓		✓	✓	✓	✓		✓	✓			✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	
Land Surveyors				✓																								
Scientists familiar with the hazards of the community	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Staff with education or expertise to assess the community's vulnerability to hazards	✓							✓	✓	✓	✓	✓						✓				✓		✓	✓			
Personnel skilled in GIS and/or HAZUS	✓											✓	✓	✓	✓	✓									✓	✓	✓	✓
Resource development staff or grant writers																												

Credit for having a floodplain manager was given to those jurisdictions that have a flood damage prevention ordinance, and therefore an appointed floodplain administrator, regardless of whether the appointee was dedicated solely to floodplain management. Credit was given for having a scientist familiar with the hazards of the community if a jurisdiction has a Cooperative Extension Service or Soil and Water Conservation Department. Credit was also given for having staff with education or expertise to assess the community's vulnerability to hazards if a staff member from the jurisdiction was a participant on the existing hazard mitigation plan's planning committee.

7.3.7 Fiscal Capability

The ability of a local government to take action is often closely associated with the amount of money available to implement policies and projects. This may take the form of outside grant funding awards or locally-based revenue and financing. The costs associated with mitigation policy and project implementation vary widely. In some cases, policies are tied primarily to staff time or administrative costs associated with the creation and monitoring of a given program. In other cases, direct expenses are linked to an actual project, such as the acquisition of flood-prone homes, which can require a substantial commitment from local, state, and federal funding sources.

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The Capability Assessment Survey was used to capture information on the region’s fiscal capability through the identification of locally available financial resources.

Table 7.5 provides a summary of the results for the MEMA District 2 Region with regard to relevant fiscal resources. A checkmark (✓) indicates that the given fiscal resource is locally available for hazard mitigation purposes (including match funds for state and federal mitigation grant funds) according to the previous hazard mitigation plans.

TABLE 7.5: RELEVANT FISCAL RESOURCES

Fiscal Tool / Resource	ALCORN COUNTY	Corinth	Farmington	Glen	Kossuth	Rienzi	BENTON COUNTY	Ashland	Hickory Flat	Snow Lake Shores	ITAWAMBA COUNTY	Fulton	Mantachie	Tremont	LAFAYETTE COUNTY	Abbeville	Oxford	Taylor	LEE COUNTY	Baldwyn	Guntown	Nettleton	Plantersville	Saltito	Shannon	Tupelo	Verona	MARSHALL COUNTY	Byhalia	Holly Springs	Potts Camp
Capital Improvement Programming	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Community Development Block Grants (CDBG)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Special Purpose Taxes (or taxing districts)																															
Gas / Electric Utility Fees																															
Water / Sewer Fees																															
Stormwater Utility Fees																															
Development Impact Fees																															
General Obligation, Revenue, and/or Special Tax Bonds																															
Partnering Arrangements or Intergovernmental Agreements	✓	✓													✓		✓														
Other: other state and Federal funding sources	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

TABLE 7.5: RELEVANT FISCAL RESOURCES (CONT.)

Fiscal Tool / Resource	PONTOTOC COUNTY	Algoma	Ecru	Pontotoc (city)	Sherman	Thaxton	Toccopola	PRENTISS COUNTY	Booneville	Jumpertown	Marietta	TIPPAH COUNTY	Blue Mountain	Dumas	Falkner	Ripley	Walnut	TISHOMINGO COUNTY	Belmont	Burnsville	Golden	Iuka	Paden	Tishomingo (town)	UNION COUNTY	Blue Springs	Myrtle	New Albany	
Capital Improvement Programming	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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Fiscal Tool / Resource	PONTOTOC COUNTY										TISHOMINGO COUNTY												
	Algoma	Ecrú	Pontotoc (city)	Sherman	Thaxton	Toccopola	Booneville	Jumpertown	Marietta	Blue Mountain	Dumas	Falkner	Ripley	Walnut	Belmont	Burnsville	Golden	Iuka	Paden	Tishomingo (town)	Blue Springs	Myrtle	New Albany
Community Development Block Grants (CDBG)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Special Purpose Taxes (or taxing districts)																							
Gas / Electric Utility Fees																							
Water / Sewer Fees																							
Stormwater Utility Fees																							
Development Impact Fees																							
General Obligation, Revenue, and/or Special Tax Bonds																							
Partnering Arrangements or Intergovernmental Agreements																							
Other: other state and Federal funding sources	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

7.3.8 Political Capability

One of the most difficult capabilities to evaluate involves the political will of a jurisdiction to enact meaningful policies and projects designed to reduce the impact of future hazard events. Hazard mitigation may not be a local priority or may conflict with or be seen as an impediment to other goals of the community, such as growth and economic development. Therefore, the local political climate must be considered in designing mitigation strategies as it could be the most difficult hurdle to overcome in accomplishing their adoption and implementation.

The Capability Assessment Survey was used to capture information on political capability of the MEMA District 2 Region. Previous hazard mitigation plans were reviewed for general examples of local political capability, such as guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum state or federal requirements (i.e., building codes, floodplain management, etc.).

- ◆ The previous hazard mitigation plans identified existing ordinances that address natural hazards or are related to hazard mitigation, such as emergency management, zoning, subdivision regulations, comprehensive land use plans, and flood damage prevention ordinances.
- ◆ During the months immediately following a disaster, local public opinion in the region is more likely to shift in support of hazard mitigation efforts.

7.4 CONCLUSIONS ON LOCAL CAPABILITY

In order to form meaningful conclusions on the assessment of local capability, a quantitative scoring methodology was designed and applied to results of the Capability Assessment Survey. This methodology, further described in Appendix B, attempts to assess the overall level of capability of the MEMA District 2 Region to implement hazard mitigation actions.

The overall capability to implement hazard mitigation actions varies among the participating jurisdictions. For planning and regulatory capability, the jurisdictions are in the limited or moderate range. The administrative and technical capabilities vary widely among the jurisdictions with larger jurisdictions generally having greater staff and technical resources. The majority of jurisdictions are in the limited range for fiscal capability.

Table 7.6 shows the results of the capability assessment using the designed scoring methodology. The capability score is based solely on the information found in existing hazard mitigation plans and readily available on the jurisdictions' government websites. According to the assessment, the average local capability score for all responding jurisdictions is 18.4, which falls into the limited capability ranking.

TABLE 7.6: CAPABILITY ASSESSMENT RESULTS

Jurisdiction	Overall Capability Score	Overall Capability Rating
ALCORN COUNTY	24	Moderate
Corinth	24	Moderate
Farmington	9	Limited
Glen	9	Limited
Kossuth	9	Limited
Rienzi	16	Limited
BENTON COUNTY	23	Moderate
Ashland	25	Moderate
Hickory Flat	17	Limited
Snow Lake Shores	10	Limited
ITAWAMBA COUNTY	22	Moderate
Fulton	17	Limited
Mantachie	15	Limited
Tremont	8	Limited
LAFAYETTE COUNTY	31	Moderate
Abbeville	31	Moderate

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Jurisdiction	Overall Capability Score	Overall Capability Rating
Oxford	49	High
Taylor	23	Moderate
LEE COUNTY	26	Moderate
Baldwyn	20	Moderate
Guntown	20	Moderate
Nettleton	22	Moderate
Plantersville	19	Limited
Saltillo	23	Moderate
Shannon	22	Moderate
Tupelo	38	Moderate
Verona	25	Moderate
MARSHALL COUNTY	30	Moderate
Byhalia	24	Moderate
Holly Springs	23	Moderate
Potts Camp	16	Limited
PONTOTOC COUNTY	23	Moderate
Algoma	8	Limited
Ecru	15	Limited
Pontotoc (city)	16	Limited
Sherman	22	Moderate
Thaxton	15	Limited
Toccopola	8	Limited
PRENTISS COUNTY	22	Moderate
Booneville	19	Limited
Jumpertown	9	Limited
Marietta	9	Limited
TIPPAH COUNTY	25	Moderate

Jurisdiction	Overall Capability Score	Overall Capability Rating
Blue Mountain	16	Limited
Dumas	9	Limited
Falkner	9	Limited
Ripley	20	Moderate
Walnut	19	Limited
TISHOMINGO COUNTY	22	Moderate
Belmont	15	Limited
Burnsville	15	Limited
Golden	15	Limited
Iuka	21	Moderate
Paden	15	Limited
Tishomingo (town)	10	Limited
UNION COUNTY	23	Moderate
Blue Springs	12	Limited
Myrtle	16	Limited
New Albany	23	Moderate

As previously discussed, one of the reasons for conducting a Capability Assessment is to examine local capabilities to detect any existing gaps or weaknesses within ongoing government activities that could hinder proposed mitigation activities and possibly exacerbate community hazard vulnerability. These gaps or weaknesses have been identified for each jurisdiction in the tables found throughout this section. The participating jurisdictions used the Capability Assessment as part of the basis for the Mitigation Actions that are identified in Section 9; therefore, each jurisdiction addresses their ability to expand on and improve their existing capabilities through the identification of their Mitigation Actions.

7.4.1 Linking the Capability Assessment with the Risk Assessment and the Mitigation Strategy

The conclusions of the Risk Assessment and Capability Assessment serve as the foundation for the development of a meaningful hazard mitigation strategy. During the process of identifying specific mitigation actions to pursue, the RHMC considered not only each jurisdiction's level of hazard risk, but also their existing capability to minimize or eliminate that risk.

SECTION 8

MITIGATION STRATEGY

This section of the Plan provides the blueprint for the participating jurisdictions in the MEMA District 2 Region to follow in order to become less vulnerable to its identified hazards. It is based on general consensus of the Regional Hazard Mitigation Council (RHMC) and the findings and conclusions of the *Capability Assessment* and *Risk Assessment*. It consists of the following five subsections:

- ◆ 8.1 Introduction
 - ◆ 8.2 Mitigation Goals
 - ◆ 8.3 Identification and Analysis of Mitigation Techniques
 - ◆ 8.4 Selection of Mitigation Techniques for the MEMA District 2 Region
 - ◆ 8.5 Plan Update Requirement
-

8.1 INTRODUCTION

The intent of the Mitigation Strategy is to provide the communities in the MEMA District 2 Region with the goals that will serve as guiding principles for future mitigation policy and project administration, along with an analysis of mitigation techniques deemed available to meet those goals and reduce the impact of identified hazards. It is designed to be comprehensive, strategic, and functional in nature:

- ◆ In being *comprehensive*, the development of the strategy includes a thorough review of all hazards and identifies extensive mitigation measures intended to not only reduce the future impacts of high-risk hazards, but also to help the region achieve compatible economic, environmental, and social goals.
- ◆ In being *strategic*, the development of the strategy ensures that all policies and projects proposed for implementation are consistent with pre-identified, long-term planning goals.
- ◆ In being *functional*, each proposed mitigation action is linked to established priorities and assigned to specific departments or individuals responsible for their implementation with target completion deadlines. When necessary, funding sources are identified that can be used to assist in project implementation.

The first step in designing the Mitigation Strategy includes the identification of mitigation goals. Mitigation goals represent broad statements that are achieved through the implementation of more specific mitigation actions. These actions include both hazard mitigation policies (such as the regulation of land in known hazard areas through a local ordinance) and hazard mitigation projects that seek to address specifically targeted hazard risks (such as the acquisition and relocation of a repetitive loss structure).

The second step involves the identification, consideration, and analysis of available mitigation measures to help achieve the identified mitigation goals. This is a long-term, continuous process sustained through the development and maintenance of this Plan. Alternative mitigation measures will continue

to be considered as future mitigation opportunities are identified, as data and technology improve, as mitigation funding becomes available, and as this Plan is maintained over time.

The third and last step in designing the Mitigation Strategy is the selection and prioritization of specific mitigation actions for the communities in the MEMA District 2 Region (provided separately in Section 9: *Mitigation Action Plan*). Each county and participating jurisdiction has its own Mitigation Action Plan (MAP) that reflects the needs and concerns of that jurisdiction. The MAP represents an unambiguous and functional plan for action and is considered to be the most essential outcome of the mitigation planning process.

The MAP includes a prioritized listing of proposed hazard mitigation actions (policies and projects) for the MEMA District 2 counties and jurisdictions to complete. Each action has accompanying information, such as those departments or individuals assigned responsibility for implementation, potential funding sources, and an estimated target date for completion. The MAP provides those departments or individuals responsible for implementing mitigation actions with a clear roadmap that also serves as an important tool for monitoring success or progress over time. The cohesive collection of actions listed in the MAP can also serve as an easily understood menu of mitigation policies and projects for those local decision makers who want to quickly review the recommendations and proposed actions of the Regional Hazard Mitigation Plan.

In preparing each Mitigation Action Plan for the MEMA District 2 Region, officials considered the overall hazard risk and capability to mitigate the effects of hazards as recorded through the risk and capability assessment process, in addition to meeting the adopted mitigation goals and unique needs of the community.

8.1.1 Mitigation Action Prioritization

Prioritization of the proposed mitigation actions was based on the following six factors:

- ◆ Effect on overall risk to life and property
- ◆ Ease of implementation
- ◆ Political and community support
- ◆ A general economic cost/benefit review¹
- ◆ Funding availability
- ◆ Continued compliance with the NFIP

¹ Only a general economic cost/benefit review was considered by the Regional Hazard Mitigation Council through the process of selecting and prioritizing mitigation actions. Mitigation actions with “high” priority were determined to be the most cost effective and most compatible with the participating jurisdictions’ unique needs. Actions with a “moderate” priority were determined to be cost-effective and compatible with jurisdictional needs, but may be more challenging to complete administratively or fiscally than “high” priority actions. Actions with a “low” priority were determined to be important community needs, but the community likely identified several potential challenges in terms of implementation (e.g. lack of funding, technical obstacles). A more detailed cost/benefit analysis will be applied to particular projects prior to the application for or obligation of funding, as appropriate.

SECTION 8: MITIGATION STRATEGY

The point of contact for each county helped coordinate the prioritization process by reviewing each action and working with the lead agency/department responsible to determine a priority for each action using the six factors listed above.

Using these criteria, actions were classified as high, moderate, or low priority by the participating jurisdiction officials.

8.2 MITIGATION GOALS

44 CFR Requirement

44 CFR Part 201.6(c)(3)(i): The mitigation strategy shall include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

The primary goal of all local governments is to promote the public health, safety, and welfare of its citizens. In keeping with this standard, the MEMA District 2 counties and the participating municipalities have developed six goal statements for local hazard mitigation planning in the region. In developing these goals, the previous county hazard mitigation plans were reviewed to determine areas of consistency. The project consultant reviewed the goals from each of the existing plans that were combined to form this regional plan. Many of the goals were similar and, therefore, regional goals were formulated based on commonalities found between the goals in each plan.

As a result of reviewing the existing goals, 10 proposed regional goals were presented to the Hazard Mitigation Council for their consideration. The proposed goals were reviewed, voted on, and accepted by the RHMC at their second meeting. This process of combining goals from the previous plans served to highlight the planning process that had occurred in each county prior to joining this regional planning effort. Each goal, purposefully broad in nature, serves to establish parameters that were used in developing more mitigation actions. The MEMA District 2 Regional Mitigation Goals are presented in **Table 8.1**. Consistent implementation of actions over time will ensure that community goals are achieved.

TABLE 8.1: MEMA DISTRICT 2 REGIONAL MITIGATION GOALS

	Goal
Goal #1	Local government will have the capacity to develop, implement, and maintain effective mitigation programs .
Goal #2	All sectors of the community will work together to create a disaster-resistant community by the year 2020.
Goal #3	The community will have the capability to initiate and sustain emergency response operations during and after a disaster .
Goal #4	The continuity of local government operations will not be significantly disrupted by disasters.
Goal #5	The health, safety, and welfare of the community's residents and visitors will not be threatened by disasters.
Goal #6	The policies and regulations of local government will support effective hazard mitigation programming throughout the community.
Goal #7	Residents of the community will have homes, institutions, and places of employment that are not vulnerable to disaster .
Goal #8	The economic vitality of the community will not be threatened by a disaster.
Goal #9	The availability and functioning of the community's infrastructure will not be significantly disrupted by a disaster .
Goal #10	All members of the community will understand the hazards threatening local areas and the techniques to minimize vulnerability to those hazards.

8.3 IDENTIFICATION AND ANALYSIS OF MITIGATION TECHNIQUES

44 CFR Requirement

44 CFR Part 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 effect of each hazard, with particular emphasis on new and existing buildings and infrastructure.

In formulating the Mitigation Strategy for the MEMA District 2 Region, a wide range of activities were considered in order to help achieve the established mitigation goals, in addition to addressing any specific hazard concerns. These activities were discussed during the MEMA District 2 Regional Hazard Mitigation Planning meetings. In general, all activities considered by the RHMC can be classified under one of the following six (6) broad categories of mitigation techniques: Prevention, Property Protection, Natural Resource Protection, Structural Projects, Emergency Services, and Public Awareness and Education. These are discussed in detail below.

8.3.1 Prevention

Preventative activities are intended to keep hazard problems from getting worse, and are typically administered through government programs or regulatory actions that influence the way land is developed and buildings are built. They are particularly effective in reducing a community's future vulnerability, especially in areas where development has not occurred or capital improvements have not been substantial. Examples of preventative activities include:

- ◆ Planning and zoning
- ◆ Building codes
- ◆ Open space preservation
- ◆ Floodplain regulations
- ◆ Stormwater management regulations
- ◆ Drainage system maintenance
- ◆ Capital improvements programming
- ◆ Riverine / fault zone setbacks

8.3.2 Property Protection

Property protection measures involve the modification of existing buildings and structures to help them better withstand the forces of a hazard, or removal of the structures from hazardous locations. Examples include:

- ◆ Acquisition
- ◆ Relocation
- ◆ Building elevation
- ◆ Critical facilities protection
- ◆ Retrofitting (e.g., wind proofing, floodproofing, seismic design techniques, etc.)
- ◆ Safe rooms, shutters, shatter-resistant glass
- ◆ Insurance

8.3.3 Natural Resource Protection

Natural resource protection activities reduce the impact of natural hazards by preserving or restoring natural areas and their protective functions. Such areas include floodplains, wetlands, steep slopes, and sand dunes. Parks, recreation, or conservation agencies and organizations often implement these protective measures. Examples include:

- ◆ Floodplain protection
- ◆ Watershed management
- ◆ Riparian buffers
- ◆ Forest and vegetation management (e.g., fire resistant landscaping, fuel breaks, etc.)
- ◆ Erosion and sediment control
- ◆ Wetland preservation and restoration
- ◆ Habitat preservation
- ◆ Slope stabilization

8.3.4 Structural Projects

Structural mitigation projects are intended to lessen the impact of a hazard by modifying the environmental natural progression of the hazard event through construction. They are usually designed by engineers and managed or maintained by public works staff. Examples include:

- ◆ Reservoirs
- ◆ Dams / levees / dikes / floodwalls
- ◆ Diversions / detention / retention
- ◆ Channel modification
- ◆ Storm sewers

8.3.5 Emergency Services

Although not typically considered a “mitigation” technique, emergency service measures do minimize the impact of a hazard event on people and property. These commonly are actions taken immediately prior to, during, or in response to a hazard event. Examples include:

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- ◆ Warning systems
- ◆ Evacuation planning and management
- ◆ Emergency response training and exercises
- ◆ Sandbagging for flood protection
- ◆ Installing temporary shutters for wind protection

8.3.6 Public Education and Awareness

Public education and awareness activities are used to advise residents, elected officials, business owners, potential property buyers, and visitors about hazards, hazardous areas, and mitigation techniques they can use to protect themselves and their property. Examples of measures to educate and inform the public include:

- ◆ Outreach projects
- ◆ Speaker series / demonstration events
- ◆ Hazard map information
- ◆ Real estate disclosure
- ◆ Library materials
- ◆ School children educational programs
- ◆ Hazard expositions

8.4 SELECTION OF MITIGATION TECHNIQUES FOR THE MEMA DISTRICT 2 REGION

In order to determine the most appropriate mitigation techniques for the communities in the MEMA District 2 Region, the RHMC members thoroughly reviewed and considered the findings of the *Capability Assessment* and *Risk Assessment* to determine the best activities for their respective communities. Other considerations included the effect of each mitigation action on overall risk to life and property, its ease of implementation, its degree of political and community support, its general cost-effectiveness, and funding availability (if necessary).

8.5 PLAN UPDATE REQUIREMENT

In keeping with FEMA requirements for plan updates, the Mitigation Actions identified in the previous MEMA District 2 county hazard mitigation plans were evaluated to determine their 2021 implementation status. Updates on the implementation status of each action are provided. The mitigation actions provided in Section 9: *Mitigation Action Plan* include the mitigation actions from the previous plans as well as any new mitigation actions proposed through the 2021 planning process.

SECTION 9

MITIGATION ACTION PLAN

This section includes the listing of the mitigation actions proposed by the participating jurisdictions in MEMA District 2. It consists of the following two subsections:

- ◆ 9.1 Overview
- ◆ 9.2 Mitigation Action Plans

44 CFR Requirement

44 CFR Part 201.6(c)(3)(iii): The mitigation strategy shall include an action plan describing how the actions identified in paragraph (c)(2)(ii) of this section will be prioritized, implemented, and administered by the local jurisdiction.

9.1 OVERVIEW

As described in the previous section, the Mitigation Action Plan, or MAP, provides a functional plan of action for each jurisdiction. It is designed to achieve the mitigation goals established in Section 8: *Mitigation Strategy* and will be maintained on a regular basis according to the plan maintenance procedures established in Section 10: *Plan Maintenance*.

Each proposed mitigation action has been identified as an effective measure (policy or project) to reduce hazard risk for the communities in the MEMA District 2 Region. Each action is listed in the MAP in conjunction with background information such as hazard(s) addressed and relative priority. Other information provided in the MAP includes potential funding sources to implement the action should funding be required (not all proposed actions are contingent upon funding). Most importantly, implementation mechanisms are provided for each action, including the designation of a lead agency or department responsible for carrying the action out as well as a timeframe for its completion. These implementation mechanisms ensure that the MEMA District 2 Regional Hazard Mitigation Plan remains a functional document that can be monitored for progress over time. The proposed actions are not listed in priority order, though each has been assigned a priority level of “high,” “moderate,” or “low” as described below and in Section 8 (page 8.2).

The Mitigation Action Plan is organized by mitigation strategy category (Prevention, Property Protection, Natural Resource Protection, Structural Projects, Emergency Services, or Public Education and Awareness). The following are the key elements described in the Mitigation Action Plan:

- ◆ Hazard(s) Addressed—Hazard which the action addresses.
- ◆ Relative Priority—High, moderate, or low priority as assigned by the jurisdiction.
- ◆ Lead Agency/Department—Department responsible for undertaking the action.
- ◆ Potential Funding Sources—Local, State, or Federal sources of funds are noted here, where applicable.

- ◆ Implementation Schedule—Date by which the action the action should be completed. More information is provided when possible.
- ◆ Implementation Status (2021)—Indication of completion, progress, deferment, or no change since the previous plan. If the action is new, that will be noted here.

9.2 MITIGATION ACTION PLANS

The mitigation actions proposed by each of the participating jurisdictions are listed in individual MAPs on the following pages. **Table 9.1** shows the location of each jurisdiction’s MAP within this section as well as the number of mitigation actions proposed by each jurisdiction. In most cases, jurisdictions had few changes in priorities since the last update of their plan. As noted in the individual action tables below, some actions have been completed, showing progress, while others have been identified for deletion as the action is no longer feasible for the community. In some cases, jurisdictions added new actions, indicating some change in focus concerning mitigation. However, many actions have been deferred due to lack of funding or due to lack of staff time available to fully complete the action. The fact that jurisdictions decided to keep these actions in the plan demonstrates that, in general, there was little change in priorities.

TABLE 9.1: INDIVIDUAL MAP LOCATIONS

Location	Page
Alcorn County	9:4
Benton County	9:41
Itawamba County	9:65
Lafayette County	9:78
Lee County	9:94
Marshall County	9:123
Pontotoc County	9:151
Prentiss County	9:172
Tippah County	9:192
Tishomingo County	9:222
Union County	9:261

Alcorn County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Alcorn County	MEMA, FEMA, Local	2025	Deferred. The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Alcorn County EMA	Local, MEMA, FEMA	2025	Deferred. Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	Ongoing. The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Alcorn County EMA	FEMA, MEMA, Local	2020	Completed
Property Protection							
PP-1	The creek where the railroad crosses at U.S. Highway 72 is an area that catches debris in the old trestle. The plans are for the railroad to remove the old pilings to alleviate this problem. Also, downstream there is a bridge on County Road 402 with just a culvert that is not large enough to carry the water away fast enough. It is in the planning state to replace this with a span of bridge with wing walls.	Flood	High	Alcorn County	Local, MEMA, FEMA, Soil and Water Conservation Office	2016	Completed
PP-2	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Alcorn County EMA	FEMA, Public and private funds	2025	Deferred. Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PP-3	Surge protectors can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Alcorn County EMA	FEMA	2025	Ongoing. Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Install ten (10) additional advanced warning systems throughout Alcorn County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the damages and losses associated with high winds and tornados.	Tornado, High Winds	High	Alcorn County EMA	Local, MEMA, FEMA	2023	Awaiting grants. The county has not invested in additional warning systems, but this is a high priority need and will be carried out as soon as funds are available
ES-2	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Alcorn County EMA	Local, MEMA, FEMA	2025	Ongoing. Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-3	Procure a mobile power supply (generator) that will enable Alcorn County Water Associations to have alternate power to help restore operations if severe winter weather disrupts usual power supply. (All generators to be shared by multiple associations.)	Winter Storm and Freeze	High	Alcorn County EMA	Local, FEMA	2017 or as soon as funds are in place	Completed
ES-4	Procure a mobile power supply (generator) that will enable each municipality and Alcorn County government to have alternate power to help restore basic governmental operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	Alcorn County EMA	Local, FEMA	As soon as funds are in place	Ongoing. Some generators have been secured and additional generators will be secured as soon as funds are available.
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Alcorn County EMA	Local, FEMA	2020	Completed

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Winds	High	Alcorn County EMA	Local, MEMA, FEMA	2025	Ongoing. Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Alcorn County EMA	Alcorn County EMA, Local, MEMA, FEMA	2025	Ongoing. Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Alcorn County to better prepare them for potential hazardous events.	All	High	Alcorn County EMA Chapter of the American Red Cross	MEMA, FENA, Private/Public Donations	2025	Ongoing. The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Recommend that public information and outreach workshops on the FireWise program be scheduled and encourage participation in workshops presented by Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Alcorn County EMA	MEMA, FEMA, Local	2025	Ongoing. Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessibly heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Alcorn County EMA	Local funding	2025	Ongoing. The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-6	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support of MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Alcorn County EMA	MEMA, FEMA, Local	2025	Ongoing. Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

SECTION 9: MITIGATION ACTION PLAN

City of Corinth Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	City of Corinth	MEMA, FEMA, Local	2025	The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Alcorn County EMA, City of Corinth	Local, MEMA, FEMA	2025	Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Alcorn County EMA, City of Corinth	FEMA, MEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.
Property Protection							
PP-1	The City of Corinth has a major flooding problem in the Melody Park area on the west side. The area is a flood-prone area and FEMA is, at this time, trying to buy out the residents.	Flood	High	FEMA	FEMA	2025	The properties in question have not all been addressed. There are still a number of properties that are flood prone and the city is continuing to look at ways to mitigate these properties.
PP-2	The creek where the railroad crosses at U.S. Highway 72 is an area that catches debris in the old trestle. The plans are for the railroad to remove the old pilings to alleviate this problem. Also, downstream there is a bridge on County Road 402 with just a culvert that is not large enough to carry the water away fast enough. It is in the planning state to replace this with a span of bridge with wing walls.	Flood	High	Alcorn County	Local, MEMA, FEMA, Soil and Water Conservation Office	2025	To date, this project has not been implemented so the county will continue to work with other stakeholders going forward to try to implement.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PP-3	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Alcorn County EMA, City of Corinth	FEMA, Public and private funds	2025	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs.
PP-4	Surge protectors can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Alcorn County EMA, City of Corinth	FEMA	2025	Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Install ten (10) additional advanced warning systems throughout Alcorn County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the damages and losses associated with high winds and tornados.	Tornado, High Winds	High	Alcorn County EMA, City of Corinth	Local, MEMA, FEMA	2025	The county has not invested in additional warning systems, but this is a high priority need and will be carried out as soon as funds are available

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Alcorn County EMA, City of Corinth	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.
ES-3	Procure a mobile power supply (generator) that will enable Alcorn County Water Associations to have alternate power to help restore operations if severe winter weather disrupts usual power supply. (All generators to be shared by multiple associations.)	Winter Storm and Freeze	High	Alcorn County EMA	Local, FEMA	2017 or as soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available
ES-4	Procure a mobile power supply (generator) that will enable the City of Corinth Gas and Water Department to have alternate power to help restore operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	City of Corinth	Local, FEMA	As soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available
ES-5	Procure a mobile power supply (generator) that will enable the City of Corinth to have alternate power to help restore basic governmental operations (including police, fire, and city fuel supply) if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	City of Corinth	Local, FEMA	As soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-6	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Alcorn County EMA	Local, FEMA	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Winds	High	Alcorn County EMA, City of Corinth	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Alcorn County EMA, City of Corinth	Alcorn County EMA, Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Alcorn County to better prepare them for potential hazardous events.	All	High	Alcorn County EMA Chapter of the American Red Cross	MEMA, FENA, Private/Public Donations	2025	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Recommend that public information and outreach workshops on the FireWise program be scheduled and encourage participation in workshops presented by Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Alcorn County EMA	MEMA, FEMA, Local	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessibly heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Alcorn County EMA, City of Corinth	Local Funding	2025	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-6	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support of MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Alcorn County EMA, City of Corinth	MEMA, FEMA, Local	2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

Town of Farmington Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Town of Farmington	MEMA, FEMA, Local	2025	The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Alcorn County EMA, Town of Farmington	Local, MEMA, FEMA	2025	Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Alcorn County EMA, Town of Farmington	FEMA, MEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Alcorn County EMA, Town of Farmington	FEMA, Public and private funds	2025	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs.
PP-2	Surge protectors can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Alcorn County EMA, Town of Farmington	FEMA	2025	Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Install ten (10) additional advanced warning systems throughout Alcorn County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the damages and losses associated with high winds and tornados.	Tornado, High Winds	High	Alcorn County EMA, Town of Farmington	Local, MEMA, FEMA	2025	The county has not invested in additional warning systems, but this is a high priority need and will be carried out as soon as funds are available
ES-2	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Alcorn County EMA, Town of Farmington	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.
ES-3	Procure a mobile power supply (generator) that will enable Alcorn County Water Associations to have alternate power to help restore operations if severe winter weather disrupts usual power supply. (All generators to be shared by multiple associations.)	Winter Storm and Freeze	High	Alcorn County EMA	Local, FEMA	2017 or as soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available
ES-4	Procure a mobile power supply (generator) that will enable each municipality and Alcorn county government to have alternate power to help restore basic governmental operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	Alcorn County EMA, Town of Farmington	Local, FEMA	As soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Alcorn County EMA	Local, FEMA	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Winds	High	Alcorn County EMA, Town of Farmington	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Alcorn County EMA, Town of Farmington	Alcorn County EMA, Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Alcorn County to better prepare them for potential hazardous events.	All	High	Alcorn County EMA Chapter of the American Red Cross	MEMA, FENA, Private/Public Donations	2025	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.
PEA-4	Recommend that public information and outreach workshops on the FireWise program be scheduled and encourage participation in workshops presented by Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Alcorn County EMA	MEMA, FEMA, Local	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessibly heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Alcorn County EMA, Town of Farmington	Local Funding	2025	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-6	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support of MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Alcorn County EMA, Town of Farmington	MEMA, FEMA, Local	2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

Town of Glen Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Town of Glen	MEMA, FEMA, Local	2025	The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Alcorn County EMA, Town of Glen	Local, MEMA, FEMA	2025	Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Alcorn County EMA, Town of Glen	FEMA, MEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Alcorn County EMA, Town of Glen	FEMA, Public and private funds	2025	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs.
PP-2	Surge protectors can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Alcorn County EMA, Town of Glen	FEMA	2025	Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Install ten (10) additional advanced warning systems throughout Alcorn County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the damages and losses associated with high winds and tornados.	Tornado, High Winds	High	Alcorn County EMA, Town of Glen	Local, MEMA, FEMA	2025	The county has not invested in additional warning systems, but this is a high priority need and will be carried out as soon as funds are available
ES-2	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Alcorn County EMA, Town of Glen	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.
ES-3	Procure a mobile power supply (generator) that will enable Alcorn County Water Associations to have alternate power to help restore operations if severe winter weather disrupts usual power supply. (All generators to be shared by multiple associations.)	Winter Storm and Freeze	High	Alcorn County EMA	Local, FEMA	2017 or as soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available
ES-4	Procure a mobile power supply (generator) that will enable each municipality and Alcorn county government to have alternate power to help restore basic governmental operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	Alcorn County EMA, Town of Glen	Local, FEMA	As soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Alcorn County EMA	Local, FEMA	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Winds	High	Alcorn County EMA, Town of Glen	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Alcorn County EMA, Town of Glen	Alcorn County EMA, Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Alcorn County to better prepare them for potential hazardous events.	All	High	Alcorn County EMA Chapter of the American Red Cross	MEMA, FENA, Private/Public Donations	2025	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Recommend that public information and outreach workshops on the FireWise program be scheduled and encourage participation in workshops presented by Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Alcorn County EMA	MEMA, FEMA, Local	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessibly heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Alcorn County EMA, Town of Glen	Local Funding	2025	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-6	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support of MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Alcorn County EMA, Town of Glen	MEMA, FEMA, Local	2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

Village of Kossuth Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Village of Kossuth	MEMA, FEMA, Local	2025	The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Alcorn County EMA, Village of Kossuth	Local, MEMA, FEMA	2025	Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Alcorn County EMA, Village of Kossuth	FEMA, MEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Alcorn County EMA, Village of Kossuth	FEMA, Public and private funds	2025	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs.
PP-2	Surge protectors can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Alcorn County EMA, Village of Kossuth	FEMA	2025	Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Install ten (10) additional advanced warning systems throughout Alcorn County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the damages and losses associated with high winds and tornados.	Tornado, High Winds	High	Alcorn County EMA, Village of Kossuth	Local, MEMA, FEMA	2025	The county has not invested in additional warning systems, but this is a high priority need and will be carried out as soon as funds are available
ES-2	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Alcorn County EMA, Village of Kossuth	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.
ES-3	Procure a mobile power supply (generator) that will enable Alcorn County Water Associations to have alternate power to help restore operations if severe winter weather disrupts usual power supply. (All generators to be shared by multiple associations.)	Winter Storm and Freeze	High	Alcorn County EMA	Local, FEMA	2017 or as soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available
ES-4	Procure a mobile power supply (generator) that will enable each municipality and Alcorn county government to have alternate power to help restore basic governmental operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	Alcorn County EMA, Village of Kossuth	Local, FEMA	As soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Alcorn County EMA	Local, FEMA	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Winds	High	Alcorn County EMA, Village of Kossuth	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Alcorn County EMA, Village of Kossuth	Alcorn County EMA, Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Alcorn County to better prepare them for potential hazardous events.	All	High	Alcorn County EMA Chapter of the American Red Cross	MEMA, FENA, Private/Public Donations	2025	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Recommend that public information and outreach workshops on the FireWise program be scheduled and encourage participation in workshops presented by Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Alcorn County EMA	MEMA, FEMA, Local	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-6	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessibly heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Alcorn County EMA, Village of Kossuth	Local Funding	2025	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-7	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support of MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Alcorn County EMA, Village of Kossuth	MEMA, FEMA, Local	2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

Town of Rienzi Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Town of Rienzi	MEMA, FEMA, Local	2025	The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Alcorn County EMA, Town of Rienzi	Local, MEMA, FEMA	2025	Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Alcorn County EMA, Town of Rienzi	FEMA, MEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Alcorn County EMA, Town of Rienzi	FEMA, Public and private funds	2025	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs.
PP-2	Surge protectors can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Alcorn County EMA, Town of Rienzi	FEMA	2025	Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Install ten (10) additional advanced warning systems throughout Alcorn County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the damages and losses associated with high winds and tornados.	Tornado, High Winds	High	Alcorn County EMA, Town of Rienzi	Local, MEMA, FEMA	2025	The county has not invested in additional warning systems, but this is a high priority need and will be carried out as soon as funds are available
ES-2	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Alcorn County EMA, Town of Rienzi	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.
ES-3	Procure a mobile power supply (generator) that will enable Alcorn County Water Associations to have alternate power to help restore operations if severe winter weather disrupts usual power supply. (All generators to be shared by multiple associations.)	Winter Storm and Freeze	High	Alcorn County EMA	Local, FEMA	2017 or as soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available
ES-4	Procure a mobile power supply (generator) that will enable each municipality and Alcorn county government to have alternate power to help restore basic governmental operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	Alcorn County EMA, Town of Rienzi	Local, FEMA	As soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Alcorn County EMA	Local, FEMA	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Winds	High	Alcorn County EMA, Town of Rienzi	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Alcorn County EMA, Town of Rienzi	Alcorn County EMA, Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Alcorn County to better prepare them for potential hazardous events.	All	High	Alcorn County EMA Chapter of the American Red Cross	MEMA, FENA, Private/Public Donations	2025	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Recommend that public information and outreach workshops on the FireWise program be scheduled and encourage participation in workshops presented by Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Alcorn County EMA	MEMA, FEMA, Local	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessibly heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Alcorn County EMA, Town of Rienzi	Local Funding	2025	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-6	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support of MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Alcorn County EMA, Town of Rienzi	MEMA, FEMA, Local	2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

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Benton County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Benton County EMA	MEMA, FEMA, Local	2025	Ongoing. The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Benton County EMA	Local, MEMA, FEMA	2025	Deferred. Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, imitate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	Ongoing. The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Benton County EMA	FEMA, MEMA, Local	2025	Deferred. Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Benton County EMA	FEMA, Public and private funds	2025	Deferred. Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs.
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Benton County EMA	FEMA	2025	Ongoing. Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Procure a mobile operations center that will enable Benton County to help restore operations if high winds or tornados halt business at local governmental offices.	Tornado, High Winds	High	Benton County EMA	Local, FEMA	Deleted	Deleted
ES-2	Install ten (10) additional advanced warning systems for the jurisdictions located in Benton County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the damages and losses associated with high winds and tornados.	Tornado, High Winds	High	Benton County EMA	Local, MEMA, FEMA	2025	Some have been added, this is ongoing. The county has not invested in additional warning systems, but this is a high priority need and will be carried out as soon as funds are available.
ES-3	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Benton County EMA	Local, MEMA, FEMA	2025	Ongoing. Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried
ES-4	Procure a mobile power supply (generator) that will enable Benton County Water Associations to have alternate power to help restore operations if severe winter weather disrupts usual power supply (All generators to be shared by multiple associations.)	Winter Storm and Freeze	High	Benton County EMA	Local, FEMA	2017 or as soon as funds are in place	Completed
ES-5	Procure a mobile power supply (generator) that will enable each municipality and Benton County government to have alternate power to help restore basic governmental operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	Benton County EMA	Local, FEMA	As soon as funds are in place	Completed

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-6	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Benton County EMA	Local, FEMA	2025	Ongoing. The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.
Public Education and Awareness							
PEA-1	This project is a countywide public education on community hazards, mitigation safety, and emergencies.	Tornado, High Winds	High	Benton County EMA	Local, MEMA, FEMA	2025	Ongoing. Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Benton County EMA	Local, MEMA, FEMA	Deleted	Deleted
PEA-3	Provide literature, classes, and materials to the citizens of Benton County to better prepare them for potential hazardous events.	All	High	Benton County EMA Chapter of the American Red Cross	FEMA, Private/Public Donations	2025	Ongoing. The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Benton County EMA	MS Forestry Commission	2025	Deferred. Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating and cooling centers in the community.	Drought/Heat Wave	Moderate	Benton County EMA	FEMA, MEMA, Local	2025	Ongoing. The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-6	The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Benton County EMA	MEMA, FEMA, Local	2025	Ongoing. Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

SECTION 9: MITIGATION ACTION PLAN

Town of Ashland Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Town of Ashland	MEMA, FEMA, Local	2025	Ongoing. The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Benton County EMA, Town of Ashland	Local, MEMA, FEMA	2025	Deferred. Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, imitate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	Ongoing. The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Benton County EMA, Town of Ashland	FEMA, MEMA, Local	2025	Deferred. Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Benton County EMA, Town of Ashland	FEMA, Public and private funds	2025	Deferred. Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs.
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Benton County EMA, Town of Ashland	FEMA	2025	Ongoing. Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Install ten (10) additional advanced warning systems for the jurisdictions located in Benton County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the damages and losses associated with high winds and tornados.	Tornado, High Winds	High	Benton County EMA, Town of Ashland	Local, MEMA, FEMA	2025	Some have been added. The county has not invested in additional warning systems, but this is a high priority need and will be carried out as soon as funds are available
ES-2	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Benton County EMA, Town of Ashland	Local, MEMA, FEMA	2025	Ongoing. Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried
ES-3	Procure a mobile power supply (generator) that will enable Benton County Water Associations to have alternate power to help restore operations if severe winter weather disrupts usual power supply (All generators to be shared by multiple associations.)	Winter Storm and Freeze	High	Benton County EMA	Local, FEMA	2017 or as soon as funds are in place	Completed
ES-4	Procure a mobile power supply (generator) that will enable each municipality and Benton County government to have alternate power to help restore basic governmental operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	Benton County EMA, Town of Ashland	Local, FEMA	2017 or as soon as funds are in place	Completed

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Benton County EMA	Local, FEMA	2025	Ongoing. The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled
Public Education and Awareness							
PEA-1	This project is a countywide public education on community hazards, mitigation safety, and emergencies.	Tornado, High Winds	High	Benton County EMA, Town of Ashland	Local, MEMA, FEMA	2025	Ongoing. Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds and tornados and the positive impacts of various hazard mitigation actions associated with wind-related events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Benton County EMA, Town of Ashland	Local, MEMA, FEMA	Deleted	Deleted
PEA-3	Provide literature, classes, and materials to the citizens of Benton County to better prepare them for potential hazardous events.	All	High	Benton County EMA Chapter of the American Red Cross	FEMA, Private/Public Donations	2025	Ongoing. The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.
PEA-4	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Benton County EMA	MS Forestry Commission	2025	Deferred. Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating and cooling centers in the community.	Drought/Heat Wave	moderate	Benton County EMA, Town of Ashland	FEMA, MEMA, Local	2025	Ongoing. The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-6	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Benton County EMA, Town of Ashland	MEMA, FEMA, Local	2025	Ongoing. Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in

Town of Hickory Flat Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Town of Hickory Flat	MEMA, FEMA, Local	2025	Ongoing. The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Benton County EMA, Town of Hickory Flat	Local, MEMA, FEMA	2025	Deferred. Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, imitate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	Ongoing. The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Benton County EMA, Town of Hickory Flat	FEMA, MEMA, Local	2025	Deferred. Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Benton County EMA, Town of Hickory Flat	FEMA, Public and private funds	2025	Deferred Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs.
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Benton County EMA, Town of Hickory Flat	FEMA	2025	Ongoing. Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Install ten (10) additional advanced warning systems for the jurisdictions located in Benton County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the damages and losses associated with high winds and tornados.	Tornado, High Winds	High	Benton County EMA, Town of Hickory Flat	Local, MEMA, FEMA	Deleted	Deleted
ES-2	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Benton County EMA, Town of Hickory Flat	Local, MEMA, FEMA	2025	Some have been added, this is ongoing. The county has not invested in additional warning systems, but this is a high priority need and will be carried out as soon as funds are available.
ES-3	Procure a mobile power supply (generator) that will enable Benton County Water Associations to have alternate power to help restore operations if severe winter weather disrupts usual power supply (All generators to be shared by multiple associations.)	Winter Storm and Freeze	High	Benton County EMA	Local, FEMA	2025	Ongoing. Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this
ES-4	Procure a mobile power supply (generator) that will enable each municipality and Benton County government to have alternate power to help restore basic governmental operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	Benton County EMA, Town of Hickory Flat	Local, FEMA	2017 or as soon as funds are in place	Completed
ES-5	Procure a mobile power supply (generator) that will enable each municipality and Benton County government to have alternate power to help restore basic governmental operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	Benton County EMA	Local, FEMA	As soon as funds are in place	Completed

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-6	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Benton County EMA	Local, FEMA	2025	Ongoing. The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled
Public Education and Awareness							
PEA-1	This project is a countywide public education on community hazards, mitigation safety, and emergencies.	Tornado, High Winds	High	Benton County EMA, Town of Hickory Flat	Local, MEMA, FEMA	2016	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2016)
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds and tornados and the positive impacts of various hazard mitigation actions associated with wind-related events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Benton County EMA, Town of Hickory Flat	Local, MEMA, FEMA	Deleted	Deleted
PEA-3	Provide literature, classes, and materials to the citizens of Benton County to better prepare them for potential hazardous events.	All	High	Benton County EMA Chapter of the American Red Cross	FEMA, Private/Public Donations	2025	Ongoing. The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Benton County EMA	MS Forestry Commission	2025	Deferred. Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating and cooling centers in the community.	Drought/Heat Wave	Moderate	Benton County EMA	FEMA, MEMA, Local	2025	Ongoing. The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-6	The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Benton County EMA	MEMA, FEMA, Local	2025	Ongoing. Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-7	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating and cooling centers in the community.	Drought/Heat Wave	moderate	Benton County EMA, Town of Hickory Flat	FEMA, MEMA, Local	2025	Ongoing. The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-8	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Benton County EMA, Town of Hickory Flat	MEMA, FEMA, Local	2025	Ongoing. Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in

Town of Snow Lake Shores Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Town of Snow Lake Shores	MEMA, FEMA, Local	2025	Ongoing. The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Benton County EMA, Town of Snow Lake Shores	Local, MEMA, FEMA	2025	Deferred. Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, imitate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	Ongoing. The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Benton County EMA, Town of Snow Lake Shores	FEMA, MEMA, Local	2025	Deferred. Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Benton County EMA, Town of Snow Lake Shores	FEMA, Public and private funds	2025	Deferred. Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs.
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Benton County EMA, Town of Snow Lake Shores	FEMA	2025	Ongoing. Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Install ten (10) additional advanced warning systems for the jurisdictions located in Benton County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the damages and losses associated with high winds and tornados.	Tornado, High Winds	High	Benton County EMA, Town of Snow Lake Shores	Local, MEMA, FEMA	2025	Some have been added, this is ongoing. The county has not invested in additional warning systems, but this is a high priority need and will be carried out as soon as funds are available.
ES-2	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Benton County EMA, Town of Snow Lake Shores	Local, MEMA, FEMA	2025	Ongoing. Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried
ES-3	Procure a mobile power supply (generator) that will enable Benton County Water Associations to have alternate power to help restore operations if severe winter weather disrupts usual power supply (All generators to be shared by multiple associations.)	Winter Storm and Freeze	High	Benton County EMA	Local, FEMA	2017 or as soon as funds are in place	Completed
ES-4	Procure a mobile power supply (generator) that will enable each municipality and Benton County government to have alternate power to help restore basic governmental operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	Benton County EMA, Town of Snow Lake Shores	Local, FEMA	As soon as funds are in place	Completed

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2016)
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Benton County EMA	Local, FEMA	2025	Ongoing. The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled
Public Education and Awareness							
PEA-1	This project is a countywide public education on community hazards, mitigation safety, and emergencies.	Tornado, High Winds	High	Benton County EMA, Town of Snow Lake Shores	Local, MEMA, FEMA	2025	Ongoing. Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds and tornados and the positive impacts of various hazard mitigation actions associated with wind-related events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Benton County EMA, Town of Snow Lake Shores	Local, MEMA, FEMA	Deleted	Deleted
PEA-3	Provide literature, classes, and materials to the citizens of Benton County to better prepare them for potential hazardous events.	All	High	Benton County EMA Chapter of the American Red Cross	FEMA, Private/Public Donations	2025	Ongoing. The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.
PEA-4	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Benton County EMA	MS Forestry Commission	2025	Deferred. Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Recommend that public information and outreach workshops on the FireWise program be scheduled and encourage participation in workshops presented by the Forestry Commission for the benefit of elected officials,	Wildfire	High	Town of Snow Lake Shores (Designated FireWise Community)	MS Forestry Commission	2025	Ongoing. The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-6	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating and cooling centers in the community.	Drought/Heat Wave	moderate	Benton County EMA, Town of Snow Lake Shores	FEMA, MEMA, Local	2025	Ongoing. The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-7	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Benton County EMA, Town of Snow Lake Shores	MEMA, FEMA, Local	2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

Itawamba County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Itawamba County EMA	Local	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going forward.
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	Moderate	Itawamba County EMA	Federal, State, Local	2025	Ongoing. Although some smaller- scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Itawamba County EMA	Federal, State, Local	2025	Some generators were procured. The county would like to add more when funding is available
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Itawamba County EMA	Federal, State, Local	2025	Three mobile generators have been purchased for the county, but the county would like to purchase more when funding is available
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	Itawamba County EMA	Federal, State, Local	2025	Ongoing. Weather radios have not been purchased for individual citizens but the county does have CodeRed in place and will continue to work on using advanced warning notification.
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Itawamba County EMA	Federal, State, Local	2025	Some have been installed, but more are needed. The county has installed 6 shelters/safe rooms, but will need to continue to monitor and evaluate these going forward.
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Itawamba County EMA	Federal, State, Local	2025	Most of the county is not covered by outdoor sirens and this remains a top priority.

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ES-6	County is looking to procure a boat for water rescue.	Flooding	High	Itawamba County EMA	Federal, State, Local	2025	New Action. County is prone to flooding and the county would like a boat for emergency operations.
ES-7	County EMA is looking to procure a mobile command trailer (EOC).	All Hazards	High	Itawamba County EMA	Federal, State, Local	2025	New Action. County is looking for an enclosed trailer, will apply for grants.
ES-8	County EMA is looking to build a new EOC.	All Hazards	High	Itawamba County EMA	Federal, State, Local	2025	New Action. County EMA is looking to eventually build a new EOC. They are currently building a new 911 center.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-6	County is looking to procure a boat for water rescue.	Flooding	High	Itawamba County EMA	Federal, State, Local	2025	New Action. County is prone to flooding and the county would like a boat for emergency operations.
ES-7	County EMA is looking to procure a mobile command trailer (EOC).	All Hazards	High	Itawamba County EMA	Federal, State, Local	2025	New Action. County is looking for an enclosed trailer, will apply for grants.
ES-8	County EMA is looking to build a new EOC.	All Hazards	High	Itawamba County EMA	Federal, State, Local	2025	New Action. County EMA is looking to eventually build a new EOC. They are currently building a new 911 center.
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Itawamba County EMA	Local Funding	2025	Ongoing. The county has worked with local newspapers and media outlets to help pass along information about the dangers of natural hazards. The county will continue to work

City of Fulton Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	City of Fulton, Itawamba County EMA	Local	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	Moderate	City of Fulton, Itawamba County EMA	Federal, State, Local	2025	Although some smaller-scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	City of Fulton, Itawamba County EMA	Federal, State, Local	2025	Some generators were procured. The county would like to add more when funding is available
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	City of Fulton, Itawamba County EMA	Federal, State, Local	2025	Three mobile generators have been purchased for the county, but the county would like to purchase more when funding is available
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	City of Fulton, Itawamba County EMA	Federal, State, Local	2025	Ongoing. Weather radios have not been purchased for individual citizens but the county does have CodeRed in place and will continue to work on using advanced warning notification.
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	City of Fulton, Itawamba County EMA	Federal, State, Local	2025	Some have been installed, but more are needed. The county has installed 6 shelters/safe rooms, but will need to continue to
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	City of Fulton, Itawamba County EMA	Federal, State, Local	2025	Most of the county is not covered by outdoor sirens and this remains a top priority.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	City of Fulton, Itawamba County EMA	Local Funding	2025	Ongoing. The county has worked with local newspapers and media outlets to help pass along information about the dangers of natural hazards. The county will continue to work

Town of Mantachie Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Town of Mantachie, Itawamba County EMA	Local Funding	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	Moderate	Town of Mantachie, Itawamba County EMA	Federal, State, Local	2025	Ongoing. Although some smaller- scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Town of Mantachie, Itawamba County EMA	Federal, State, Local	2025	Some generators were procured. The county would like to add more when funding is available
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Town of Mantachie, Itawamba County EMA	Federal, State, Local	2025	Three mobile generators have been purchased for the county, but the county would like to purchase more when funding is available
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	Town of Mantachie, Itawamba County EMA	Federal, State, Local	2025	Ongoing. Weather radios have not been purchased for individual citizens but the county does have CodeRed in place and will continue to work on using advanced warning notification.
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Town of Mantachie, Itawamba County EMA	Federal, State, Local	2025	Some have been installed, but more are needed. The county has installed 6 shelters/safe rooms, but will need to continue to
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Town of Mantachie, Itawamba County EMA	Federal, State, Local	2025	Most of the county is not covered by outdoor sirens and this remains a top priority.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Town of Mantachie, Itawamba County EMA	Local Funding	2025	Ongoing. The county has worked with local newspapers and media outlets to help pass along information about the dangers of natural hazards. The county will continue to work

Town of Tremont Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Town of Tremont, Itawamba County EMA	Local Funding	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high-risk zones. Therefore, this action will remain in the plan
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	Moderate	Town of Tremont, Itawamba County EMA	Federal, State, Local	2025	Ongoing. Although some smaller- scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Town of Tremont, Itawamba County EMA	Federal, State, Local	2025	Some generators were procured. The county would like to add more when funding is available
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Town of Tremont, Itawamba County EMA	Federal, State, Local	2025	Three mobile generators have been purchased for the county, but the county would like to purchase more when funding is available
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	Town of Tremont, Itawamba County EMA	Federal, State, Local	2025	Ongoing. Weather radios have not been purchased for individual citizens but the county does have CodeRed in place and will continue to work on using advanced warning notification.
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Town of Tremont, Itawamba County EMA	Federal, State, Local	2025	Some have been installed, but more are needed. The county has installed 6 shelters/safe rooms, but will need to continue to
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Town of Tremont, Itawamba County EMA	Federal, State, Local	2025	Most of the county is not covered by outdoor sirens and this remains a top priority.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Town of Tremont, Itawamba County EMA	Local Funding	2025	Ongoing. The county has worked with local newspapers and media outlets to help pass along information about the dangers of natural hazards. The county will continue to work

Lafayette County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Lafayette County EMA	Local	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	Moderate	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Although some smaller- scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
SP-2	Install Automatic Seismic Shutoff Valves to critical areas.	Earthquake	High	Lafayette County EMA	Federal, State, Local	2025	Deferred.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Lafayette County EMA	Federal, State, Local	2025	More generators have been purchased, but additional generators are needed at other critical facilities.
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Two mobile generators have been purchased. Additional portable generators may be needed in the future.
ES-3	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Lafayette Co. has several storm shelters available to the public. Additional shelters are needed to accommodate the demand.
ES-4	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Lafayette County EMA	Federal, State, Local	2018	Completed

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Lafayette County EMA	Local	2025	Ongoing. Lafayette County has a good relationship with local and regional media outlets. Timely articles are published on a regular basis. This action will continue to be implemented going forward.
PEA-2	Modify/upgrade 17 existing outdoor warning sirens with two-way radio communication for improved monitoring and maintenance	Tornado, High Wind, Hail, Lightning	High	Lafayette County EMA	Federal, State, Local	2025	Some have been upgraded and added, now there are 27. Still ongoing to complete two-way communication.
PEA-3	Construct critical facilities such as additional fire stations to enhance public safety	All	High	Lafayette County EMA	Federal, State, Local	2025	Added two fire stations, and are actively hiring more firefighters.
PEA-4	Conduct training exercises to test plans and capabilities of first responders	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Training exercises are conducted on a routine basis.
PEA-5	Preventing erosion with proper bank stabilization, sloping or grading techniques, planting vegetation on slopes, terracing hillsides, or installing riprap boulders or geotextile fabric.	Erosion, Flood	High	Lafayette County EMA	Federal, State, Local	2025	Some work has been completed, but remains an ongoing project.
PEA-6	Increase awareness of flood risk and safety by Educating citizens about safety during flood conditions, including the dangers of driving on flooded roads.	Flood	High	Lafayette County EMA	Federal, State, Local	2020	Ongoing project. Continue to provide education and outreach to the public regarding flood safety
PEA-7	Protect critical facilities and infrastructure from lightning damage by installing lightning protection devices and methods, such as lightning rods and grounding, on communications infrastructure and other critical facilities.	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to install lightning protection devices and methods as funding allows.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-8	Protect critical facilities and infrastructure from lightning damage by installing and maintaining surge protection on critical electronic equipment.	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to install and maintain equipment as funding allows.
PEA-9	Conduct outreach activities to increase awareness of tornado risk.	Tornado	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing project. Continue to engage public on tornado education and outreach.

Town of Abbeville Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Town of Abbeville, Lafayette County EMA	Local Funding	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	Moderate	Town of Abbeville, Lafayette County EMA	Federal, State, Local	2025	Ongoing. Although some smaller- scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
SP-2	The Town proposes to construct 6 and 8 inch water mains to the city limits along State Highway 7, West and East Long Streets, North & South Business 7 and Graham Lake Road, replacing main service lines less than 6 inch.	Flood, Wildfire, Drought/Heat, Earthquake	High	Town of Abbeville	Local, Federal, State	2025	Deferred.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
SP-3	The Town propose to create a sewage system including sewage treatment.	Flood, Drought/Heat, Land Subsidence/Expansive Soils	High	Town of Abbeville	Local, Federal, State	2025	Ongoing. The town has been working on this project , but it is still underway. This action will remain in the plan until project is complete.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Town of Abbeville, Lafayette County EMA	Federal, State, Local	2025	More generators have been purchased, but additional generators are needed at other critical facilities.
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Town of Abbeville, Lafayette County EMA	Federal, State, Local	2025	Ongoing. Two mobile generators have been purchased. Additional portable generators may be needed in the future.
ES-3	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Town of Abbeville, Lafayette County EMA	Federal, State, Local	2025	Ongoing. Lafayette Co. has several storm shelters available to the public. Additional shelters are needed to accommodate the demand.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Town of Abbeville, Lafayette County EMA	Federal, State, Local	2018	Completed
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Town of Abbeville, Lafayette County EMA	Local Funding	2025	Ongoing. Lafayette County has a good relationship with local and regional media outlets. Timely articles are published on a regular basis. This action will continue to be implemented going forward.
PEA-2	Modify/upgrade 17 existing outdoor warning sirens with two-way radio communication for improved monitoring and maintenance	Tornado, High Wind, Hail, Lightning	High	Lafayette County EMA	Federal, State, Local	2025	Some have been upgraded and added, now there are 27. Still ongoing to complete two-way communication.
PEA-3	Construct critical facilities such as additional fire stations to enhance public safety	All	High	Lafayette County EMA	Federal, State, Local	2025	Added two fire stations, and are actively hiring more firefighters.
PEA-4	Conduct training exercises to test plans and capabilities of first responders	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Training exercises are conducted on a routine basis.
PEA-5	Preventing erosion with proper bank stabilization, sloping or grading techniques, planting vegetation on slopes, terracing hillsides, or installing riprap boulders or geotextile fabric.	Erosion, Flood	High	Lafayette County EMA	Federal, State, Local	2025	Some work has been completed, but remains an ongoing project.
PEA-6	Increase awareness of flood risk and safety by Educating citizens about safety during flood conditions, including the dangers of driving on flooded roads.	Flood	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing project. Continue to provide education and outreach to the public regarding flood safety

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-7	Protect critical facilities and infrastructure from lightning damage by installing lightning protection devices and methods, such as lightning rods and grounding, on communications infrastructure and other critical facilities.	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to install lightning protection devices and methods as funding allows.
PEA-8	Protect critical facilities and infrastructure from lightning damage by installing and maintaining surge protection on critical electronic equipment.	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to install and maintain equipment as funding allows.
PEA-9	Conduct outreach activities to increase awareness of tornado risk.	Tornado	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to engage public on tornado education and awareness.

City of Oxford Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	City of Oxford, Lafayette County EMA	Local Funding	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control & drainage improvements: 18 th St. Flash Flooding, Notting Hill subdivision flooding, Summerset Dr. Flooding, Links Dr. drainage, Harlan Dr. flooding, CR 401 flooding, Davidson Creek / Toby Tubby Creek Flood Study, Park Dr. at Sisk Ave Intersection flooding, Elm St. Ditch project, South Oaks / South Lamar Flooding, Rolling Woods drainage project.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	Moderate	City of Oxford, Lafayette County EMA	Federal, State, Local	2025	Although some smaller-scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
SP-2	Install Automatic Seismic Shutoff Valves to critical areas.	Earthquake	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to install automatic seismic shutoff valves as funding allows.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
SP-3	The project would address the recurring drainage and flooding problems along and near Burney Branch Creek and Bailey Branch Creek. Runoff from rain events has increased over the past several years and has started to overload the existing drainage system and caused flooding of homes in the area. The project will replace and upgrade existing drainage structures to handle the increased water capacity.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High	City of Oxford EMA, City of Oxford Engineering/ Public Works Department	Federal, State, Local	2025	In the process of being awarded, and remains an ongoing project.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	City of Oxford, Lafayette County EMA	Federal, State, Local	2025	More generators have been purchased, but additional generators are needed at other critical facilities.
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	City of Oxford, Lafayette County EMA	Federal, State, Local	2025	Ongoing. Two mobile generators have been purchased. Additional portable generators may be needed in the future.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-3	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	City of Oxford, Lafayette County EMA	Federal, State, Local	2025	Ongoing. Lafayette Co. has several storm shelters available to the public. Additional shelters are needed to accommodate the demand.
ES-4	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	City of Oxford, Lafayette County EMA	Federal, State, Local	2018	Completed
ES-5	Construct a hardened Emergency Operations Center and Central Fire Station to provide for the continuity of governmental operations in the event of natural hazard events. The facility would provide for a safe, centralized operations area for local government officials and emergency first responders during times of emergency. The facility would also be able to serve as a regional operations facility in the event of a state or region wide disaster.	All	High	City of Oxford EMA	Local, Federal, State	2017	Completed.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-6	Install additional advanced warning systems throughout the City of Oxford. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with storm events.	Tornado, High Wind, Hail, Lightning	High	City of Oxford EMA	Local, Federal, State, Private sector	2025	Ongoing. Some effort has been made to secure funding for additional advanced warning systems in the city, but city officials feel there is still a need to pursue more sirens so it will attempt to pursue funding to construct these.
ES-7	Install emergency backup generator at Industrial Park water well/ tower.	All	High	City of Oxford	Local, Federal, State	2025	NEW
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	City of Oxford, Lafayette County EMA	Local Funding	2025	Ongoing. Lafayette County has a good relationship with local and regional media outlets. Timely articles are published on a regular basis. This action will continue to be implemented going forward.
PEA-2	Modify/upgrade existing outdoor warning sirens with two-way radio communication for improved monitoring and maintenance	Tornado, High Wind, Hail, Lightning	High	City of Oxford	Federal, State, Local	2025	Ongoing. more sirens being added and some are being updated.
PEA-3	Construct critical facilities such as additional fire stations to enhance public safety	All	High	City of Oxford	Federal, State, Local	2025	Deferred. Will continue to pursue this action as funding allows.
PEA-4	Conduct training exercises to test plans and capabilities of first responders	All	High	City of Oxford	Federal, State, Local	2025	Ongoing. Training and exercises are conducted on a routine basis.
PEA-5	Preventing erosion with proper bank stabilization, sloping or grading techniques, planting vegetation on slopes, terracing hillsides, or installing riprap boulders or geotextile fabric.	Erosion, Flood	High	City of Oxford	Federal, State, Local	2025	Ongoing. Implement erosion mitigation and maintenance as funding allows.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-6	Increase awareness of flood risk and safety by Educating citizens about safety during flood conditions, including the dangers of driving on flooded roads.	Flood	High	City of Oxford	Federal, State, Local	2025	Ongoing project. Continue to provide education and outreach to the public regarding flood safety.
PEA-7	Protect critical facilities and infrastructure from lightning damage by Installing lightning protection devices and methods, such as lightning rods and grounding, on communications infrastructure and other critical facilities.	All	High	City of Oxford	Federal, State, Local	2025	Ongoing project. Continue to install lightning protection devices and methods as funding allows.
PEA-8	Protect critical facilities and infrastructure from lightning damage by Installing and maintaining surge protection on critical electronic equipment.	All	High	City of Oxford	Federal, State, Local	2025	Ongoing project. Continue to install and maintain equipment as funding allows.
PEA-9	Conduct outreach activities to increase awareness of tornado risk.	Tornado	High	City of Oxford	Federal, State, Local	2025	Ongoing project. Continue to engage public on tornado education and outreach.
PEA-10	Install Digital Message Boards for public notifications.	All	High	City of Oxford	Federal, State, Local	2025	NEW

Town of Taylor Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2016)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Town of Taylor, Lafayette County EMA	Local Funding	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	Moderate	Town of Taylor, Lafayette County EMA	Federal, State, Local	2025	Ongoing. Although some smaller- scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Town of Taylor, Lafayette County EMA	Federal, State, Local	2025	Ongoing. A fixed generator has been installed at the Road Dept./Maintenance Shop and most fire stations. Additional generators are needed at other critical facilities.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Town of Taylor, Lafayette County EMA	Federal, State, Local	2025	Ongoing. Two mobile generators have been purchased. Additional portable generators may be needed in the future.
ES-3	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Town of Taylor, Lafayette County EMA	Federal, State, Local	2025	Ongoing. Lafayette Co. has several storm shelters available to the public. Additional shelters are needed to accommodate the demand.
ES-4	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Town of Taylor, Lafayette County EMA	Federal, State, Local	2018	Completed
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Town of Taylor, Lafayette County EMA	Local Funding	2025	Ongoing. Lafayette County has a good relationship with local and regional media outlets. Timely articles are published on a regular basis. This action will continue to be implemented going forward.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2016)
PEA-2	Modify/upgrade 17 existing outdoor warning sirens with two-way radio communication for improved monitoring and maintenance	Tornado, High Wind, Hail, Lightning	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Partially completed and will continue as funding allows.
PEA-3	Construct critical facilities such as additional fire stations to enhance public safety	All	High	Lafayette County EMA	Federal, State, Local	2025	NEW
PEA-4	Conduct training exercises to test plans and capabilities of first responders	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Training and exercise are conducted on a routine basis.
PEA-5	Preventing erosion with proper bank stabilization, sloping or grading techniques, planting vegetation on slopes, terracing hillsides, or installing riprap boulders or geotextile fabric.	Erosion, Flood	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Implement erosion mitigation and maintenance as funding allows.
PEA-6	Increase awareness of flood risk and safety by Educating citizens about safety during flood conditions, including the dangers of driving on flooded roads.	Flood	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to provide education and outreach to the public regarding flood safety
PEA-7	Protect critical facilities and infrastructure from lightning damage by Installing lightning protection devices and methods, such as lightning rods and grounding, on communications infrastructure and other critical facilities.	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to install lightning protection devices and methods as funding allows.
PEA-8	Protect critical facilities and infrastructure from lightning damage by Installing and maintaining surge protection on critical electronic equipment.	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to install and maintain equipment as funding allows.
PEA-9	Conduct outreach activities to increase awareness of tornado risk.	Tornado	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to engage public on tornado education and outreach.

Lee County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Lee County, Lee County EMA	Local	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high-risk zones. Therefore, this action will remain in the plan
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High to Low	Lee County, Lee County EMA	Federal, State, Local	2025	Ongoing. Although some smaller- scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Lee County, Lee County EMA	Federal, State, Local	2018	Completed

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Lee County, Lee County EMA	Federal, State, Local	2018	Completed
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	Lee County, Lee County EMA	Federal, State, Local	2025	Ongoing. The county has not purchased or distributed weather radios to members of the public and may not have the funding to do so, but it will re-emphasize the need to purchase these to the public.
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event. In particular, increased development in Guntowne, Saltillo has led to more population to protect.	All	High	Lee County, Lee County EMA	Federal, State, Local	2025	Ongoing. The county has identified and constructed some shelters and safe rooms, but there is a need to continually identify these areas as new construction takes place.
ES-5	Install additional outdoor warning sirens throughout the county.	Tornado	Moderate	Lee County EMA	Federal, State, Local	2025	New Action
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Lee County, Lee County EMA	Local	2025	Ongoing. The county has worked with local media to disburse information regarding hazards and will continue to work on improving its relationship with media and use the media as a means of educating the public going forward.

City of Baldwin Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	City of Baldwin, Lee County EMA	Local	2025	The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high-risk zones. Therefore, this action will remain in the plan going forward.
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High to Low	City of Baldwin, Lee County EMA	Federal, State, Local	2025	Although some smaller-scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	City of Baldwin, Lee County EMA	Federal, State, Local	2025	Some fixed generators have been installed, but additional generators are needed at other critical facilities.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	City of Baldwin, Lee County EMA	Federal, State, Local	2025	Some mobile generators have been purchased, but additional generators are desired to be used during storm events.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	City of Baldwin, Lee County EMA	Federal, State, Local	Deleted	Deleted
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	City of Baldwin, Lee County EMA	Federal, State, Local	2025	The county has identified and constructed some shelters and safe rooms, but there is a need to continually identify these areas as new construction takes place.
ES-5	The City of Baldwin proposes to construct a new fire station in order to have additional space and to better locate itself to serve residents.	All	High	City of Baldwin, Lee County EMA	Local, Federal, State	2025	Ongoing. The city has not constructed a new fire station but this is still a priority so the city will continue to pursue this action.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	City of Baldwin, Lee County EMA	Local	2025	The county has worked with local media to disburse information regarding hazards and will continue to work on improving its relationship with media and use the media as a means of educating the public going forward.

Town of Guntown Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Town of Guntown, Lee County EMA	Local	2025	The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high-risk zones. Therefore, this action will remain in the plan going forward.
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High to Low	Town of Guntown, Lee County EMA	Federal, State, Local	2025	Although some smaller-scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Town of Guntown, Lee County EMA	Federal, State, Local	2025	Some fixed generators have been installed, but additional generators are needed at other critical facilities.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Town of Guntown, Lee County EMA	Federal, State, Local	2025	Some mobile generators have been purchased, but additional generators are desired to be used during storm events.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	Town of Guntown, Lee County EMA	Federal, State, Local	Deleted	Deleted
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Town of Guntown, Lee County EMA	Federal, State, Local	2020	The county has identified and constructed some shelters and safe rooms, but there is a need to continually identify these areas as new construction takes place.
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Town of Guntown, Lee County EMA	Federal, State, Local	2020	The town has not installed a new advanced notification system as of yet, but this is still a high priority so the town will continue to pursue this action going forward.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Town of Guntown, Lee County EMA	Local	2025	The county has worked with local media to disburse information regarding hazards and will continue to work on improving its relationship with media and use the media as a means of educating the public going forward.

SECTION 9: MITIGATION ACTION PLAN

City of Nettleton Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	City of Nettleton, Lee County EMA	LOCAL	2025	The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high-risk zones. Therefore, this action will remain in the plan going forward.
P-2	Drainage mitigation project to control flooding from Maple Rd. to Will Robins Highway.	Flooding	High	City of Nettleton, Lee County EMA	Local, FEMA, MEMA	2025	New Action
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High to Low	City of Nettleton, Lee County EMA	Federal, State, Local	2025	Although some smaller-scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power	All	High	City of Nettleton, Lee County EMA	Federal, State, Local	2025	Some fixed generators have been installed, but additional generators are needed at other critical facilities.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	City of Nettleton, Lee County EMA	Federal, State, Local	2025	Some mobile generators have been purchased, but additional generators are desired to be used during storm events.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	City of Nettleton, Lee County EMA	Federal, State, Local	Deleyed	Deleted
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	City of Nettleton, Lee County EMA	Federal, State, Local	2025	The county has identified and constructed some shelters and safe rooms, but there is a need to continually identify these areas as new construction takes place.
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	City of Nettleton, Lee County EMA	Federal, State, Local	2025	The town has not installed a new advanced notification system as of yet, but this is still a high priority so the town will continue to pursue this action going forward.
ES-6	The project would involve building four storm shelters in Nettleton.	All	High	City of Nettleton, Lee County EMA	Local, Federal, State	2025	Ongoing. The city has not constructed these storm shelters yet, however, this is a high priority so the city would like to continue to pursue this going forward.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	City of Nettleton, Lee County EMA	Local	2025	The county has worked with local media to disburse information regarding hazards and will continue to work on improving its relationship with media and use the media as a means of educating the public going forward.

