Ridgeland, MS
HAZARD MITIGATION PLAN AVAILABLE FOR REVIEW

Ridgeland has been working to update the Hazard Mitigation Plan. The purpose of this plan is to identify natural and man-made hazards that affect the community and identify actions that can be taken to eliminate or reduce the risks identified.

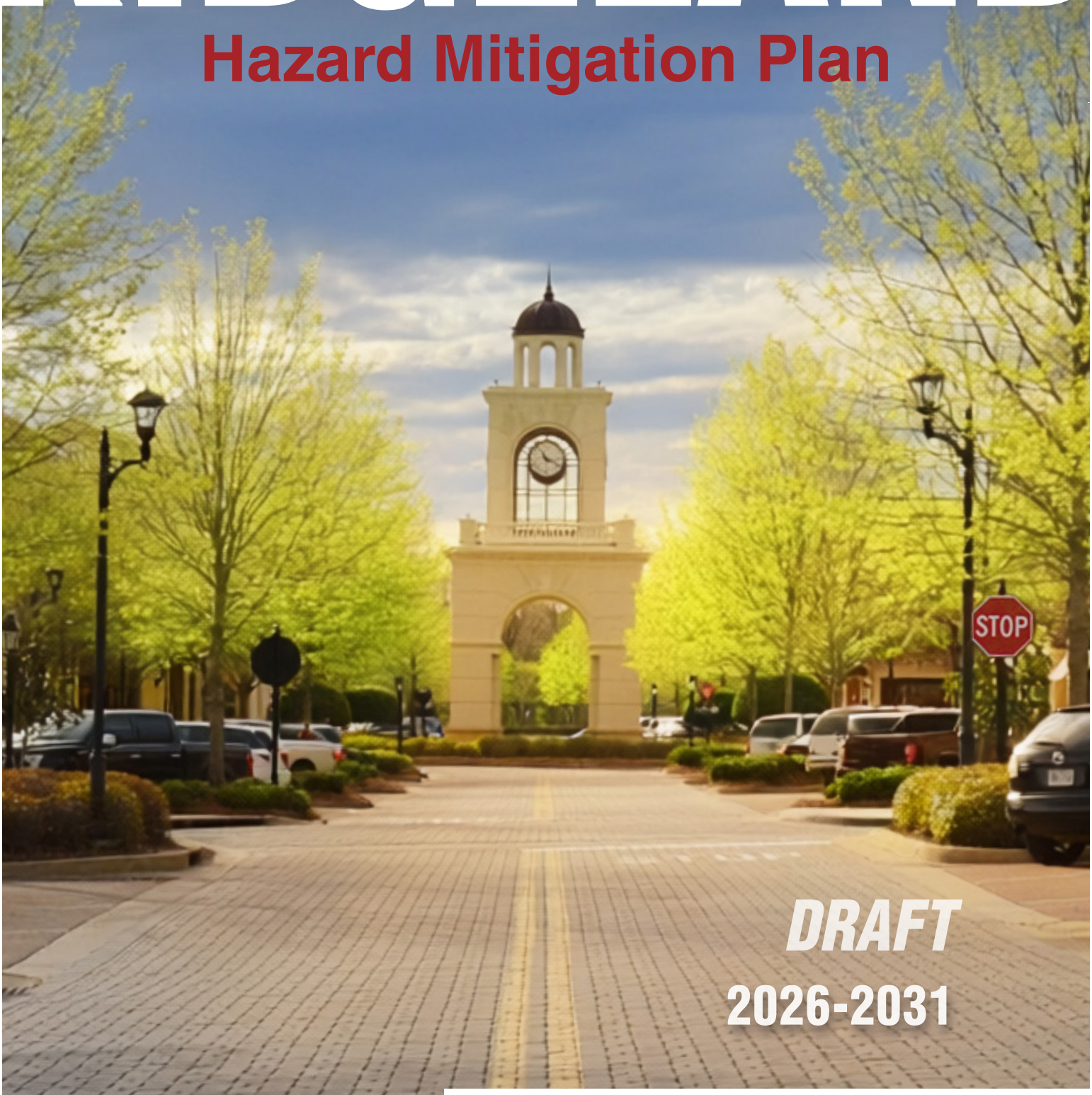
The community is encouraged to provide comments on the contents of this plan by reviewing a copy of the plan and completing the survey below. Public copies of the plan can be reviewed starting Thursday, July 2, 2026 and will be available for review through Friday, July 10, 2026 at the following locations:

- Ridgeland City Hall
- Central MS Planning and Development District: 1020 Centre Pointe Blvd. Pearl, MS during normal business hours
- Link

For any additional comments, please email them to Madeline Ezell, planner at mezell@cmpdd.org.

RIDGELAND

Hazard Mitigation Plan



DRAFT

2026-2031

prepared by

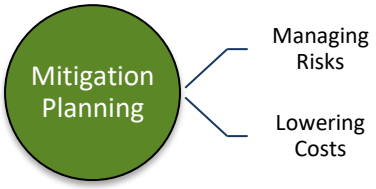
CENTRAL MISSISSIPPI PLANNING AND DEVELOPMENT DISTRICT

1020 Centre Pointe Boulevard
Pearl, MS 39208
www.cmpdd.org

Contents

Introduction

The Federal Emergency Management Agency (FEMA) defines mitigation as, "*the effort to reduce loss of life and property by lessening the impact of disasters. Mitigation is taking action now – before the next disaster – to reduce human and financial consequences later (analyzing risk, reducing risk, insuring against risk).*"



Predicting where the next disaster will occur, and how severe its impact will be on a community is difficult. Natural disasters can occur at anytime and anyplace. Their human and financial consequences can be significant. Mitigation planning is intended to assist communities in determining their risks to natural disasters and developing an action plan to address the known risks by lessening the impact of natural disasters when they do take place.

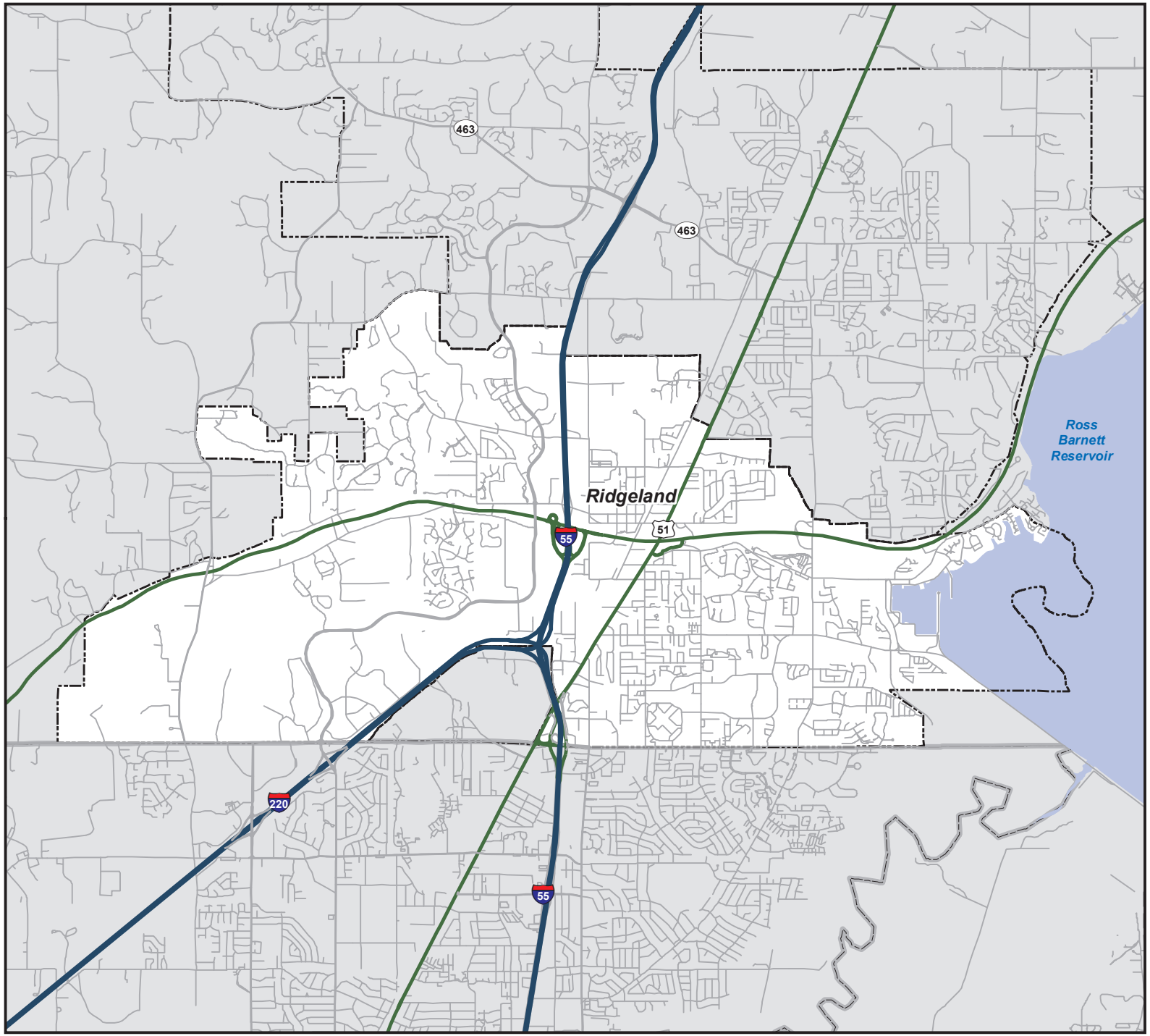
The Disaster Mitigation Act of 2000 (Public Law 106-390) provides the legal basis for mitigation planning requirements for State, local and Indian Tribal governments as a condition for receiving pre- and post- disaster mitigation grant assistance. The Disaster Mitigation Act of 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act by establishing a new set of requirements that emphasize the need for an on-going coordinated mitigation planning process.

In response to the Disaster Mitigation Act of 2000, the City of Ridgeland has developed this Hazard Mitigation Plan, it is an update to the city's existing Hazard Mitigation Plan approved in 2021.

The purpose of this plan is to document the mitigation planning process carried-out by the City of Ridgeland, and to provide an integrated strategy for implementing hazard mitigation projects that will minimize future disaster impacts and losses. This plan is intended to meet all hazard mitigation planning requirements established by the Disaster Mitigation Act of 2000.

Local officials should use the information contained in this document as a blueprint to help reduce the future impacts of known risks in the community. When possible, local officials should commit local funds, as well as seek Federal and State assistance to carry out the action plan detailed in this document. This plan should; however, be updated as outlined in Section 7 of this plan in order for it to continue to be effective, and to maintain compliance with the Disaster Mitigation Act of 2000.

City of Ridgeland, MS



LEGEND

- Interstates
- Major Highways
- Major Local Roads
- Local Roads
- Municipalities
- Counties

Prepared by

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Central Mississippi
Planning & Development District

Planning Process

This section of the City of Ridgeland Mitigation Plan describes the planning process undertaken to develop this plan update. This section includes a description of who was involved in preparing this document; the process utilized to prepare this document; how the public was involved; and an explanation of the major differences between this plan and previously developed plans in the City of Ridgeland.

Planning Process Summary

The planning process used to develop this plan was based on Section 322 of the Stafford Act, as amended by the Disaster Mitigation Act of 2000 and supporting guidance developed by FEMA. To maintain compliance with the five-year required update process, in June 2025 the city began the plan update process. This document serves as an update for the city's plan approved in 2021.

As the initial step in the planning process, CMPDD contacted the city and requested an updated list of committee members to serve on Ridgeland's Mitigation Council. The purpose of the Mitigation Council is to serve as the primary point of contact for completing the planning process, and to coordinate information between CMPDD and local officials. Once the City of Ridgeland appointed committee members, CMPDD was ready to proceed with the planning process. The process used to develop a plan for the City of Ridgeland included six (6) basic steps:

Task 1	**Organizing the Planning Process / Building the Planning Team**
Task 2	**Community Assessment**
Task 3	**Conduct Risk / Vulnerability Assessment**
Task 4	**Develop Goals and Objectives**
Task 5	**Develop a Mitigation Strategy**
Task 6	**Plan Review, Approval and Adoption**

Each step involved in creating this document built upon the efforts of previous steps to ensure that the mitigation actions outlined at the end of this document have a valid basis for their implementation and truly address actions that will reduce the individual vulnerabilities identified in the City of Ridgeland. The planning process carried out by the Mitigation Council is detailed below with a listing of basic steps completed during each task, as well as the project timeline:

1. **Organizing the Planning Process/Building the Planning Team**
    - Engage local leadership
    - Establish a Mitigation Council
    - Develop and implement an outreach strategy
    - Develop a project timeline

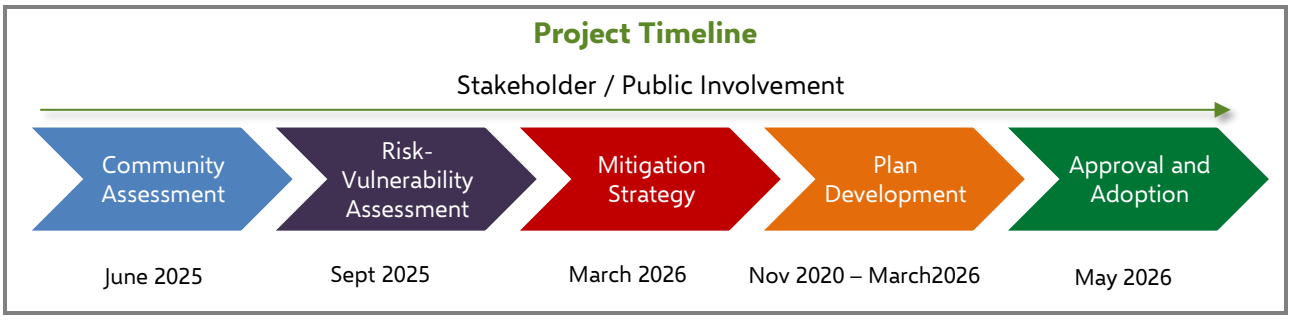
2. **Community Assessment**
    - Review existing plans and policies
    - Develop community profile
    - Identify critical facilities
    - Identify local capabilities
    - Identify participation in the National Flood Insurance Program

3. **Conduct Risk/Vulnerability Assessment**
    - Identify hazards
    - Develop hazard profiles
    - Identify community assets
    - Analyze risks to determine vulnerabilities
    - Summarize overall vulnerabilities

4. **Develop Goals and Objectives**
    - Develop long-term outcomes through goal statements
    - Develop specific objectives for each long-term goal

5. **Develop a Mitigation Strategy**
    - Document progress implementing previous actions
    - Identify an action plan specific to Ridgeland

6. **Plan Review, Approval, and Adoption**
    - Draft plan review
    - Plan amendments as needed
    - Final plan review
    - Plan adoption



The results of the comprehensive planning process completed by the City of Ridgeland resulted in the development of this document which contains eight (8) sections. A brief description of each section is provided below:

Section 1 Introduction and Purpose: states the general overall purpose of this document and lists the jurisdiction participating in the planning process.

Section 2 Planning Process: includes a description of who was involved in preparing this document; the process utilized to prepare this document; how the public was involved; and an explanation of the major differences between this plan and previous mitigation plans.

Section 3 Community Profile: describes general information pertaining to the physical setting, population, demographics, and land use patterns within Ridgeland.

Section 4 Risk Assessment: provides a description of the type, location and extent of all-natural hazards that can impact the City of Ridgeland. Each hazard identified includes a description of the type of hazard, the area that can be affected by the potential hazard, and an analysis of the impact the hazard may have on the area. The assessment conducted in this section is based upon previous occurrences of natural hazards, research material reviewed and a vulnerability assessment completed by the Mitigation Council.

Section 5 Capability Assessment: the capability assessment serves as an instrument for identifying local capabilities, it also provides a means for recognizing gaps and weaknesses that can be resolved through future mitigation actions. The capability assessment section addresses Ridgeland's participation in the National Flood Insurance Program, as well as capabilities such as administrative, regulatory, and financial abilities.

Section 6 Mitigation Strategy: provides a blueprint the City of Ridgeland can use to reduce overall vulnerabilities identified in Section 4. This section describes the goals and objectives established by the Mitigation Council and provides an explanation of how individual mitigation actions were prioritized.

Section 7 Plan Maintenance: outlines how this plan will continue to be monitored, evaluated, and updated within a five-year cycle as required by federal regulations. This section explains who will be responsible for maintenance activities. It also provides a methodology and schedule of maintenance activities including a description of how the public will be involved on a continuous basis, and how mitigation practices outlined in this plan will be incorporated into future planning mechanisms.

Section 8 Plan Adoption: documents the city's formal adoption of this plan.

The Planning Team

Those appointed to Ridgeland's Mitigation Council are listed in Table 2.1. CMPDD met with Mitigation Council members throughout the entire project to explain each step in the planning process and to provide forms and other tools needed to complete the planning process. It was the responsibility of the Mitigation Council members to meet with small working groups, as needed, to collect data and analyze any information provided by CMPDD.

Table 2.1 Ridgeland Mitigation Council Members

Alan Hart Public Works Director 100 West School Street Ridgeland, MS 39157 601-853-2027	
Jonathan Posey Fire Chief 100 West School Street Ridgeland, MS 39157 601-856-8105	**Cynthia James** Senior Civil Engineer 100 West School Street Ridgeland, MS 39157 601-853-2027
Paul Forster City Engineer 100 West School Street Ridgeland, MS 39157 601-856-3877	**Brian Myers** Police Chief 100 West School Street Ridgeland, MS 39157 601-853-2027

Plan Development Meetings

CMPDD facilitated a series of meetings with the Mitigation Council to ensure continuous involvement of local staff and stakeholders in the development of this plan. The meetings were strategically scheduled throughout the project to gain valuable input from the Mitigation Council and to keep everyone informed of the project's progress. The initial meeting was held February 13, 2026. The primary purpose of this meeting was to review the planning process in detail, describe individual roles and responsibilities, and begin the data gathering process. CMPDD provided Mitigation Council members with forms to aid in gathering data and deadlines to complete each phase of the planning process during each meeting. Following the initial meeting, several additional meetings, phone calls, mail, and email exchanges occurred were CMPDD was able to gather data needed to complete this plan update. The following page provides meeting dates and copies of sign-in sheets from each meeting.