Town of Plantersville Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Town of Plantersville, Lee County EMA	Local Funding	2025	The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high-risk zones. Therefore, this action will remain in the plan going forward.
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High to Low	Town of Plantersville, Lee County EMA	Federal, State, Local	2025	Although some smaller-scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
SP-2	The Town proposes to construct a 50 GPM booster station along County Road 1009, increase the water line size to a four-inch line along Parker Street, bore for four-inch and six-inch water line near the County Road 870 creek crossings, relocate 100 feet of six-inch water line near County Road 814 and Central Street, increase the line size to a six-inch water line along Estes Street, clean and pain the inside and outside of its 50,000-gallon water tank, and replace all of the pulleys, cables, and floats in its 50,000-gallon water tank.	Flood, Wildfire, Drought/Heat Wave	High	Town of Plantersville, Lee County EMA	Local, Federal, State	Completed	Completed.
SP-3	The Town proposes to install a new flow meter at the Town’s sewage lagoon, replace the existing pumping station with a triplex pumping station (with generator set) and install a separate eight-inch force main, upgrade to a larger sewer machine, and purchase a vehicle capable of pulling the sewer machine and generator.	Flood, Drought/Heat Wave, Land Subsidence/ Expansive Soils	High	Town of Plantersville, Lee County EMA	Local, Federal, State	Completed	Completed
SP-4	The Town proposes a comprehensive drainage improvements effort that will target problem areas such as Woodgreen, Pinecrest, Cedar Street, the railroad near the park, the area around the old lagoon, Maple, Old Planters, Poplar, and Meadowbrook.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High	Town of Plantersville, Lee County EMA	Local, Federal, State	2025	Ongoing. The town has been working on comprehensive drainage improvement projects, but there are still a number of steps that need to take place to complete these, so this action will remain in the plan until the project is complete.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Town of Plantersville, Lee County EMA	Federal, State, Local	2025	Some fixed generators have been installed, but additional generators are needed at other critical facilities.
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Town of Plantersville, Lee County EMA	Federal, State, Local	2025	Some mobile generators have been purchased, but additional generators are desired to be used during storm events.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	Town of Plantersville, Lee County EMA	Federal, State, Local	Deleted	Deleted
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Town of Plantersville, Lee County EMA	Federal, State, Local	2025	The county has identified and constructed some shelters and safe rooms, but there is a need to continually identify these areas as new construction takes place.
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Town of Plantersville, Lee County EMA	Federal, State, Local	2025	The town has not installed a new advanced notification system as of yet, but this is still a high priority so the town will continue to pursue this action going forward.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Town of Plantersville, Lee County EMA	Local	2025	The county has worked with local media to disburse information regarding hazards and will continue to work on improving its relationship with media and use the media as a means of educating the public going forward.

SECTION 9: MITIGATION ACTION PLAN

City of Saltillo Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	City of Saltillo, Lee County EMA	Local	2025	The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high-risk zones. Therefore, this action will remain in the plan going forward.
P-2	Purchase roughly 13 homes in a flood prone area of Willow Creek neighborhood to return to natural habitat.	Flooding	High	City of Saltillo, Lee County EMA	Local, FEMA, MEMA	2025	New Action
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High to Low	City of Saltillo, Lee County EMA	Federal, State, Local	2025	Although some smaller-scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
SP-2	The City of Saltillo has flooding problems in the east ditch of West Water Street. The city proposes the placement of double-line arch piping, ditch grading, erosion control, and road repair.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High	City of Saltillo	Local, Federal, State	2025	Ongoing. The town has been working on this ditch project, but it is still underway. This action will remain in the plan until the project is complete.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
SP-3	The City of Saltillo has flooding problems in the west ditch of West Water Street. The City proposes the placement of double-line arch piping, ditch grading, erosion control, and road repair.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High	City of Saltillo	Local, Federal, State	2025	Ongoing. The town has been working on this ditch project, but it is still underway. This action will remain in the plan until the project is complete.
SP-4	The City of Saltillo has flooding problems on Rogers Avenue at the Knight Drive intersection. The City proposes the placement of triple-line arch piping, ditch grading, erosion control, and road repair.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High	City of Saltillo	Local, Federal, State	2025	Ongoing. The town has been working on this piping project, but it is still underway. This action will remain in the plan until the project is complete.
SP-5	The City of Saltillo has flooding problems in the ditch line under a residential driveway on Knight Drive. The City proposes the placement of double-line arch piping, ditch grading, erosion control, and road repair.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High	City of Saltillo	Local, Federal, State	2025	Ongoing. The town has been working on this ditch project, but it is still underway. This action will remain in the plan until the project is complete.
SP-6	The City of Saltillo has flooding problems at the Dogwood Plantation Assisted Living Complex on Knight Drive. The City proposes the placement of double-line arch piping, ditch grading, erosion control, and road repair.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High	City of Saltillo	Local, Federal, State	2025	Ongoing. The town has been working on this piping project, but it is still underway. This action will remain in the plan until the project is complete.
SP-7	The City of Saltillo has flooding problems in the Gym Circle area. The City proposes the placement of double-line arch piping, ditch grading, erosion control, and road repair.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High	City of Saltillo	Local, Federal, State	2025	Ongoing. The town has been working on this piping project, but it is still underway. This action will remain in the plan until the project is complete.
SP-8	The City of Saltillo has flooding problems in the Saltillo Elementary School cafeteria on Old Saltillo Road area. The City proposes the placement of double-line arch piping, ditch grading, erosion control, and road repair.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High	City of Saltillo	Local, Federal, State	2025	Ongoing. The town has been working on this piping project, but it is still underway. This action will remain in the plan until the project is complete.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
SP-9	The City of Saltillo has flooding problems on Willow Creek at Elm Tree Lane. The city proposes the placement of double-line arch piping, ditch grading, erosion control, and road repair.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High	City of Saltillo	Local, Federal, State	2025	Ongoing. The town has been working on this piping project, but it is still underway. This action will remain in the plan until the project is complete.
SP-10	The City of Saltillo proposes replacing deteriorating pipes with double line piping, ditch grading, erosion control, and road repair to correct the drainage problems in the Maple Ridge subdivision	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High	City of Saltillo	Local, Federal, State	2025	Ongoing. The town has been working on this piping project, but it is still underway. This action will remain in the plan until the project is complete.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	City of Saltillo, Lee County EMA	Federal, State, Local	2025	Ongoing. Some fixed generators have been installed, but additional generators are needed at other critical facilities.
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	City of Saltillo, Lee County EMA	Federal, State, Local	2025	Ongoing. Some mobile generators have been purchased, but additional generators are desired to be used during storm events.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	City of Saltillo, Lee County EMA	Federal, State, Local	Deleted	Deleted

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	City of Saltillo, Lee County EMA	Federal, State, Local	2025	The county has identified and constructed some shelters and safe rooms, but there is a need to continually identify these areas as new construction takes place.
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	City of Saltillo, Lee County EMA	Federal, State, Local	2025	The town has not installed a new advanced notification system as of yet, but this is still a high priority so the town will continue to pursue this action going forward.
ES-6	Construct a new fire station with additional space in a better location to serve local residents	All	High	City of Saltillo, Lee County EMA	Federal, State, Local	2025	Ongoing. The city has not constructed a new fire station but this is still a priority so the city will continue to pursue this action.
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	City of Saltillo, Lee County EMA	Local	2025	The county has worked with local media to disburse information regarding hazards and will continue to work on improving its relationship with media and use the media as a means of educating the public going forward.

Town of Shannon Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Town of Shannon, Lee County EMA	Local	2025	The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high-risk zones. Therefore, this action will remain in the plan going forward.
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	Moderate	Town of Shannon, Lee County EMA	Federal, State, Local	2025	Although some smaller-scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Town of Shannon, Lee County EMA	Federal, State, Local	2025	Some fixed generators have been installed, but additional generators are needed at other critical facilities.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Town of Shannon, Lee County EMA	Federal, State, Local	2025	Some mobile generators have been purchased, but additional generators are desired to be used during storm events.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	Town of Shannon, Lee County EMA	Federal, State, Local	Deleted	Deleted
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Town of Shannon, Lee County EMA	Federal, State, Local	2025	The county has identified and constructed some shelters and safe rooms, but there is a need to continually identify these areas as new construction takes place.
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Town of Shannon, Lee County EMA	Federal, State, Local	2025	The town has not installed a new advanced notification system as of yet, but this is still a high priority so the town will continue to pursue this action going forward.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Town of Shannon, Lee County EMA	Local	2025	The county has worked with local media to disburse information regarding hazards and will continue to work on improving its relationship with media and use the media as a means of educating the public going forward.

City of Tupelo Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	City of Tupelo, Lee County EMA	Local	2025	The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high-risk zones. For example, the city would like to create a tracking system for repetitive flood/damaged areas. Therefore, this action will remain in the plan going forward.
Property Protection							
PP-1	Protect or “harden” critical facilities, infrastructure, and key structures/components that would include retrofitting or reconstruction of roofs and other critical facility components for heavier snow/ice loading.	All	High	City of Tupelo, Lee County EMA	Federal, State, Local	2025	Ongoing. The city has taken a number of steps to better protect and strengthen its critical facilities, but there are still a number of retrofits on facilities that it would like to implement going forward, so this will
PP-2	Install below-grade electric power and other utility services to critical structures.	All	High	City of Tupelo Lee County EMA	Federal, State, Local	2025	Ongoing need. The city has installed below-grade electric power to some critical structures, but this action still needs work going forward.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PP-3	Protect computers and telecommunications capabilities for power loss.	All	High	City of Tupelo Lee County EMA	Federal, State, Local	2025	Ongoing. Many steps have been taken to protect computers and telecommunications equipment, but more effort is needed to fully protect against a potential power loss.
PP-4	Conduct tree removal/trimming programs near critical infrastructure.	All	High	City of Tupelo Lee County EMA	Federal, State, Local	2025	Ongoing. Tree trimming and removal has taken place in many areas and has been very helpful, but this action will need to be implemented on a continual basis so it will remain in place in the
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High to Low	City of Tupelo, Lee County EMA	Federal, State, Local	2025	Ongoing. Although some smaller- scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	City of Tupelo, Lee County EMA	Federal, State, Local	2025	Ongoing. Some fixed generators have been installed, but additional generators are needed at other critical facilities.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	City of Tupelo, Lee County EMA	Federal, State, Local	2025	Some mobile generators have been purchased, but additional generators are desired to be used during storm events.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	City of Tupelo, Lee County EMA	Federal, State, Local	2020	Deleted
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	City of Tupelo, Lee County EMA	Federal, State, Local	Completed	Completed
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	City of Tupelo, Lee County EMA	Federal, State, Local	Completed	Completed
ES-6	Purchase snow removal equipment for quicker access and egress.	Severe Winter Storm	High	City of Tupelo Lee County EMA	Federal, State, Local	Deleted	Deleted

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-7	Construct or retrofit facilities to serve as storm shelters.	All	High	City of Tupelo Lee County EMA	Federal, State, Local	2025	Ongoing. Some facilities have been constructed that can serve as storm shelters, but additional retrofitting of existing facilities is likely required.
ES-8	Construct hazard-resistant emergency services facilities (EOC's, etc.)	All	High	City of Tupelo Lee County EMA	Federal, State, Local	2025	Ongoing. The city has made many of its emergency services facilities hazard resistant, but there is still a great deal of protection that needs to be implemented
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	City of Tupelo, Lee County EMA	Local	2025	Ongoing. The county has worked with local media to disburse information regarding hazards and will continue to work on improving its relationship with media and use the media as a means of educating the public going forward.

City of Verona Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	City of Verona, Lee County EMA	Local	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high-risk zones. Therefore, this action will remain in the plan
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High to Low	City of Verona, Lee County EMA	Federal, State, Local	2025	Although some smaller-scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	City of Verona, Lee County EMA	Federal, State, Local	2025	Some fixed generators have been installed, but additional generators are needed at other critical facilities.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	City of Verona, Lee County EMA	Federal, State, Local	2025	Some mobile generators have been purchased, but additional generators are desired to be used during storm events.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	City of Verona, Lee County EMA	Federal, State, Local	2020	Deleted
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	City of Verona, Lee County EMA	Federal, State, Local	2025	Ongoing. The county has identified and constructed some shelters and safe rooms, but there is a need to continually identify these areas as new construction
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	City of Verona, Lee County EMA	Federal, State, Local	Deleted	Deleted – Merged with ES-6
ES-6	The City of Verona proposes to install advanced warning sirens to warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornadoes.	Tornado, High Wind, Hail, Lightning	High	City of Verona, Lee County EMA	Local, Federal, State	2025	Ongoing. The town has not installed a new advanced notification system as of yet, but this is still a high priority so the town will continue to pursue this action going

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	City of Verona, Lee County EMA	Local	2025	Ongoing. The county has worked with local media to disburse information regarding hazards and will continue to work on improving its relationship with media and use the media as a means of educating the public going forward.

SECTION 9: MITIGATION ACTION PLAN

Marshall County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Due to flooding in Tippah River Bottom the Marshall County Board of Supervisors proposes to locate road closures with adequate advance warning devices on the East and West side of Tippah River bottom. This closure would only be used in times of high water.	Flood	High	Marshall County EMA	FEMA, Local	Completed	Road closures have been included along the Tippah River bottom. This project has been completed.
P-2	Due to flooding on the Bethlehem Road, the Marshall County Board of Supervisors proposes to locate permanent road closures with adequate advance warning devices on the East and West side of the Tippah River bottom. These closures would only be used in times of high water.	Flood	High	Marshall County EMA	FEMA, Local	Completed	Road closures have been included along the Tippah River bottom. This project has been completed.
P-3	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Marshall County	MEMA, FEMA, Local	2024	The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-4	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Marshall County EMA	Local, MEMA, FEMA	2020	Deleted

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-5	<p>The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.</p> <p>Ongoing with prescribed burns.</p>	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	Deferred. The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled
P-6	<p>Communities can pass ordinances to prioritize or control water use, particular for emergency situations like firefighting.</p> <p>Does not have county system.</p>	Drought/Heat Wave	Moderate	Marshall County EMA	MEMA, FEMA, Local	2020	Deleted

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Property Protection							
PP-1	Due to the dredging by the US Army Corps of Engineers in the late 1960's a curve was created in Tippah River near its approach to Potts Camp Road bridge, thus creating extreme scouring along its east banks. In an unsuccessful attempt to prevent further damage the US Corps of Engineers installed erosion deterrent devices along that bank. Currently those devices are submerged and scouring is occurring 100-150 feet further into the east bank, ultimately forming a new course for the river. The Marshall County Engineer has predicted severe damage to the east bridge abutment and road levee within five years. The project proposes installing flow deterrent devices, backfilling, and stabilizing the eroded area.	Flood	High	Marshall County EMA, US Army Corps of Engineers, FEMA	FEMA, Local, MS Department of Transportation-State Aid Division	2025	Deferred. Stabilizing efforts have been made to some degree, but a long-term solution to the problem needs to be implemented so this action will remain in the plan going forward.
PP-2	Public and private buildings can be designed with hail-resistant roof shingles of flashing to minimize damage.	Hail	Low	Marshall County EMA	FEMA, Public and private funds	2020	Deleted

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PP-3	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Marshall County EMA	FEMA	2019	Completed
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Supply county residents outside the municipalities with NOAA weather radios. The radios will warn area residents of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Marshall County EMA	Local, MEMA, FEMA, Private industry	2016	Completed
ES-2	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Marshall County EMA	Local, MEMA, FEMA	2025	Ongoing. Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-3	Procure a mobile power supply (generator) that will enable Marshall County Water Associations to have alternate power to help restore operations if severe winter weather disrupts usual power supply. (All generators to be shared by multiple associations.)	Winter Storm and Freeze	High	Marshall County EMA	Local, FEMA	2022 or as soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available. Still ongoing.
ES-4	Procure a mobile power supply (generator) that will enable each municipality and Marshall County government (including the County Road Shop) to have alternate power to help restore basic governmental operations if severe winter weather disrupts power supply.	Winter Storm and Freeze	High	Marshall County EMA	Local, FEMA	As soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available. Hookups have been installed on buildings.
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD service area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Marshall County EMA	Local, FEMA	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future. Public education is ongoing.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Marshall County EMA	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Marshall County EMA	Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue to encourage media outlets to improve public education. Ongoing efforts.
PEA-3	Provide literature, classes, and materials to the residents of Marshall County to better prepare them for potential hazardous events.	All	High	Marshall County EMA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-13	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Marshall County EMA	MS Forestry Commission	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward. Still ongoing.
PEA-15	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Marshall County EMA	MEMA, FEMA, Local	2025	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-17	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Marshall County EMA	MEMA, FEMA, Local	2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

SECTION 9: MITIGATION ACTION PLAN

Town of Byhalia Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Town of Byhalia	MEMA, FEMA, Local	2020	The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Marshall County EMA, Town of Byhalia	Local, MEMA, FEMA	2020	Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2018	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	Communities can pass ordinances to prioritize or control water use, particular for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Marshall County EMA, Town of Byhalia	MEMA, FEMA, Local	2020	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Marshall County EMA, Town of Byhalia	FEMA, Public and private funds	2020	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs.
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Marshall County EMA, Town of Byhalia	FEMA	2019	Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Install two (2) advanced warning sirens in Byhalia. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Marshall County EMA, Town of Byhalia	Local, MEMA, FEMA	2016	The town has not invested in additional warning systems, but this is a high priority need and will be carried out as soon as funds are available
ES-2	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Marshall County EMA, Town of Byhalia	Local, MEMA, FEMA	2020	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.
ES-3	Procure a mobile power supply (generator) that will enable Marshall County Water Associations to have alternate power to help restore operations if severe winter weather disrupts usual power supply. (All generators to be shared by multiple associations.)	Winter Storm and Freeze	High	Marshall County EMA	Local, FEMA	2017 or as soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available
ES-4	Procure a mobile power supply (generator) that will enable each municipality and Marshall county government (including the County Road Shop) to have alternate power to help restore basic governmental operations if severe winter weather disrupts power supply.	Winter Storm and Freeze	High	Marshall County EMA, Town of Byhalia	Local, FEMA	As soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available. Hookups need to be installed on buildings

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD service area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Marshall County EMA	Local, FEMA	2020	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Marshall County EMA, Town of Byhalia	Local, MEMA, FEMA	2016	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Marshall County EMA, Town of Byhalia	Local, MEMA, FEMA	2020	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the residents of Marshall County to better prepare them for potential hazardous events.	All	High	Marshall County EMA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2020	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.
PEA-4	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of flooding and the positive impacts of various hazard mitigation actions associated with flood events. The articles and information pieces will address existing and future buildings and infrastructure as well as other potential impacts.	Flood	High	Marshall County EMA, Town of Byhalia	Local, MEMA, FEMA	Deleted	Combined with PEA-2

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-13	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Marshall County EMA	MS Forestry Commission	2020	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-15	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Marshall County EMA, Town of Byhalia	MEMA, FEMA, Local	2020	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-17	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Marshall County EMA, Town of Byhalia	MEMA, FEMA, Local	2020	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

City of Holly Springs Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	City of Holly Springs	MEMA, FEMA, Local	2020	The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Marshall County EMA, City of Holly Springs	Local, MEMA, FEMA	2020	Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2018	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	Communities can pass ordinances to prioritize or control water use, particular for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Marshall County EMA, City of Holly Springs	MEMA, FEMA, Local	2020	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Marshall County EMA, City of Holly Springs	FEMA, Public and private funds	2020	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs.
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Marshall County EMA, City of Holly Springs	FEMA	2019	Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Install five (5) advanced warning sirens in Holly Springs. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Marshall County EMA, City of Holly Springs	Local, MEMA, FEMA	2016	The town has not invested in additional warning systems, but this is a high priority need and will be carried out as soon as funds are available
ES-2	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Marshall County EMA, City of Holly Springs	Local, MEMA, FEMA	2020	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.
ES-3	Procure a mobile power supply (generator) that will enable Marshall County Water Associations to have alternate power to help restore operations if severe winter weather disrupts usual power supply. (All generators to be shared by multiple associations.)	Winter Storm and Freeze	High	Marshall County EMA	Local, FEMA	2017 or as soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available
ES-4	Procure a mobile power supply (generator) that will enable Holly Springs Utility Department to have alternate power to help restore operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	City of Holly Springs	Local, FEMA	As soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available. Hookups need to be installed on buildings

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-5	Procure a mobile power supply (generator) that will enable each municipality and Marshall county government (including the County Road Shop) to have alternate power to help restore basic governmental operations if severe winter weather disrupts power supply.	Winter Storm and Freeze	High	Marshall County EMA, City of Holly Springs	Local, FEMA	As soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available. Hookups need to be installed on buildings
ES-6	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD service area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Marshall County EMA	Local, FEMA	2020	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Marshall County EMA, City of Holly Springs	Local, MEMA, FEMA	2016	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Marshall County EMA, City of Holly Springs	Local, MEMA, FEMA	2020	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the residents of Marshall County to better prepare them for potential hazardous events.	All	High	Marshall County EMA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2020	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-13	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Marshall County EMA	MS Forestry Commission	2020	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-15	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Marshall County EMA, City of Holly Springs	MEMA, FEMA, Local	2020	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-17	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Marshall County EMA, City of Holly Springs	MEMA, FEMA, Local	2020	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

Town of Potts Camp Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Town of Potts Camp	MEMA, FEMA, Local	2020	The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Marshall County EMA, Town of Potts Camp	Local, MEMA, FEMA	2020	Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2018	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	Communities can pass ordinances to prioritize or control water use, particular for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Marshall County EMA, Town of Potts Camp	MEMA, FEMA, Local	2020	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Marshall County EMA, Town of Potts Camp	FEMA, Public and private funds	2020	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs.
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Marshall County EMA, Town of Potts Camp	FEMA	2019	Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Install an advanced warning siren in Potts Camp. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the damages and losses associated with high winds and tornados.	Tornado, High Winds	High	Marshall County EMA, Town of Potts Camp	Local, MEMA, FEMA	2016	The town has not invested in additional warning systems, but this is a high priority need and will be carried out as soon as funds are available
ES-2	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Marshall County EMA, Town of Potts Camp	Local, MEMA, FEMA	2020	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.
ES-3	Procure a mobile power supply (generator) that will enable Marshall County Water Associations to have alternate power to help restore operations if severe winter weather disrupts usual power supply. (All generators to be shared by multiple associations.)	Winter Storm and Freeze	High	Marshall County EMA	Local, FEMA	2017 or as soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available
ES-4	Procure a mobile power supply (generator) that will enable each municipality and Marshall county government (including the County Road Shop) to have alternate power to help restore basic governmental operations if severe winter weather disrupts power supply.	Winter Storm and Freeze	High	Marshall County EMA, Town of Potts Camp	Local, FEMA	As soon as funds are in place	Some generators have been secured and additional generators will be secured as soon as funds are available. Hookups need to be installed on buildings

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD service area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Marshall County EMA	Local, FEMA	2020	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Marshall County EMA, Town of Potts Camp	Local, MEMA, FEMA	2016	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Marshall County EMA, Town of Potts Camp	Local, MEMA, FEMA	2020	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the residents of Marshall County to better prepare them for potential hazardous events.	All	High	Marshall County EMA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2020	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-13	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Marshall County EMA	MS Forestry Commission	2020	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-15	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Marshall County EMA, Town of Potts Camp	MEMA, FEMA, Local	2020	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-17	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Marshall County EMA, Town of Potts Camp	MEMA, FEMA, Local	2020	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

Pontotoc County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Pontotoc County EMA	Local	2025	The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going forward.
Property Protection							
PP-1	The project would involve hardening the Pontotoc County Public Safety Center. The facility houses the County's emergency operations center, its E-911 dispatch, its fire coordinator, its coroner, and its E-911 office. The project would involve installing storm shutters on the entire building in order to better protect it from natural hazard events.	All	High	Pontotoc County EMA	Local, Federal, State	2022	Ongoing. This project has not been implemented and the County is looking for possible grant assistance for this project.
Natural Resource Protection							
NRP-1							

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence / Expansive Soils, Dam Failure	Moderate	Pontotoc County EMA	Federal, State, Local	2025	Although some smaller-scale projects have been implemented, EMA is working with all entities to determine these areas and develop ways to reduce impact.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Pontotoc County EMA	Federal, State, Local	2025	County schools are working on safe room projects (2) that include generators for alternate power source. Most water systems have them in place. However, additional generators may be required, so this action will remain in place
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Pontotoc County EMA	Federal, State, Local	2018	Completed
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	Pontotoc County EMA	Federal, State, Local	Deleted	Deleted

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Pontotoc County EMA	Federal, State, Local	2025	Grant application is awaiting approval. County has 49 community safe rooms and 800-900 individual shelters. The county will continue to evaluate these and may require additional going forward.
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Pontotoc County EMA	Federal, State, Local	2020	COMPLETED
ES-6	Purchase 10 portable trunked radios to increase interoperability for MSWIN.	All	High	Pontotoc County EMA	Federal, State, Local	2025	New Action
ES-7	Become IPAWS Ready	All	Moderate	Pontotoc County EMA	Local Funding	2022	New Action
ES-8	Create a countywide Flood Response Plan	Flood	Moderate	Pontotoc County EMA	Local Funding, State Funding, FEMA Funding	2025	New Action
Public Education and Awareness							
PEA-1	Encourage Local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Pontotoc County EMA	Local	2025	County has done this in the past and continues to work with Local media outlets. This will remain an action going forward because of the need to maintain relationships with the media and leverage it to keep the public aware of hazard risks.

Town of Algoma Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Town of Algoma, Pontotoc County EMA	Local	2025	The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high-risk zones. Therefore, this action will remain in the plan going forward.
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence / Expansive Soils, Dam Failure	Moderate	Town of Algoma, Pontotoc County EMA	Federal, State, Local	2025	EMA is working with all entities to determine these areas and develop ways to reduce impact. Once these have been identified and scoped, these can be implemented
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Town of Algoma, Pontotoc County EMA	Federal, State, Local	2018	COMPLETED

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Town of Algoma, Pontotoc County EMA	Federal, State, Local	2018	COMPLETED
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	Town of Algoma, Pontotoc County EMA	Federal, State, Local	DELETED	DELETED
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Town of Algoma, Pontotoc County EMA	Federal, State, Local	2025	Grant application awaiting approval. Town of Algoma has two community safe rooms and one public safety safe room located in town hall. The town will continue to evaluate these and may require additional
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Town of Algoma, Pontotoc County EMA	Federal, State, Local	2020	COMPLETED

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage Local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Town of Algoma, Pontotoc County EMA	Local	2025	Algoma has done this in the past and continues to work with county EMA and Local media outlets. This will remain an action going forward because of the need to maintain relationships with the media and leverage it to keep the public aware of hazard risks.

Town of Ecu Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Town of Ecu, Pontotoc County EMA	Local	2025	The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going forward.
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence / Expansive Soils, Dam Failure	Moderate	Town of Ecu, Pontotoc County EMA	Federal, State, Local	2025	Although some smaller-scale projects have been implemented, EMA is working with all entities to determine these areas and develop ways to reduce impact.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Town of Ecu, Pontotoc County EMA	Federal, State, Local	2025	Town of Ecu is working on possibility of purchasing generator for critical facilities through a grant program.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Town of Ecu, Pontotoc County EMA	Federal, State, Local	2025	Town of Ecu is also working on possibility of purchasing mobile generator for providing power to critical facilities through a grant program.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	Town of Ecu, Pontotoc County EMA	Federal, State, Local	Deleted	Deleted
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Town of Ecu, Pontotoc County EMA	Federal, State, Local	2025	Town of Ecu has five community safe rooms at town hall and two at town park. The town will continue to evaluate these and may require additional going forward.
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Town of Ecu, Pontotoc County EMA	Federal, State, Local	2025	Ecu participates in CodeRED sign up for citizens to receive weather warnings and alert notifications. These will continue to be evaluated and utilized going forward to ensure advanced warning remains in place for citizens.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage Local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Town of Ecu, Pontotoc County EMA	Local	2025	Ecu has done this in the past and continues to work with county EMA and Local media outlets. This will remain an action going forward because of the need to maintain relationships with the media and leverage it to keep the public aware of hazard risks.

City of Pontotoc Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	City of Pontotoc, Pontotoc County EMA	Local	2025	The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going forward.
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence / Expansive Soils, Dam Failure	Moderate	City of Pontotoc, Pontotoc County EMA	Federal, State, Local	2025	EMA is working with all entities to determine these areas and develop ways to reduce impact. Once these have been identified and scoped, these can be implemented
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	City of Pontotoc, Pontotoc County EMA	Federal, State, Local	2025	City of Pontotoc has some fixed site generators and is working on possibility of purchasing generator for other critical facilities through a grant program.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	City of Pontotoc, Pontotoc County EMA	Federal, State, Local	2025	City of Pontotoc has some mobile generators and is also working on possibility of purchasing other mobile generator for providing power to critical facilities through a grant program.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	City of Pontotoc, Pontotoc County EMA	Federal, State, Local	Deleted	Deleted
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	City of Pontotoc, Pontotoc County EMA	Federal, State, Local	2025	City of Pontotoc has eight community safe rooms throughout the city and one public safety safe room located in city hall. The town will continue to evaluate these and may require additional going forward.
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	City of Pontotoc, Pontotoc County EMA	Federal, State, Local	2025	City of Pontotoc participates in CodeRED sign up for citizens to receive weather warnings and alert notifications. These will continue to be evaluated and utilized going forward to ensure advanced warning remains in place for citizens.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage Local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	City of Pontotoc, Pontotoc County EMA	Local	2025	Pontotoc has done this in the past and continues to work with county EMA and Local media outlets. This will remain an action going forward because of the need to maintain relationships with the media and leverage it to keep the public aware of hazard risks.

Town of Sherman Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Town of Sherman, Pontotoc County EMA	LOCAL	2025	The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going forward.
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence / Expansive Soils, Dam Failure	Moderate	Town of Sherman, Pontotoc County EMA	Federal, State, Local	2025	EMA is working with all entities to determine these areas and develop ways to reduce impact. Once these have been identified and scoped, these can be implemented
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Town of Sherman, Pontotoc County EMA	Federal, State, Local	2025	Town of Sherman is working on possibility of purchasing generator for other critical facilities through a grant program.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Town of Sherman, Pontotoc County EMA	Federal, State, Local	2025	Town of Sherman is also working on possibility of purchasing other mobile generator for providing power to critical facilities through a grant program.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	Town of Sherman, Pontotoc County EMA	Federal, State, Local	Deleted	Deleted
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Town of Sherman, Pontotoc County EMA	Federal, State, Local	2025	Sherman has seven community safe rooms throughout the town. The town will continue to evaluate these and may require additional going forward.
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Town of Sherman, Pontotoc County EMA	Federal, State, Local	2025	Sherman participates in CodeRED sign up for citizens to receive weather warnings and alert notifications. These will continue to be evaluated and utilized going forward to ensure advanced warning remains in place for citizens.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage Local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Town of Sherman, Pontotoc County EMA	LOCAL	2025	Sherman has done this in the past and continues to work with county EMA and Local media outlets. This will remain an action going forward because of the need to maintain relationships with the media and leverage it to keep the public aware of hazard risks.

Town of Thaxton Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Town of Thaxton, Pontotoc County EMA	Local	2025	The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going forward.
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence / Expansive Soils, Dam Failure	Moderate	Town of Thaxton, Pontotoc County EMA	Federal, State, Local	2025	EMA is working with all entities to determine these areas and develop ways to reduce impact. Once these have been identified and scoped, these can be implemented
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Town of Thaxton, Pontotoc County EMA	Federal, State, Local	2025	Town of Thaxton is working on possibility of purchasing generator for other critical facilities through a grant program.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Town of Thaxton, Pontotoc County EMA	Federal, State, Local	2025	Town of Thaxton is also working on possibility of purchasing other mobile generator for providing power to critical facilities through a grant program.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	Town of Thaxton, Pontotoc County EMA	Federal, State, Local	Deleted	Deleted
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Town of Thaxton, Pontotoc County EMA	Federal, State, Local	2025	Thaxton has four community safe rooms throughout the town. The town will continue to evaluate these and may require additional going forward.
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Town of Thaxton, Pontotoc County EMA	Federal, State, Local	2025	Thaxton participates in CodeRED sign up for citizens to receive weather warnings and alert notifications. These will continue to be evaluated and utilized going forward to ensure advanced warning remains in place for citizens.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage Local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Town of Thaxton, Pontotoc County EMA	Local	2025	Thaxton has done this in the past and continues to work with county EMA and Local media outlets. This will remain an action going forward because of the need to maintain relationships with the media and leverage it to keep the public aware of hazard risks.

Town of Toccopola Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Town of Toccopola, Pontotoc County EMA	Local	2025	The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high-risk zones. Therefore, this action will remain in the plan going forward.
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence / Expansive Soils, Dam Failure	Moderate	Town of Toccopola, Pontotoc County EMA	Federal, State, Local	2025	EMA is working with all entities to determine these areas and develop ways to reduce impact. Once these have been identified and scoped, these can be implemented
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Town of Toccopola, Pontotoc County EMA	Federal, State, Local	2025	Town of Toccopola is working on possibility of purchasing generator for other critical facilities through a grant program.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Town of Toccopola, Pontotoc County EMA	Federal, State, Local	2025	Town of Toccopola is also working on possibility of purchasing other mobile generator for providing power to critical facilities through a grant program.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	Town of Toccopola, Pontotoc County EMA	Federal, State, Local	Deleted	Deleted
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Town of Toccopola, Pontotoc County EMA	Federal, State, Local	2025	Toccopola has two community safe rooms located near the fire department. The town will continue to evaluate these and may require additional going forward.
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Town of Toccopola, Pontotoc County EMA	Federal, State, Local	2025	Toccopola participates in CodeRED sign up for citizens to receive weather warnings and alert notifications. These will continue to be evaluated and utilized going forward to ensure advanced warning remains in place for citizens.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage Local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Town of Toccopola, Pontotoc County EMA	Local	2025	Toccopola has done this in the past and continues to work with county EMA and Local media outlets. This will remain an action going forward because of the need to maintain relationships with the media and leverage it to keep the public aware of hazard risks.

Prentiss County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Prentiss County	MEMA, FEMA, Local	2025	Ongoing. Continuing to monitor land use and discussion of hazardous materials placement and critical facilities locations. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Prentiss County EMA	Local, MEMA, FEMA	2025	Ongoing. Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	Ongoing. The county, in conjunction with the PDD, has implemented a number of these strategies. The county will continue to work with the State Forestry and Local Fire Departments to improve its program.
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Prentiss County EMA	MEMA, FEMA, Local	2025	Ongoing. Some ordinances have been passed that give the county power to control water use in emergencies, but, the county would like to work with the Alliance to import ground water from the TennTom Waterway for

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Property Protection							
PP-1	Public and private buildings can be designed with hail resistant roof shingles or flashing to minimize damage.	Hail	Low	Prentiss County EMA	FEMA, Public and private funds	Deleted	Deleted
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Prentiss County EMA	FEMA	2025	Ongoing. Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but, but the county needs to continue to work with Prentiss County Power and Electric Association to assure grounding and protection devices are adequate.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Install fourteen (14) additional advanced warning systems throughout Prentiss County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Prentiss County EMA	Local, MEMA, FEMA	2025	CodeRed has been implemented, but the county intends on installing one more tornado warning siren in the Wheeler Community. Possibly one each in Jumpertown, Thrasher, New Site community.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Supply 100 schools and businesses in Prentiss County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Prentiss County EMA	Local, MEMA, FEMA	2025	Deferred. Unable to implement due to no funding available. Replace with countywide warning notification using the Code-Red phone system
ES-3	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Prentiss County EMA	Local, MEMA, FEMA	2025	Ongoing. Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.
ES-4	Procure a mobile power supply (generator) that will enable each municipality and Prentiss County government to have alternate power to help restore basic governmental operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	Prentiss County EMA	Local, FEMA	2025 or as soon as funds are in place	Acquired one 150 kW mobile generator which can be moved from location to location for alternate power at intervals. Additional generators needed as funds become available.
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Prentiss County EMA	Local, FEMA	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the county will need to continue public education during times of low rainfall
ES-6	Purchase and install a fixed standby emergency generator at the Prentiss County Ag Center.	All	High	Prentiss County EMA	Local, FEMA, MEMA	2025	New Action

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Prentiss County EMA	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep so the county will continue public education of public safety during severe weather.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Prentiss County EMA	Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue as in past to maintain public education and awareness via media outlets.
PEA-3	Provide literature, classes, and materials to the citizens of Prentiss County to better prepare them for potential hazardous events.	All	High	Prentiss County EMA, Northeast MS Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Recommend that public information and outreach workshops on the FireWise program be scheduled and encourage participation in workshops presented by Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and other others.	Wildfire	High	Prentiss County EMA	MS Forestry Commission	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Prentiss County EMA	MEMA, FEMA, Local	2025	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-6	The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Prentiss County EMA	MEMA, FEMA, Local	2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

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City of Booneville Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	City of Booneville	MEMA, FEMA, Local	2025	Continuing to monitor land use and discussion of hazardous materials placement and critical facilities locations. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Prentiss County EMA, City of Booneville	Local, MEMA, FEMA	2025	Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county, in conjunction with the PDD, has implemented a number of these strategies. The county will continue to work with the State Forestry and Local Fire Departments to improve its program.
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Prentiss County EMA, City of Booneville	MEMA, FEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but, the county would like to work with the Alliance to import ground water from the TennTom Waterway for local usage.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Property Protection							
PP-1	Public and private buildings can be designed with hail resistant roof shingles or flashing to minimize damage.	Hail	Low	Prentiss County EMA, City of Booneville	FEMA, Public and private funds	2025	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs.
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Prentiss County EMA, City of Booneville	FEMA	2025	Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but, but the county needs to continue to work with Prentiss County Power and Electric Association to assure grounding and protection devices are adequate.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Install fourteen (14) additional advanced warning systems throughout Prentiss County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Prentiss County EMA, City of Booneville	Local, MEMA, FEMA	2025	Unable to implement due to no funding available. Replace with countywide warning notification using the Code-Red phone system.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Supply 100 schools and businesses in Prentiss County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Prentiss County EMA, City of Booneville	Local, MEMA, FEMA	2025	Unable to implement due to no funding available. Replace with countywide warning notification using the Code-Red phone system
ES-3	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Prentiss County EMA, City of Booneville	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.
ES-4	Procure a mobile power supply (generator) that will enable each municipality and Prentiss County government to have alternate power to help restore basic governmental operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	Prentiss County EMA, City of Booneville	Local, FEMA	2025or as soon as funds are in place	Acquired one 150 kW mobile generator which can be moved from location to location for alternate power at intervals. Additional generators needed as funds become available.
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Prentiss County EMA	Local, FEMA	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the county will need to continue public education during times of low rainfall

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Prentiss County EMA, City of Booneville	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep so the county will continue public education of public safety during severe weather.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of high winds and tornados and the positive impacts of various hazard mitigation actions associated with wind-related events. The articles and information pieces will address existing and future buildings and infrastructure as well as other potential impacts.	Tornado, High Wind	High	Prentiss County EMA, City of Booneville	Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue as in past to maintain public education and awareness via media outlets.
PEA-3	Provide literature, classes, and materials to the citizens of Prentiss County to better prepare them for potential hazardous events.	Flood	High	Prentiss County EMA, Northeast MS Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Recommend that public information and outreach workshops on the FireWise program be scheduled and encourage participation in workshops presented by Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and other others.	Wildfire	High	Prentiss County EMA	MS Forestry Commission	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Prentiss County EMA, City of Booneville	MEMA, FEMA, Local	2025	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-17	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Prentiss County EMA, City of Booneville	MEMA, FEMA, Local	2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.
Previously Completed Actions							

Town of Jumpertown Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Town of Jumpertown	MEMA, FEMA, Local	2025	Continuing to monitor land use and discussion of hazardous materials placement and critical facilities locations. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Prentiss County EMA, Town of Jumpertown	Local, MEMA, FEMA	2025	Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county, in conjunction with the PDD, has implemented a number of these strategies. The county will continue to work with the State Forestry and Local Fire Departments to improve its program.
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Prentiss County EMA, Town of Jumpertown	MEMA, FEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but, the county would like to work with the Alliance to import ground water from the TennTom Waterway for local usage.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Property Protection							
PP-1	Public and private buildings can be designed with hail resistant roof shingles or flashing to minimize damage.	Hail	Low	Prentiss County EMA, Town of Jumpertown	FEMA, Public and private funds	2025	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs.
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Prentiss County EMA, Town of Jumpertown	FEMA	2025	Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but, but the county needs to continue to work with Prentiss County Power and Electric Association to assure grounding and protection devices are adequate.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Install fourteen (14) additional advanced warning systems throughout Prentiss County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Prentiss County EMA, Town of Jumpertown	Local, MEMA, FEMA	2025	Unable to implement due to no funding available. Replace with countywide warning notification using the Code-Red phone system.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Supply 100 schools and businesses in Prentiss County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Prentiss County EMA, Town of Jumpertown	Local, MEMA, FEMA	2025	Unable to implement due to no funding available. Replace with countywide warning notification using the Code-Red phone system
ES-3	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Prentiss County EMA, Town of Jumpertown	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.
ES-4	Procure a mobile power supply (generator) that will enable each municipality and Prentiss County government to have alternate power to help restore basic governmental operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	Prentiss County EMA, Town of Jumpertown	Local, FEMA	2025or as soon as funds are in place	Acquired one 150 kW mobile generator which can be moved from location to location for alternate power at intervals. Additional generators needed as funds become available.
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Prentiss County EMA	Local, FEMA	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the county will need to continue public education during times of low rainfall

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Prentiss County EMA, Town of Jumpertown	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep so the county will continue public education of public safety during severe weather.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of high winds and tornados and the positive impacts of various hazard mitigation actions associated with wind-related events. The articles and information pieces will address existing and future buildings and infrastructure as well as other potential impacts.	Tornado, High Wind	High	Prentiss County EMA, Town of Jumpertown	Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue as in past to maintain public education and awareness via media outlets.
PEA-3	Provide literature, classes, and materials to the citizens of Prentiss County to better prepare them for potential hazardous events.	Flood	High	Prentiss County EMA, Northeast MS Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Recommend that public information and outreach workshops on the FireWise program be scheduled and encourage participation in workshops presented by Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and other others.	Wildfire	High	Prentiss County EMA	MS Forestry Commission	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Prentiss County EMA, Town of Jumpertown	MEMA, FEMA, Local	2025	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-17	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Prentiss County EMA, Town of Jumpertown	MEMA, FEMA, Local	2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.
Previously Completed Actions							

Town of Marietta Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Town of Marietta	MEMA, FEMA, Local	2025	Continuing to monitor land use and discussion of hazardous materials placement and critical facilities locations. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Prentiss County EMA, Town of Marietta	Local, MEMA, FEMA	2025	Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county would like to make more of an effort to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county, in conjunction with the PDD, has implemented a number of these strategies. The county will continue to work with the State Forestry and Local Fire Departments to improve its program.
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Prentiss County EMA, Town of Marietta	MEMA, FEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but, the county would like to work with the Alliance to import ground water from the TennTom Waterway for local usage.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Property Protection							
PP-1	Public and private buildings can be designed with hail resistant roof shingles or flashing to minimize damage.	Hail	Low	Prentiss County EMA, Town of Marietta	FEMA, Public and private funds	2025	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs.
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Prentiss County EMA, Town of Marietta	FEMA	2025	Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but, but the county needs to continue to work with Prentiss County Power and Electric Association to assure grounding and protection devices are adequate.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Install fourteen (14) additional advanced warning systems throughout Prentiss County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Prentiss County EMA, Town of Marietta	Local, MEMA, FEMA	2025	Unable to implement due to no funding available. Replace with countywide warning notification using the Code-Red phone system.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Supply 100 schools and businesses in Prentiss County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Prentiss County EMA, Town of Marietta	Local, MEMA, FEMA	2025	Unable to implement due to no funding available. Replace with countywide warning notification using the Code-Red phone system
ES-3	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Prentiss County EMA, Town of Marietta	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.
ES-4	Procure a mobile power supply (generator) that will enable each municipality and Prentiss County government to have alternate power to help restore basic governmental operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	Prentiss County EMA, Town of Marietta	Local, FEMA	2025 or as soon as funds are in place	Acquired one 150 kW mobile generator which can be moved from location to location for alternate power at intervals. Additional generators needed as funds become available.
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Prentiss County EMA	Local, FEMA	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the county will need to continue public education during times of low rainfall

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Prentiss County EMA, Town of Marietta	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. However, this is a process that requires continual upkeep so the county will continue public education of public safety during severe weather.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of high winds and tornados and the positive impacts of various hazard mitigation actions associated with wind-related events. The articles and information pieces will address existing and future buildings and infrastructure as well as other potential impacts.	Tornado, High Wind	High	Prentiss County EMA, Town of Marietta	Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue as in past to maintain public education and awareness via media outlets.
PEA-3	Provide literature, classes, and materials to the citizens of Prentiss County to better prepare them for potential hazardous events.	Flood	High	Prentiss County EMA, Northeast MS Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Recommend that public information and outreach workshops on the FireWise program be scheduled and encourage participation in workshops presented by Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and other others.	Wildfire	High	Prentiss County EMA	MS Forestry Commission	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Prentiss County EMA, Town of Marietta	MEMA, FEMA, Local	2025	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-17	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Prentiss County EMA, Town of Marietta	MEMA, FEMA, Local	2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.
Previously Completed Actions							

Tippah County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquakes can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Tippah County	MEMA, FEMA, Local	2020	Unable to complete at this time. The county needs more funding for this project.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Tippah County EMA	Local, MEMA, FEMA	2020	Deleted
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	Moderate	Local Fire Departments	Local, FEMA, State Forestry Department	2025	Ongoing. The county has ongoing training and state personnel who regularly complete this task. Need additional funding to increase training.
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Tippah County EMA	MEMA, FEMA, Local	2025	Ongoing. Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Tippah County EMA	FEMA, Public and private funds	2025	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs. Need additional funding.
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Low	Tippah County EMA	FEMA	2025	Ongoing. Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future. Will need
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Looking to develop a countywide training center.	All	Moderate	Tippah County EMA	Local, MEMA, FEMA	2025	New Action
Emergency Services							
ES-1	Install nine (9) additional advanced warning systems throughout Tippah County. The sirens and radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornadoes.	Tornado, High Wind	High	Tippah County EMA	Local, MEMA, FEMA	2025	Deferred. The county has not invested in additional warning systems because it needs additional funding to complete this critical task. Priority is HIGH!!!

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Supply 8,000 residents and businesses in Tippah County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tippah County EMA	Local, MEMA, FEMA	2025	Ongoing. Some training of first responders and studies of potential hazards have been carried out, but there is a need for additional funding for this much needed project
ES-3	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Tippah County EMA	Local, MEMA, FEMA	2025 or as soon as funds are in place	Ongoing. We regularly have drills to help with this action. Need additional funding to better prepare, train, and equip our first responders
ES-4	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD service area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Tippah County EMA	Local, FEMA	2025 or as soon as funds are in place	Ongoing. We regularly have drills to help with this action. Need additional funding to better prepare, train, and equip our first responders
ES-5	County would like to subscribe to an emergency alert service such as CodeRed or NIXLE.	All	High	Tippah County EMA	Local, FEMA, MEMA	2025 or as funds become available	New Action

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Tippah County EMA	Local, MEMA, FEMA	2025	Ongoing. Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. The county also teaches CERT to the public and will continue to do so. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds and tornados and the positive impacts of various hazard mitigation actions associated with wind-related events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Tippah County EMA	Local, MEMA, FEMA	2025	Ongoing. Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Tippah County to better prepare them for potential hazardous events.	All	High	Tippah County EMA, Northeast MA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	Ongoing. The county has done and overall good job of public outreach, but needs much more literature and materials to complete this task.
PEA-4	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	Moderate	Tippah County EMA	MS Forestry Commission	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-5	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Low	Tippah County EMA	MEMA, FEMA, Local	2025	Ongoing. Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in

Town of Blue Mountain Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquakes can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Town of Blue Mountain	MEMA, FEMA, Local	2025	Unable to complete at this time. The county needs more funding for this project.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Tippah County EMA, Town of Blue Mountain	Local, MEMA, FEMA	2025	Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county needs more funding and subject matter expertise.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county has ongoing training and state personnel who regularly complete this task. Need additional funding to increase training.
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Tippah County EMA, Town of Blue Mountain	MEMA, FEMA, Local	2025	Unable to complete at this time. The county needs more funding for this project.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Tippah County EMA, Town of Blue Mountain	FEMA, Public and private funds	2025	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs. Need additional funding.
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Tippah County EMA, Town of Blue Mountain	FEMA	2025	Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future. Will need additional funding.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Install nine (9) additional advanced warning systems throughout Tippah County. The sirens and radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornadoes.	Tornado, High Wind	High	Tippah County EMA, Town of Blue Mountain	Local, MEMA, FEMA	2025	The county has not invested in additional warning systems because it needs additional funding to complete this critical task. Priority is HIGH!!!

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Supply 8,000 residents and businesses in Tippah County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tippah County EMA, Town of Blue Mountain	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but there is a need for additional funding for this much needed project
ES-3	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Tippah County EMA, Town of Blue Mountain	Local, MEMA, FEMA	2025or as soon as funds are in place	We regularly have drills to help with this action. Need additional funding to better prepare, train, and equip our first responders
ES-4	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD service area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Tippah County EMA	Local, FEMA	2025or as soon as funds are in place	We regularly have drills to help with this action. Need additional funding to better prepare, train, and equip our first responders

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Tippah County EMA, Town of Blue Mountain	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. The county also teaches CERT to the public and will continue to do so. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of high winds and tornadoes and the positive impacts of various hazard mitigation actions associated with wind-related events. The articles and information pieces will address existing and future buildings and infrastructure as well as other potential impacts.	Tornado, High Wind	High	Tippah County EMA, Town of Blue Mountain	Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Tippah County to better prepare them for potential hazardous events.	Flood	High	Tippah County EMA, Northeast MA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	The county has done and overall good job of public outreach, but needs much more literature and materials to complete this task.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Tippah County EMA	MS Forestry Commission	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Tippah County EMA, Town of Blue Mountain	MEMA, FEMA, Local	Completed	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in.
PEA-6	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Tippah County EMA, Town of Blue Mountain	MEMA, FEMA, Local	2020	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

Town of Dumas Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquakes can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Town of Dumas	MEMA, FEMA, Local	2025	Unable to complete at this time. The county needs more funding for this project.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Tippah County EMA, Town of Dumas	Local, MEMA, FEMA	2025	Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county needs more funding and subject matter expertise.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county has ongoing training and state personnel who regularly complete this task. Need additional funding to increase training.
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Tippah County EMA, Town of Dumas	MEMA, FEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Tippah County EMA, Town of Dumas	FEMA, Public and private funds	2025	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs. Need additional funding.
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Tippah County EMA, Town of Dumas	FEMA	2025	Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future. Will need additional funding.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Install nine (9) additional advanced warning systems throughout Tippah County. The sirens and radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornadoes.	Tornado, High Wind	High	Tippah County EMA, Town of Dumas	Local, MEMA, FEMA	2025	The county has not invested in additional warning systems because it needs additional funding to complete this critical task. Priority is HIGH!!!

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Supply 8,000 residents and businesses in Tippah County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tippah County EMA, Town of Dumas	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but there is a need for additional funding for this much needed project
ES-3	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Tippah County EMA, Town of Dumas	Local, MEMA, FEMA	2025or as soon as funds are in place	We regularly have drills to help with this action. Need additional funding to better prepare, train, and equip our first responders
ES-4	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD service area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Tippah County EMA	Local, FEMA	2025or as soon as funds are in place	We regularly have drills to help with this action. Need additional funding to better prepare, train, and equip our first responders

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Tippah County EMA, Town of Dumas	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. The county also teaches CERT to the public and will continue to do so. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of high winds and tornadoes and the positive impacts of various hazard mitigation actions associated with wind-related events. The articles and information pieces will address existing and future buildings and infrastructure as well as other potential impacts.	Tornado, High Wind	High	Tippah County EMA, Town of Dumas	Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Tippah County to better prepare them for potential hazardous events.	Flood	High	Tippah County EMA, Northeast MA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	The county has done and overall good job of public outreach, but needs much more literature and materials to complete this task.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Tippah County EMA	MS Forestry Commission	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Tippah County EMA, Town of Dumas	MEMA, FEMA, Local	Completed	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in.
PEA-6	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Tippah County EMA, Town of Dumas	MEMA, FEMA, Local	2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

Town of Falkner Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquakes can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Town of Falkner	MEMA, FEMA, Local	2025	Unable to complete at this time. The county needs more funding for this project.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Tippah County EMA, Town of Falkner	Local, MEMA, FEMA	2025	Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county needs more funding and subject matter expertise.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county has ongoing training and state personnel who regularly complete this task. Need additional funding to increase training.
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Tippah County EMA, Town of Falkner	MEMA, FEMA, Local	2025	Unable to complete at this time. The county needs more funding for this project.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Tippah County EMA, Town of Falkner	FEMA, Public and private funds	2025	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs. Need additional funding.
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Tippah County EMA, Town of Falkner	FEMA	2025	Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future. Will need additional funding.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Install nine (9) additional advanced warning systems throughout Tippah County. The sirens and radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornadoes.	Tornado, High Wind	High	Tippah County EMA, Town of Falkner	Local, MEMA, FEMA	2025	The county has not invested in additional warning systems because it needs additional funding to complete this critical task. Priority is HIGH!!!

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Supply 8,000 residents and businesses in Tippah County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tippah County EMA, Town of Falkner	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but there is a need for additional funding for this much needed project
ES-3	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Tippah County EMA, Town of Falkner	Local, MEMA, FEMA	2025or as soon as funds are in place	We regularly have drills to help with this action. Need additional funding to better prepare, train, and equip our first responders
ES-4	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD service area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Tippah County EMA	Local, FEMA	2025 or as soon as funds are in place	We regularly have drills to help with this action. Need additional funding to better prepare, train, and equip our first responders

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Tippah County EMA, Town of Falkner	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. The county also teaches CERT to the public and will continue to do so. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of high winds and tornadoes and the positive impacts of various hazard mitigation actions associated with wind-related events. The articles and information pieces will address existing and future buildings and infrastructure as well as other potential impacts.	Tornado, High Wind	High	Tippah County EMA, Town of Falkner	Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Tippah County to better prepare them for potential hazardous events.	Flood	High	Tippah County EMA, Northeast MA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	The county has done and overall good job of public outreach, but needs much more literature and materials to complete this task.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2016)
PEA-4	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of dam failures and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure as well as other potential impacts.	Dam Failure	High	Tippah County EMA, Town of Falkner	Local, MEMA, FEMA	Deleted	Combined with PEA-2
PEA-5	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Tippah County EMA, Town of Falkner	MEMA, FEMA, Local	2020	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

City of Ripley Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquakes can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	City of Ripley	MEMA, FEMA, Local	2025	Unable to complete at this time. The county needs more funding for this project.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Tippah County EMA, City of Ripley	Local, MEMA, FEMA	2025	Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county needs more funding and subject matter expertise.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county has ongoing training and state personnel who regularly complete this task. Need additional funding to increase training.
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Tippah County EMA, City of Ripley	MEMA, FEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Tippah County EMA, City of Ripley	FEMA, Public and private funds	2025	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs. Need additional funding.
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Tippah County EMA, City of Ripley	FEMA	2025	Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future. Will need additional funding.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	The City of Ripley proposes to clean out Town Creek, which runs the length of the city, line with rip-rap, backfill, and stabilize eroded area to alleviate flooding conditions throughout the City.	Flood	High	City of Ripley	FEMA, Local, Natural Resource Conservation Service	2025	The city has not completed the Town Creek project as of yet, but it is looking to finish this project going forward so it will remain in the plan.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Install nine (9) additional advanced warning systems throughout Tippah County. The sirens and radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornadoes.	Tornado, High Wind	High	Tippah County EMA, City of Ripley	Local, MEMA, FEMA	2025	The county has not invested in additional warning systems because it needs additional funding to complete this critical task. Priority is HIGH!!!
ES-2	Supply 8,000 residents and businesses in Tippah County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tippah County EMA, City of Ripley	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but there is a need for additional funding for this much needed project
ES-3	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Tippah County EMA, City of Ripley	Local, MEMA, FEMA	2025 or as soon as funds are in place	We regularly have drills to help with this action. Need additional funding to better prepare, train, and equip our first responders
ES-4	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD service area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Tippah County EMA	Local, FEMA	2017 or as soon as funds are in place	We regularly have drills to help with this action. Need additional funding to better prepare, train, and equip our first responders

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Tippah County EMA, City of Ripley	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. The county also teaches CERT to the public and will continue to do so. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of high winds and tornadoes and the positive impacts of various hazard mitigation actions associated with wind-related events. The articles and information pieces will address existing and future buildings and infrastructure as well as other potential impacts.	Tornado, High Wind	High	Tippah County EMA, City of Ripley	Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Tippah County to better prepare them for potential hazardous events.	Flood	High	Tippah County EMA, Northeast MA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	The county has done and overall good job of public outreach, but needs much more literature and materials to complete this task.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Tippah County EMA, City of Ripley	MEMA, FEMA, Local	Completed	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in.
PEA-5	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Tippah County EMA, City of Ripley	MEMA, FEMA, Local	2020-2025	Partially Completed. Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in
	Procure a mobile power supply (generator) that will enable each municipality and Tippah County government to have alternate power to help restore basic governmental operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	Tippah County EMA, City of Ripley	Local, FEMA		Completed.

Town of Walnut Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquakes can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to significant seismic hazards.	Earthquake	Low	Town of Walnut	MEMA, FEMA, Local	2025	Unable to complete at this time. The county needs more funding for this project.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Tippah County EMA, Town of Walnut	Local, MEMA, FEMA	2025	Groundwater level monitoring has not taken place other than in the form of anecdotal observation from local officials. The county needs more funding and subject matter expertise.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county has ongoing training and state personnel who regularly complete this task. Need additional funding to increase training.
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Drought/Heat Wave	Moderate	Tippah County EMA, Town of Walnut	MEMA, FEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Property Protection							
PP-1	Public and private buildings can be designed with hail-resistant roof shingles or flashing to minimize damage.	Hail	Low	Tippah County EMA, Town of Walnut	FEMA, Public and private funds	2025	Some buildings in the county have more hail-resistant roofs, but there are many that are still susceptible and there needs to be more effort going forward to implement more resistant roofs. Need additional funding.
PP-2	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Tippah County EMA, Town of Walnut	FEMA	2025	Lightning protection and surge protection has been installed in many communications areas and in several critical facilities, but there is a definite need for additional surge protection infrastructure so the county will look to implement more infrastructure in the future. Will need additional funding.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Install nine (9) additional advanced warning systems throughout Tippah County. The sirens and radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornadoes.	Tornado, High Wind	High	Tippah County EMA, Town of Walnut	Local, MEMA, FEMA	2025	The county has not invested in additional warning systems because it needs additional funding to complete this critical task. Priority is HIGH!!!

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Supply 8,000 residents and businesses in Tippah County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tippah County EMA, Town of Walnut	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but there is a need for additional funding for this much needed project
ES-3	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Tippah County EMA, Town of Walnut	Local, MEMA, FEMA	2025 or as soon as funds are in place	We regularly have drills to help with this action. Need additional funding to better prepare, train, and equip our first responders
ES-4	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD service area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Tippah County EMA	Local, FEMA	2025 or as soon as funds are in place	We regularly have drills to help with this action. Need additional funding to better prepare, train, and equip our first responders

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Tippah County EMA, Town of Walnut	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities. The county also teaches CERT to the public and will continue to do so. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of high winds and tornadoes and the positive impacts of various hazard mitigation actions associated with wind-related events. The articles and information pieces will address existing and future buildings and infrastructure as well as other potential impacts.	Tornado, High Wind	High	Tippah County EMA, Town of Walnut	Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Tippah County to better prepare them for potential hazardous events.	Flood	High	Tippah County EMA, Northeast MA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	The county has done and overall good job of public outreach, but needs much more literature and materials to complete this task.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2016)
PEA-4	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Tippah County EMA	MS Forestry Commission	2020-2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Tippah County EMA, Town of Walnut	MEMA, FEMA, Local	Completed	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in.
PEA-6	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Tippah County EMA, Town of Walnut	MEMA, FEMA, Local	2020-2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

Tishomingo County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Due to flooding on County Road 321, the Tishomingo County Board of Supervisors proposes to locate temporary road closures with adequate advance warning devices on the east and west side of Short Creek. These closures would only be used in times of high water.	Flood	High	Tishomingo County EMA	FEMA, Local	2016	Completed
P-2	Due to flooding, the Tishomingo County Board of Supervisors proposes to locate temporary road closures with adequate advance warning devices at several locations. These closures would only be used in times of high water.	Flood	High	Tishomingo County EMA	FEMA, Local	2025	These are ongoing projects, several have already since been completed.
P-3	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to seismic hazards.	Earthquake	Low	Tishomingo County	MEMA, FEMA, Local	2025	Ongoing. The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-4	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Tishomingo County EMA	Local, MEMA, FEMA	2025	Ongoing. Groundwater level monitoring has taken place, but the county would like to make an effort to continue to monitor groundwater levels going forward.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-5	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	Ongoing. The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.
P-6	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Wildfire	Moderate	Tishomingo County EMA	MEMA, FEMA, Local	2025	Ongoing. Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement
P-7	County needs to upgrade wiring to 3 phase for emergency mobile generators.	All	High	Tishomingo County	Local, MEMA, FEMA	2025	New Action
P-8	Procure larger generators for local municipalities as the existing ones are insufficient.	All	High	Tishomingo County EMA	Local, MEMA, FEMA	2025	New Action

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-9	Procure a mobile power supply (generator) that will enable Tishomingo County Schools to have alternate power when used as shelters if severe winter weather disrupts usual power supply.	Tornado, severe weather, winter storms	High	Tishomingo County EMA	Local, MEMA, FEMA	2025	Ongoing concern. At this time, none of the buildings designated for Red Cross Shelters have Backup power sources. This is something the county would like to look into going forward.
P-10	At West side of Short Creek before entrance to JP Coleman Park, Water Management needs to trench and remove old debris to help flow of water to help from flooding road	Flood	High	District 1 Supervisor	local	2022	Underway. The project has not been implemented fully and the county would like to leave the action in place going forward.
P-11	Install more community storm shelters throughout the county	Tornado, severe weather	High	County Board of Supervisors	Local, MEMA, FEMA	2025	Ongoing. Although a number of storm shelters have been identified in the county, additional locations are required and will need to be
P-12	Bridges at CR311 and Old 72 at Burnsville waterway need repairs where water is washing away around and wood pillars are deteriorating	Severe Weather	High	County Board of Supervisors- District 2	Local, MEMA, FEMA	2016	Completed
P-13	Due to flooding on County Road 294 current culvert needs to be replaced with a larger culvert to reduce hazard	Severe weather	high	District 2 Supervisors	Local, MEMA, FEMA	2025	This culvert project has not been implemented and so it will remain an action in this plan.
P-14	Provide fire alarms to citizens throughout the 17 fire department districts that currently do not have in homes	Fire	High	Local Fire Departments , Red Cross	Local, North Ms Chapter of Red Cross	2025	This project has been started, but just need to set up dates as the next step. So far have completed one area.
P-15	Replacing wood bridges on County Rod. 67 and County Rd. 86 with box culverts to handle water flow and eliminates wood deterioration.	Flood	High	County Board of Supervisors	Local, MEMA, FEMA	2025	New Action

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-16	Protect Bluff at Eastport Millcreek by providing Riprap and welded wire reinforcement to control bank erosion	Erosion	moderate	County Board of Supervisors	Local, MEMA, FEMA	2025	Ongoing. Currently fixed small issues with implementation of this project, but overtime bigger issues are emerging and will need to be
Property Protection							
PP-1	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Tishomingo County EMA	FEMA	2025	Ongoing. There have been some efforts to increase surge protection in critical facilities, but there is a strong need to focus on Fire Departments and Shelters in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Install 30 additional advanced warning systems for the jurisdictions located in Tishomingo County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tishomingo County EMA	Local, MEMA, FEMA	2025	Ongoing. There have been some efforts to improve the advanced warning system but there is a need to focus on repair and replacement of older existing sirens
ES-2	Supply 5,000 residences and businesses in Tishomingo County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tishomingo County EMA	Local, MEMA, FEMA	2025	Still looking for funding. Residents have not been supplied with weather radios as a grant is needed to be able to purchase these. The county will continue to look for funding.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-3	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	Moderate	Tishomingo County EMA	Local, MEMA, FEMA	2025	Ongoing. Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried
ES-4	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Tishomingo County EMA	Local, FEMA	2025	Ongoing. The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled
ES-5	Testing a weather notification system (Code Red) to warn residents of approaching weather concerns	Tornado, High Wind	High	Tishomingo EMA	Local	2016	Completed

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Tishomingo County EMA	Local, MEMA, FEMA	2025	Ongoing. Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities such as public speaking about emergency management. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Tishomingo County EMA	Local, MEMA, FEMA	2025	Ongoing. Although there has been some effort to get local media to report on hazards and further educate the public, such as through updating articles for newspaper and media outlets to focus on awareness, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Tishomingo County to better prepare them for potential hazardous events.	All	High	Tishomingo County EMA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	Ongoing. The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Local Fire Departments	MS Forestry Commission	2025	Ongoing. Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Tishomingo County EMA	MEMA, FEMA, Local	2025	Ongoing. The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-6	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Tishomingo County EMA	MEMA, FEMA, Local	2025	Still ongoing. Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

Town of Belmont Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Due to flooding on Washington Street, the Tishomingo County Emergency Management Agency proposes to locate temporary road closures with adequate advance warning device in a low-lying area of town. This closure would only be used in times of high water.	Flood	High	Tishomingo County EMA, Town of Belmont	FEMA, Local	Completed	Temporary road closures were added and this project was completed.
P-2	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to seismic hazards.	Earthquake	Low	Town of Belmont	MEMA, FEMA, Local	2025	The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-3	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Tishomingo County EMA, Town of Belmont	Local, MEMA, FEMA	2025	Groundwater level monitoring has taken place, but the county would like to make an effort to continue to monitor groundwater levels going forward.
P-4	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-5	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Wildfire	Moderate	Tishomingo County EMA, Town of Belmont	MEMA, FEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.
Property Protection							
PP-1	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Tishomingo County EMA, Town of Belmont	FEMA	2025	There have been some efforts to increase surge protection in critical facilities, but there is a strong need to focus on Fire Departments and Shelters in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Install 30 additional advanced warning systems for the jurisdictions located in Tishomingo County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tishomingo County EMA, Town of Belmont	Local, MEMA, FEMA	2025	There have been some efforts to improve the advanced warning system but, would like to add 3 additional to Belmont area based on if grant is available

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Supply 5,000 residences and businesses in Tishomingo County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tishomingo County EMA, Town of Belmont	Local, MEMA, FEMA	2025	Residents have not been supplied with weather radios as a grant is needed to be able to purchase these. The county will continue to look for funding.
ES-3	The municipalities within Tishomingo County will construct safe rooms at all the City Halls. Belmont will be retrofitted at a cost of \$20,000.	Tornado, High Wind	High	Tishomingo County EMA, Town of Belmont	MEMA and FEMA	2025	Some safe rooms have been identified, but the town would like to identify additional shelters if grant funding is available.
ES-4	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Tishomingo County EMA, Town of Belmont	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Tishomingo County EMA	Local, FEMA	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-6	Second location possible to retrofit for storm shelter and park area-looking into cost	Tornado, High Wind	High	Town of Belmont	MEMA, FEMA	2025	A shelter location has been identified, but a second location is needed in case Belmont City Hall is not approved space
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Tishomingo County EMA, Town of Belmont	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities such as public speaking about emergency management. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Tishomingo County EMA, Town of Belmont	Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, such as through updating articles for newspaper and media outlets to focus on awareness, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-3	Provide literature, classes, and materials to the citizens of Tishomingo County to better prepare them for potential hazardous events.	Flood	High	Tishomingo County EMA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.
PEA-4	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Local Fire Departments	MS Forestry Commission	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Tishomingo County EMA, Town of Belmont	MEMA, FEMA, Local	2025	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.

Town of Burnsville Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Due to flooding on Jefferson Street and Front Street, the Tishomingo County Emergency Management Agency proposes to locate temporary road closures with adequate advance warning devices on the north and south sides of Sand Creek. These closures would only be used in times of high water.	Flood	High	Tishomingo County EMA, Town of Burnsville	FEMA, Local	2025	Temporary road closures were added and this project was completed, but needs additional barriers.
P-2	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to seismic hazards.	Earthquake	Low	Town of Burnsville	MEMA, FEMA, Local	2025	The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-3	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Tishomingo County EMA, Town of Burnsville	Local, MEMA, FEMA	2025	Groundwater level monitoring has taken place, but the county would like to make an effort to continue to monitor groundwater levels going forward.
P-4	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, ongoing training and procurement of updated equipment is needed

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-5	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Wildfire	Moderate	Tishomingo County EMA, Town of Burnsville	MEMA, FEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. There is a need for a template of ordinances so that all towns in county are consistent
Property Protection							
PP-1	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Tishomingo County EMA, Town of Burnsville	FEMA	2025	There have been some efforts to increase surge protection in critical facilities, but there is a strong need to focus on Fire Departments and Shelters in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Install 30 additional advanced warning systems for the jurisdictions located in Tishomingo County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tishomingo County EMA, Town of Burnsville	Local, MEMA, FEMA	2025	There have been some efforts to improve the advanced warning system but need to replace current sirens that were installed decades ago

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Supply 5,000 residences and businesses in Tishomingo County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tishomingo County EMA, Town of Burnsville	Local, MEMA, FEMA	2025	The town was able to receive a few for elderly population. Continue to look for grants to supply.
ES-3	The municipalities within Tishomingo County will construct safe rooms at all the City Halls. Burnsville will construct from ground up at a cost of \$50,000.	Tornado, High Wind	High	Tishomingo County EMA, Town of Burnsville	MEMA and FEMA	Completed	The town has constructed a safe room. This action is completed.
ES-4	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Tishomingo County EMA, Town of Burnsville	Local, MEMA, FEMA	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Tishomingo County EMA	Local, FEMA	2025	The county is working on implementing this action and sign-ups for citizens will begin once the system is up and running

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Tishomingo County EMA, Town of Burnsville	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities such as public speaking about emergency management. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Tishomingo County EMA, Town of Burnsville	Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, such as through updating articles for newspaper and media outlets to focus on awareness, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Tishomingo County to better prepare them for potential hazardous events.	All	High	Tishomingo County EMA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Tishomingo County EMA	MS Forestry Commission	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Tishomingo County EMA, Town of Burnsville	MEMA, FEMA, Local	2025	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-6	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Tishomingo County EMA, Town of Burnsville	MEMA, FEMA, Local	2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

Village of Golden Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to seismic hazards.	Earthquake	Low	Village of Golden	MEMA, FEMA, Local	2025	The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Tishomingo County EMA, Village of Golden	Local, MEMA, FEMA	2025	Groundwater level monitoring has taken place, and there have been no issues but can continue to monitor around water supply wells
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Wildfire	Moderate	Tishomingo County EMA, Village of Golden	MEMA, FEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.
Property Protection							
PP-1	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Tishomingo County EMA, Village of Golden	FEMA	2025	There have been some efforts to increase surge protection in critical facilities, but there is a strong need to focus on Fire Departments and Shelters in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Install 30 additional advanced warning systems for the jurisdictions located in Tishomingo County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tishomingo County EMA, Village of Golden	Local, MEMA, FEMA	2025	There have been some efforts to improve the advanced warning system but would like to add warning sirens around community and also have existing siren at Fire Department remote access through radio or back to 911

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Supply 5,000 residences and businesses in Tishomingo County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tishomingo County EMA, Village of Golden	Local, MEMA, FEMA	2025	Residents have not been supplied with weather radios as a grant is needed to be able to purchase these. The county will continue to look for funding.
ES-3	The municipalities within Tishomingo County will construct safe rooms at all the City Halls. Golden will construct from ground up at a cost of \$50,000.	Tornado, High Wind	High	Tishomingo County EMA, Village of Golden	MEMA and FEMA	2025	The village has identified a safe room, so this action is completed but the village would like to add one more if funding comes available
ES-4	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Tishomingo County EMA, Village of Golden	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Tishomingo County EMA	Local, FEMA	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Tishomingo County EMA, Village of Golden	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities such as public speaking about emergency management. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Tishomingo County EMA, Village of Golden	Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, such as through updating articles for newspaper and media outlets to focus on awareness, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Tishomingo County to better prepare them for potential hazardous events.	All	High	Tishomingo County EMA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as trying to start up a volunteer group for Red Cross. Do not have a local chapter for 3 years now.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Tishomingo County EMA	MS Forestry Commission	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Tishomingo County EMA, Village of Golden	MEMA, FEMA, Local	2020- 2025	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-6	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Tishomingo County EMA, Village of Golden	MEMA, FEMA, Local	2020-2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place. This is not an issue in Golden
	Procure a mobile power supply (generator) that will enable each municipality and Tishomingo County government to have alternate power to help restore basic governmental operations if severe winter weather disrupts usual power supply.	Winter Storm and Freeze	High	Tishomingo County EMA, Village of Golden	Local, FEMA		Completed. One generator purchased for town. Can be used for government as long as water supply doesn't fail.

City of Iuka Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Due to flooding on East Quitman and Indian creek Road, the Tishomingo County Emergency Management Agency proposes to locate temporary road closures with adequate advance warning devices on the east and west side of Indian Creek. These closures would only be used in times of high water.	Flood	High	Tishomingo County EMA, City of Iuka	FEMA, Local	Completed	Temporary road closures were added and this project was completed.
P-2	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to seismic hazards.	Earthquake	Low	City of Iuka	MEMA, FEMA, Local	2025	The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-3	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Tishomingo County EMA, City of Iuka	Local, MEMA, FEMA	2025	Groundwater level monitoring has taken place, but the county would like to make an effort to continue to monitor groundwater levels going forward.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.
P-5	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Wildfire	Moderate	Tishomingo County EMA, City of Iuka	MEMA, FEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.
Property Protection							
PP-1	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Tishomingo County EMA, City of Iuka	FEMA	2025	There have been some efforts to increase surge protection in critical facilities, but there is a strong need to focus on Fire Departments and Shelters in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Install 30 additional advanced warning systems for the jurisdictions located in Tishomingo County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tishomingo County EMA, City of luka	Local, MEMA, FEMA	2025	There have been some efforts to improve the advanced warning system but, would like to add 3 additional to Belmont area based on if grant is available
ES-2	Supply 5,000 residences and businesses in Tishomingo County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tishomingo County EMA, City of luka	Local, MEMA, FEMA	2025	Residents have not been supplied with weather radios as a grant is needed to be able to purchase these. The county will continue to look for funding.
ES-3	The municipalities within Tishomingo County will construct safe rooms at all the City Halls. luka will be retrofitted at a cost of \$20,000.	Tornado, High Wind	High	Tishomingo County EMA, City of luka	MEMA and FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action is still needed.
ES-4	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Tishomingo County EMA, City of luka	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Tishomingo County EMA	Local, FEMA	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Tishomingo County EMA, City of Iuka	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities such as public speaking about emergency management. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Tishomingo County EMA, City of Iuka	Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, such as through updating articles for newspaper and media outlets to focus on awareness, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Tishomingo County to better prepare them for potential hazardous events.	All	High	Tishomingo County EMA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Tishomingo County EMA	MS Forestry Commission	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Tishomingo County EMA, City of Iuka	MEMA, FEMA, Local	2025	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-6	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Tishomingo County EMA, City of Iuka	MEMA, FEMA, Local	2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

Village of Paden Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to seismic hazards.	Earthquake	Low	Village of Paden	MEMA, FEMA, Local	2025	The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Tishomingo County EMA, Village of Paden	Local, MEMA, FEMA	2025	Groundwater level monitoring has taken place, but the county would like to make an effort to continue to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Wildfire	Moderate	Tishomingo County EMA, Village of Paden	MEMA, FEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.
Property Protection							
PP-1	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Tishomingo County EMA, Village of Paden	FEMA	2025	There have been some efforts to increase surge protection in critical facilities, but there is a strong need to focus on Fire Departments and Shelters in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Install 30 additional advanced warning systems for the jurisdictions located in Tishomingo County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tishomingo County EMA, Village of Paden	Local, MEMA, FEMA	2025	There have been some efforts to improve the advanced warning system but would like to install additional if grant becomes available

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Supply 5,000 residences and businesses in Tishomingo County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tishomingo County EMA, Village of Paden	Local, MEMA, FEMA	2025	Residents have not been supplied with weather radios as a grant is needed to be able to purchase these. The county will continue to look for funding.
ES-3	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Tishomingo County EMA, Village of Paden	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.
ES-4	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Tishomingo County EMA	Local, FEMA	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Tishomingo County EMA, Village of Paden	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities such as public speaking about emergency management. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Tishomingo County EMA, Village of Paden	Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, such as through updating articles for newspaper and media outlets to focus on awareness, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Tishomingo County to better prepare them for potential hazardous events.	All	High	Tishomingo County EMA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Tishomingo County EMA	MS Forestry Commission	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Tishomingo County EMA, Village of Paden	MEMA, FEMA, Local	2025	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-6	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Tishomingo County EMA, Village of Paden	MEMA, FEMA, Local	2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

Town of Tishomingo Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Earthquake hazards can be mitigated through land use planning. Local governments can develop and distribute guidelines that require developers to locate critical facilities and hazardous materials out of areas subject to seismic hazards.	Earthquake	Low	Town of Tishomingo	MEMA, FEMA, Local	2025	The county is still working on adjusting its land use planning efforts to reduce development in high earthquake hazard areas. This will remain in the plan going forward.
P-2	Groundwater levels can be monitored in subsidence-prone areas.	Expansive Soils	Moderate	Tishomingo County EMA, Town of Tishomingo	Local, MEMA, FEMA	2025	Groundwater level monitoring has taken place, but the county would like to make an effort to continue to monitor groundwater levels going forward.
P-3	The goal is to remove/reduce fire hazards from rural areas in all counties within the NE MS Planning and Development District. The proposed actions include: control burning place fire lanes, educate the public on fire safety, train volunteers, purchase equipment enhancements, initiate/maintain a fire inspection/prevention program, and improve access.	Wildfire	High	Local Fire Departments	Local, FEMA, State Forestry Department	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
P-4	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like firefighting.	Wildfire	Moderate	Tishomingo County EMA, Town of Tishomingo	MEMA, FEMA, Local	2025	Some ordinances have been passed that give the county power to control water use in emergencies, but there are still other water use control measures that might be taken. The county will evaluate these possibilities in the future and implement appropriately.
Property Protection							
PP-1	Surge protection can be installed on critical electronic equipment. Lightning protection devices and methods, such as lightning rods and grounding, can be installed on the community's communications infrastructure and other critical facilities.	Lightning	Moderate	Tishomingo County EMA, Town of Tishomingo	FEMA	2025	There have been some efforts to increase surge protection in critical facilities, but there is a strong need to focus on Fire Departments and Shelters in the future.
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1							
Emergency Services							
ES-1	Install 30 additional advanced warning systems for the jurisdictions located in Tishomingo County. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tishomingo County EMA, Town of Tishomingo	Local, MEMA, FEMA	2025	There have been some efforts to improve the advanced warning system but, would like to replace outdated non-working sirens plus replace with ones that can be remote accessed...Based on grant availability

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Supply 5,000 residences and businesses in Tishomingo County with NOAA weather radios. The radios will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with high winds and tornados.	Tornado, High Wind	High	Tishomingo County EMA, Town of Tishomingo	Local, MEMA, FEMA	2025	Residents have not been supplied with weather radios as a grant is needed to be able to purchase these. The county will continue to look for funding.
ES-3	The municipalities within Tishomingo County will construct safe rooms at all the City Halls. Tishomingo will be retrofitted at a cost of \$20,000.	Tornado, High Wind	High	Tishomingo County EMA, Town of Tishomingo	MEMA and FEMA	2025	Would like to add storm shelter in town based on grant availability
ES-4	This strategy will address incident response activities at local plants and transportation systems. The proposed mitigation activities are: public education, training first responders, equipment, and studies of existing potential hazards.	Earthquake	High	Tishomingo County EMA, Town of Tishomingo	Local, MEMA, FEMA	2025	Some training of first responders and studies of potential hazards have been carried out, but this is an area that requires constant attention and improvement, so this action will be carried forward.
ES-5	This strategy will address incident response activities at local plants and transportation systems located within the NEMPDD services area. The proposed mitigation activities are: public education, training of first responders, equipment, and studies of existing/potential hazards.	Wildfire	High	Tishomingo County EMA	Local, FEMA	2025	The county, in conjunction with the PDD, has implemented a number of these strategies, especially those related to educating the public. However, the overall prevention program to reduce fires needs to be improved further and the county would like to continue to try to improve its program through more volunteer training and controlled burning in the future.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	This project is a countywide public education campaign on community hazards, mitigation safety, and emergencies.	Tornado, High Wind	High	Tishomingo County EMA, Town of Tishomingo	Local, MEMA, FEMA	2025	Many efforts have been made to improve public education on hazard risk including involvement in the HMP development process and other outreach activities such as public speaking about emergency management. However, this is a process that requires continual upkeep and implementation so it will remain an action going forward.
PEA-2	Encourage local newspapers and media outlets to run articles and information pieces regarding the dangers of high winds, tornadoes, flooding, hail, earthquake, expansive soils, winter storms, lightning, wildfire, drought, heat wave, and dam failures, and the positive impacts of various hazard mitigation actions associated with these events. The articles and information pieces will address existing and future buildings and infrastructure as well as other impacts.	All	High	Tishomingo County EMA, Town of Tishomingo	Local, MEMA, FEMA	2025	Although there has been some effort to get local media to report on hazards and further educate the public, such as through updating articles for newspaper and media outlets to focus on awareness, there remains much room for improvement. The county will continue to encourage media outlets to improve public education.
PEA-3	Provide literature, classes, and materials to the citizens of Tishomingo County to better prepare them for potential hazardous events.	All	High	Tishomingo County EMA Chapter of the American Red Cross	MEMA, FEMA, Private/public donations	2025	The county has done a good job of providing literature and materials to citizens, but would like to provide more in-person activities such as classes to further educate the public in the future.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-4	Hold outreach workshops on the Community Wildfire Protection Program presented by the MS Forestry Commission for the benefit of elected officials, vulnerable residents, firefighters, and others.	Wildfire	High	Tishomingo County EMA	MS Forestry Commission	2025	Outreach workshops have been held but there is always a need to hold more workshops so this action will remain in the plan going forward.
PEA-5	Local governments can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Drought/Heat Wave	Moderate	Tishomingo County EMA, Town of Tishomingo	MEMA, FEMA, Local	2025	The county has taken a number of steps to outreach to vulnerable populations during extreme heat events including providing community centers to cool off in. However, additional coordination is required to maintain this program so the action will remain in the plan.
PEA-6	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The MDEQ, Dam Safety Division is tasked to review the plans. Support MDEQ in outreach to high hazard and significant hazard dam owners concerning the development of acceptable emergency action plans.	Dam Failure	Moderate	Tishomingo County EMA, Town of Tishomingo	MEMA, FEMA, Local	2025	Emergency action plans are developed, exercised, and maintained by the individual dam owners. The county will work with MDEQ to continue to help ensure dam owners have emergency action plans in place.

Union County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Union County EMA	Local	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence / Expansive Soils, Dam Failure	Moderate	Union County EMA	Federal, State, Local	2025	Ongoing. Although some smaller- scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Union County EMA	Federal, State, Local	2018	Complete

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Union County EMA	Federal, State, Local	2025	Ongoing, two have been purchased but would like more to be used during storm events.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide	All	High	Union County EMA	Federal, State, Local	Deleted	Deleted
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Union County EMA	Federal, State, Local	2025	Ongoing. The county has identified and constructed some shelters and safe rooms, but there is a need to continually identify these areas as new construction
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Union County EMA	Federal, State, Local	2025	Some sirens have been installed New Albany and in Blue Springs. County wishes to procure more as funding allows.
ES-6	County wants to move fire departments to MissWin 800Mhz. Trunked Radio System.	All	High	Union County EMA	Federal, State, Local	2022	New Action
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Union County EMA	Local	2025	Ongoing. The county has worked with local media to disburse information regarding hazards and will continue to work on improving its relationship with media and use the media as a means of educating the public going forward.

Village of Blue Springs Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Village of Blue Springs, Union County EMA	Local	2025	Ongoing. The county has worked with local media to disburse information regarding hazards and will continue to work on improving its relationship with media and use the media as a means of educating the public going forward.
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence / Expansive Soils, Dam Failure	Moderate	Village of Blue Springs, Union County EMA	Federal, State, Local	2025	Ongoing. Although some smaller- scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Village of Blue Springs, Union County EMA	Federal, State, Local	2018	Complete

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Village of Blue Springs, Union County EMA	Federal, State, Local	2025	Ongoing. Some mobile generators have been purchased, but additional generators are desired to be used during storm events.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	Village of Blue Springs, Union County EMA	Federal, State, Local	Deleted	Deleted
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Village of Blue Springs, Union County EMA	Federal, State, Local	2025	Ongoing. The county has identified and constructed some shelters and safe rooms, but there is a need to continually identify these areas as new construction
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Village of Blue Springs, Union County EMA	Federal, State, Local	2025	Some sirens have been installed New Albany and in Blue Springs. County wishes to procure more as funding allows.
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Village of Blue Springs, Union County EMA	Local Funding	2025	Ongoing. The county has worked with local media to disburse information regarding hazards and will continue to work on improving its relationship with media and use the media as a means of educating the public going forward.

Town of Myrtle Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Town of Myrtle, Union County EMA	Local	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence / Expansive Soils, Dam Failure	Moderate	Town of Myrtle, Union County EMA	Federal, State, Local	2025	Ongoing. Although some smaller- scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Town of Myrtle, Union County EMA	Federal, State, Local	2018	Complete

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Town of Myrtle, Union County EMA	Federal, State, Local	2025	Ongoing. Some mobile generators have been purchased, but additional generators are desired to be used during storm events.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	Town of Myrtle, Union County EMA	Federal, State, Local	Deleted	Deleted
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Town of Myrtle, Union County EMA	Federal, State, Local	2025	Ongoing. The county has identified and constructed some shelters and safe rooms, but there is a need to continually identify these areas as new construction
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Town of Myrtle, Union County EMA	Federal, State, Local	2025	Ongoing. Some mobile generators have been purchased, but additional generators are desired to be used during storm
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Town of Myrtle, Union County EMA	Local Funding	2025	Ongoing. The county has worked with local media to disburse information regarding hazards and will continue to work on improving its relationship with media and use the media as a means of educating the public going forward.

City of New Albany Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	City of New Albany, Union County EMA	Local	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence / Expansive Soils, Dam Failure	Moderate	City of New Albany, Union County EMA	Federal, State, Local	2025	Ongoing. Although some smaller- scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	City of New Albany, Union County EMA	Federal, State, Local	2018	Completed

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	City of New Albany, Union County EMA	Federal, State, Local	2025	Ongoing. Some mobile generators have been purchased, but additional generators are desired to be used during storm events.
ES-3	Purchase weather/hazard radios for utilization in the event of a natural hazard event (flood, tornado, earthquake, etc.). The weather/hazard radios would be distributed to citizens, businesses, and other entities in order to provide notification of natural hazard events.	All	High	City of New Albany, Union County EMA	Federal, State, Local	Deleted	Deleted
ES-4	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	City of New Albany, Union County EMA	Federal, State, Local	2025	Ongoing. The county has identified and constructed some shelters and safe rooms, but there is a need to continually identify these areas as new construction
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	City of New Albany, Union County EMA	Federal, State, Local	2025	Ongoing. Some mobile generators have been purchased, but additional generators are desired to be used during storm
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	City of New Albany, Union County EMA	Local Funding	2025	Ongoing. The county has worked with local media to disburse information regarding hazards and will continue to work on improving its relationship with media and use the media as a means of educating the public going forward.

SECTION 10

PLAN MAINTENANCE

This section discusses how the MEMA District 2 Mitigation Strategy and Mitigation Action Plan will be implemented and how the Regional Hazard Mitigation Plan will be evaluated and enhanced over time. This section also discusses how the public will continue to be involved in a sustained hazard mitigation planning process. It consists of the following four subsections:

- ◆ 10.1 Monitoring and Evaluating the Previous Plan
- ◆ 10.2 Implementation and Integration
- ◆ 10.3 Monitoring, Evaluation, and Enhancement
- ◆ 10.4 Continued Public Involvement

44 CFR Requirement

44 CFR Part 201.6(c)(4)(i):

The plan shall include a plan maintenance process that includes a section describing the method and schedule of monitoring, evaluating and updating the mitigation plan within a five-year cycle.

44 CFR Part 201.6(c)(4)(ii):

The plan maintenance process 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

10.1 MONITORING AND EVALUATING THE PREVIOUS PLAN

Since the previous MEMA District 2 Regional Hazard Mitigation Plan was adopted in 2016, each county that comprises the MEMA District 2 Region has worked to ensure that mitigation was integrated into local activities and that the mitigation plan was appropriately implemented. The region outlined a process in their previous mitigation plans for monitoring and evaluating the plan throughout the interim period between plan updates.

The region was ultimately successful in implementing the monitoring and evaluation processes that were outlined in previous plans as all eleven counties held annual meetings to discuss the mitigation plan and the priorities that were outlined in it. The MEMA District 2 region's specific process is outlined below with an explanation of how the monitoring and evaluating process was carried out as well as any changes that were identified by any county or its jurisdictions that would be useful to implement during the next update.

MEMA District 2 Regional Hazard Mitigation Plan

The MEMA District 2 Regional Hazard Mitigation Plan (2016) included an annual review process so that the Regional Hazard Mitigation Planning Team (RHMPT) could ensure that proposed mitigation

projects would remain eligible for funding through FEMA and that potential mitigation initiatives were being evaluated for implementation. This review process was carried out by the RHMPT every year since the previous plan was approved. During this annual review process, RHMPT members evaluated the efficacy of the projects and actions that were laid out in the plan to determine whether or not they were still applicable and worthwhile objectives to pursue.

The RHMPT also determined that any changes to the plan that were suggested by any jurisdiction should be automatically incorporated into the plan, so long as the change only impacted the jurisdiction in question. Although there were some minor revisions made to the plan during interim update period, there were few major revisions identified during these annual reviews and the RHMPT generally agreed that the plan was on course and that the monitoring and evaluating process itself was sufficient to ensure implementation of the plan.

10.2 IMPLEMENTATION AND INTEGRATION

Each agency, department, or other partner participating under the MEMA District 2 Regional Hazard Mitigation Plan is responsible for implementing specific mitigation actions as prescribed in the Mitigation Action Plan. Every proposed action listed in the Mitigation Action Plan is assigned to a specific “lead” agency or department in order to assign responsibility and accountability and increase the likelihood of subsequent implementation.

In addition to the assignment of a local lead department or agency, an implementation time period or a specific implementation date has been assigned in order to assess whether actions are being implemented in a timely fashion. The counties in the MEMA District 2 Region will seek outside funding sources to implement mitigation projects in both the pre-disaster and post-disaster environments. When applicable, potential funding sources have been identified for proposed actions listed in the Mitigation Action Plan.

The RHMPT reviewed and considered other planning mechanisms when developing this plan update. Other plans included the State Hazard Mitigation Plan and other comprehensive and capital improvement plans. The participating jurisdictions will also integrate this Hazard Mitigation Plan into relevant city and county government decision-making processes or mechanisms, where feasible. This includes integrating the requirements of the Hazard Mitigation Plan into other local planning documents, processes, or mechanisms, such as comprehensive or capital improvement plans, when appropriate. The members of the MEMA District 2 Regional Hazard Mitigation Planning Team (RHMPT) will remain charged with ensuring that the goals and mitigation actions of new and updated local planning documents for their agencies or departments are consistent, or do not conflict with, the goals and actions of the Hazard Mitigation Plan, and will not contribute to increased hazard vulnerability in the MEMA District 2 Region.

Since the previous regional-level plans were adopted, each county and participating jurisdiction has worked to integrate the hazard mitigation plan into other planning mechanisms where applicable/feasible. Examples of how this integration has occurred have been documented in the Implementation Status discussion provided for each of the mitigation actions found in Section 9. Specific examples of how integration has occurred include:

- ◆ Integrating the mitigation plan into reviews and updates of floodplain management

- ordinances;
- ◆ Integrating the mitigation plan into reviews and updates of County emergency operations plans;
- ◆ Integrating the mitigation plan into review and updates of building codes; and
- ◆ Integrating the mitigation plan into the capital improvements plan through identification of mitigation actions that require local funding

Opportunities to further integrate the requirements of this Plan into other local planning mechanisms shall continue to be identified through future meetings of the RHMPT, individual county meetings, and the annual review process described herein. Although it is recognized that there are many possible benefits to integrating components of this Plan into other local planning mechanisms, the development and maintenance of this stand-alone Regional Hazard Mitigation Plan is deemed by the MEMA District 2 RHMPT to be the most effective and appropriate method to implement local hazard mitigation actions at this time.

10.3 MONITORING, EVALUATION, AND ENHANCEMENT

Periodic revisions and updates of the Hazard Mitigation Plan are required to ensure that the goals of the Plan are kept current, taking into account potential changes in hazard vulnerability and mitigation priorities. In addition, revisions may be necessary to ensure that the Plan is in full compliance with applicable federal and state regulations. Periodic evaluation of the Plan will also ensure that specific mitigation actions are being reviewed and carried out according to the Mitigation Action Plan.

The MEMA District 2 RHMPT shall meet every year to evaluate the progress attained and to revise, where needed, the activities set forth in the Plan. The findings and recommendations of the RHMPT shall be shared with interested municipal and County Council members. The RHMPT will also meet following any disaster events warranting a reexamination of the mitigation actions being implemented or proposed for future implementation. This will ensure that the Plan is continuously updated to reflect changing conditions and needs within the region. MEMA will be responsible for reconvening the RHMPT for these reviews.¹

FIVE YEAR PLAN REVIEW

The Plan will be thoroughly reviewed by the RHMPT every five years to determine whether there have been any significant changes in the region that may, in turn, necessitate changes in the types of mitigation actions proposed. New development in identified hazard areas, an increased exposure to hazards, an increase or decrease in capability to address hazards, and changes to federal or state legislation are examples of factors that may affect the necessary content of the Plan.

The plan review provides MEMA District 2 county officials with an opportunity to evaluate those actions that have been successful and to explore the possibility of documenting potential losses avoided due to the implementation of specific mitigation measures. The plan review also provides the opportunity to address mitigation actions that may not have been successfully implemented as

¹ A sample Mitigation Action Progress Form and Plan Update Evaluation Worksheet (from FEMA's *Local Mitigation Planning Handbook*) are included in Appendix B. These documents can be used to guide the evaluation of mitigation actions and future plan updates.

SECTION 10: PLAN MAINTENANCE

assigned. MEMA will be responsible for reconvening the RHMPT and helping conduct the five-year review.

During the five-year plan review process, the following questions will be considered as criteria for assessing the effectiveness and appropriateness of the Plan:

- ◆ Do the goals address current and expected conditions?
- ◆ Has the nature or magnitude of risks changed?
- ◆ Are the current resources appropriate for implementing the Plan?
- ◆ Are there implementation problems, such as technical, political, legal or coordination issues with other agencies?
- ◆ Have the outcomes occurred as expected?
- ◆ Did County departments participate in the plan implementation process as assigned?

Following the five-year review, any revisions deemed necessary will be summarized and implemented according to the reporting procedures and plan amendment process outlined herein. Upon completion of the review and update/amendment process, the MEMA District 2 Regional Hazard Mitigation Plan will be submitted to the State Hazard Mitigation Officer at MEMA for final review and approval in coordination with the Federal Emergency Management Agency (FEMA).

Because the plan update process can take several months to complete, and because Federal funding may be needed to update the plan, it is recommended that the five-year review process begin at the beginning of the third year after the plan was last approved. This will allow the participants in the MEMA District 2 Regional Hazard Mitigation Plan to organize in order to seek Federal funding if necessary and complete required plan update documentation before the plan expires at the end of the fifth year.

DISASTER DECLARATION

Following a disaster declaration, the MEMA District 2 Regional Hazard Mitigation Plan will be revised as necessary to reflect lessons learned, or to address specific issues and circumstances arising from the event. It will be the responsibility of MEMA to reconvene the RHMPT and ensure the appropriate stakeholders are invited to participate in the plan revision and update process following declared disaster events.

REPORTING PROCEDURES

The results of the five-year review will be summarized by the RHMPT in the plan update and will include an evaluation of the effectiveness of the Plan and any required or recommended changes or amendments. The results will also include an evaluation of implementation progress for each of the proposed mitigation actions, identifying reasons for delays or obstacles to their completion along with recommendations as to whether and how to continue to pursue the action.

PLAN AMENDMENT PROCESS

In general, the RHMPT agreed that any minor amendments suggested by a county or participating

SECTION 10: PLAN MAINTENANCE

municipality would be automatically accepted into the plan as long as the amendment only impacted that jurisdiction. However, if the amendment proposed a large-scale change to the structure of the plan or impacted other jurisdictions, the following amendment process would need to be followed.

Upon the initiation of the amendment process, the MEMA District 2 counties will forward information on the proposed change(s) to all interested parties including, but not limited to, all directly affected County departments, residents, and businesses. Information will also be forwarded to MEMA. This information will be disseminated in order to seek input on the proposed amendment(s) for no less than a 45-day review and comment period.

At the end of the 45-day review and comment period, the proposed amendment(s) and all comments will be forwarded to the RHMPT for final consideration. The RHMPT will review the proposed amendment along with the comments received from other parties, and if acceptable, the committee will submit a recommendation for the approval and adoption of changes to the Plan.

In determining whether to recommend approval or denial of a Plan amendment request, the following factors will be considered by the RHMPT:

- ◆ There are errors, inaccuracies, or omissions made in the identification of issues or needs in the Plan.
- ◆ New issues or needs have been identified which are not adequately addressed in the Plan.
- ◆ There has been a change in information, data, or assumptions from those on which the Plan is based.

Upon receiving the recommendation from the RHMPT, and prior to adoption of the Plan Amendment, the participating jurisdictions will hold a public hearing, if deemed necessary. The governing bodies of each participating jurisdiction will review the recommendation from the RHMPT (including the factors listed above) and any oral or written comments received at the public hearing. Following that review, the governing bodies will take one of the following actions:

- ◆ Adopt the proposed amendments as presented;
- ◆ Adopt the proposed amendments with modifications;
- ◆ Refer the amendments request back to the RHMPT for further revision; or
- ◆ Defer the amendment request back to the RHMPT for further consideration and/or additional hearings.

10.4 CONTINUED PUBLIC INVOLVEMENT

44 CFR Requirement
44 CFR Part 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

Public participation is an integral component to the mitigation planning process and will continue to be essential as this Plan evolves over time. As described above, significant changes or amendments to the Plan shall require a public hearing prior to any adoption procedures.

SECTION 10: PLAN MAINTENANCE

Other efforts to involve the public in the maintenance, evaluation, and revision process will be made as necessary. These efforts may include:

- ◆ Advertising meetings of the RHMPT in local newspapers, Facebook, public bulletin boards and/or County office buildings;
- ◆ Designating willing and voluntary citizens and private sector representatives as official members of the RHMPT;
- ◆ Utilizing local media to update the public on any maintenance and/or periodic review activities taking place;
- ◆ Utilizing the MEMA District 2 county websites to advertise any maintenance and/or periodic review activities taking place; and
- ◆ Keeping copies of the Plan in public libraries.

Overall, the RHMPT and participating counties will continue to provide outreach concerning mitigation through TV and other media as well as through outreach events such as local fairs or public events. In this way, the public will have continual interaction with the mitigation process and the efforts taken by local officials to implement mitigation.

ANNEX D

LAFAYETTE COUNTY

This annex includes jurisdiction-specific information for Lafayette County and its participating municipalities. It consists of the following five subsections:

- ◆ D.1 Lafayette County Community Profile
 - ◆ D.2 Lafayette County Risk Assessment
 - ◆ D.3 Lafayette County Vulnerability Assessment
 - ◆ D.4 Lafayette County Capability Assessment
 - ◆ D.5 Lafayette County Mitigation Strategy
-

D.1 LAFAYETTE COUNTY COMMUNITY PROFILE

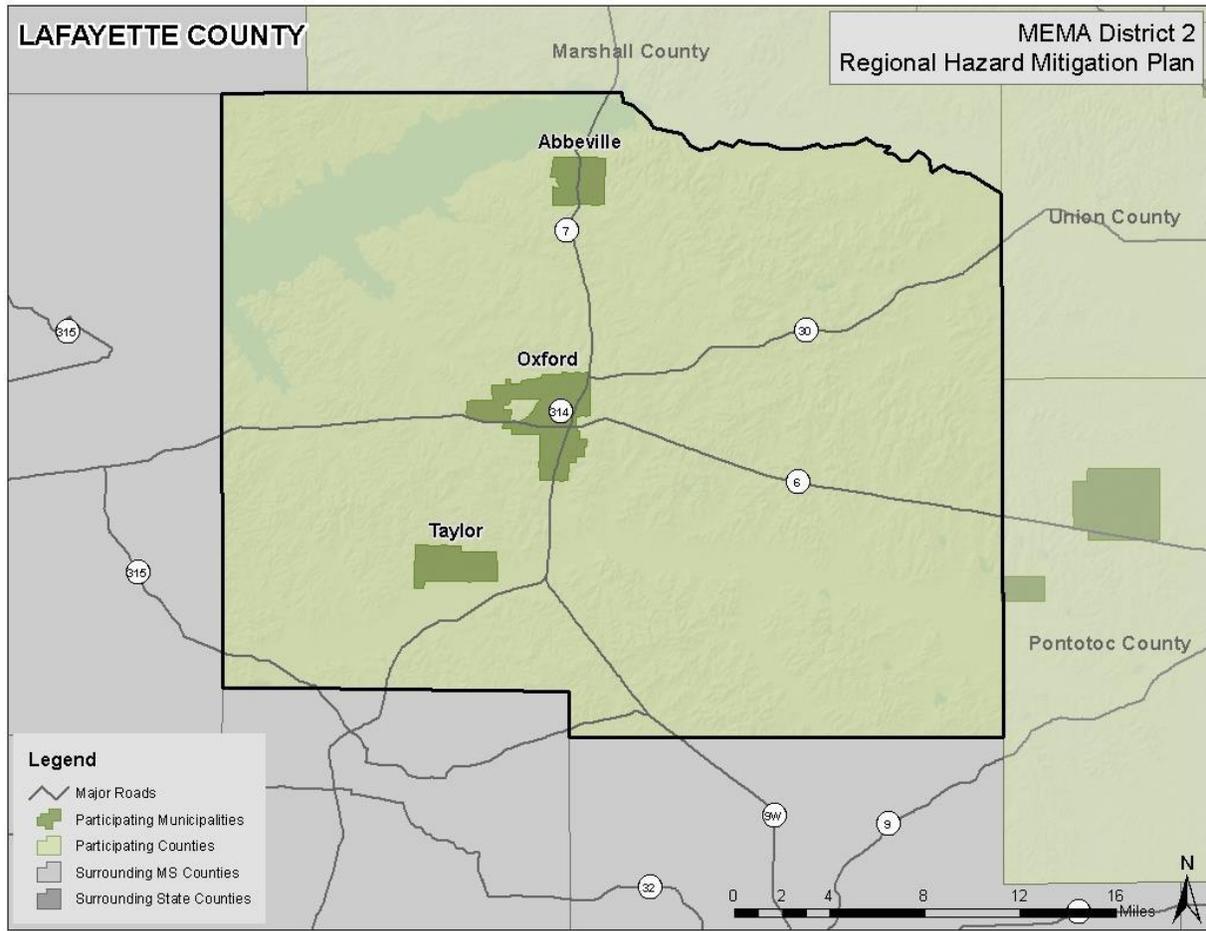
D.1.1 Geography and the Environment

Lafayette County is located in north eastern Mississippi. It comprises one town, one village and one city, Town of Abbeville, City of Oxford, Town of Taylor, as well as many small unincorporated communities. An orientation map is provided as **Figure D.1**.

The county contains the University of Mississippi, a public educational facility which is the largest in the state of Mississippi. The total area of the county is 679 square miles, 47 square miles of which is water area.

Summer temperatures in the county range from highs of about 90 degrees Fahrenheit (°F) to lows in the upper 60s. Winter temperatures range from highs in the low to mid 50s to lows around 30°F. Average annual rainfall is approximately 56 inches, with the wettest months being November, December, and May.

Figure D.1: LAFAYETTE COUNTY ORIENTATION MAP



D.1.2 Population and Demographics

According to the 2019 American Community Survey, Lafayette County has a population of 53,590 people. The county has seen an increase in population between 2010 and 2019, and the population density is approximately 85 people per square mile. Population counts from the US Census Bureau for 2000, 2010, and 2019 for the county and participating jurisdictions are presented in **Table D.1**.

Table D.1: POPULATION COUNTS FOR LAFAYETTE COUNTY

Jurisdiction	2000 Census Population	2010 Census Population	2019 Census Population	% Change 2000-2019
Lafayette County	38,744	47,351	53,590	12%
Abbeville	423	419	407	-3%
Oxford*	11,756	18,916	26,962	30%
Taylor	289	322	282	-14%

Source: United States Census Bureau

*Local estimates of population have put the population in the City of Oxford at over 22,000. This estimate does not include the large student population, which is estimated at more than an additional 23,000. Many of these students live in the city or surrounding unincorporated areas of Lafayette County.

Based on the 2019 American Community Survey, the median age of residents of Lafayette County is 38.1 years. The racial characteristics of the county are presented in **Table D.2**. Whites make up the majority of the population in the county, accounting for 71 percent of the population.

Table D.2: DEMOGRAPHICS OF LAFAYETTE COUNTY

Jurisdiction	White, Percent (2019)	Black or African American, Percent (2019)	American Indian or Alaska Native, Percent (2019)	Asian, Percent (2019)	Native Hawaiian or Other Pacific Islander, Percent (2019)	Other Race, Percent (2019)	Two or More Races, percent (2019)	Persons of Hispanic Origin, Percent (2019)*
Lafayette County	71.4%	23.6%	0.2%	2.1%	0.0%	1.5%	1.1%	2.6%
Abbeville	63.8%	23.6%	0.0%	0.0%	0.0%	4.9%	2.7%	5.5%
Oxford	69%	24.1%	0.2%	3.4%	0.0%	0.5%	0.9%	1.9%
Taylor	64.9%	30.1%	0.0%	0.0%	0.0%	1.1%	3.9%	0.0%

*Hispanics may be of any race, so also are included in applicable race categories
 Source: United States Census Bureau

D.1.3 Housing

According to the 2019 US Census, there are 25,653 housing units in Lafayette County, the majority of which are single family homes or mobile homes. Housing information for the county and three municipalities is presented in **Table D.3**.

Table D.3: HOUSING CHARACTERISTICS OF LAFAYETTE COUNTY

Jurisdiction	Housing Units (2010)	Housing Units (2019)	Median Home Value (2019)
Lafayette County	22,729	25,263	\$199,700
Abbeville	187	134	\$121,900
Oxford	11,085	9,250	\$258,600
Taylor	158	113	\$192,500

Source: United States Census Bureau – American Community Survey

D.1.4 Infrastructure

TRANSPORTATION

In Lafayette County, Mississippi Highway 6/U.S. Route 278 provides access east west highway servicing the City of Oxford and additional communities throughout Lafayette County. State Highway 7 runs north south through the county and the City of Oxford. State Highway 30 connects with State Highway 7 north of the City of Oxford.

The University-Oxford Airport is a non-commercial airport that serves local businesses, private pilots, and charters near the University of Mississippi. The closest international airport is in Memphis, approximately 75 miles away from the county.

One freight rail line operates within Lafayette County. Mississippi Central Railroad Company has a line providing access to the City of Oxford and surrounding areas north of the city. This line connects to Norfolk Southern Railway in Grand Junction, Tennessee.

UTILITIES

Electrical power in Lafayette County is provided by a number power associations including the North East Mississippi Electrical Power Association, Northcentral Mississippi Electrical Power Association, Pontotoc Electrical Power Association, and Tallahatchie Valley Electric Power Association. The City of Holly Springs and Oxford Electric Departments are also contributors to electrical needs within the area.

Water and sewer service is provided to residents by multiple local water utility companies including 25 rural water associations. Among these water associations are Anchor Water Association, Delta Rain, Mud Creek Waster Association, Tri-Lake Rural Waster Association, and many other additional local providers depending on location within the county. It should also be noted that the City of Oxford, the Town of Abbeville, and the University of Mississippi all provide water to residents as well.

It should also be noted that CenterPoint Energy provides natural gas services to Oxford, Taylor, and many areas to the south of these urbanized areas. There are multiple pipelines for gas distribution throughout these areas.

COMMUNITY FACILITIES

There are a number of buildings and community facilities located throughout Lafayette County. According to the data collected for the vulnerability assessment (Section 6.4.1), there are 19 fire stations, 4 police stations, and 18 school facilities located within the county. There is also 1 hospital operating within Lafayette County.

The county is home to a number of medical services via its hospitals and other medical facilities. For example, the Baptist Centers for Cancer Care recently received accreditation for comprehensive cancer care that only two hospitals in northern Mississippi have achieved. The Baptist Memorial Hospital is also well-known for housing a Rehabilitative Services unit, a Sleep Disorders Center, a Women's Pavilion, and a Surgery Center among other services. The county is also home to a number of urgent care centers and other medical centers that provide both basic and advanced care for citizens in the county and region at-large.

Additionally, the county has become a hub for a number of federal and state law enforcement related agencies due in part to the location of a federal courthouse in the City of Oxford. Among the agencies that have facilities in the county are the Federal Bureau of Investigation, U.S. Marshal Service, Bureau of Alcohol, Tobacco, Firearms and Explosives, U.S. Secret Service, Internal Revenue Service Enforcement Agency, Drug Enforcement Agency, and Mississippi Bureau of Narcotics.

The Oxford Park Commission manages seven parks, one skate park, and one pool that are open to residents within Lafayette County at various times throughout the year. MTrade Park is an athletic facility featuring over 75 acres of multiple sport complexes able to handle different sport tournaments. In addition, there are a number of other publicly and privately owned parks and facilities that are available to residents throughout the county.¹ For instance, in 2014 a private sports complex was recently opened in Oxford that is home to a number of baseball/softball fields as well as half a dozen combination soccer/football/lacrosse fields.

THE UNIVERSITY OF MISSISSIPPI

In addition to the many facilities and infrastructure listed above, it should also be noted that the University of Mississippi plays a major role in providing services to students and other residents within the university environment. In many cases, the university provides services that are independent of any municipal or county agencies.

For instance, the university has its own Emergency Operations Center, water supply system, health centers, food distribution centers, and power generating plant. Moreover, the university provides a number of unique facilities that are utilized by residents such as the medical center and a number of athletic and educational facilities that could be used for sheltering or recovery-related activities. In and of itself, these facilities and services make the university a valuable resource that provides additional available capacity for emergency managers and planners in the field of mitigation.

Additionally, university staff and officials have worked hard to reach out to students, faculty, and other staff regarding hazard risk and planning generally. Outside of the hazard mitigation planning process, a number of surveys and information have been provided to try to gain a better understanding of citizen perception of risk and to try to bring the concept of mitigation and its benefits to the forefront of discussion on campus. These efforts have generally succeeded and officials responsible for hazard planning have been the beneficiaries of new ideas and a better understanding of the campus.

The university has a disaster resistant university hazard mitigation plan that identifies many of these facilities and outlines the potential risks and mitigation actions that will be taken by the university specifically to reduce these risks. This plan is an important resource for residents of the MEMA District 2 Region who reside on the university campus or whose daily lives are linked to the university. For more information on university-specific mitigation planning, please refer to the Natural Hazard Mitigation Plan of the University of Mississippi.

D.1.5 Land Use

Unincorporated areas within Lafayette County still mostly remain undeveloped or sparsely developed; however, the City of Oxford contains the University of Mississippi and other commercial establishments related to the college creating diverse land use and large populations of people. There are several small incorporated municipalities located throughout the region, with a few larger hubs interspersed. These areas are where the region's population is generally concentrated. The incorporated areas are also where many of the businesses, commercial uses, and institutional uses are located. Land uses in the balance of the study area generally consist of rural residential development, agricultural uses, and recreational areas, although there are some notable exceptions in the larger municipalities. Local land use and associated regulations are further discussed in Section 7: Capability Assessment. The City of Oxford and

¹ <http://www.oxfordparkcommission.com/default.aspx>

ANNEX D: LAFAYETTE COUNTY

Lafayette County each maintain planning departments to guide development within their jurisdictions. The City of Oxford also maintains a Historic Preservation Commission to provide information to assist the growth and development process within Oxford.

D.1.6 Employment and Industry

According to the U.S. Census Bureau's American Community Survey (ACS), in 2019, Lafayette County had an average annual employment rate of 55.9 percent and an average unemployment rate of 5.4 percent (compared to 6.4 percent for the state). An estimated 55.9 percent of the people employed were private wage and salary workers; 17.7 percent were federal, state, or local government workers; and 6 percent were self-employed in their own (not incorporated) business with 36% employed in educational services, and health care and social assistance. In 2019, the largest industries in Lafayette County were Educational services, health care & Social Assistance industry (36%), and Accommodation & Food Services (12.9%). The average annual wage in 2019 for Lafayette County was \$50,272 compared to \$45,081 in the state of Mississippi.

D.2 LAFAYETTE COUNTY RISK ASSESSMENT

This subsection includes hazard profiles for each of the significant hazards identified in Section 4: *Hazard Identification* as they pertain to Lafayette County. Each hazard profile includes a description of the hazard's location and extent, notable historical occurrences, and the probability of future occurrences. Additional information can be found in Section 5: *Hazard Profiles*.

D.2.1 Flood

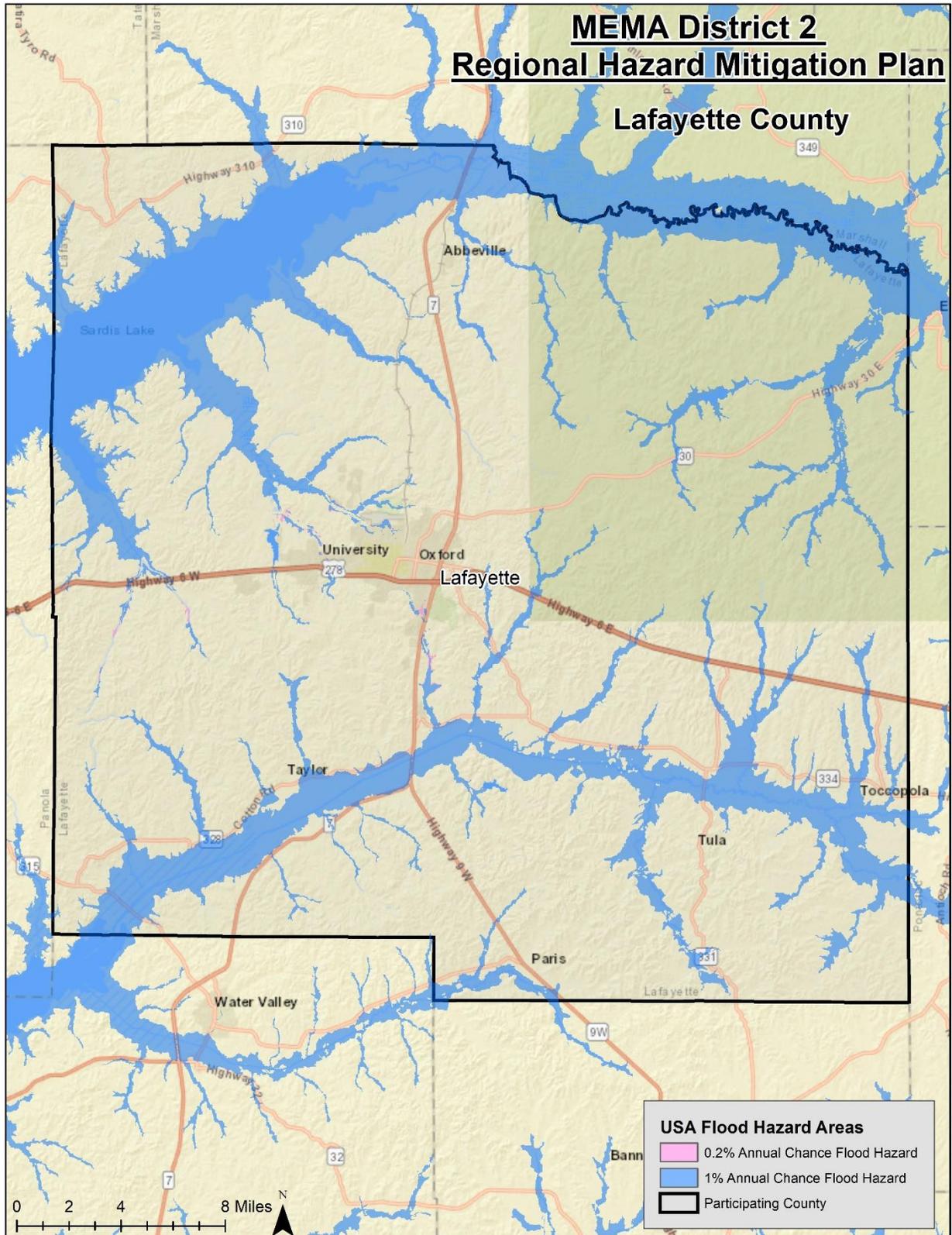
LOCATION AND SPATIAL EXTENT

There are areas in Lafayette County that are susceptible to flood events. Special flood hazard areas in the county were mapped using Geographic Information System (GIS) and FEMA Digital Flood Insurance Rate Maps (DFIRM).² This includes Zone A (1-percent annual chance floodplain), Zone AE (1-percent annual chance floodplain with elevation), and Zone X500 (0.2-percent annual chance floodplain). According to GIS analysis, of the 678 square miles that make up Lafayette County, there are 162.4 square miles of land in zones A and AE (1-percent annual chance floodplain/100-year floodplain) and 0.4 square mile of land in zone X500 (0.2-percent annual chance floodplain/500-year floodplain).

These flood zone values account for 24.0 percent of the total land area in Lafayette County. It is important to note that while FEMA digital flood data is recognized as best available data for planning purposes, it does not always reflect the most accurate and up-to-date flood risk. Flooding and flood-related losses often do occur outside of delineated special flood hazard areas. **Figure D.2** illustrates the location and extent of currently mapped special flood hazard areas for Lafayette County based on best available FEMA Digital Flood Insurance Rate Map (DFIRM) data.

² The county-level DFIRM data used for Lafayette County were updated in 2011.

Figure D.2: SPECIAL FLOOD HAZARD AREAS IN LAFAYETTE COUNTY



Source: Federal Emergency Management Agency

ANNEX D: LAFAYETTE COUNTY

Flood extent can be measured by the amount of land and property in the floodplain as well as flood height and velocity. The amount of land in the floodplain accounts for 14.4 percent of the total land area in the MEMA District 2 Region.

Flood depth and velocity are recorded via United States Geological Survey stream gages throughout the region. While a gage does not exist for each participating jurisdiction, there is one at or near many areas. The greatest peak discharge recorded for the region was near Fulton in Itawamba County in 1955. Water reached a discharge of 82,200 cubic feet per second and the stream gage height was recorded at 25.75 feet. Additional peak discharge readings and gage heights are in the table below.

Table A:4A: Extent of MEMA District 2 Flood

County	Location/Jurisdiction	Date	Peak Discharge (cfs)	Gage Height (ft)
Alcorn County	Tuscumbia River Canal near Corinth	03/15/1973	30,300	15.72
Benton County	Weasley Branch near Walnut	07/05/1967	755	6.84
Itawamba County	Tombigbee River near Fulton	03/22/1955	82,200	25.75
	Bull Mountain Creek at Tremont	03/13/1975	15,000	9.80
Lafayette County	Yocona River near Oxford	03/21/1955	44,100	23.72
Lee County	Twentymile Creek near Guntown	02/03/1990	22,200	27.95
	Euclautubba Creek at Saltillo	03/21/1955	5,750	14.53
	Chiwapa Creek at Shannon	03/21/1955	35,500	15.72
	Town Creek at Eason Boulevard at Tupelo	05/27/1991	37,900	27.80
	Town Creek near Verona	03/21/1955	70,000	29.40
Marshall County	Tippah Creek near Potts Camp	02/16/1948	24,000	20.78
Pontotoc County	Cracker Ditch near Pontotoc	04/11/1962	213	7.08
Prentiss County	Big Brown Creek near Booneville	04/17/1970	3,900	99.97
Tippah County	North Tippah Creek near Ripley	11/28/1968	7,100	21.17
	Hurricane Creek near Walnut	02/04/1956	1,650	20.83
Tishomingo County	Rock Creek near Belmont	05/08/1978	1,900	13.40
	Little Yellow Creek East near Burnsville	12/26/1982	5,180	21.74
	Pollard Mill Branch at Paden	08/25/2004	2,350	13.53
Union County	Cane Creek near New Albany	03/21/1955	8,680	9.08

HISTORICAL OCCURRENCES

Floods were at least partially responsible for six disaster declarations in Lafayette County in 1973, 2001, 2010, 2011, 2019, and 2020.³ Information from the National Centers for Environmental Information was used to ascertain additional historical flood events. The National Centers for Environmental Information reported a total of 23 events in Lafayette County since 1997.⁴ A summary of these events is presented in **Table D.4**. These events accounted for over \$1.2 million in property damage in the county.

Table D.4: SUMMARY OF FLOOD OCCURRENCES IN LAFAYETTE COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Abbeville	1	0/0	\$0
Oxford	15	0/0	\$1,089,000
Taylor	2	0/0	\$20,000
Unincorporated Area	5	0/0	\$101,000
LAFAYETTE COUNTY TOTAL	23	0/0	\$1,210,000

Source: National Centers for Environmental Information

HISTORICAL FLOOD EVENTS IN LAFAYETTE COUNTY

According to the National Centers for Environmental Information, there have been a total of 23 reported flood events in Lafayette County with over \$1.2 million in property damage. These are the most significant flood events reported:

May 1970

According to *Oxford Eagle* (May 14, 1970 issue) reports, a storm on May 10, 1970 resulted in heavy rain, high wind, and spawned a tornado in the City of Oxford. The rain event consisted of seven inches of precipitation associated with a spring thunderstorm. The rain resulted in flooding of Burney Branch which caused damage along Park and Bramlett Boulevards and South 18th Street. Flooding also caused damage in the area of Country Club and Club View Road, in the Midtown Shopping Center, and near Ewing’s Trailer Park. Apartments were flooded when Toby Tubby Creek exceeded its bank capacity. The damage consisted of bridge damage on Burney Branch (in front of Oxford High School) and at Ewing’s Trailer Park. Other damage consisted of homes and apartments being flooded, roads washed out by flood waters, and in other places the flood waters deposited sand and mud across roads requiring removal. At Ewing’s Trailer Park, a car was caught in the flood waters and was washed downstream, and cars were flooded at Country Club Terraces apartments. The City of Oxford estimated damages at \$750,000 and speculated that damages would ultimately reach \$1 million. There was similar damage in Lafayette County and damage was estimated to be \$177,000. This event was reported by the US Department of Agriculture’s Soil and Sedimentation Laboratory to be equivalent to the 100-year flood.

November 28th, 2001

Rainfall of between 5 and 9 inches fell between November 26 and November 29. This produced widespread flooding across North Mississippi. Numerous roads were closed. Many homes and businesses were flooded forcing some evacuations. Some schools were also forced to close. One woman was killed when her car went into a flooded ditch. Reported damage was around \$50,000.

³ complete listing of historical disaster declarations can be found in Section 4: *Hazard Identification*.

⁴ These flood events are only inclusive of those reported by the National Centers for Environmental Information (NCEI) from 1996 through April 2020.

May 16th, 2010

Very heavy rain produced flash flooding in Oxford. Many roads were covered with 3 to 4 feet of water throughout Oxford. Flooding damaged 21 homes, 7 apartments, 10 businesses and 25 cars resulting in \$500,000 in damage.

September 2nd, 2012

Showers and thunderstorms trained over Oxford for a couple of hours producing very heavy rain. Major flash flooding occurred as a result. Numerous streets had at least six inches of water covering them with others flooded up to three feet. Three homes were flooded on Chandler Avenue and one home was flooded on South 18th Street. The homes had anywhere from a few inches up to a foot of water inside them. Cars and apartments were flooded along Highway 314 near the Oxford Airport.

Additional information on historical flood events in Lafayette County that occurred prior to the start of the NCEI flood record was obtained from the University of Mississippi Hazard Mitigation Plan. A description of one notable event is found below.

HISTORICAL SUMMARY OF INSURED FLOOD LOSSES

Updated NFIP and Repetitive Loss Properties data was not available for this plan update. The following is current as of 2015. According to FEMA flood insurance policy records as of June 2015, there have been 18 flood losses reported in Lafayette County through the National Flood Insurance Program (NFIP) since 1978, totaling almost \$214,000 in claims payments. A summary of these figures for the county is provided in **Table D.5**. It should be emphasized that these numbers include only those losses to structures that were insured through the NFIP policies, and for losses in which claims were sought and received. It is likely that many additional instances of flood loss in Lafayette County were either uninsured, denied claims payment, or not reported.

Table D.5: SUMMARY OF INSURED FLOOD LOSSES IN LAFAYETTE COUNTY (2016)

Location	Flood Losses	Claims Payments
Abbeville	0	\$0
Oxford	16	\$200,687
Taylor	0	\$0
Unincorporated Area	2	\$13,160
LAFAYETTE COUNTY TOTAL	18	\$213,847

Source: Federal Emergency Management Agency, National Flood Insurance Program

REPETITIVE LOSS PROPERTIES

According to the Mississippi Emergency Management Agency, there are three non-mitigated repetitive loss properties located in Lafayette County, which accounted for six losses and almost \$48,000 in claims payments under the NFIP. The average claim amount for these properties is \$7,988. All three if these properties are single family. Without mitigation, these properties will likely continue to experience flood losses. **Table D.6** presents detailed information on repetitive loss properties and NFIP claims and policies for Lafayette County.

Table D.6: REPETITIVE LOSS PROPERTIES IN LAFAYETTE COUNTY

Location	Number of Properties	Types of Properties	Number of Losses	Building Payments	Content Payments	Total Payments	Average Payment
Abbeville	0	--	--	--	--	--	--
Oxford	3	3 single family	6	\$45,009	\$2,916	\$47,926	\$7,988
Taylor	0	--	--	--	--	--	--
Unincorporated Area	0	--	--	--	--	--	--
LAFAYETTE COUNTY TOTAL	3		6	\$45,009	\$2,916	\$47,926	\$7,988

Source: National Flood Insurance Program

PROBABILITY OF FUTURE OCCURRENCES

Flood events will remain a threat in Lafayette County, and the probability of future occurrences will remain likely (between 50 and 100 percent annual probability). The participating jurisdictions and unincorporated areas have risk to flooding, though not all areas will experience flood. The probability of future flood events based on magnitude and according to best available data is illustrated in the figure above, which indicates those areas susceptible to the 1-percent annual chance flood (100-year floodplain) and the 0.2-percent annual chance flood (500-year floodplain).

It can be inferred from the floodplain location maps, previous occurrences, and repetitive loss properties that risk varies throughout the county. For example, the northern part of the county has more floodplain and thus a higher risk of flood than the central portion. Flood is not the greatest hazard of concern but will continue to occur and cause damage. Therefore, mitigation actions may be warranted, particularly for repetitive loss properties.

D.2.2 Erosion

LOCATION AND SPATIAL EXTENT

Erosion in Lafayette County is typically caused by flash flooding events. Unlike coastal areas, areas of concern for erosion in Lafayette County are primarily rivers and streams. Generally, vegetation helps to prevent erosion in the area, and it is not an extreme threat to the county. No areas of concern were reported by the hazard mitigation council.

HISTORICAL OCCURRENCES

Several sources were vetted to identify areas of erosion in Lafayette County. This includes searching local newspapers, interviewing local officials, and reviewing previous hazard mitigation plans. No historical erosion occurrences were found in these sources.

PROBABILITY OF FUTURE OCCURRENCES

Erosion remains a natural, dynamic, and continuous process for Lafayette County, and it will continue to occur. The annual probability level assigned for erosion is likely (between 50 and 100 percent annually).

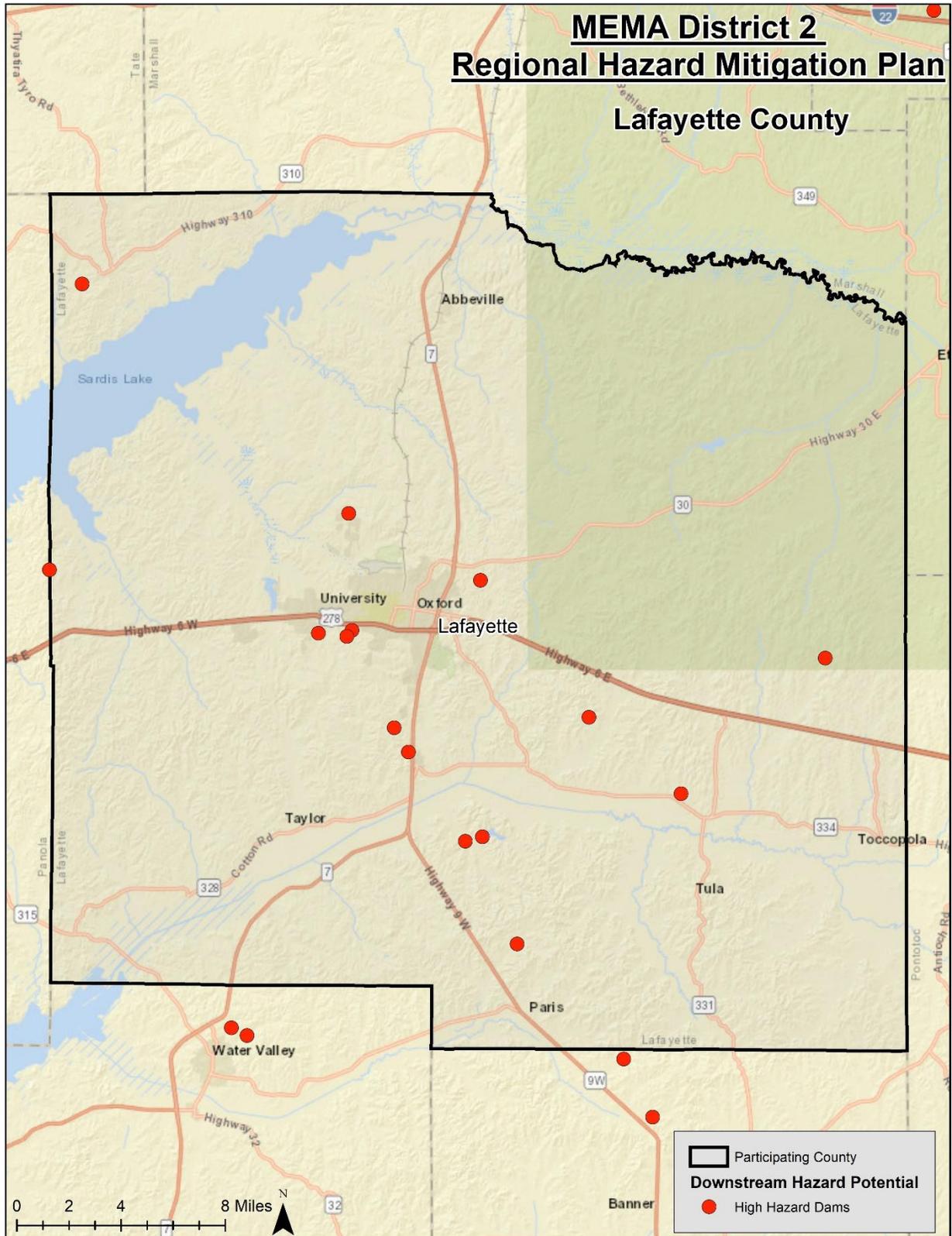
D.2.3 Dam and Levee Failure

LOCATION AND SPATIAL EXTENT

According to the Mississippi Department of Environmental Quality, there are fourteen high hazard dams in Lafayette County. **Figure D.3** shows the location of each of these high hazard dams and it is also listed by name in **Table D.7**.

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Figure D.3: LAFAYETTE COUNTY HIGH HAZARD DAM LOCATIONS



Source: U.S. Army Corps of Engineers – National Inventory of Dams (NID)

Table D.7: LAFAYETTE COUNTY HIGH HAZARD DAMS

Dam Name	Hazard Potential
Lafayette County	
UPPER YOCONA WS STR Y-14-01 DAM	High
GREASY CREEK WS STR LT-1A-11 DAM	High
MURRAY CREEK WS STR Y-13A-5 DAM	High
MURRAY CREEK WS STR Y-13A-1 DAM	High
ROYAL OAKS DAM	High
SPRING LAKE DAM	High
LAKE TARA DAM	High
OTOUCALOFA CREEK STRUCTURE Y-15B-8 DAM	High
AVANT LAKE DAM	High
EAST AND WEST GOOSE STR R-9-1 DAM	High
EAST AND WEST GOOSE STR R-9-2 DAM	High
BROWN LAKE DAM	High
BIG JONES LAKE DAM	High
REAGAN LAKE DAM	High

Source: U.S. Army Corps of Engineers – National Inventory of Dams (NID)

HISTORICAL OCCURRENCES

According to the Mississippi State Hazard Mitigation Plan, there have been three dam failures reported in Lafayette County. The first incident occurred in July 2002 when massive slides and erosion on the downstream slope led to a dam breach at the Horseshoe Lake structure. The second incident occurred in December 2002 when the piping failed at the Royal Oaks structure. The third incident occurred in June 2021 at Lake Tara Dam near Tara subdivision on CR 102 due to excessive rain. Although no damage was reported with these events, several breach scenarios in the county could be catastrophic.

PROBABILITY OF FUTURE OCCURRENCES

Given the current dam inventory and historic data, a dam breach is unlikely (less than 1 percent annual probability) in the future. However, as has been demonstrated in the past, regular monitoring is necessary to prevent these events.

D.2.4 Winter Storm and Freeze

LOCATION AND SPATIAL EXTENT

Nearly the entire continental United States is susceptible to winter storm and freeze events. Some ice and winter storms may be large enough to affect several states, while others might affect limited, localized areas. The degree of exposure typically depends on the normal expected severity of local winter weather. Lafayette County is not accustomed to severe winter weather conditions and rarely receives severe winter weather, even during the winter months. Events tend to be mild in nature; however, even relatively small accumulations of snow, ice, or other wintry precipitation can lead to losses and damage due to the fact that these events are not commonplace. Given the atmospheric nature of the hazard, the entire county has uniform exposure to a winter storm.

The extent of winter storms can be measured by the amount of snowfall received (in inches). Official long term snow records are not kept for any areas in the MEMA District 2 Region. However, the greatest snowfall reported in Meridian (south of the region) was 14.0 inches in 1963. In February 2021, the region experienced winter weather with freezing rain and several inches of sleet and snow. Transportation was greatly impacted.

HISTORICAL OCCURRENCES

Winter weather has resulted in one disaster declaration in Lafayette County in 1994.⁶ According to the National Centers for Environmental Information, there have been a total of 28 recorded winter storm events in Lafayette County since 1994 (Table D.8).⁵ These events resulted in almost \$18.5 million in damages. Detailed information on the recorded winter storm events can be found in Table D.9.

Table D.8: SUMMARY OF WINTER STORM EVENTS IN LAFAYETTE COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Lafayette County	28	1/0	\$18,539,440

Source: National Centers for Environmental Information

Table D.9: HISTORICAL WINTER STORM IMPACTS IN LAFAYETTE COUNTY

Location	Date	Type	Deaths / Injuries	Property Damage*
Abbeville				
None Reported	--	--	--	--
Oxford				
None Reported	--	--	--	--
Taylor				
None Reported	--	--	--	--
Unincorporated Area				
LAFAYETTE COUNTY	2/9/1994	Ice Storm	0/0	\$18,517,440
LAFAYETTE (ZONE)	2/1/1996	Winter Storm	0/0	\$20,000
LAFAYETTE (ZONE)	1/15/1998	Winter Storm	0/0	\$0
LAFAYETTE (ZONE)	12/22/1998	Ice Storm	0/0	\$1,000
LAFAYETTE (ZONE)	12/31/2000	Extreme Cold/Wind Chill	1/0	\$0
LAFAYETTE (ZONE)	1/27/2000	Heavy Snow	0/0	\$0
LAFAYETTE (ZONE)	2/18/2006	Winter Storm	0/0	\$1,000
LAFAYETTE (ZONE)	2/1/2007	Winter Weather	0/0	\$0
LAFAYETTE (ZONE)	4/7/2007	Frost/freeze	0/0	\$0
LAFAYETTE (ZONE)	1/25/2008	Winter Weather	0/0	\$0
LAFAYETTE (ZONE)	3/7/2008	Winter Weather	0/0	\$0
LAFAYETTE (ZONE)	3/1/2009	Winter Weather	0/0	\$0
LAFAYETTE (ZONE)	1/29/2010	Ice Storm	0/0	\$0
LAFAYETTE (ZONE)	2/14/2010	Winter Weather	0/0	\$0
LAFAYETTE (ZONE)	12/15/2010	Winter Weather	0/0	\$0
LAFAYETTE (ZONE)	12/25/2010	Winter Weather	0/0	\$0

⁵ These ice and winter storm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI) from 1996 through April 2020. It is likely that additional winter storm conditions have affected Lafayette County. For example, although it is not accounted for in the NCEI records, the February 1994 ice storm was added to these results since it was a major event that impacted Lafayette County. The National Weather Service reported that the storm resulted in \$481,453,441 in damages across 26 counties in Mississippi; therefore, there was approximately \$18,517,440 of damage in each impacted county.

ANNEX D: LAFAYETTE COUNTY

LAFAYETTE (ZONE)	1/9/2011	Winter Storm	0/0	\$0
LAFAYETTE (ZONE)	2/9/2011	Winter Storm	0/0	\$0
LAFAYETTE (ZONE)	1/14/2013	Winter Weather	0/0	\$0
LAFAYETTE (ZONE)	1/17/2013	Winter Weather	0/0	\$0
LAFAYETTE (ZONE)	2/11/2014	Winter Weather	0/0	\$0
LAFAYETTE (ZONE)	2/20/2015	Winter Weather	0/0	\$0
LAFAYETTE (ZONE)	2/25/2015	Winter Storm	0/0	\$0
LAFAYETTE (ZONE)	3/4/2015	Winter Storm	0/0	\$0
LAFAYETTE (ZONE)	1/22/2016	Winter Storm	0/0	\$0
LAFAYETTE (ZONE)	1/12/2018	Winter Weather	0/0	\$0
LAFAYETTE (ZONE)	1/16/2018	Winter Storm	0/0	\$0
LAFAYETTE (ZONE)	1/11/2021	Winter Weather	0/0	\$0
LAFAYETTE (ZONE)	2/14/2021	Winter Storm	0/0	\$0

*All damage may not have been reported.

Source: National Centers for Environmental Information

There have been several severe winter weather events in Lafayette County. The text below describes three of the major events and associated impacts on the county. Similar impacts can be expected with severe winter weather.

February 1994

A damaging ice storm with freezing rain accumulations of 3 to 6 inches occurred across north Mississippi from February 9-11. Most estimates calculate this storm as the worst on record since 1951 with damages occurring across parts of Arkansas, Tennessee, Alabama, Louisiana, and Texas, as well as 26 counties in Mississippi, which sustained damages of roughly \$300 million. According to power companies, more than 200,000 homes were left without power at the height of the storm, and water provides estimate nearly 175,000 homes were without water during this time period. Agriculture also took an especially hard hit as nearly 5 percent of the state’s pecan trees were destroyed.⁶

December 1998

Much of north Mississippi was hit with an ice storm. Most counties reported between 0.25 to 0.5 inches of ice on their roads with some locations in the southern part of the region reporting as much as 3 inches of ice. The ice caused numerous power outages and brought down many trees and power lines. Thousands of people in north Mississippi were without power, some for as long as one week. Christmas travel was severely hampered for several days with motorists stranded at airports, bus stations, and truck stops. Travel did not return to normal until after Christmas in some locations.

January 2000

A winter storm brought a swath of heavy snow across north central Mississippi. The snow began falling over western portions of the area during the early morning of the 27th and spread eastward during the day. The snow was heavy at times and did not end until the morning of the 28th. Snowfall amounts generally ranged from 4 to 10 inches. The heaviest amounts fell along the Highway 82 corridor from Greenville to Starkville where isolated snow depths of 12 inches were reported. Damage from the heavy snow was relatively minimal with reports limited to a few collapsed roofs and downed trees. Power outages were sporadic, but travelling was more than just an inconvenience as numerous reports of vehicles running off the road were received.

⁶ Pfof, Russell L. Disastrous Mississippi Ice Storm of 1994. National Weather Service Forecast Office. Jackson, Mississippi.

Winter storms throughout the planning area have several negative externalities including hypothermia, cost of snow and debris cleanup, business and government service interruption, traffic accidents, and power outages. Furthermore, citizens may resort to using inappropriate heating devices that could lead to fire or an accumulation of toxic fumes.

Additional information on historical winter storm events in Lafayette County that occurred prior to the start of the NCEI winter storm record was obtained from the University of Mississippi Hazard Mitigation Plan. Descriptions of two notable events are found below.

January 1948

According to *Oxford Eagle*, there was a significant ice storm in 1948 that appears to be set of continuous weather events rather than a single ice event. The *Oxford Eagle* first reports four inches of snow and temperatures as low as -1°F in the January 22 issue. The last mention of these events was published in the February 19 issue. Damage and conditions were discussed in the January 29 issue with reports of sleet, freezing rain, and a covering of ice as well as damage to property and trees, closing of schools, commercial business in Oxford “at a standstill,” icy roads and dangerous travel, damaged telephone lines, and a shortage of fuel oil for heating at the University of Mississippi. The February 5 issue notes damage to the telephone system is significant, noting 424 phones are out of service, 22 lines down north to Holly Springs, and a broken pole on the line to Tula.

February 1951

The 1951 ice storm was similar to the 1948 event described above. The event was first reported in the February 1 issue of the *Oxford Eagle*. This issue reports that the storm started on Monday night with cold temperatures, rain, sleet, and slush with some ice covering wires. By Wednesday, it was a mix of sleet and rain with local street flooding reported due to lack of carrying capacity of the storm sewers. By Thursday, it was freezing rain that turned to snow.

The February 8 issue focused on the ice damage and the temperatures. The temperature had reached a minimum low of -8°F. The damage consisted of downed power and telephone lines, damage to trees and property, icy roads and dangerous travel, commerce at a minimum, injuries due to icy conditions, and death of livestock due to falling through ice into water bodies. The damage was estimated to be \$50 million across the state of Mississippi.

PROBABILITY OF FUTURE OCCURRENCES

Winter storm events will continue to occur in Lafayette County. Based on historical information, the probability is likely (between 50 and 100 percent annual probability).

FIRE-RELATED HAZARDS

D.2.5 Drought / Heat Wave

LOCATION AND SPATIAL EXTENT

Drought

Drought typically covers a large area and cannot be confined to any geographic or political boundaries. Furthermore, it is assumed that Lafayette County would be uniformly exposed to drought, making the

ANNEX D: LAFAYETTE COUNTY

that were planted during the spring struggled to grow due to lack of water. Many pastures were in poor condition forcing farmers to feed cattle baled hay. Lake and river levels dropped to low levels. Burn bans were issued for many counties as a result of the dry conditions. Drought conditions improved during the month of October.

Heat Wave

The National Centers for Environmental Information was used to determine historical heat wave occurrences in the county.

August 2007 – A severe heat wave brought high temperatures near or above the 100 degree mark during most of the month of August. The unusually warm temperatures combined with high dew points produced heat index values of 105 degrees or greater during the heat wave.

June/July/August 2010 – The combination of high humidity and above normal temperatures produced brutal heat indices of 105-120 degrees.

July/August 2011 – The combination of the hot and humid conditions allowed heat indices to reach between 105 and 118 degrees during the afternoon hours.

July 2012 – The combination of heat and humidity produced heat indices above 110 degrees.