Mitigation Council Meeting Sign-in Sheets

Ridgeland, MS - Hazard Mitigation Plan
First Hazard Mitigation Meeting
February 13,2026

First Name	Last Name	Title	Organization	Email	Phone
Cynthia	James	Engineer	City of Ridgeland	Cynthia.james@ridgeland.ms.org	601-853-2002
Paul	Forster	City Engineer	City of Ridgeland	Paul.forster@ridgelandms.org	601.664.8306 (c)
Jonathan	Posey	Fire Chief	City of Ridgeland Fire Dept.	Jonathan.Posey@ridgelandms.org	769-573-2414
Alan	Hafer	Public Works Dir.	"	alan.hafer@ridgelandms.org	601-853-2027
Brian	Myers	Police Chief	" Police Dept	brian.myers@ridgelandms.org	601-853-2019
Madeline	Ezell	Planner	CMPDD	mezell@cmpdd.org	769-777-7311

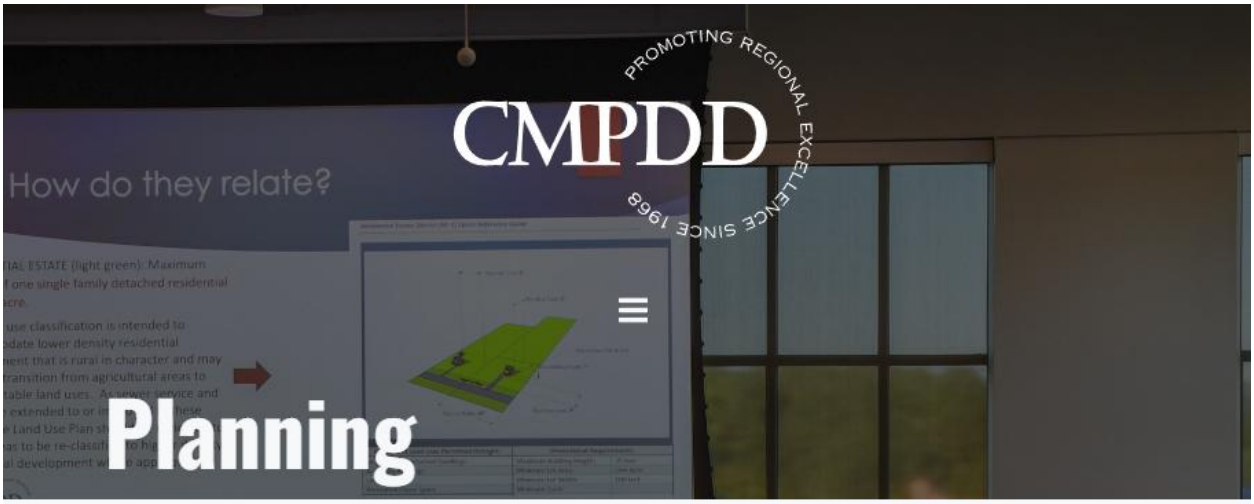
Public Participation and Additional Stakeholder Involvement

CMPDD took an active approach to engaging the public and others that hold a stake in mitigation planning in the development of this mitigation plan. Following a review of steps taken in the development of previous plans, CMPDD devised a public outreach strategy that provided several opportunities for participation by stakeholders, as well as the general public throughout the development of this plan. These opportunities included:

- Visiting the CMPDD Mitigation Planning website page
- Contacting CMPDD to become involved in the planning process
- Reviewing and commenting on the draft document

Mitigation Planning Website

In coordination with the start of this project, CMPDD updated its Mitigation Planning website page, http://www.cmpdd.org/mitigation-planning/, to provide information about the City of Ridgeland's mitigation planning process. The content for the page was updated to include a brief introduction to the hazard mitigation planning process. In addition, plan review opportunities were posted to the site, and those visiting the site were encouraged to get involved in the planning process by contacting CMPDD through the link provided on the site.



The Central Mississippi Planning and Development District (CMPDD) provides a wide range of services to assist member governments with planning, coordination, and implementation of local initiatives. Our goal is to support cities and counties in Central Mississippi with practical and strategic guidance that promotes long-term community development and resilience.

Land Use Planning

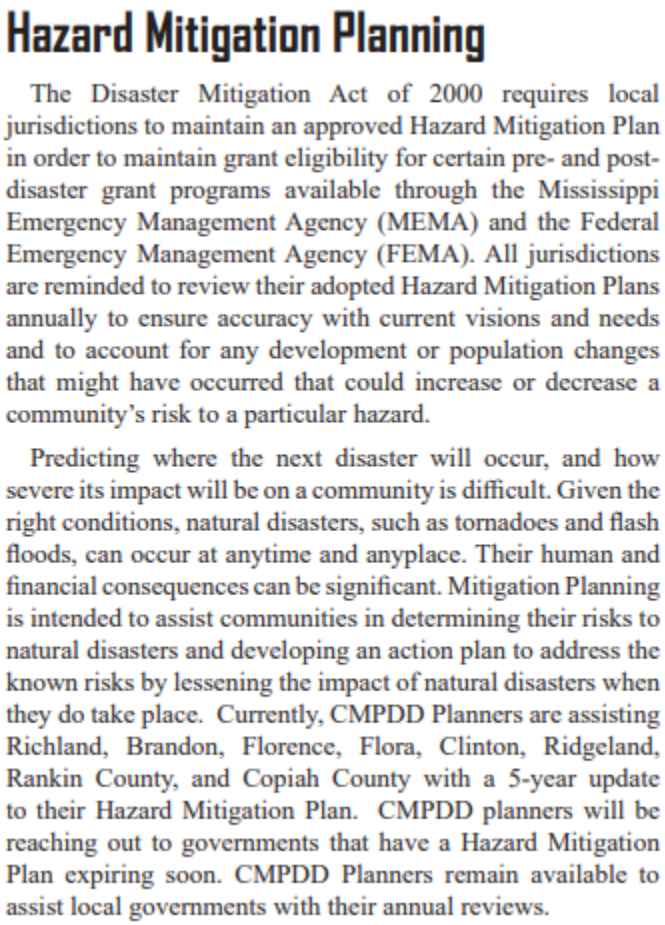
CMPDD works closely with local governments to prepare and update **comprehensive plans**, which serve as long-range guides for growth and development. These plans help communities balance economic development, housing, infrastructure, and natural resources. CMPDD also assists with the development and revision of **zoning ordinances** and **subdivision regulations**, ensuring that land use decisions are consistent with each community's goals and meet legal requirements.

Hazard Mitigation Planning

To promote safer and more resilient communities, CMPDD helps prepare and update **hazard mitigation plans** that identify risks from natural disasters such as floods, tornadoes, and severe storms. These federally approved plans are required to remain eligible for certain FEMA funding opportunities and help guide local actions to reduce or eliminate long-term risk.

News Articles

In addition to the Mitigation Planning website page, CMPDD published news articles in its quarterly newsletters, The Central Update, on a regular basis. The newsletter is posted on CMPDD's website, as well as mailed to over 1,100 recipients. Those receiving the newsletter include neighboring communities, regional non-profit organizations, state and federal agencies, local utility providers, colleges and many other key stakeholders across Mississippi. A complete listing of neighboring communities and other key stakeholders receiving the newsletter by mail is available in Appendix A of this document. Each article published encouraged those interested in finding out more about the planning process underway in Ridgeland to contact CMPDD or to visit the mitigation planning website page for more information.



Hazard Mitigation Planning

The Disaster Mitigation Act of 2000 requires local jurisdictions to maintain an approved Hazard Mitigation Plan in order to maintain grant eligibility for certain pre- and post-disaster grant programs available through the Mississippi Emergency Management Agency (MEMA) and the Federal Emergency Management Agency (FEMA). All jurisdictions are reminded to review their adopted Hazard Mitigation Plans annually to ensure accuracy with current visions and needs and to account for any development or population changes that might have occurred that could increase or decrease a community's risk to a particular hazard.

Predicting where the next disaster will occur, and how severe its impact will be on a community is difficult. Given the right conditions, natural disasters, such as tornadoes and flash floods, can occur at anytime and anyplace. Their human and financial consequences can be significant. Mitigation Planning is intended to assist communities in determining their risks to natural disasters and developing an action plan to address the known risks by lessening the impact of natural disasters when they do take place. Currently, CMPDD Planners are assisting Richland, Brandon, Florence, Flora, Clinton, Ridgeland, Rankin County, and Copiah County with a 5-year update to their Hazard Mitigation Plan. CMPDD planners will be reaching out to governments that have a Hazard Mitigation Plan expiring soon. CMPDD Planners remain available to assist local governments with their annual reviews.

Review and Commenting Opportunities

Finally, the public was given the opportunity to review copies of the plan and to provide comments on the Hazard Mitigation Plan for the City of Ridgeland during two (2) separate public review opportunities. The first opportunity took place during the draft stage of the plan, and the second opportunity took place just prior to formal adoption of the plan. Notices of these public review and comment opportunities were placed on the city's website and posted at various community buildings. Copies of the plan were also made available to the public at varies locations listed in Table 2.2 during each comment and review period. Comments received during both public review and comment periods are listed in Table 2.3. All comments received during the two (2) separate public review opportunities were review by the Mitigation Council members after each review opportunity. Any relevant comments received were incorporated by the Mitigation Council into the final document as appropriate.

Table 2.2 Public Review Opportunities

Location	Dates Available	
	Draft Review	*Final Review*
Ridgeland City Hall Public Works Office 100 W. School St. Ridgeland, MS	07/06-10/2026	n/a
Central MS PDD 1020 Centre Pointe Blvd. Pearl, MS	07/06-10/2026	n/a

Public Notice: Draft Stage published on Ridgeland's website and posted at various community buildings

Public Notice: Final Plan Review Notice published on Ridgeland's website and posted at several community buildings

Table 2.3 **Draft Review Comments**
No comments were received
Final Review Comments
Comments to be added once they are received

Plan Changes

Ridgeland's latest Hazard Mitigation Plan was adopted in May 2021. The plan titled *City of Ridgeland Hazard Mitigation Plan Update* pertains to just the incorporated limits of the City of Ridgeland. Basic changes between this plan and previously developed plans include:

- Updated Mitigation Actions related to necessary hazard preperation
- Updated Risk Assessment
- Updated design and formatting

Previous Hazard Mitigation Plans for the City of Ridgeland include:

- City of Ridgeland Hazard Mitigation Plan Update 2016 – 2021
- City of Ridgeland Hazard Mitigation Plan Update 2011 – 2016

Community Profile

In this Section of the plan, profile information is presented and analyzed to develop an understanding of the components that comprise the City of Ridgeland. This profile describes general information pertaining to the city's physical setting, population and demographics, general building stock, and land uses in order to develop an understanding of the city's characteristics.

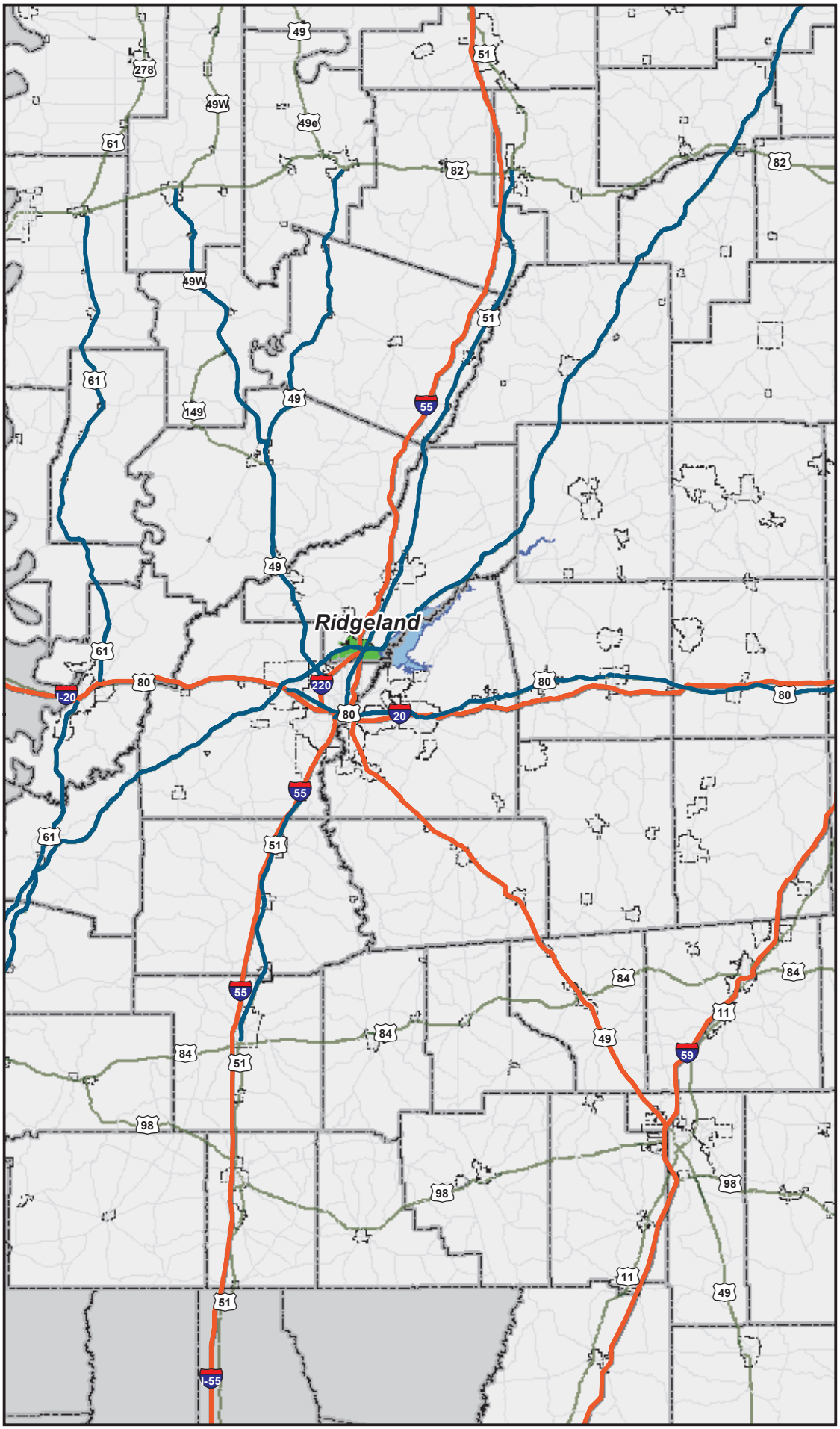
Location

The City of Ridgeland, which is located just north of the state's capital city, encompasses 21.42 square miles. The city is one of four incorporated municipalities in Madison County.

Transportation Network

The City of Ridgeland has a well-developed transportation network. Major East/West corridors include the Natchez Trace Parkway, Old Agency Road, and Lake Harbour Drive. Major North/South corridors include Interstate 55, Highway 51, and Highland Colony Parkway. Traffic volumes in 2024 averaged 114,000 vehicles per day on Interstate 55 between the Natchez Trace Parkway and 107,000 near I-220. In comparison, the average daily traffic volume on Highway 51 between E Jackson Street and Lake Harbour Drive included 27,000 vehicles per day. Map 3.2 depicts the location of major transportation corridors in the City of Ridgeland and the designated evaluation routes within the County.

Evacuation & Transportation Data for the City of Ridgeland



Emergency Evacuation Routes

Route Classification

- Primary Evacuation Routes
- Alternate Evacuation Routes
- Interstates
- Major Highways
- Major Local Roads
- Municipalities
- County Boundaries

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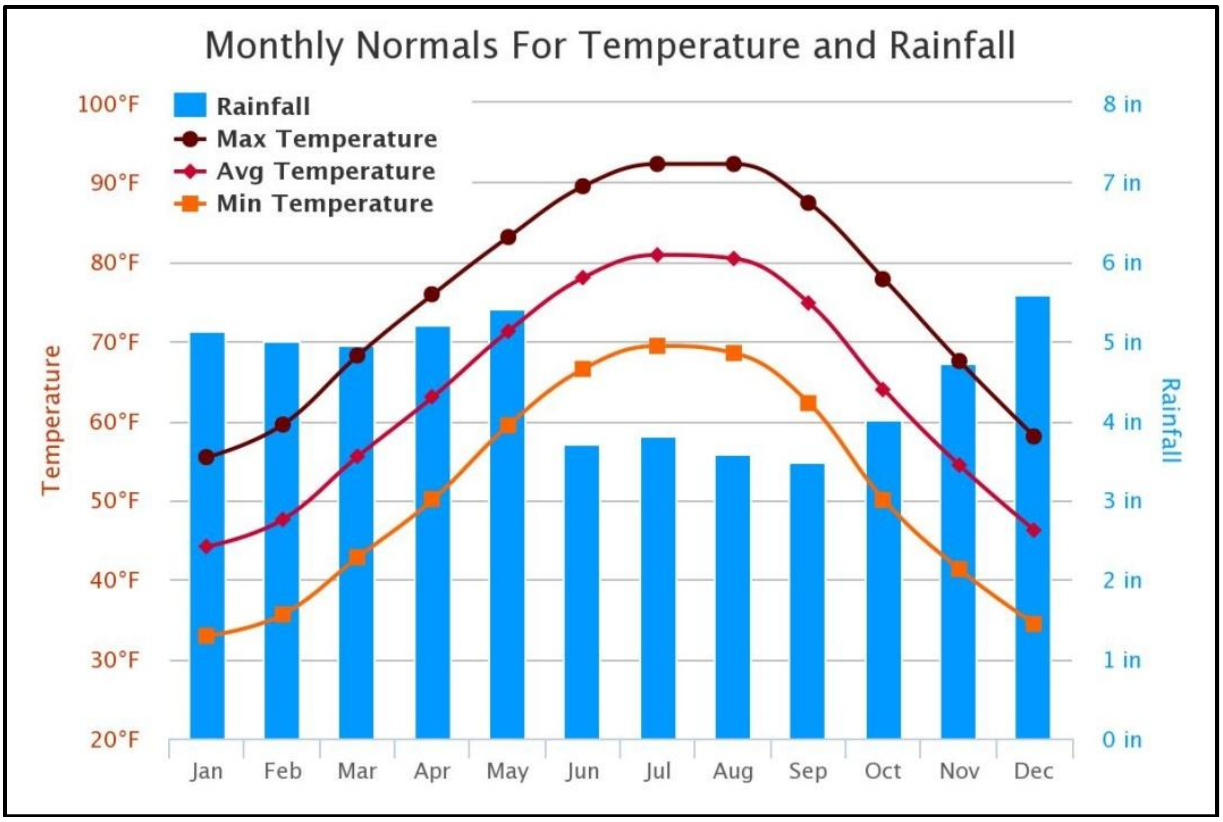
Climate

The City of Ridgeland is located in the humid subtropical climate region, which is characterized by temperate winters; long hot summers; and rainfall that is fairly evenly distributed throughout the year. Temperatures average about 92 degrees in July and about 56 degrees in January. On average, the warmest month is July and the coolest month is January. Prevailing southerly winds provide moisture for high humidity and potential discomfort from May through September. Locally violent and destructive thunderstorms are a threat on an average of about 60 days each year. Normal precipitation averages from 3.4 to 5.6 inches per month throughout the area annually. Traceable amounts of sleet and snowfall are also typical.

Mississippi State University
Office of Climatologist

"Mississippi has a climate characterized by absence of severe cold in winter, but by the presence of extreme heat in summer. The ground rarely freezes, and outdoor activities are generally planned year-round. Cold spells are usually of short duration and the growing season is long. Rainfall is plentiful, but so are dry spells and sunshine."