PROBABILITY OF FUTURE OCCURRENCES

Drought

Based on historical occurrence information, it is assumed that Lafayette County has a probability level of likely (between 50 and 100 percent annual probability) for future drought events. However, the extent (or magnitude) of drought and the amount of geographic area covered by drought, varies with each year. Historic information indicates that there is a much lower probability for extreme, long-lasting drought conditions.

Heat Wave

Based on historical occurrence information, it is assumed that all of Lafayette County has a probability level of likely (between 50 and 100 percent annual probability) for future heat wave events.

D.2.6 Wildfire

LOCATION AND SPATIAL EXTENT

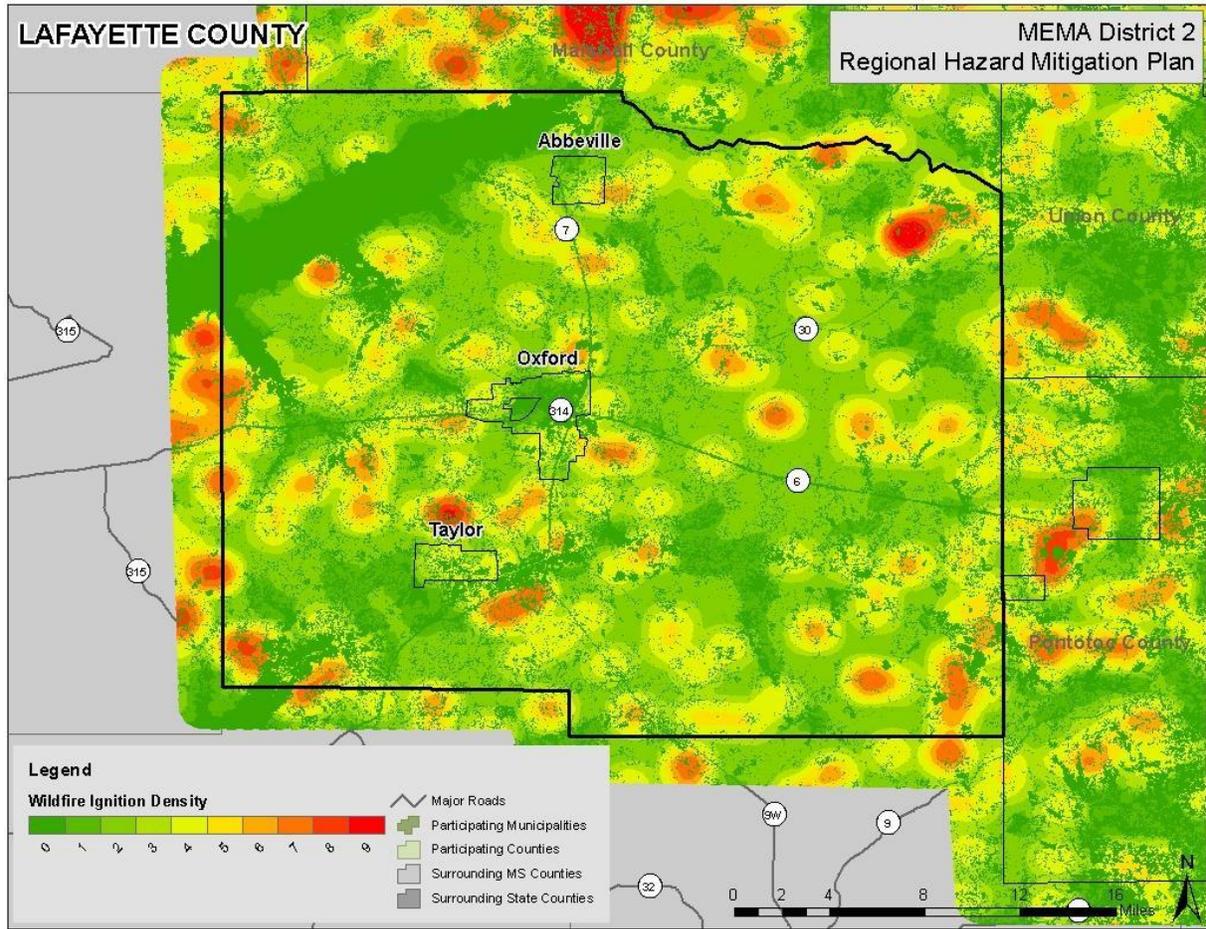
The entire county is at risk to a wildfire occurrence. However, several factors such as drought conditions or high levels of fuel on the forest floor, may make a wildfire more likely. Furthermore, areas in the urban-wildland interface are particularly susceptible to fire hazard as populations abut formerly undeveloped areas. The Wildfire Ignition Density data shown in the figure below give an indication of historic location.

HISTORICAL OCCURRENCES

Figure D.4 shows the Wildfire Ignition Density in Lafayette County based on data from the Southern Wildfire Risk Assessment. This data is based on historical fire ignitions and the likelihood of a wildfire igniting in an area. Occurrence is derived by modeling historic wildfire ignition locations to create an

average ignition rate map. This is measured in the number of fires per year per 1,000 acres.⁷

Figure D.4: WILDFIRE IGNITION DENSITY IN LAFAYETTE COUNTY



Source: Southern Wildfire Risk Assessment

Based on data from the Mississippi Forestry Commission from 2012 to 2020, Lafayette County experiences an average of 8 wildfires annually which burn an average of 141 acres per year. The data indicates that most of these fires are small, averaging about 16 acres per fire. **Table D.11** provides a summary of wildfire occurrences in Lafayette County and **Table D.12** lists the number of reported wildfire occurrences in the county between the years 2012 and 2020. Jurisdiction specific information is not available due to Mississippi Forestry Commission providing only county level data.

Table D.11: SUMMARY TABLE OF ANNUAL WILDFIRE OCCURRENCES (2012-2020)*

⁷ Southern Wildfire Risk Assessment, 2014.

ANNEX D: LAFAYETTE COUNTY

	Lafayette County
Average Number of Fires per year	8.6
Average Number of Acres Burned per year	141.1
Average Number of Acres Burned per fire	16.4

*These values reflect averages over a 10-year period.
Source: Mississippi Forestry Commission

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Table D.12: HISTORICAL WILDFIRE OCCURRENCES IN LAFAYETTE COUNTY

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Lafayette County										
Number of Fires	5	14	5	19	6	16	13	2	5	1
Number of Acres Burned	75	249	74	397	174	437	319	41	40	2

Source: Mississippi Forestry Commission

Additional information on historical wildfire events in Lafayette County was obtained from the University of Mississippi Hazard Mitigation Plan. A description of one notable event is found below.

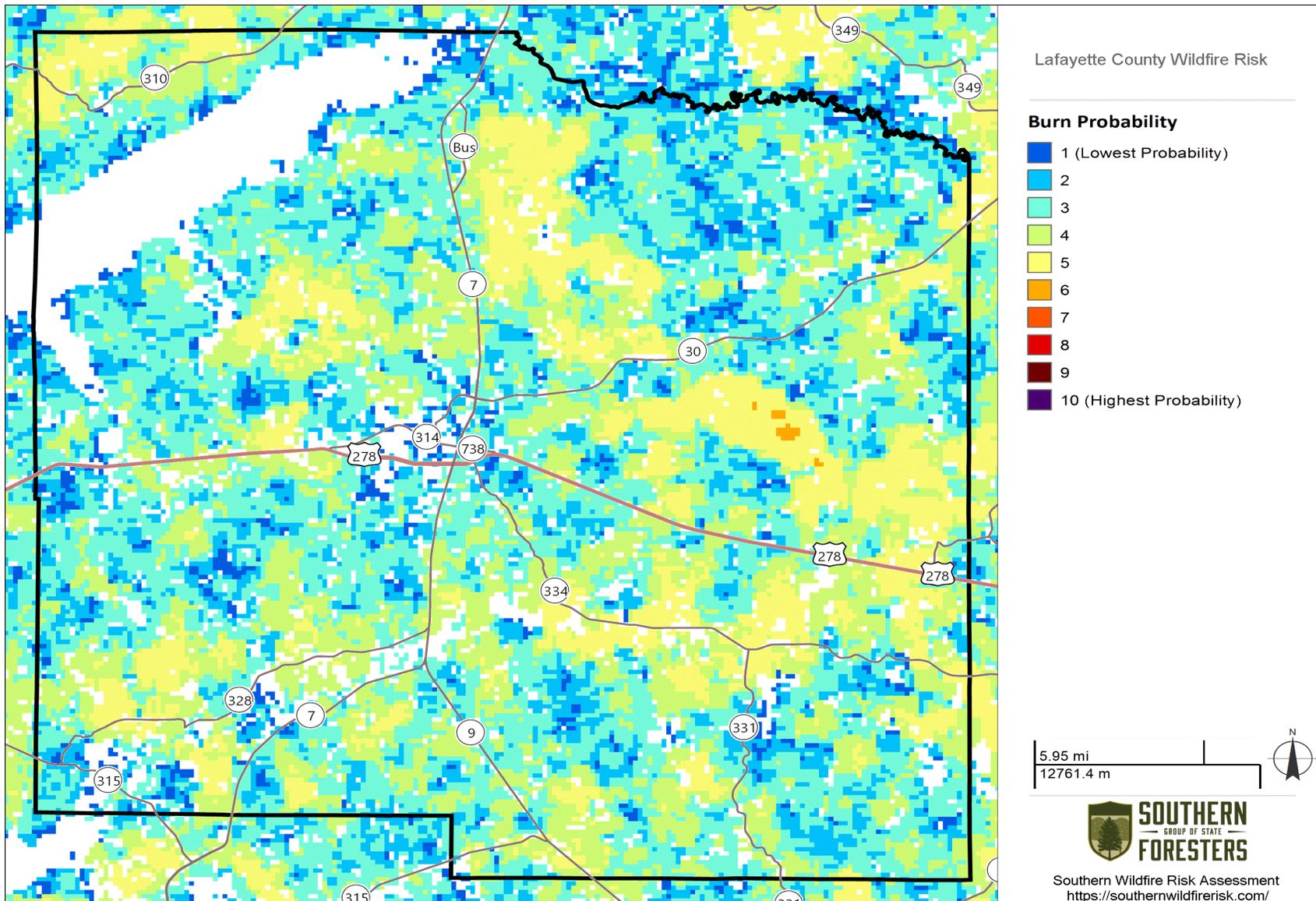
May 1987

Perhaps a worst-case scenario of a local wildfire is in the 1987 “Thacker Mountain Fire.” According to the Mississippi Forestry Commission, the fire began on May 11, 1987, with fire units being dispatched at 9:00 AM. This initial fire burned a total of 200 acres and required 110 firefighters to control. Later, at 1:45 PM, another fire, thought to be spawned by the 9:00 o’clock fire was reported. This fire rapidly spread into one of the largest in the area in recent history. Mississippi Forestry Commission records indicate that this second fire burned a total of 1,493 acres of state or private forest and 45 acres of state or private non-forest land. This fire required 24 state firefighters and 200 other firefighters from the Federal government, city and county firefighters, as well as firefighting personnel from private industry. These two fires burned a total of 1,783 acres. Fortunately, this area of the county was not heavily populated and damage to the built environment was small. This fire does indicate that wildfires of significant size can develop under the right conditions and considerable resources are required to control them.

PROBABILITY OF FUTURE OCCURRENCES

Wildfire events will be an ongoing occurrence in Lafayette County. **Figure D.5** shows that there is some probability a wildfire will occur throughout the county. However, the likelihood of wildfires increases during drought cycles and abnormally dry conditions. Fires are likely to stay small in size but could increase due to local climate and ground conditions. Dry, windy conditions with an accumulation of forest floor fuel (potentially due to ice storms or lack of fire) could create conditions for a large fire that spreads quickly. It should also be noted that some areas do vary somewhat in risk. For example, highly developed areas are less susceptible unless they are located near the urban-wildland boundary. The risk will also vary due to assets. Areas in the urban-wildland interface will have much more property at risk, resulting in increased vulnerability and need to mitigate compared to rural, mainly forested areas. The probability assigned to Lafayette County for future wildfire events is highly likely (100 percent annual probability).

Figure D.5: BURN PROBABILITY IN LAFAYETTE COUNTY



Source: Southern Wildfire Risk Assessment

GEOLOGIC HAZARDS

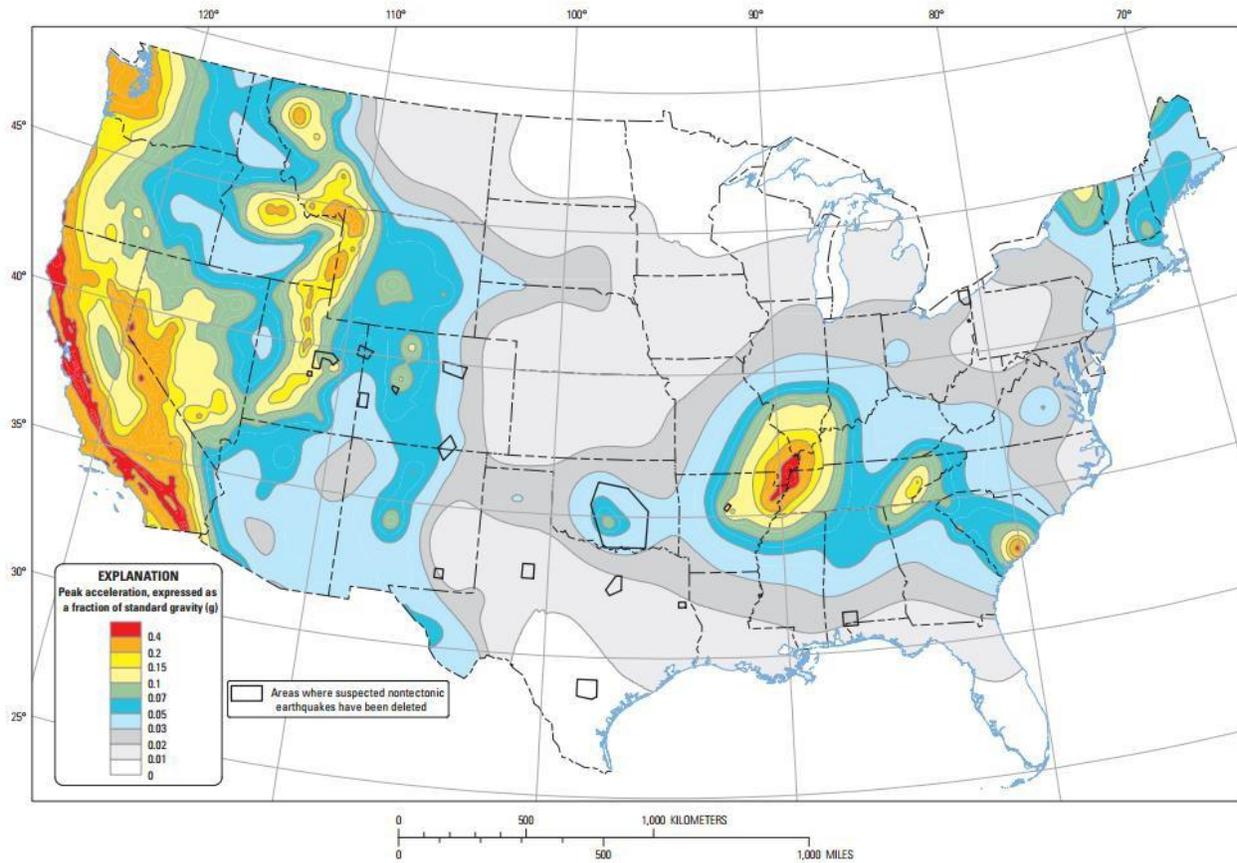
D.2.7 Earthquake

LOCATION AND SPATIAL EXTENT

Figure D.6 shows the intensity level associated with Lafayette County, based on the national USGS map of peak acceleration with 10 percent probability of exceedance in 50 years. It is the probability that ground motion will reach a certain level during an earthquake. The data show peak horizontal ground acceleration (the fastest measured change in speed, for a particle at ground level that is moving horizontally due to an earthquake) with a 10 percent probability of exceedance in 50 years. The map was compiled by the U.S. Geological Survey (USGS) Geologic Hazards Team, which conducts global investigations of earthquake, geomagnetic, and landslide hazards. According to this map, Lafayette County lies within an approximate zone of level “7” to “15” ground acceleration. This indicates that the county exists within an area of moderate seismic risk.

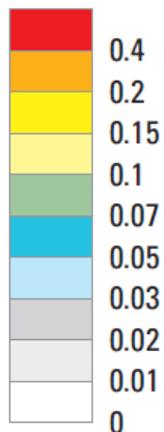
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Figure D.6: PEAK ACCELERATION WITH 10 PERCENT PROBABILITY OF EXCEEDANCE IN 50 YEARS



Ten-percent probability of exceedance in 50 years map of peak ground acceleration

EXPLANATION
Peak acceleration, expressed as a fraction of standard gravity (g)



Areas where suspected nontectonic earthquakes have been deleted

Source: United States Geological Survey, 2014

HISTORICAL OCCURRENCES

At least 14 earthquakes are known to have affected Lafayette County since 1886. The strongest of these measured a VI on the Modified Mercalli Intensity (MMI) scale. **Table D.13** provides a summary of earthquake events reported by the National Geophysical Data Center between 1638 and 1985. **Table D.14** presents a detailed occurrence of each event including the date, distance for the epicenter, magnitude and Modified Mercalli Intensity (if known).⁸

No earthquakes have occurred in the planning area since the last plan update. This was also confirmed during planning meetings with participants.

Table D.13: SUMMARY OF SEISMIC ACTIVITY IN LAFAYETTE COUNTY

Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
Abbeville	3	VI	< 5.4
Oxford	5	V	< 4.8
Taylor	2	V	< 4.8
Unincorporated Area	4	V	< 4.8
LAFAYETTE COUNTY TOTAL	14	VI (strong)	< 5.4

Source: National Geophysical Data Center

Table D.14: SIGNIFICANT SEISMIC EVENTS IN LAFAYETTE COUNTY (1638 -1985)

Location	Date	Epicentral Distance	Magnitude	MMI*
Abbeville				
Abbeville	12/17/1931	52.0 km	Unknown	IV
Abbeville	11/17/1970	159.0 km	3.6	V
Abbeville	3/25/1976	150.0 km	4.9	VI
Oxford				
Oxford	9/1/1886	895.0 km	Unknown	IV
Oxford	12/17/1931	38.0 km	Unknown	IV
Oxford	6/29/1967	152.0 km	3.4	III
Oxford	11/9/1968	414.0 km	5.3	IV
Oxford	3/25/1976	162.0 km	4.9	V
Taylor				
Taylor	12/17/1931	26.0 km	Unknown	V
Taylor	3/25/1976	167.0 km	4.9	V
Unincorporated Area				
University	6/4/1967	149.0 km	3.8	III
University	11/9/1968	416.0 km	5.3	IV
Paris	3/25/1976	182.0 km	4.9	IV
Tula	3/25/1976	182.0 km	4.9	V

Source: National Geophysical Data Center

*MMI based on intensity felt at location of epicenter

⁸ Due to reporting mechanisms, not all earthquakes events were recorded during this time. Furthermore, some are missing data, such as the epicenter location, due to a lack of widely used technology. In these instances, a value of “unknown” is reported.

PROBABILITY OF FUTURE OCCURRENCES

The probability of significant, damaging earthquake events affecting Lafayette County is unlikely. However, it is possible that future earthquakes resulting in light to moderate perceived shaking and damages ranging from none to very light will affect the county. The annual probability level for the county is estimated to be between 1 and 50 percent (possible).

D.2.8 Expansive Soils

LOCATION AND SPATIAL EXTENT

Much of Lafayette County is located in an area where the soil is substantially clay, causing a shrink and swell effect depending on the current conditions. Indeed, much of the area underlain by calcareous clay which, when combined with sand and marl, is highly susceptible to expansion when wet and shrinking when dry.

Due to the amount of clay minerals present in Lafayette County, expansive soils present a threat to the county. Areas underlain by soils with swelling potential are shown in **Figure D.7**. The areas in red contain abundant clay having high swelling potential, the areas in blue are underlain with generally less than 50 percent clay having high swelling potential, the areas in green are underlain with generally less than 50 percent clay having slight to moderate swelling potential, and the areas in brown contain little or no swelling clays.

Figure D.7: SWELLING CLAYS IN MISSISSIPPI



Source: United States Geological Survey

HISTORICAL OCCURRENCES

Although there is a relatively substantial potential for expansive soils to impact the county, diligent records of past events have not been kept. Nevertheless, local officials have pointed to several localized incidents that have occurred in the region in the past and had impacts on infrastructure as well as individual homeowners. Exact locational information could not be provided in most cases, but this knowledge of historic events occurring is evidence that there is some cause for concern for future events.

PROBABILITY OF FUTURE OCCURRENCES

Given the potential for future impacts based on mapping and past historical events, it is likely (between 50 and 100 percent annual probability) that future expansive soil events will occur.

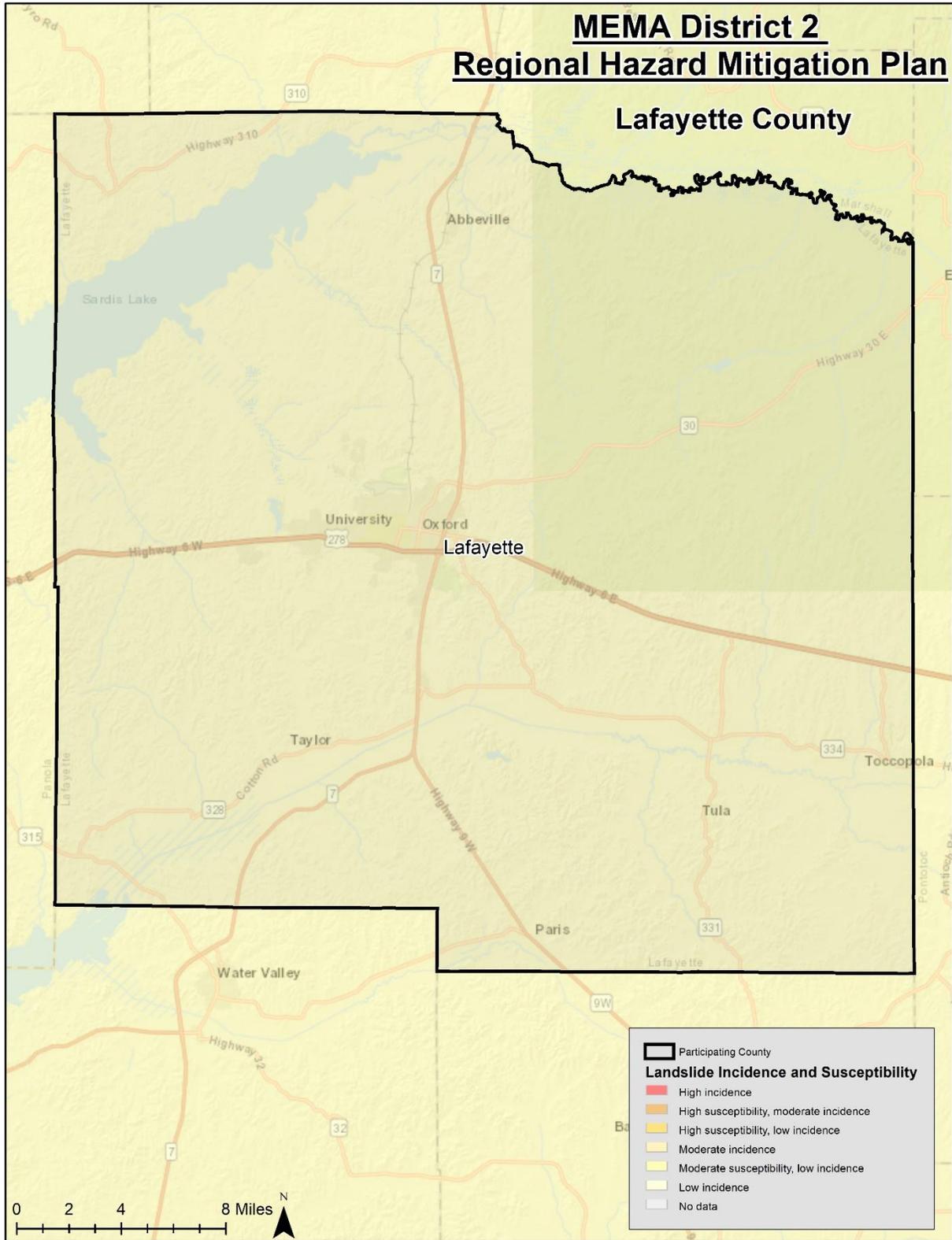
D.2.9 Landslide

LOCATION AND SPATIAL EXTENT

Landslides occur along steep slopes when the pull of gravity can no longer be resisted (often due to heavy rain). Human development can also exacerbate risk by building on previously undevelopable steep slopes. Landslides are possible throughout Lafayette County, though the risk is relatively low.

According to **Figure D.8** below, the entire county falls under a low incidence area. This indicates that less than 1.5 percent of the area is involved in landsliding.

Figure D.8: LANDSLIDE SUSCEPTIBILITY AND INCIDENCE MAP OF LAFAYETTE COUNTY



ANNEX D: LAFAYETTE COUNTY

Source: United States Geological Survey

HISTORICAL OCCURRENCES

There is no extensive history of landslides in Lafayette County. Landslide events typically occur in isolated areas, but no major landslide events were reported.

PROBABILITY OF FUTURE OCCURRENCES

Based on historical information and the USGS susceptibility index, the probability of future landslide events is unlikely (less than 1 percent probability). The USGS data indicates that all areas in Lafayette County have a low incidence rate and low susceptibility to landsliding activity. Local conditions may become more favorable for landslides due to heavy rain, for example. This would increase the likelihood of occurrence. It should also be noted that some areas in Lafayette County have greater risk than others given factors such as steepness on slope and modification of slopes.

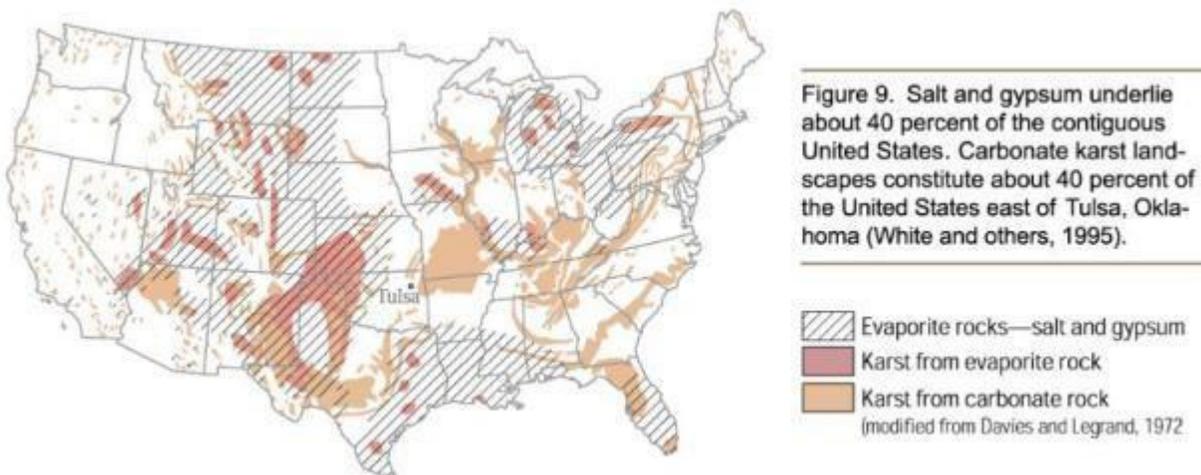
D.2.10 Land Subsidence / Sinkhole

LOCATION AND SPATIAL EXTENT

According to the U.S. Geological Survey (USGS), subsidence affects an estimated 17,000 square miles in 45 states, including Mississippi. Salt and gypsum underlie about 35 to 40 percent of the United States, though in many areas they are buried at great depths.

Figure D.9 shows the location of rock types associated with subsidence in the United States. It indicates that there are areas in the region underlain with karst from carbonate rock.

Figure D.9: MAP OF ROCK TYPES ASSOCIATED WITH SUBSIDENCE IN THE UNITED STATES

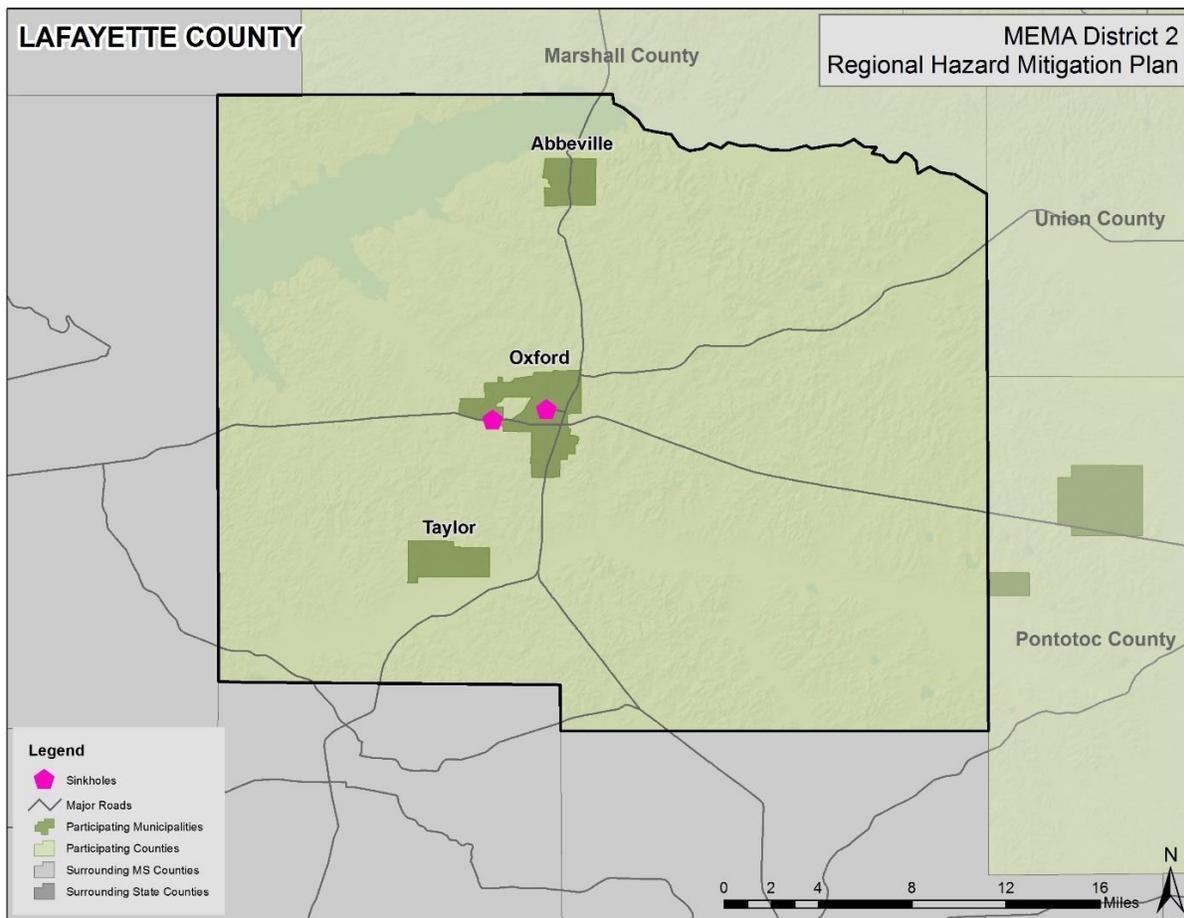


Source: United States Geological Survey

The location of two historical sinkhole events is found in Figure D.10. Although there have been many more incidents of sinkholes in the county. This map demonstrates that sinkholes can occur in populated

areas such as Oxford and have an impact on people and infrastructure.

Figure D.10: MAP OF PREVIOUS SINKHOLE OCCURRENCES IN LAFAYETTE COUNTY



Source: Local Officials

HISTORICAL OCCURRENCES

Although there is no extensive history of land subsidence in Lafayette County, anecdotal evidence of isolated incidents have been reported. Local county officials have noted the impacts from these swings and changes in soil as roads and other infrastructure have experienced large cracks and breaks, causing stops in daily operations and significant costs to local, state, and federal budgets. Often the cost to repair this infrastructure can be in the range of millions of dollars depending on the degree of damage and necessity for quick repairs.

Lafayette County offers several examples of historical incidents of land subsidence and sinkholes that have occurred. One recent incident occurred on April 29, 2015 on Highway 6 in Oxford where a sinkhole formed beneath the road, creating a large hole in the right lane of the eastbound section of the highway. The erosion itself was extensive, reaching across both lanes. This incident caused traffic delays, but could have caused serious injuries and/or fatalities if a vehicle had hit the hole in the road. A photo of the hole can be seen below.



April 29, 2015: Sinkhole on Highway 6 in Oxford

Another example of an historic incident was at Sneed's Ace Hardware on University Drive. Although local officials couldn't recall the exact date, there was a significant impact to the parking lot.

PROBABILITY OF FUTURE OCCURRENCES

The probability of future land subsidence events in the county is possible (between 1 and 50 percent annual probability). The potential for land subsidence may be impacted by local conditions such as heavy rain or extremely dry periods.

WIND-RELATED HAZARDS

D.2.11 Hurricane and Tropical Storm

LOCATION AND SPATIAL EXTENT

Hurricanes and tropical storms threaten the entire Atlantic and Gulf seaboard of the United States. While coastal areas are most directly exposed to the brunt of landfalling storms, their impact is often felt hundreds of miles inland and they can affect Lafayette County. All areas in Lafayette County are equally susceptible to hurricane and tropical storms.

HISTORICAL OCCURRENCES

According to the National Hurricane Center's historical storm track records, 48 hurricane or tropical storm/depression tracks have passed within 75 miles of the MEMA District 2 Region since 1860.⁹ This includes: 1 Category 1 hurricane, 2 Category 4 hurricanes, 1 Category 5 hurricane, 27 tropical storms, and 17 tropical depressions.

A total of 24 tracks passed directly through the region as shown in as show in **Figure D.11**. These events were all tropical storm or tropical depression strength at the time they traversed the region. **Table D.16** provides the date of occurrence, name (if applicable), maximum wind speed (as recorded within 75 miles of the MEMA District 2 Region) and category of the storm based on the Saffir-Simpson Scale for each event.

⁹ These storm track statistics include tropical depressions, tropical storms, and hurricanes. Lesser events may still cause significant local impact in terms of rainfall and high winds

Figure D.11: HISTORICAL HURRICANE STORM TRACKS

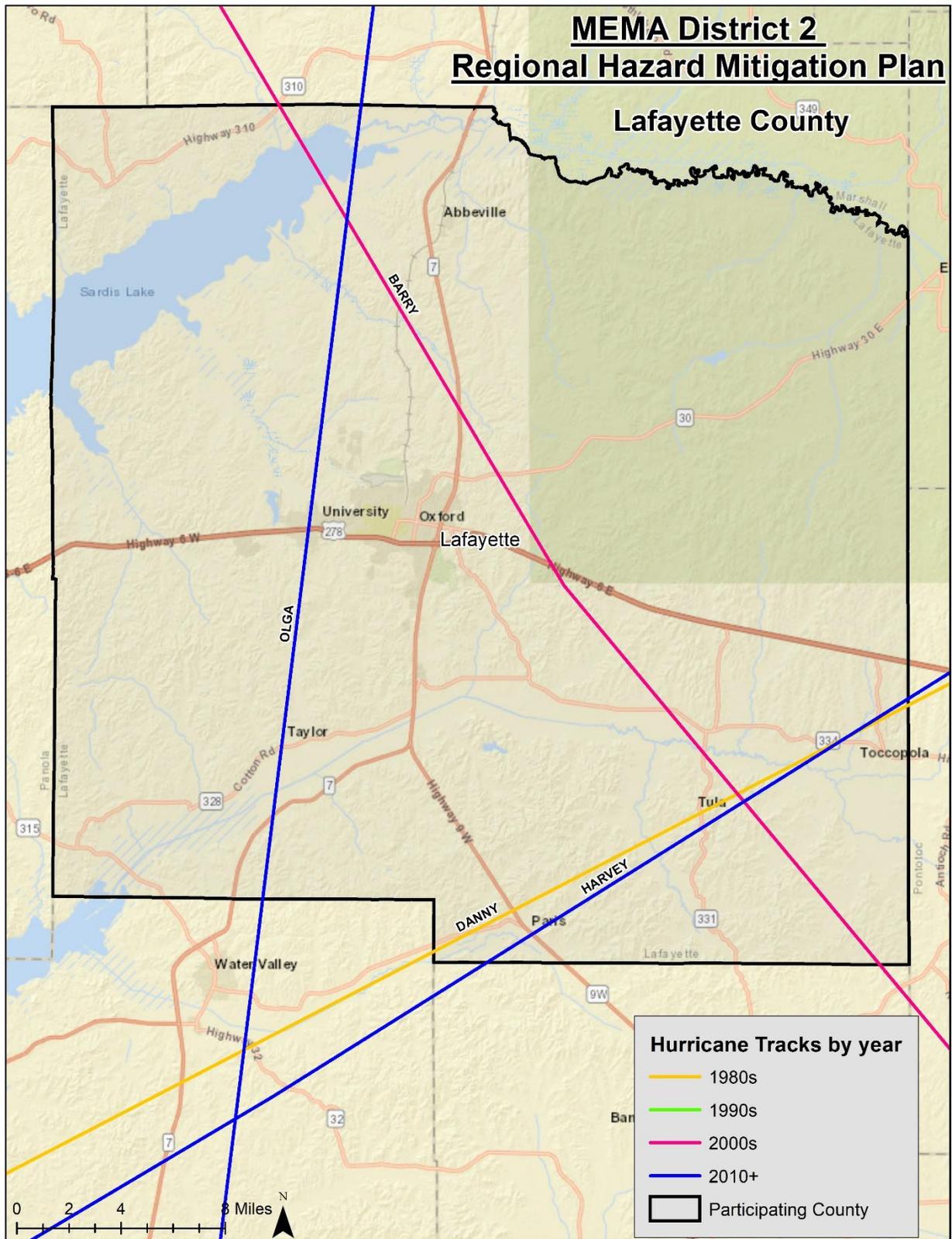


Table D.15: HISTORICAL STORM TRACKS WITHIN 75 MILES OF THE MEMA 2 DISTRICT REGION (1850–2020)

Date of Occurrence	Storm Name	Maximum Wind Speed (knots)	Storm Category
10/3/1860	UNNAMED	40	Tropical Storm
7/13/1872	UNNAMED	30	Tropical Depression
7/7/1891	UNNAMED	30	Tropical Depression
7/8/1891	UNNAMED	25	Tropical Depression
8/20/1888	UNNAMED	60	Tropical Storm
8/28/1890	UNNAMED	35	Tropical Storm
8/29/1881	UNNAMED	40	Tropical Storm
9/2/1879	UNNAMED	40	Tropical Storm
9/1/1880	UNNAMED	30	Tropical Depression
9/9/1893	UNNAMED	35	Tropical Storm
8/16/1901	UNNAMED	35	Tropical Storm
10/10/1905	UNNAMED	30	Tropical Depression
9/28/1906	UNNAMED	40	Tropical Storm
9/15/1912	UNNAMED	35	Tropical Storm
9/30/1915	UNNAMED	50	Tropical Storm
7/7/1916	UNNAMED	40	Tropical Storm
10/19/1916	UNNAMED	45	Tropical Storm
10/18/1923	UNNAMED	40	Tropical Storm
9/2/1932	UNNAMED	35	Tropical Storm
9/20/1932	UNNAMED	35	Tropical Storm
6/17/1934	UNNAMED	35	Tropical Storm
6/17/1939	UNNAMED	25	Tropical Depression
9/5/1948	UNNAMED	40	Tropical Storm
9/5/1949	UNNAMED	40	Tropical Storm
8/31/1950	BAKER	35	Tropical Storm
9/8/1950	EASY	25	Tropical Depression
6/28/1957	AUDREY	40	Tropical Storm
9/16/1960	ETHEL	30	Tropical Depression
8/18/1969	CAMILLE	50	Tropical Storm
7/12/1979	BOB	30	Tropical Depression
9/13/1979	FREDERIC	65	Category 1
8/16/1985	DANNY	30	Tropical Depression
8/27/1992	ANDREW	30	Tropical Depression
8/4/1995	ERIN	20	Tropical Depression
8/7/2001	BARRY	15	Tropical Depression
9/27/2002	ISIDORE	20	Tropical Depression
6/12/2005	ARLENE	25	Tropical Depression
7/11/2005	DENNIS	30	Tropical Depression
8/30/2005	KATRINA	50	Tropical Storm
9/12/2007	HUMBERTO	20	Tropical Depression
8/15/2008	FAY	60	Tropical Storm
8/16/2009	CLAUDETTE	50	Tropical Storm
6/20/2017	CINDY	60	Tropical Storm
8/17/2017	HARVEY	125	Category 4
8/30/2017	IRMA	160	Category 5
5/25/2018	ALBERTO	50	Tropical Storm
9/17/2020	BETA	50	Tropical Storm
10/4/2020	DELTA	120	Category 4

Source: National Hurricane Center

Federal records indicate that one disaster declaration was made in 2005 (Hurricane Katrina) in Lafayette County. Hurricane and tropical storm events can cause substantial damage in the area due to high winds and flooding.

Flooding and high winds from hurricanes and tropical storms can cause damage throughout the county. Anecdotes are available from NCEI for the major storms that have impacted the county as found below:

Hurricane Katrina – August 29, 2005

Hurricane Katrina had weakened to tropical storm strength when it reached north Mississippi. An electrical transformer was blown down on a house in Oxford (Lafayette County). Some awnings were ripped off in Ripley (Tippah County). Several buildings were damaged in Calhoun County due to the winds. Numerous trees and power lines along with some telephone poles were blown down. Some trees fell on cars, mobile homes and apartment buildings. Four to eight inches of rain fell in some parts of northeast Mississippi producing some flash flooding. Overall, at least 100,000 customers lost power.

PROBABILITY OF FUTURE OCCURRENCES

Given the inland location of the county, it is more likely to be affected by remnants of hurricane and tropical storm systems (as opposed to a major hurricane) which may result in flooding or high winds. The probability of being impacted is less than coastal areas, but still remains a real threat to Lafayette County due to induced events like flooding. Based on historical evidence, the probability level of future occurrence is likely (between 50 and 100 percent annual probability). Given the regional nature of the hazard, all areas in the county are equally exposed to this hazard. However, when the county is impacted, the damage could be catastrophic, threatening lives and property throughout the planning area.

D.2.12 Thunderstorm (wind, hail, lightning)

LOCATION AND SPATIAL EXTENT

Thunderstorm / High Wind

A thunderstorm event is an atmospheric hazard, and thus has no geographic boundaries. It is typically a widespread event that can occur in all regions of the United States. However, thunderstorms are most common in the central and southern states because atmospheric conditions in those regions are favorable for generating these powerful storms. It is assumed that Lafayette County has uniform exposure to an event and the spatial extent of an impact could be large.

The following Beaufort scale is an empirical measure for the intensity of the wind associated with windstorms.

Table D16A: Beaufort Wind Scale

ANNEX D: LAFAYETTE COUNTY

Beaufort Scale					
NUMBER	WIND SPEED (MPH)	DESCRIPTION	WAVE HEIGHT (FT)	SEA CONDITIONS	LAND CONDITIONS
0	<1	Calm	0	Flat.	Calm. Smoke rises vertically.
1	1-3	Light air	0.33	Ripples without crests.	Wind motion visible in smoke.
2	3-7	Light breeze	0.66	Small wavelets.	Wind felt on exposed skin. Leaves rustle.
3	8-12	Gentle breeze	2	Large wavelets.	Leaves and smaller twigs in constant motion.
4	13-17	Moderate breeze	3.3	Small waves.	Dust and loose paper rise. Small branches begin to move.
5	18-24	Fresh breeze	6.6	Moderate (1.2 m) longer waves. Some foam and spray.	Small trees sway.
6	25-30	Strong breeze	9.9	Large waves with foam crests and some spray.	Large branches in motion. Whistling heard in overhead wires. Umbrella use difficult.
7	31-38	High wind, Moderate Gale, Near Gale	13.1	Sea heaps up and foam begins to streak.	Whole trees in motion. Effort needed to walk against the wind.
8	39-46	Fresh Gale	18	Moderately high waves with breaking crests forming spindrift. Streaks of foam.	Twigs broken from trees. Cars veer on road.
9	47-54	Strong Gale	23	High waves (6-7 m) with dense foam. Wave crests start to roll over. Considerable spray.	Larger branches break off trees, and some small trees blow over. Construction/temporary signs and barricades blow over. Damage to circus tents and canopies.
10	55-63	Whole Gale/Storm	29.5	Very high waves. The sea surface is white and there is considerable tumbling.	Trees uprooted. Considerable structural damage.

ANNEX D: LAFAYETTE COUNTY

Beaufort Scale					
NUMBER	WIND SPEED (MPH)	DESCRIPTION	WAVE HEIGHT (FT)	SEA CONDITIONS	LAND CONDITIONS
11	64-72	Violent storm	37.7	Exceptionally high waves.	Widespread vegetation and structural damage.
12	≥73	Hurricane-force	≥46	Huge waves. Sea is completely white with foam and spray. Air is filled with driving	Massive and widespread damage to structures.

Source: www.spc.noaa.gov

Although wind damage associated with thunderstorms is normally minor, the extent to which MEMA District 2 could be affected by high winds is not insignificant. As an example of the intensity of winds that MEMA District 2 may experience, a thunderstorm on record in Nettleton in Lee County indicated damage associated with 70 kts, which equates to 80 mile per hour straight line winds and a Number 12 on the Beaufort Scale. In this scenario, building damage would be significant, power lines downed, trees uprooted, and loss of life possible. This same category of thunderstorm wind could also happen in Lafayette County. Historically, windstorms in the region fall within the 35-50kts, which equates to 40-57 miles per hour and a Number 8-10 on the Beaufort Scale.

Hailstorm

Hailstorms frequently accompany thunderstorms, so their locations and spatial extents coincide. It is assumed that Lafayette County is uniformly exposed to severe thunderstorms; therefore, all areas of the county are equally exposed to hail which may be produced by such storms.

Lightning

Lightning occurs randomly, therefore it is impossible to predict where and with what frequency it will strike. It is assumed that all of Lafayette County is uniformly exposed to lightning.

HISTORICAL OCCURRENCES

Thunderstorm / High Wind

Severe storms were at least partially responsible for eight disaster declarations in Lafayette County in 1971, twice in 2001, 2002, 2010 2011, 2019, and 2020. According to NCEI, there have been 135 reported thunderstorm and high wind events since 1964 in Lafayette County. There were also reports of one fatality and two injuries. These events caused almost \$935,000 in damages. **Table D.16** summarizes this information.

Table D.16B: SUMMARY OF THUNDERSTORM / HIGH WIND OCCURRENCES IN LAFAYETTE COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
LAFAYETTE COUNTY TOTAL	135	1/2	\$935,100

HISTORICAL THUNDERSTORM / HIGH WIND OCCURRENCES IN LAFAYETTE COUNTY

November 10, 2002

Thunderstorm winds across the county resulted in some trees blown down on the University of Mississippi campus. One house was destroyed by a fire started when a fallen tree broke a gas line and a downed power line produced a spark. Some of the trees fell on cars. Trees and power lines were blown across much of the remainder of the county. The resulting property damage amounted to \$100,000.

March 9, 2006

The National Weather Service issued a Severe Thunderstorm Watch for a line of severe thunderstorms crossing through Mississippi into Alabama. Maximum wind gusts were determined to be around 60 knots. Straight line wind gusts were estimated to be between 58 and 80 miles an hour. In Lafayette County, several businesses were damaged. About a half dozen homes sustained significant damage. One family was trapped in their mobile home. Numerous trees were blown down. Over \$150,000 worth of damage was sustained.

August 2nd, 2008

Diurnal Convection fired up across portions Northeast Mississippi during the late afternoon and evening hours of August 2nd, 2008. Some of the thunderstorms produced flash flooding, large hail and damaging winds. The storms eventually died off but re-fired over Northwest Mississippi during the late afternoon and early evening hours of August 3rd, 2008. Some of these storms produced damaging winds as well. Straight-line winds knocked several trees and power lines down across Southern Lafayette County caused \$30,000 in damage.

August 31, 2017

The remnants of Harvey tracked across the Mid-South with heavy rain and gusty winds. There were several reports of flash flooding and a few tornadoes. Strong winds knocked down a tree that fell on the electric meter of a church on County Road 435 southwest of Oxford. This resulted in a fire that destroyed the church and caused \$100,000 in damage.

Hailstorm

According to the National Centers for Environmental Information, 90 recorded hailstorm events have affected Lafayette County since 1962.15 Table D.19 is a summary of the hail events in Lafayette County. **Table D.17** provides detailed information about each event that occurred in the county. In all, hail occurrences resulted in approximately \$39,750 in property damages. Hail ranged in diameter from 0.75 inches to 5.0 inches. It should be noted that hail is notorious for causing substantial damage to cars, roofs, and other areas of the built environment that may not be reported to the National Centers for Environmental Information. Therefore, it is likely that damages are greater than the reported value.

Table D.17: SUMMARY OF HAIL OCCURRENCES IN LAFAYETTE COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
LAFAYETTE COUNTY TOTAL	90	0/0	\$38,750

Source: National Centers for Environmental Information

HISTORICAL HAIL OCCURRENCES IN LAFAYETTE COUNTY

April 10th, 1962

Hail between 2 and 5 inches covered a four-square mile area, inflicting heavy damage to roof tops, automobiles, greenhouses, windows, roads, crops, and livestock. No injuries or fatalities were reported. This 5-inch hail remains the largest sized hail to fall in Mississippi.

April 7th, 2006

A series of supercell thunderstorms swept through Mississippi during April 6 and 7, 2006. The storm resulted in tornado touchdowns, large hail up to the size of softballs, and straight-line wind gusts in excess of 60 mph in multiple states. In Lafayette County, the largest hail to fall was measured at 1.75 inches in diameter and caused \$10,000 in damage.

Lightning

According to the National Centers for Environmental Information, there have been ten recorded lightning events in Lafayette County since 1997. These events resulted in more than \$630,000 in damages, as listed in summary **Table D.18**. Detailed information on historical lightning events can be found in **Table D.19**.

It is certain that more than nine events have impacted the county. Many of the reported events are those that cause damage, and it should be expected that damages are likely much higher for this hazard than what is reported.

Table D.18: SUMMARY OF LIGHTNING OCCURRENCES IN LAFAYETTE COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Abbeville	1	0/0	\$50,000
Oxford	7	0/0	\$560,000
Taylor	1	0/0	\$5,000
Unincorporated Area	1	0/0	\$15,000
LAFAYETTE COUNTY TOTAL	10	0/0	\$630,000

Source: National Centers for Environmental Information

Table D.19: HISTORICAL LIGHTNING OCCURRENCES IN LAFAYETTE COUNTY

Location	Date	Deaths / Injuries	Property Damage*	Details
Abbeville				
ABBEVILLE	8/22/2017	0/0	\$50,000	A fire was caused by lightning at a building on Long
Oxford				
OXFORD	7/9/1997	0/0	\$50,000	Lightning struck a house causing a fire which burnt the house to the ground.
OXFORD	7/23/1998	0/0	\$50,000	Two fires sparked by lightning within one block of each other occurred in a 40 minute time span. The two fires forced the evacuation of 20 apartments and three businesses in the area.
OXFORD	4/12/2001	0/0	\$75,000	A home was destroyed by a fire started by lightning.
OXFORD	10/19/2004	0/0	\$5,000	A trailer was destroyed by a fire started by lightning.
OXFORD	1/22/2006	0/0	\$10,000	A house was damaged by a fire started by lightning.
OXFORD	6/4/2012	0/0	\$100,000	Three structures were struck by lightning. One structure was a total loss.
OXFORD	9/2/2012	0/0	\$250,000	Lightning struck a house in Oxford causing a fire. The house was destroyed as a result of the fire.
Taylor				
TAYLOR	11/23/2004	0/0	\$5,000	A barn was damaged by a fire started by lightning.
Unincorporated Area				
(UOX)OXFORD ARPT	7/21/2011	0/0	\$15,000	Over the course of 40-minute span, three houses were struck by lightning in the Oxford area. Each strike caused a fire although minimal damage occurred as a result.

*All damage may not have been reported.

Source: National Centers for Environmental Information

PROBABILITY OF FUTURE OCCURRENCES

Thunderstorm / High Wind

Given the high number of previous events, it is certain that thunderstorm events, including straight-line wind events, will occur in the future. This results in a probability level of highly likely (100 percent annual probability) for the entire county.

Hailstorm

Based on historical occurrence information, it is assumed that the probability of future hail occurrences is highly likely (100 percent annual probability). Since hail is an atmospheric hazard, it is assumed that Lafayette County has equal exposure to this hazard. It can be expected that future hail events will continue to cause minor damage to property and vehicles throughout the county.

Lightning

Although there was not a high number of historical lightning events reported in Lafayette County via NCEI data, it is a regular occurrence accompanied by thunderstorms. In fact, lightning events will assuredly happen on an annual basis, though not all events will cause damage. According to Vaisala's U.S. National Lightning Detection Network (NLDN), Prentiss County is located in an area of the country that experienced an average of 4 to 6 cloud-to-ground lightning flashes per square kilometer per year between 2015 and 2019.¹⁰ Therefore, the probability of future events is highly likely (100 percent annual probability). It can

¹⁰ Vaisala's Annual Lightning Report – 2020. Retrieved on 9.8.2021 from:

be expected that future lightning events will continue to threaten life and cause minor property damages throughout the county.

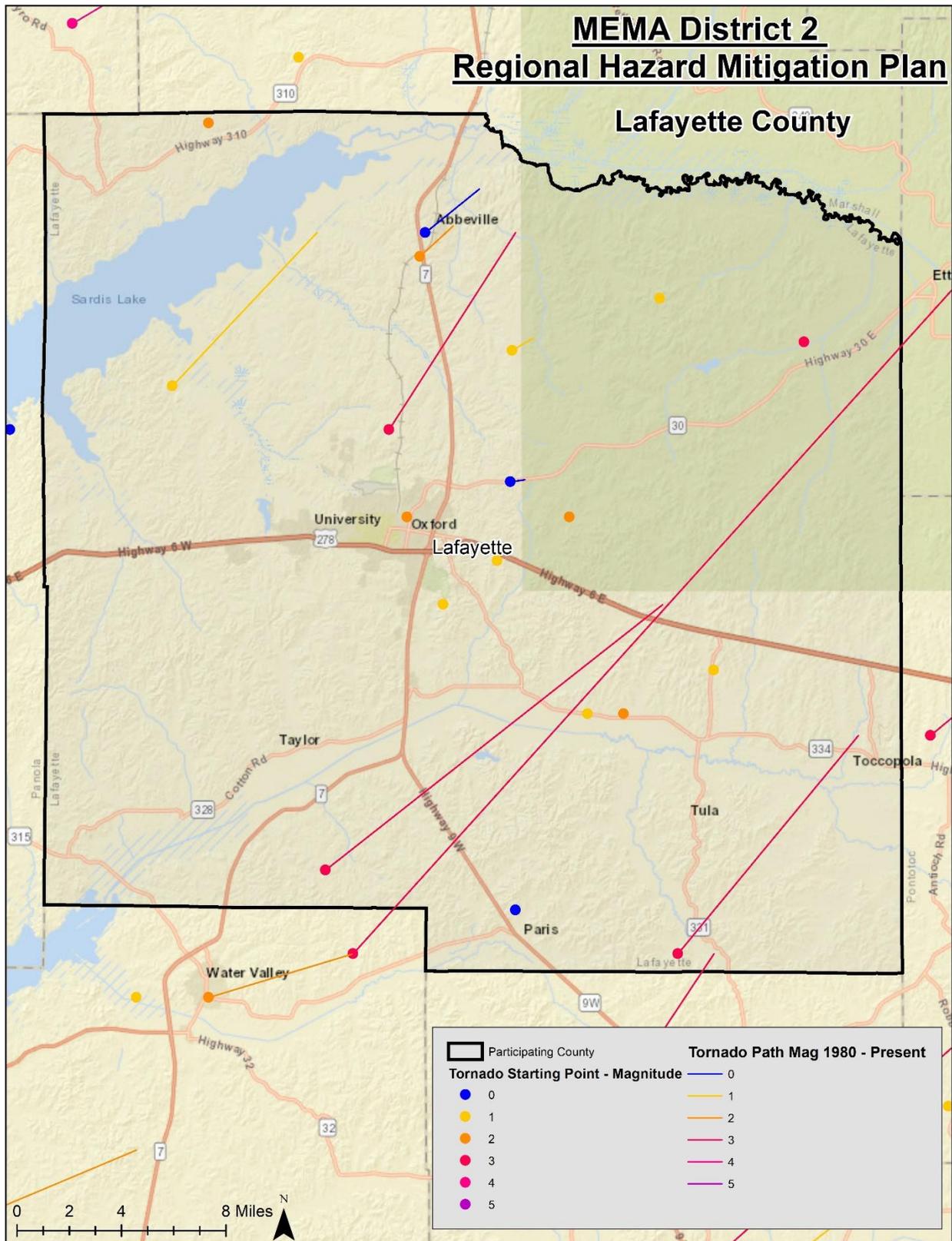
D.2.13 Tornado

LOCATION AND SPATIAL EXTENT

Tornadoes occur throughout the state of Mississippi, and thus in Lafayette County. Tornadoes typically impact a relatively small area, but damage may be extensive. Event locations are completely random and it is not possible to predict specific areas that are more susceptible to tornado strikes over time. Therefore, it is assumed that Lafayette County is uniformly exposed to this hazard. With that in mind, **Figure D.12** shows tornado track data for many of the major tornado events that have impacted the county. While no definitive pattern emerges from this data, some areas that have been impacted in the past may be potentially more susceptible in the future.

DRAFT

Figure D.12: HISTORICAL TORNADO TRACKS IN LAFAYETTE COUNTY



HISTORICAL OCCURRENCES

Tornadoes were at least partially responsible for ten disaster declarations in Lafayette County in 1971, 1973, 1984, twice in 2001, 2002, 2010 2011, 2019 and 2020. According to the National Centers for Environmental Information, there have been a total of 23 recorded tornado events in Lafayette County since 1952 (**Table D.20**), resulting in over \$99.0 million in property damages.¹¹ In addition, 1 fatality and 33 injuries were reported. The magnitude of these tornadoes ranges from F1 to F3 and EF0 to EF3 in intensity, although an EF5 event is possible.

Table D.20: SUMMARY OF TORNADO OCCURRENCES IN LAFAYETTE COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
LAFAYETTE COUNTY TOTAL	23	1/33	\$62,367,000

Source: National Centers for Environmental Information

HISTORICAL TORNADO IMPACTS IN LAFAYETTE COUNTY

April 21st, 1984

Strong thunderstorms spawned 7 tornadoes in northern Mississippi and southwest Tennessee. Of the 7 tornadoes, 2 were F3, 1 was F2, and the remaining 4 were F1. One of the F3 tornadoes touched down briefly in a wooded area in northeast Lafayette County. Only timber damage was found. Three people were injured and 25 million dollars in damage was found.

February 5th, 2008

A strong low pressure system tracked from Northern Arkansas into Southern Missouri during the evening hours of February 5th, 2008. Supercells developed out ahead of the system during the late afternoon into the early evening. The storms produced tornadoes, large hail and damaging winds. As the supercells moved east during the evening, a cold front moved into North Mississippi. A squall line developed along the front and produced another round of large hail and damaging winds. The front continued to push east into the overnight hours. A tornado touched down in the Lafayette County Industrial Park on County Road 166 north of Oxford. The tornado destroyed the Ability Works Incorporated plant and tracked northeast hitting a county owned speculation warehouse and the Caterpillar Plant. The Elliot Lumber Company was also heavily damaged. The tornado then tracked northeast crossing County Road 101 near the County Road 104 intersection. In this area the Harvest Ministries Church, a mobile home and a veterinary clinic were all destroyed. Tree damage was noted as the tornado crossed Highway 7. The tornado continued northeast inflicting heavy damage along County Road 291 where 12 homes and mobile homes were destroyed. The tornado then damaged 2,500 acres of the Holly Springs National Forest before lifting about 2 miles east of Abbeville. A total of about 70 structures were damaged or destroyed. Eleven homes were destroyed and about 15 suffered heavy damage. About 10 mobile homes were destroyed or heavily damaged. Nine commercial structures were destroyed with another 6 suffering heavy damage. The rest of the structures had minor to moderate damage. Over \$35 million dollars was sustained and 14 people were injured.

May 2nd, 2010

An upper level disturbance slowly approached the Mid-South during the evening of April 30th, 2010 as a cold front became stationary to the west. This pattern remained in place through the evening hours of May 2nd, 2010. South to southwest winds pumped warm moist air from the Gulf of Mexico and created a very unstable

¹¹ These tornado events are only inclusive of those reported by the National Centers for Environmental Information (NCEI) from 1950 through April 2020. It is likely that additional tornadoes have occurred in Lafayette County.

ANNEX D: LAFAYETTE COUNTY

atmosphere. Showers and thunderstorms developed in association with the front during the early evening hours and moved east into Eastern Arkansas shortly before midnight. Additional thunderstorms occurred in association with the upper level disturbance. Due to the unstable atmosphere, thunderstorms quickly became severe producing large hail, damaging winds, and flash flooding. The severe weather evolved into an outbreak by May 1st and 2nd. Historic rainfall and flash flooding in addition to large hail and damaging winds occurred during the early morning hours of May 1st with several tornadoes occurring during the afternoon hours of May 1st to early morning hours of May 2nd. A tornado touched down just southwest of Abbeville and tracked northeast hitting the south side of Abbeville. The tornado lifted along County Road 215. One fatality occurred when a single-family home was destroyed. A double wide mobile home was also destroyed. Three other homes sustained major damage. Numerous trees were also uprooted along the path. The event caused the death of one 45-year-old woman as well as \$250,000 in damage.

PROBABILITY OF FUTURE OCCURRENCES

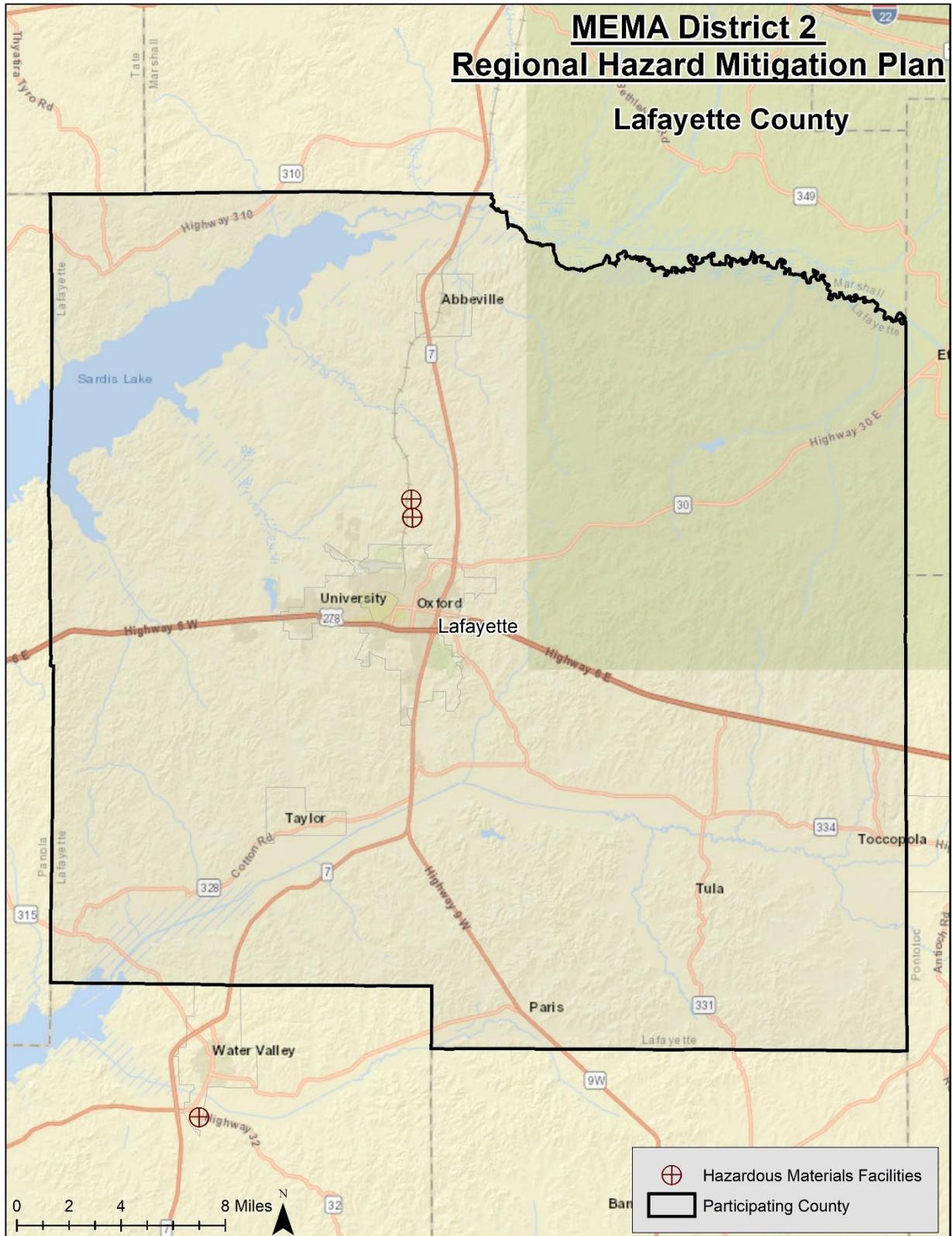
According to historical information, tornado events pose a significant threat to Lafayette County. The probability of future tornado occurrences affecting Lafayette County is likely (between 50 and 100 percent annual probability).

D.2.14 Hazardous Materials Incidents

LOCATION AND SPATIAL EXTENT

Lafayette County has two TRI sites. These sites are shown in **Figure D.13**.

Figure D.13: TOXIC RELEASE INVENTORY (TRI) SITES IN LAFAYETTE COUNTY



Source: Environmental Protection Agency

In addition to “fixed” hazardous materials locations, hazardous materials may also impact the county via roadways and rail. Many roads in the county are subject to hazardous materials transport and all roads that permit hazardous material transport are considered potentially at risk to an incident.

HISTORICAL OCCURRENCES

There have been a total of four recorded HAZMAT incidents in Lafayette County since 1975 (Table D.21). These events did not result in any property damage. Table D.22 presents detailed information on historic HAZMAT incidents in Lafayette County as reported by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA).

Table D.21: SUMMARY OF HAZMAT INCIDENTS IN LAFAYETTE COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2015)
Abbeville	1	0/0	\$0
Oxford	3	0/0	\$0
Taylor	0	0/0	\$0
Unincorporated Area	0	0/0	\$0
LAFAYETTE COUNTY TOTAL	4	0/0	\$0

Source: United States Department of Transportation Pipeline and Hazardous Materials Safety Administration

Table D.22: HAZMAT INCIDENTS IN LAFAYETTE COUNTY

Report Number	Date	City	Mode	Serious Incident?	Fatalities/ Injuries	Damages (\$)*	Quantity Released
Abbeville							
X-2009100281	9/29/2009	ABBEVILLE	Highway	No	0/0	\$0	0.125 LGA
Oxford							
I-1975120179	11/17/1975	OXFORD	Highway	No	0/0	\$0	0
I-1984080192	8/1/1984	OXFORD	Highway	No	0/0	\$0	0.042 LGA
I-1986040386	4/1/1986	UNIVERSITY OF MISSISSIPPI	Highway	No	0/0	\$0	0.031 LGA
Taylor							
None Reported	--	--	--	--	--	--	--
Unincorporated Area							
None Reported	--	--	--	--	--	--	--

*All damage may not have been reported.

Source: United States Department of Transportation Pipeline and Hazardous Materials Safety Administration

PROBABILITY OF FUTURE OCCURRENCES

Given the location of three toxic release inventory sites in Lafayette County and prior roadway incidents, it is likely (between 50 and 100 percent annual probability) that a hazardous material incident may occur in the county. County and town officials are mindful of this possibility and take precautions to prevent such an event from occurring. Furthermore, there are detailed plans in place to respond to an occurrence.

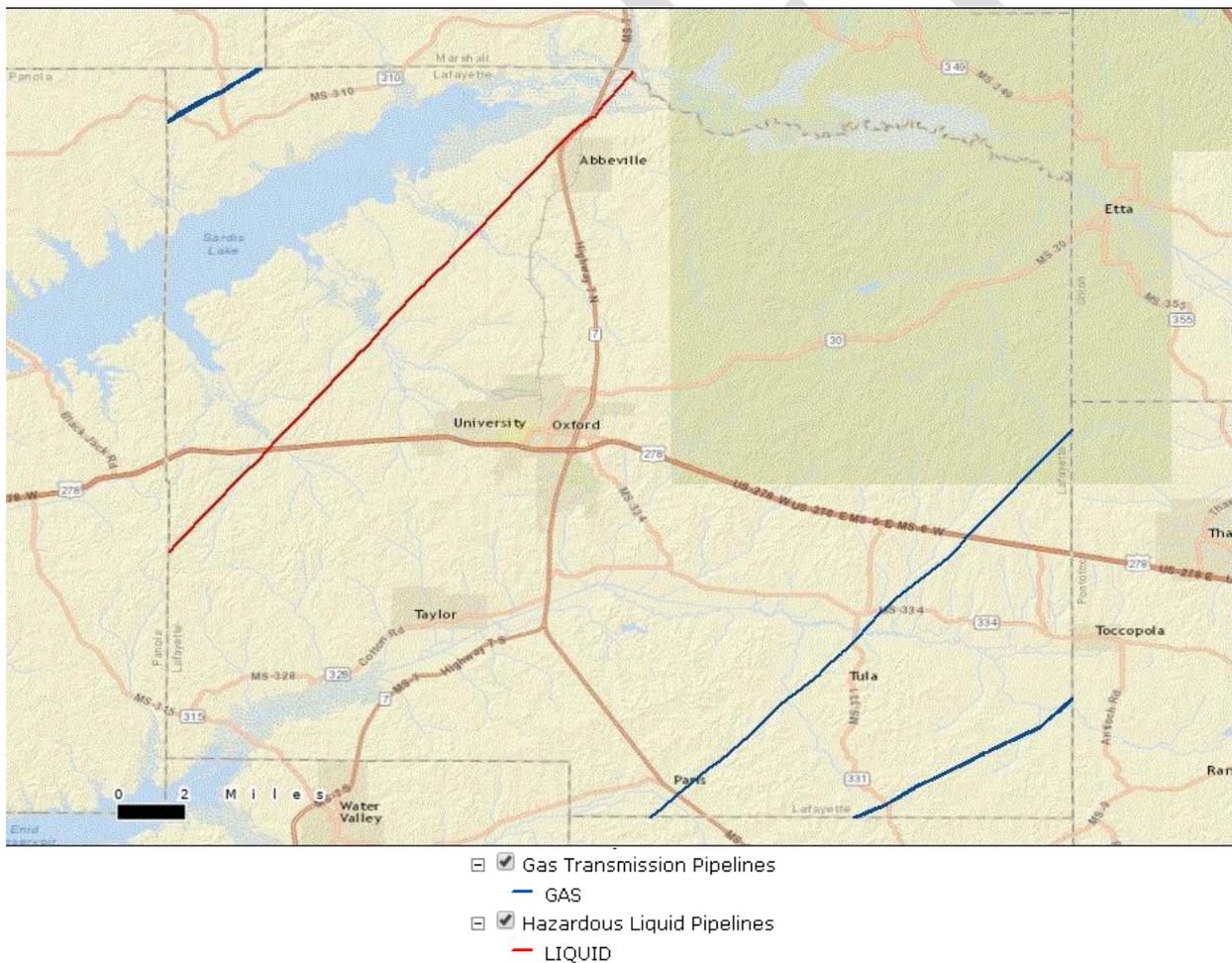
D.2.15 Pipelines

LOCATION AND SPATIAL EXTENT

Pipeline impacts can vary when it comes to people and the environment, ranging from personal injuries such as inhalation of toxins to ecological damage and water contamination. Pipeline incidents can affect local and regional economies resulting in potential shortages and/or increases in energy costs. A vulnerability assessment of pipeline impacts greatly depends on various factors such as location, severity of incident, environmental factors, proximity to waterways, and infrastructure operation. However, as mentioned above, due to the unavailability of precise location data for pipelines across the county, a thorough analysis of pipeline incidents was not carried out in this plan. The City of Oxford noted that there are several gas distribution lines running throughout the city that are owned by CenterPoint.