Source: Southern Regional Climate Center

People

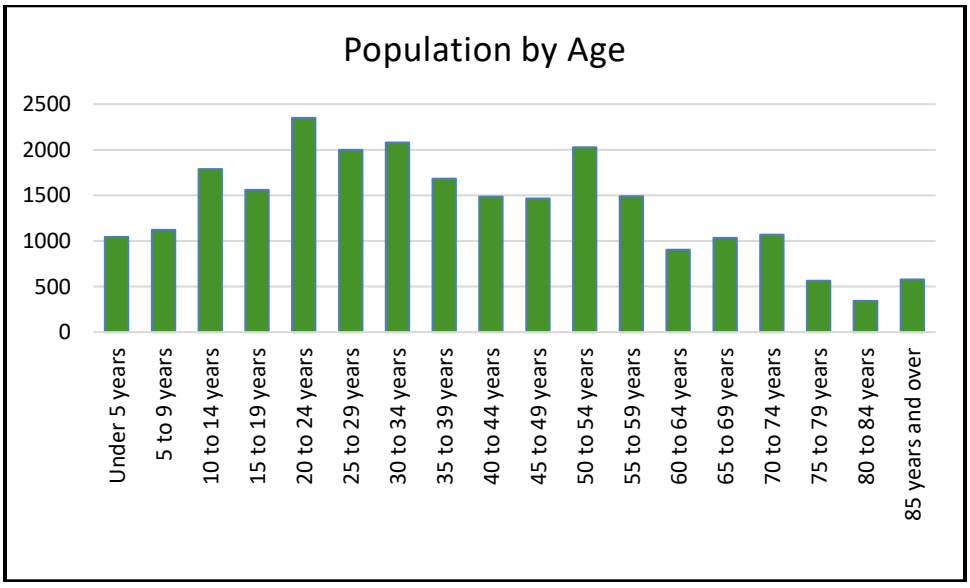
According to the 2020 U.S. Census, the City of Ridgeland had a population of 24,340 people. The Disaster Mitigation Act of 2000 requires Mitigation plans to consider socially vulnerable populations as part of the planning process. These populations can be more susceptible to hazard events, based on a number of factors including their physical and financial ability to react or respond during a hazard and the location and construction quality of their home. For the purposes of this study, vulnerable populations include (1) the elderly (persons 65 years and over) and (2) those living in low-income households. Table 3.1 presents the population statistics for the City of Ridgeland.

Table 3.1 Population

Jurisdiction	2010 U.S. Census			American Community Survey		
	Total Population	Pop. 65+	% Pop. 65+	Pop. Below Poverty Level	% Below Poverty	2024 Pop Estimate
Ridgeland	24,340	3,588	14.7%	2,388	9.8%	24,587

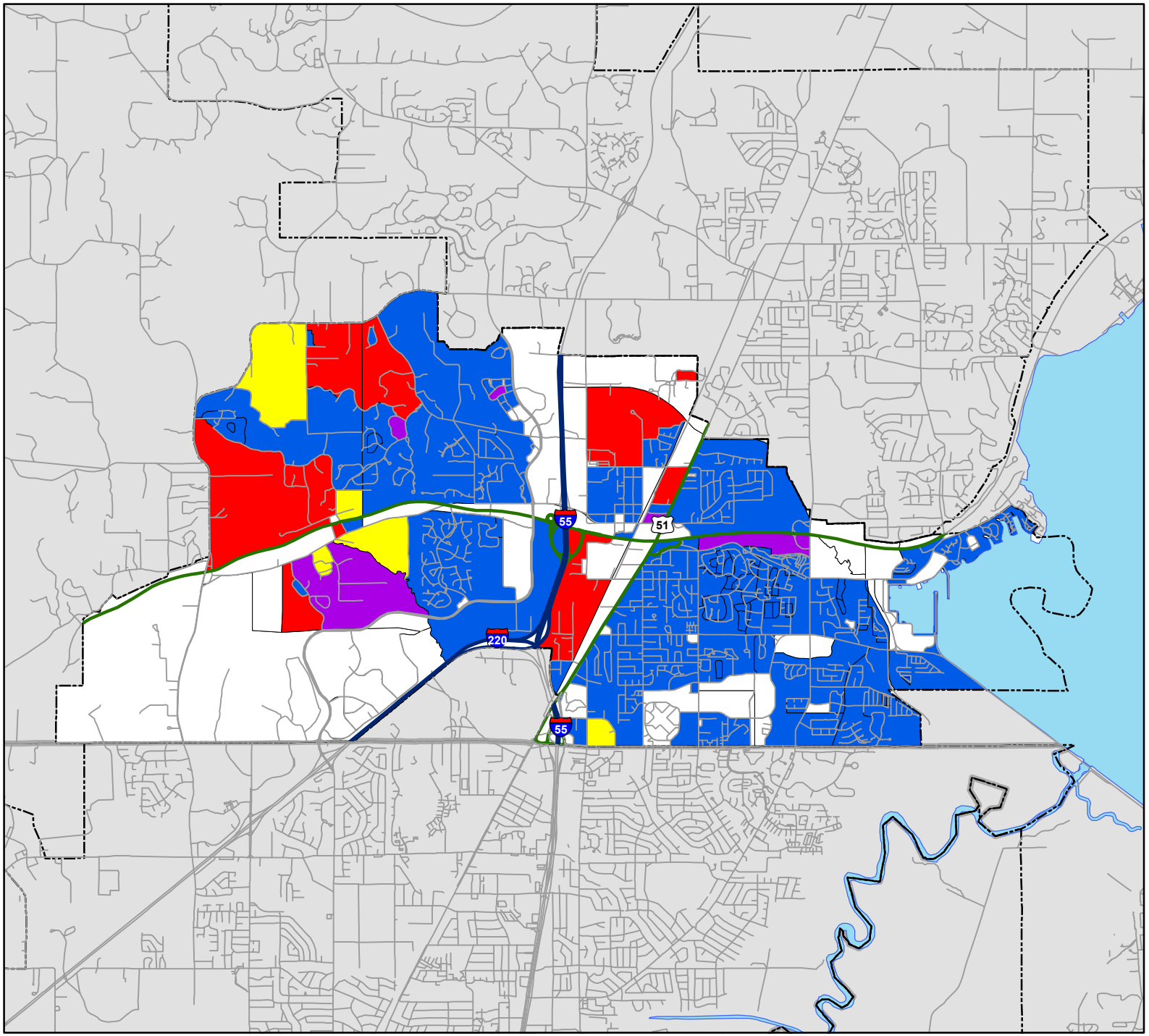
Source: U.S. Census Bureau

It is evident in the population analysis for the City of Ridgeland that the largest population segment are those aged 20 to 24. In comparison, only 14.7% of the residents are 65 years or older, and 9.8% of the total population is below the poverty level.



Map 3.3 shows the distribution of the general population density (persons per square mile) by Census block based on 2020 Census data.

Distribution of General Population for the City of Ridgeland, MS



U.S. Census 2020
PopPerSqMile

- < 100
- 101 - 200
- 201 - 300
- 301 - 400
- > 400
- Municipalities
- Interstates
- Major Highways
- Major Local Roads

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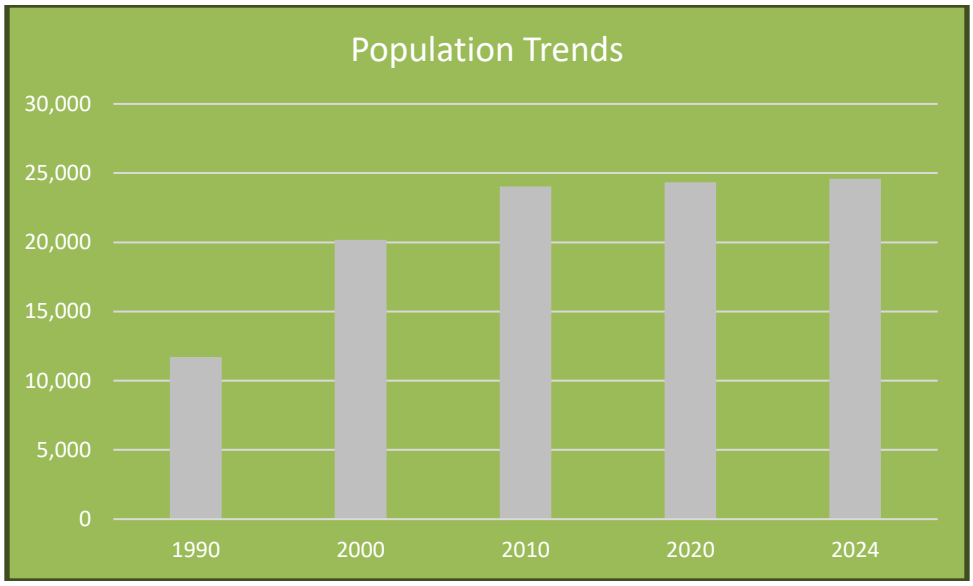
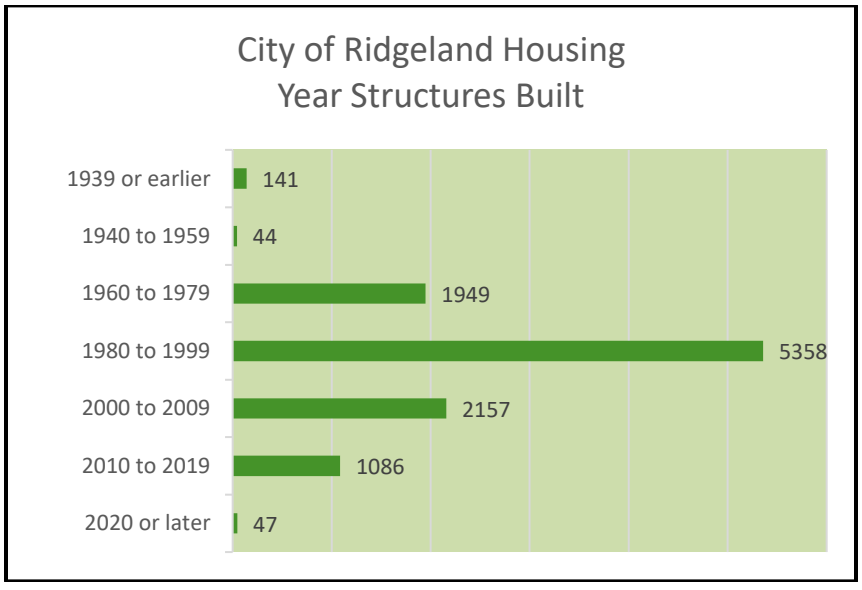


General Building Stock

The 2024 American Community Survey identified 10,782 housing units in the City of Ridgeland. The vast majority of housing structures were built after 1980 (80%) with the largest percent of housing units built between 1980 and 1999 (50%). The housing stock consist of mostly 1-unit detached housing structures (52%) and multi-unit structures (44%).



Housing Units Ridgeland

1-unit detached	52%
1-unit attached	1.6%
2-units	1.4%
3 or 4 units	8.3%
5 to 9 units	18.3%
10 or more units	15.8%
Mobile Home/Other	2%

Economy

According to the U.S. Census Bureau 2024 American Community Survey, 13,837 residents 16 years and older are employed. Table 3.2 provides the economic census for the City of Ridgeland.

Table 3.2 2012 Economic Census

Industry	Number of Establishments	Employment
Utility	1	--
Manufacturing	18	278
Wholesale Trade	71	--
Retail Trade	286	4,039
Transportation and warehousing	13	256
Information	48	1,364
Finance and insurance	212	2,645
Real estate and rental leasing	76	442
Professional, scientific, and technical services	201	2,141
Administrative and support services	44	2,461
Educational Services	44	214
Health care and social assistance	106	11,085
Accommodation and food services	121	9,051
Other Services except public administration	90	8,001
Source: U.S. Census Bureau		

The U.S. Census Bureau 2024 American Community Survey also provides household income data for the City of Ridgeland. According to the American Community Survey, 36.5% of households in the City of Ridgeland have a household income of less than $50,000 per year, while 63.5% of the households have an income over $50,000 per year.

Table 3.3 Household Income

Household Income	Estimate	Percent
Less than $10,000	345	3.2%
$10,000 to $14,999	194	1.8%
$15,000 to $24,999	561	5.2%
$25,000 to $34,999	873	8.1%
$35,000 to $49,999	1962	18.2%
$50,000 to $74,999	2027	18.8%
$75,000 to $99,999	1542	14.3%
$100,000 to $149,999	1445	13.4%
$150,000 to $199,999	658	6.1%
$200,000 or more	1175	10.9%
Source: American Community Survey		

Land Uses

Land use regulatory authority in Mississippi is vested in each local jurisdiction. According to state law, zoning and other land use regulations must be based upon a comprehensive plan. A comprehensive plan must include a minimum of four components in order to comply with state regulations. These components include long-range goals and objectives, a land use plan, a transportation plan, and a community facilities plan. The city updated its existing land use survey in 2014. Existing land use patterns identified in the city consist of thirteen (13) main land use categories. A review of the city's development patterns indicated that no significant changes have occurred in development patterns since the last plan was developed to indicate an increased risk to the city due to increased development, particularly in identified hazard areas. Map 3.4 provides an overview of development patterns in the City of Ridgeland.

Table 3.4 Ridgeland Existing Land Uses

Land Use Category		Area in Acres
C-1	Low Intensity Commercial District	542.7
C-2	General Commercial District	505.4
C-2A	General Commercial District	366.3
C-3	Convenience Commercial District	151.6
C-4	Highway Commercial District	208.1
C-5	High Intensity Commercial District	8.6
C-6	Regional Shopping Mall District	114.0
I-1	Limited Industrial District	1,352.2
I-2	Heavy Industrial District	372.8
TIP	Technical Industrial Park District	1,349.5
MU-1	Mixed Use District	978.8
R-1	Single Family Residential District	243.6
R-1A	Single Family Residential District	3,087.1
R-2	Single Family Residential District	1,803.5
R-3	Single Family Residential District	188.6
R-4	Zero Lot Line Residential District	223.5
R-4A	Townhouse Residential District	63.8
R-5	Multi-Family Residential District	243.4
RE	Residential Estate District	2,286.5
RE-A	Residential Estate District	404.0
RM	Mobile Home Park Residential District	59.2
S-1	Special Use District	3,382.9

Recent and Future development planned within the city for any identified significant residential, commercial, or infrastructure projects planned within the next 5 years are provided in the table below. The developments listed below on Table 3.5 and 3.6 are not expected to create an increase in vulnerability to any hazards in the City of Ridgeland due to adherence to the Mitigation Actions found in Section 6 of this plan.

Table 3.5 **Recent Development**

Project Name	Type of Project	Location
Storage Max Highland	Industrial	Highland Commerce Dr
Landmark Lifestyles	Institutional	Dyess Rd
Central MS Realtors Association	Commercial	Sunnybrook Rd
Topgolf	Commercial	Topgolf Way
Wendy's	Commercial	Highland Colony Parkway
St. Andrews Chapel	Institutional	Highland Colony Parkway
McAllister's Deli	Commercial	County Line Rd
Watkins Construction	Industrial	N Wheatley St
Starbucks	Commercial	County Line Rd
UPS Distribution Center	Industrial	Marketridge Dr
Chick-fil-A	Commercial	Highland Colony Parkway
Southern Beverage	Industrial	Highland Colony Parkway
Infinity Volleyball	Commercial	Harbor Pointe Crossing
Southern Ag Credit	Commercial	Concourse Blvd
Chipotle	Commercial	County Line Rd
Oakley Square	Commercial	West Jackson St
Two Gun Tactical	Commercial	Highway 51
Porsche Dealership	Commercial	I-55 Frontage Rd
AWS Data Center	Industrial	Highland Colony Parkway
UMMC Medical Center	Institutional	Colony Park Blvd
Holiday Inn Express	Commercial	I-55 Frontage Rd
Tru by Hilton	Commercial	I-55 Frontage Rd
Renaissance Phase 3B	Commercial	Highland Colony Parkway

Table 3.6 **Future Development**

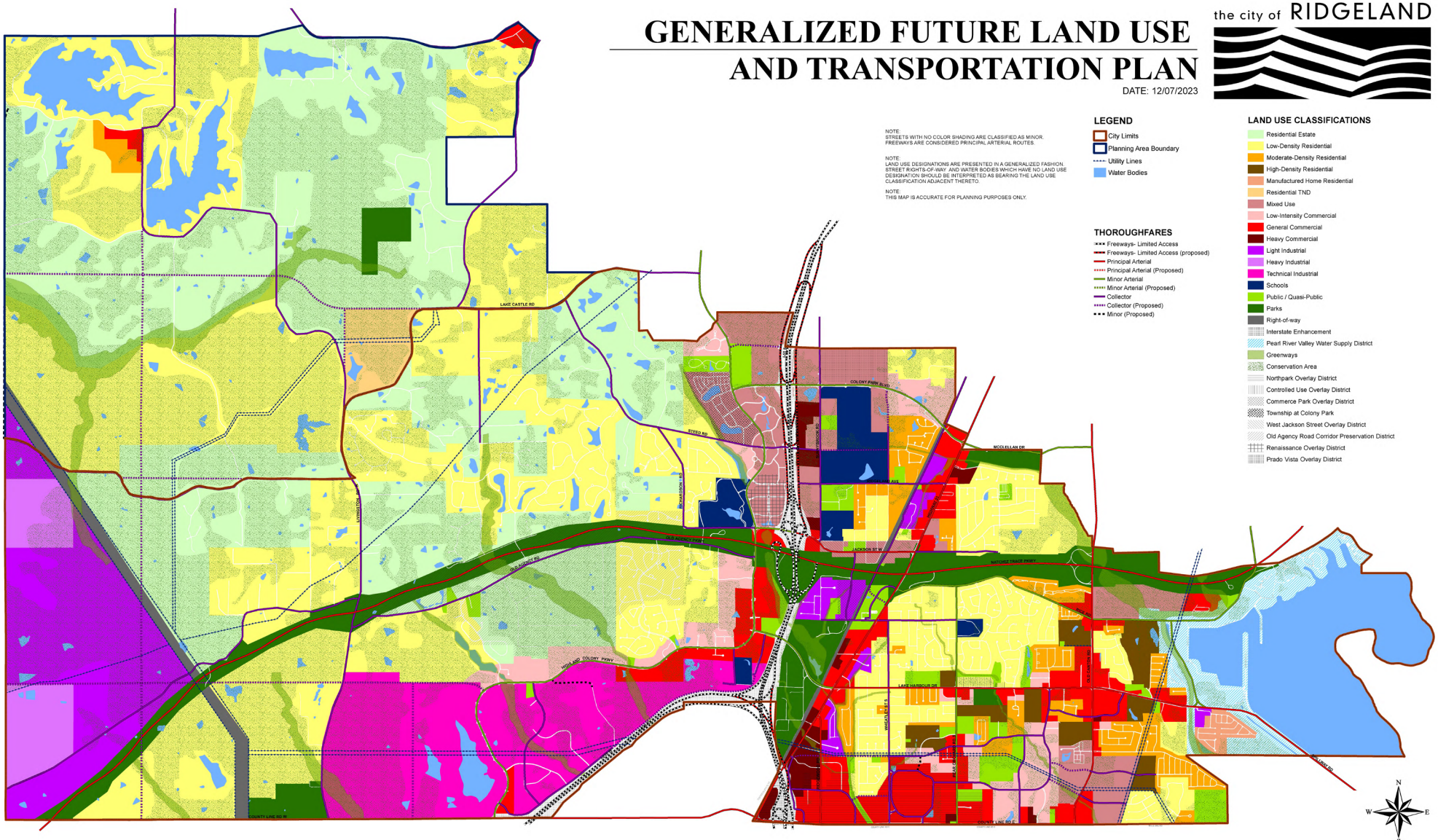
Project Name	Type of Project	Location
AWS Data Center Expansion	Industrial	Highland Colony Parkway
Dave and Busters	Commercial	Colony Park Blvd
Dolce Hotel	Commercial	Sunnybrook Road
Madison County Conference Center	Institutional	Sunnybrook Road

Highland Colony Parkway Tank and Well	Water Infrastructure	Highland Colony Parkway
Colony Park Blvd Tank and Well	Water Infrastructure	Colony Park Blvd
South Livingston Tank and Well	Water Infrastructure	Livingston Rd
Hardy Road Tank	Water Infrastructure	Hardy Rd
West County Line Road Well	Water Infrastructure	West County Line Road
Highland Commerce Drive	Street Infrastructure	Highland Commerce Drive

GENERALIZED FUTURE LAND USE AND TRANSPORTATION PLAN

DATE: 12/07/2023

the city of RIDGELAND



NOTE:
STREETS WITH NO COLOR SHADING ARE CLASSIFIED AS MINOR. FREEWAYS ARE CONSIDERED PRINCIPAL ARTERIAL ROUTES.