Figure D.14 illustrates the location of several types of pipeline infrastructure including gas transmission lines, hazardous liquid lines, liquefied natural gas (LNG) plants, and breakout tanks in Lafayette County.

Figure D.14: PIPELINES IN LAFAYETTE COUNTY



Source: United States Department of Transportation Pipeline and Hazardous Materials Safety Administration

HISTORICAL OCCURRENCES

Pipeline accidents can originate in a number of different ways. According to the Pipeline and Hazardous Materials Safety Administration (PHMSA), some of the most prominent causes of pipeline accidents include: corrosion, excavation damage, incorrect operation, material/weld/equipment failure, natural force damage, and other outside force damage.¹² **Table D.23** describes pipeline incidents throughout Mississippi from 2001 to 2020. On average, ten pipeline incidents resulting in \$2.1 million in damages occur annually in the State of Mississippi.

Table D.23: PIPELINE INCIDENTS (2001-2020)

Year	Incidents	Fatalities	Injuries	Cost
2001	5	1	2	\$496,000
2002	10	0	1	\$588,397
2003	11	0	0	\$516,624
2004	8	0	1	\$294,899
2005	10	0	0	\$1,173,585
2006	10	2	0	\$1,517,176
2007	17	2	8	\$4,093,859
2008	12	0	2	\$1,256,450
2009	12	0	0	\$1,851,029
2010	6	0	0	\$2,702,520
2011	8	0	2	\$1,867,519
2012	6	0	0	\$1,652,156
2013	14	0	0	\$7,965,328
2014	13	0	0	\$974,894
2015	13	0	0	\$3,342,998
2016	11	0	0	\$2,923,621
2017	12	0	0	\$1,762,609
2018	4	0	0	\$1,344,223
2019	7	0	1	\$1,201,788
2020	6	0	0	\$5,617,695
	195	5	17	\$43,143,370

¹² United States Department of Transportation Pipeline and Hazardous Materials Safety Administration, 2015. Hazard Mitigation Planning: Practices for Land Use Planning and Development near Pipelines.

PROBABILITY OF FUTURE OCCURRENCES

Given that there have been some occurrences of pipeline incidents in the United States, the probability of future occurrences in Lafayette County is possible (between 1 and 50 percent annual probability).

D.2.16 Water Supply / System Failure

LOCATION AND SPATIAL EXTENT

This type of hazard could occur anywhere that water supply lines run which encompasses many areas of the county. Most of the incorporated jurisdictions have many water supply lines running throughout their jurisdictional boundaries, so the extent of this type of hazard is large.

HISTORICAL OCCURRENCES

Although there have not been any major instances of water supply system failure in the county since the last plan update and prior, there have been some small-scale incidents and it should be noted that there have been many drought incidents (recorded in an earlier section) which would have similar impacts in terms of supply shortage, although these impacts would be much easier to recognize in advance of serious issues than the impacts from a system failure.

PROBABILITY OF FUTURE OCCURRENCES

Based on the limited number of incidents of water supply failure that have occurred historically, the likelihood of this hazard is considered possible (between 1 and 50 percent annual probability).

D.2.17 Active Shooter

LOCATION AND SPATIAL EXTENT

The exact location and spatial extent of an active shooter could be throughout the county, though there is a higher likelihood this type of event will occur in a public place with relatively high volumes of people present.

HISTORICAL OCCURRENCES

Although there have not been any active shooter incidents to make national news within Lafayette County since the last plan update and prior, there have been some incidents around the state of Mississippi that indicate this type of incident could occur within the county. Most recently in August of 2015, a suspect was taken in to custody on the Mississippi State University campus in Starkville.¹³ There were no fatalities or injuries, but this incident reveals that there is some threat to local universities and schools of an active shooter and this type of event would be difficult to predict.

¹³ Mosendz, Polly. Suspect in Custody After Active Shooter Incident Reported at Mississippi State University. Newsweek. <http://www.newsweek.com/report-active-shooter-mississippi-state-university-campus-366246>

PROBABILITY OF FUTURE OCCURRENCES

Although there have not been any major active shooter incidents in the county since the last plan update and prior, there have been some incidents in other areas of the United States. Therefore the likelihood of this type of incident is considered possible (between 1 and 50 percent annual probability).

D.2.18 Civil Unrest

LOCATION AND SPATIAL EXTENT

Civil disturbance or unrest can occur in any location in the county but is more likely to take place in or near prominent locations such as government buildings or significant landmarks.

HISTORICAL OCCURRENCES

In Lafayette County, there have not been any major instances of civil unrest in many years, though it should be noted that the constantly changing political and social climate is difficult to predict and often changes occur rapidly and without much warning. This has happened in other areas of the country and local officials have had to respond quickly to these types of incidents.

PROBABILITY OF FUTURE OCCURRENCES

Civil unrest has occurred occasionally within the county, although there have not been any major incidents in the past several years so the likelihood of this type of incident is considered possible (between 1 and 50 percent annual probability).

D.2.19 Cyberterrorism

LOCATION AND SPATIAL EXTENT

Cyber-attacks could occur anywhere within Lafayette County and, indeed, could originate from outside of the county while still having an impact on it.

HISTORICAL OCCURRENCES

At least four Mississippi school districts or universities have been targeted in ransomware attacks since 2013, according to a database compiled by StateScoop, though others may not have been publicly disclosed. The Oxford School District was targeted in 2016, though officials said they did not pay a ransom.¹⁴ Also, in May 2021, Colonia Pipeline fell victim to a ransomware attack that completely shut down their pipeline. The 5,500-mile Colonial system which runs from Texas to New Jersey carries over 100 million gallons of gasoline, diesel, jet fuel and home heating oil to the East Coast from refineries along the Gulf Coast. It delivers about 45% of the fuel for the East Coast. The pipeline traverses Mississippi.¹⁵

¹⁴ Mississippi Today. *Mississippi Schools Targeted by Ransomware*. Retrieved 8.19.2021 from: <https://mississippitoday.org/2021/06/11/school-district-ransomware-attack-mississippi/>

¹⁵ Clarion Ledger. *Colonial Pipeline Attack*. Retrieved 8.19.2021 from: <https://www.clarionledger.com/story/news/2021/05/11/colonial-pipeline-hack-mississippi-gas-prices-collins-ms-shortage-outage-impacts/5036923001/>

PROBABILITY OF FUTURE OCCURRENCES

Cyberterrorism has generally not occurred within Lafayette County historically, but the issue is becoming much larger and incidents that occur outside of the county may still have impacts inside of it. Therefore, likelihood of this type of incident is considered possible (between 1 and 50 percent annual probability).

D.2.20 Human Trafficking

LOCATION AND SPATIAL EXTENT

While unfortunate, human trafficking is likely happening throughout the county and there is no definitive boundary to define the areas in which it is most likely to occur.

HISTORICAL OCCURRENCES

There have been many incidents of human trafficking in the state, though this type of incident occurs in a covert manner and so many incidents are not reported and the problem is much larger than most people understand.

PROBABILITY OF FUTURE OCCURRENCES

Although it is difficult to account for and to determine because it is covert by nature, this type of incident occurs often and the future threat to the county is considered to remain likely (between 50 and 100 percent annual probability).

C.2.21 Pandemic

LOCATION AND SPATIAL EXTENT

Pandemics are global in nature. However, they may start anywhere. Lafayette County chose to analyze this hazard given the agriculture in the area and potential for this kind of event to occur in any location at any time.

All populations should be considered at risk to pandemic. Buildings and infrastructure are not directly impacted by the virus/pathogen but could be indirectly impacted if people are not able to operate and maintain them due to illness. Many buildings may be shutdown, at least temporarily, as a result. Employers may initiate work from home procedures for non-essential workers in order to help stop infection. Commerce activities, and thus the economy, may suffer greatly during this time.

HISTORICAL OCCURRENCES

Several pandemics have been reported throughout history. A short history of the flu/Spanish Flu was collected from The Historical Text Archive and is described below.

The first known pandemic dates back to 430 B.C. with the Plague of Athens. It reportedly killed a quarter of the population over four years due to typhoid fever. In 165-180 A.D., the Antonine Plague killed nearly 5 million people. Next, the Plague of Justinian (the first bubonic plague pandemic) occurred from 541 to 566. It killed 10,000 people a day at its peak and resulted in a 50 percent drop in Europe's population.

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Since the 1500s, influenza pandemics have occurred about three times every century or roughly every 10 to 50 years. The Black Death devastated European populations in the 14th century. Nearly a third of the population (20-30 million) was killed over six years. From 1817 to present, seven Cholera Pandemics have impacted to the world and killed millions. Perhaps most severe, was the Third Cholera Pandemic (1852-1959) which started in China. Isolated cases can still be found in the Western U.S. today. There were three major pandemics in the 20th century (1918-1919, 1957-1958, and 1968-1969). The most infamous pandemic flu of the 20th century, however, was that of 1918-1919. Since the 1960s, there has only been one pandemic, the 2009 H1N1 influenza. The pandemics of the 20th and 21st centuries that impacted the United States are detailed below.

1918 Spanish Flu: This was the most devastating flu of the 20th century. This pandemic spread across the world in three waves between 1918 and 1919. It typically impacted areas for around twelve weeks and then would largely disappear. However, it would frequently reemerge several months later. Worldwide, approximately 50 million persons died and over a quarter of the population was infected. Nearly 675,000 people died in the United States. The illness came on suddenly and could cause death within a few hours. The virus impacted those aged 15 to 35 especially hard. The movement of troops during World War I is thought to have facilitated the spread of the virus.

In Mississippi, state officials noted that "epidemics have been reported from a number of places in the State," on October 4th, 1918. By the 18th, twenty-six localities reported 1,934 cases (the real number of cases was likely much higher). West Point, Mississippi was hit especially hard and quarantine was established. Throughout the state, African Americans were impacted at a greater rate than white populations. This is thought to be partly caused from a shortage of caretakers. It is estimated that over 6,000 people died in Mississippi, though that number may be much higher as death records were not widely recorded.

1957 Asian Flu: It is estimated that the Asian Flu caused 2 million deaths worldwide. Approximately 70,000 deaths were in the U.S. However, the proportion of people impacted was substantially higher than that of the Spanish Flu. This flu was characterized as having much milder effects than the Spanish Flu and greater survivability. Similar to other pandemics, this pandemic has two waves. Elderly and infant populations were more likely to succumb to death. This flu is thought to have originated from a genetic mutation of a bird virus.

1968 Hong Kong Flu: The Hong Kong Flu is thought to have caused one million deaths worldwide. It was milder than both the Asian and Spanish influenza viruses. It was similar to the Asian Flu, which may have provided some immunity to the virus. It had the most severe impact on elderly populations.

2009 H1N1 Influenza: This flu was derived from human, swine, and avian virus strains. It was initially reported in Mexico in April 2009. On April 26, the U.S. government declared H1N1 a public health emergency. A vaccine was developed and over 80 million were vaccinated which helped minimize the impacts. The virus had mild impacts on most of the population but did cause death (usually from viral pneumonia) in high-risk populations such as pregnant women, obese persons, indigenous people, and those with chronic respiratory, cardiac, neurological, or immunity conditions. Worldwide, it is estimated that 43 million to 89 million people contracted H1N1 between April 2009 and April 2010, and between 8,870 and 18,300 H1N1 cases resulted in death.

2020 SARS-CoV-2 (COVID-19): Coronavirus Disease 2019 (COVID-19) was declared as pandemic by the World Health Organization on March 11th, 2020 mainly due to the speed and scale of the transmission of the disease. Prior to that, it started as an epidemic in mainland China with the focus being firstly reported

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in the city of Wuhan, Hubei province on February 26th, 2020. The etiologic agent of COVID-19 was isolated and identified as a novel coronavirus, initially designated as 2019-nCoV. Later, the virus genome was sequenced and because it was genetically related to the coronavirus outbreak responsible for the SARS outbreak of 2003, the virus was named as severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) by the International Committee for Taxonomy of Viruses.

There is a considerable amount of data on the extent of COVID-19 throughout the State of Mississippi and Lafayette County. The number of reported cases and deaths across the State of Mississippi and Lafayette County are shown in the figure below.

Table B.24: COVID-19 Cases as of 08/31/2021¹⁶

	Cases	Deaths
Mississippi	439,661	8,490
Lafayette County	7,500	130

In addition to the pandemics above, there have been several cases of pandemic threats, some of which reached epidemic levels. They were contained before spreading globally. Examples include Smallpox, Polio, Tuberculosis, Malaria, AIDS, SARS and Yellow Fever. Advances in medicine and technology have been instrumental in containing the spread of viruses in recent history.

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It is notable that no birds have been infected with Avian Flu in North and South America.

PROBABILITY OF FUTURE OCCURRENCES

Based on historical occurrence information, it is assumed that all of Lafayette County has a probability level of unlikely (less than 1 percent annual probability) for future pandemics events. While pandemic can have devastating impacts, they are relatively rare.

The Mississippi State Department of Health maintains a state pandemic plan which can be found here: <http://www.msdh.state.ms.us/msdhsite/index.cfm/44,1136,122,154,pdf/SNSPlan.pdf>

¹⁶ Mississippi State Department of Health. *COVID-19 Dashboard*. Retrieved from: https://msdh.ms.gov/msdhsite/_static/14,0,420.html

D.2.22 Terror Threat

LOCATION AND SPATIAL EXTENT

A terror threat could potentially occur at any location in the county. However, the very definition of a terrorist event indicates that it is most likely to be targeted at a critical or symbolic resource/location/event. Ensuring and protecting the continuity of critical infrastructure and key resources (CIKR) of the United States is essential to the Nation’s security, public health and safety, economic vitality, and way of life. CIKR includes physical and/or virtual systems or assets that, if damaged, would have a detrimental impact on national security, including large-scale human casualties, property destruction, economic disruption, and significant damage to morale and public confidence. **Table D.25** lists the U.S. Department of Homeland Security’s (DHS) identified main critical infrastructure sectors.

**Table D.25: U.S. DEPARTMENT OF HOMELAND SECURITY
CRITICAL INFRASTRUCTURE SECTORS**

▪ Agriculture and Food	▪ Government Facilities
▪ Banking and Finance	▪ Healthcare and Public Health
▪ Chemical	▪ Information Technology
▪ Commercial Facilities	▪ National Monuments and Icons
▪ Communications	▪ Nuclear Reactors, Materials, and Waste
▪ Critical Manufacturing	▪ Postal and Shipping
▪ Dams	▪ Transportation Systems
▪ Defense Industrial Base	▪ Water
▪ Emergency Services	
▪ Energy	

HISTORICAL OCCURRENCES

Perhaps the most notable terrorist incident in recent memory was the attacks on the World Trade Center and Pentagon on September 11, 2001. These events resulted in more than an estimated 3,000 deaths and caused destruction of many buildings including both of the World Trade Center buildings. Prior to this, in 1995, the bombing of the federal office building in Oklahoma City was one of the most devastating attacks on U.S. soil, causing more than 150 deaths and damage to more than 200 buildings.

Although there have been no recorded incidents of a major terror attack occurring in the county since the last plan update and prior, there have been several instances where attacks were thwarted or discovered in advance. These kinds of events are indicative of the fact that future terror threats could impact the county.

Additionally, it is possible that locally-targeted terrorist incidents could occur in the future and there are several facilities/events in the county that could be potential targets.

PROBABILITY OF FUTURE OCCURRENCES

The county has had no recorded major terrorist events since the last plan update and prior. However, given the historic attempts to carry out attacks that were thwarted and the existence of government complexes, notable structures, and significant landmarks, there is a possibility that a terrorist incident

might occur. Due to few recorded incidents against the county, the probability of future occurrences of a terrorist attack is unlikely (less than 1 percent annual probability).

D.2.23 Conclusions on Hazard Risk

The hazard profiles presented in this subsection were developed using best available data and result in what may be considered principally a qualitative assessment as recommended by FEMA in its “How-to” guidance document titled *Understanding Your Risks: Identifying Hazards and Estimating Losses* (FEMA Publication 386-2). It relies heavily on historical and anecdotal data, stakeholder input, and professional and experienced judgment regarding observed and/or anticipated hazard impacts. It also carefully considers the findings in other relevant plans, studies, and technical reports.

HAZARD EXTENT

The table below describes the extent of each natural hazard identified for Lafayette County. The extent of a hazard is defined as its severity or magnitude, as it relates to the planning area.

Table D.26: EXTENT OF LAFAYETTE COUNTY HAZARDS

Flood-related Hazards	
Flood	<p>Flood extent can be measured by the amount of land and property in the floodplain as well as flood height and velocity. The amount of land in the floodplain accounts for 24.0 percent of the total land area in Lafayette County.</p> <p>Flood depth and velocity are recorded via United States Geological Survey stream gages throughout the region. While a gage does not exist for each participating jurisdiction, there is one at or near many areas. The greatest peak discharge recorded for the county was at the Yocona River near Oxford in 1955. Water reached a discharge of 44,100 cubic feet per second and the stream gage height was recorded at 23.72 feet.</p>
Erosion	The extent of erosion can be defined by the measurable rate of erosion that occurs. There are no erosion rate records located in Lafayette County.
Dam and Levee Failure	Dam Failure extent is defined using the Mississippi Department of Environmental Quality criteria. Fourteen dams are classified as high-hazard in Lafayette County.
Winter Storm and Freeze	The extent of winter storms can be measured by the amount of snowfall received (in inches). Official long term snow records are not kept for any areas in Lafayette County. However, the greatest snowfall reported in Meridian (south of the county) was 14.0 inches in 1963.
Fire-related Hazards	
Drought / Heat Wave	<p>Drought extent is defined by the U.S. Drought Monitor Classifications which include Abnormally Dry, Moderate Drought, Severe Drought, Extreme Drought, and Exceptional Drought. According to the U.S. Drought Monitor Classifications, the most severe drought condition is Exceptional. Lafayette County has received this ranking once over the 15-year reporting period.</p> <p>The extent of extreme heat can be measured by the record high temperature recorded. Official long term temperature records are not kept for any areas in Lafayette County. However, the highest recorded temperature in Greenwood (southwest of the county) was 106°F in 2007 and in Meridian (south of the county) was 107°F in 1980.</p>

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Wildfire	Wildfire data was provided by the Mississippi Forestry Commission and is reported annually by county from 2011-2020. The greatest number of fires to occur in Lafayette County in any year 44 in 2007. The greatest number of acres to burn in the county in a single year occurred in 2007 when 836 acres were burned. Although this data lists the extent that has occurred, larger and more frequent wildfires are possible throughout the county.
Geologic Hazards	
Earthquake	Earthquake extent can be measured by the Richter Scale, the Modified Mercalli Intensity (MMI) scale, and the distance of the epicenter from Lafayette County. According to data provided by the National Geophysical Data Center, the greatest earthquake to impact the county was reported in Abbeville with a MMI of VI (strong), a correlating Richter Scale measurement of approximately 4.9, and 150 km away from the epicenter.
Expansive Soils	Expansive Soils can have large scale impacts depending on the nature of the soil and the soil conditions (wet vs. dry). Expansive soil extent is difficult to quantify, but it is possible that the volume of soil could increase by as much as 50% saturation.
Landslide	As noted above in the landslide profile, there is no extensive history of landslides in Lafayette County and landslide events typically occur in isolated areas. This provides a challenge when trying to determine an accurate extent for the landslide hazard. However, when using USGS landslide susceptibility index, extent can be measured with incidence, which is low throughout the county. There is also low susceptibility throughout the county.
Land Subsidence / Sinkhole	The extent of land subsidence can be defined by the measurable rate of subsidence that occurs. There are no subsidence rate records located in Lafayette County nor is there any significant historical record of events. The largest potential event might be as a large as 10,000 cubic yards.
Wind-related Hazards	
Hurricane and Tropical Storm	Hurricane extent is defined by the Saffir-Simpson Scale which classifies hurricanes into Category 1 through Category 5. The greatest classification of hurricane to traverse directly through Lafayette County was Hurricane Audrey which carried tropical force winds of 40 knots upon arrival in the county.
Thunderstorm / Hail / Lightning	Thunderstorm extent is defined by the number of thunder events and wind speeds reported. According to a 65-year history from the National Centers for Environmental Information, the strongest recorded wind event in Lafayette County was reported on April 28, 1966 at 80 knots (approximately 92 mph). It should be noted that future events may exceed these historical occurrences. Hail extent can be defined by the size of the hail stone. The largest hail stone reported in Lafayette County was 5.0 inches (reported on April 10, 1962). It should be noted that future events may exceed this. According to the Vaisala’s flash density map (Figure 5.26), Lafayette County is located in an area that experiences 6 to 8 lightning flashes per square kilometer per year. It should be noted that future lightning occurrences may exceed these figures.
Tornado	Tornado hazard extent is measured by tornado occurrences in the US provided by FEMA as well as the Fujita/Enhanced Fujita Scale. The greatest magnitude reported in Lafayette County was an F3 last reported on March 1, 1997).
Other Hazards	

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Hazardous Materials Incident	According to USDOT PHMSA, the largest hazardous materials incident reported in the Lafayette County was 0.125 LGA released on the highway (reported on September 29, 2009). It should be noted that larger events are possible.
Pipelines	A pipeline failure could be caused in several different ways. If an explosion or fire were the cause of the incident, the impacts might include fatalities or injuries as well as loss of a fuel source and damage to personal property. However, the impacts could also be less fatal in which case the more immediate effects might be down time for services and significant price hikes for consumers.
Water Supply / System Failure	There are many impacts that would occur as a result of water system failure. Among other impacts, residents might lose water supply, medical equipment and operations may not be able to be carried out, and access to clean water will be limited for business operations. These failures could potentially leave many homes and businesses without water service.
Active Shooter	The potential impacts of an active shooter might be that there are fatalities or significant injuries to members of the public. Additionally, there would likely be a negative impact on the community emotionally.
Civil Unrest	Often one of the greatest impacts from civil unrest is collateral damage to people and property. During civil unrest, property can be destroyed or stolen and citizens can be injured due to violence that erupts. First responders may also be targeted and many times are more likely to be injured as a result of civil unrest than the average citizen.
Cyberterrorism	While there is seldom physical damage inflicted from a cyberterrorism event, the effects of such an event are often damaging in other ways. For example, theft, denial of service attacks, and dissemination of misinformation can all result from a cyberterrorism event. Moreover, these events are often aimed at shutting down IT systems which can result in loss of productivity and damage to IT
Human Trafficking	There is a significant emotional and physical toll on victims of human trafficking and this extends to their families and communities as well. This can cause long-term impacts on communities that are affected and has an overall negative impact on our culture.
Pandemic	The extent of a pandemic impacting the county is difficult to estimate. It could result in thousands of deaths and extreme disruption of commerce and everyday life.
Terror Threat	Although there is a low probability of one these events, if one were to take place, the magnitude of the event could range on the scale of critical damage with many fatalities and injuries to the population.

PRIORITY RISK INDEX RESULTS

In order to draw some meaningful planning conclusions on hazard risk for Lafayette County, the results of the hazard profiling process were used to generate countywide hazard classifications according to a “Priority Risk Index” (PRI). More information on the PRI and how it was calculated can be found in Section 5.

Table D.27 summarizes the degree of risk assigned to each category for all initially identified hazards based on the application of the PRI. Assigned risk levels were based on the detailed hazard profiles developed for this subsection, as well as input from the Regional Hazard Mitigation Council. The results were then used in calculating PRI values and making final determinations for the risk assessment.

Table D.27: SUMMARY OF PRI RESULTS FOR LAFAYETTE COUNTY

Hazard	Category/Degree of Risk					
	Probability	Impact	Spatial Extent	Warning Time	Duration	PRI Score
Flood-related Hazards						
Flood	Likely	Limited	Moderate	6 to 12 hours	Less than 24 hours	2.6
Erosion	Likely	Minor	Moderate	More than 24 hours	More than 1 week	2.3
Dam Failure and Levee Failure	Unlikely	Critical	Small	Less than 6 hours	Less than 6 hours	2.1
Winter Storm and Freeze	Likely	Limited	Moderate	More than 24 hours	Less than 1 week	2.5
Fire-related Hazards						
Drought / Heat Wave	Likely	Minor	Large	More than 24 hours	More than 1 week	2.5
Wildfire	Highly Likely	Minor	Small	Less than 6 hours	Less than 1 week	2.6
Geologic Hazards						
Earthquake	Possible	Catastrophic	Large	Less than 6 hours	Less than 6 hours	3.1
Expansive Soils	Likely	Minor	Small	More than 24 hours	More than 1 week	2.1
Landslide	Unlikely	Minor	Small	Less than 6 hours	Less than 6 hours	1.5
Land Subsidence / Sinkhole	Possible	Minor	Small	Less than 6 hours	More than 1 week	2.1
Wind-related Hazards						
Hurricane and Tropical Storm	Likely	Limited	Large	More than 24 hours	Less than 24 hours	2.6
Thunderstorm Wind / High Wind	Highly Likely	Critical	Moderate	6 to 12 hours	Less than 6 hours	3.1
Hailstorm	Highly Likely	Minor	Moderate	6 to 12 hours	Less than 6 hours	2.5
Lightning	Highly Likely	Limited	Small	6 to 12 hours	Less than 6 hours	2.6
Tornado	Likely	Catastrophic	Small	Less than 6 hours	Less than 6 hours	3.0
Other Hazards						
Hazardous Materials Incident	Likely	Critical	Small	Less than 6 hours	Less than 24 hours	2.8
Pipelines	Possible	Critical	Small	Less than 6 hours	Less than 24 hours	2.5
Water Supply / System Failure	Possible	Limited	Moderate	Less than 6 hours	Less than 24 hours	2.4
Active Shooter	Possible	Critical	Small	Less than 6 hours	Less than 24 hours	2.5
Civil Unrest	Possible	Minor	Small	Less than 6 hours	Less than 24 hours	1.9
Cyberterrorism	Possible	Limited	Small	Less than 6 hours	More than 1 week	2.4
Human Trafficking	Likely	Limited	Negligible	Less than 6 hours	Less than 24 hours	2.3
Pandemic	Unlikely	Limited	Large	More than 24 hours	More than 1 week	2.2
Terror Threat	Unlikely	Critical	Small	Less than 6 hours	Less than 1 week	2.3

D.2.24 Final Determinations on Hazard Risk

The conclusions drawn from the hazard profiling process for Lafayette County, including the PRI results and input from the Regional Hazard Mitigation Council, resulted in the classification of risk for each

identified hazard according to three categories: High Risk, Moderate Risk, and Low Risk (**Table D.28**). For purposes of these classifications, risk is expressed in relative terms according to the estimated impact that a hazard will have on human life and property throughout all of Lafayette County. A more quantitative analysis to estimate potential dollar losses for each hazard has been performed separately, and is described in Section 6: *Vulnerability Assessment* and below in Section D.3. It should be noted that although some hazards are classified below as posing low risk, their occurrence of varying or unprecedented magnitudes is still possible in some cases and their assigned classification will continue to be evaluated during future plan updates.

Table D.28: CONCLUSIONS ON HAZARD RISK FOR LAFAYETTE COUNTY

HIGH RISK	Earthquake Thunderstorm Wind / High Wind Tornado Hazardous Materials Incident
MODERATE RISK	Flood Wildfire Lightning Hurricane / Tropical Storm Winter Storm and Freeze Hailstorm Pipelines Active Shooter Drought / Heat Wave Cyberterrorism Water Supply / System Failure
LOW RISK	Hurricane and Tropical Storm Erosion Terror Threat Human Trafficking Pandemic Expansive Soils Land Subsidence Dam and Levee Failure Civil Unrest Landslide

D.3 LAFAYETTE COUNTY VULNERABILITY ASSESSMENT

This subsection identifies and quantifies the vulnerability of Lafayette County to the significant hazards previously identified. This includes identifying and characterizing an inventory of assets in the county and assessing the potential impact and expected amount of damages caused to these assets by each identified hazard event. More information on the methodology and data sources used to conduct this assessment can be found in Section 6: *Vulnerability Assessment*.

D.3.1 Asset Inventory

Table D.29 lists the fire stations, police stations, emergency operations centers (EOCs), hospitals, schools, government buildings, and other facilities located in Lafayette County according to Hazus-MH Version 2.2.

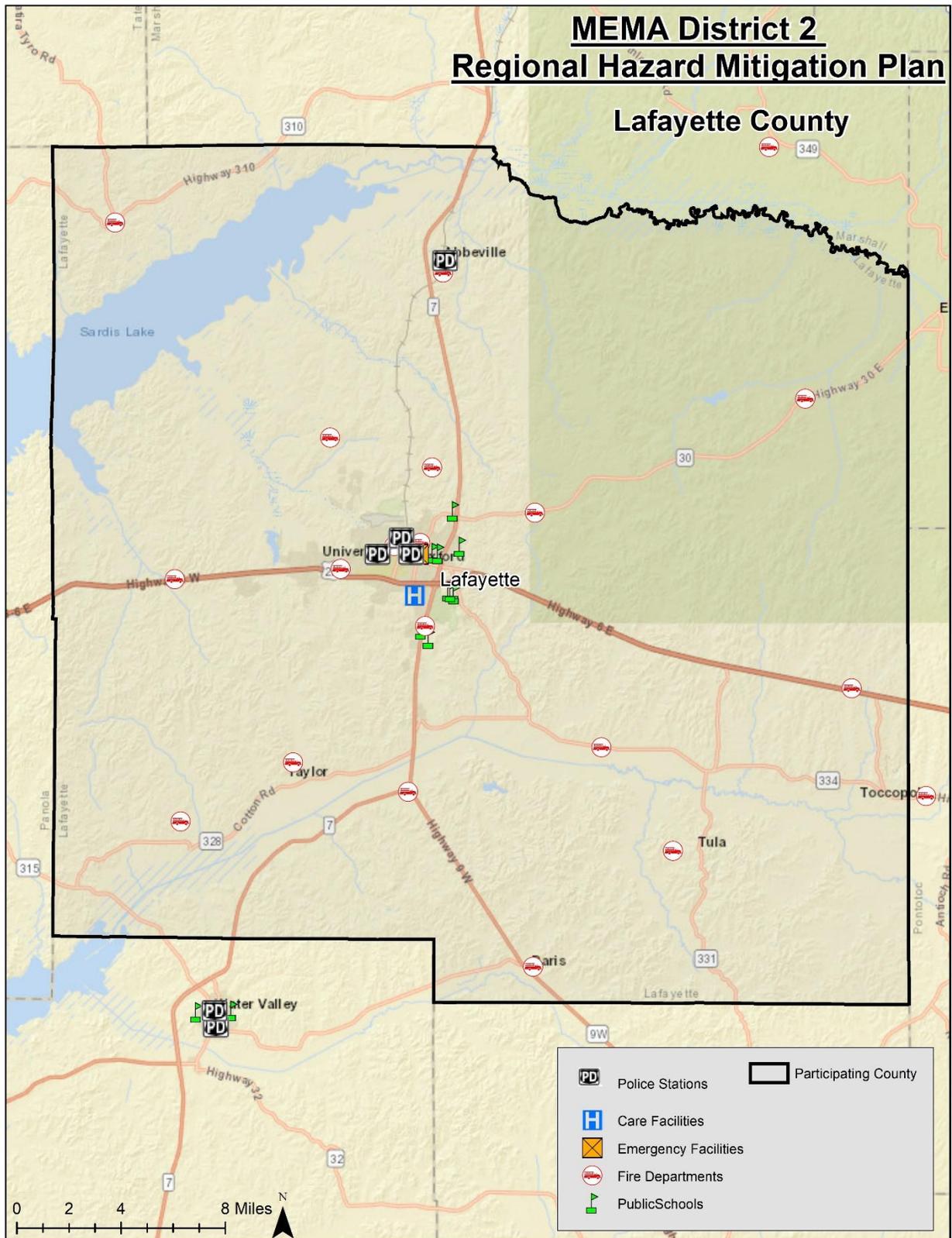
In addition, **Figure D.15** shows the locations of critical facilities in Lafayette County. The table at the end of this subsection, shows a complete list of the critical facilities by name, as well as the hazards that affect each facility. As noted previously, this list is not all-inclusive and only includes information provided through Hazus.

Table D.29: CRITICAL FACILITY INVENTORY IN LAFAYETTE COUNTY

Location	Fire Stations	Police Stations	Hospitals	EOC	Schools
Abbeville	1	1	0	0	0
Oxford	4	2	1	1	17
Taylor	1	0	0	0	0
Unincorporated Area	13	1	0	1	1
ASSET VALUATION	\$38,759,900	\$8,613,311	\$2,273,847	\$2,153,327	\$491,314,439
LAFAYETTE COUNTY TOTAL	19	4	1	2	18

Source: Hazus-MH 2.2

Figure D.15: CRITICAL FACILITY LOCATIONS IN LAFAYETTE COUNTY



D.3.2 Social Vulnerability

In addition to identifying those assets potentially at risk to identified hazards, it is important to identify and assess those particular segments of the resident population in Lafayette County that are potentially at risk to these hazards.

The table below lists the population by jurisdiction according to U.S. Census 2019 population estimates. The total population in Lafayette County according to Census data is 53,590 persons. Additional population estimates are presented above in Section D.1.

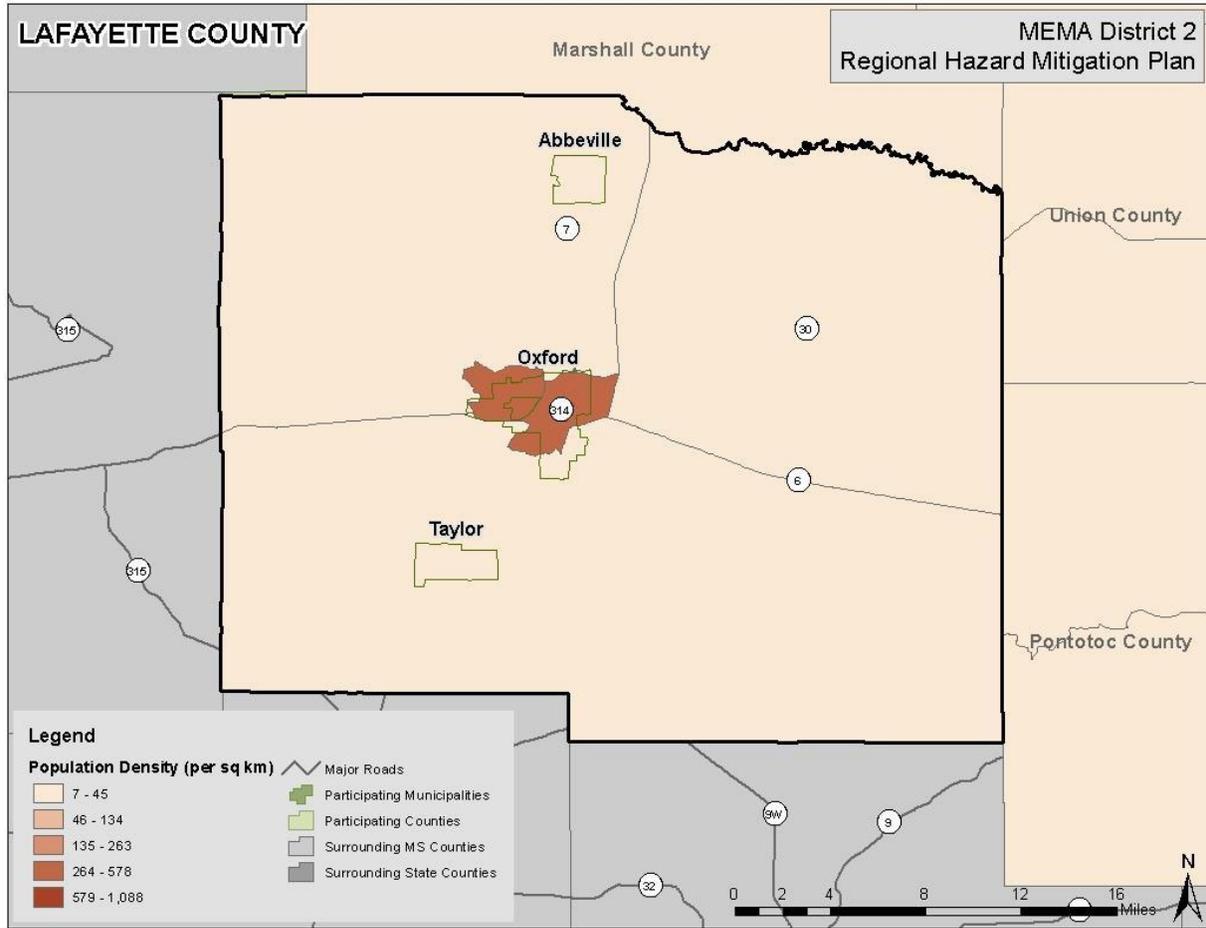
Table D.30: TOTAL POPULATION IN LAFAYETTE COUNTY

Location	Total 2019 Population
Abbeville	407
Oxford	26,962
Taylor	282
Unincorporated Area	25,939
LAFAYETTE COUNTY TOTAL	53,590

Source: United States Census – American Community Survey 2019

In addition, **Figure D.16** illustrates the population density per square kilometer by census tract as it was reported by the U.S. Census Bureau in 2019.

Figure D.16: POPULATION DENSITY IN LAFAYETTE COUNTY



Source: United States Census Bureau, 2010

D.3.3 Development Trends and Changes in Vulnerability

Since the previous county hazard mitigation plan was approved (in 2016), Lafayette County has experienced some growth and development. The following table shows the number of building units constructed since 2010 according to the U.S. Census American Community Survey.

Table D.31: BUILDING COUNTS FOR LAFAYETTE COUNTY

Jurisdiction	Total Housing Units (2019)	Units Built 2014 or later	% Building Stock Built Post-2014
Abbeville	164	2	1.2%
Oxford	13,331	904	6.8%
Taylor	147	10	6.8%
Unincorporated Area	11,624	431	3.7%
LAFAYETTE COUNTY TOTAL	25,266	1,347	5.3%

Source: United States Census Bureau

*The City of Oxford provided more detailed construction data which was obtained from its Building Department.

The table below shows population growth estimates for the county from 2015 to 2019 based on the U.S. Census Annual Estimates of Resident Population.

Table D.32: POPULATION GROWTH FOR LAFAYETTE COUNTY

Jurisdiction	Population Estimates (as of July 1)					% Change 2015-2019
	2015	2016	2017	2018	2019	
Abbeville	428	423	427	421	423	-1.2%
Oxford	25,532	26,371	27,058	27,685	28,122	9.2%
Taylor	342	364	387	417	444	23.0%
Unincorporated Area	26,434	26,318	22,544	23,470	23,941	-10.4%
LAFAYETTE COUNTY TOTAL	52,736	53,476	50,416	51,993	52,930	0.4%

Source: United States Census Bureau

Based on the data above, there has been a low rate of residential development but moderate population growth in the county since 2015. However, the Town of Taylor and City of Oxford has experienced a higher rate of development compared to the rest of the county, resulting in an increased number of structures that are vulnerable to the potential impacts of the identified hazards. Additionally, since the population has increased across the county, there are now greater numbers of people exposed to the identified hazards. Therefore, development and population growth have impacted the county's vulnerability since the previous local hazard mitigation plan was approved and there has been an increase in the overall vulnerability.

It is also important to note that as development increases in the future, greater populations and more structures and infrastructure will be exposed to potential hazards if development occurs in the floodplains, moderate landside susceptibility areas, high wildfire risk areas, or primary and secondary TRI site buffers.

D.3.4 Vulnerability Assessment Results

As noted in Section 6: *Vulnerability Assessment*, only hazards with a specific geographic boundary, available modeling tool, or sufficient historical data allow for further analysis. Those results, specific to Lafayette County, are presented here. All other hazards are assumed to impact the entire planning region (drought / heat wave; thunderstorm—wind, hail, lightning; tornado; and winter storm and freeze) or, due to lack of data, analysis would not lead to credible results (dam and levee failure, erosion, landslide / land

subsidence, pipelines, water supply / system failure, active shooter, civil unrest, cyberterrorism, and human trafficking).

The hazards to be further analyzed in this subsection include: flood, wildfire, earthquake, hurricane and tropical storm winds, and hazardous materials incident.

The annualized loss estimate for all hazards is presented near the end of this subsection.

FLOOD

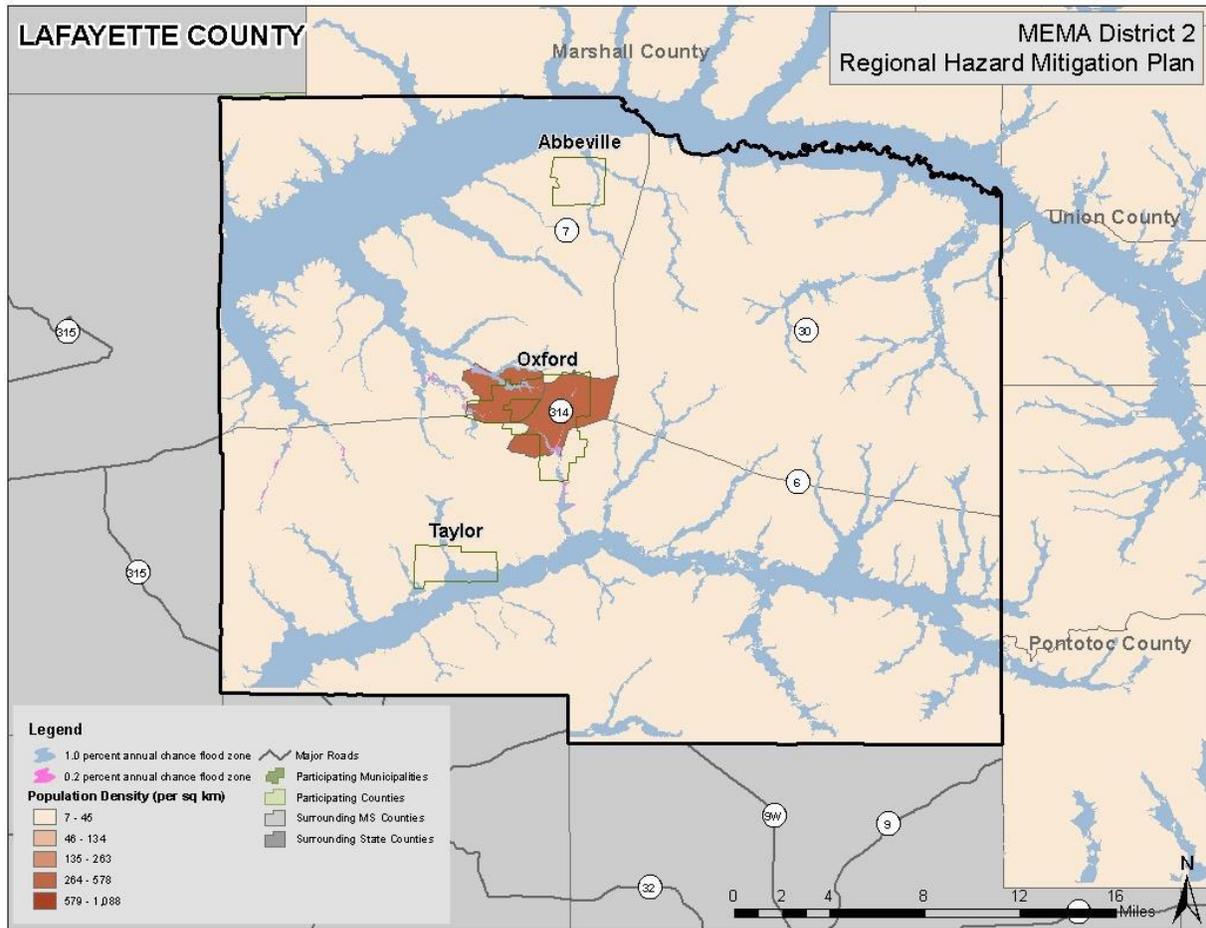
Historical evidence indicates that Lafayette County is susceptible to flood events. A total of 23 flood events have been reported by the National Centers for Environmental Information resulting in \$1.2 million in property damage. On an annualized level, these damages amounted to \$71,958 for Lafayette County.

Social Vulnerability

Figure D.17 is presented to gain a better understanding of at-risk population by evaluating census tract level population data against mapped floodplains. There are areas of concern in the population center around the City of Oxford. Indeed, nearly every incorporated municipality is potentially at risk of being impacted by flooding in some areas of its jurisdiction. Therefore, further investigation in these areas may be warranted. This data remains unchanged since the last plan update.

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Figure D.17: POPULATION DENSITY NEAR FLOODPLAINS



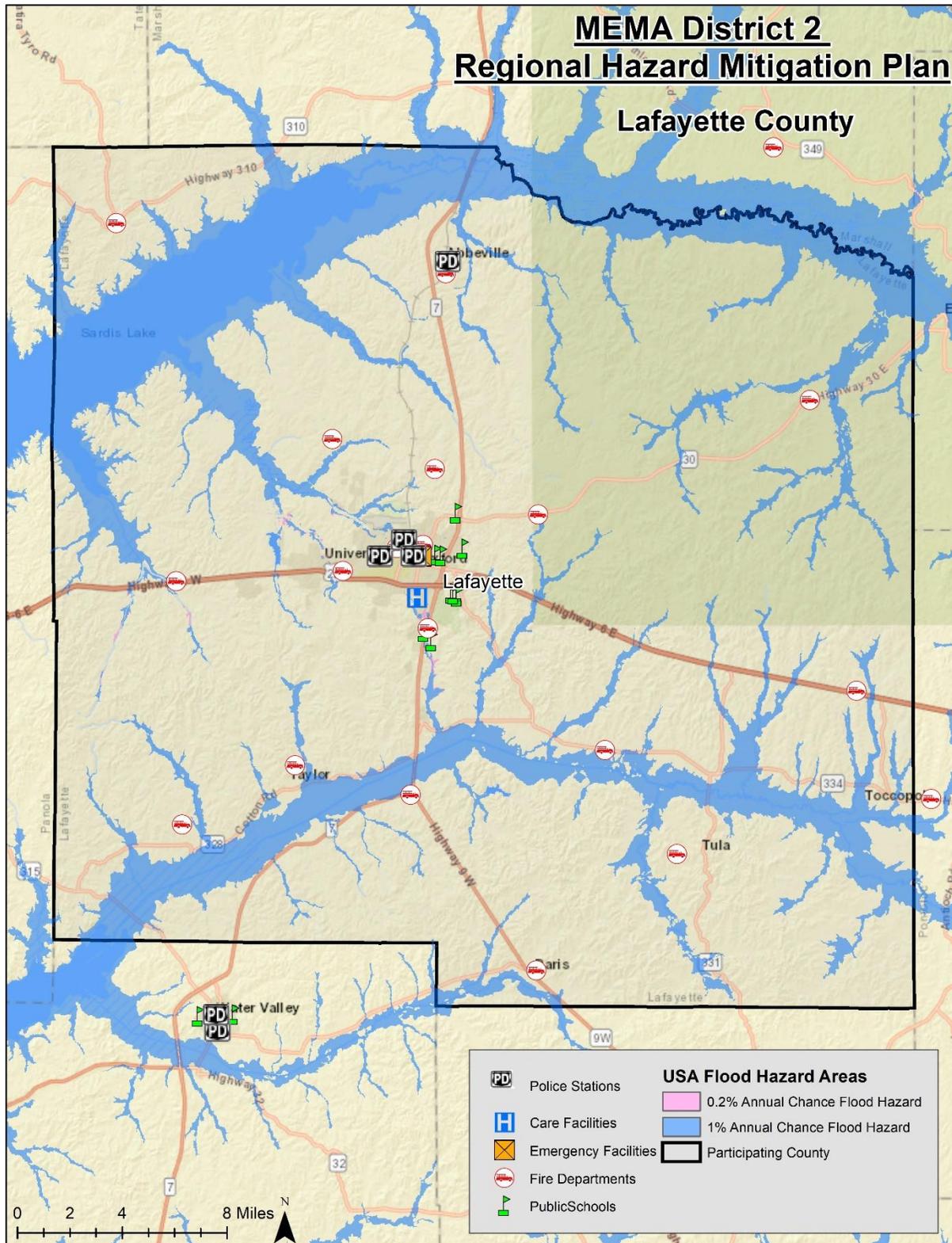
Source: Federal Emergency Management Agency DFIRM, United States Census 2010

Critical Facilities

The following figure shows critical facilities in relation to Special Flood Hazard Areas. (Please note, as previously indicated, this analysis does not consider building elevation, which may negate risk.) These facilities are both schools located in the 1.0 percent annual chance flood zone. A list of specific critical facilities and their associated risk can be found at the end of this subsection.

In conclusion, a flood has the potential to impact many existing and future buildings, facilities, and populations in Lafayette County, though some areas are at a higher risk than others. All types of structures in a floodplain are at-risk, though elevated structures will have a reduced risk. Such site-specific vulnerability determinations are outside the scope of this assessment but will be considered during future plan updates. Furthermore, areas subject to repetitive flooding should be analyzed for potential mitigation actions.

Figure D.18: CRITICAL FACILITIES ANALYSIS - SFHA



Source: Federal Emergency Management Agency DFIRM

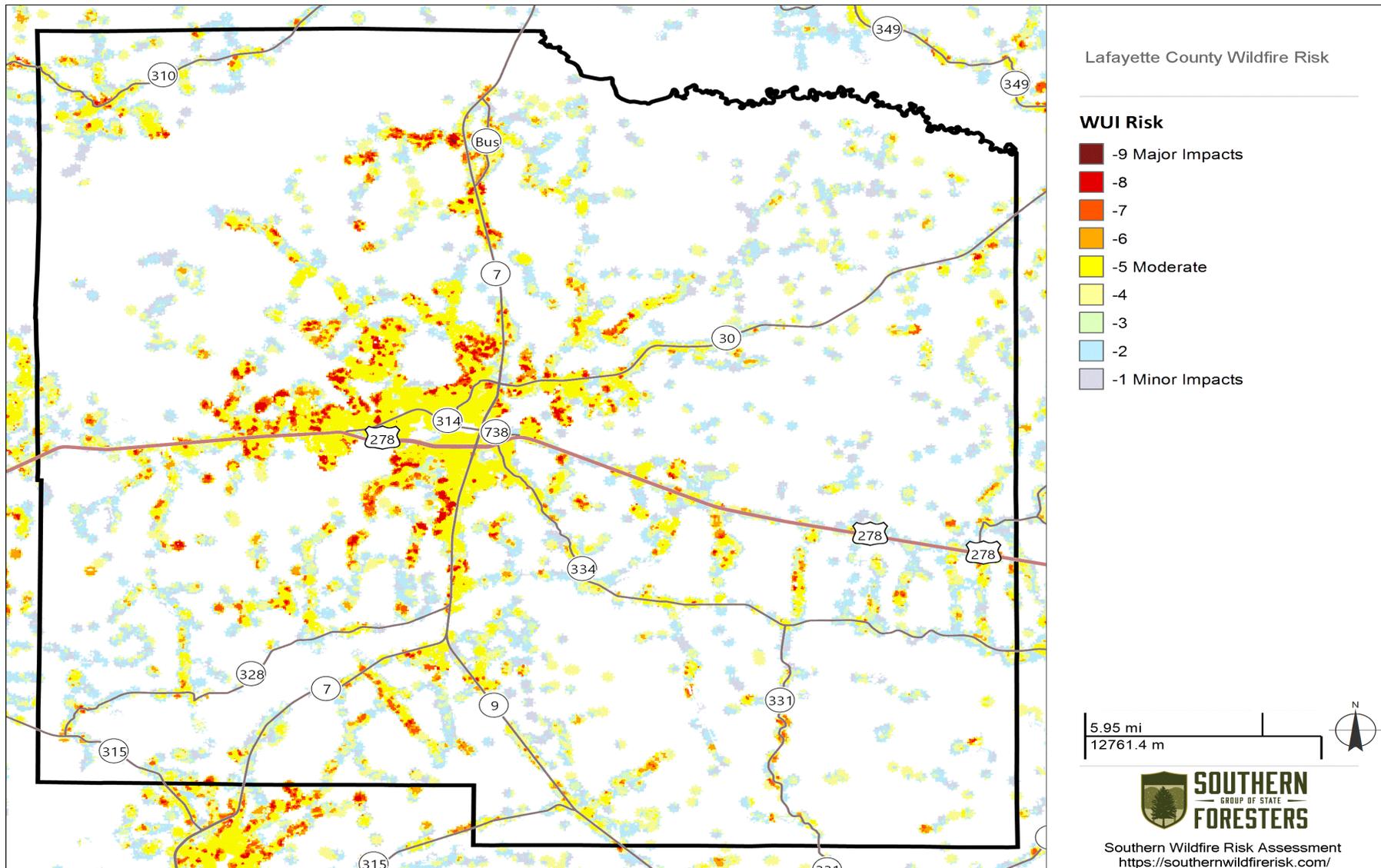
WILDFIRE

Although historical evidence indicates that Lafayette County is susceptible to wildfire events, there are few reports of damage. Therefore, it is difficult to calculate a reliable annualized loss figure. Annualized loss is considered negligible though it should be noted that a single event could result in significant damages throughout the county.

To estimate exposure to wildfire, building data was obtained from Hazus-MH 2.2 which includes information that has been aggregated at the Census block level and which has been deemed useful for analyzing wildfire vulnerability. However, it should be noted that the accuracy of Hazus data is somewhat lower than that of parcel data. For the critical facility analysis, areas of concern were intersected with critical facility locations.

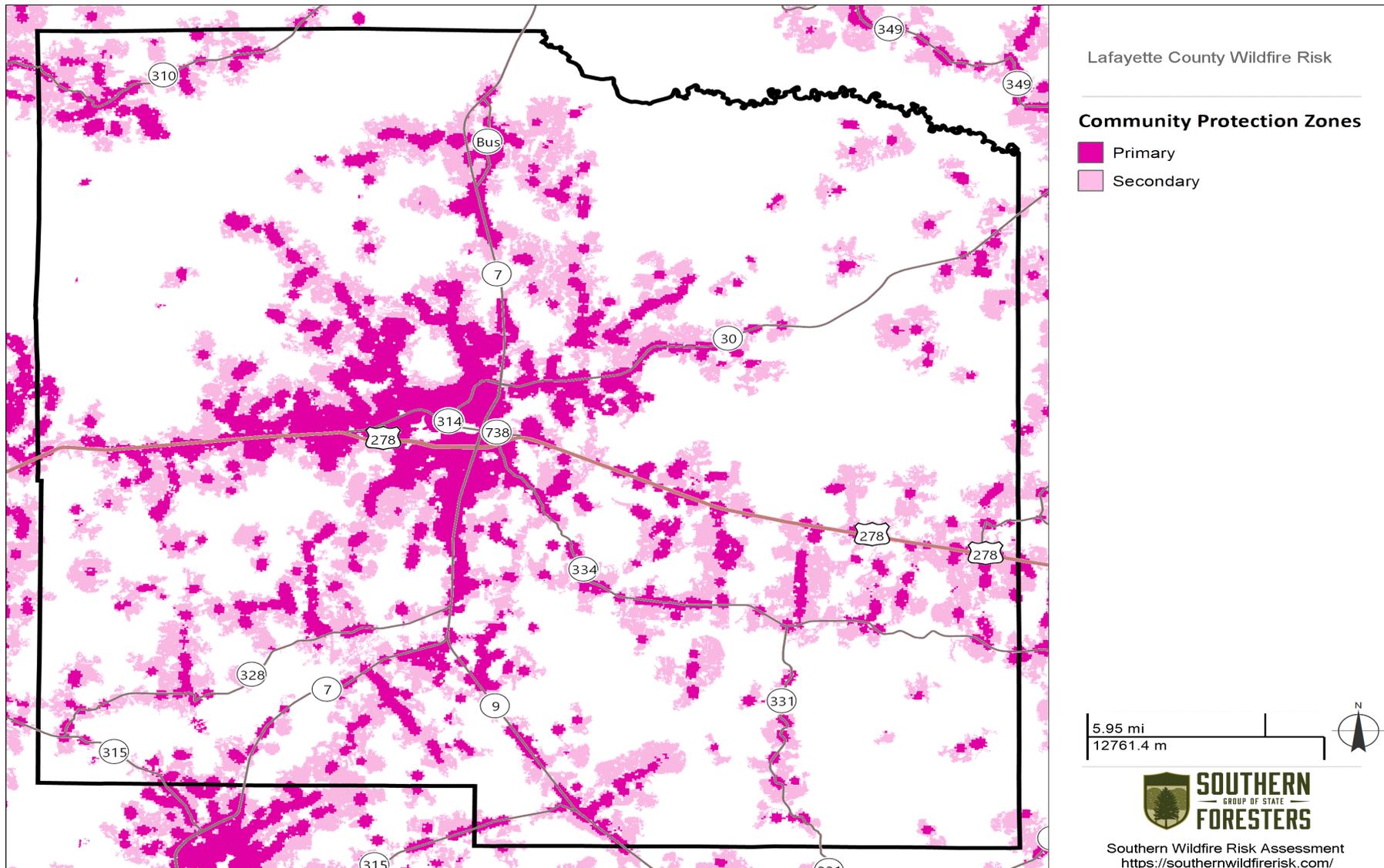
Figure D.19 shows the Wildland Urban Interface Risk Index (WUIRI) data, which is a data layer that shows a rating of the potential impact of a wildfire on people and their homes. The key input, Wildland Urban Interface (WUI), reflects housing density (houses per acre) consistent with Federal Register National standards. The location of people living in the WUI and rural areas is key information for defining potential wildfire impacts to people and homes. Initially provided as raster data, it was converted to a polygon to allow for analysis. The Wildland Urban Interface Risk Index data ranges from 0 to -9 with lower values being most severe (as noted previously, this is only a measure of relative risk). **Figure D.20** Community Protection Zones (CPZ) represent those areas considered highest priority for mitigation planning activities. CPZs are based on an analysis of the *Where People Live* housing density data and surrounding fire behavior potential. Rate of Spread data is used to determine the areas of concern around populated areas that are within a 2-hour fire spread distance. This is referred to as the Secondary CPZ. **Figure D.21** shows critical facility locations in relation to historical wildfire burns.

Figure D.19: WUI RISK INDEX AREAS IN LAFAYETTE COUNTY



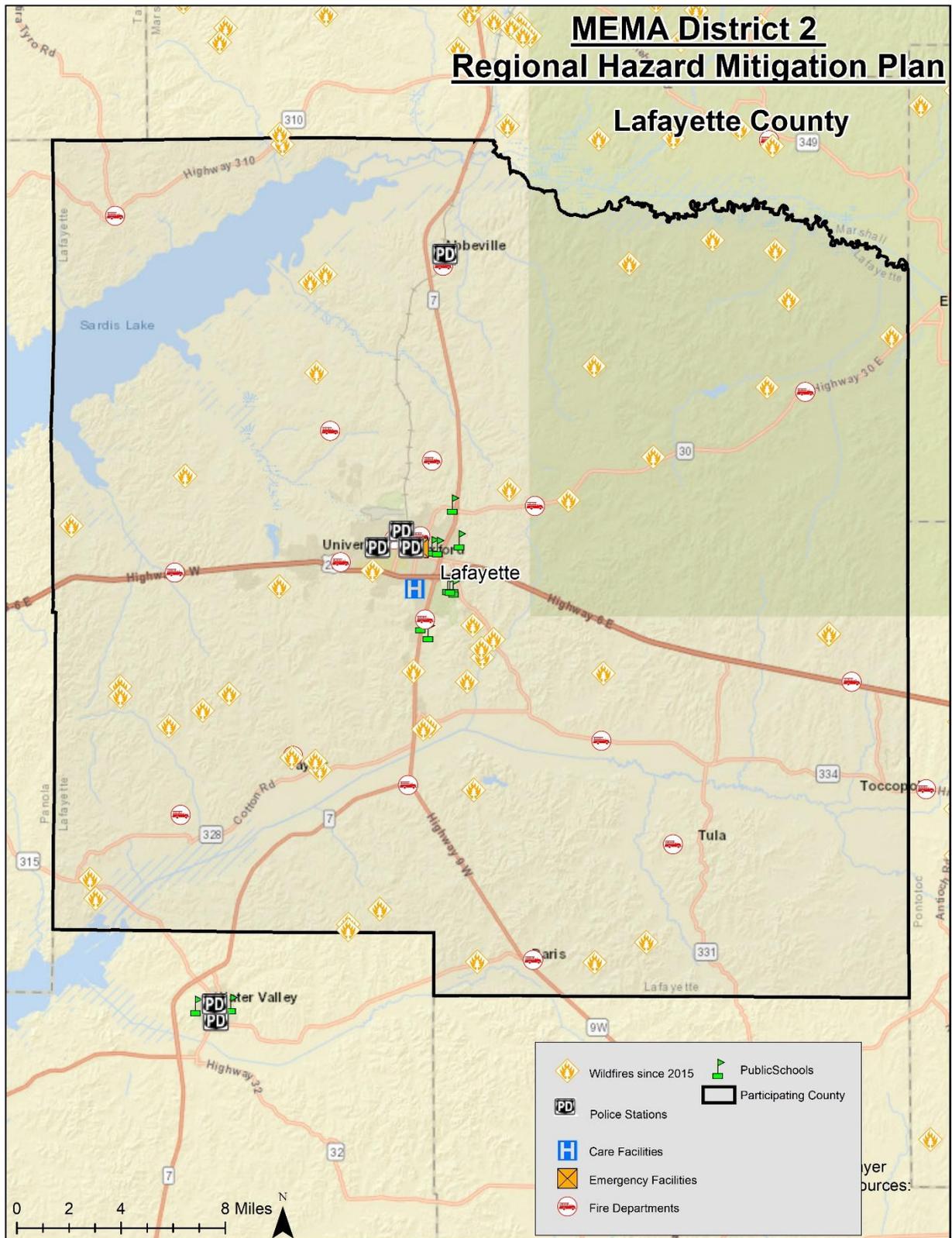
Source: Southern Wildfire Risk Assessment Data

Figure D.20: COMMUNITY PROTECTION ZONES



Source: Southern Wildfire Risk Assessment Data

Figure D.21: CRITICAL FACILITIES ANALYSIS - WILDFIRE



Source: Southern Wildfire Risk Assessment Data

Social Vulnerability

Given some level of susceptibility across the entire county, it is assumed that the total population is at risk to the wildfire hazard. Determining the exact number of people in certain wildfire zones is difficult with existing data and could be misleading. In particular, the expansion of residential development from urban centers out into rural landscapes, increases the potential for wildland fire threat to public safety and the potential for damage to forest resources and dependent industries. This increase in population across the region will impact counties and communities that are located within the Wildland Urban Interface (WUI). According To the Southern Group of State Foresters, The Wildland Urban Interface is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. For the Lafayette County Wildfire Risk project area, it is estimated that 46,030 people or 97.2 % percent of the total project area population (47,341) live within the WUI.¹⁷

Critical Facilities

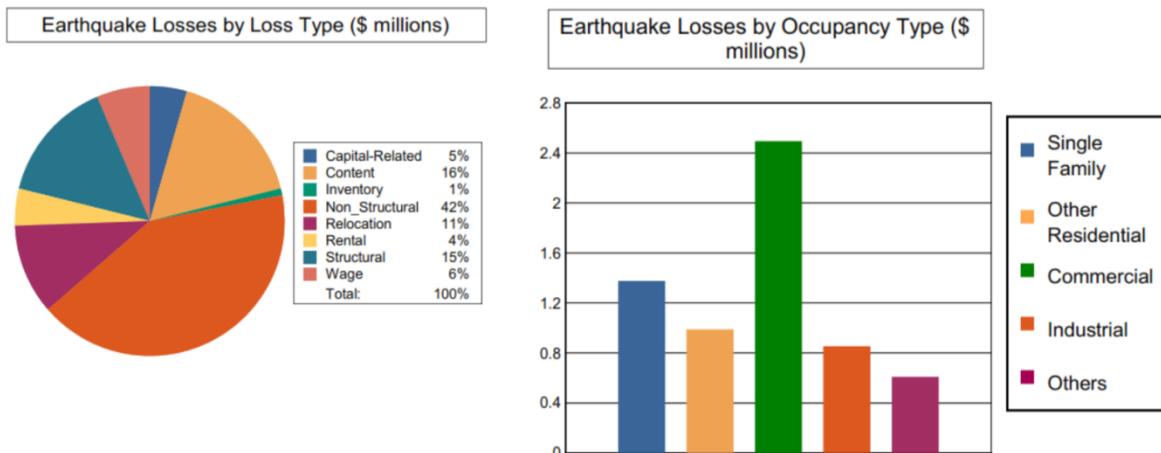
A list of specific critical facilities and their associated risk can be found at the end of this subsection.

In conclusion, a wildfire event has the potential to impact many existing and future buildings, critical facilities, and populations in Lafayette County.

EARTHQUAKE

A probabilistic earthquake model was performed for the MEMA District 2 Region. As the Hazus-MH model suggests below, and historical occurrences confirm, any earthquake activity in the area is likely to inflict minor damage to the county. Hazus-MH 2.2 estimates the total building-related losses to be \$6.32 Million; 26 % of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 37 % of the total loss. See figure below.

Figure D.22: MEMA D2 EARTHQUAKE LOSSES BY TYPE



For the earthquake hazard vulnerability assessment, a probabilistic scenario was created to estimate the average annualized loss for the region. The results of the analysis are generated at the Census Tract level

¹⁷ Southern Wildfire Risk Assessment (SWRA) August 2021

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within Hazus-MH and then aggregated to the region level. Since the scenario is annualized, no building counts are provided. Losses reported included losses due to structure failure, building loss, contents damage, and inventory loss.

Social Vulnerability

It can be assumed that all existing future populations are at risk to the earthquake hazard. Hazus estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 450 households in the region to be displaced due to the earthquake. Of these, 352 people (out of a total region population of 360,784) will seek temporary shelter in public shelters.¹⁸ The total economic loss estimated for the earthquake is \$840.85 Million, which includes building and lifeline related losses based on the region's available inventory.

Critical Facilities

The Hazus-MH probabilistic analysis indicated that no critical facilities would sustain measurable damage in an earthquake event. However, all critical facilities should be considered at-risk to minor damage, should an event occur. Before the earthquake, the region had 1,522 hospital beds available for use. On the day of the earthquake, the model estimates that only 907 hospital beds (60.00%) are available for use by patients already in the hospital and those injured by the earthquake. After one week, 79.00% of the beds will be back in service. By 30 days, 94.00% will be operational.

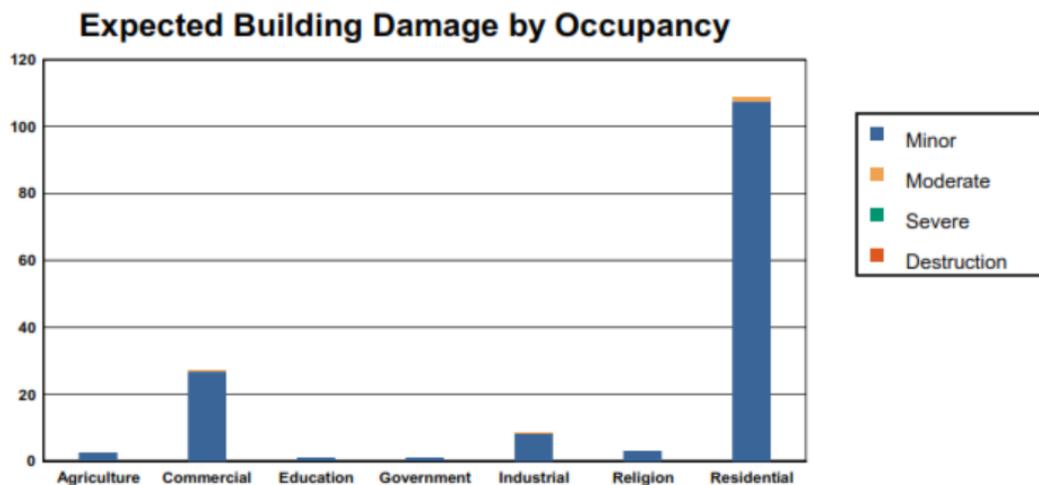
In conclusion, an earthquake has the potential to impact all existing and future buildings, facilities, and populations in Lafayette County. The Hazus-MH scenario indicates that minimal to moderate damage is expected from an earthquake occurrence. While Lafayette County may not experience a large earthquake (the greatest on record is a magnitude VI MMI), localized damage is possible with an occurrence. A list of specific critical facilities and their associated risk can be found at the end of this subsection.

HURRICANE AND TROPICAL STORM

Historical evidence indicates that Lafayette County has some risk to the hurricane and tropical storm hazard. There has been one disaster declaration due to hurricanes (Hurricane Katrina). Several tracks have come near or traversed through the county, as shown and discussed in Section D.2.9.

A probabilistic 100-year hurricane model was performed for the MEMA District 2. Hazus estimates that about 2 buildings will be at least moderately damaged. This is over 0% of the total number of buildings in the region. There are an estimated 0 buildings that will be completely destroyed. The figure below summarizes the expected damage by general occupancy for the buildings in the region.

¹⁸ HAZUS-MH utilizes 2010 Census Data

Figure D.23: MEMA D2 100-YEAR HURRICANE

Hurricanes and tropical storms can cause damage through numerous additional hazards such as flooding, erosion, tornadoes, and high winds, thus it is difficult to estimate total potential losses from these cumulative effects. The current Hazus-MH hurricane model only analyzes hurricane winds and is not capable of modeling and estimating cumulative losses from all hazards associated with hurricanes; therefore, only hurricane winds are analyzed in this section. It can be assumed that all existing and future buildings and populations are at risk to the hurricane and tropical storm hazard.

The total property damage losses were \$14 million dollars. 0% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 98% of the total loss.

Social Vulnerability

Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the hurricane. Of these, 0 people (out of a total population of 360,784) will seek temporary shelter in public shelters.

Critical Facilities

Given equal vulnerability across Lafayette County, all critical facilities are considered to be at risk. Some buildings may perform better than others in the face of such an event due to construction and age, among other factors. Determining individual building response is beyond the scope of this plan. However, this plan will consider mitigation action for especially vulnerable structures and/or critical facilities to mitigate against the effects of the hurricane hazard. A list of specific critical facilities can be found at the end of this subsection.

In conclusion, a hurricane event has the potential to impact many existing and future buildings, critical facilities, and populations in Lafayette County.