NOTE:
LAND USE DESIGNATIONS ARE PRESENTED IN A GENERALIZED FASHION. STREET RIGHTS-OF-WAY AND WATER BODIES WHICH HAVE NO LAND USE DESIGNATION SHOULD BE INTERPRETED AS BEARING THE LAND USE CLASSIFICATION ADJACENT THERETO.

NOTE:
THIS MAP IS ACCURATE FOR PLANNING PURPOSES ONLY.

LEGEND

- City Limits
- Planning Area Boundary
- Utility Lines
- Water Bodies

THOROUGHFARES

- Freeways- Limited Access
- Freeways- Limited Access (proposed)
- Principal Arterial
- Principal Arterial (Proposed)
- Minor Arterial
- Minor Arterial (Proposed)
- Collector
- Collector (Proposed)
- Minor (Proposed)

LAND USE CLASSIFICATIONS

- Residential Estate
- Low-Density Residential
- Moderate-Density Residential
- High-Density Residential
- Manufactured Home Residential
- Residential TND
- Mixed Use
- Low-Intensity Commercial
- General Commercial
- Heavy Commercial
- Light Industrial
- Heavy Industrial
- Technical Industrial
- Schools
- Public / Quasi-Public
- Parks
- Right-of-way
- Interstate Enhancement
- Pearl River Valley Water Supply District
- Greenways
- Conservation Area
- Northpark Overlay District
- Controlled Use Overlay District
- Commerce Park Overlay District
- Township at Colony Park
- West Jackson Street Overlay District
- Old Agency Road Corridor Preservation District
- Renaissance Overlay District
- Prado Vista Overlay District

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the city of RIDGELAND

OFFICIAL ZONING MAP

DATE: 07/20/2021

THIS IS TO CERTIFY THAT THIS IS THE OFFICIAL ZONING MAP OF THE CITY OF RIDGELAND, AS ADOPTED BY THE MAYOR AND BOARD OF ALDERMAN ON FEBRUARY 4, 2014.

GENE F. McGEE, MAYOR

ATTEST:

PAULA TIERCE, CITY CLERK

ZONING CLASSIFICATIONS

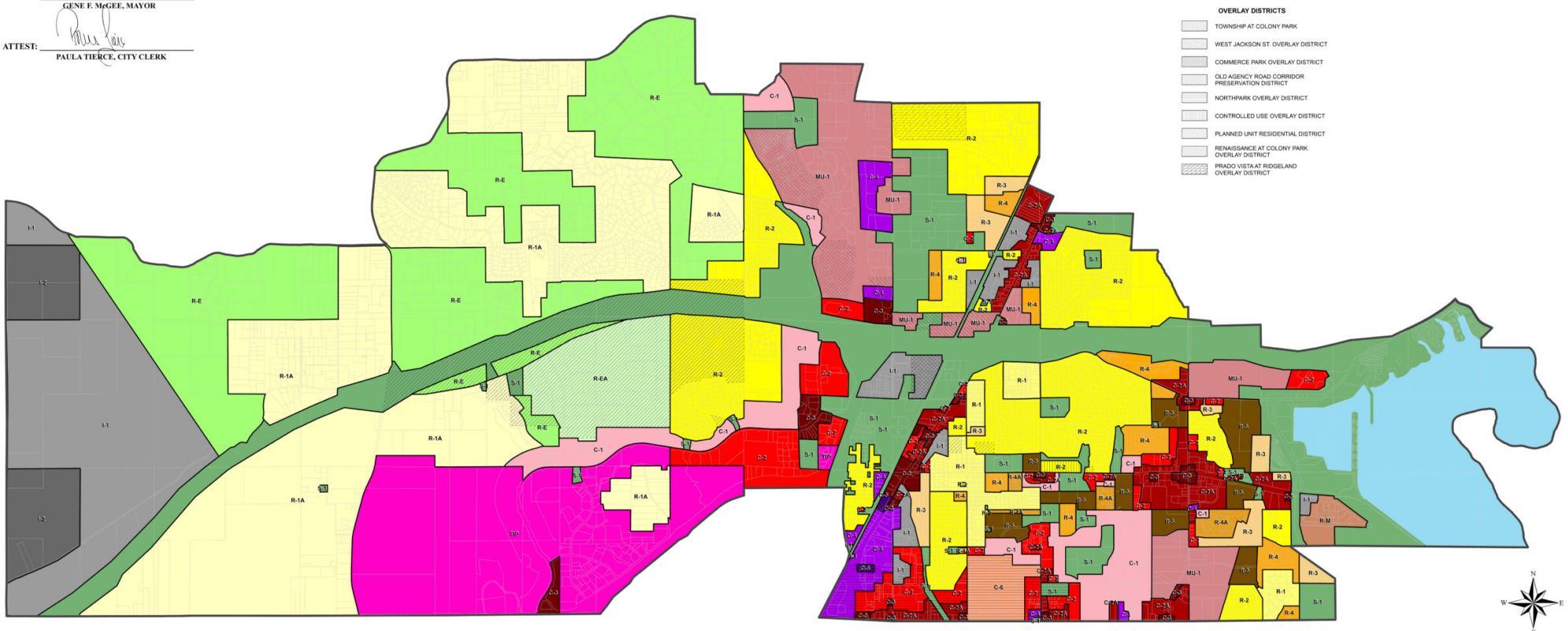
A-1	AGRICULTURAL DISTRICT
R-EA	RESIDENTIAL ESTATE DISTRICT
RE	RESIDENTIAL ESTATE DISTRICT
R-1A	SINGLE FAMILY RESIDENTIAL DISTRICT
R-1	SINGLE FAMILY RESIDENTIAL DISTRICT
R-2	SINGLE FAMILY RESIDENTIAL DISTRICT
R-3	SINGLE FAMILY RESIDENTIAL DISTRICT
R-4	ZERO LOT LINE RESIDENTIAL DISTRICT
R-4A	TOWNHOUSE RESIDENTIAL DISTRICT
R-5	MULTI-FAMILY RESIDENTIAL DISTRICT
R-M	MOBILE HOME PARK RESIDENTIAL DISTRICT
S-1	SPECIAL USE DISTRICT
GW-1	GREENWAY DISTRICT
MU-1	MIXED USE DISTRICT
C-1	LOW INTENSITY COMMERCIAL DISTRICT
C-2	GENERAL COMMERCIAL DISTRICT
C-2A	GENERAL COMMERCIAL DISTRICT
C-3	CONVENIENCE COMMERCIAL DISTRICT
C-4	HIGHWAY COMMERCIAL DISTRICT
C-5	HIGH INTENSITY COMMERCIAL DISTRICT
C-6	REGIONAL SHOPPING MALL DISTRICT
I-1	LIMITED INDUSTRIAL DISTRICT
I-2	HEAVY INDUSTRIAL DISTRICT
TIP	TECHNICAL INDUSTRIAL PARK DISTRICT

OVERLAY DISTRICTS

- TOWNSHIP AT COLONY PARK
- WEST JACKSON ST. OVERLAY DISTRICT
- COMMERCE PARK OVERLAY DISTRICT
- OLD AGENCY ROAD CORRIDOR PRESERVATION DISTRICT
- NORTHPARK OVERLAY DISTRICT
- CONTROLLED USE OVERLAY DISTRICT
- PLANNED UNIT RESIDENTIAL DISTRICT
- RENAISSANCE AT COLONY PARK OVERLAY DISTRICT
- PRADO VISTA AT RIDGELAND OVERLAY DISTRICT

AMENDMENTS

ORDINANCE NUMBER	DATE	DISTRICT FROM	CHANGE TO	MAYOR	CLERK
2022-6	5/3/2022	C-1	MU-1	GM	
2022-14	10/4/2022	C-2	C-3	GM	
2023-5	4/18/2023	-	Overlay	GM	
2023-10	11/7/2023	MU-1/C-3 /R-1A	TIP	GM	



Review and Incorporation of Existing Plans

There are a number of regulatory and planning mechanisms in place in the City of Ridgeland which support hazard mitigation planning efforts. These tools include items such as the 2023 State of Mississippi Standard Hazard Mitigation Plan, a local Hazard Mitigation Plan, a Floodplain Management Ordinance, Comprehensive Plan, Zoning Ordinance, Building Codes, Subdivision Regulations, and many other regulatory policies. These mechanisms were discussed at Mitigation Council meetings and are described in Section 5. Each of these existing mechanisms enhance the city's ability to implement a comprehensive mitigation strategy. Therefore, existing regulatory and planning mechanisms were reviewed and incorporated into the development of this document as appropriate, including identifying mitigation actions which enhance existing policies. An example of how existing mechanisms were incorporated into this plan includes but is not limited to the following examples:

State of Mississippi Standard Hazard Mitigation Plan
The Mississippi Emergency Management Agency prepared the 2023 Statewide Hazard Mitigation Plan, which was an update to a previously developed plan. This Plan was thoroughly reviewed for the purpose of ensuring consistency with the development of this plan. For instance, the state incorporated a new methodology to determine the risk level the state faces from each identified hazard. Therefore, for consistency purposes the same methodology was used in the development of this plan, Section 4.

Jurisdictional Hazard Mitigation Plans
The following plans were reviewed for information relevant to the city.

Ridgeland Hazard Mitigation Plan Update, 2021
Madison County Mitigation Plan Update, 2022
District 5 Regional Hazard Mitigation Plan, 2015

Risk Assessment

The City of Ridgeland is vulnerable to a wide array of natural hazards that threaten the health, safety and welfare of the city's residents. This section of the plan provides a description of the type, location and extent of all-natural hazards that can impact Ridgeland. Each hazard identified includes a description of the type of hazard, the area that can be affected by the potential hazard, and an analysis of the impact the hazard may have on the area. The assessment conducted in this section is based upon previous occurrences of natural hazards, research material reviewed, and a risk assessment completed by the Mitigation Council.

Hazard Identification

To begin the risk assessment process, the Mitigation Council reviewed a number of sources to develop a list of potential hazards affecting the City of Ridgeland. The potential hazards were identified through a process that considered input from the Mitigation Council, research of previous events, a review of existing Hazard Mitigation Plans, as well as the 2023 State of Mississippi Standard Hazard Mitigation Plan Update, and a range of hazards included in FEMA planning guidance. Through the review process the Mitigation Council identified ten (10) potential natural hazards impacting the City of Ridgeland. Table 4.1 summarizes the full range of potential hazards examined during the hazard identification process. Some hazards such as coastal erosion were automatically eliminated as a potential hazard due to the geographical location of Ridgeland. Table 4.2 provides a listing of recent Major Disaster Declarations which have included Madison County and the City of Ridgeland.

Table 4.1 **Evaluations of Potential Hazards**

Potential Hazard	Potential in Ridgeland?	How was this determination made?
Dam / Levee Failure	**Yes**	○ Review of the State Mitigation Plan revealed there are over 3,000 dams in the state with over 300 of them rated as a high or significant hazard dam. ○ The Mitigation Council identified over 50 dams within Central Mississippi including some in Madison County following an initial review of the MS Dept. of Environmental Quality (MDEQ) inventory of MS Dams.
Drought	**Yes**	○ Review of Existing Mitigation Plan identified drought as a potential risk. ○ Review of the State Mitigation Plan revealed the state identifies drought as a non-location specific hazard and all areas of Mississippi are vulnerable to drought.
Earthquake	**Yes**	○ Review of existing Mitigation Plan identified an earthquake as a potential risk. ○ Review of the State Mitigation Plan revealed Mississippi is not only at risk to an earthquake originating in Mississippi but to those originating in surrounding states as well. ○ Identified proximity to the New Madrid Seismic Zone as a concern.
Expansive Soils	**Yes**	○ Review of existing Mitigation Plan revealed expansive soils as a potential risk. ○ Review of the State Mitigation Plan revealed expansive soils do not typically cause a statewide impact and is mitigated at the local level. ○ The Mitigation Council identified potential risk areas by reviewing USGS soil maps that identified abundant clay areas in Central Mississippi having high swelling potential. ○ The Mitigation Council acknowledged little to no documented history of previous occurrences causing damage is readily available.
Flooding	**Yes**	○ Review of existing Mitigation Plan revealed flooding has been identified as a potential risk. ○ The Mitigation Council identified multiple repetitive loss properties in Ridgeland.
Tropical Storms	**Yes**	○ Review of existing Mitigation Plan identified tropical storms as a potential risk. ○ According to the State Mitigation Plan, the Gulf Coast of Mississippi is located in a high-hazard area for hurricanes and storm surge. However, hurricane effects have also impacted, with less severity, the medium to low risk counties located further inland, which includes areas in Madison County.

Potential Hazard	Potential in Ridgeland?	How was this determination made?
Severe Storms (high wind, hail, and lightning)	**Yes**	○ Review of existing Mitigation Plan revealed severe storms as a potential risk. ○ According to the State Mitigation Plan, severe storms can occur at any time in Mississippi given the right atmospheric conditions. ○ Historical records indicate the entire state is vulnerable to severe thunderstorms
Tornado	**Yes**	○ Review of existing Mitigation Plan revealed tornadoes as a potential risk. ○ According to FEMA's map of Wind Zones in the United States, Central Mississippi is located in the highest risk area for tornadoes.
Wildfire	**Yes**	○ Review of existing Mitigation Plans revealed wildfires as a potential risk. ○ According to the MS Forestry Commission (MFC), Mississippi suppressed 1,702 wildfires in 2025 burning more than 43,000 acres.
Winter Storms	**Yes**	○ Review of existing Mitigation Plan revealed winter storms as a potential risk. ○ Since 2017, the National Weather Service has recorded 8 winter weather related events in Madison County.
Avalanche	**No**	○ Recognized by FEMA as a hazard prone to the United States but poses no threat to Mississippi.
Coastal Erosion	**No**	○ Recognized as a hazard for coastal areas, but poses no threat to Madison County due to its geographical location
Landslide	**No**	○ Recognized by FEMA as a hazard prone to the United States, but poses no threat to Mississippi.
Tsunami	**No**	○ Recognized by FEMA as a hazard, but poses no threat due to Madison County's geographical location
Volcano	**No**	○ Recognized by FEMA as a hazard prone to the United States but poses no active threat to Mississippi.

Table 4.2 **Major Disaster Declarations – Madison County**

Date	Description
February 6, 2026	Severe Winter Storm (DR-4899-MS)
June 10, 2024	Severe Storms, Straight-line Winds, Tornados, and Flooding (DR-4790-MS)
August 12, 2023	Severe Storms, Straight-line Winds, and Tornados (DR-4727-MS)
October 22, 2021	Hurricane Ida (DR-4626-MS)
April 5, 2020	Covid-19 Pandemic (DR-4528-MS)
May 12, 2014	Severe Storms, Tornadoes, and Flooding (DR-4175)

Natural Hazard Profiles

Hazard profiles look at the impact, historical occurrences, and the probability of future occurrences for each hazard identified through the hazard identification process. Developing a hazard profile for each natural hazard allows the Mitigation Council and other users of this Hazard Mitigation Plan to look at the unique characteristics of each individual hazard and determine which areas in the City of Ridgeland are vulnerable to a specific hazard.

Dam/Levee Failure

Description

A Dam is a barrier that impounds water or underground streams. Dams generally serve the primary purpose of retaining water, while other structures such as floodgates or levees are used to manage or prevent water flow into specific areas. Dam failure is the collapse, breach or other failure of a dam structure that results in an uncontrolled release of impounded water causing downstream flooding. Dam failures due to natural events such as prolonged periods of rainfall and flooding can result in overtopping. Human-induced failures may be attributed to improper design, improper maintenance, or negligent operation and typically include inadequate spillway capacity resulting in overtopping, or internal erosion caused by embankment or foundation leakage. The Mississippi Department of Environmental Quality (MDEQ) is responsible for protecting the state's water resources, which includes monitoring the state's 3,000 plus dams.

According to the U.S. Army Corps of Engineers levees are defined as follows:

Levee – a man-made structure, usually an earthen embankment or concrete floodwall, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water to provide reasonable assurance of excluding temporary flooding from the leveed area.

Levee System – one or more levee segments and other features such as floodwalls and pump stations, which are interconnected and necessary to ensure exclusion of the design flood from the associated leveed area.

Leveed Area – the lands from which flood water is excluded by the levee system.

Levees are designed to reduce the risk of flooding. However, no levee system can eliminate all flood risk. A levee is generally designed to control a certain amount of floodwater. If a larger flood occurs than what it is designed to hold, floodwaters will flow over the levee. Flooding also can damage levees, allowing floodwater to flow through an opening or breach.

Location and Extent

According to MDEQ there are multiple dams located in the City of Ridgeland and two (2) levee systems south of the City. MDEQ ranks dams by hazard classification, which is determined by the potential for loss of life, as well as infrastructure and property damages downstream if a dam failure were to occur.

The three hazard classifications used by the MDEQ's Dam Safety Division include:

- **High Hazard** – Dam failure may cause loss of life, serious damage to homes, industrial or commercial buildings, important public utilities, main highways or railroads.
- **Significant Hazard** – Dam failure may cause significant damage to main roads, minor railroads, or cause interruption of use or service of relatively important public utilities.
- **Low Hazard** – Dam failure may cause damage to farm buildings (excluding residences), agricultural land, or county or minor roads.

MDEQ has identified seven (7) low hazard dams and one (1) high hazard dams near the City of Ridgeland. Map 4.1 depicts the locations of dams and levees near the city.

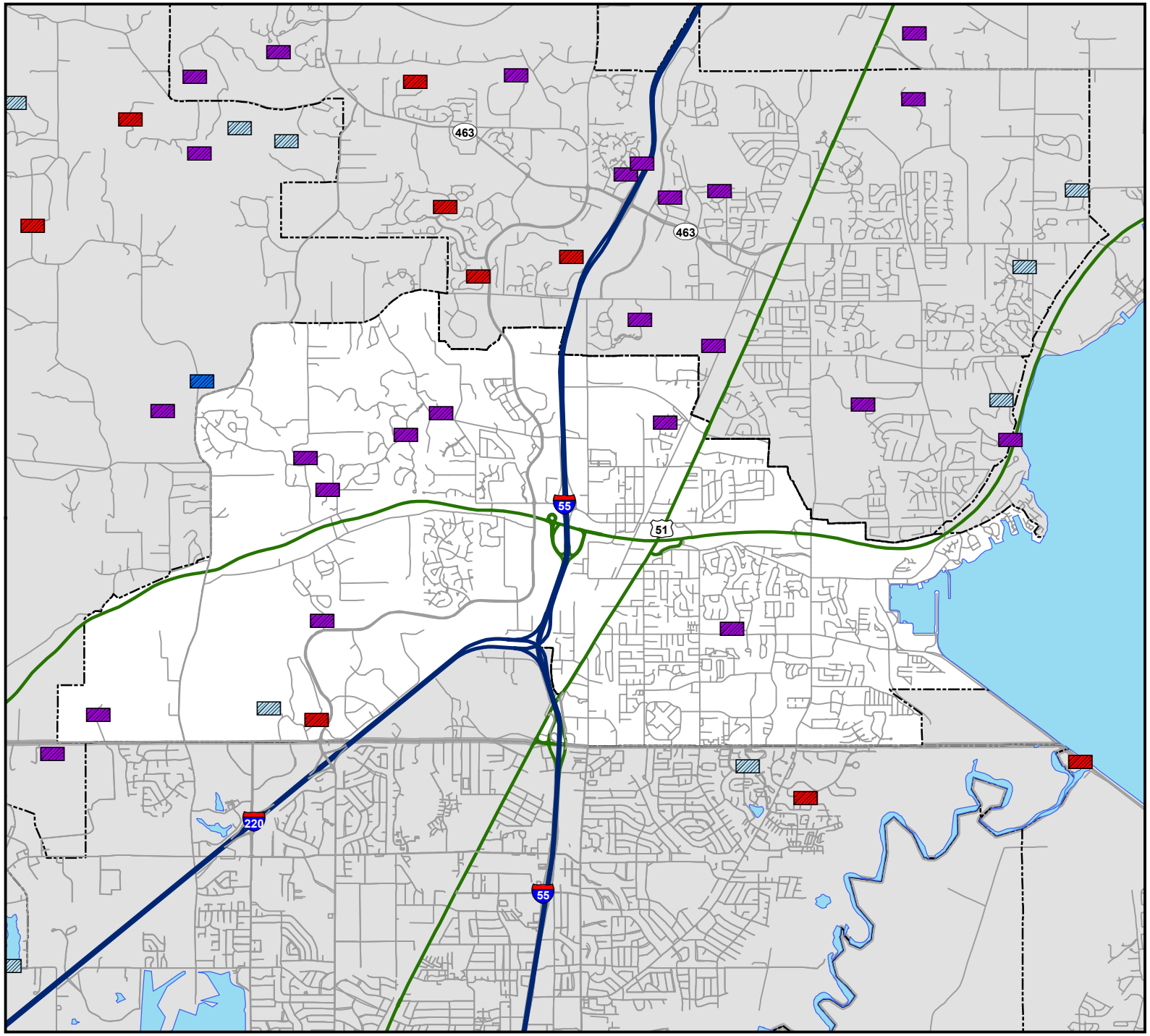
Table 4.3 **Dams**

	Number of Dams			
Jurisdiction	**High Hazard**	**Significant Hazard**	**Low Hazard**	**Total Dams**
Ridgeland	1	0	7	8
Source: MDEQ				

Table 4.4 **Levee Systems**

System Name	**Counties Protected**	**Length (miles)**	**Leveed Area Acreage**	**Leveed Area Type**
Jackson Fairgrounds MS	2	2.1	534.59	Urban
East Jackson MS	2	11.45	8,370.31	Urban
Source: U.S. Corps of Engineers				

Dam Hazard Data for the City of Ridgeland, MS



Mississippi Department of Environmental Quality Hazard Class:

- High Hazard
- Significant Hazard
- Low Hazard
- Unclassified
- Further Investigation Needed
- Breached
- Municipalities
- Interstates
- Major Highways
- Major Local Roads

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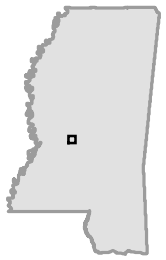
Prepared by

CMPDD

PROMOTING REGIONAL EXCELLENCE SINCE 1968

Central Mississippi Planning & Development District



High Hazard Dams

Costas Lake

Costas Lake is a private lake constructed in 1950 primarily as a recreational facility. The lake includes an estimated storage of 663 acre-feet. Water levels in the lake are regulated manually with a gate valve on the outlet pipe. Water leaving the outlet flows through a tributary of LaRue Creek. Based upon inundation maps developed as part of the Lake's Emergency Action Plan, portions of Ridgeland as well as developments further downstream in the City of Jackson are in the immediate path of potential floodwaters if a dam failure or a large operational release occurs. Streets in the potential path of inundation include:

Highland Colony Parkway	at Cole Road	Culley Drive	50-300
Cole Road	6300 – 6400	Chatham Circle	All
West County Line Road	2350 – 2150	Mimosa Drive	All
Windward Road	All	Crepe Myrtle Drive	All
Woodstock Drive	All	Crepe Myrtle Court	All
Winthrop Circle	All	Barnes Street	100-400
Whitestone Road	6100 – 6400	Cedars of Lebanon Drive	100-300
Woodacre Road	All	Grafton Street	All
Begonia Court	All	Manhattan Road	5250-5300
Morning Glory Court	All	Barbara Street	300-350
Orchid Court	All	Francis Street	300-350
Floral Drive	All	Serville Drive	All
Northfield Drive	All	Ponce DeLeon Court	All
Quail Lake Drive	6000 – 6400	D'Iberville Court	All
Wimbledon Court	All	Bienville Court	All
Beasley Road	100 – 500	Bounds Street	400-500
North Commerce Plaza Drive	All	Woodway Drive	All
Fernwood Drive	100 – 150	Marquis Street	All
Briarwood Drive	100 – 200	Grove Loop	All

Previous Occurrences

While dam failures in Mississippi have caused damages in recent years, there is no record of any significant damages, fatalities or injuries associated with a dam or levee failure in the City of Ridgeland in recent years.

Probability of Future Occurrence

Provided that adequate engineering and maintenance measures are in place, complete failure of a dam or levee in the future is unlikely, meaning they are rare occurrences with an expected occurrence rate of once every 50-years or greater. However, a low possibility will always exist that a future failure may occur simply by their existence. The severity of a dam failure event depends on various aspects related to the size of the dam, the extent of the failure, the velocity of the floodwaters released, and the intensity of the downstream development. State regulations require owners of high hazard and significant hazard dams to have their dams inspected by a registered engineer at recurring intervals. In addition, all high hazard and some significant hazard dams are required by State regulations to have an approved Emergency Action Plan in place.

Drought

Description

Drought is defined by the National Weather Service as a deficiency in precipitation over an extended period, usually a season or more, resulting in a water shortage causing adverse impacts on vegetation, animals, and/or people. Droughts are normally accompanied by heat waves, which are periods of excessive heat often combined with excessive humidity and can result in human illnesses and even death as a result of exposure to heat. The severity of a drought depends upon the degree of moisture deficiency and the duration of the drought. Human factors such as water demand and water management can greatly change the impact of a drought on a region. There are four types of drought conditions:

Meteorological Drought is defined by a period of substantially diminished precipitation based on the degree of dryness (in comparison to some "normal" or average) and the duration of the dry period. The onset of a drought generally occurs with a meteorological drought.

Hydrological Drought is associated with periods of extended precipitation shortfalls that impact water supply (i.e., stream flow, reservoir and lake levels, and ground water).

Agricultural Drought occurs when there is a deficiency in the water supply that impacts crop production or livestock. Agricultural drought is defined in terms of soil moisture deficiencies relative to water demand of plant life, primarily crops.

Socio-economic Drought occurs when physical water shortages start to affect the health, well-being, and quality of life of people, or when drought starts to affect the supply and demand of an economic products.

Location and Extent

Droughts occur every year in the United States and can extend over long periods of time and large areas, including several States at once. According to the State of Mississippi Standard Mitigation Plan, all areas of Mississippi are vulnerable to drought; therefore, placing all of the City of Ridgeland in the risk area for drought conditions.

Determining the onset, end, and severity of a drought can be difficult due to multiple indicators that must be examined in order to explain drought conditions. The United States Drought Monitor describes drought conditions based on five key indicators that examine dryness levels. Table 4.5 explains the indicators used to determine the severity of a drought by the U.S. Drought Monitor and the possible impacts that may occur.

Table 4.5 **Drought Severity Classifications**

Category	Description	Possible Impacts	Ranges				
			Palmer Drought Index	CPC Soil Moisture Model (Percentiles)	USGS Weekly Stream flow (Percentiles)	Standardized Precipitation Index	Objective Short and Long-term Drought Indicator Blends (Percentiles)
D0	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered.	-1.0 to -1.9	21-30	21-30	-0.5 to -0.7	21-30
D1	Moderate Drought	Some damage to crops, pastures; streams, reservoirs, or wells low, some water shortages developing or imminent, voluntary water use restrictions requested	-2.0 to -2.9	11-20	11-20	-0.8 to -1.2	11-20
D2	Severe Drought	Crop or pasture losses likely; water shortages common; water restrictions imposed	-3.0 to -3.9	6-10	6-10	-1.3 to -1.5	6-10
D3	Extreme Drought	Major crop/pasture losses; widespread water shortages or restrictions	-4.0 to -4.9	3-5	3-5	-1.6 to -1.9	3-5
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses; shortages of water in reservoirs, streams, and wells, creating water emergencies	-5.0 or less	0-2	0-2	-2.0 or less	0-2

Source: U.S. Drought Monitor

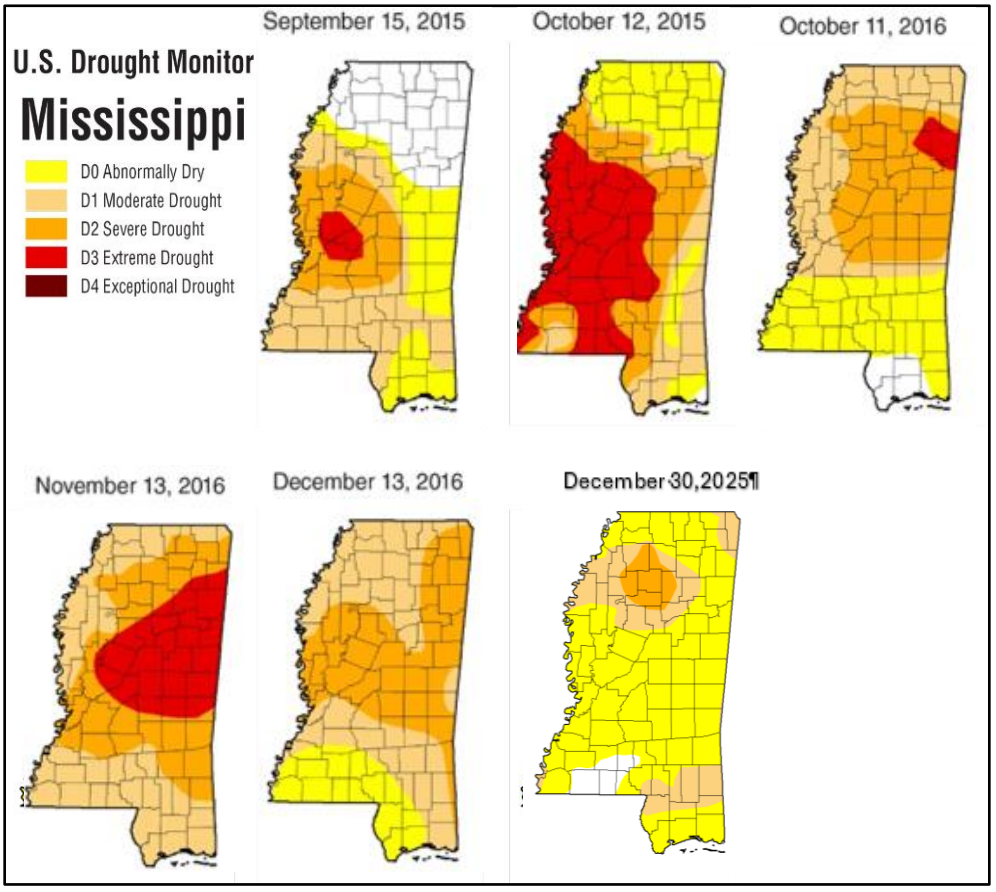
Previous Occurrences

According to the National Climatic Data Center, eight (8) prolonged drought periods occurred in Central Mississippi since 2016, as listed in Table 4.6. Most recently a drought occurred in 2023 which was preceded by drought conditions in 2016. Each event lasted several months and resulted in multiple record heat days. Some of the worst drought conditions in the City of Ridgeland occurred September through November 2023 when drought conditions reached a D4, exceptional drought rating and significant amounts of crop and property damages were reported.

Table 4.6 **Madison County Drought Conditions 2016 – 2025**

Date	Hazard	Number of Persons		Magnitude	Estimated Property Damage	
		Killed	Injured		Property*	Crop*
11/01/2023	Drought	0	0	D4	0.00K	7.5M
10/01/2023	Drought	0	0	D4	0.00K	0.00K
09/01/2023	Drought	0	0	D1-D4	0.00K	0.00K
12/01/2016	Drought	0	0	D2	0.00K	50.00K
11/01/2016	Drought	0	0	D2-D3	50.00K	0.00K
10/11/2016	Drought	0	0	D2-D3	0.00K	40.00K
08/01/2016	Drought	0	0	D2	0.00K	30.00K
07/26/2016	Drought	0	0	D2	30.00K	0.00K -

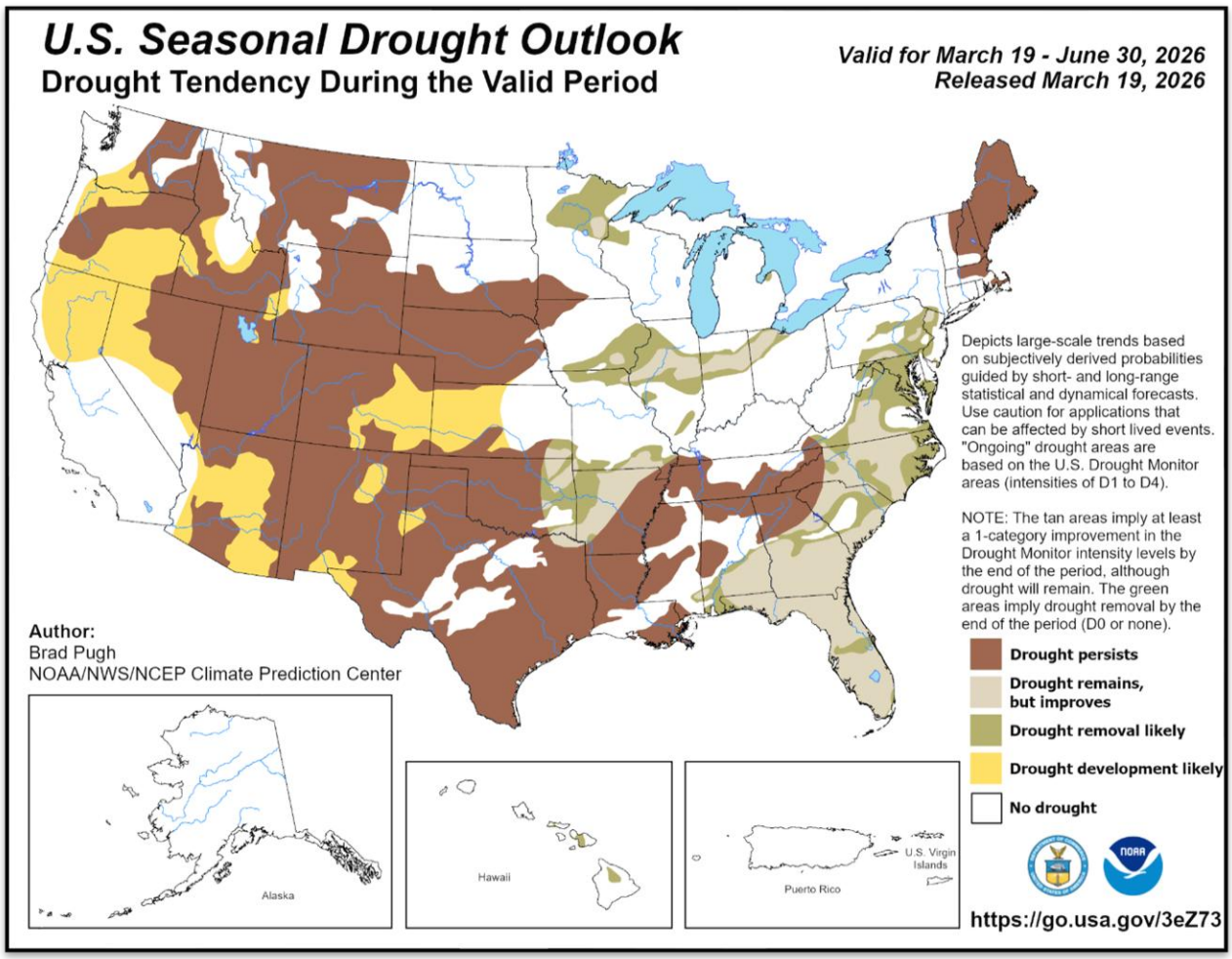
Source: National Climatic Data Center
*includes damage estimated for Central MS



Probability of Future Occurrence

Predicting future drought conditions is difficult due to the number of variables that must be examined and the limited ability to accurately forecast precipitation and temperature months in advance. Historically, abnormalities of precipitation and temperatures have lasted from a time period as short as a few days to several months or even decades. Therefore, scientists can't predict drought conditions a month or more in advance. However, a number of steps are in place nationally to consistently monitor potential drought conditions such as the U.S. Drought Monitor and the National Drought Mitigation Center at the University of Nebraska-Lincoln.

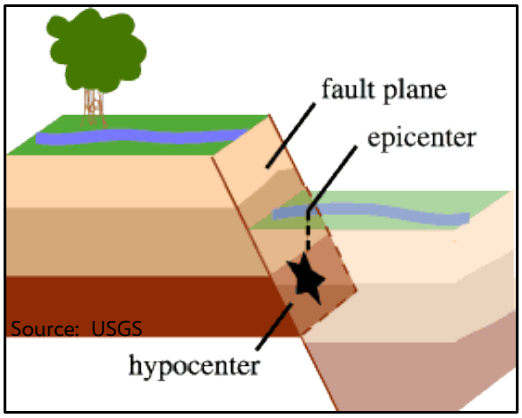
It is anticipated that the City of Ridgeland will continue to experience direct and indirect impacts of drought and extreme heat periodically, dependent largely upon the amount of deficiency in precipitation over an extended period of time.



Earthquake

Description

FEMA describes an earthquake as ground shaking caused by a sudden movement of rock in the Earth's crust. Such movements occur along faults, which are thin zones of crushed rock separating blocks of crust. When one block suddenly slips and moves relative to the other along a fault, the energy released creates vibrations called seismic waves that radiate up through the crust to the Earth's surface, causing the ground to shake.



Earthquakes may last only a few seconds or up to several minutes. They can occur at any time of the day or night throughout the year. They are caused by stress that builds up over time as blocks of crust attempt to move but are held in place by friction along a fault. When the pressure to move becomes stronger than the friction holding them together, adjoining blocks of crust can suddenly slip, rupturing the fault and creating an earthquake. The underground point of initial rupture is known as an earthquake's focus or hypocenter, and the point at ground level directly above the hypocenter is known as its epicenter. Generally, the severity of the resulting ground motion increases with the amount of energy released and decreases with distance from the epicenter.