HAZARDOUS MATERIALS INCIDENT

Although historical evidence indicates that Lafayette County is susceptible to hazardous materials events,

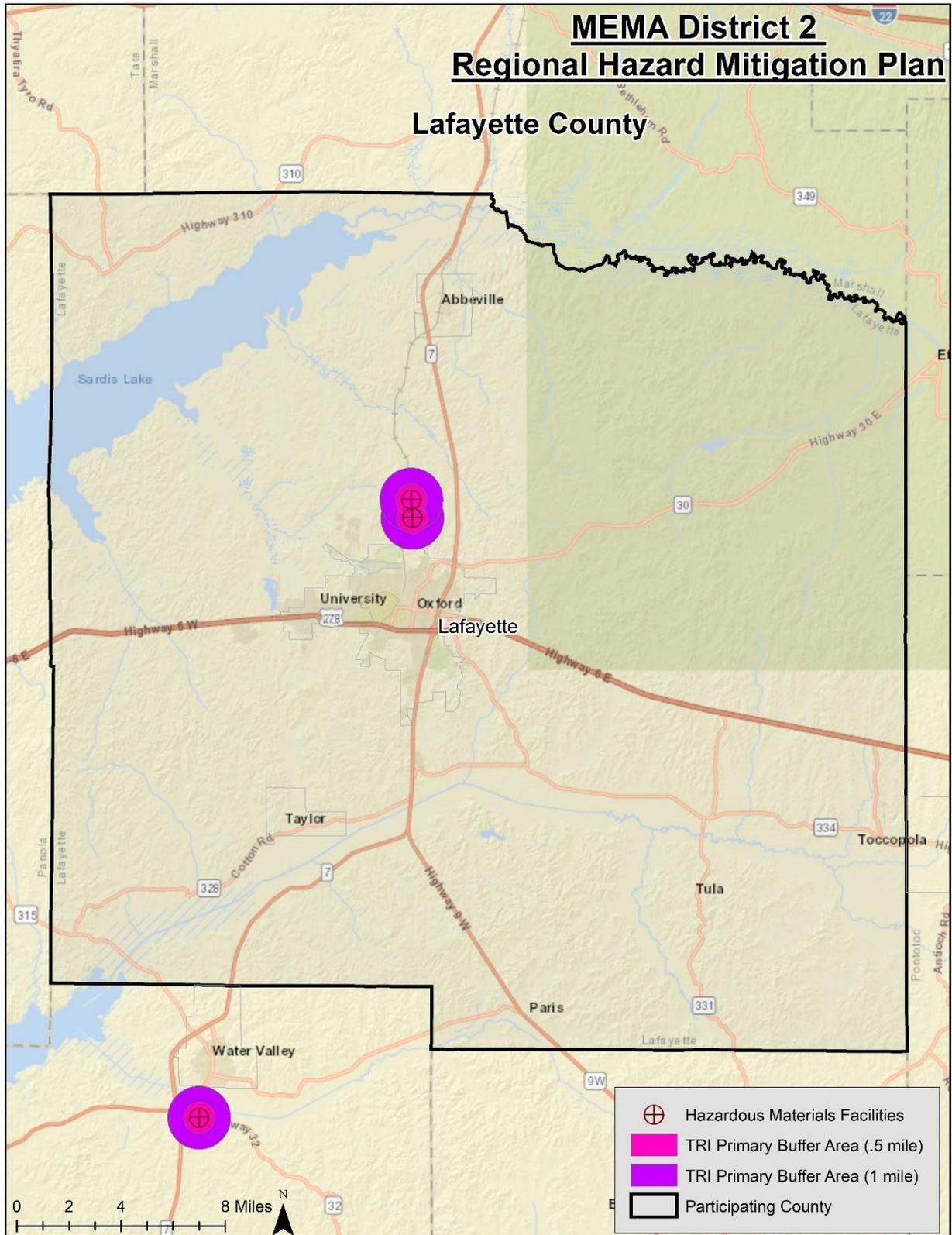
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there are no reports of damage. Therefore, it is difficult to calculate a reliable annualized loss figure. It is assumed that while one major event could result in significant losses, annualizing structural losses over a long period of time would most likely yield a negligible annualized loss estimate for Lafayette County.

Most hazardous materials incidents that occur are contained and suppressed before destroying any property or threatening lives. However, they can have a significant negative impact. Such events can cause multiple deaths, completely shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage. In a hazardous materials incident, solid, liquid, and/or gaseous contaminants may be released from fixed or mobile containers. Weather conditions will directly affect how the hazard develops. Certain chemicals may travel through the air or water, affecting a much larger area than the point of the incidence itself. Non-compliance with fire and building codes, as well as failure to maintain existing fire and containment features, can substantially increase the damage from a hazardous materials release. The duration of a hazardous materials incident can range from hours to days. Warning time is minimal to none.

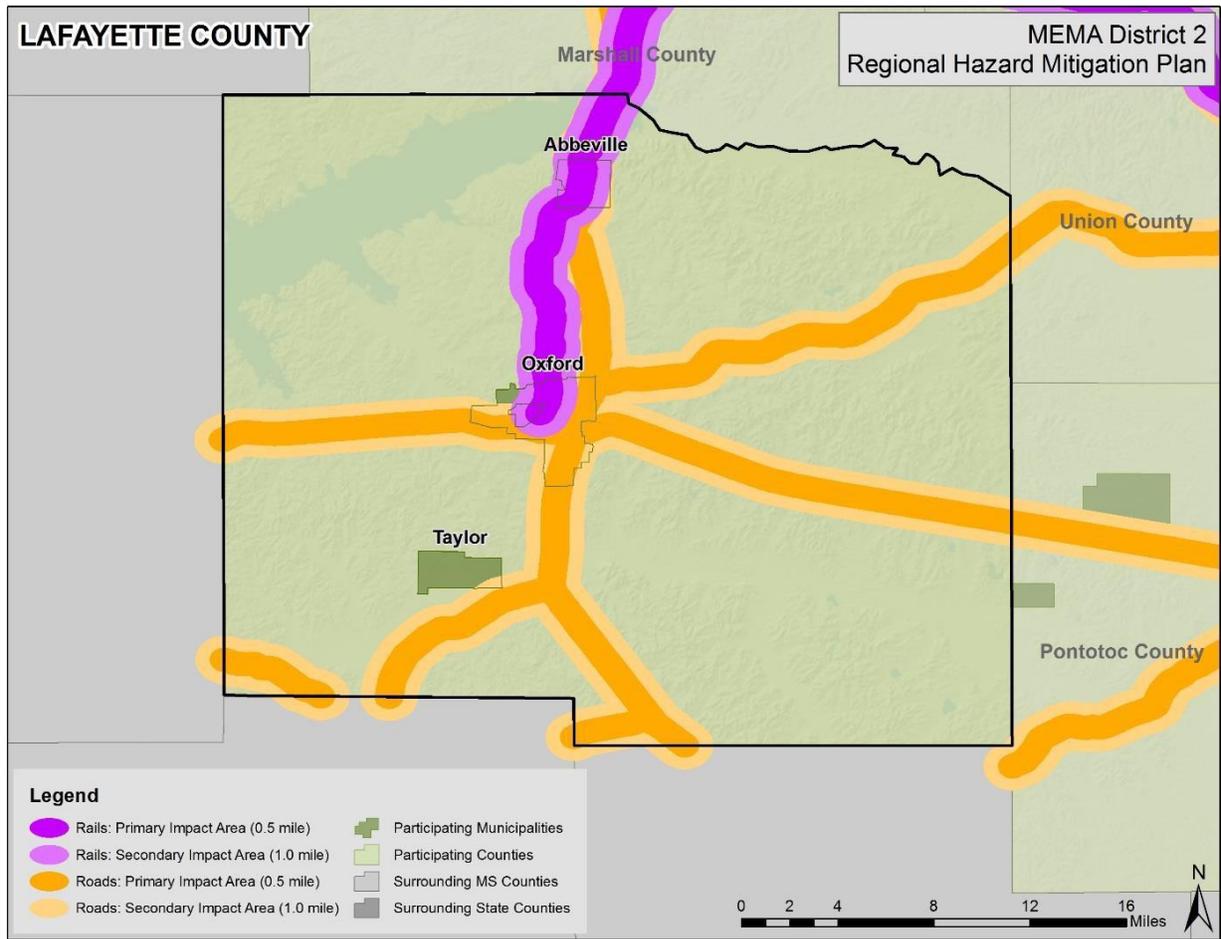
In order to conduct the vulnerability assessment for this hazard, GIS intersection analysis was used for fixed and mobile areas and building footprints/parcels.³³ In both scenarios, two sizes of buffers—0.5-mile and 1.0-mile—were used. These areas are assumed to represent the different levels of effect: immediate (primary) and secondary. Primary and secondary impact zones were selected based on guidance from the PHMSA Emergency Response Guidebook. For the fixed site analysis, geo-referenced TRI sites in the region, along with buffers, were used for analysis as shown in **Figure D.24**. For the mobile analysis, the major roads (Interstate highway, U.S. highway, and State highway) and railroads, where hazardous materials are primarily transported that could adversely impact people and buildings, were used for the GIS buffer analysis. **Figure D.25** shows the areas used for mobile toxic release buffer analysis.

Figure D.24: TRI SITES WITH BUFFERS IN LAFAYETTE COUNTY



Source: Environmental Protection Agency

Figure D.25: MOBILE HAZMAT BUFFERS IN LAFAYETTE COUNTY



Social Vulnerability

Given high susceptibility across the entire county, it is assumed that the total population is at risk to a hazardous materials incident. It should be noted that areas of population concentration may be at an elevated risk due to a greater burden to evacuate population quickly.

Critical Facilities

Fixed Site Analysis:

The critical facility analysis for fixed TRI sites revealed that there are sixteen facilities located in a HAZMAT risk zone. This includes one EOC, two fire stations, three police stations, four schools, five government buildings, and one other. Only five facilities are located within the primary impact zone. A list of specific critical facilities and their associated risk can be found at the end of this subsection.

Mobile Analysis:

It should be presumed that any facility located near a public roadway or rail line is susceptible to a potential HAZMAT event. A list of specific critical facilities and their associated risk can be found at the end of this subsection.

For the rail line buffer areas, there are a total of twenty critical facilities located in primary and secondary buffer areas, including one EOC, three fire stations, three police stations, six schools, six government buildings, and one other. Of these, twelve facilities are located within the primary buffer area.

A list of specific critical facilities and their associated risk can be found at the end of this subsection.

In conclusion, a hazardous material incident has the potential to impact many existing and future buildings, critical facilities, and populations in Lafayette County. Those areas in a primary buffer are at the highest risk, though all areas carry some vulnerability due to variations in conditions that could alter the impact area (i.e., direction and speed of wind, volume of release, etc.). Further, incidents from neighboring counties could also impact the county and participating jurisdictions.

CONCLUSIONS ON HAZARD VULNERABILITY

The following table presents a summary of annualized loss for each hazard in Lafayette County. Due to the reporting of hazard damages primarily at the county level, it was difficult to determine an accurate annualized loss estimate for each municipality. Therefore, an annualized loss was determined through the damage reported through historical occurrences at the county level. These values should be used as an additional planning tool or measure risk for determining hazard mitigation strategies throughout the county.

Table D.33: ANNUALIZED LOSS FOR LAFAYETTE COUNTY

Event	Lafayette County	Abbeville	Oxford	Taylor
Flood-related Hazards				
Flood	\$71,958	Negligible	\$45,375	\$17,500
Erosion	Negligible	Negligible	Negligible	Negligible
Dam and Levee Failure	Negligible	Negligible	Negligible	Negligible
Winter Storm & Freeze	\$883,357	Negligible	Negligible	Negligible
Fire-related Hazards				
Drought / Heat Wave	Negligible	Negligible	Negligible	Negligible
Wildfire	Negligible	Negligible	Negligible	Negligible
Geologic Hazards				
Earthquake	Negligible	Negligible	Negligible	Negligible
Expansive Soils	Negligible	Negligible	Negligible	Negligible
Landslide	Negligible	Negligible	Negligible	Negligible
Land Subsidence / Sinkhole	Negligible	Negligible	Negligible	Negligible
Wind-related Hazards				
Hurricane & Tropical Storm	\$108,000	Negligible	Negligible	Negligible
Thunderstorm / High Wind	\$33,963	\$543	\$7,510	\$263
Hail	\$1,796	Negligible	\$385	Negligible
Lightning	\$40,987	\$2,083	\$23,333	\$208
Tornado	\$1,610,085	\$3,985	\$1,449	
Other Hazards				
HAZMAT Incident	Negligible	Negligible	Negligible	Negligible
Pipelines	Negligible	Negligible	Negligible	Negligible
Water Supply / System Failure	Negligible	Negligible	Negligible	Negligible
Active Shooter	Negligible	Negligible	Negligible	Negligible
Civil Unrest	Negligible	Negligible	Negligible	Negligible
Cyberterrorism	Negligible	Negligible	Negligible	Negligible
Human Trafficking	Negligible	Negligible	Negligible	Negligible
Pandemic	Negligible	Negligible	Negligible	Negligible
Terror Threat	Negligible	Negligible	Negligible	Negligible

**In this table, the term "Negligible" is used to indicate that no records of dollar losses for the particular hazard were recorded. This could be the case either because there were no events that caused dollar damage or because documentation of that particular type of event is not well kept. It could also mean that event data was only reported at the County-level. Annualized losses were calculated based on the total number*

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As noted previously, all existing and future buildings and populations (including critical facilities) are vulnerable to atmospheric hazards including drought / heat wave, hurricane and tropical storm, thunderstorm (wind, hail, lightning), tornado, and winter storm and freeze. In addition, all buildings and populations are vulnerable to all of the man-made and technological hazards identified above. Some buildings may be more vulnerable to these hazards based on locations, construction, and building type. **Table D.46** shows the critical facilities vulnerable to additional hazards analyzed in this subsection. The table lists those assets that are determined to be exposed to each of the identified hazards (marked with an "X").

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Table D.34: AT-RISK CRITICAL FACILITIES IN LAFAYETTE COUNTY

FACILITY NAME	FACILITY TYPE	FLOOD-RELATED				FIRE-RELATED			GEOLOGIC				WIND-RELATED			OTHER														
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ¹⁹	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat
Lafayette County																														
Oxford Emergency Operations Center	EOC			X	X	X	X	X	X	X			X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X
Lafayette County Fire 10	Fire Station			X	X	X	X		X	X			X	X	X	X	X		X		X	X	X	X	X	X	X	X	X	X
Lafayette County Fire Department 16	Fire Station			X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X
Lafayette County Fire Department 9	Fire Station			X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X
Oxford Fire Station #1	Fire Station			X	X	X	X	X	X	X			X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X
Oxford Fire Station #2	Fire Station			X	X	X	X	X	X	X			X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X
Oxford Fire Station #3	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Oxford Fire Station #4	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Lafayette County Fire Station #1	Fire Station			X	X	X	X		X	X			X	X	X	X						X	X	X	X	X	X	X	X	X
Lafayette County Fire Station #11	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Lafayette County Fire Station #12	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X
Lafayette County Fire Station #14	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X

¹⁹ As noted previously, these facilities could be at risk to dam failure if located in an inundation area. Data was not available to conduct such an analysis. There was no local knowledge of these facilities being at risk to dam failure. As additional data becomes available, more in-depth analysis will be conducted.

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FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED			GEOLOGIC				WIND-RELATED				OTHER												
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ²⁰	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat
Lafayette County																														
Lafayette County Fire Station #15	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Lafayette County Fire Station #2	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Lafayette County Fire Station #3	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Lafayette County Fire Station #4	Fire Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X
Lafayette County Fire Station #5	Fire Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X
Lafayette County Fire Station #6	Fire Station			X	X	X	X		X	X			X	X	X	X							X	X	X	X	X	X	X	X
Lafayette County Fire Station #7	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Lafayette County Fire #17	Fire Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Baptist Memorial Hospital	Hospital			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Abbeville Police Department	Police Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
University Police and Campus Safety	Police Station			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X
Lafayette County Sheriff's Dept. & Jail	Police Station			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
Oxford City Police Dept	Police Station			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X

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FACILITY NAME	FACILITY TYPE	FLOOD-RELATED					FIRE-RELATED			GEOLOGIC					WIND-RELATED				OTHER												
		Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ²¹	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat	
Lafayette County																															
Bramlett Elementary School	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X
Della Davidson Elem	School			X	X	X	X	X	X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X
Lafayette County Upper Elementary	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X
Lafayette County Lower Elementary																															
Lafayette County High School	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X
Lafayette County Middle	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X
Northwest Mississippi Community College	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X
Oxf\Laf School Of Applied Tech	School	X		X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X
Oxford Elementary School	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X
Oxford High School	School			X	X	X	X		X	X			X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X
Oxford Intermediate School	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X
Oxford Learning Center	School			X	X	X	X		X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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FACILITY NAME	FACILITY TYPE	Flood – 100 yr	Flood – 500 yr	Erosion	Dam and Levee Failure ²	Winter Storm and Freeze	Drought / Heat Wave	Wildfire	Earthquake	Expansive Soils	Landslide – Mod	Landslide – High	Land Subsidence / Sinkhole	Hurricane and Tropical Storm	Thunderstorm (wind, hail,	Tornado	Fixed HAZMAT – 0.5 mile	Fixed HAZMAT – 1.0 mile	Mobile HAZMAT – 0.5 mile (road)	Mobile HAZMAT – 1.0 mile (road)	Mobile HAZMAT – 0.5 mile (rail)	Mobile HAZMAT – 1.0 mile (rail)	Pipelines	Water Supply / System Failure	Active Shooter	Civil Unrest	Cyberterrorism	Human Trafficking	Pandemic	Terror Threat	
Oxford Middle School	School			X	X	X	X		X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
		FLOOD-RELATED				FIRE-RELATED			GEOLOGIC					WIND-RELATED			OTHER														
Lafayette County																															
Regents School of Oxford	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X
Scott Child Development Center	School			X	X	X	X		X	X			X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X
Stovall SPED Complex	School	X		X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X
University of Mississippi	School			X	X	X	X		X	X			X	X	X	X			X	X			X	X	X	X	X	X	X	X	X

In addition to the site-specific critical facilities listed above, Lafayette County also noted several rural water systems whose infrastructure is considered critical. This infrastructure runs in many locations throughout the county and would have significant impacts if affected by a hazard. Rural water systems are identified below.

Table D.35: CRITICAL RURAL WATER SYSTEMS IN LAFAYETTE COUNTY

Rural Water System
Harmontown Water Association
Hurricane Hills Water Association
Turner Springs Water Association
Town of Abbeville Water
Hurricane Creek Water Association
College Hill Water Association
Sardis Lake Water Association
Westover Water Association
Taylor Water Association
Tri-Lake Water Association
Anchor Water Association
O-Tuckalofa Water Association
Mt. Comfort Water Association
Yocona Water Association
Toccopola Water Association
Denmark Water Association
La. Spring Water Association
Mudd Creek Water Association
Sanders Water Association
Hopewell Water Association
Campbell Water Association
East Oxford Water Association
City of Oxford Water Association
Campground Water Association
Punkin Water Association

D.4 LAFAYETTE COUNTY CAPABILITY ASSESSMENT

This subsection discusses the capability of Lafayette County to implement hazard mitigation activities. More information on the purpose and methodology used to conduct the assessment can be found in Section 7: *Capability Assessment*.

D.4.1 Planning and Regulatory Capability

The following table provides a summary of the relevant local plans, ordinances, and programs already in place or under development for Lafayette County. A checkmark (✓) indicates that the given item is currently in place and being implemented. An asterisk (*) indicates that the given item is currently being developed for future implementation. Each of these local plans, ordinances, and programs should be considered available mechanisms for incorporating the requirements of the MEMA District 2 Regional Hazard Mitigation Plan.

Table D.36: RELEVANT PLANS, ORDINANCES, AND PROGRAMS

Planning Tool/Regulatory Tool																							
	Hazard Mitigation Plan	Comprehensive Land Use Plan	Floodplain Management Plan	Open Space Management Plan (Parks & Rec/Greenway Plan	Stormwater Management Plan/Ordinance	Natural Resource Protection Plan	Flood Response Plan	Emergency Operations Plan	Continuity of Operations Plan	Evacuation Plan	Disaster Recovery Plan	Capital Improvements Plan	Economic Development Plan	Historic Preservation Plan	Flood Damage Prevention Ordinance	Zoning Ordinance	Subdivision Ordinance	Unified Development Ordinance	Post-Disaster Redevelopment Ordinance	Building Code	Fire Code	National Flood Insurance Program (NFIP)	NFIP Community Rating System
LAFAYETTE COUNTY	✓	✓					✓					✓		✓		✓			✓	✓	✓		
Abbeville	✓	✓		✓			✓	✓	*	*		✓	*	✓	*	*			*	*	✓		
Oxford	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Taylor	✓	✓					✓					✓		✓	✓	✓	✓	✓	✓	✓	✓		

A more detailed discussion on the county’s planning and regulatory capabilities follows.

EMERGENCY MANAGEMENT

Hazard Mitigation Plan

Lafayette County has previously adopted a hazard mitigation plan. The Town of Abbeville, City of Oxford, and Town of Taylor were also included in this plan.

Emergency Operations Plan

Lafayette County maintains an emergency operations plan through its Emergency Management Agency. The Town of Abbeville, and Town of Taylor are each covered by this plan. The City of Oxford also maintains their own EOP.

GENERAL PLANNING

Comprehensive Land Use Plan

Lafayette County has adopted a county comprehensive plan. Additionally, the Town of Abbeville has adopted a municipal comprehensive plan, the City of Oxford has adopted a municipal comprehensive land use plan, and the Town of Taylor has adopted a municipal general development and preservation plan.

Zoning Ordinance

Lafayette County does have a zoning ordinance in place. However, the City of Oxford and Town of Taylor

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include zoning regulations as part of their local development codes.

Subdivision Ordinance

Lafayette County has adopted zoning ordinances that now cover subdivisions; and the Town of Taylor includes subdivision regulations as part of their local development codes.

Building Codes, Permitting, and Inspections

Lafayette County, the City of Oxford, and the Town of Taylor have adopted a building code.

FLOODPLAIN MANAGEMENT

The following table provides NFIP policy and claim information for each participating jurisdiction in Lafayette County.

Table D.37: NFIP POLICY AND CLAIM INFORMATION

Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies in Force	Insurance in Force	Closed Claims	Total Payments to Date
LAFAYETTE COUNTY†	12/08/06	11/26/10	103	\$24,102,700	2	\$13,160
Abbeville	11/26/10	11/26/10(M)	0	\$0	0	\$0
Oxford	09/29/78	11/26/10	159	\$41,916,400	16	\$200,687
Taylor	03/15/11	11/26/10(M)	2	\$301,700	0	\$0

†Includes unincorporated areas of county only

*Community does not participate in the NFIP

(M) – No Elevation Determined, All Zone A, C and X

Source: NFIP Community Status information as of 8/17/2015; NFIP claims and policy information as of 6/30/2015

Community Rating System

The City of Oxford participates in the Community Rating System (CRS) had has a Class 8 rating.

Flood Damage Prevention Ordinance

All communities participating in the NFIP are required to adopt a local flood damage prevention ordinance. Lafayette County, the Town of Abbeville, the City of Oxford, and the Town of Taylor all participate in the NFIP and have adopted flood damage prevention ordinances.

Open Space Management Plan

Although Lafayette County has not adopted an open space management plan, the City of Oxford, and the Town of Abbeville has a municipal open space management plan in place.

Stormwater Management Plan

Although Lafayette County has not adopted a stormwater management plan, it includes some stormwater regulations in its local subdivision ordinance. The City of Oxford is the only jurisdiction in the county that has adopted a local stormwater management ordinance.

D.4.2 Administrative and Technical Capability

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The following table provides a summary of the capability assessment results for Lafayette County with regard to relevant staff and personnel resources. A checkmark (✓) indicates the presence of a staff member(s) in that jurisdiction with the specified knowledge or skill.

Table D.38: RELEVANT STAFF / PERSONNEL RESOURCES

Staff / Personnel Resource	Planners with knowledge of land development/land management practices	Engineers or professionals trained in construction practices related to buildings and/or infrastructure	Planners or engineers with an understanding of natural and/or human-caused hazards	Emergency Manager	Floodplain Manager	Land Surveyors	Scientists familiar with the hazards of the community	Staff with education or expertise to assess the community's vulnerability to hazards	Personnel skilled in GIS and/or Hazus	Resource development staff or grant writers
LAFAYETTE COUNTY	✓	✓		✓	✓		✓	✓	✓	
Abbeville				✓	✓		✓		✓	
Oxford	✓	✓	✓	✓	✓		✓	✓	✓	✓
Taylor				✓	✓		✓		✓	

Credit for having a floodplain manager was given to those jurisdictions that have a flood damage prevention ordinance, and therefore an appointed floodplain administrator, regardless of whether the appointee was dedicated solely to floodplain management. Credit was given for having a scientist familiar with the hazards of the community if a jurisdiction has a Cooperative Extension Service or Soil and Water Conservation Department. Credit was also given for having staff with education or expertise to assess the community's vulnerability to hazards if a staff member from the jurisdiction was a participant on the existing hazard mitigation plan's planning committee.

D.4.3 Fiscal Capability

The following table provides a summary of the results for Lafayette County with regard to relevant fiscal resources. A checkmark (✓) indicates that the given fiscal resource is locally available for hazard mitigation purposes (including match funds for state and federal mitigation grant funds) according to the previous county hazard mitigation plan.

Table D.39: RELEVANT FISCAL RESOURCES

Fiscal Tool / Resource	Capital Improvement Programming	Community Development Block Grants (CDBG)	Special Purpose Taxes (or taxing districts)	Gas/Electric Utility Fees	Water/Sewer Fees	Stormwater Utility Fees	Development Impact Fees	General Obligation, Revenue, and/or Special Tax Bonds	Partnering Arrangements or Intergovernmental Agreements	Other: other state and Federal funding sources
LAFAYETTE COUNTY	✓	✓						✓	✓	✓
Abbeville	✓	✓								✓
Oxford	✓	✓	✓	✓	✓		✓	✓	✓	✓
Taylor	✓	✓								✓

D.4.4 Political Capability

During the months immediately following a disaster, local public opinion in Lafayette County is more likely to shift in support of hazard mitigation efforts.

D.4.5 Conclusions on Local Capability

The following table shows the results of the capability assessment using the designed scoring methodology described in Section 7: *Capability Assessment*. The capability score is based solely on the information found in existing hazard mitigation plans and readily available on the jurisdictions’ government websites. According to the assessment, the average local capability score for the county and its jurisdictions is 30.3, which falls into the moderate capability ranking.

Table D.40: CAPABILITY ASSESSMENT RESULTS

Jurisdiction	Overall Capability Score	Overall Capability Rating
LAFAYETTE COUNTY	29	Moderate
Abbeville	31	Moderate
Oxford	49	High
Taylor	23	Moderate

D.5 LAFAYETTE COUNTY MITIGATION STRATEGY

This subsection provides the blueprint for Lafayette County to follow in order to become less vulnerable to its identified hazards. It is based on general consensus of the Regional Hazard Mitigation Council and the findings and conclusions of the capability assessment and risk assessment. Additional Information can be found in Section 8: *Mitigation Strategy* and Section 9: *Mitigation Action Plan*.

D.5.1 Mitigation Goals

Lafayette County developed six mitigation goals in coordination with the other participating MEMA District 2 Region jurisdictions. The regional mitigation goals are presented below.

Table D.41: MEMA DISTRICT 2 REGIONAL MITIGATION GOALS

Goal #		Goals & Objectives	Action #
#1	Goal	Local government will be able to maintain effective mitigation programs.	PEA-9
	Objective	<i>County and City of Oxford are clearly identifying mitigation projects such as flooding and drainage control, and continually work to ensure they are completed.</i>	
#2	Goal	The community will work together to create a disaster-resistant community.	PEA-9
	Objective	<i>County is bringing back long-term recovery committee and actively engages with subcommittees.</i>	
#3	Goal	The community will be able to initiate and sustain emergency response operations.	PEA-2
	Objective	<i>County and municipalities have procured generators for critical facilities. Each department has and regularly updates their COOP, and maintains alternate locations.</i>	
#4	Goal	Government operations will not be significantly disrupted by disasters.	ES-5
	Objective		
#5	Goal	The health, safety, and welfare of the community's residents and visitors will be protected.	ES-5
	Objective	<i>County has CodeRed, City of Oxford has NIXLE to maintain alerts for the community. Active public outreach to get residents to signup.</i>	
#6	Goal	Local government will support effective hazard mitigation programming in the community.	
	Objective	<i>County and municipalities continually work to maintain mitigation efforts. City of Oxford and County has 2018 Building Codes.</i>	
#7	Goal	Residents of the community will have homes, institutions, and work places that are safer.	ES-3
	Objective	<i>County is working to obtain community shelters.</i>	
#8	Goal	The local economy of the community will be prepared for a disaster.	ES-2
	Objective	<i>Messaging platforms. Long-term recovery committee seeks to address shortcomings.</i>	
#9	Goal	Local infrastructure will not be significantly disrupted by a disaster.	ES-4
	Objective	<i>Continually addressing mitigation projects. City of Oxford Utilities actively deploying underground electric to be more disaster resistant.</i>	
#10	Goal	All members of the community will understand the hazards threatening their community.	PEA-1
	Objective	<i>Extensive public outreach programs, CodeRed, NIXLE. Storm Spotter training with NWS, and Amateur radio group.</i>	

To attain the listed mitigation goals, the county has also identified objectives that will assist them in the mitigation action process. Objectives are broader than specific actions, but are measurable, unlike goals. Objectives connect goals with the actual mitigation actions. The action plan describes how the mitigation actions will be implemented, including how those actions will be prioritized, administered and incorporated into the community's existing planning mechanisms.

D.5.2 Mitigation Action Plan

The mitigation actions proposed by Lafayette County, Abbeville, Oxford, and Taylor are listed in the following individual Mitigation Action Plans.

Lafayette County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Lafayette County EMA	Local	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	Moderate	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Although some smaller- scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
SP-2	Install Automatic Seismic Shutoff Valves to critical areas.	Earthquake	High	Lafayette County EMA	Federal, State, Local	2025	Deferred.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Lafayette County EMA	Federal, State, Local	2025	More generators have been purchased, but additional generators are needed at other critical facilities.
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Two mobile generators have been purchased. Additional portable generators may be needed in the future.
ES-3	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Lafayette Co. has several storm shelters available to the public. Additional shelters are needed to accommodate the demand.
ES-4	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Lafayette County EMA	Federal, State, Local	2018	Completed

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Lafayette County EMA	Local	2025	Ongoing. Lafayette County has a good relationship with local and regional media outlets. Timely articles are published on a regular basis. This action will continue to be implemented going forward.
PEA-2	Modify/upgrade 17 existing outdoor warning sirens with two-way radio communication for improved monitoring and maintenance	Tornado, High Wind, Hail, Lightning	High	Lafayette County EMA	Federal, State, Local	2025	Some have been upgraded and added, now there are 27. Still ongoing to complete two-way communication.
PEA-3	Construct critical facilities such as additional fire stations to enhance public safety	All	High	Lafayette County EMA	Federal, State, Local	2025	Added two fire stations, and are actively hiring more firefighters.
PEA-4	Conduct training exercises to test plans and capabilities of first responders	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Training exercises are conducted on a routine basis.
PEA-5	Preventing erosion with proper bank stabilization, sloping or grading techniques, planting vegetation on slopes, terracing hillsides, or installing riprap boulders or geotextile fabric.	Erosion, Flood	High	Lafayette County EMA	Federal, State, Local	2025	Some work has been completed, but remains an ongoing project.
PEA-6	Increase awareness of flood risk and safety by Educating citizens about safety during flood conditions, including the dangers of driving on flooded roads.	Flood	High	Lafayette County EMA	Federal, State, Local	2020	Ongoing project. Continue to provide education and outreach to the public regarding flood safety
PEA-7	Protect critical facilities and infrastructure from lightning damage by installing lightning protection devices and methods, such as lightning rods and grounding, on communications infrastructure and other critical facilities.	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to install lightning protection devices and methods as funding allows.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-8	Protect critical facilities and infrastructure from lightning damage by installing and maintaining surge protection on critical electronic equipment.	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to install and maintain equipment as funding allows.
PEA-9	Conduct outreach activities to increase awareness of tornado risk.	Tornado	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing project. Continue to engage public on tornado

Town of Abbeville Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Town of Abbeville, Lafayette County EMA	Local Funding	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	Moderate	Town of Abbeville, Lafayette County EMA	Federal, State, Local	2025	Ongoing. Although some smaller- scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
SP-2	The Town proposes to construct 6 and 8 inch water mains to the city limits along State Highway 7, West and East Long Streets, North & South Business 7 and Graham Lake Road, replacing main service lines less than 6 inch.	Flood, Wildfire, Drought/Heat, Earthquake	High	Town of Abbeville	Local, Federal, State	2025	Deferred.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
SP-3	The Town propose to create a sewage system including sewage treatment.	Flood, Drought/Heat, Land Subsidence/Expansive Soils	High	Town of Abbeville	Local, Federal, State	2025	Ongoing. The town has been working on this project , but it is still underway. This action will remain in the plan until project is complete.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Town of Abbeville, Lafayette County EMA	Federal, State, Local	2025	More generators have been purchased, but additional generators are needed at other critical facilities.
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Town of Abbeville, Lafayette County EMA	Federal, State, Local	2025	Ongoing. Two mobile generators have been purchased. Additional portable generators may be needed in the future.
ES-3	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Town of Abbeville, Lafayette County EMA	Federal, State, Local	2025	Ongoing. Lafayette Co. has several storm shelters available to the public. Additional shelters are needed to accommodate the demand.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-5	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Town of Abbeville, Lafayette County EMA	Federal, State, Local	2018	Completed
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Town of Abbeville, Lafayette County EMA	Local Funding	2025	Ongoing. Lafayette County has a good relationship with local and regional media outlets. Timely articles are published on a regular basis. This action will continue to be implemented going forward.
PEA-2	Modify/upgrade 17 existing outdoor warning sirens with two-way radio communication for improved monitoring and maintenance	Tornado, High Wind, Hail, Lightning	High	Lafayette County EMA	Federal, State, Local	2025	Some have been upgraded and added, now there are 27. Still ongoing to complete two-way communication.
PEA-3	Construct critical facilities such as additional fire stations to enhance public safety	All	High	Lafayette County EMA	Federal, State, Local	2025	Added two fire stations, and are actively hiring more firefighters.
PEA-4	Conduct training exercises to test plans and capabilities of first responders	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Training exercises are conducted on a routine basis.
PEA-5	Preventing erosion with proper bank stabilization, sloping or grading techniques, planting vegetation on slopes, terracing hillsides, or installing riprap boulders or geotextile fabric.	Erosion, Flood	High	Lafayette County EMA	Federal, State, Local	2025	Some work has been completed, but remains an ongoing project.
PEA-6	Increase awareness of flood risk and safety by Educating citizens about safety during flood conditions, including the dangers of driving on flooded roads.	Flood	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing project. Continue to provide education and outreach to the public regarding flood safety

ANNEX D: LAFAYETTE COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-7	Protect critical facilities and infrastructure from lightning damage by installing lightning protection devices and methods, such as lightning rods and grounding, on communications infrastructure and other critical facilities.	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to install lightning protection devices and methods as funding allows.
PEA-8	Protect critical facilities and infrastructure from lightning damage by installing and maintaining surge protection on critical electronic equipment.	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to install and maintain equipment as funding allows
PEA-9	Conduct outreach activities to increase awareness of tornado risk.	Tornado	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to engage public on tornado

City of Oxford Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	City of Oxford, Lafayette County EMA	Local funding	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control & drainage improvements: 18 th St. Flash Flooding, Notting Hill subdivision flooding, Summerset Dr. Flooding, Links Dr. drainage, Harlan Dr. flooding, CR 401 flooding, Davidson Creek / Toby Tubby Creek Flood Study, Park Dr. at Sisk Ave Intersection flooding, Elm St. Ditch project, South Oaks / South Lamar Flooding, Rolling Woods drainage project.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	Moderate	City of Oxford, Lafayette County EMA	Federal, State, Local	2025	Although some smaller-scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
SP-2	Install Automatic Seismic Shutoff Valves to critical areas.	Earthquake	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to install automatic seismic shutoff

ANNEX D: LAFAYETTE COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
SP-3	The project would address the recurring drainage and flooding problems along and near Burney Branch Creek and Bailey Branch Creek. Runoff from rain events has increased over the past several years and has started to overload the existing drainage system and caused flooding of homes in the area. The project will replace and upgrade existing drainage structures to handle the increased water capacity.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	High	City of Oxford EMA, City of Oxford Engineering/ Public Works Department	Federal, State, Local	2025	In the process of being awarded, and remains an ongoing project.
Emergency Services							
ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	City of Oxford, Lafayette County EMA	Federal, State, Local	2025	More generators have been purchased, but additional generators are needed at other critical facilities.
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	City of Oxford, Lafayette County EMA	Federal, State, Local	2025	Ongoing. Two mobile generators have been purchased. Additional portable generators may be needed in the future.

ANNEX D: LAFAYETTE COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-3	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	City of Oxford, Lafayette County EMA	Federal, State, Local	2025	Ongoing. Lafayette Co. has several storm shelters available to the public. Additional shelters are needed to accommodate the demand.
ES-4	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	City of Oxford, Lafayette County EMA	Federal, State, Local	2018	Completed
ES-5	Construct a hardened Emergency Operations Center and Central Fire Station to provide for the continuity of governmental operations in the event of natural hazard events. The facility would provide for a safe, centralized operations area for local government officials and emergency first responders during times of emergency. The facility would also be able to serve as a regional operations facility in the event of a state or region wide disaster.	All	High	City of Oxford EMA	Local, Federal, State	2017	Completed.

ANNEX D: LAFAYETTE COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-6	Install additional advanced warning systems throughout the City of Oxford. The sirens will warn area residents and businesses of approaching storms in an attempt to reduce the potential damages and losses associated with storm events.	Tornado, High Wind, Hail, Lightning	High	City of Oxford EMA	Local, Federal, State, Private sector	2025	Ongoing. Some effort has been made to secure funding for additional advanced warning systems in the city, but city officials feel there is still a need to pursue more sirens so it will attempt to pursue funding to construct these.
ES-7	Install emergency backup generator at Industrial Park water well/ tower.	All	High	City of Oxford	Local, Federal, State	2025	NEW
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	City of Oxford, Lafayette County EMA	Local Funding	2025	Ongoing. Lafayette County has a good relationship with local and regional media outlets. Timely articles are published on a regular basis. This action will continue to be implemented going forward.
PEA-2	Modify/upgrade existing outdoor warning sirens with two-way radio communication for improved monitoring and maintenance	Tornado, High Wind, Hail, Lightning	High	City of Oxford	Federal, State, Local	2025	Ongoing. more sirens being added and some are being updated.
PEA-3	Construct critical facilities such as additional fire stations to enhance public safety	All	High	City of Oxford	Federal, State, Local	2025	Deferred. Will continue to pursue this action as funding allows.
PEA-4	Conduct training exercises to test plans and capabilities of first responders	All	High	City of Oxford	Federal, State, Local	2025	Ongoing. Training and exercises are conducted on a routine basis.
PEA-5	Preventing erosion with proper bank stabilization, sloping or grading techniques, planting vegetation on slopes, terracing hillsides, or installing riprap boulders or geotextile fabric.	Erosion, Flood	High	City of Oxford	Federal, State, Local	2025	Ongoing. Implement erosion mitigation and maintenance as funding allows.

ANNEX D: LAFAYETTE COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
PEA-6	Increase awareness of flood risk and safety by Educating citizens about safety during flood conditions, including the dangers of driving on flooded roads.	Flood	High	City of Oxford	Federal, State, Local	2025	Ongoing project. Continue to provide education and outreach to the public regarding flood safety.
PEA-7	Protect critical facilities and infrastructure from lightning damage by Installing lightning protection devices and methods, such as lightning rods and grounding, on communications infrastructure and other critical facilities.	All	High	City of Oxford	Federal, State, Local	2025	Ongoing project. Continue to install lightning protection devices and methods as funding allows.
PEA-8	Protect critical facilities and infrastructure from lightning damage by Installing and maintaining surge protection on critical electronic equipment.	All	High	City of Oxford	Federal, State, Local	2025	Ongoing project. Continue to install and maintain equipment as funding allows.
PEA-9	Conduct outreach activities to increase awareness of tornado risk.	Tornado	High	City of Oxford	Federal, State, Local	2025	Ongoing project. Continue to engage public on tornado
PEA-10	Install Digital Message Boards for public notifications.	All	High	City of Oxford	Federal, State, Local	2025	NEW

Town of Taylor Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2016)
Prevention							
P-1	Review policies, procedures, facilities, infrastructure, etc. to seek ways to help mitigate natural hazards so as to reduce losses and negative impacts associated with hazard events. The jurisdiction will review existing and future buildings and infrastructure as well as current policies and procedures.	All	High	Town of Taylor, Lafayette County EMA	Local Funding	2025	Ongoing. The county has worked with all municipalities to implement policies/plans that can help reduce the potential impacts of hazards over the past 5 years. However, the overall regulatory system could be improved by reducing development in high hazard areas and directing growth away from high risk zones. Therefore this action will remain in the plan going
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1							
Structural Projects							
SP-1	Implement flood control drainage improvements/measures in flood-prone areas so as to reduce losses and impacts.	Flood, Land Subsidence/ Expansive Soils, Dam Failure	Moderate	Town of Taylor, Lafayette County EMA	Federal, State, Local	2025	Ongoing. Although some smaller- scale projects have been implemented, larger drainage projects need to be identified and implemented so this action will remain in place.
Emergency Services							

ANNEX D: LAFAYETTE COUNTY

ES-1	Purchase fixed generators for utilization in the event of a natural hazard event. The fixed generators would be employed in critical facilities as well as other vital buildings and structures in order to provide power when needs arise.	All	High	Town of Taylor, Lafayette County EMA	Federal, State, Local	2025	Ongoing. A fixed generator has been installed at the Road Dept./Maintenance Shop and most fire stations. Additional generators are needed at other critical facilities.
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ANNEX D: LAFAYETTE COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2021)
ES-2	Purchase mobile generators for utilization in the event of a natural hazard event. The mobile generators could be moved from one site to another (e.g., critical facility to critical facility) in order to provide power where needs arise.	All	High	Town of Taylor, Lafayette County EMA	Federal, State, Local	2025	Ongoing. Two mobile generators have been purchased. Additional portable generators may be needed in the future.
ES-3	Construct/install shelters and safe rooms for utilization in the event of a natural hazard event.	All	High	Town of Taylor, Lafayette County EMA	Federal, State, Local	2025	Ongoing. Lafayette Co. has several storm shelters available to the public. Additional shelters are needed to accommodate the demand.
ES-4	Construct/install advanced warning notification systems for utilization in the event of tornadoes and other severe storms.	Tornado, High Wind, Hail, Lightning	High	Town of Taylor, Lafayette County EMA	Federal, State, Local	2018	Completed
Public Education and Awareness							
PEA-1	Encourage local newspapers and media outlets to run articles and information pieces regarding the potential dangers of natural hazards and the positive impacts of various hazard mitigation actions. The articles and information pieces will address existing and future buildings and infrastructure.	All	High	Town of Taylor, Lafayette County EMA	Local Funding	2025	Ongoing. Lafayette County has a good relationship with local and regional media outlets. Timely articles are published on a regular basis. This action will continue to be implemented going forward.

ANNEX D: LAFAYETTE COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2016)
PEA-2	Modify/upgrade 17 existing outdoor warning sirens with two-way radio communication for improved monitoring and maintenance	Tornado, High Wind, Hail, Lightning	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Partially completed and will continue as funding allows.
PEA-3	Construct critical facilities such as additional fire stations to enhance public safety	All	High	Lafayette County EMA	Federal, State, Local	2025	NEW
PEA-4	Conduct training exercises to test plans and capabilities of first responders	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Training and exercise are conducted on a routine basis.
PEA-5	Preventing erosion with proper bank stabilization, sloping or grading techniques, planting vegetation on slopes, terracing hillsides, or installing riprap boulders or geotextile fabric.	Erosion, Flood	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Implement erosion mitigation and maintenance as funding allows.
PEA-6	Increase awareness of flood risk and safety by Educating citizens about safety during flood conditions, including the dangers of driving on flooded roads.	Flood	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to provide education and outreach to the public regarding flood safety
PEA-7	Protect critical facilities and infrastructure from lightning damage by Installing lightning protection devices and methods, such as lightning rods and grounding, on communications infrastructure and other critical facilities.	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to install lightning protection devices and methods as funding allows.
PEA-8	Protect critical facilities and infrastructure from lightning damage by Installing and maintaining surge protection on critical electronic equipment.	All	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to install and maintain equipment as funding allows.
PEA-9	Conduct outreach activities to increase awareness of tornado risk.	Tornado	High	Lafayette County EMA	Federal, State, Local	2025	Ongoing. Continue to engage public on tornado education and outreach.

APPENDIX A

PLAN ADOPTION

This appendix includes the local adoption resolutions for each of the participating jurisdictions.

APPENDIX B

PLANNING TOOLS

This appendix includes the following:

1. List of Recommended Stakeholders
2. Blank Public Participation Survey
3. GIS Data Inventory Sheet
4. Scoring Criteria for Capability Assessment
5. Blank Mitigation Action Worksheet

In establishing a planning team, you want to ensure that you have a broad range of backgrounds and experiences represented. Below are some suggestions for agencies to include in a planning team. There are many organizations, both governmental and community-based, that should be included when creating a local team. In addition, state organizations can be included on local teams, when appropriate, to serve as a source of information and to provide guidance and coordination.

Use the checklist as a starting point for forming your team. Check the boxes beside any individuals or organizations that you have in your community/state that you believe should be included on your planning team so you can follow up with them.

Task A. Create the planning team – Suggestions for team members. Date: _____

Local/Tribal

- Administrator/Manager's Office
- Budget/Finance Office
- Building Code Enforcement Office
- City/County Attorney's Office
- Economic Development Office
- Emergency Preparedness Office
- Fire and Rescue Department
- Hospital Management
- Local Emergency Planning Committee
- Planning and Zoning Office
- Police/Sheriff's Department
- Public Works Department
- Sanitation Department
- School Board
- Transportation Department
- Tribal Leaders

Special Districts and Authorities

- Airport and Seaport Authorities
- Business Improvement District(s)
- Fire Control District
- Flood Control District
- Redevelopment Agencies
- Regional/Metropolitan Planning Organization(s)
- School District(s)
- Transit/Transportation Agencies

Others

- Architectural/Engineering/Planning Firms
- Citizen Corps
- Colleges/Universities
- Land Developers
- Major Employers/Businesses
- Professional Associations
- Retired Professionals

State

- Adjutant General's Office (National Guard)
- Board of Education
- Building Code Office
- Climatologist
- Earthquake Program Manager
- Economic Development Office
- Emergency Management Office/State Hazard Mitigation Officer
- Environmental Protection Office
- Fire Marshal's Office
- Geologist
- Homeland Security Coordinator's Office
- Housing Office
- Hurricane Program Manager
- Insurance Commissioner's Office
- National Flood Insurance Program Coordinator
- Natural Resources Office
- Planning Agencies
- Police
- Public Health Office
- Public Information Office
- Tourism Department

Non-Governmental Organizations (NGOs)

- American Red Cross
- Chamber of Commerce
- Community/Faith-Based Organizations
- Environmental Organizations
- Homeowners Associations
- Neighborhood Organizations
- Private Development Agencies
- Utility Companies
- Other Appropriate NGOs

PUBLIC PARTICIPATION SURVEY FOR HAZARD MITIGATION PLANNING

We need your help!

The Counties of Alcorn, Benton, Itawamba, Lafayette, Lee, Marshall, Pontotoc, Prentiss, Tippah, Tishomingo, and Union are currently engaged in a planning process to become less vulnerable to disasters, and your participation is important to us!

The Counties, along with participating local jurisdictions and other participating partners, are now working to prepare a multi-jurisdictional *Hazard Mitigation Plan*. The purpose of this Plan is to identify and assess our community's hazard risks and determine how to best minimize or manage those risks. Upon completion, the Plan will represent a comprehensive multi-jurisdictional *Hazard Mitigation Plan* for the eleven-county region.

This survey questionnaire provides an opportunity for you to share your opinions and participate in the mitigation planning process. The information you provide will help us better understand your hazard concerns and can lead to mitigation activities that should help lessen the impact of future hazard events.

Please help us by completing this survey by September 1, 2015 and returning it to:

Ryan Wiedenman, Atkins
1616 E Millbrook Road, Suite 310
Raleigh, NC 27609

Surveys can also be faxed to: (919) 876-6848 or emailed to ryan.wiedenman@atkinglobal.com

If you have any questions regarding this survey or would like to learn about more ways you can participate in the development of the *MEMA District 2 Regional Hazard Mitigation Plan*, please contact Atkins, planning consultant for the project. You may reach Ryan Wiedenman (Atkins) at 919-431-5295 or by email at ryan.wiedenman@atkinglobal.com.

1. Where do you live?

- | | | | |
|--|--|--|--|
| <input type="checkbox"/> Unincorporated Alcorn Co. | <input type="checkbox"/> Blue Mountain | <input type="checkbox"/> Iuka | <input type="checkbox"/> Shannon |
| <input type="checkbox"/> Unincorporated Benton Co. | <input type="checkbox"/> Blue Springs | <input type="checkbox"/> Jumpertown | <input type="checkbox"/> Sherman |
| <input type="checkbox"/> Unincorporated Itawamba Co. | <input type="checkbox"/> Booneville | <input type="checkbox"/> Kossuth | <input type="checkbox"/> Snow Lake Shores |
| <input type="checkbox"/> Unincorporated Lafayette Co. | <input type="checkbox"/> Burnsville | <input type="checkbox"/> Mantachie | <input type="checkbox"/> Taylor |
| <input type="checkbox"/> Unincorporated Lee Co. | <input type="checkbox"/> Byhalia | <input type="checkbox"/> Marietta | <input type="checkbox"/> Thaxton |
| <input type="checkbox"/> Unincorporated Marshall Co. | <input type="checkbox"/> Corinth | <input type="checkbox"/> Myrtle | <input type="checkbox"/> Tishomingo (town) |
| <input type="checkbox"/> Unincorporated Pontotoc Co. | <input type="checkbox"/> Dumas | <input type="checkbox"/> Nettleton | <input type="checkbox"/> Toccopola |
| <input type="checkbox"/> Unincorporated Prentiss Co. | <input type="checkbox"/> Ecu | <input type="checkbox"/> New Albany | <input type="checkbox"/> Tremont |
| <input type="checkbox"/> Unincorporated Tippah Co. | <input type="checkbox"/> Falkner | <input type="checkbox"/> Oxford | <input type="checkbox"/> Tupelo |
| <input type="checkbox"/> Unincorporated Tishomingo Co. | <input type="checkbox"/> Farmington | <input type="checkbox"/> Paden | <input type="checkbox"/> Verona |
| <input type="checkbox"/> Unincorporated Union Co. | <input type="checkbox"/> Fulton | <input type="checkbox"/> Plantersville | <input type="checkbox"/> Walnut |
| <input type="checkbox"/> Abbeville | <input type="checkbox"/> Glen | <input type="checkbox"/> Pontotoc (city) | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Algoma | <input type="checkbox"/> Golden | <input type="checkbox"/> Potts Camp | |
| <input type="checkbox"/> Ashland | <input type="checkbox"/> Guntown | <input type="checkbox"/> Rienzi | |
| <input type="checkbox"/> Baldwyn | <input type="checkbox"/> Hickory Flat | <input type="checkbox"/> Ripley | |
| <input type="checkbox"/> Belmont | <input type="checkbox"/> Holly Springs | <input type="checkbox"/> Saltillo | |

2. Have you ever experienced or been impacted by a disaster?

- Yes
- No

a. If “Yes,” please explain:

3. How concerned are you about the possibility of our community being impacted by a disaster?

- Extremely concerned
- Somewhat concerned
- Not concerned

4. Please select the one hazard you think is the *highest threat* to your neighborhood:

- | | |
|---|--|
| <input type="checkbox"/> Active Shooter | <input type="checkbox"/> Human Trafficking |
| <input type="checkbox"/> Civil Unrest | <input type="checkbox"/> Hurricane / Tropical Storm |
| <input type="checkbox"/> Cyberterrorism | <input type="checkbox"/> Land Subsidence / Sink Holes |
| <input type="checkbox"/> Dam / Levee Failure | <input type="checkbox"/> Landslide |
| <input type="checkbox"/> Drought | <input type="checkbox"/> Lightning |
| <input type="checkbox"/> Earthquake | <input type="checkbox"/> Pipelines |
| <input type="checkbox"/> Erosion | <input type="checkbox"/> Severe Thunderstorm / High Wind |
| <input type="checkbox"/> Extreme Heat | <input type="checkbox"/> Severe Winter / Ice Storm |
| <input type="checkbox"/> Flood | <input type="checkbox"/> Tornado |
| <input type="checkbox"/> Hailstorm | <input type="checkbox"/> Water Supply / System Failure |
| <input type="checkbox"/> Hazardous Materials Incident | <input type="checkbox"/> Wildfire |

5. Please select the one hazard you think is the *second highest threat* to your neighborhood:

- | | |
|---|--|
| <input type="checkbox"/> Active Shooter | <input type="checkbox"/> Human Trafficking |
| <input type="checkbox"/> Civil Unrest | <input type="checkbox"/> Hurricane / Tropical Storm |
| <input type="checkbox"/> Cyberterrorism | <input type="checkbox"/> Land Subsidence / Sink Holes |
| <input type="checkbox"/> Dam / Levee Failure | <input type="checkbox"/> Landslide |
| <input type="checkbox"/> Drought | <input type="checkbox"/> Lightning |
| <input type="checkbox"/> Earthquake | <input type="checkbox"/> Pipelines |
| <input type="checkbox"/> Erosion | <input type="checkbox"/> Severe Thunderstorm / High Wind |
| <input type="checkbox"/> Extreme Heat | <input type="checkbox"/> Severe Winter / Ice Storm |
| <input type="checkbox"/> Flood | <input type="checkbox"/> Tornado |
| <input type="checkbox"/> Hailstorm | <input type="checkbox"/> Water Supply / System Failure |
| <input type="checkbox"/> Hazardous Materials Incident | <input type="checkbox"/> Wildfire |

6. Is there another hazard not listed above that you think is a wide-scale threat to your neighborhood?

- Yes (please explain): _____
- No

7. Is your home located in a floodplain?

- Yes
- No
- I don't know

8. Do you have flood insurance?

- Yes
- No
- I don't know

a. If "No," why not?

- Not located in floodplain
- Too expensive
- Not necessary because it never floods
- Not necessary because I'm elevated or otherwise protected
- Never really considered it
- Other (please explain): _____

9. Have you taken any actions to make your home or neighborhood more resistant to hazards?

- Yes
- No

b. If "Yes," please explain:

10. Are you interested in making your home or neighborhood more resistant to hazards?

- Yes
- No

11. Do you know what office to contact regarding reducing your risks to hazards in your area?

- Yes

No

12. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Newspaper

Television

Radio

Internet

Mail

Public workshops/meetings

School meetings

Other (please explain): _____

13. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

14. Are there any other issues regarding the reduction of risk and loss associated with hazards or disasters in the community that you think are important?

15. A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. Please tell us how important you think each one is for your community to consider pursuing.

Category	Very Important	Somewhat Important	Not Important
<p><u>1. Prevention</u> Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><u>2. Property Protection</u> Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area. Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><u>3. Natural Resource Protection</u> Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><u>4. Structural Projects</u> Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard. Examples include dams, levees, detention/retention basins, channel modification, retaining walls, and storm sewers.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><u>5. Emergency Services</u> Actions that protect people and property during and immediately after a hazard event. Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><u>6. Public Education and Awareness</u> Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property. Examples include outreach projects, school education programs, library materials, and demonstration events.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

THANK YOU FOR YOUR PARTICIPATION!

This survey may be submitted anonymously; however, if you provide us with your name and contact information below we will have the ability to follow up with you to learn more about your ideas or concerns (optional):

Name: _____

Address: _____

Phone: _____ **E-Mail:** _____

GIS Data Request Sheet
MEMA District 2 Hazard Mitigation Plan

Data requested	Available?	Received?	Potential Sources
Tax Parcel Data			Tax Assessor
<i>including replacement value</i>			
Building Footprints			Tax Assessor/GIS office
Critical Facilities (in GIS or list form with addresses)			Tax Assessor/GIS office
examples include:			
government buildings			
hospitals			
senior care			
police/fire/EMS/EOC			
locally significant buildings			
schools			
Local hazard studies			public works, natural resources, planning
examples include:			
Flood Studies (HEC-RAS, Risk MAP)			
Local Hazard History Articles			
Areas of Concern Studies			

If you have any questions, please contact:

Ryan Wiedenman

ryan.wiedenman@gmail.com

919-431-5295

Points System for Capability Ranking

<p>0-19 points = Limited overall capability 20-39 points = Moderate overall capability 40-68 points = High overall capability</p>
--

I. Planning and Regulatory Capability (Up to 43 points)

Yes = 3 points

Under Development = 1 point

Included under County plan/code/ordinance/program = 1 point

No = 0 points

- Hazard Mitigation Plan
- Comprehensive Land Use Plan
- Floodplain Management Plan
- National Flood Insurance Program
- NFIP Community Rating System

Yes = 2 points

Under Development = 1 point

Included under County plan/code/ordinance/program = 1 point

No = 0 points

- Open Space Management Plan / Parks & Recreation Plan
- Stormwater Management Plan
- Natural Resource Protection Plan
- Flood Response Plan
- Emergency Operations Plan
- Continuity of Operations Plan
- Evacuation Plan
- Disaster Recovery Plan
- Flood Damage Prevention Ordinance
- Post-disaster Redevelopment / Reconstruction Ordinance

Yes = 1 point

No = 0 points

- Capital Improvements Plan
- Economic Development Plan
- Historic Preservation Plan
- Zoning Ordinance
- Subdivision Ordinance
- Unified Development Ordinance
- Building Code
- Fire Code

II. Administrative and Technical Capability (Up to 15 points)

Yes = 2 points

Service provided by County = 1 point

No = 0 points

- Planners with knowledge of land development and land management practices
- Engineers or professionals trained in construction practices related to buildings and/or infrastructure
- Planners or engineers with an understanding of natural and/or human-caused hazards
- Emergency manager
- Floodplain manager

Yes = 1 point

No = 0 points

- Land surveyors
- Scientist familiar with the hazards of the community
- Staff with education or expertise to assess the community's vulnerability to hazards
- Personnel skilled in Geographical Information Systems (GIS) and/or Hazus
- Resource development staff or grant writers

III. Fiscal Capability (Up to 10 points)

Yes = 1 point

No = 0 points

- Capital Improvement Programming
- Community Development Block Grants (CDBG)
- Special Purpose Taxes (or tax districts)
- Gas / Electric Utility Fees
- Water / Sewer Fees
- Stormwater Utility Fees
- Development Impact Fees
- General Obligation / Revenue / Special Tax Bonds
- Partnering arrangements or intergovernmental agreements
- Other

MITIGATION ACTION WORKSHEETS

Mitigation Action Worksheets are used to identify potential hazard mitigation actions that participating jurisdictions in the MEMA District 2 Region will consider to reduce the negative effects of identified hazards. The worksheets provide a simple yet effective method of organizing potential actions in a user- friendly manner that can easily be incorporated into the Regional Hazard Mitigation Plan.

The worksheets are to be used as part of a strategic planning process and are designed to be:

- a.) completed electronically (worksheets and instructions will be e-mailed to members of the Hazard Mitigation Planning Team following the Mitigation Strategy Workshop);
- b.) reviewed with your department/organization for further consideration; and
- c.) returned according to the contact information provided below.

Please return all completed worksheets no later than October 28, 2015 to:

Ryan Wiedenman, Project Manager Atkins

Electronic copies may be e-mailed to: ryan.wiedenman@atkinsglobal.com

Hard copies may be faxed to: 919-876-6848 (Attn: Ryan Wiedenman)

INSTRUCTIONS

Each mitigation action should be considered to be a separate local project, policy or program and each individual action should be entered into a separate worksheet. By identifying the implementation requirements for each action, the worksheets will help lay the framework for engaging in distinct actions that will help reduce the community's overall vulnerability and risk. Detailed explanations on how to complete the worksheet are provided below.

Proposed Action: Identify a specific action that, if accomplished, will reduce vulnerability and risk in the impact area. Actions may be in the form of local policies (i.e., regulatory or incentive-based measures), programs or structural mitigation projects and should be consistent with any pre-identified mitigation goals and objectives.

Site and Location: Provide details with regard to the physical location or geographic extent of the proposed action, such as the location of a specific structure to be mitigated, whether a program will be citywide, countywide or regional, etc.

History of Damages: Provide a brief history of any known damages as it relates to the proposed action and the hazard(s) being addressed. For example, the proposed elevation of a repetitive loss property should include an overview of the number of times the structure has flooded, total dollar amount of damages if available, etc.

Hazard(s) Addressed: List the hazard(s) the proposed action is designed to mitigate against.

Category: Indicate the most appropriate category for the proposed action as discussed during the Mitigation Strategy Workshop (Prevention; Property Protection; Natural Resource Protection; Structural Projects; Emergency Services; Public Education and Awareness).

Priority: Indicate whether the action is a "high" priority, "moderate" priority or "low" priority based generally on the following criteria:

1. Effect on overall risk to life and property
2. Ease of implementation / technical feasibility
3. Project costs versus benefits
4. Political and community support
5. Funding availability

Estimated Cost: If applicable, indicate what the total cost will be to accomplish this action. This amount will be an estimate until actual final dollar amounts can be determined. Some actions (such as ordinance revisions) may only cost “local staff time” and should be noted so.

Potential Funding Sources: If applicable, indicate how the cost to complete the action will be funded. For example, funds may be provided from existing operating budgets or general funds, a previously established contingency fund, a cost-sharing federal or state grant program, etc.

Lead Agency/Department Responsible: Identify the local agency, department or organization that is best suited to implement the proposed action.

Implementation Schedule: Indicate when the action will begin and when the action is expected to be completed. Remember that some actions will require only a minimal amount of time, while others may require a long-term or continuous effort.

Comments: This space is provided for any additional information or details that may not be captured under the previous headings.

MITIGATION ACTION	
Proposed Action:	
BACKGROUND INFORMATION	
Site and Location:	
History of Damages:	

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	
Category:	
Priority (High, Moderate, Low):	
Estimated Cost:	
Potential Funding Sources:	
Lead Agency/Department Responsible:	
Implementation Schedule:	

COMMENTS

APPENDIX C

LOCAL MITIGATION PLAN REVIEW TOOL

LOCAL MITIGATION PLAN REVIEW TOOL

The *Local Mitigation Plan Review Tool* demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The Regulation Checklist provides a summary of FEMA’s evaluation of whether the Plan has addressed all requirements.
- The Plan Assessment identifies the plan’s strengths as well as documents areas for future improvement.
- The Multi-jurisdiction Summary Sheet is an optional worksheet that can be used to document how each jurisdiction met the requirements of the each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this *Local Mitigation Plan Review Guide* when completing the *Local Mitigation Plan Review Tool*.

Jurisdiction: MEMA District 2 (Alcorn, Benton, Itawamba, Lafayette, Lee, Marshall, Pontotoc, Prentiss, Tippah, Tishomingo, and Union Counties)	Title of Plan: MEMA District 2 Regional Hazard Mitigation Plan	Date of Plan: December 2021
Local Point of Contact: Erin Buchanan		Address: 1201 15th St. NW, Suite 600, Washington, DC 20005
Title: Managing Director		
Agency: Witt O’Brien’s		
Phone Number: 615-972-1414		
		E-Mail: EBuchanan@wittobriens.com

State Reviewer:	Title:	Date:

FEMA Reviewer:	Title:	Date:
Date Received in FEMA Region (insert #)		
Plan Not Approved		
Plan Approvable Pending Adoption		
Plan Approved		

**SECTION 1:
REGULATION CHECKLIST**

INSTRUCTIONS: The Regulation Checklist must be completed by FEMA. The purpose of the Checklist is to identify the location of relevant or applicable content in the Plan by Element/sub-element and to determine if each requirement has been ‘Met’ or ‘Not Met.’ The ‘Required Revisions’ summary at the bottom of each Element must be completed by FEMA to provide a clear explanation of the revisions that are required for plan approval. Required revisions must be explained for each plan sub-element that is ‘Not Met.’ Sub-elements should be referenced in each summary by using the appropriate numbers (A1, B3, etc.), where applicable. Requirements for each Element and sub-element are described in detail in this *Plan Review Guide* in Section 4, Regulation Checklist.

1. REGULATION CHECKLIST		Location in Plan	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)		(section and/or page number)		
ELEMENT A. PLANNING PROCESS				
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))	Section 2; Appendix D			
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))	Section 2.4-2.7; Appendix B & D;			
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	Section 2.6-2.7; Appendix B & D;			
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))	Section 7.3; Annexes A-K Section 4;			
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))	Section 10.4			
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))	Section 10.3			

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
<u>ELEMENT A: REQUIRED REVISIONS</u>				
ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT				
B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))	Section 4; Section 5; Annexes A-K Section 2;			
B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))	S Section 5; Annexes A-K Section 2;			
B3. Is there a description of each identified hazard’s impact on the community as well as an overall summary of the community’s vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))	Section 5; Section 6; Annexes A-K Sections 2 & 3;			
B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))	Section 5.3.5; Annexes A-K Section 2.1; <i>Updated NFIP data was not made available for this plan update.</i>			
<u>ELEMENT B: REQUIRED REVISIONS</u>				

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
ELEMENT C. MITIGATION STRATEGY				
C1. Does the plan document each jurisdiction’s existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))	Section 7; Annexes A-K Section 4;			
C2. Does the Plan address each jurisdiction’s participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))	Section 5.3.4; Section 7.3.4; Annexes A-K Section 2.1 and 4.1;			
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))	Section 8.2; Annexes A-K Section 5.1;			
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))	Section 8.3-8.4; Section 9.2; Annexes A-K Section 5.2;			
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))	Section 8.1.1; Section 9.2; Annexes A-K Section 5.2);			
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))	Section 7.3.1; Section 10.1-10.2; Annexes A-K Section 4.1;			
<u>ELEMENT C: REQUIRED REVISIONS</u>				
ELEMENT D. PLAN REVIEW, EVALUATION, AND IMPLEMENTATION (applicable to plan updates only)				
D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))	Section 6.4.3; Annexes A-K Section 3.3;			

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))		Section 2.8; Section 8.5; Section 9.2; Annexes A-K Section 5.2;		
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))		Section 5.17; Section 9.2; Annexes A-K Section 2.15 & 5.2;		
<u>ELEMENT D: REQUIRED REVISIONS</u>				
ELEMENT E. PLAN ADOPTION				
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))		Appendix A		
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))		Appendix A		
<u>ELEMENT E: REQUIRED REVISIONS</u>				
ELEMENT F. ADDITIONAL STATE REQUIREMENTS (OPTIONAL FOR STATE REVIEWERS ONLY; NOT TO BE COMPLETED BY FEMA)				
F1.				
F2.				
<u>ELEMENT F: REQUIRED REVISIONS</u>				

SECTION 2: PLAN ASSESSMENT

INSTRUCTIONS: The purpose of the Plan Assessment is to offer the local community more comprehensive feedback to the community on the quality and utility of the plan in a narrative format. The audience for the Plan Assessment is not only the plan developer/local community planner, but also elected officials, local departments and agencies, and others involved in implementing the Local Mitigation Plan. The Plan Assessment must be completed by FEMA. The Assessment is an opportunity for FEMA to provide feedback and information to the community on: 1) suggested improvements to the Plan; 2) specific sections in the Plan where the community has gone above and beyond minimum requirements; 3) recommendations for plan implementation; and 4) ongoing partnership(s) and information on other FEMA programs, specifically RiskMAP and Hazard Mitigation Assistance programs. The Plan Assessment is divided into two sections:

1. Plan Strengths and Opportunities for Improvement
2. Resources for Implementing Your Approved Plan

Plan Strengths and Opportunities for Improvement is organized according to the plan Elements listed in the Regulation Checklist. Each Element includes a series of italicized bulleted items that are suggested topics for consideration while evaluating plans, but it is not intended to be a comprehensive list. FEMA Mitigation Planners are not required to answer each bullet item, and should use them as a guide to paraphrase their own written assessment (2-3 sentences) of each Element.

The Plan Assessment must not reiterate the required revisions from the Regulation Checklist or be regulatory in nature, and should be open-ended and to provide the community with suggestions for improvements or recommended revisions. The recommended revisions are suggestions for improvement and are not required to be made for the Plan to meet Federal regulatory requirements. The italicized text should be deleted once FEMA has added comments regarding strengths of the plan and potential improvements for future plan revisions. It is recommended that the Plan Assessment be a short synopsis of the overall strengths and weaknesses of the Plan (no longer than two pages), rather than a complete recap section by section.

Resources for Implementing Your Approved Plan provides a place for FEMA to offer information, data sources and general suggestions on the overall plan implementation and maintenance process. Information on other possible sources of assistance including, but not limited to, existing publications, grant funding or training opportunities, can be provided. States may add state and local resources, if available.

A. Plan Strengths and Opportunities for Improvement

This section provides a discussion of the strengths of the plan document and identifies areas where these could be improved beyond minimum requirements.

Element A: Planning Process

How does the Plan go above and beyond minimum requirements to document the planning process with respect to:

- *Involvement of stakeholders (elected officials/decision makers, plan implementers, business owners, academic institutions, utility companies, water/sanitation districts, etc.);*
- *Involvement of Planning, Emergency Management, Public Works Departments or other planning agencies (i.e., regional planning councils);*
- *Diverse methods of participation (meetings, surveys, online, etc.); and*
- *Reflective of an open and inclusive public involvement process.*

Element B: Hazard Identification and Risk Assessment

In addition to the requirements listed in the Regulation Checklist, 44 CFR 201.6 Local Mitigation Plans identifies additional elements that should be included as part of a plan's risk assessment. The plan should describe vulnerability in terms of:

- 1) *A general description of land uses and future development trends within the community so that mitigation options can be considered in future land use decisions;*
- 2) *The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas; and*
- 3) *A description of potential dollar losses to vulnerable structures, and a description of the methodology used to prepare the estimate.*

How does the Plan go above and beyond minimum requirements to document the Hazard Identification and Risk Assessment with respect to:

- *Use of best available data (flood maps, HAZUS, flood studies) to describe significant hazards;*
- *Communication of risk on people, property, and infrastructure to the public (through tables, charts, maps, photos, etc.);*
- *Incorporation of techniques and methodologies to estimate dollar losses to vulnerable structures;*
- *Incorporation of Risk MAP products (i.e., depth grids, Flood Risk Report, Changes Since Last FIRM, Areas of Mitigation Interest, etc.); and*
- *Identification of any data gaps that can be filled as new data became available.*

Element C: Mitigation Strategy

How does the Plan go above and beyond minimum requirements to document the Mitigation Strategy with respect to:

- *Key problems identified in, and linkages to, the vulnerability assessment;*
- *Serving as a blueprint for reducing potential losses identified in the Hazard Identification and Risk Assessment;*
- *Plan content flow from the risk assessment (problem identification) to goal setting to mitigation action development;*
- *An understanding of mitigation principles (diversity of actions that include structural projects, preventative measures, outreach activities, property protection measures, post-disaster actions, etc);*
- *Specific mitigation actions for each participating jurisdictions that reflects their unique risks and capabilities;*
- *Integration of mitigation actions with existing local authorities, policies, programs, and resources; and*
- *Discussion of existing programs (including the NFIP), plans, and policies that could be used to implement mitigation, as well as document past projects.*

Element D: Plan Update, Evaluation, and Implementation (Plan Updates Only)

How does the Plan go above and beyond minimum requirements to document the 5-year Evaluation and Implementation measures with respect to:

- *Status of previously recommended mitigation actions;*
- *Identification of barriers or obstacles to successful implementation or completion of mitigation actions, along with possible solutions for overcoming risk;*
- *Documentation of annual reviews and committee involvement;*
- *Identification of a lead person to take ownership of, and champion the Plan;*
- *Reducing risks from natural hazards and serving as a guide for decisions makers as they commit resources to reducing the effects of natural hazards;*
- *An approach to evaluating future conditions (i.e. socio-economic, environmental, demographic, change in built environment etc.);*
- *Discussion of how changing conditions and opportunities could impact community resilience in the long term; and*
- *Discussion of how the mitigation goals and actions support the long-term community vision for increased resilience.*

B. Resources for Implementing Your Approved Plan

Ideas may be offered on moving the mitigation plan forward and continuing the relationship with key mitigation stakeholders such as the following:

- *What FEMA assistance (funding) programs are available (for example, Hazard Mitigation Assistance (HMA)) to the jurisdiction(s) to assist with implementing the mitigation actions?*
- *What other Federal programs (National Flood Insurance Program (NFIP), Community Rating System (CRS), Risk MAP, etc.) may provide assistance for mitigation activities?*
- *What publications, technical guidance or other resources are available to the jurisdiction(s) relevant to the identified mitigation actions?*
- *Are there upcoming trainings/workshops (Benefit-Cost Analysis (BCA), HMA, etc.) to assist the jurisdictions(s)?*
- *What mitigation actions can be funded by other Federal agencies (for example, U.S. Forest Service, National Oceanic and Atmospheric Administration (NOAA), Environmental Protection Agency (EPA) Smart Growth, Housing and Urban Development (HUD) Sustainable Communities, etc.) and/or state and local agencies?*

SECTION 3:
MULTI-JURISDICTION SUMMARY SHEET (OPTIONAL)

INSTRUCTIONS: For multi-jurisdictional plans, a Multi-jurisdiction Summary Spreadsheet may be completed by listing each participating jurisdiction, which required Elements for each jurisdiction were ‘Met’ or ‘Not Met,’ and when the adoption resolutions were received. This Summary Sheet does not imply that a mini-plan be developed for each jurisdiction; it should be used as an optional worksheet to ensure that each jurisdiction participating in the Plan has been documented and has met the requirements for those Elements (A through E).