Location and Extent

According to the United States Geological Survey (USGS), all states have some potential for earthquakes, and 42 of the 50 states have a reasonable chance of experiencing damaging ground shaking from an earthquake in 50 years (the typical lifespan of a building). While Mississippi is not recognized as one of the 16 states with a relatively high likelihood of experiencing damaging ground shaking it is still at risk, due largely to the State's close proximity to the New Madrid Seismic Zone, the southern end of which is 40 miles from the northwest corner of Mississippi. Seismic hazard maps depict the ground shaking that is expected to be exceeded at a selected probability (or chance) over a specific time period. Estimates of this "probabilistic" ground shaking at any location must include the possible shaking from all likely earthquakes and the types of rocks and soil in the region. The USGS updated the National Seismic Hazard Maps in 2023, which succeeds maps previously produced. New seismic, geologic, and geodetic information on earthquake rates and associated ground shaking were incorporated into the revised maps. The 2023 National Seismic Hazard Maps reflect the most current understanding of where future earthquakes will occur, how often they will occur, and how hard the ground will likely shake as a result.

A number of different scales have been developed to measure the magnitude and intensity of an earthquake. Magnitude and intensity measure different characteristics of earthquakes. The magnitude of an earthquake measures the energy released at the source of the earthquake usually by analyzing instrumental recordings of an earthquake using defined mathematical formulas. Magnitude scales that have been commonly used include the Richter Magnitude Scale and the Moment Magnitude Scale. Intensity scales measure the strength of shaking produced by the earthquake. Intensity is determined from effects on people, human structures, and the natural environment. The Modified Mercalli Intensity Scale is a common intensity scale used in the United States. The Modified Mercalli Scale is composed of 12 increasing levels of intensity that range from imperceptible shaking to catastrophic destruction and is designated by roman numerals. The lower numbers of the intensity scale generally deal with the way the earthquake is felt by people. The higher numbers of the scale are based on observed structural damage. Table 4.7 provides a comparison of the magnitude and intensity of an earthquake, and Table 4.8 provides a brief description of the impacts felt at the surface.

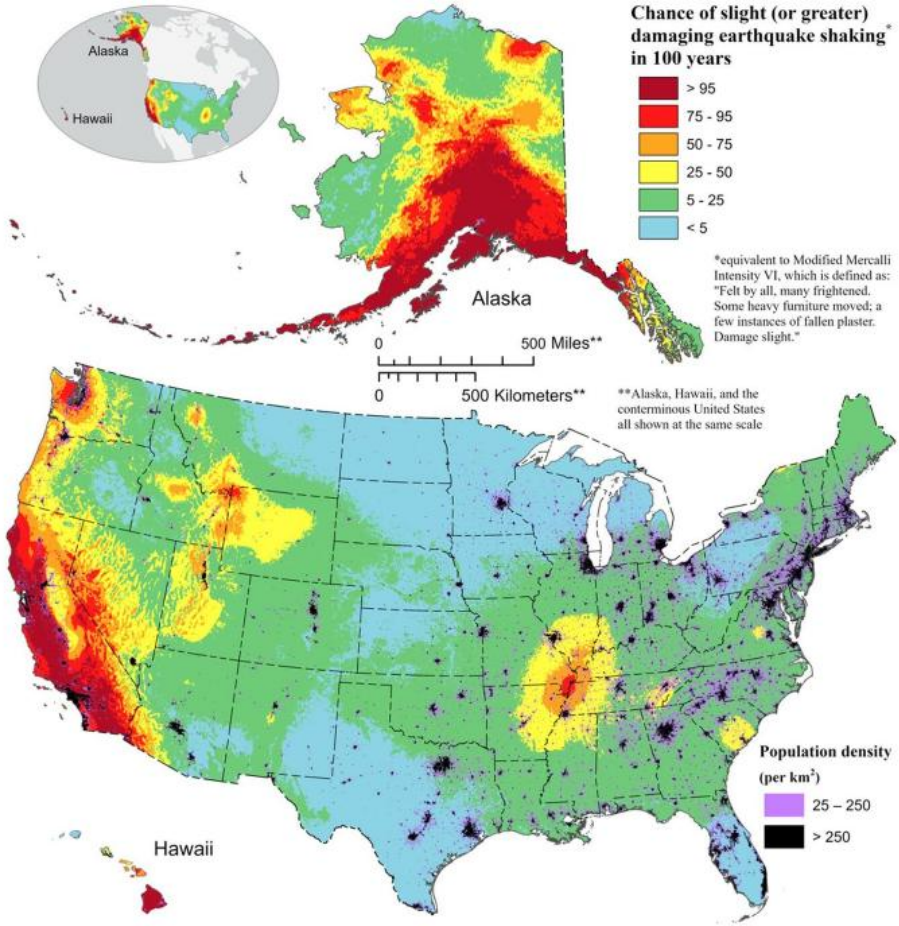


Table 4.7 **Comparison of Magnitude and Intensity**

Magnitude	Modified Mercalli Intensity
1.0 – 3.0	I
3.0 – 3.9	II – III
4.0 – 4.9	IV – V
5.0 – 5.9	VI – VII
6.0 – 6.9	VII – IX
7.0 and higher	VIII or Higher

Source: USGS

Table 4.8 **Modified Mercalli Intensity Scale Abbreviated Description**

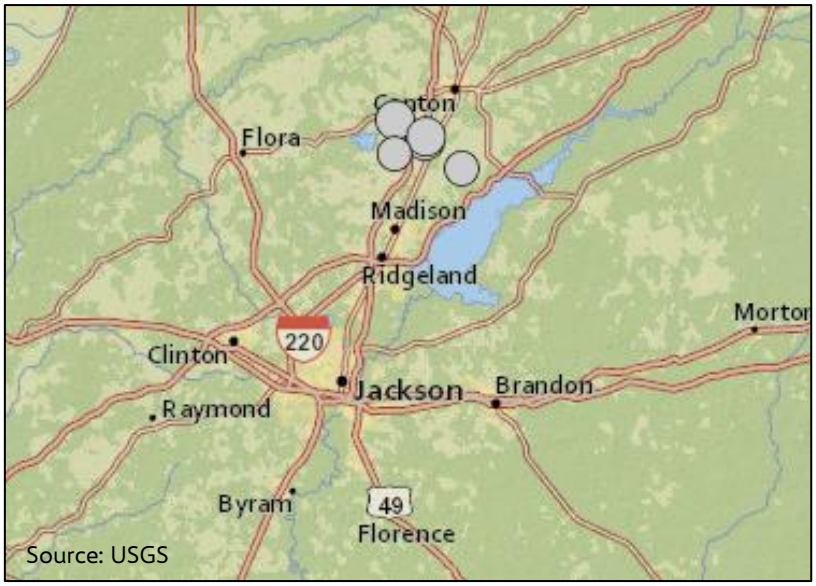
I.	Not felt except by a few under especially favorable conditions.
II.	Felt only by a few persons at rest, especially on upper floors of buildings.
III.	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV.	Felt indoors by many, outdoors by a few during the day. At night, some awakened. Dishes, windows, doors disturbed, walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V.	Felt by nearly everyone, many awakened. Some dishes and windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI.	Felt by all, many frightened. Some heavy furniture moved, a few instances of fallen plaster. Damage slight.
VII.	Damage negligible in buildings of good design and construction, slight to moderate in well-built ordinary structures, considerable damage in poorly built or badly designed structures, some chimneys broken.

VIII.	Damage slight in specially designed structures, considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls, and heavy furniture overturned.
IX.	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X.	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.
XI.	Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly.
XII.	Damage total lines of sight. Objects thrown into the air.

Source: USGS

Previous Occurrences

According to the MS Department of Environmental Quality, a small number of earthquakes of low magnitude have occurred throughout Mississippi over the years, and it is expected that earthquakes of low magnitude will continue to occur. However, none have occurred in the City of Ridgeland in recent years.

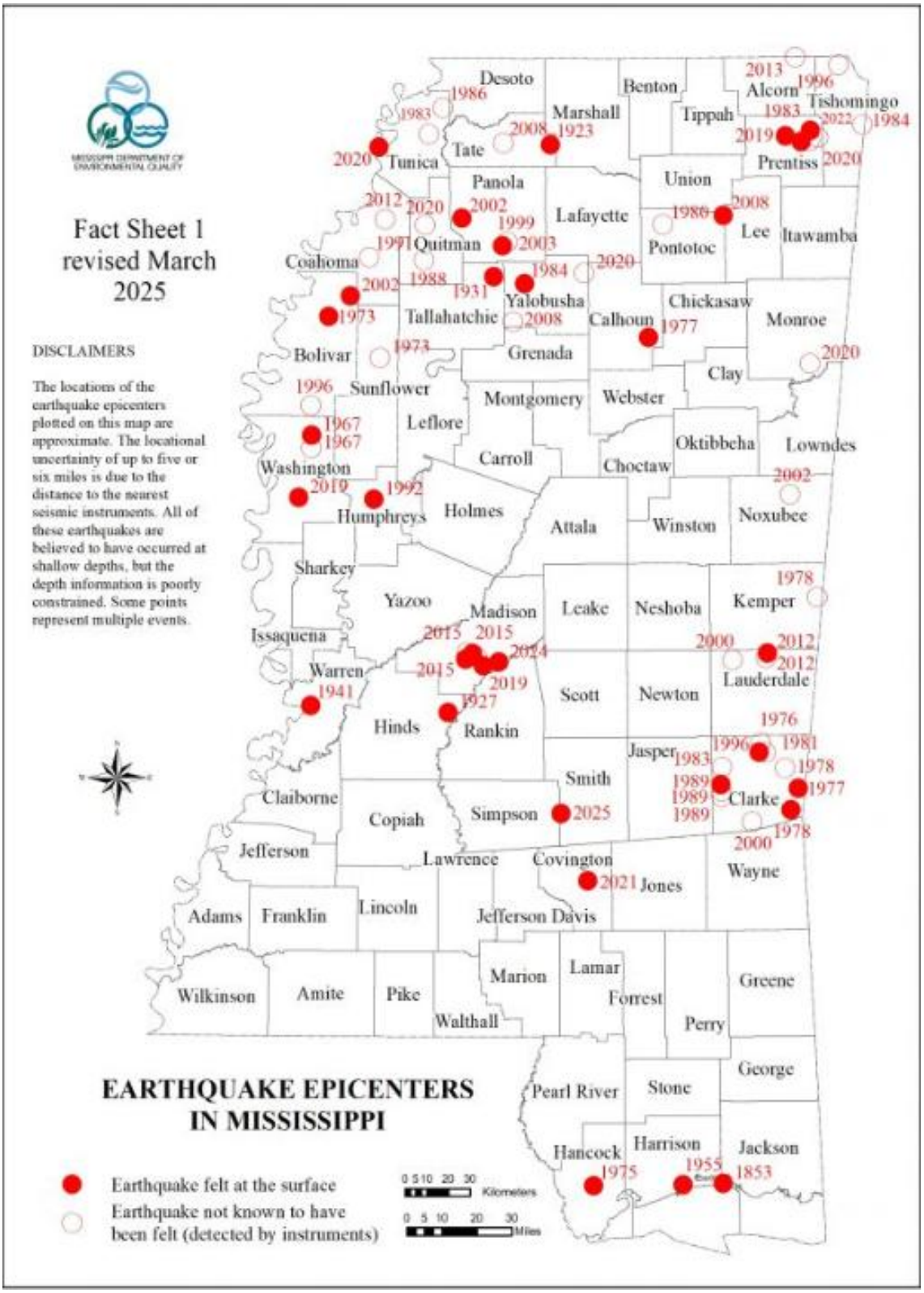


Some of the most noteworthy earthquakes that have impacted Mississippi have originated in neighboring or distant states. The great New Madrid, Missouri earthquake of 1811-1812 included at least four shocks strong enough to shake northern Mississippi at damaging intensities and was felt as far south as the Gulf Coast, including causing damage within Central Mississippi with the banks of the Mississippi River caving. Mississippi's most recent earthquake activity includes four (4) earthquakes in Madison County in 2015 and one (1) in 2019.

Table 4.9 **Recent Earthquakes**

Magnitude	Date	Location
2.8	August 9, 2019	9km South of Canton
2.6	August 17, 2015	5 miles north of Madison
3.2	June 29, 2015	6km SSW of Canton
3.2	May 2, 2015	6km SW of Canton
3.0	May 2, 2015	8km SW of Canton

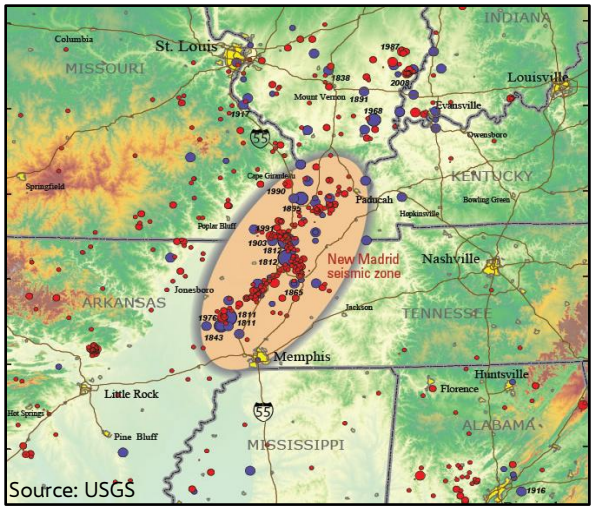
Source: USGS


Fact Sheet 1
revised March
2025
DISCLAIMERS
The locations of the earthquake epicenters plotted on this map are approximate. The locational uncertainty of up to five or six miles is due to the distance to the nearest seismic instruments. All of these earthquakes are believed to have occurred at shallow depths, but the depth information is poorly constrained. Some points represent multiple events.
EARTHQUAKE EPICENTERS
IN MISSISSIPPI
Earthquake felt at the surface
Earthquake not known to have been felt (detected by instruments)
Desoto
Benton
Alcorn
Tishomingo
Marshall
Tippah
Tunica
Tate
Prentiss
Panola
Union
Lafayette
Lee
Itawamba
Pontotoc
Coahoma
Quitman
Yalobusha
Chickasaw
Monroe
Tallahatchie
Calhoun
Bolivar
Grenada
Clay
Sunflower
Montgomery
Webster
Leflore
Oktibbeha
Lowndes
Carroll
Choctaw
Washington
Humphreys
Holmes
Attala
Winston
Noxubee
Sharkey
Yazoo
Madison
Leake
Neshoba
Kemper
Issaquena
Warren
Scott
Newton
Lauderdale
Hinds
Rankin
Jasper
Smith
Clarke
Claiborne
Copiah
Simpson
Jefferson
Lawrence
Covington
Wayne
Jones
Adams
Franklin
Lincoln
Jefferson Davis
Marion
Lamar
Greene
Wilkinson
Amite
Pike
Walthall
Forrest
Perry
George
Pearl River
Stone
Hancock
Harrison
Jackson
0 5 10 20 30
Kilometers
0 5 10 20 30
Miles

Probability of Future Occurrence

The greatest risk to Mississippi from earthquakes is from a strong earthquake in the New Madrid Seismic Zone, the southern end of which is 40 miles from the northwest corner of Mississippi. The New Madrid seismic zone is the most active area of the United States east of the Rockies with continuing small and moderate earthquakes recorded regularly. While it is impossible to predict when or where the next earthquake might occur, studying evidence from previous earthquakes, seismologists can estimate the average long-term frequency of large earthquakes and estimate the probability of future earthquakes.

New Madrid Seismic Zone

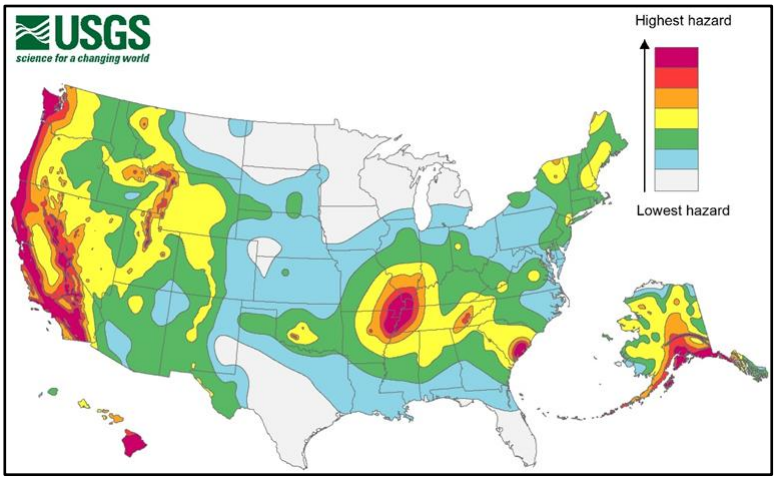


According to the USGS and the Center for Earthquake Research and Information at the University of Memphis, the chance of having an earthquake similar to one of the 1811-1812 sequence in the next 50 years is about 7 to 10 percent, and the chance of having a magnitude 6 or greater earthquake in 50 years is 25 to 40 percent.

Using USGS earthquake probability mapping tools the image below was produced for the City of Ridgeland. The USGS mapping tool uses a model to display the probabilities of earthquakes within a 50 km radius. The map produced places the City of Ridgeland outside of the risk zone.

Probability of a repeat of the 1811 – 1812 earthquakes

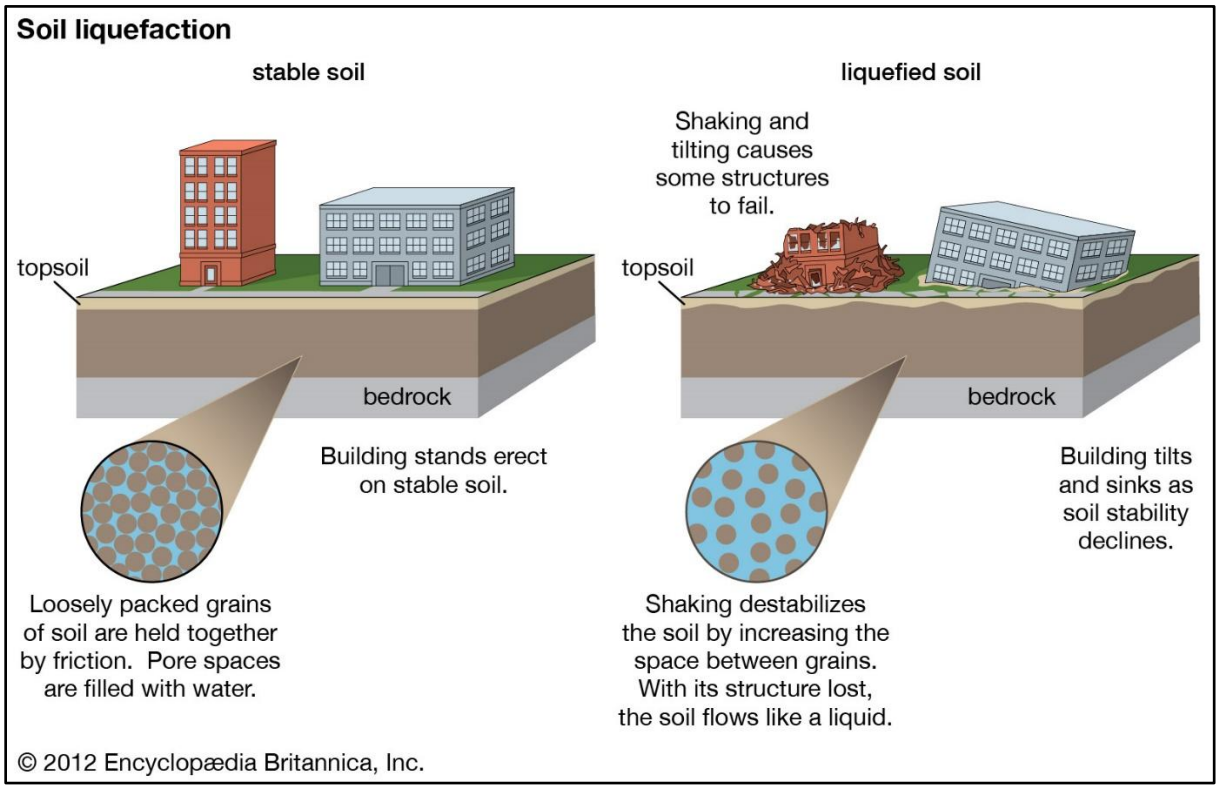
Magnitude 7.5 – 8.0 = 7 – 10%
Magnitude 6.0 or larger = 25 – 40%



USGS Earthquake Probability Map

Liquefaction

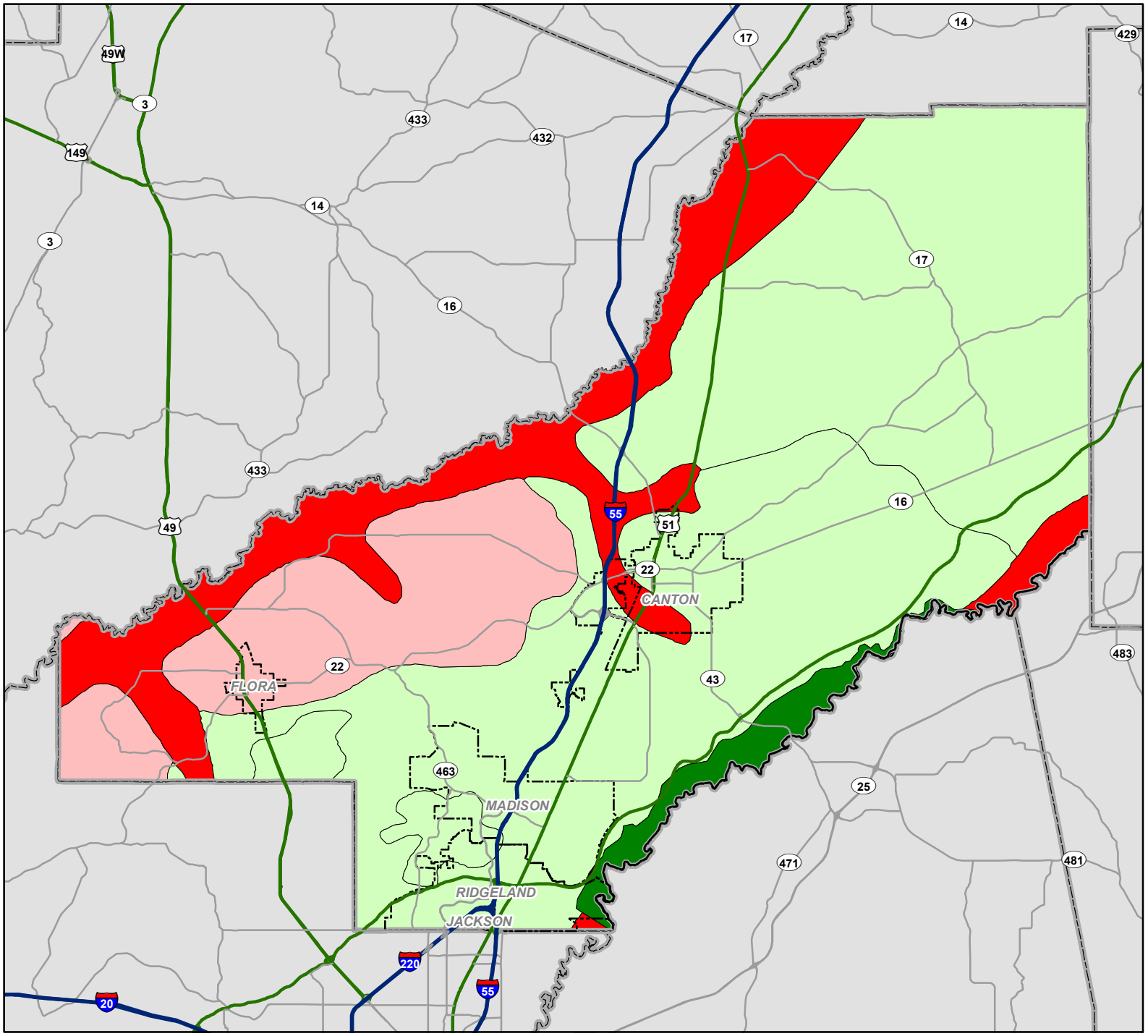
Liquefaction takes place when loosely packed, water-logged sediments at or near the ground surface lose their strength in response to strong ground shaking. Liquefaction occurring beneath buildings and other structures can cause major damage during earthquakes. Buildings constructed on loose soil pitch and tilt easily when liquefaction occurs, since the soil no longer supports the structures' foundations. In contrast, structures anchored to bedrock or stiff soils in earthquake-prone areas suffer less damage, because less vibration is transmitted through the foundation to the structure above. In addition, buildings anchored to bedrock have a reduced risk of pitching and tilting. Poorly drained fine-grained soils such as sandy, silty, and gravelly soils are the most susceptible to liquefaction.



Granular soils are made up of a mix of soil and pore spaces. When earthquake shock occurs in waterlogged soils, the water-filled pore spaces collapse, which decreases the overall volume of the soil. This process increases the water pressure between individual soil grains, and the grains can then move freely in the watery matrix. This substantially lowers the soil's resistance to shear stress and causes the mass of soil to take on the characteristics of a liquid. In its liquefied state, soil deforms easily, and heavy objects such as structures can be damaged from the sudden loss of support from below.

(Sources: USGS and Encyclopædia Britannica)

Liquefaction Susceptibility Data for Madison County, MS



Madison County, MS
Liquefaction Susceptibility

- None
- Very Low
- Low
- Moderate
- High
- Very High
- Interstates
- Major Highways
- Major Local Roads
- Municipalities
- County Boundaries

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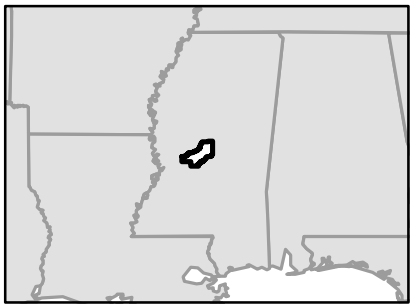


Expansive Soil

Description

Expansive soils or swelling soils, which are commonly known as Yazoo Clay throughout Central Mississippi, are comprised of bedrock that increases in volume as it gets wet and shrinks as it dries out. Soil grains in expansive soils are predominantly clay minerals that have the ability to absorb large quantities of water. As the individual clay minerals absorb water, they repel each other, and the soil expands. The amount of soil expansion is inversely proportional to the weight that a structure places on the soil. Therefore, heavy structures generally are less impacted by expansive soils than are lighter structures such as pavements and building slabs.

Location and Extent

The concentration level of expansive soils found across a state or even a community can vary significantly. According to soil maps produced by USGS, Central Mississippi is covered in high concentration areas of expansive soils. The expansive clay areas are concentrated in a northwest-southeast trending belt across nearly three-fourths the width of Central Mississippi. The surface outcrop belt ranges from 6 to 30 miles wide and covers portions of eleven counties: Yazoo, Holmes, Hinds, Madison, Rankin, Smith, Scott, Newton, Jasper, Clarke, and Wayne. Map 4.2 depicts the soil types in Mississippi. The Yazoo Clay area in Mississippi is formally identified by USGS as the Jackson Group. The City of Ridgeland is largely comprised of two (2) soil types, Forest Hill/Red Bluff and the highly expansive Jackson Group:

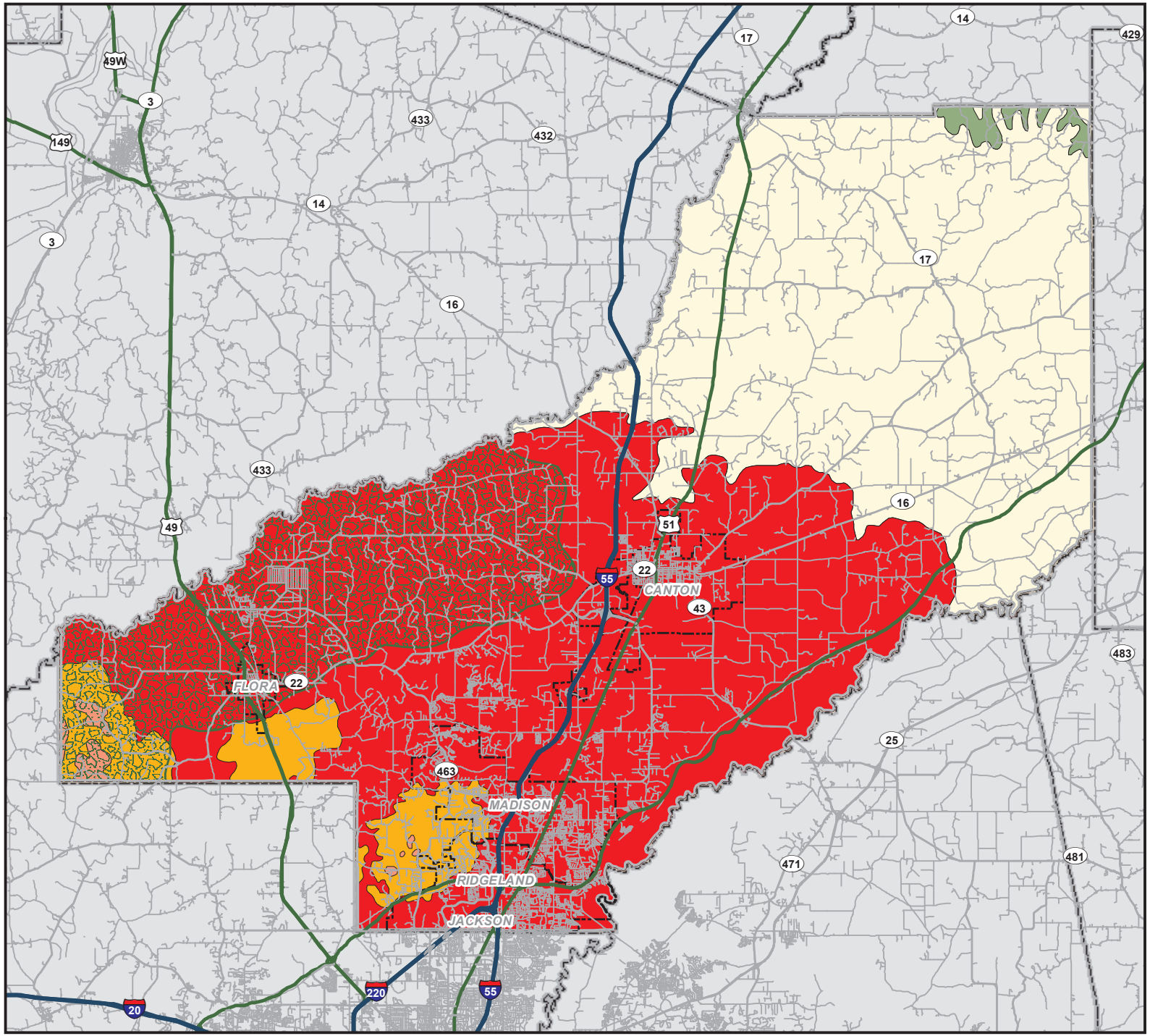
Forest Hill/Red Bluff Formation
Forest Hill sand, cross-bedded fine gray sand, laminated fine sand and clay, and a little lignite

Jackson Group
Yazoo clay, green and gray, calcareous clay containing some sand and marl; Moody's Branch formation at base, shells embedded in glauconitic clayey quartz sand

Occurrence of expansive soil hazards are expected to be limited throughout the City of Ridgeland. Impacts to life, health and safety are minimal for expansive soils. According to FEMA, the anticipated types of structural damage to buildings include: sticking doors; uneven floors, and cracked foundations, floors, walls, ceilings and windows. An accepted measure for determining the swelling potential of soil is the Expansion Index which provides an indication of swelling potential of a compacted soil. Generally, building codes require special design consideration be employed if the Expansion Index is 20 or greater.

Expansion Index		
Very Low 0-20	**Low** 21-50	**Medium** 51 to 90
High 91 – 130	**Very High** >130	

USDA Soil Survey Data for Madison County, MS



U.S. Depart. of Agriculture NRCS Data
Soil Survey Geographic Formations

- MS River Aluvium
- Coastal Deposits
- Citronelle
- Pascagoula/Hattiesburg
- Catahoula
- Vicksburg/Chickasawhay
- Forest Hill/Red Bluff
- Jackson Group
- Cockfield
- Cook Mountain
- Kosciusko
- Zilpha/Winona
- Tallahatta
- Wilcox
- Bashi/Mid Nanafalia
- Naheola
- Porters Creek
- Clayton
- Prairie Bluff/Owl Creek
- Ripley
- McNairy Sand
- Demopolis Chalk
- Arcola Limestone
- Mooreville Chalk
- Coffee Sand
- Tombigbee Sand
- Eutaw
- Tuscaloosa
- Chester Group
- Mermac Osage Kinderhook
- Chattanooga Shale
- Loess
- Municipalities
- Interstates
- Major Highways
- Major Local Roads

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Previous Occurrences

While the City of Ridgeland experiences problems with expansive soils from time to time such as waterline breaks, heaving of roadways, and foundation problems with residential and commercial structures, detailed damage information related to expansive soils is not available at this time to accurately document previous occurrences. The City of Ridgeland have not reported any major events related to expansive soils since the previous update of this plan.

Probability of Future Occurrence

Damages due to the shrinking and swelling of expansive soil, while not largely documented, do occur annually within the City of Ridgeland in isolated areas. Therefore, future occurrences are highly likely meaning multiple annual occurrences are expected. However, using smart construction techniques such as testing soil prior to construction and excavating expansive clay and backfilling with a non-sensitive material are all effective ways to mitigate future risks. It is also important to consider soil treatment and landscaping techniques that will keep soil moisture contents constant or nearly constant since problems with expansive soil occur with fluctuations in soil moisture.

Flooding

Description

Flooding is a process that occurs when water temporarily inundates an area of normally dry land by the overflow and accumulation of excess water. Floods are one of the most common and costliest natural hazards in the United States. Some floods develop slowly, sometimes over a period of days, while flash floods develop quickly, sometimes in just a matter of minutes. Flood effects can be disastrous and can be local, impacting a single neighborhood or community, or very large, affecting an entire river basin or multiple states. There are several different types or causes of flooding. Most communities only experience a few of them. Flooding, which impacts Central Mississippi, can be classified according to three distinct hazard types or causes, and according to the State of Mississippi Standard Mitigation Plan, all three types occur in all river basins in Mississippi.

River (Riverine or Stream) flooding is the most common flood type and occurs along a channel and includes overbank and flash flooding. Channels are defined ground features that carry water through and out of a watershed. Channels may include rivers, creeks, streams, or ditches. When a channel receives too much water, the excess water flows over its banks and inundates low-lying areas adjacent to the channel. River flooding usually develops gradually and has a longer duration than flash flooding. However, flash floods can impact river flooding rapidly, usually following a heavy down pour in a short amount of time impacting usually ditches or smaller streams or creeks.

Flash flooding occurs as a result of heavy localized rainfall over a short period of time due to slow-moving intense thunderstorms that can cause small creeks, streams, branches, and rivers to overflow.

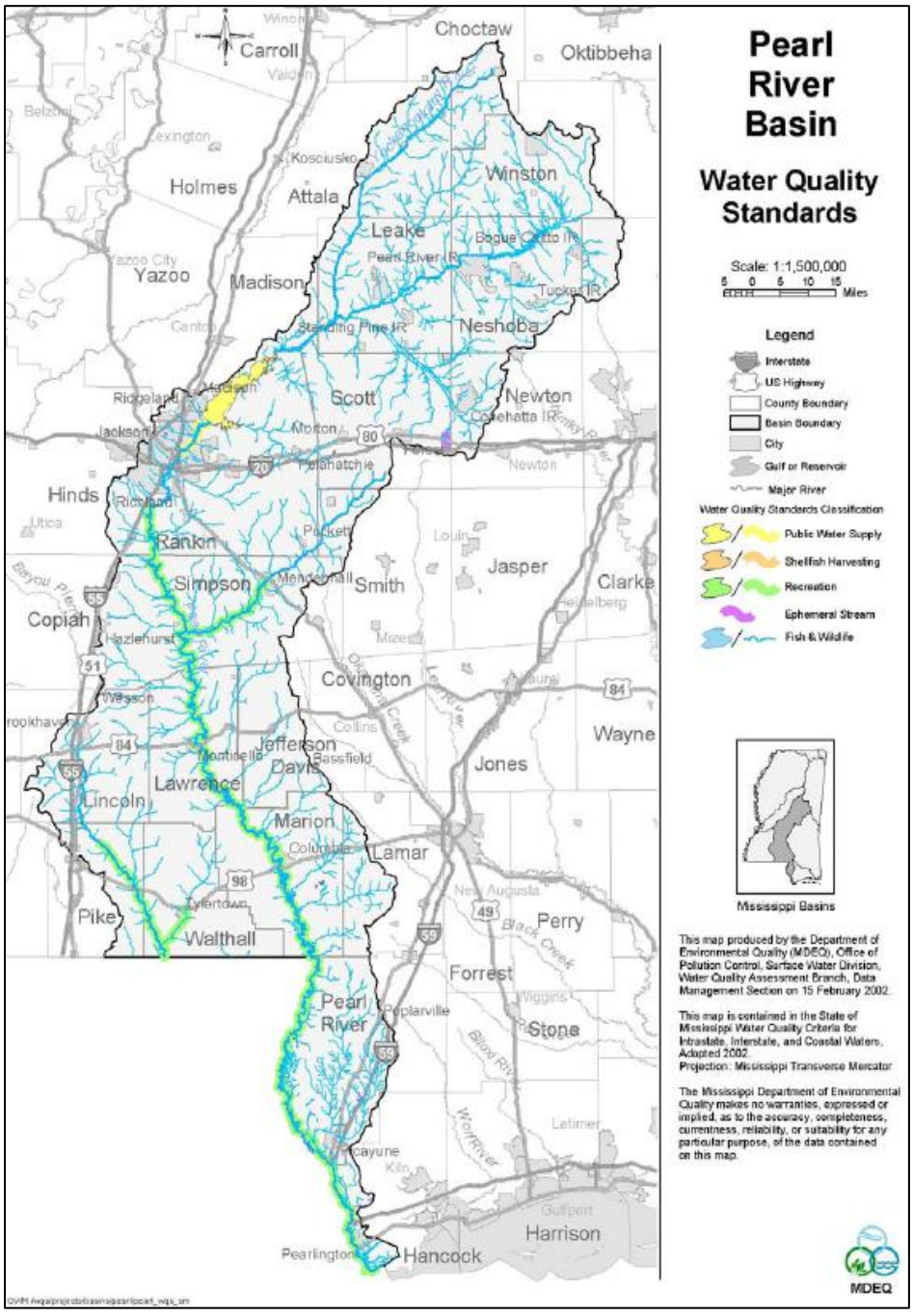
Drainage flooding occurs primarily in developed areas when the volume of run-off exceeds the capacity of the drainage system. Flooding of this nature can be the result of increased development, inadequate drainage, riverine flooding, flash flooding or a combination of each.