MULTI-JURISDICTION SUMMARY SHEET												
#	Jurisdiction Name	Jurisdiction Type (city/borough/ township/ village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Requirements
1	Alcorn County	County	Ricky Gibens									
2	Corinth	City	Todd Welch									
3	Farmington	Town	Dale Fortenberry									
4	Glen	Town	Tony White									
5	Kossuth	Village	Don Pace									
6	Rienzi	Town	Walter Williams									
7	Benton County	County	Jimmy Gresham									
8	Ashland	Town	Jimmy Gresham									

MULTI-JURISDICTION SUMMARY SHEET

#	Jurisdiction Name	Jurisdiction Type (city/borough/ township/ village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Requirements
9	Hickory Flat	Town	Jimmy Gresham									
10	Snow Lake Shores	Town	Doug Irby									
11	Itawamba County	County	Patrick Homan									
12	Fulton	City	Patrick Homan									
13	Mantachie	Town	Patrick Homan									
14	Tremont	Town	Patrick Homan									
15	Lafayette County	County	Steven Quarles									
16	Abbeville	Town	Steven Quarles									
17	Oxford	City	Jimmy Allgood									
18	Taylor	Village	Steven Quarles									
19	Lee County	County	Lee Bowdry									
20	Baldwyn	City	Lee Bowdry									
21	Guntown	Town	Lee Bowdry									

MULTI-JURISDICTION SUMMARY SHEET

#	Jurisdiction Name	Jurisdiction Type (city/borough/ township/ village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Requirements
22	Nettleton	City	Lee Bowdry									
23	Plantersville	Town	Shelton Shannon									
24	Saltillo	City	Brian Srissom									
25	Shannon	Town	Ronnie Hallmark									
26	Tupelo	City	Lee Bowdry									
27	Verona	City	B Williams									
28	Marshall County	County	Leland Reed									
29	Byhalia	Town	B Rodgers									
30	Holly Springs	City	Rodney Craine									
31	Potts Camp	Town	Marie Alderso									
32	Pontotoc County	County	Allen Bain									
33	Algoma	Town	Allen Bain									
34	Ecru	Town	Allen Bain									

MULTI-JURISDICTION SUMMARY SHEET

#	Jurisdiction Name	Jurisdiction Type (city/borough/ township/ village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Requirements
35	Pontotoc	City	Allen Bain									
36	Sherman	Town	Allen Bain									
37	Thaxton	Town	Allen Bain									
38	Toccopola	Town	Allen Bain									
39	Prentiss County	County	Chris Lindley									
40	Booneville	City	Chris Lindley									
41	Jumpertown	Town	Chris Lindley									
42	Marietta	Town	Chris Lindley									
43	Tippah County	County	Tom Lindsey									
44	Blue Mountain	Town	Douglas Norton									
45	Dumas	Town	Bradley Lawson									
46	Falkner	Town	Ross Gay									
47	Ripley	City	Chris Marsalis									

MULTI-JURISDICTION SUMMARY SHEET

#	Jurisdiction Name	Jurisdiction Type (city/borough/ township/ village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Requirements
48	Walnut	Town	Vicki Skinner									
49	Tishomingo County	County	Payton Berklite									
50	Belmont	Town	Payton Berklite									
51	Bunsville	Town	Payton Berklite									
52	Golden	Town	Payton Berklite									
53	Iuka	City	Payton Berklite									
54	Paden	Village	Payton Berklite									
55	Tishomingo	Town	Payton Berklite									
56	Union County	County	Curt Clayton									
57	Blue Springs	Village	Curt Clayton									
58	Myrtle	Town	Curt Clayton									
59	New Albany	City	Curt Clayton									

APPENDIX D

PLANNING PROCESS DOCUMENTATION

This appendix includes the following:

1. Meeting Agendas
2. Meeting Minutes
3. Meeting Sign-In Sheets
4. Meeting Agendas
5. Meeting Minutes
6. Meeting Sign-In Sheets
7. Public Survey Summary Results
8. Public Survey Advertisements
9. Designation Letters

AGENDA

MEMA District 2 Regional Hazard Mitigation Plan Hazard Mitigation Council Meeting

**May 21, 2015
10:00 AM – Noon**

1) Introductions

2) Overview of Mitigation/Icebreaker Exercise

3) Project Overview

- a) Key Objectives
- b) Project Tasks
- c) Project Schedule
- d) Project Staffing

4) Data Collection

- a) GIS Data Inventory
- b) Capability Assessment Survey
- c) Public Participation Survey
- d) Existing Mitigation Actions

5) Roles & Responsibilities

- a) Atkins
- b) County Leads
- c) Participating Jurisdictions

6) Next Steps

- a) Data collection efforts
- b) Begin public outreach
- c) Discuss next Hazard Mitigation Council meeting

7) Questions, Issues, or Concerns

ATKINS

AGENDA

MEMA District 2 Hazard Mitigation Plan Mitigation Strategy Meeting

October 9, 2015

Northeast Mississippi Community College-Corinth Campus
2759 South Harper Rd., Room 135
Corinth, MS 38834

1) Introductions

2) Mitigation Refresher

3) Project Schedule

4) Risk Assessment Findings

- a) Hazard History and Profiles
- b) Conclusions on Risk: PRI

5) Capability Assessment Findings

- a) Indicators
- b) Results

6) Public Involvement Activities

7) Mitigation Strategy

- a) Current Goals/Actions
- b) New Actions
- c) Discussion

8) Next Steps

- a) Mitigation Actions
- b) Continue Public Outreach

9) Questions, Issues, or Concerns

Meeting Minutes
MEMA District 2 Regional Hazard Mitigation Plan
Project Kickoff Meeting
May 21, 2015

Myrl Williams, MEMA District 2 Area Coordinator, started the meeting by welcoming the representatives from each county, participating municipal jurisdictions, and other stakeholders. Mr. Williams then introduced Ryan Wiedenman, Project Manager from the project consulting team, Atkins.

Mr. Wiedenman led the kickoff meeting and began by providing an overview of the items to be discussed at the meeting and briefly reviewed each of the handouts that were distributed in the meeting packets (agenda, project description, and presentation slides). He then provided a brief overview of mitigation and discussed the Disaster Mitigation Act of 2000 and NC Senate Bill 300.

He gave a list of the participating jurisdictions for the regional plan, noting that nearly every local government in the region is participating in an existing hazard mitigation plan. These plans expire at various times in 2016, so the planning team will plan to develop a draft to submit to FEMA by early 2016.

Mr. Wiedenman then explained the six different categories of mitigation techniques (emergency services; prevention; natural resource protection; structural projects; public education and awareness; and property protection) and gave examples of each. This explanation culminated with an Ice Breaker Exercise for the attendees.

Mr. Wiedenman instructed attendees on how to complete the exercise. Attendees were divided into small groups and given an equal amount of fictitious FEMA money and asked to spend it in the various mitigation categories. Money could be thought of as grant money that communities received towards mitigation. Attendees were asked to target their money towards areas of mitigation that are of greatest concern for their community. Ideally, the exercise helps pinpoint areas of mitigation that the community may want to focus on when developing mitigation grants. Mr. Wiedenman also presented the Ice Breaker Exercise results which were:

- Emergency Services- \$95
- Prevention- \$53
- Public Education and Awareness- \$25
- Property Protection- \$19
- Structural- \$18
- Natural Resource Protection- \$8

Mr. Wiedenman then discussed the key objectives and structure of the planning process, explaining the specific tasks to be accomplished for this project, including the planning process, risk assessment, vulnerability assessment, capability assessment, mitigation strategy and action plan, plan maintenance procedures, and documentation. The project schedule was presented along with the project staffing chart, which demonstrates the number of experienced individuals that will be working on this project. The data collection needs and public outreach efforts were also discussed.

Mr. Wiedenman then reviewed the roles and responsibilities of Atkins, participating jurisdictions, and stakeholders. The presentation concluded with a discussion of the next steps to be taken in the project development, which included discussing data collection efforts, continuing public outreach, and the next meeting for the HMPT.

The meeting was opened for questions and comments, but nothing of note was brought up other than to discuss when the next meeting might take place.

Mr. Wiedenman thanked everyone for attending and identified himself as the point of contact for any questions or issues. The meeting was adjourned.

Meeting Minutes
MEMA District 2 Regional Hazard Mitigation Plan
Mitigation Strategy Meeting
October 9, 2015

Mr. Myrl Williams with MEMA welcomed everyone to the meeting and went over safety and administrative topics. He then passed the meeting over to Mr. Ryan Wiedenman to discuss the findings and information that Atkins pulled together.

Mr. Wiedenman initiated the meeting with a review of the meeting handouts, which included an agenda, presentation slides, proposed goals for the plan, mitigation actions from the region's existing plan, and mitigation action worksheets for collecting information for any new mitigation actions. Mr. Wiedenman reviewed the project schedule and stated that a draft of the Hazard Mitigation Plan would be presented to the Hazard Mitigation Planning team at the end of November.

He then presented the findings of the risk assessment, starting with a review of the Presidential Disaster Declarations that have impacted the region. He then explained the process for preparing Hazard Profiles and discussed how each hazard falls into one of five categories: Flood-related, Fire-related, Geologic, Wind-related, and Other. He indicated that each hazard must be evaluated and then profiled and assessed to determine a relative risk for each hazard.

Mr. Wiedenman reviewed the Hazard Profiles and the following bullets summarize the information presented:

Flood-Related Hazards

- FLOOD. There have been 216 flood events recorded in MEMA District 2 since 1996, resulting in \$15.3 million in property damage per NDC. There have been 192 NFIP losses since 1978 and approximately \$6.9 million in claims. 24 repetitive loss properties in the region account for 56 of the recorded losses. Future occurrences are likely.
- EROSION. There have not been any instances of major erosion reported, however, some HMPT members pointed out that there might be some cases as a result of flood events previously mentioned.
- DAM/LEVEE FAILURE. There have been 3 recorded dam failures in the region according to the State HMP. There are 43 high hazard dams in the region. Future occurrences are unlikely.
- WINTER STORM. There have been 274 recorded winter weather events in the region since 1996 resulting in \$458,000 in reported property damages. Future occurrences are likely.

Fire-Related Hazards

- DROUGHT. There have been eight years (out of the past fifteen, 2000-2014) where drought conditions have been reported as moderate to extreme in the region and future occurrences are likely.

- HEAT WAVE. There have been 85 recorded extreme heat events reported by the National Climatic Data Center (NCDC) since 2007. Heat extents of 107 degrees indicate that extreme heat is a hazard of concern for the region. Future occurrences are likely.
- WILDFIRE. There is an average of 4,398 fires per year reported in the region. These burn an annual average of 5,559 acres. Future occurrences are highly likely.

Geologic Hazards

- EARTHQUAKES. There have been 99 recorded earthquake events in MEMA District 2 since 1886. The strongest had a recorded magnitude of VI MMI. Future occurrences are possible.
- LANDSLIDE. No known occurrences of landslides and USGS mapping shows a very low risk for the region in general. Future occurrences unlikely.

Wind-Related Hazards

- HURRICANES AND TROPICAL STORMS. NOAA data shows that 40 storm tracks have come within 75 miles of the region since 1860. Future occurrences are likely.
- THUNDERSTORM/HIGH WIND. There have been 1,205 severe thunderstorm/high wind events reported since 1955 with \$9.2 million in reported property damages. Two deaths have been reported. Future occurrences are highly likely.
- HAILSTORM. There have been 818 recorded events since 1958. Future occurrences are highly likely.
- LIGHTNING. There have been 43 recorded lightning events reported by the National Climatic Data Center (NCDC) since 1996. Future occurrences are highly likely.
- TORNADOES. There have been 192 recorded tornado events reported in the region since 1950. \$296.4 million in property damages. 34 deaths and 397 injuries have been reported. Future occurrences are likely.

Other Hazards

- HAZARDOUS MATERIALS INCIDENTS. There have been 326 reported hazardous materials events reported in the county since 1971. 58 serious events were reported with 1 death and 14 injuries. Future occurrences are likely.
- PIPELINES. Several disruptions to the pipeline systems, but no major incidents reported. A failure would cause downtime and loss of services as well as the danger of fire and explosions. Future occurrences possible.
- WATER SUPPLY/SYSTEM FAILURE. Shortages in some areas in the 1980s. Uniform exposure across region. Future occurrences possible.

- **ACTIVE SHOOTER.** No major occurrences in region, but has happened in other areas of United States. Could cause fatalities, injuries, and emotional trauma. Future occurrences possible.
- **CIVIL UNREST.** No major occurrences recorded. Most likely to happen in or near prominent locations causing collateral damage to public and property destruction. Future occurrences possible.
- **CYBERTERRORISM.** No large-scale cyberattacks in region. Could result in theft, downed IT systems, or denial of service. Future occurrences possible.
- **HUMAN TRAFFICKING.** Ongoing issue with wide ranging impacts on people, families, and community. Likely to occur in the future.

The results of the hazard identification process were used to generate a Priority Risk Index (PRI), which categorizes and prioritizes potential hazards as high, moderate or low risk based on probability, impact, spatial extent, warning time, and duration. The highest PRI was assigned to Thunderstorm/High Wind followed by Tornado, Hailstorm, and Flood.

Hazard Mitigation Planning Team members recommended raising the relative risk level for Hazardous Materials, Lightning, Winter Storm, and Erosion.

In concluding the review of Hazard Profiles, Mr. Wiedenman stated if anyone had additional information for the hazard profiles, or had concerns with any of the data presented, they should call or email him.

Mr. Wiedenman presented the Capability Assessment Findings. Atkins has developed a scoring system that was used to rank the participating jurisdictions in terms of capability in four major areas (Planning and Regulatory; Administrative and Technical; Fiscal; Political). Important capability indicators include National Flood Insurance Program (NFIP) participation, Building Code Effective Grading Schedule (BCEGS) score, Community Rating System (CRS) participation, and the Local Capability Assessment Survey conducted by Atkins.

Mr. Wiedenman reviewed the Relevant Plans and Ordinances, Relevant Staff/Personnel Resources, and Relevant Fiscal Resources. All of these categories were used to rate the overall capability of the participating counties and jurisdictions. Most jurisdictions are in the limited to moderate range for Planning and Regulatory Capability and in the limited range for Fiscal Capability. There is variation between the jurisdictions for Administrative and Technical Capability, mainly with respect to availability staff skilled in GIS and planning. Based upon the scoring methodology developed by Atkins, it was determined that most of the participating jurisdictions have limited to moderate capability to implement hazard mitigation programs and activities.

Mr. Wiedenman also discussed the results of the public participation survey that was posted on several of the participating counties' and municipal websites. As of the meeting date, 106 responses had been received. Mr. Wiedenman explained that the survey would close on October 31, so the HMPT could make one final push to get the survey out to the public. Based on preliminary survey results, respondents felt that Tornado posed the greatest threat to their neighborhood, followed by Severe Thunderstorm and Severe Winter Storm. 84 percent of the respondents were interested in making their homes more resistant to hazards. However, 43 percent don't know who to contact regarding reducing their risks to hazards.

Mr. Wiedenman gave an overview of Mitigation Strategy Development and presented the existing goals for the plan and explained that Atkins recommended keeping the goals as they are. The Hazard Mitigation Team accepted the existing goals for the plan. Mr. Wiedenman then provided an overview and examples of suggested mitigation actions tailored for MEMA District 2 counties and their municipalities. Mr. Wiedenman then asked each county and the municipalities to provide a status update for their existing mitigation actions (completed, deleted, or deferred) by October 31, 2015. Mr. Wiedenman also asked planning team members to include any new mitigation actions by October 31, 2015.

Mr. Wiedenman thanked the group for taking the time to attend and explained that if team members had any issues or questions about the planning process or their next steps, they could contact him. The meeting was adjourned.

MEMA District 2 Regional Hazard Mitigation Plan
Hazard Mitigation Council Meeting

May 21, 2015

10:00AM-12:00PM

Name	Title	Organization	Phone Number	E-mail Address
Carolyn McKinney	Planner	MEMA	601 933 6615	cmckinne4@memn.ms.g
Al Goodman	PRINCIPAL	AWG CONSULT.	769-251-5356	AL@AWGCONSULTING
Bill Patrick	BUREAU DIR.	MEMA	601 933 6605	bpatrik@MEMA.MS.G
Shae Collum	EMA Dir	Frankenba	662-862-2735	shaecollum@valco.com
Myrl Williams	Area Coordinator	rl"16 r.....()	769-257-8799	mwilliams@memn.ms.g
Rayton Berkite	EMA	Tishomingo	62-423-8280	tishomingo.ema@adl.co
Jimmy GRESHAM	EMA		662-224-4314	jgresham1948@gmail.com
SEAN P. Thompson	Co Admins LL	!!	662-432-2020	sthompson@colae.ms.g

ATKINS

Name	Title	Organization	Phone Number	E-mail Address
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ATKINS

**MEMA District 2 Regional Hazard Mitigation Plan
Hazard Mitigation Council Meeting**

October 9, 2015
10:00AM-12:00PM

Name	Title	Organization	Phone Number	E-mail Address
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Lee Bandy	EMVA			

ATKINS

Name	Title	Organization	Phone Number	E-mail Address
 t_f2c, 		 	662-224-4314	
	- 		901-603-3096	. _j \."e;(.M }nc)}
Myrl Williams			69-257-8799	
				
			6019336615	Cmckane.
				
Bill PATRICK	PLANS DIRECTOR			
Hugh Holborn	EMM DIRECTOR		1/1/07/b	
		-;+-, PP L>		
Ricky Gibens		ALCORW		

ATKINS

Name	Title	Organization	Phone Number	E-mail Address
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ATKINS

 MEMMA volunteers help clear debris from a damaged home in Tupelo, Miss.

MEMA District 2 Regional Hazard Mitigation Plan Public Participation Survey Results

Photo Source: FEMA Media Library

 Atkes%20horizon%20back.jpg

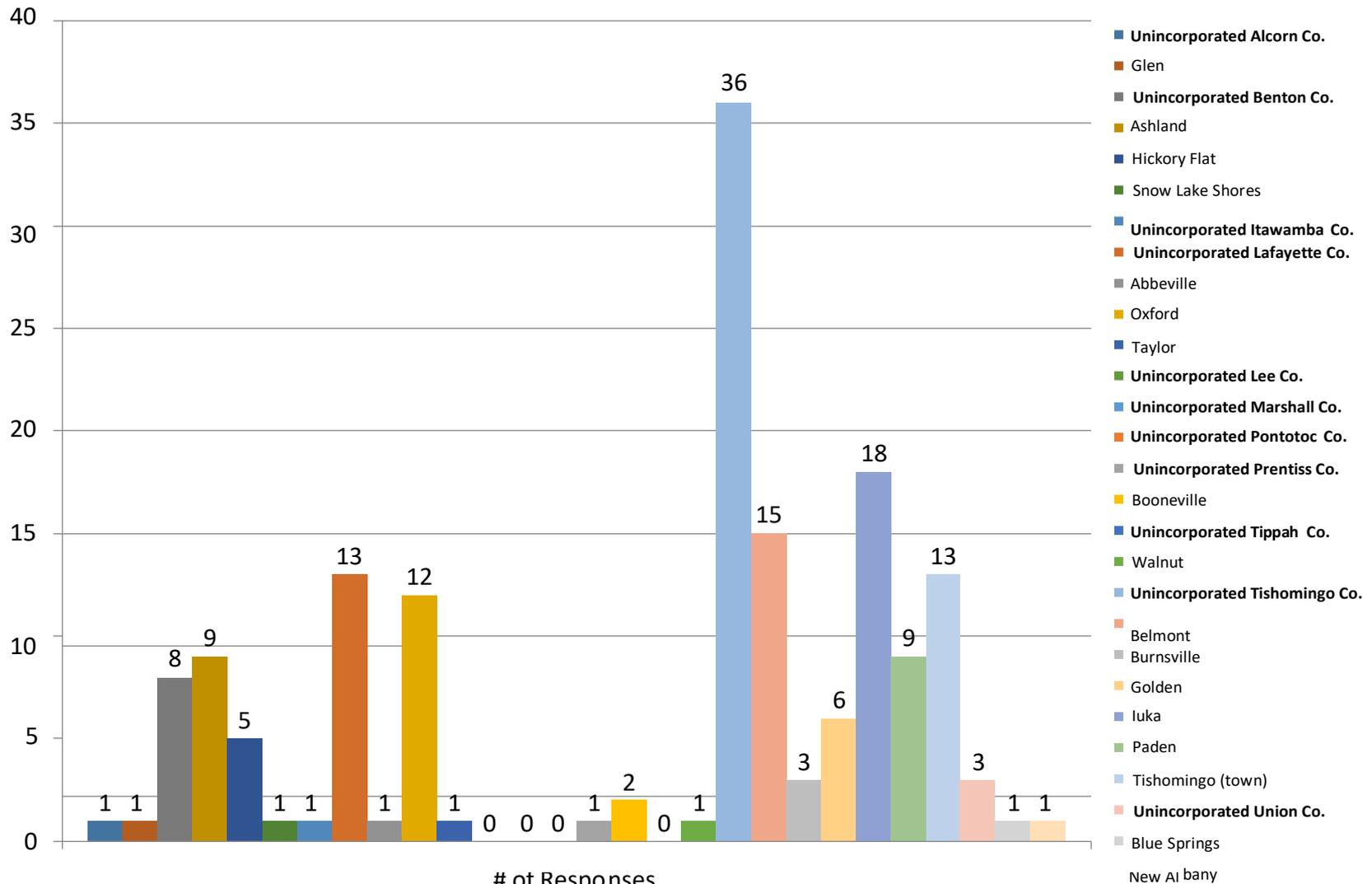
Public Participation Survey

- Provides an opportunity for the public to share opinions and participate in the planning process
- Link to survey posted on county websites
- 163 completed surveys received

Public Participation Survey Highlights

- 87% of respondents are interested in making their homes more resistant to hazards
- 20% have already taken action to make their homes more hazard resistant
- 41% do not know who to contact regarding risk reduction

1. Where do you live?

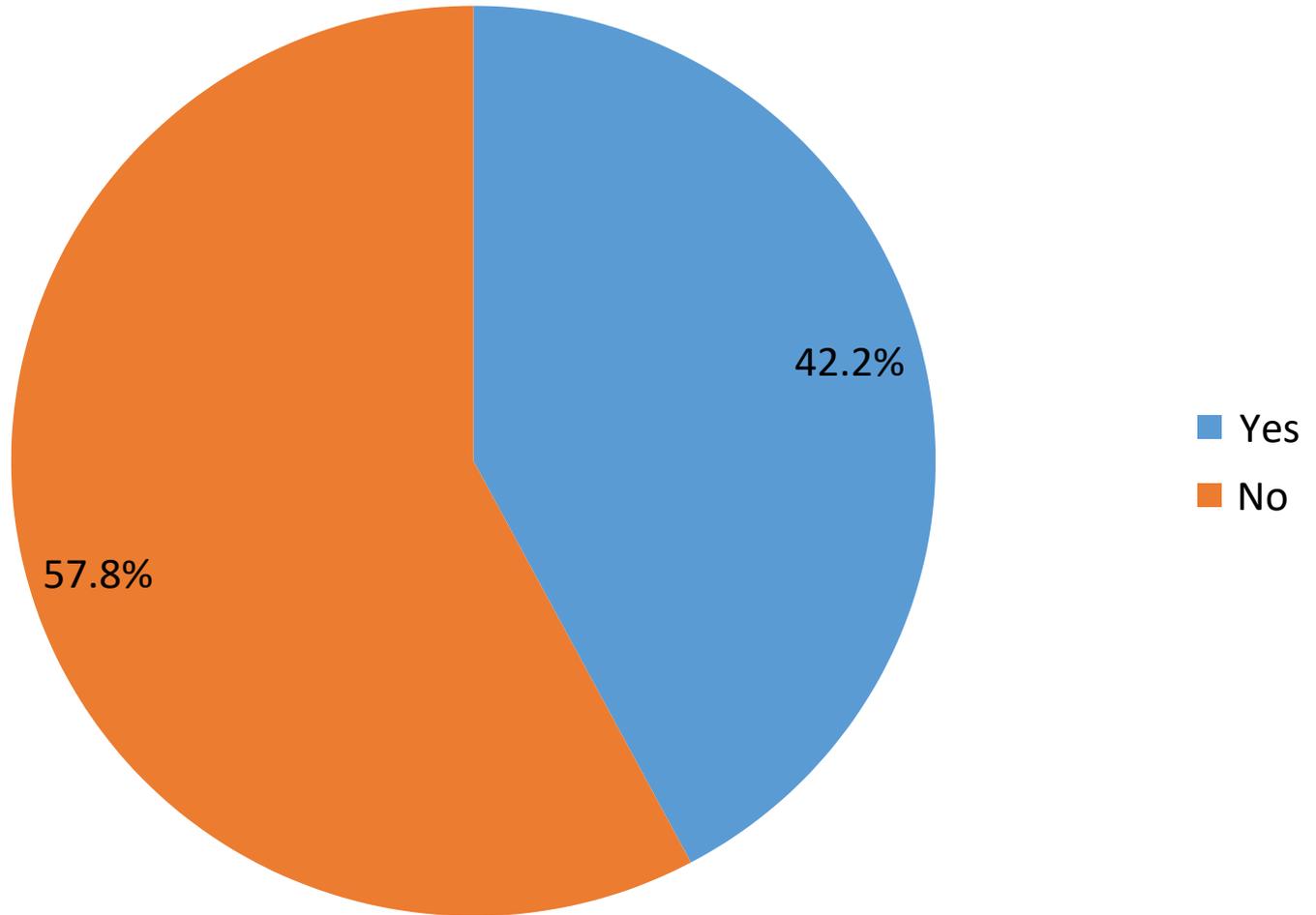


No Responses:

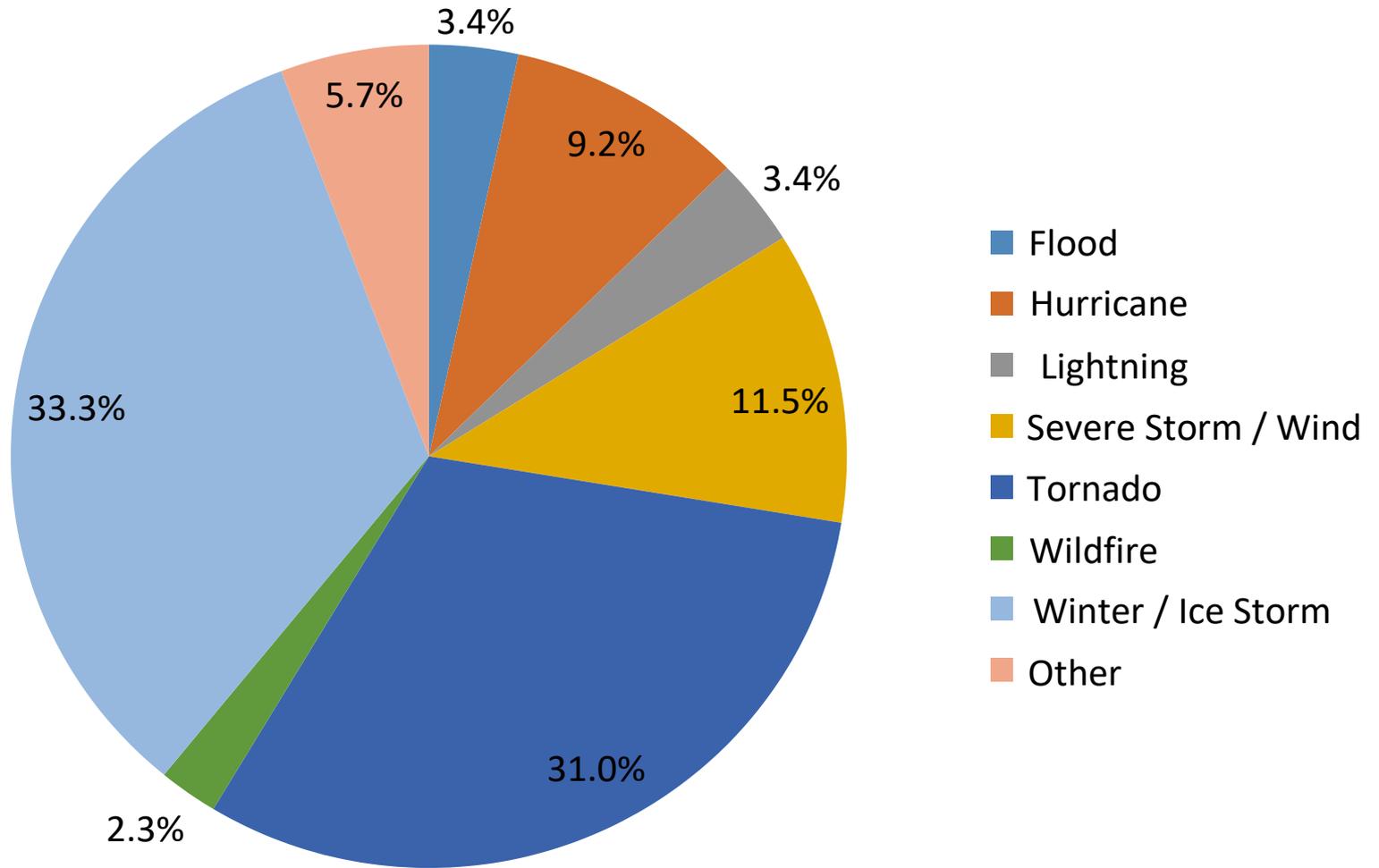
Corinth	Fulton	Nettleton	Verona	Ecru	Jumpertown	Ripley
Farmington	Mantachie	Plantersville	Byhalia	Pontotoc (city)	Marietta	Myrtle
Kossuth	Tremont	Saltillo	Holly Springs	Sherman	Blue Mountain	
Rienzi	Baldwyn	Shannon	Potts Camp	Thaxton	Dumas	
	Guntown	Tupelo	Algoma	Toccopola	Falkner	



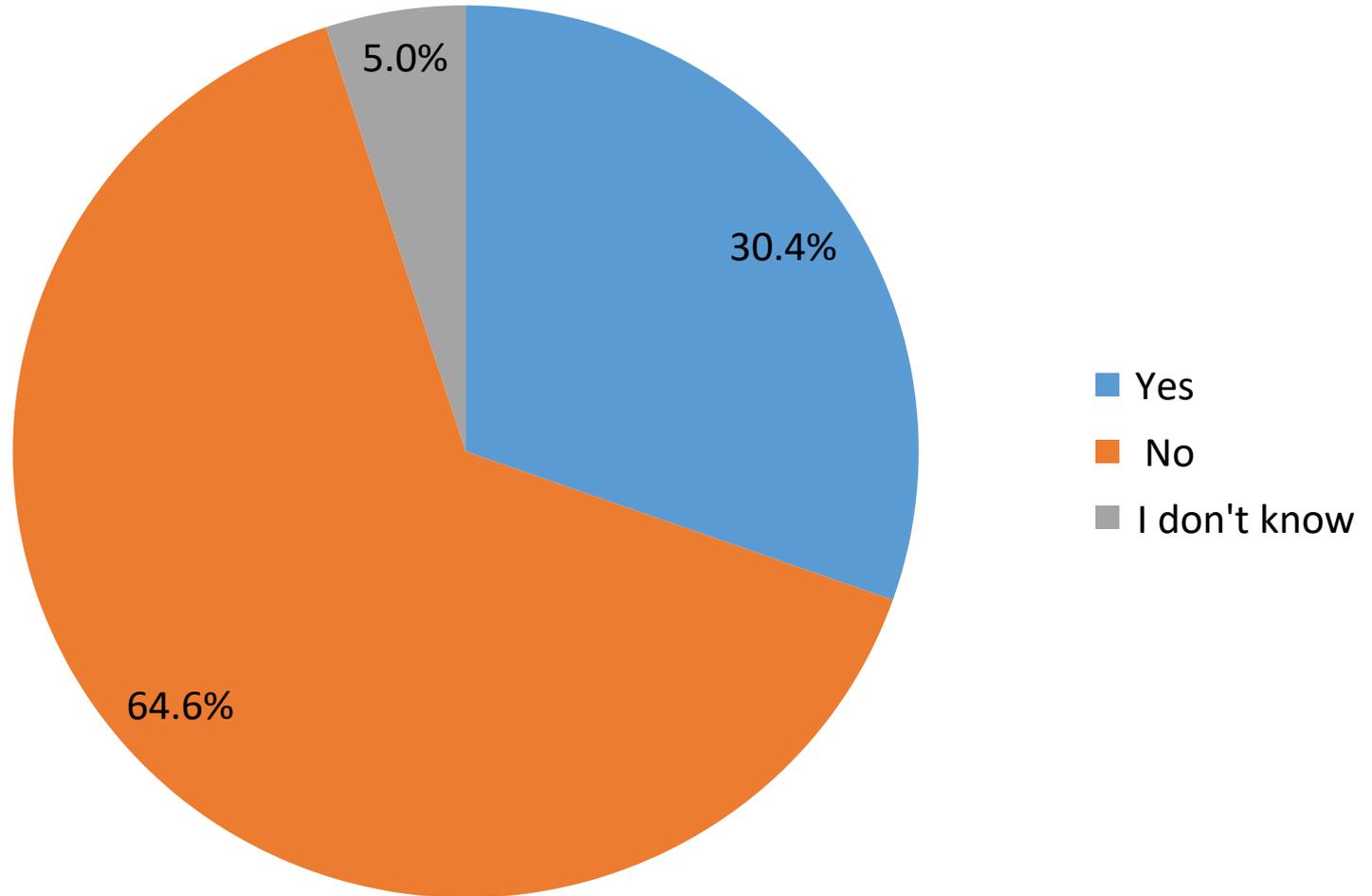
2. Have you experienced a disaster?



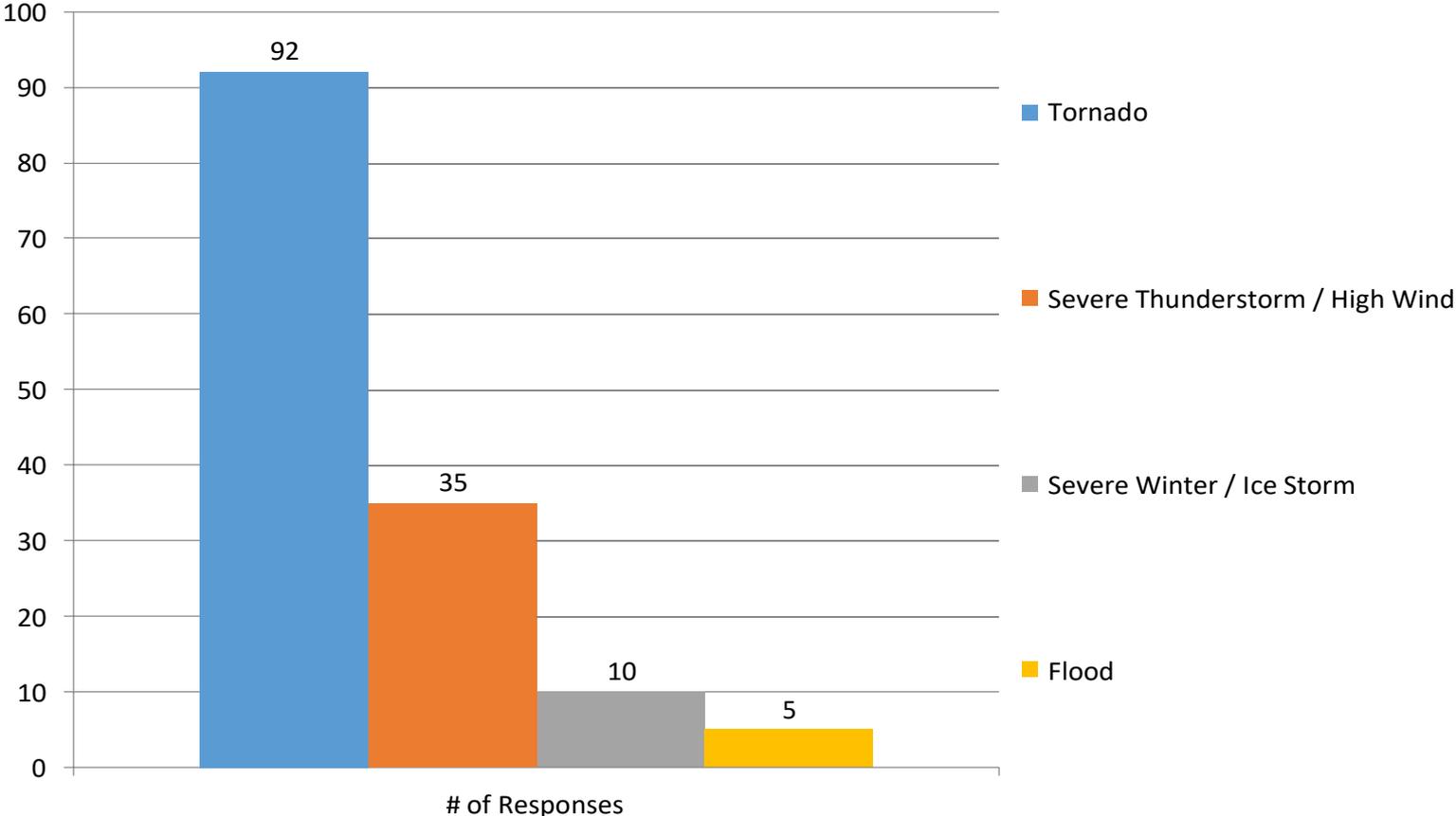
2. Examples of disasters experienced



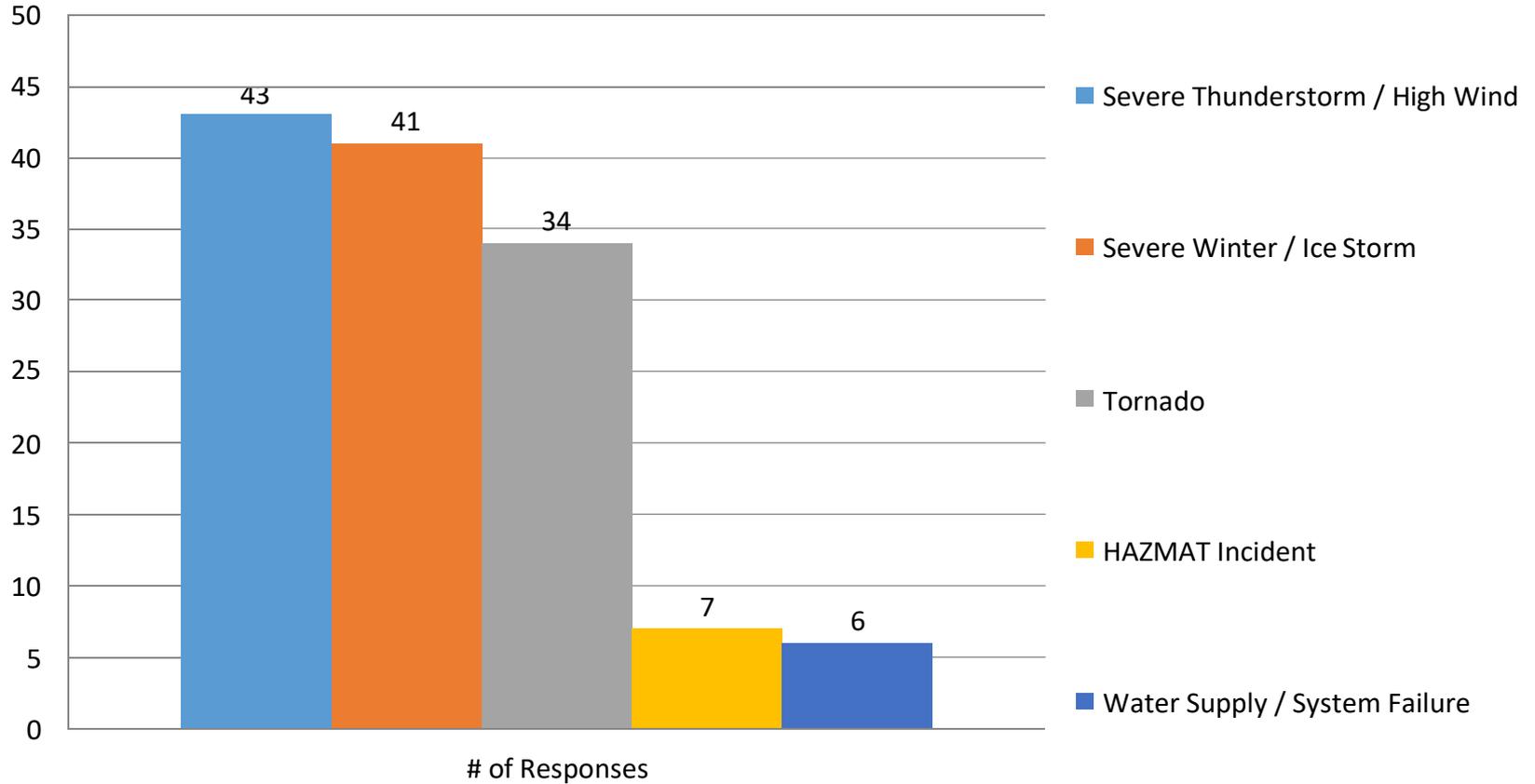
3. How concerned about possibility of disaster?



4. Highest hazard threat?



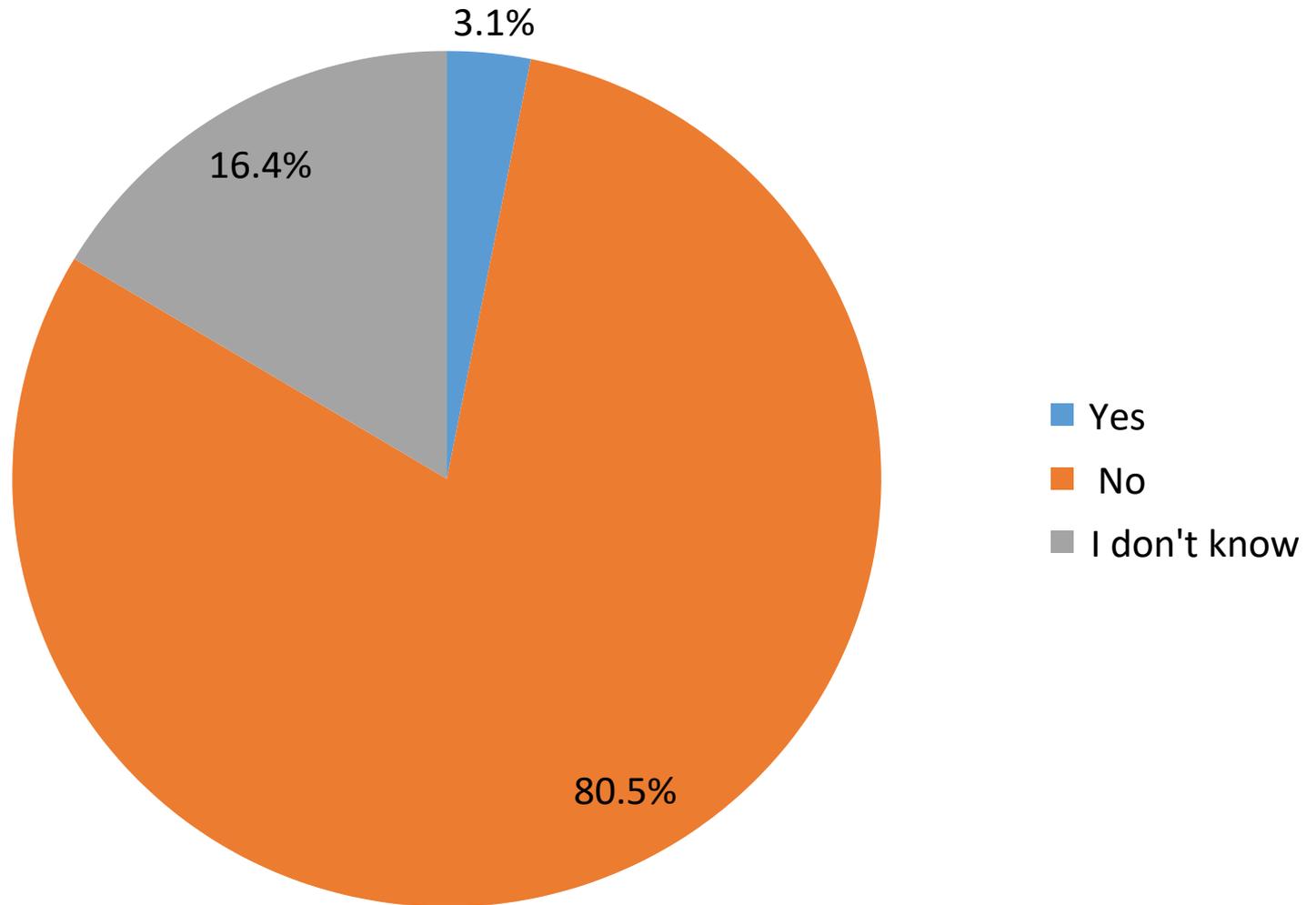
5. Second highest hazard threat?



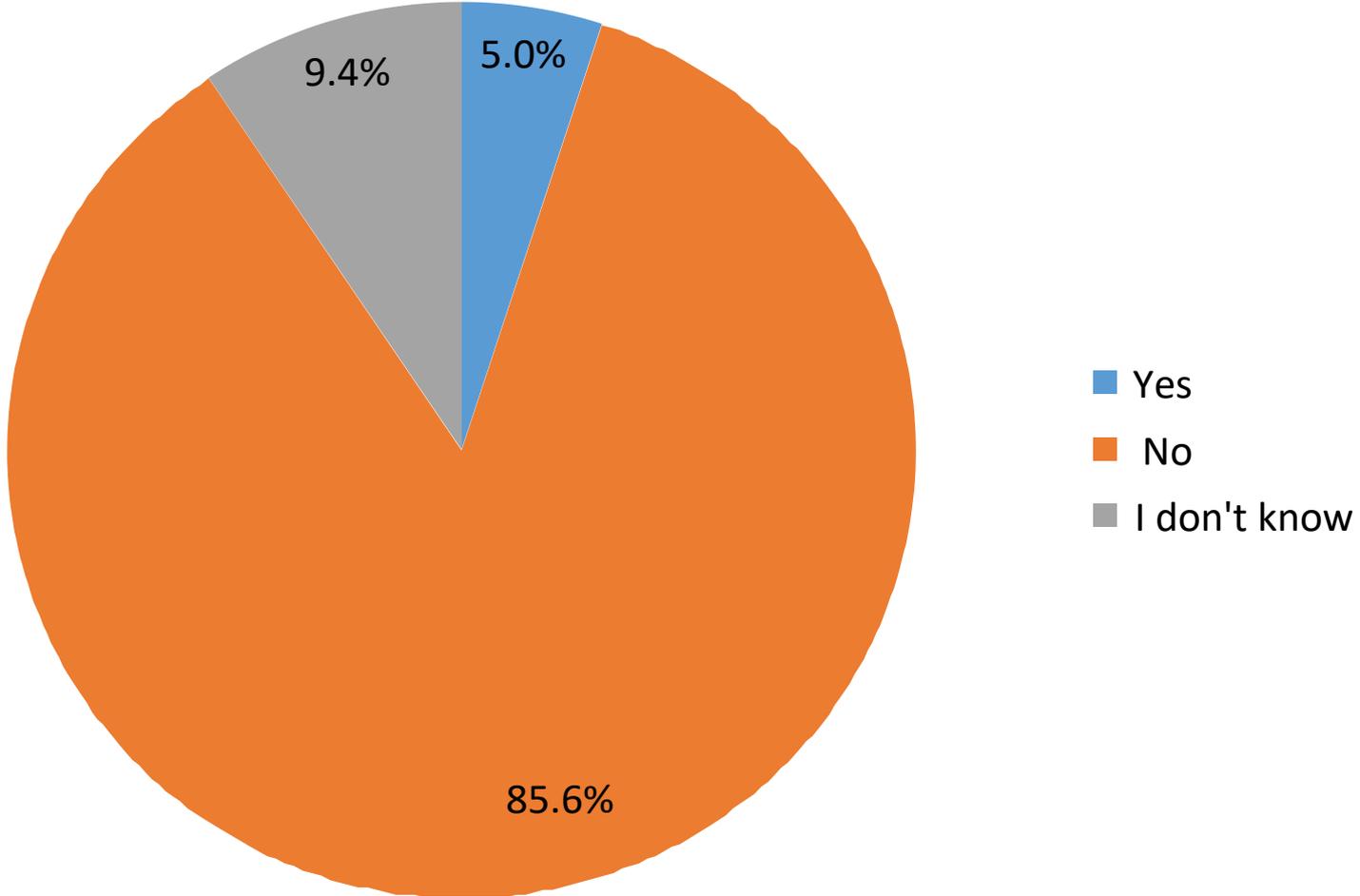
6. Other hazards not listed?

- Power outage
- Terrorism

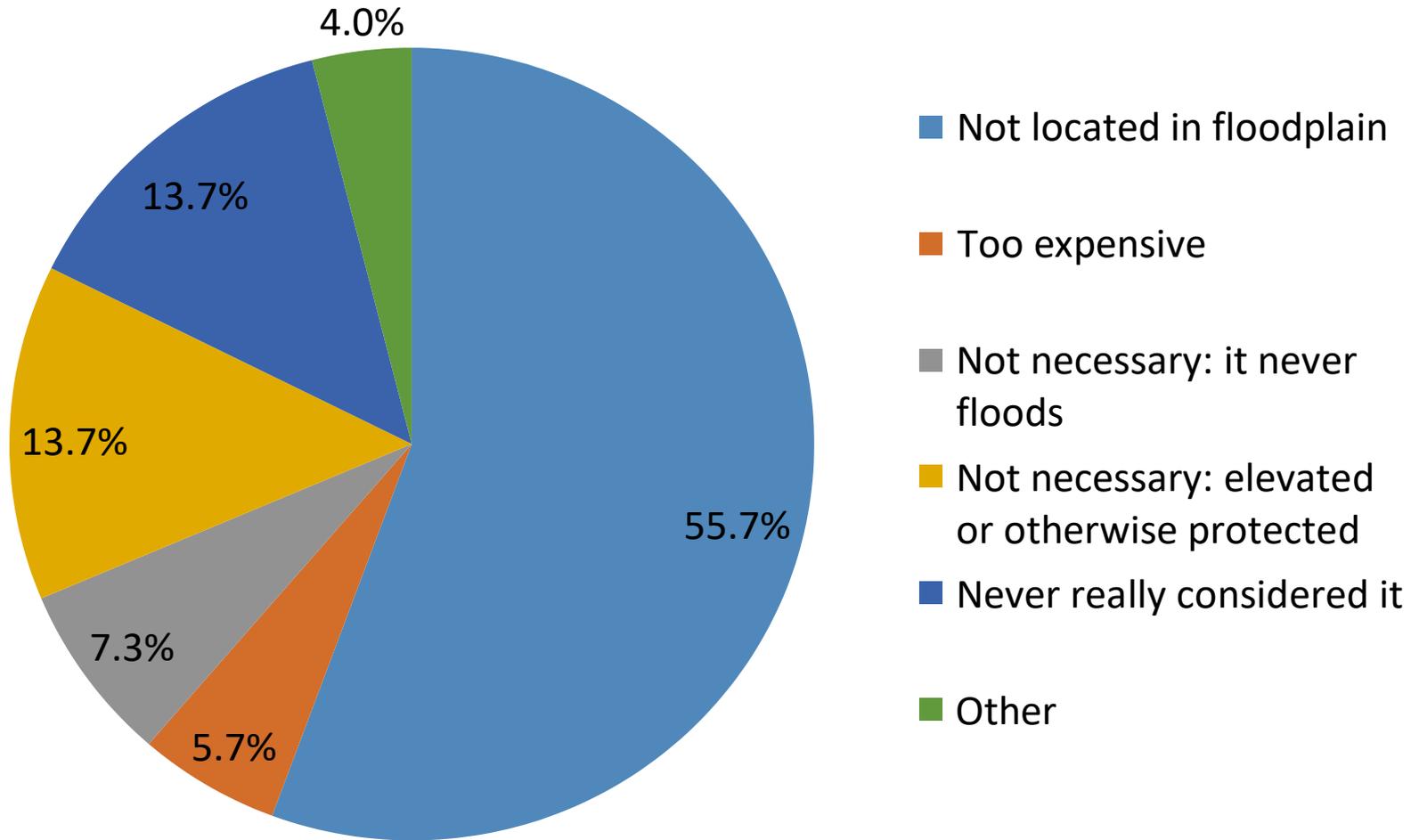
7. Is your home in a floodplain?



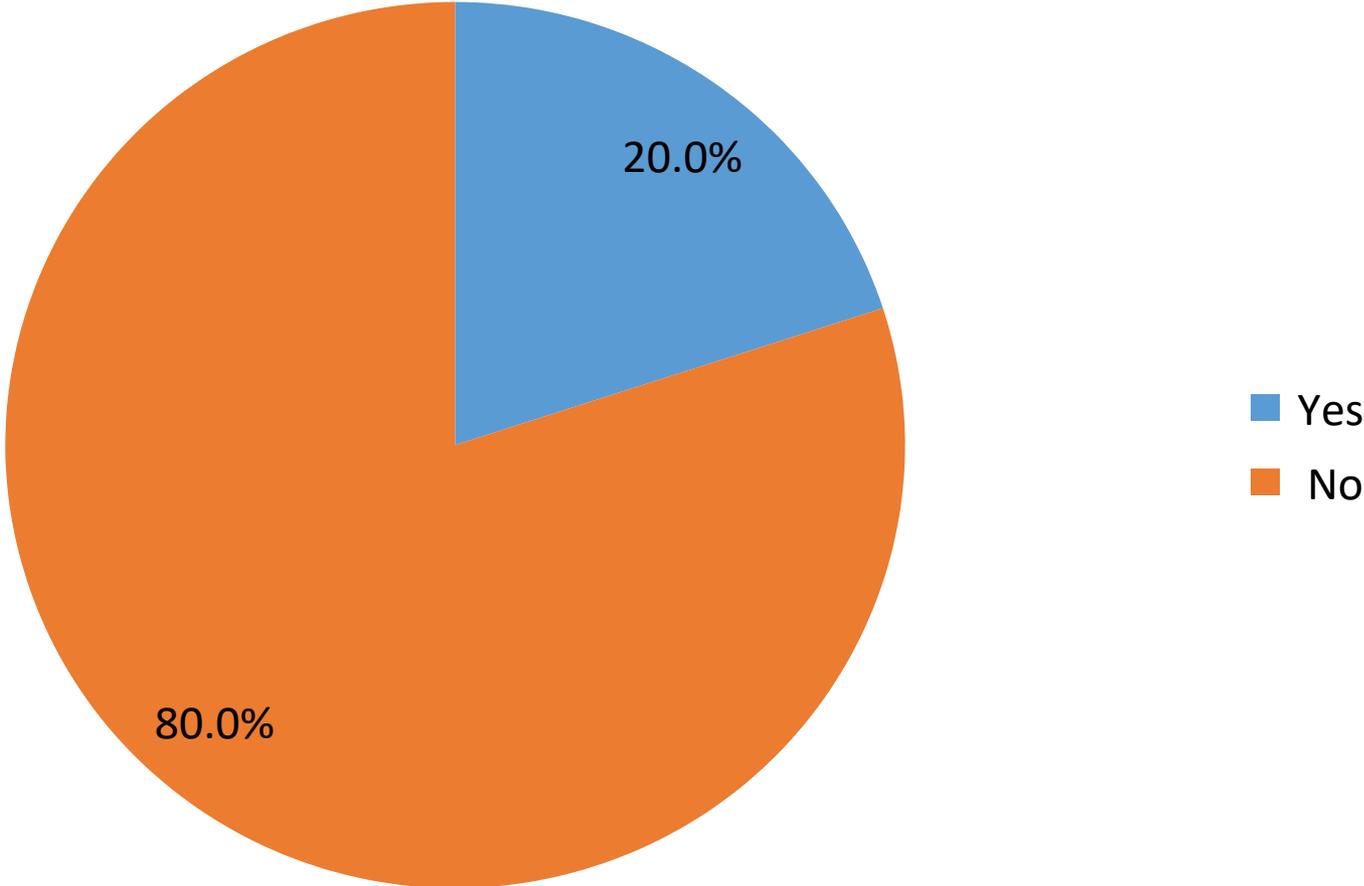
8. Do you have flood insurance?



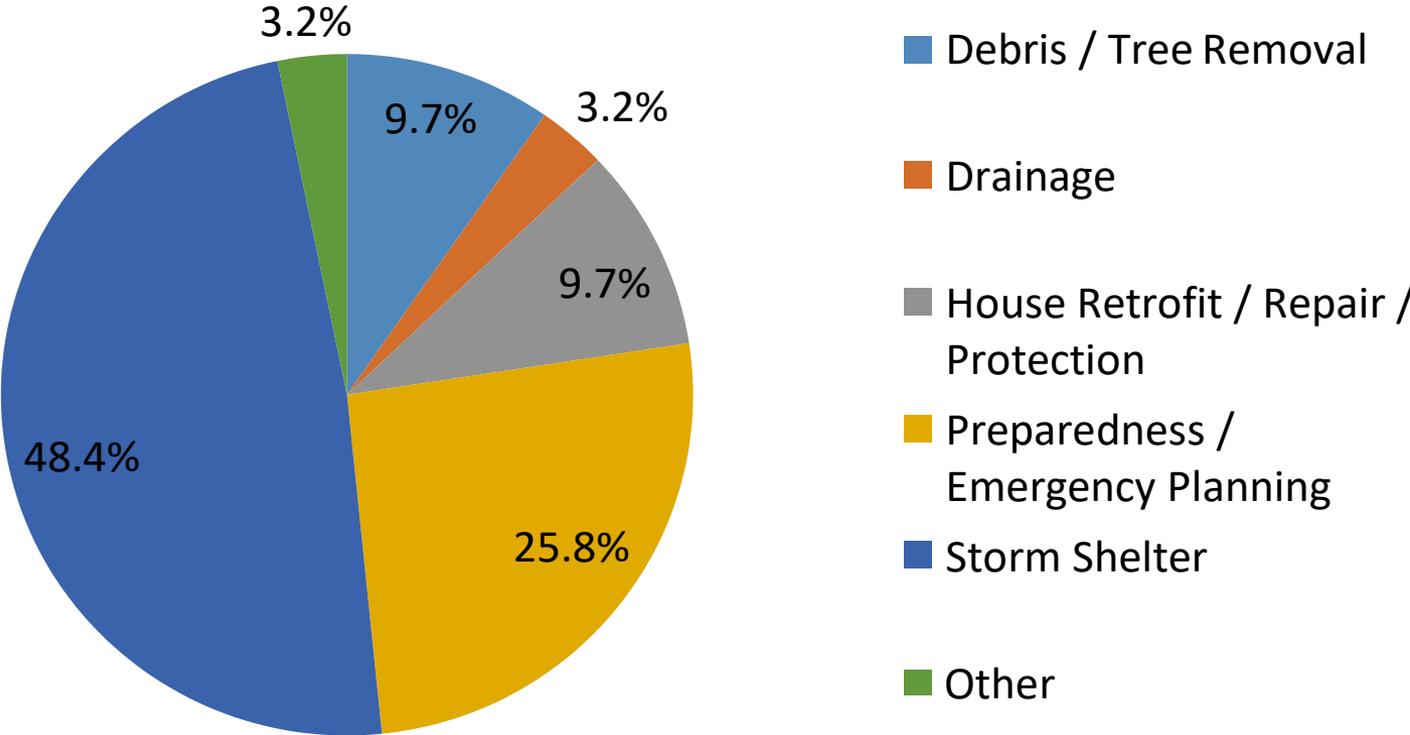
8. Why no flood insurance?



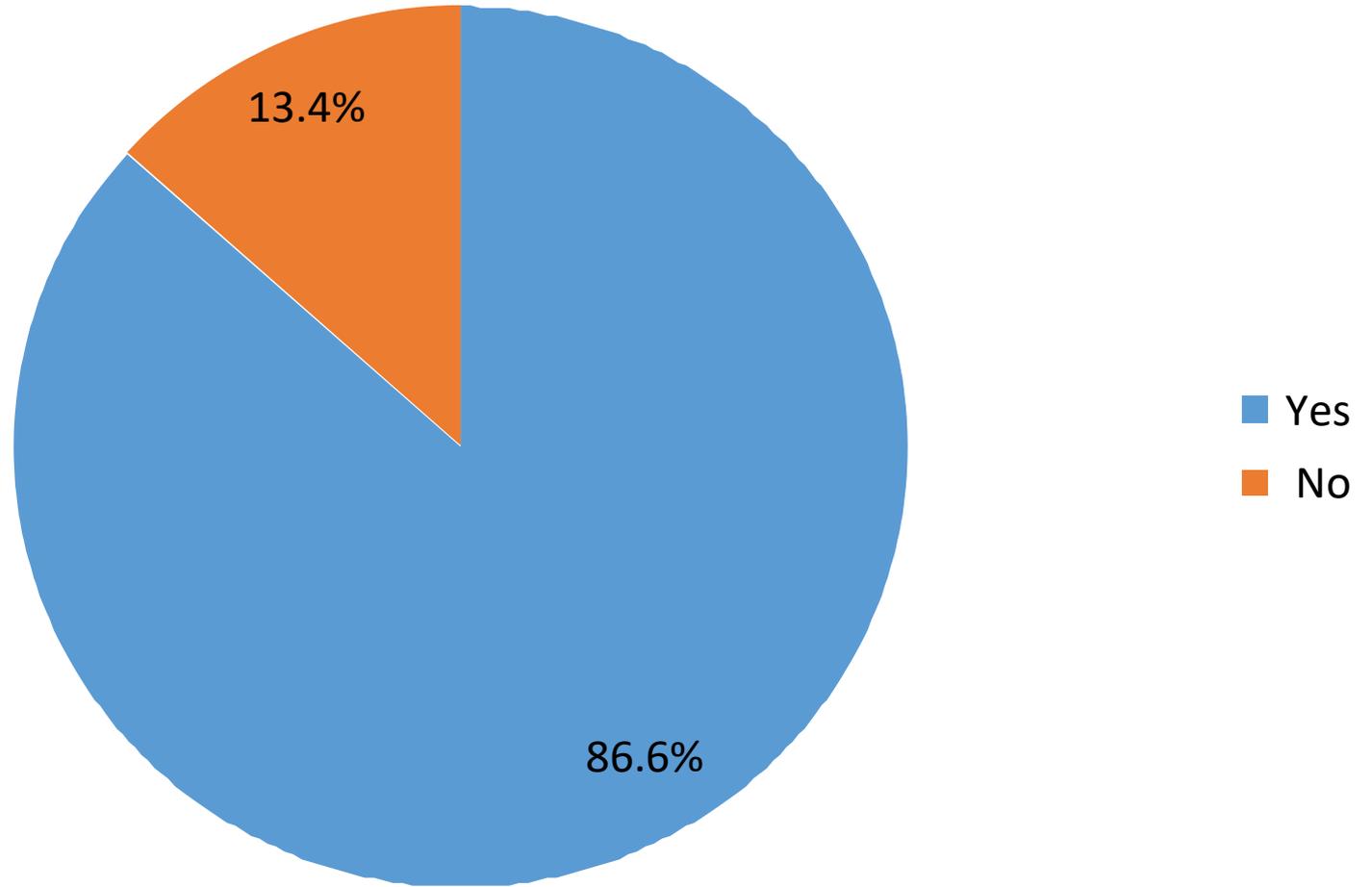
9. Taken action to be more hazard resistant?



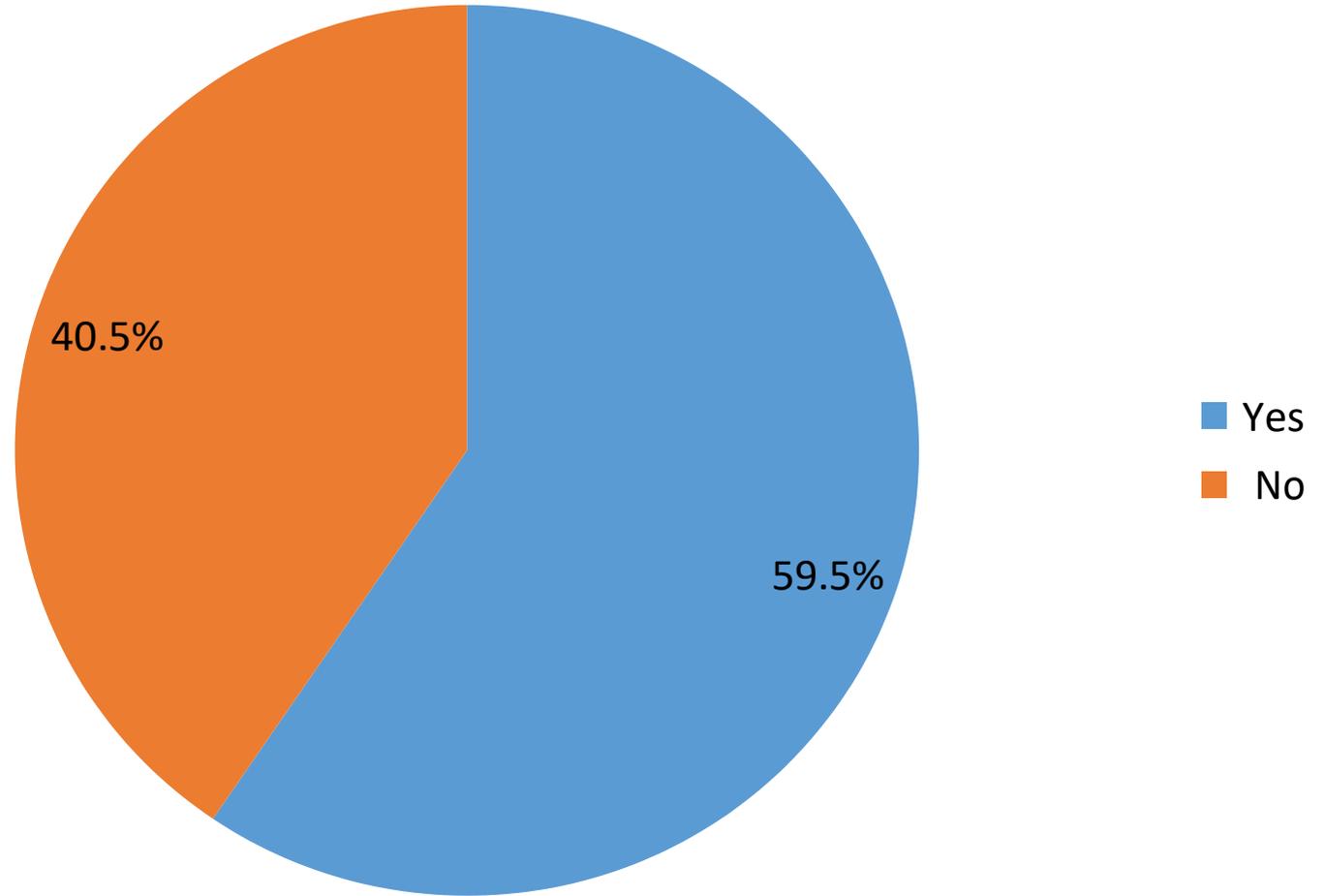
9. Examples of actions taken



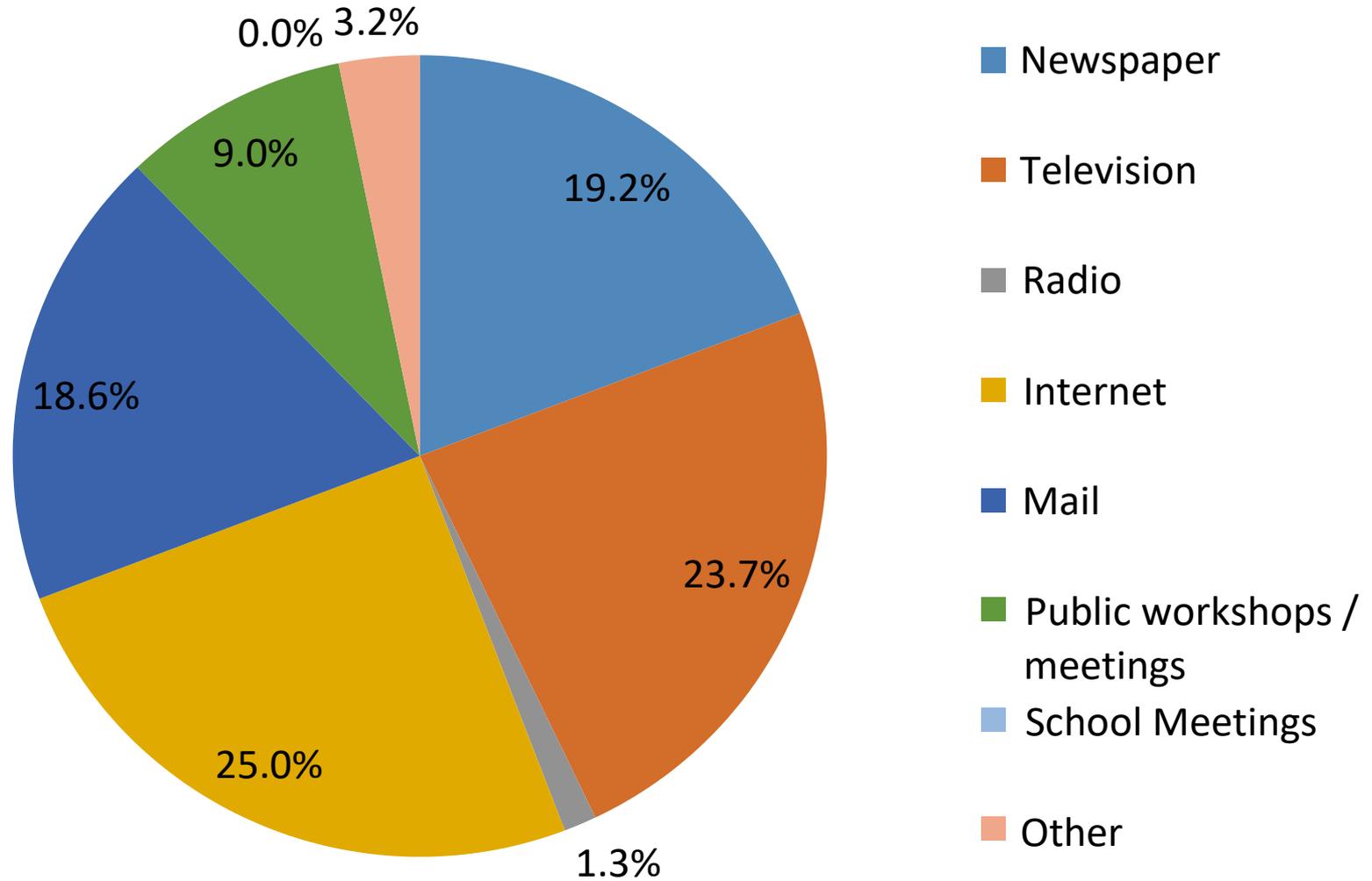
10. Interested in being more hazard resistant?



11. Know who to contact for reducing risks?



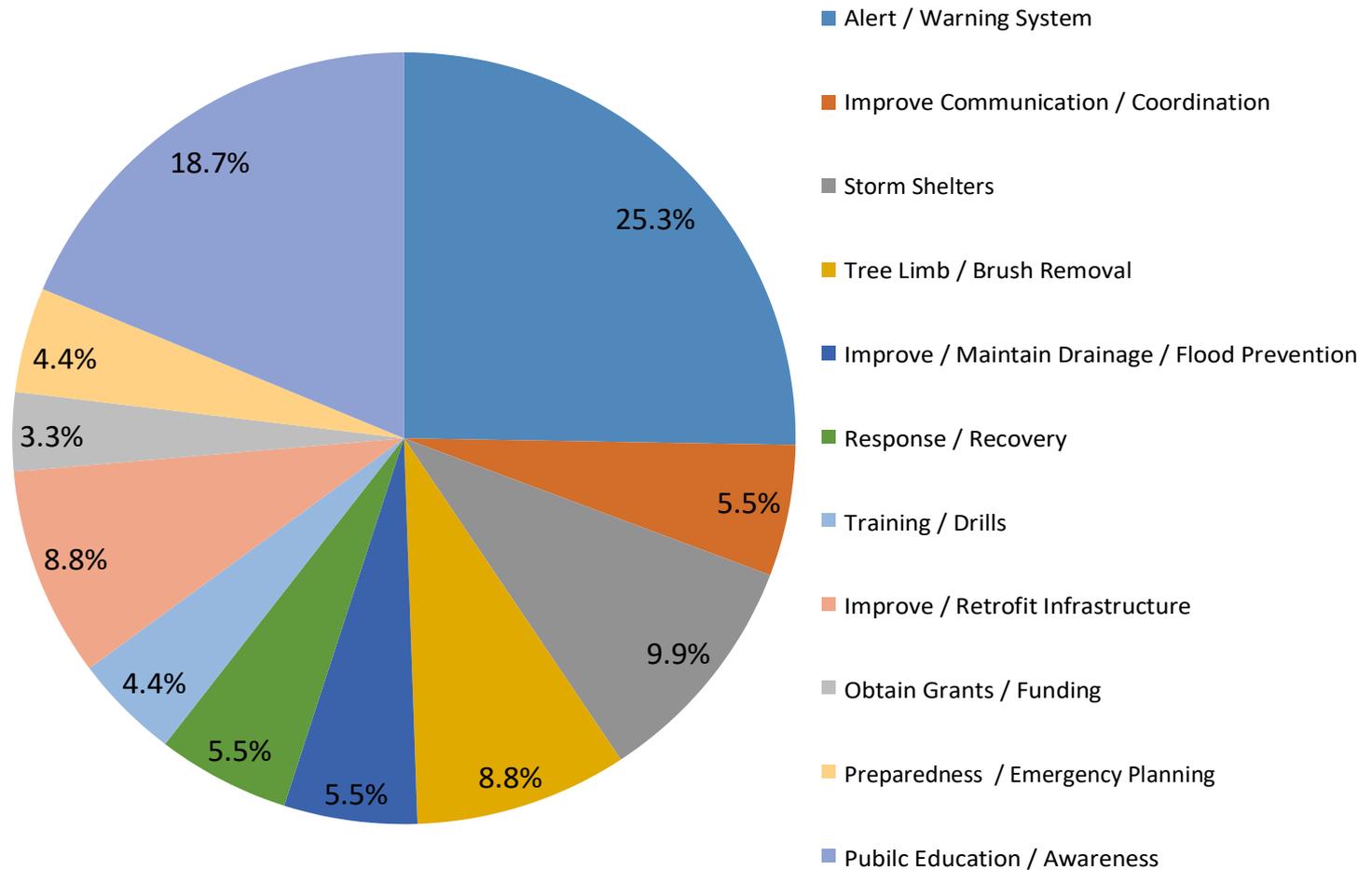
12. Most effective way to receive information?



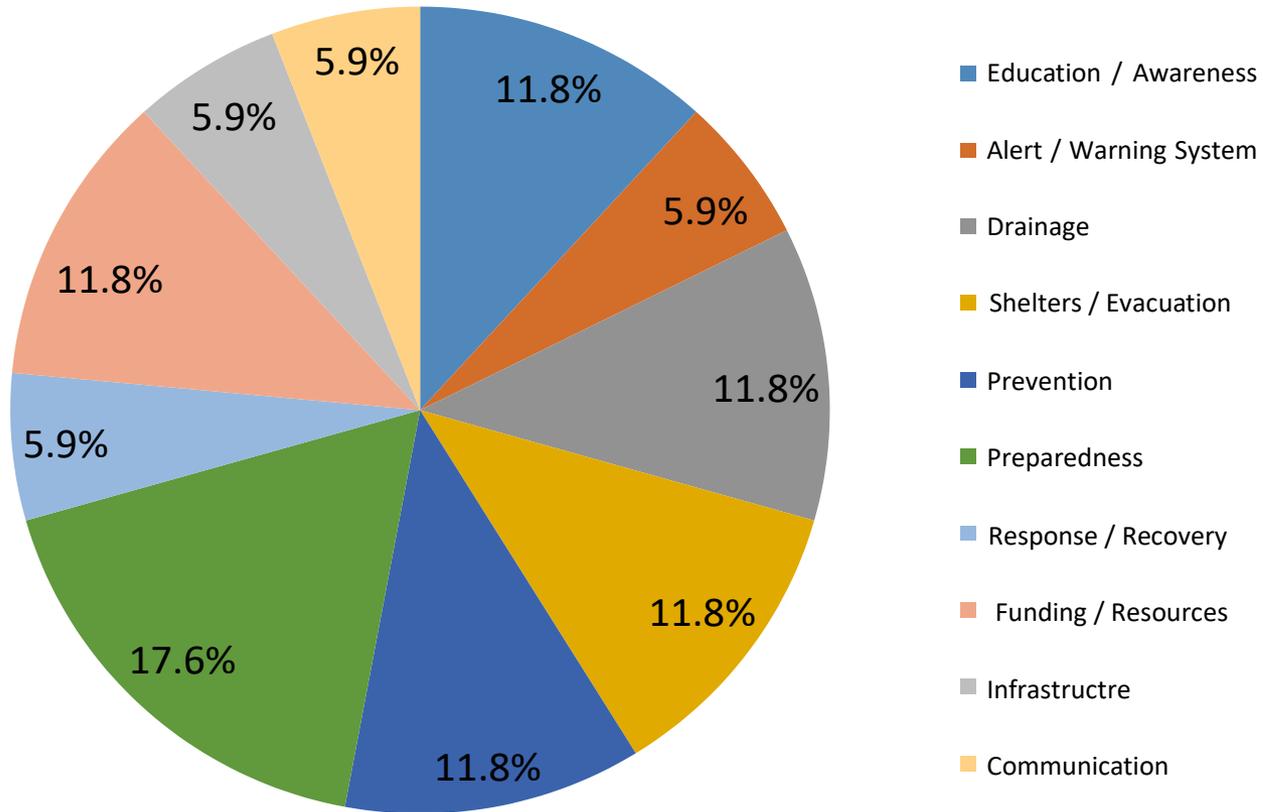
12. Other ways to receive information

- Cell phone
- 911/EMS
- Social media

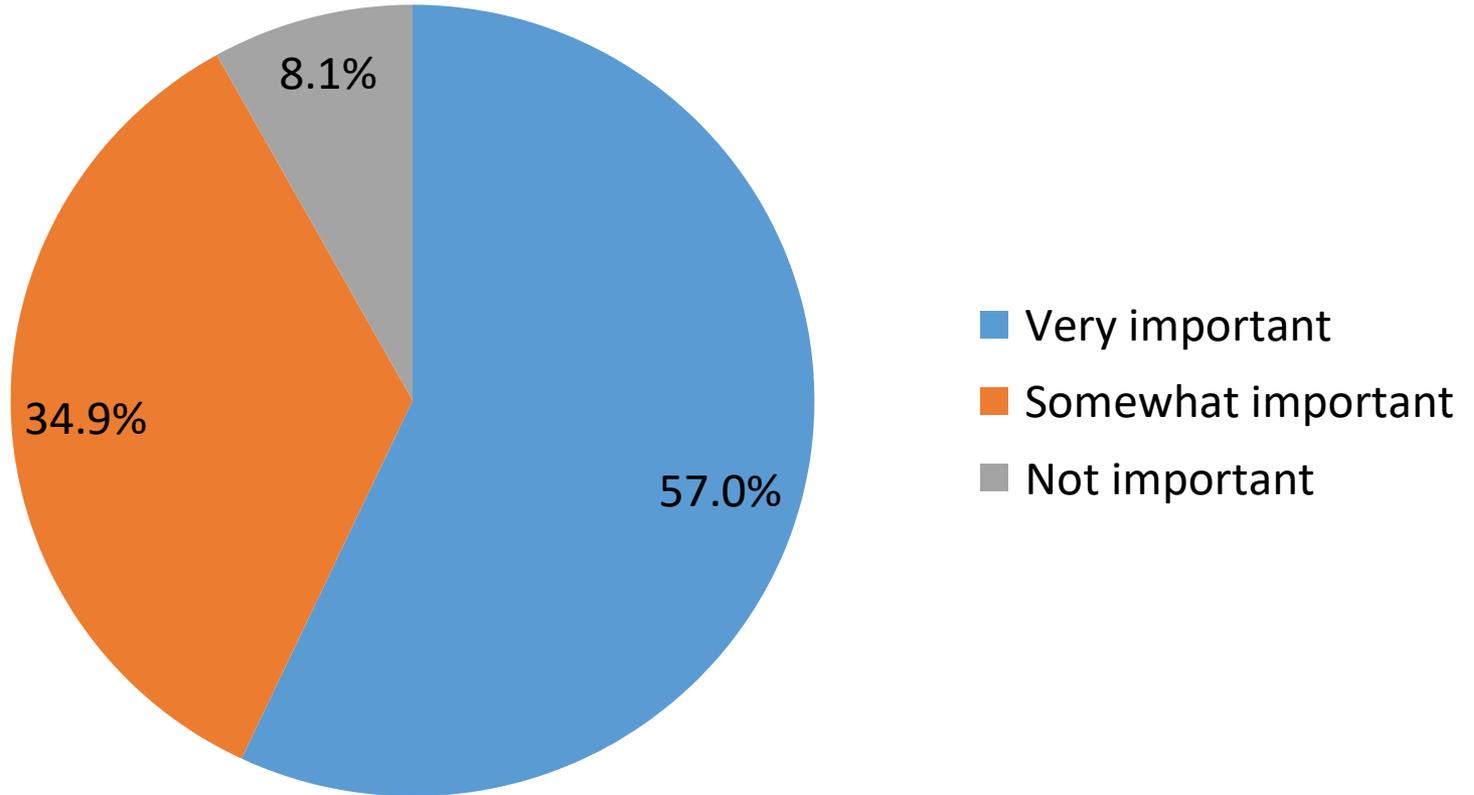
13. Steps local gov't could take to reduce risk



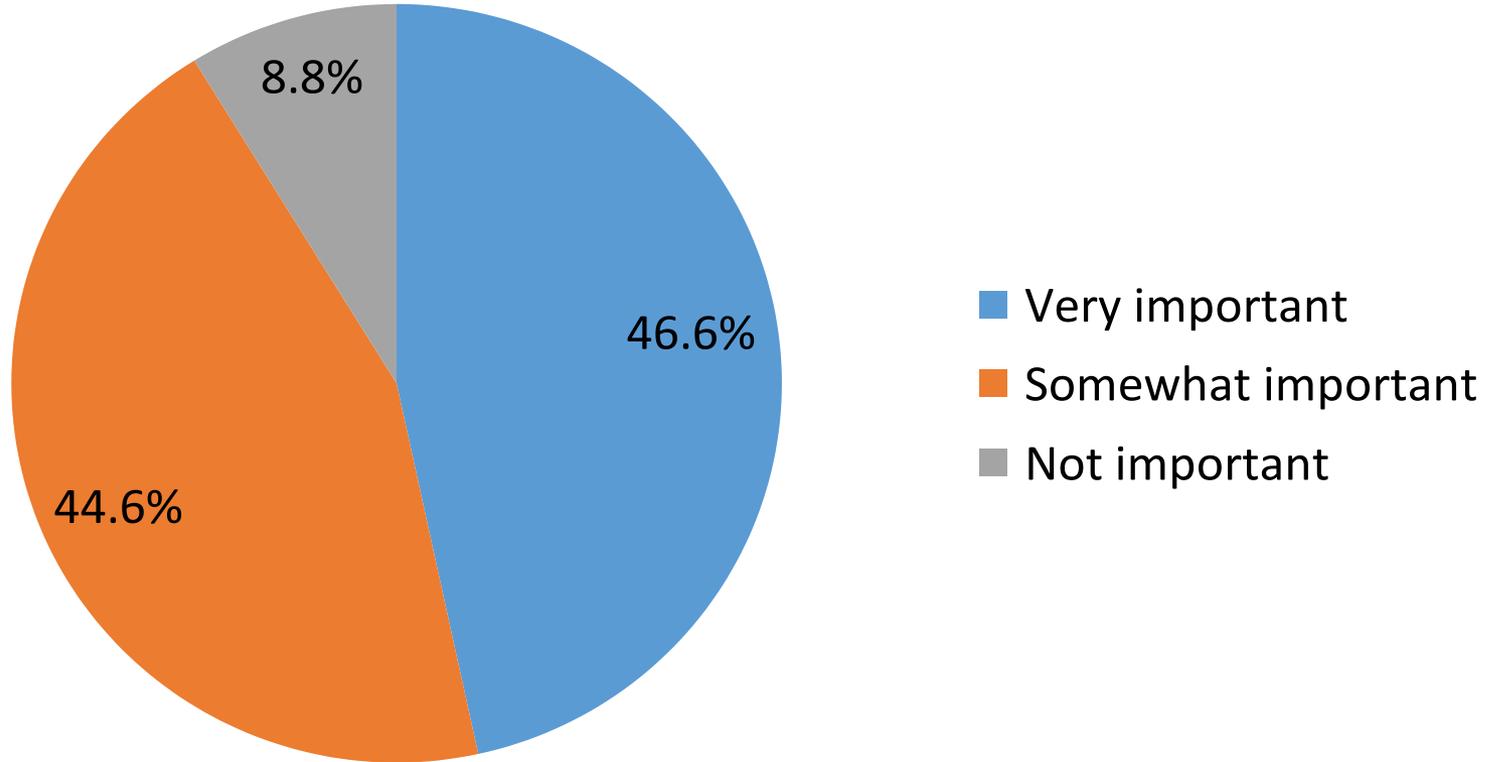
14. Other issues regarding risk and loss



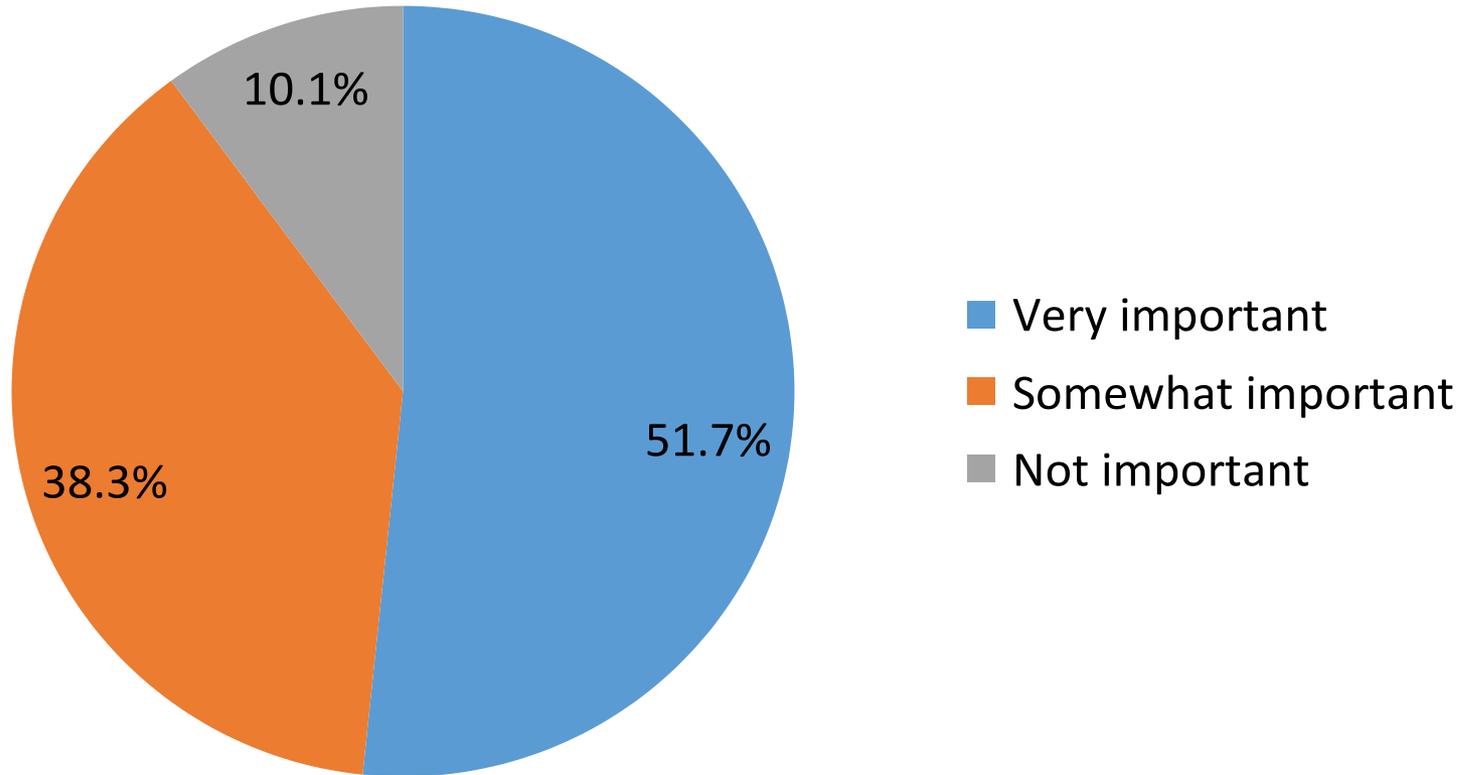
15. Mitigation Actions: Prevention



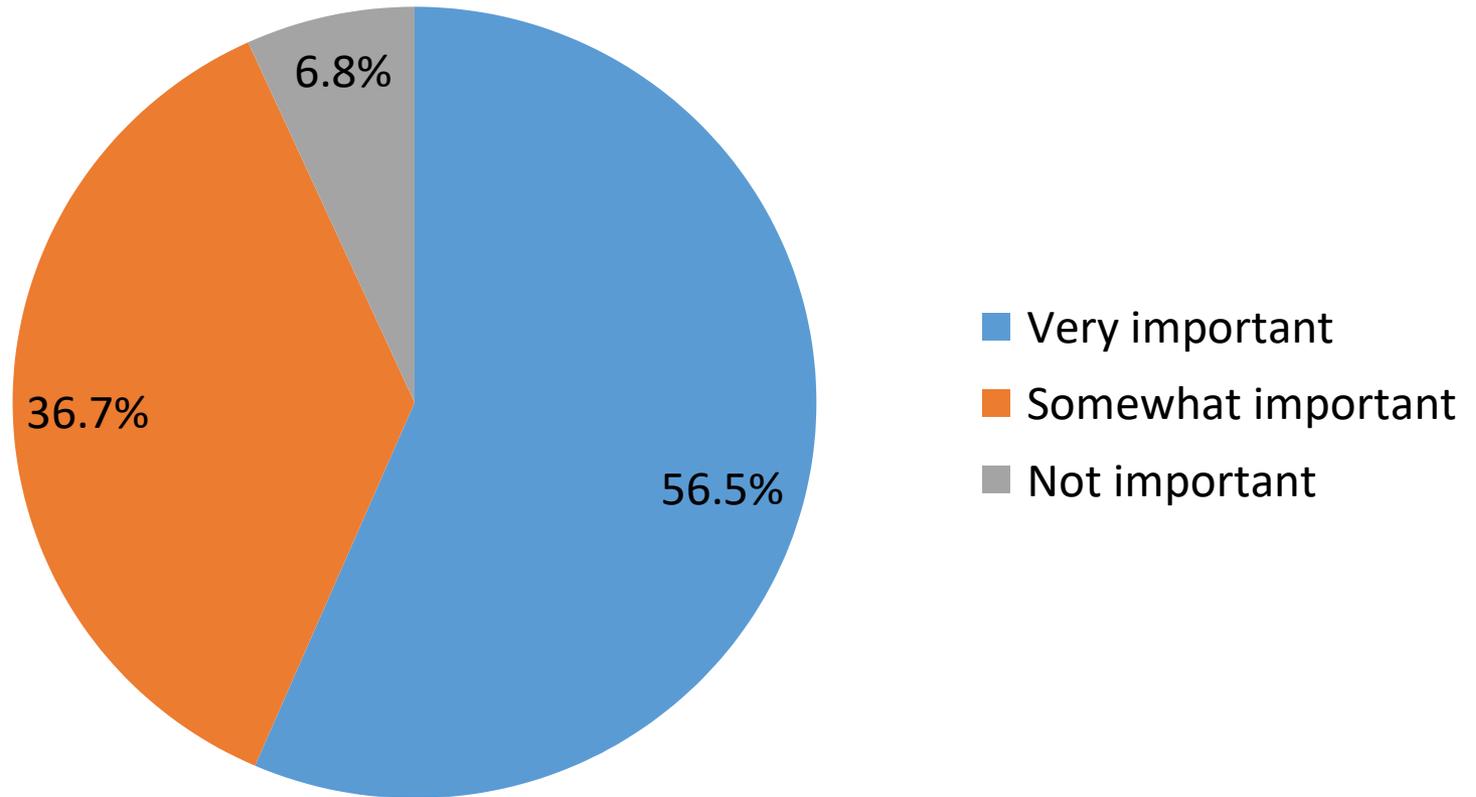
15. Mitigation Actions: Property Protection



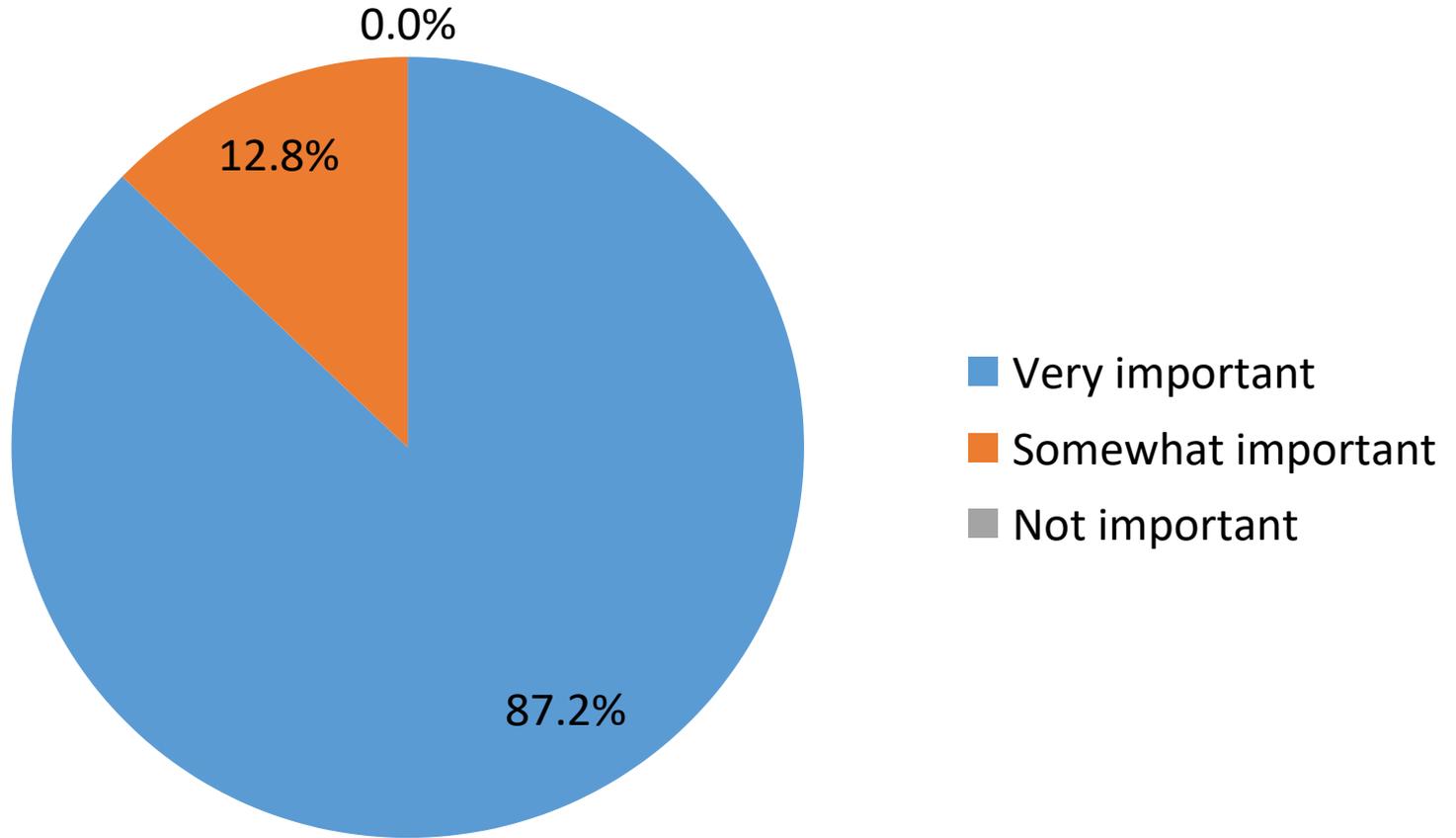
15. Mitigation Actions: Natural Resource Protection



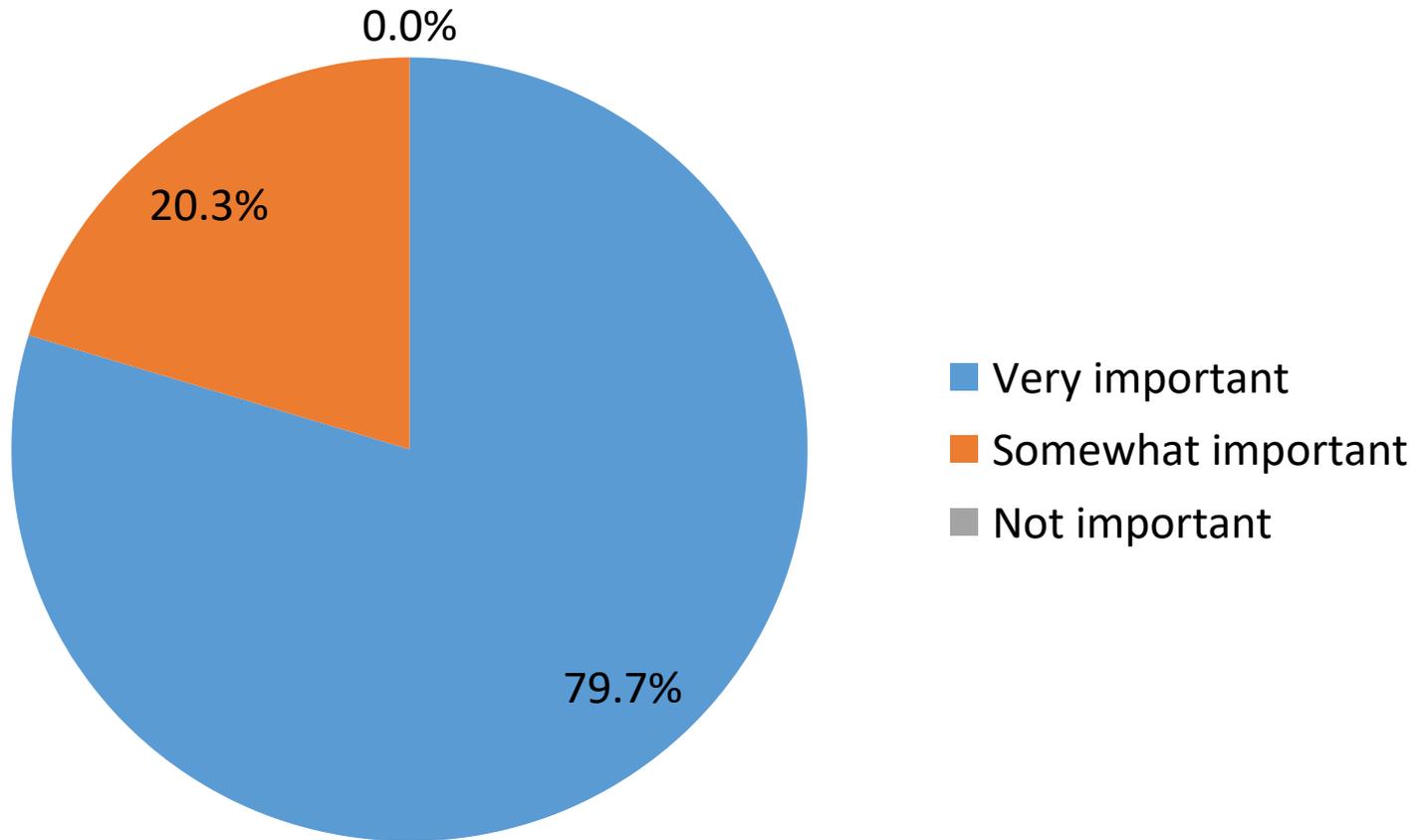
15. Mitigation Actions: Structural Projects



15. Mitigation Actions: Emergency Services



15. Mitigation Actions: Public Education & Awareness



15. Mitigation Actions: Summary

- Highest importance
 - Emergency Services
 - Public Education & Awareness
- Moderate importance
 - Prevention
 - Structural Projects
- Lowest importance
 - Natural Resource Protection
 - Property Protection

 NECHMA: volunteers help clear debris from a damaged home in Tupelo, Miss.

MEMA District 2 Regional Hazard Mitigation Plan Public Participation Survey Results

Photo Source: FEMA Media Library

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Home

About

Contact

Emergency
Management

Floodplain
Management

Fire Services

911

Communications

Forecast



(Weather Radar Site. Click on location icon at Top of Page)



Our mission is to provide Pontotoc County with highly professional, well coordinated public safety services through training, education, communications, preparedness, deployment, administration, and response to and recovery from incidents.

IMPORTANT ANNOUNCEMENTS

Pontotoc County is currently working on updating our regional hazard mitigation plan and we want your input. Please click on the following link and complete this survey.

[Hazard Mitigation Survey](#)

Lafayette County

https://www.facebook.com/LafayetteCountyEMA/

Lafayette County EMA

Page Messages Notifications Insights Publishing Tools Settings Help

Emergency Preparedness Checklist

Lafayette County EMA Government Organization

2,233 likes 0 this week Larry Brown and 416 other friends

596 post reach this week

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Invite friends to like this Page

Find New Customers
Connect with more of the people who matter to you

ABOUT
300 North Lamar Blvd.

Status Photo / Video Offer, Event +
Write something...

Lafayette County EMA
Published by David Shaw [?] · Just now · Oxford, MS ·

Lafayette County is currently working on updating our regional hazard mitigation plan and want your input.
<http://www.surveygizmo.com/.../Public-Participation-Survey-fo...>

Public Participation Survey for Hazard Mitigation Planning (MEMA 2)
Public Participation Survey for Hazard Mitigation Planning (MEMA 2).
SURVEYGIZMO.COM

THIS WEEK
596 Post Reach
0 Post Engagement
0 Website Clicks

Recent
2015
2014
2013
2012
2011
1968

See Your Ad Here

Lafayette County EMA
<https://m.youtube.com/watch?v=5VcSweUJ2D0>
4 2
Boost Post

MORE FRIENDS (37)
Adranelle Tabor
Angela Rogalski
Art Watts

12:13 PM 12/4/2015

Lafayette County E...
@LafayetteEMA

TWEETS: 890 FOLLOWING: 44 FOLLOWERS: 987

Gain more followers
Promote your account and get discovered by more people on Twitter. Preview it first below

- Trends - Change
- #NationalCookieDay
26.6K Tweets
 - MSNBC
33.7K Tweets
 - #FridayFeeling
37.9K Tweets
 - #5WordEHPProblems
Trending for 2 hours now
 - Tashfeen Malik
29.8K Tweets
 - #StormDesmond
Trending for 6 hours now
 - Jay Z
52.2K Tweets
 - Andrea Mitchell
Just started trending
 - #ALDUBRendezvous
210K Tweets
 - Ruffin McNeill
Trending for 2 hours now

Lafayette Co is currently working on updating our regional hazard mitigation plan and want your input: <http://www.surveygizmo.com/s/3/2145397/Public-Participation-Survey-for-Hazard-Mitigation-Planning-MEMA-2>

Media Location disab... Poll Tweet

MDOT @MississippiDOT - 5m
@VisitVicksburg welcomes back trolley service with the NRoute Trolley Express. ow.ly/2bwAAAd #transit



Vicksburg CVB, City of Vicksburg, Mainstreet Vicksburg and Visit Mississippi

Lafayette County EMA @LafayetteEMA - 6m
Lafayette Co is currently working on updating our regional hazard mitigation plan and want your input: surveygizmo.com/s/3/2145397/Pub...

OleMissPolice @OleMissPolice - 7m
12:09 Report of Accident Property Damage - Motor Vehicle atnear HOWRY HALL on DORMITORY ROW WEST

David Kellum Retweeted
Jeff Roberson @OW_JeffR - 30m
First quarter in the first of six games in the books. #OleMiss & #Oxford host the 2015 MHSAA state football finals.

- Who to follow · Refresh · View all
- Tiffany@BlueCross TN** @B...
Follow Promoted
 - MSU Football** @HailStat...
Follow
 - Rebel Nation Mag** @RebelN...
Followed by John Davis and ...
Follow

Find people you know
Import your contacts from Gmail

Connect other address books

© 2015 Twitter About Help Terms Privacy
Cookies Ads Info Brand Blog Status Apps
Jobs Advertise Businesses Media
Developers

Mixer

WELCOME TO THE GOOD LIFE

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- DEPARTMENTS
- LOCAL GOVERNMENT
- CALENDAR
- ONLINE PAYMENTS
- FORMS
- NEWS
- LINKS
- FAQ
- CONTACT US

ABBEVILLE, MISSISSIPPI

Abbeville is a small, quaint town located in Lafayette County on State Highway 7. Founded in the early 1800s by pioneers from South Carolina, our 450 citizens make up a friendly town with a wonderful sense of community.

Abbeville citizens are employed in occupations ranging from the medical field, education and banking, to construction and farming. Our retirees enjoy our town for its laid-back atmosphere and hunting and fishing opportunities. For residents and tourists alike, the short drive to the neighboring town of Oxford provides a variety of entertainment – SEC sports, performing arts, a vibrant music scene and art galleries galore.

Located:

- 10 miles north of Oxford, Mississippi (home of the University of Mississippi) and 15 minutes from Oxford-University Airport
- 17 miles south of Holly Springs and U.S. Highway 78 (designated as future Interstate 22)
- 1 hour from Memphis International Airport and Tupelo Regional Airport



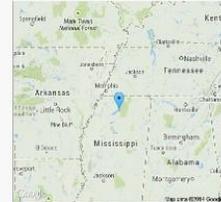
TOWN NEWS

- The Town of Abbeville and Lafayette County are currently working on updating our regional hazard mitigation plan and want your input. Please visit our [Public Participation Survey](#) page to help. Thank you.

ONLINE PAYMENTS

EVENTS

There are no current events.
➤ [View all events](#)



Follow the map to Abbeville!

🏠 Town of Abbeville
8 Business 7 South
P O Box 19
Abbeville, MS 38601

☎ Phone: 662.259.2878



Copyright 2014 All Rights Reserved Abbeville, Mississippi

[HOME](#) / [SITE MAP](#) / [CONTACT US](#)

The screenshot shows the website for the Town of Taylor, Mississippi. The browser address bar displays www.taylorms.org. The page features a navigation menu with links for Getting Started, A111, Login, Google, Taylor Mississippi Ho..., Myradio 81 Login, Online Booking, Quick-View, Taylor Map, Tazzyra Map, MDP's Access, and Municipal Man. The main content area is titled "Town of Taylor" and includes a "Welcome" sign for Taylor, Mississippi. Below the sign are four images: a "Taylor Town Hall" sign, a white building, a covered picnic shelter, and a large building. The page also displays the date "Today is: Wednesday, December 9, 2015" and the time "The time is now: 4:05:54". A sidebar on the left contains a "Home" section with links to Upcoming Events, Board of Alderman, Planning Commission, History, Maps, Budget, Links, Photographs, and Contact Us. The main content area has a "Welcome to the Town of Taylor" section with a paragraph about the town's history and a link to the "Hazard Mitigation Plan Public Survey". Below this is a "CHECK OUT THE 'LITTLE FREE LIBRARY'" section with the text "On the porch at Town Hall" and "TAKE A BOOK, RETURN A BOOK". At the bottom, it says "For use of the Town Hall facilities by residents". A "News" sidebar on the right lists "Public Hearing Dec 1st", "Christmas Parade Dec 9th", and "Open House Dec 6th", with a link to "For Details, and Public Notices see Upcoming events page." Below the news is a "Flood Plain Development Ordinances" link and a weather widget for Taylor, MS, showing a current temperature of 59°F and a sunny forecast.

Union County

Like Comment Share



Curt Clayton



Thursday at 12:53 · 

your input: <http://www.surveygizmo.com/s3/2145397/Public-Participation-Survey-for-Hazard-Mitigation-Planning-MEMA-2>



Like



Comment



Share

Benton County Hazard Mitigation Plan Survey

Please take one,

Complete it,

Mail to Address

On Survey Form

Or

Return to EMA Office

In Courthouse

PUBLIC PARTICIPATION SURVEY FOR HAZARD MITIGATION PLANNING

We need your help!

The Counties of Alcorn, Benton, Iowamba, Lafayette, Lee, Marshall, Pontotoc, Prentiss, Tishomingo, and Union are currently engaged in a planning process to become less vulnerable to disasters, and your participation is important to us!

The Counties, along with participating local jurisdictions and other participating partners, are now seeking to prepare a multi-jurisdictional *Hazard Mitigation Plan*. The purpose of this Plan is to identify and assess our community's hazard risks and determine how to best mitigate or manage those risks. Upon completion, the Plan will represent a comprehensive multi-jurisdictional *Hazard Mitigation Plan* for the eleven-county region.

This survey questionnaire provides an opportunity for you to share your opinions and participate in the mitigation planning process. The information you provide will help us better understand your hazard concerns and can lead to mitigation activities that should help lessen the impact of future hazard events.

Please help us by completing this survey by September 1, 2015 and returning it to:

Ryan Wiedeman, Atkins
1616 E. Millbrook Road, Suite 510
Raleigh, NC 27609

Surveys can also be faxed to: (919) 876-6848 or emailed to ryan.wiedeman@atkinsglobal.com

If you have any questions regarding this survey or would like to learn about more ways you can participate in the development of the *MEMA District 2 Regional Hazard Mitigation Plan*, please contact Atkins, planning consultant for the project. You may reach Ryan Wiedeman (Atkins) at 919-431-5295 or by email at ryan.wiedeman@atkinsglobal.com.

I. Where do you live?

- | | | | |
|--|--|--|--|
| <input type="checkbox"/> Unincorporated Alcorn Co. | <input type="checkbox"/> Blue Mountain | <input type="checkbox"/> Iuka | <input type="checkbox"/> Shamon |
| <input type="checkbox"/> Unincorporated Benton Co. | <input type="checkbox"/> Blue Springs | <input type="checkbox"/> Jumpertown | <input type="checkbox"/> Sherman |
| <input type="checkbox"/> Unincorporated Iowamba Co. | <input type="checkbox"/> Booneville | <input type="checkbox"/> Kosarth | <input type="checkbox"/> Snow Lake Shore |
| <input type="checkbox"/> Unincorporated Lafayette Co. | <input type="checkbox"/> Burnsville | <input type="checkbox"/> Mantachie | <input type="checkbox"/> Taylor |
| <input type="checkbox"/> Unincorporated Lee Co. | <input type="checkbox"/> Byhalia | <input type="checkbox"/> Marietta | <input type="checkbox"/> Thaxton |
| <input type="checkbox"/> Unincorporated Marshall Co. | <input type="checkbox"/> Corinth | <input type="checkbox"/> Myrtle | <input type="checkbox"/> Tishomingo (town) |
| <input type="checkbox"/> Unincorporated Pontotoc Co. | <input type="checkbox"/> Dumas | <input type="checkbox"/> Nettleton | <input type="checkbox"/> Toccopola |
| <input type="checkbox"/> Unincorporated Prentiss Co. | <input type="checkbox"/> Ecorse | <input type="checkbox"/> New Albany | <input type="checkbox"/> Tremont |
| <input type="checkbox"/> Unincorporated Tishomingo Co. | <input type="checkbox"/> Falkner | <input type="checkbox"/> Oxford | <input type="checkbox"/> Tupelo |
| <input type="checkbox"/> Unincorporated Union Co. | <input type="checkbox"/> Farmington | <input type="checkbox"/> Padon | <input type="checkbox"/> Verona |
| <input type="checkbox"/> Abbeville | <input type="checkbox"/> Fulton | <input type="checkbox"/> Plantersville | <input type="checkbox"/> Walnut |
| <input type="checkbox"/> Abigona | <input type="checkbox"/> Glen | <input type="checkbox"/> Pontotoc (city) | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Ashland | <input type="checkbox"/> Golden | <input type="checkbox"/> Potts Camp | |
| <input type="checkbox"/> Baldwyn | <input type="checkbox"/> Guntown | <input type="checkbox"/> Rienzi | |
| <input type="checkbox"/> Belmont | <input type="checkbox"/> Hickory Flat | <input type="checkbox"/> Ripley | |
| | <input type="checkbox"/> Holly Springs | <input type="checkbox"/> Saltito | |

on a Christmas ball to help decorate our tree. If they would like to have their photo made with the dog or cat they have chosen, there will be someone available to take photos."

Santa will also be at the shelter Saturday, Dec. 12 from noon until 2 p.m. to have photos made with him.

Supplies for the doggie or kitty angels may be dropped off for the chosen animal at the donor's convenience.

For more info phone 662-720-1033.

HAZARDOUS MITIGATION PLAN

Prentiss County is updating the Hazardous Mitigation Plan and is soliciting the public's input.

Please send any comments to Prentiss County Emergency Management, P.O. Box 477, Booneville, MS 38829.

If any questions please call Ralph Lauderdale, Director, at 662-720-2023.

This Week In

*B*ooneville *H*istory

A look back 35 years ago taken from the Dec. 11, 1980 edition of The Banner-Independent:

The Villager in uptown Booneville was

boonevillebann

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Itawamba County

Itawamba County

Hazard Mitigation

Plan Survey

Please take one and turn into Fulton City Hall.

Page 01
**Public Participation Survey for Hazard
Mitigation Planning (MEMA 2)**
Page One

We need your help!

The Counties of Iron, Benton, Itawamba, Lee, Marshall, Pontotoc, Rankin, Tallapoosa, and Union are currently engaged in a planning process to become an eligible community and your participation is important to us!

Counties, along with participating local jurisdictions and other participating entities, are working to prepare a multi-jurisdictional Hazard Mitigation Plan. The purpose of this Plan is to identify and address our community's hazard risks and determine how to best minimize or manage those risks. In addition, the Plan will represent a comprehensive multi-jurisdictional Hazard Mitigation Plan.

MEMA 2 provides an opportunity for you to share your opinion and participate in the planning process. The information you provide will help us better understand your needs and lead to mitigation activities that should help lessen the impact of future hazards.

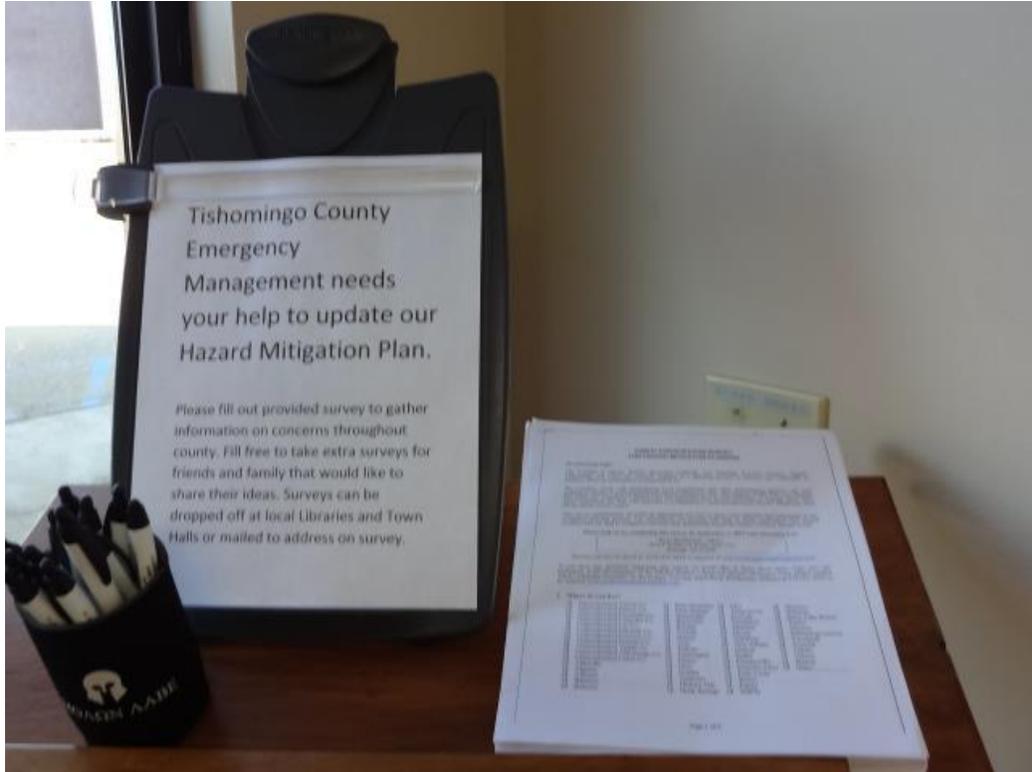
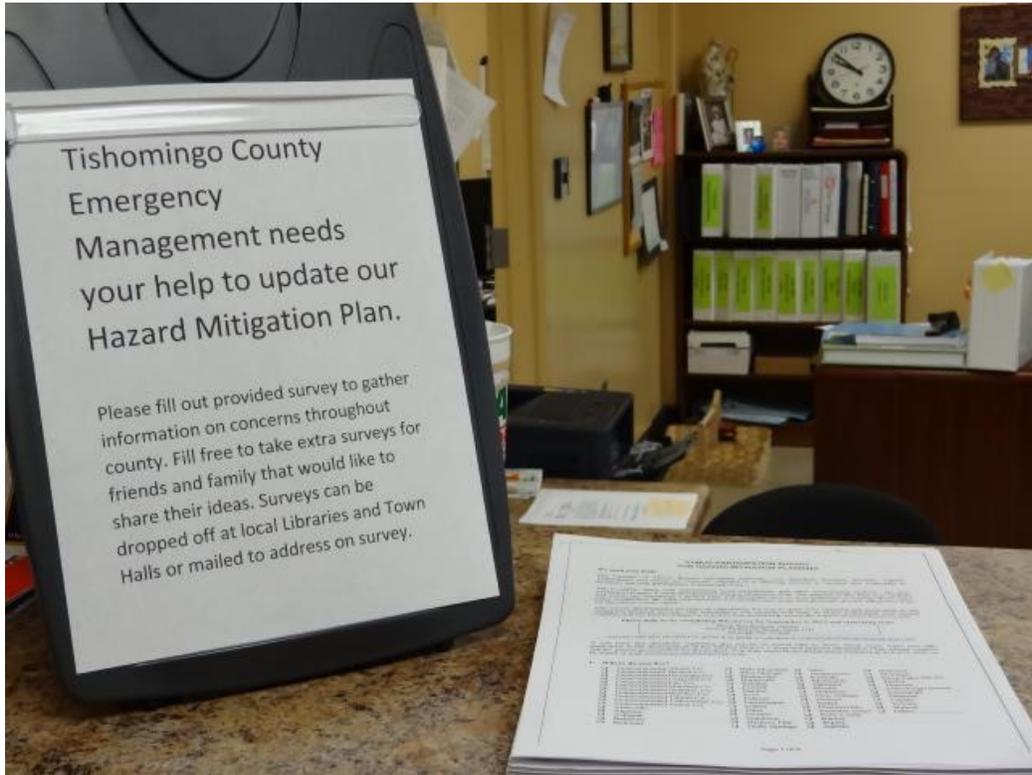
Completing this survey by October 31, 2015.

For more information regarding this survey or would like to learn about more ways you can participate in the MEMA District 2 Regional Hazard Mitigation Plan, please contact Ryan Wickman at ryan.wickman@itawambacounty.com

- Hickory Flat
- Holly Springs
- Lake
- Lenoir

Thursday, December 11, 2014
11:15 AM

Tishomingo County



Tippah County

MOVING FORWARD TOGETHER

 **TCDF**

DIRECTOR'S WELCOME | CHAMBER OF COMMERCE | DEVELOPMENT | TOURISM

   | 

Public Notices

PUBLIC NOTICE : Public Participation Survey for Hazard Mitigation Planning (MEMA 2) <http://www.surveygizmo.com/s3/2145397/Public-Participation-Survey-for-Hazard-Mitigation-Planning-MEMA-2>

 **TCDF** | © Copyright 2015 TCDF, All rights reserved.

Lee County

Lee County Emergency Services felt the best way to get the survey out to the public was via email. The survey was attached to the email below and was sent to members of various different groups/organizations to push out to members of the public either via the online link or by placing hard copies at their respective locations. Additionally several citizen groups who were encouraged to take the survey and promulgate it. Groups that were sent the email and survey are found below in the "To:" line, and include schools, local businesses, fire departments, senior living centers, and municipal government offices.

From: Sonia Ruth [<mailto:sruth@co.lee.ms.us>]

Sent: Tuesday, October 13, 2015 2:34 PM

To: BALDWYN; GUNTOWN; Nettleton; SALTILLO; SHANNON; TUPELO; BALDWYN; BALDWYN1; BELDEN VFD; BELDEN VFD1; 'Guntown Fire'; marknowell@saltilloms.org; 'Nettleton'; 'Plantersville'; SALTILLO1; SHANNON; TUPELOFD; TUPELOFD2; VERONAFD; 'al wright' <neems@bellsouth.net>; 'Anthony Hill' <anthonyhill_08@comcast.net>; 'bob ray' <bray@nmhs.net>; 'brenda gowdy' <bgowdy@co.lee.ms.us>; 'dan hurt' <dhurt@advancedinnovations.net>; 'david wommack' <dwammack@ci.tupelo.ms.us>; 'david woods' <guntownfd@hotmail.com>; 'Heath Williams' <heath.williams@msdh.state.ms.us>; 'james minix' <jminix@advancedinnovations.net>; 'jerry ozbirn' <firechief@cityofbaldwyn.com>; 'Jimmy Avery' <javery@tupeloms.gov>; 'John HALL' <jhall@leecosherriff.com>; 'john kirkey' <jkirsey@fxi.com>; 'kenneth wheeler' <kwheeler@nmhs.net>; 'kyle finley' <kyle.finley@mtdproducts.com>; 'lee bowdry' <lbowdry@co.lee.ms.us>; 'patty tucker' <ptucker@nemsredcross.org>; 'paul harkins' <pharkins@co.lee.ms.us>; 'romero Traylor' <rtraylor@tupeloms.gov>; 'thomas walker' <twalker@tupeloms.gov>; 'travis fisher' <travisfisher@saralee.com>; 'tyrone james' <tjames@ritekem.com>; '1' <dkingsley@advantagefabrics.com>; '10' <e-mail@bbconcrete.com>; '11' <goodimpressions@barberprinting.com>; '12' <basscofoam@basscofoam.com>; '13' <awiygul@bauhaususa.com>; '14' <nbridges@bridgesdental.com>; '15' <burchwood@tsixroads.com>; '16' <bobby_campbelluph@yahoo.com>; '17' <aarmstrong@capitalbeddingonline.com>; '18' <al.servati@carpenter.com>; '19' <kiml@catalinalighting.com>; '2' <mnance@mhrs.state.ms.us>; '20' <info@tsi-precision.com>; '21' <rhuffman@challengeautomation.com>; '22' <info@circadence.com>; '23' <sales@componentbuildersinc.com>; '24' <mikep@confortaire.net>; '25' <tinawilburn@aol.com>; '26' <terry@vitalm.com>; '27' <david.robakiewicz@cewmail.com>; '28' <jim.ohargan@philips.com>; '29' <timsiraltec@bellsouth.net>; '3' <tupelosales@acebolt.net>; '30' <bettyc@electricandmachine.com>; '31' <entekinc@yahoo.com>; '31' <cholloway@esginc.net>; '33' <joelw@poly-fil.com>; '34' <robert@fibrecraft.net>; '35' <hchapman@fitexpress.com>; '36' <kdavis@flexiblefoam.com>; '37' <dgarner@netdoor.com>; '38' <idellw@gmail.com>; '39' <foamcraf@olesouth.net>; '4' <tgoggans@adlamfilms.com>; '40' <rinaldi@gat.com>; '5' <bbryant@sleepinnovations.com>; '6' <sales@airfloatsys.com>; '7' <asatkins@apac.com>; '8' <robert.hardin@ashleymidsouth.com>; '9' <svandiver_sealyfutons@yahoo.com>; AVONLEA CONTACT 2 <arichardson@veritasincare.com>; HOMEPLACE <hpnursedonnac@gmail.com>; lbaxter@veritasincare.com; MAGNOILA MANOR <dhaynes@magnoliamanortupelo.com>; RIVERBIRCH RESIDENCE <phyllisw.rb@comcast.net>; ROSEWOOD RESIDENCE <mandy@guardianresidences.com>; SAMARITAN GARDENS <everleana96@yahoo.com>; TRACEWAY <jstirewall@mss.org>; TUPELO NURSING & REHAB 51hosford@tarahc.com; mflanagan@co.lee.ms.us; BALDWYN VFD1 <jerry.ozbirn@baldwynliving.com>; BALDWYN VFD2 <fire.dept59@yahoo.com>; BELDEN VFD1 <williepayne1950@gmail.com>; BELDEN VFD2 <t.carlson6602@gmail.com>; BHR VFD2 <bridgeff03@gmail.com>; CH VFD1 <fraser5719@bellsouth.net>; ME VFD2 <tiffandjase@yahoo.com>; NT VFD1 <NETTLETONFIRE@GMAIL.COM>; PF VFD2 <mccarthy@conditioned-air.com>; SL VFD1 <fells2000@yahoo.com>; UF1 <kasanford7@gmail.com>; UNION VFD1

<craig@pettigrewcabinets.com>; UNION VFD2 <jdm1065@yahoo.com>; n.robbs@flytupelo.com; Melinda Tidwell <melinda@unitedwaynems.org>; sheriffjohnson@leecosheriff.com; jhall@leecosheriff.com; karnold@leecosheriff.com; Zandra Hereford zhereford@cdfms.org; REX SMITH <mayor@saltilloms.org>; Baldwin Mayor <mjames.mayor@baldwynliving.com>; BUD HERRING <mayor@guntown.org>; JASON SHELTON <jason.shelton@tupeloms.gov>; JIMMY TAYLOR <jandbstables@ymail.com>; Plantersville COO - Norma Ballard <njc822@yahoo.com>; Plantersville Mayor -Gloria Holland <shollands@comcast.net>; Shannon Mayor- RONNIE HALLMARK <townofshannon@hotmail.com>; Tupelo CEO - Don Lewis <don.lewis@tupeloms.gov>; VERONA rtrice@cityofverona.org; Guntown- Shelly McKee <shellym@guntown.org>; nan.nanney@baldwynliving.com; Nett.-Dana Burcham <courtclerk@ms.metrocast.net>; Saltillo- Mary Parker <mparker@saltilloms.org>; Shannon <cityderk@townofshannon.org>; T2 <lynsey.vanstory@tupeloms.gov>; TUPELO sandy.shumaker@tupeloms.gov; acantrell@tupeloschools.com; BALDWYN <mckayj@baldwynschools.com>; 'LEE COUNTY' <jimmy.weeks@leecountyschools.us>; 'NETTLETON' <rtaylor@nettleton.k12.ms.us>; 'TUPELO'; TUPELO1 <kbbritton@tupeloschools.com>; Tupelo2 <epeasant@tupeloschools.com>; Tupelo3 dbezell@tupeloschools.com; BALDWYN <sheliamcgee497@yahoo.com>; GUNTOWN <guntown1@guntownpolice.com>; Nettleton <nettletonpolice@ms.metrocast.net>; SALTILLO <chiefbailey@saltilloms.org>; SHANNON <dkershners1@yahoo.com>; TUPELO; BALDWYN <jerry.ozbirn@baldwynliving.com>; BALDWYN1 <fire.dept59@yahoo.com>; BELDEN VFD <williepayne1950@gmail.com>; BELDEN VFD1 <t.carlson6602@gmail.com>; 'Guntown Fire' <shellym@guntown.org>; marknowell@saltilloms.org; 'Nettleton' <mfulco@ms.metrocast.net>; 'Plantersville'; SALTILLO1 <cjenkins@saltilloms.org>; SHANNON <thomasw871@hotmail>; TUPELOFD <thomas.walker@tupeloms.gov>; TUPELOFD2 <jimmy.avery@tupeloms.gov>; VERONAFD charlessmith@gmail.com; allusers@co.lee.ms.us; '1' <genpkg@bellsouth.net>; '10' <gene.carden@hunterdouglas.com>; '11' <mjohnston@hydrohose.com>; '12' <ed@innovationseating.com>; '12' <orwill@inter-pac.com>; '13' <sivy2@hotmail.com>; '14' <gduffjr@gmail.com>; '16' <jerrys@jescoinc.net>; '17' <billy.crews@djjournal.com>; '18' <info@k-systems.com>; '19' <kdmcustomcoatings@comcast.net>; '2' <don@genpac.net>; '20' <duane.fishel@KI.com>; '20' <larue.peters@lc-ind.com>; '21' <kim@labelexpress.net>; '21' <courierl@bellsouth.net>; '22' <lhisales@bellsouth.net>; '22' <mardan38849@yahoo.com>; '23' <lavastone@comcast.net>; '26' <mconnor@mcculloughsteel.com>; '27' <msguttering@hotmail.com>; '28' <john.stevens@leggett.com>; '29' <adam@mitchellcompanies.com>; '3' <dgibson@gibsoncorrugated.com>; '30' <barry.smith@mtdproducts.com>; '31' <mworkman@newcorp.com>; '33' <dpwages@yahoo.com>; '34' <nemetal@aol.com>; '35' <sales@okinamerica.net>; '36' <slake@omega-motion.com>; '37' <petcab@vista-express.com>; '38' <barry@piercecabinets.com>; '39' <scottwagner@pittscompanies.com>; '4' <dbgumtree@bellsouth.net>; '40' <jesse@ppims.net>; '40' <tpriest@dbims.com>; '41' <bladesp@bellsouth.net>; '42' <peggy@ttsi-precision.com>; '43' <primedesign@comcast.net>; '43' <sales@qre-inc.com>; '44' <qualitycoatms@bellsouth.net>; '45' <connied@reedmfnginc.com>; '46' <info@refreshments.net>; '47' <chrisg@renincorp.com>; '48' <phil.cochran@researchsolvents.com>; '49' <mark@ritekem.com>; '5' <jtarrant@hmrichards.com>; '50' <frank@snhsteel.com>; '6' <jaggers@hancockfabrics.com>; '7' <bryan@hawkeye.ws>; '8' <dhenson@hensonsleeprelief.com>; '9' <hbi@dixie-net.com>; '000' <tullossupplyco@bellsouth.net>; '001' <shanfsup@bellsouth.net>; '10' <paullandon@diversi-plast.com>; '11' <cold@southernbelle.biz>; '12' <tfloyd@sprintprinttupelo.com>; '13' <cwhitmon@stikp.com>; '14' <jowen@structuredfibres.com>; '15' <bhumble@styleline.us>; '16' <paulsaval@supersagless.com>; '17' <support@ttspecialty.com>; '18' <don@tapcoinc.net>; '19' <arnie.chapman@tegrant.com>; '2' <gay.baird@saralee.com>; '20' <printshop369@comcast.net>; '21' <tigrettsteelpurchasint@cavtel.com>; '22' <lauderdalepaper@bellsouth.net>; '23' <david@ttsi-precision.com>; '24' <tubs@tubsmagic.com>; '25' <blong@corinthcoke.com>; '25' <stamps@dixie-

net.com>; '26' <div2-4@div2-4.com>; '26' <mcwerner@tupelomfg.com>; '27'
<cdickerson@tupelorecycling.com>; '28' <tgates@tupelotool.com>; '29' <jpwarrenl@bellsouth.net>; '30'
<tupelowoodprod@aol.com>; '31' <vector@vectortransport.com>; '32'
<david@weatherallprinting.com>; '33' <scresap@weyvalve.com>; '33' <whitaker@whitakersales.com>;
'34' <dsullivan@whitakersales.com>; '35' <wiggintonmachine@bellsouth.net>; '36'
<travis.fisher@saralee.com>; '4' <peggy_0650@yahoo.com>; '5' <billy@stm.ntcmail.net>; '6'
<shannonsteel@bellsouth.net>; '7' <charlotte.diggs@simsmm.com>; '77-Home Decor'
<clayf@renincorp.com>; '8' <stwhite@smurfit.com>; '9' <gary.purdon@sac-inc.com>;
sandy.tyes@mdhs.ms.gov; patty.tucker@redcross.org; christopher.watkins@msdh.ms.gov;
kgarza@go.olemiss.edu; Vicki.Reese@msdh.ms.gov; Gray, Ashley T <ATGray@nmhs.net>;
nmems@bellsouth.com

Subject: Public Participation Survey

PUBLIC PARTICIPATION SURVEY FOR HAZARD MITIGATION PLANNING

We need your help!

The Counties of Alcorn, Benton, Itawamba, Lafayette, Lee, Marshall, Pontotoc, Prentiss, Tippah, Tishomingo, and Union are currently engaged in a planning process to become less vulnerable to disasters, and your participation is important to us!

The Counties, along with participating local jurisdictions and other participating partners, are now working to prepare a multi-jurisdictional *Hazard Mitigation Plan*. The purpose of this Plan is to identify and assess our community's hazard risks and determine how to best minimize or manage those risks. Upon completion, the Plan will represent a comprehensive multi-jurisdictional *Hazard Mitigation Plan* for the eleven-county region.

This survey questionnaire provides an opportunity for you to share your opinions and participate in the mitigation planning process. The information you provide will help us better understand your hazard concerns and can lead to mitigation activities that should help lessen the impact of future hazard events.

Please promulgate these surveys as much as possible either via the online link below or by placing hard copies in your offices. Please mail or email your completed hard copy survey back to ema@co.lee.ms.us no later than October 23, 2015. Thanks for your participation!

Sonia Ruth, Administrative Assistant

Lee County Emergency Management

Leonardo Bowdry, Director

662-432-2950 (office)

662-841-9021 (fax)

Marshall County





DESIGNATED REPRESENTATIVE

We, the **Board** of Supervisors of /h.of:g County do hereby designate /1..IJ.J.4.J.,d./e to represent the County In all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, **the** day of (1.46«t .2014



President

/11#11:11 County Board of Supervisors



DESIGNATED REPRESENTATIVE

We, the Board of Supervisors of Marshall County do hereby designate Hugh Hollowell to represent the County in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 11th day of February 2014

Ronnie Joe Bennett

President

Marshall County Board of Supervisors



DESIGNATED REPRESENTATIVE

We, the Board of Supervisors of &oiritJ County do hereby designate .J'.mmi GaaslwO to represent the County in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the {J'lb day of N:jtJ.Jut., 2014

- : 1 - f L . - - -
[Redacted Signature]

Benton

County Board of Supervisors



DESIGNATED REPRESENTATIVE

We, the Board of Supervisors of ik.,M County do hereby designate {;uaf t/,.:yJ'''' to represent the County in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the ___'2 day of rf)d- 2014

res/de t

County Board of Supervisors



Pontotoc County

DESIGNATED REPRESENTATIVE

We, the Board of Supervisors of Pontotoc County, do hereby designate Ricky Jagan⁰ represent the County in all matters pertaining to the development of the District Two Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 15.._ day of pt. .2014

President

Pontotoc County Board of Supervisors



DESIGNATED REPRESENTATIVE

We, the **Board** of Supervisors of Tishomingo County do hereby designate Payton Berklte to represent the County In all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the J day of _____ 2014

Dicky McBan

President

County Board of supervisors



DESIGNATED REPRESENTATIVE

We, the Board of Supervisors of Catahoula County do hereby designate Shae, & ii 11.11.11 to represent the County in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 12-th day of _____ 2014

President

109 County Board of Supervisors



DESIGNATED REPRESENTATIVE

We, the Board of Supervisors of Y'111\th County do hereby designate T.C. L. -vdc. I to represent the County in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the .'Jri:/' day of .':tD-lciliYYr, 2014

President

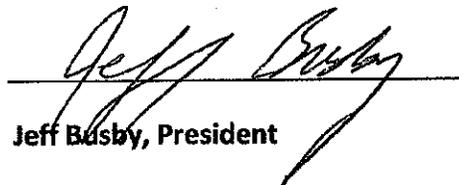
-T.jvt.b County Board of Supervisors



DESIGNATED REPRESENTATIVE

We, the Board of Supervisors of Lafayette County do hereby designate David Shaw, Emergency Management Coordinator to represent the County in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, **the** day of September, 2014



Jeff Busby, President

Lafayette County Board of Supervisors



DESIGNATED REPRESENTATIVE

We, the Board of Supervisors of Alcorn County do hereby designate Lowell to represent the County in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 15 day of February, 2014

President

Lowell County Board of Supervisors

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ORDER IN RE: HAZARD MITIGATION PLAN

WHEREAS, the Town desires to continue participation in the District 2 Regional Hazard Mitigation Plan.

NOW, THEREFORE, upon Motion duly made by Alderman LaBarreare, seconded by Alderman Bullock and unanimously adopted, **IT IS HEREBY ORDERED** that the Town of Falkner shall participate in the development of the District 2 Regional Hazard Mitigation Plan. Further, that the Town shall commit up to \$200.00 toward its local government share and that Tom Lindsey is hereby appointed as the Town of Falkner's representative to help develop the plan.

IN RE: PAYMENT OF CLAIMS

WHEREAS, the Town Clerk is presented the docket of claims for review by the Board and for approval: and,

WHEREAS, the Town Clerk advised the Board that all claims are in accordance with the City's budget and compliance with all state purchasing laws to the best of her knowledge and recommended that they should be, therefore, approved for payment

Upon Motion duly made by Alderman LaBarreare, and seconded by Alderman Hudson, and unanimously adopted, **IT IS HEREBY ORDERED**, that the claims be and the
--- .° h1>rP.hv aooroved for payment.



DESIGNATED REPRESENTATIVE

We, the Town of Myrtle, do hereby designate Cliff Hill to represent the Town in all matters pertaining to the development of the District Two (2) regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 10th day of April, 2014

Mayor

Town of MYRTLE



DESIGNATED REPRESENTATIVE

We, the City of OXFORD do hereby designate JIMMY ALLGOOD to represent the City
In all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 11 day of SEPTEMBER 2014

Mayor

City of Oxford



DESIGNATED REPRESENTATIVE

We, the Town of Marietta do hereby designate [REDACTED] as the Town In all matters pertaining to the development of the [REDACTED] mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 10 day of October, 2014



Mayor

Town of Marietta



DESIGNATED REPRESENTATIVE

We, the Town of Jumpertown do hereby designate *D. D. P. I. I. I.* represent the Town In all matters pertaining to the development of the District wo (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the *11e*....day of *Ot:!/vieC.* 2014


Mayor

Town of Jumpertown



DESIGNATED REPRESENTATIVE

We, the Town of Indianola, MS do hereby designate Allen Gray to represent the Town in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 1 day of October, 2014

Allen Gray

Mayor

Town of Indianola



DESIGNATED REPRESENTATIVE

We, the Town of Ashlo, YJd do hereby designate Jlrom, / @ca-sh11/ltO represent the Town in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, **the** day of _____, 2014

Sandra Preston - Vice Mayor

Mayor

Town of J



DESIGNATED REPRESENTATIVE

We, the City of Ne... do hereby designate Cr.,r-f C/ti:ffhrJ to represent the City in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the & day of Ocf- • 2014

Mayor

City of ...:5



DESIGNATED REPRESENTATIVE

We, the Town of 6/,-... Sr,....J do hereby designate CIA i----l: CIM/.....I to represent the Town in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the :2:f6day of CJC +, 2014

Mayor

Town of "Dlr<.: Sf,~ ;,S



Pontotoc County

Town of Algoma

DESIGNATED REPRESENTATIVE

We, the Town of Algoma, do hereby designate Ricardo "JumefS" to represent the Town in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 17 day of June 2014

 _____

Mayor

Town of Algoma



Pontotoc County

Town of Ecu

DESIGNATED REPRESENTATIVE

We, the Town of Ecu, do hereby designate Kitty :fr'.¥5'''5 to represent the Town in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the / r-d day of :S., 2014

 _____

Mayor

Town of Ecu



Pontotoc County

Town of Sherman

DESIGNATED REPRESENTATIVE

We, the Town of Sherman, do hereby designate Ridley Jaegers to represent the Town in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 4th day of September, 2014

Mayor

Town of Sherman



Pontotoc- County

Town of Toccopola

DESIGNATED REPRESENTATIVE

We, the Town of Toccopola, do hereby designate _____ o represent the Town in all matters pertaining to the development of the District T o) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the **L** day _____ 2014

A handwritten signature in cursive script, appearing to read "Billy B. Berry".

Mayor

Town of Toccopola



Pontotoc County

City of Pontotoc

DESIGNATED REPRESENTATIVE

We, the City of Pontotoc, do hereby designate Jeffrey T. N. G. to represent the City in all matters pertaining to the development of the District Two (Z) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 1 day of July, 2014

Mayor
City of Pontotoc



DESIGNATED REPRESENTATIVE

We, the Town of b1-.ltrwt,}; do hereby designate *t* to represent the Town
 In all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the *L* day of J. 2014

Buddy Wilkerson
 Mayor

Town of



DESIGNATED REPRESENTATIVE

We, the Town of Ut{fJJu4/i-i)/'"to hereby designate r71JA) lJPCkll to represent the Town in all matter\$ pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the ;:tN3day 0 2014

t=-;-&t/4JA-

Town of Jw j) , M.5---



DESIGNATED REPRESENTATIVE

We, the Town of Golden, do hereby designate Mark J. Jones to represent the Town
 In all matters pertaining to the development of the District Regional Hazard Mitigation Plan,

IN WITNESS WHEREOF, We have subscribed our signature this, the 1 day of June, 2014



Mark J. Jones

Mayor

Town



DESIGNATED REPRESENTATIVE

We, the Town of Au4ibe, J/e. do hereby designate M. :Bc:c\<.l;+ to represent the Town in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the if-11Jav of J fe./Jt., 2014

Mayor

Town of .&!A.tj1/e.



DESIGNATED REPRESENTATIVE

We, the Town of b.Aci do hereby designate 'C\<.I' to represent the Town
 In all matters pertaining to the development of the District TWO (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the Z!!! day of od, 2014

Pam Dswalt

Mayor

Town of Mer\



DESIGNATED REPRESENTATIVE

-,00.,-t-

We, the Town of f>al!rMJ:: do hereby designate [REDACTED] to represent the Town in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF We have subscribed our signature this, the d.,. day of lf':rl.:t^., 2014

& JI) fA

Mayor

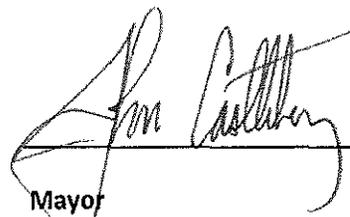
Town of f). g{;y...t



DESIGNATED REPRESENTATIVE

We, the City of Iuka do hereby designate Brian Grissom to represent the City in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 12th day of September, 2014



Mayor
City of Iuka



DESIGNATED REPRESENTATIVE

We, the Town of Abbeville do hereby designate Scott Smith to represent the Town in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 13th day of June, 2014

Mayor .

Town of Abbeville



DESIGNATED REPRESENTATIVE

We, the City of Baldwyn do hereby designate Lee Bowdry to represent the City in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 2 day of September 2014



City of Baldwyn



DESIGNATED REPRESENTATIVE

We, the ~~City of Ithaca~~ do hereby designate ~~the City of Ithaca~~ ^{i.} ~~the City of Ithaca~~ to represent the City in all matters pertaining to the development of the District (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 1 day of September, 2014

Mayor

~~City of Ithaca~~



DESIGNATED REPRESENTATIVE

We, the City of Jackson do hereby designate Jeff Butler to represent the City in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 1st day of July, 2014

Jeff Butler

Mayor

7

of

Page 2 of 2



DESIGNATED REPRESENTATIVE

We, the City of Fulton do hereby designate Shae Collum to represent the City in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 3rd day of September, 2014

Mayor

City of Fulton



DESIGNATED
REPRESENTATIVE

We, the City of Verona do hereby designate JO W00-1 to represent the City in all matters pertaining to the development of the District Two (2) Regional Hazard Mitigation Plan.

IN WITNESS WHEREOF, We have subscribed our signature this, the 11 day of Sept. 2014

Robert Guca

Mayor

City of Verona