Location and Extent

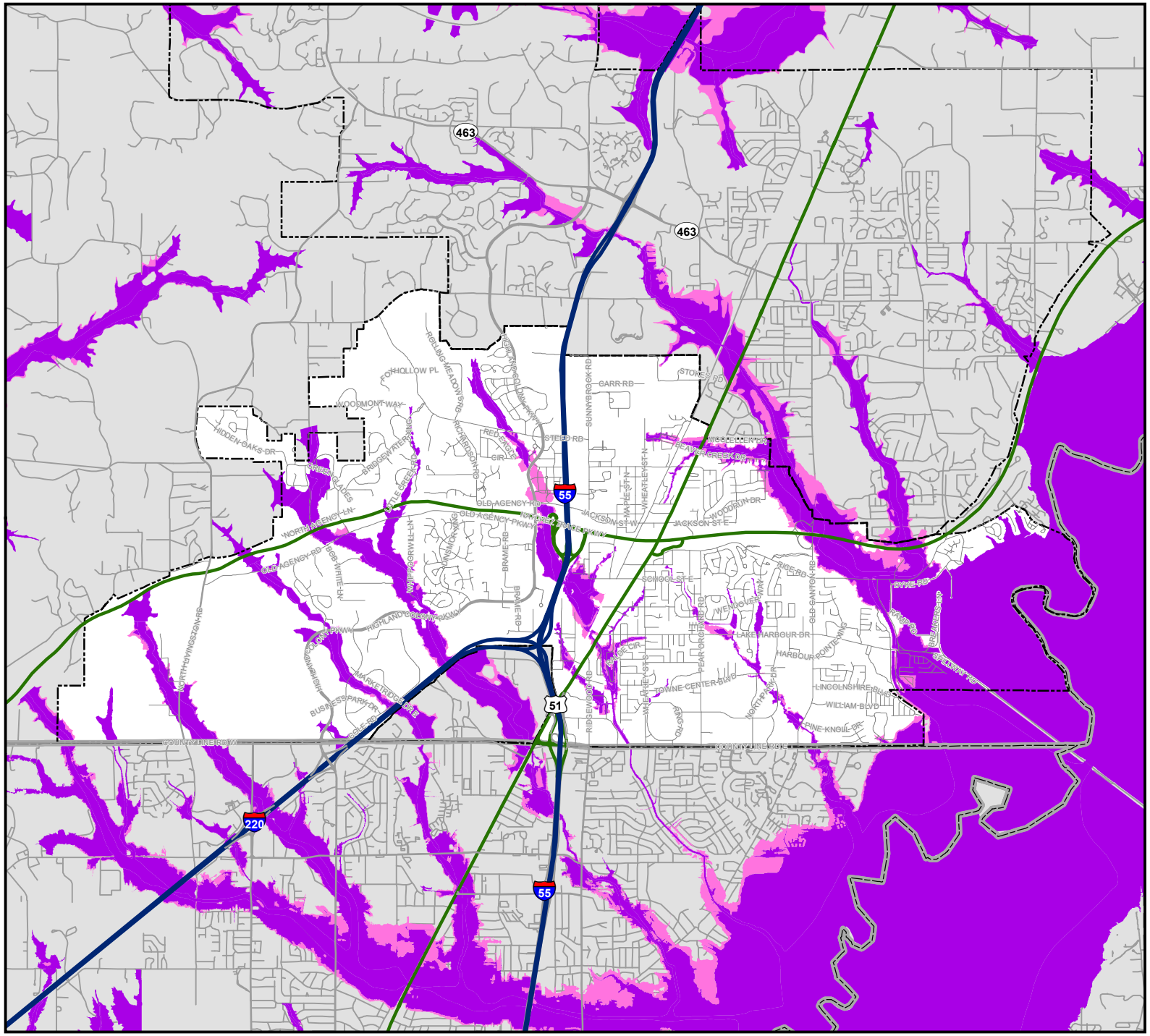
There are nine primary river basins identified in Mississippi, and Ridgeland is part of the Pearl River Basin. The Pearl River, as well as, a large number of smaller rivers and tributaries, streams, lakes and other water bodies run throughout Madison County that are associated with special flood hazard areas as delineated by FEMA. Map 4.3 depict the locations of all special flood hazard areas for Ridgeland as shown on current FEMA Digital Flood Insurance Rate Maps (DFIRMS).

Special flood hazard areas identified on FEMA's DFIRMs are defined as the areas that will be inundated by a flood event having a 1 percent chance of being equaled or exceeded in any given year. The 1 percent annual chance flood is also referred to as the base flood or 100-year floodplain

and is the national minimum standard for applying FEMA's National Flood Insurance Program (NFIP) floodplain management regulations and mandatory flood insurance purchase requirements. Statistically, according to FEMA, the 100-year flood has a 26% chance of occurring during a 30-year period, the length of many mortgages. Contrary to what the term suggests, a 100-year flood is not a flood that occurs only once every 100 years. A 100-year flood can and often does occur multiple times in a century. Areas shown to be inundated by a 0.2 percent annual chance (500-year floodplain) are considered moderate flood hazard areas, and areas outside of these areas are considered minimal flood hazard areas.



FEMA Floodplain Data for the City of Ridgeland, MS



FEMA DFIRM FLOOD DATA

Flood Zones

- 0.2% Annual Flood Hazard
- 100 Yr Floodplain
- Protected by Levee
- Municipalities
- County Boundaries
- Interstates
- Major Highways
- Major Local Roads

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In the case of river, flash, and drainage flooding, the extent or severity of a flood event is categorized by the National Weather Service based on property damage and public threat for Minor, Moderate, and Major Flooding:

Minor Flooding – minimal or no property damage, but possibly some public threat or inconvenience

Moderate Flooding – some inundation of structures and roads near streams and some evacuations of people and/or transfer of property to higher elevations are necessary

Major Flooding – extensive inundation of structures and roads. Significant evacuations of people and/or transfer of property to higher elevations

According to the National Weather Service, flooding along the Pearl River becomes a concern for Central Mississippi when the River reaches 28 feet.

Table 4.10 **Pearl River Flood Stages in Central Mississippi**

Flood Categories	River Stage (in feet)
Major Flood Stage	36
Moderate Flood Stage	33
Flood Stage	28
Action Stage	24

Source: National Weather Service

The impact of flooding on life, health and safety is dependent upon several factors including the severity of the event and whether or not adequate warning time is provided to residents. However, exposure to flooding risk is not limited to only those that live in a defined hazard zone, but everyone that might travel through a flooded area as well. To estimate the population exposed to the 1% flood event, GIS mapping capabilities were used to study floodplain boundaries and field work collected that identified the type of structures located on each parcel of property within the city. Property parcels contained within the flood boundaries were used to calculate the estimated population and housing units exposed to this hazard. Using this method, it is estimated that 1,310 people and 601 housing units are exposed to a possible flood event in the City of Ridgeland. This estimate should be used to gather a general understanding of who and what is at risk and not used as an exact number.

Table 4.11 **Identified Hazard Area Flooding**

Flooding	Estimated Population	% of Total Population	Housing Units	% of Total Housing
1-percent	861	3.5%	395	3.7%
0.2-percent	449	1.8%	206	1.9%

Source: CMPDD

Areas in the city that experience repetitive flooding are of particular concern for the city due to the threat to structures located in these areas. These areas are a persistent problem for the city and include areas such as:

1. The Harbor Pines Trail Park, which is located along the Pearl River. The mobile home park is located about 8 feet below the base flood elevation and as a result, experiences periodical flooding problems from the Pearl River.

2. The loop of Culley Creek just north of Rice Road. Residential and commercial structures located in this loop below the base flood elevation experience periodical flooding.

3. The Cottonwood Subdivision, which is a pre-FIRM development located along the Beaver Creek. Twelve (12) homes border the creek and are subject to periodical flooding.

4. The Northbrook Apartments experience flooding as a result of backwater flooding from adjacent City of Jackson property.

5. The Oakbrook Apartments experience periodical flooding problems as a result of the adjacent creek.

6. The grade control structure at Mule Jail Road is too small and creates a backwater effect causing overbank flooding along Brashear Creek in the vicinity of Lake Harbour Drive, Rice Road, and the Natchez Trace Parkway. Culley Creek joins Brashear Creek at Rice Road and contributes to the flooding in the area between the Natchez Trace Parkway.

Previous Occurrences

Historical records gathered from the National Weather Service and the National Climatic Data Center indicate several moderate river flood events have occurred along the Pearl River in Central Mississippi in recent years. In addition, numerous annual flash flood or urban flood events have been identified.

River Flood Events

Table 4.12 **Historic Crests of the Pearl River in Central MS**

Date	Crest (feet)
04/09/1983	21.05
03/14/2016	20.35
04/02/1980	19.75
04/19/1900	19.70
01/03/1990	19.60
04/26/1979	19.25
12/12/1971	19.23
04/01/2009	19.18
03/16/1921	18.60
09/04/2012	18.59

Source: National Weather Service

Table 4.13 **Recent Crests of the Pearl River in Central MS**

Date	Crest (feet)
03/21/2025	14.52
03/12/2025	14.49
02/26/2025	16.44
02/13/2025	14.32
01/14/2024	14.30
12/23/2022	16.11
09/08/2022	17.40
04/06/2022	16.81
09/19/2021	16.21
09/03/2021	16.96

Source: National Weather Service

Flash Flood Events

Table 4.14 **Flash Flood Events in Madison County**

Date	Location	Damage	
		Property	Crop
04/10/2024	Charlton	1.00K	0.00K
01/08/2023	Sloan	5.00K	0.00K
08/24/2022	Ridgeland	50.00K	0.00K
08/24/2022	Farmhaven	20.00K	0.00K
08/24/2022	Canton	1.00M	0.00K
08/02/2022	Charlton	20.00K	0.00K
08/02/2022	Canton	50.00K	0.00K
08/02/2022	Turnetta	1.00M	0.00K
04/13/2022	Canton	5.00K	0.00K
07/16/2021	Rocky Hill	10.00K	0.00K
09/24/2020	Canton	10.00K	0.00K
02/10/2020	Cameron	10.00K	0.00K
02/10/2020	Canton	5.00K	0.00K
01/2/2020	Madison Station	50.00K	0.00K
10/30/2019	Gluckstadt	2.00K	0.00K
10/30/2019	Canton	5.00K	0.00K
10/30/2019	Gluckstadt	10.00K	0.00K
05/9/2019	Madison Airport	25.00K	0.00K
04/18/2019	Gluckstadt	5.00K	0.00K
04/13/2019	Flora	3.00K	0.00K
04/13/2019	Mansdale	4.00K	0.00K
11/7/2018	Ridgeland	5.00K	0.00K
09/26/2018	Ridgeland	5.00K	0.00K
08/17/2018	Madison	20.00K	0.00K
07/18/2018	Gluckstadt	2.00K	0.00K
07/16/2018	Richton	5.00K	0.00K
07/16/2018	Gluckstadt	3.00K	0.00K
07/16/2018	Madison	50.00K	0.00K
04/6/2018	Madison Airport	2.00K	0.00K
04/6/2018	Gluckstadt	3.00K	0.00K
02/21/2018	Madison Station	10.00K	0.00K
07/29/2017	Barnett Res East	15.00K	0.00K
06/23/2017	Gluckstadt	2.00K	0.00K
06/19/2017	Gluckstadt	12.00K	0.00K
06/19/2017	Ballard	9.00K	0.00K
04/3/2017	Madison Airport	5.00K	0.00K
04/3/2017	Canton	400.00K	0.00K
03/11/2016	Ballard	70.00K	0.00K
03/10/2016	Rocky hill	15.00K	0.00K
03/10/2016	Gluckstadt	5.00K	0.00K

Source: National Climatic Data Center

Note: Flood depth information is not available for flash flood events

National Flood Insurance Program (NFIP)

National Flood Insurance Program (NFIP) records indicate five (5) repetitive loss properties have been identified in Ridgeland, which include four (4) residential structures and one (1) commercial property. Table 4.15 lists the number of losses and total claims payments for historical flood damages for those properties as recorded under the NFIP as of April 30, 2010. It should be noted that this information only reflects previous losses as reported through claims under the NFIP, and that additional uninsured or unreported losses may have occurred throughout the city. Additional information regarding the City of Ridgeland's participation in the NFIP is located in Section 5 of this plan.

Table 4.15 NFIP Repetitive Loss Properties

Jurisdiction	Total Flood Losses	Total Claim Payments	# of Repetitive Loss Properties	# of Severe Repetitive Loss Properties
Ridgeland	11	$156,258.88	5	0

Source: MS Emergency Management Agency as of April 2010 (latest available data)

National Flood Insurance Program Definitions

Repetitive loss property is an NFIP insured structure that has had at least two paid flood losses of more than $1,000 each in any 10-year period since 1978.

Severe repetitive loss properties single or multifamily residential properties that are covered under the NFIP flood insurance policy and:

1. That have incurred flood related damage for which 4 or more separate claim payments have been made, with the amount of each claim (including building and contents payments) exceeding $5,000, and with the cumulative amount of such claims payments exceeding $20,000; or
2. For which at least 2 separate claims payments (building payments only) have been made under such coverage, with cumulative amount of such claims exceeding the market value of the building.
3. In both instances, at least 2 of the claims must be within 10-years of each other, and claims made within 10-days of each other will be counted as 1 claim.

Source: FEMA

Probability of Future Occurrence

Given the history of flood events that have impacted Ridgeland and Madison County, it is apparent that future flooding of varying degrees will continue to occur within the County annually. Major riverine floods will continue to be an occasional occurrence within Madison County, while drainage and flash flood events will likely occur more frequently. Table 4.16 summarizes the occurrences of flash flood events and their average annual occurrence rate for Madison County.

Table 4.16 **Annual Flash Flood Events**

Year	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**Average Annual Occurrence**
# of Events	3	6	10	7	4	1	7	1	1	0	4

Furthermore, the 100-year and 500-year floodplains identified on the NFIP DFIRMs express probability of occurrence as the chance a flood of a specific extent will be equaled or exceeded in any given year. The 100-year floodplain has a 1% chance of being equaled or exceeded annually. While the 500-year floodplain has 0.2% annual chance of being equaled or exceeded annually.

Severe Thunderstorm

Description

Thunderstorms are one of the most common and most noticed weather events. A thunderstorm is a rain shower during which you hear thunder. Since thunder comes from lightning, all thunderstorms have lightning. Thunderstorms typically produce heavy downpours of rain for a brief period, anywhere from 30 minutes to an hour. Some of the most severe thunderstorms occur when a single thunderstorm affects one location for an extended period of time. Warm humid conditions are highly favorable for thunderstorm development. Thunderstorms may occur singly, in clusters or in lines. The primary damaging forces associated with these storms are straight-line winds, hail, and lightning, but they can also cause flash flooding or spawn tornadoes. Thunderstorms are most likely in the spring and summer months and during the afternoon and evening hours, but they can occur year-round and at all hours.

Straight-line winds: any winds not associated with the rotation of a tornado. Straight-line winds are responsible for most thunderstorm wind damage. Strong thunderstorm winds come from a number of different processes. Most thunderstorm winds that cause damage at the ground are a result of outflow generated by a thunderstorm downdraft. Damaging winds are classified as those exceeding 50-60 mph. Straight-line winds can exceed 125 mph.

Hail: precipitation that is formed when updrafts in thunderstorms carry raindrops upward into extremely cold areas of the atmosphere. Hail falls to the surface when the thunderstorm's updraft can no longer support the weight of the ice. The stronger the updraft the larger the hailstone can grow. Hail has the potential to cause minor to major property damage, particularly the larger hailstones associated with severe thunderstorms. The size of hailstones is a direct result of the size and severity of the storm.

Lightning: a giant spark of electricity in the atmosphere between clouds, the air, or the ground. Energy from a lightning channel heats the air to around 18,000 degrees Fahrenheit, which causes the air to rapidly expand, creating a sound wave known as thunder.

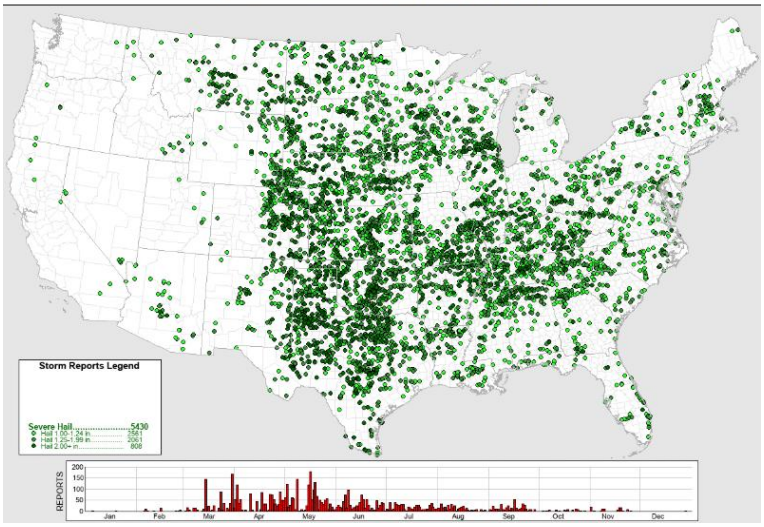
Location and Extent

All of the City of Ridgeland is uniformly susceptible to the occurrence of severe thunderstorms. According to the National Weather Service, a thunderstorm is classified as "severe" if it produces one or more of the following:

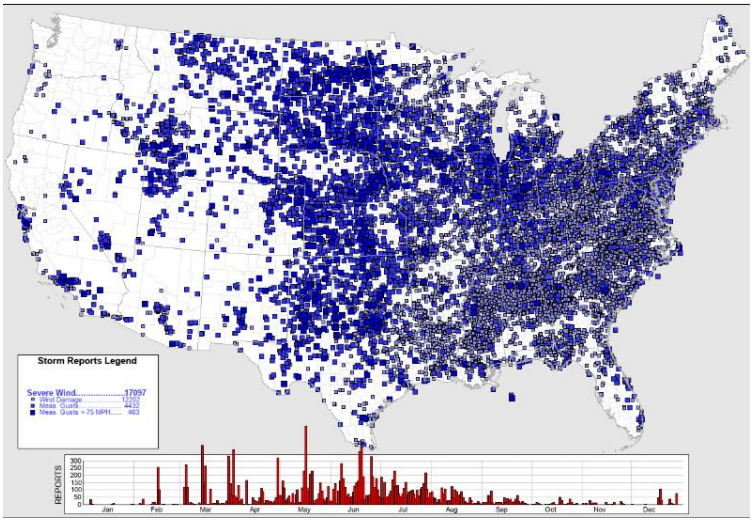
- hail at least 1 inch in diameter,
- wind gusts of at least 58 miles per hour, or
- produces a tornado.

Under the right conditions, rainfall from thunderstorms can cause flash flooding; lightning can cause fires; strong straight-line winds can knock down trees, power lines and mobile homes; and tornadoes can destroy all structures in its path. Each of these potential hazards produced by thunderstorms can result in fatalities.

2025 Annual Preliminary Hail Summary



2025 Annual Preliminary Wind Summary



Previous Occurrences

Severe thunderstorms are a frequent occurrence in Mississippi. National Climatic Data Center historical records include a significant number of annual occurrences of severe thunderstorm events in Madison County. Tables 4.17 and 4.18 provide summary data for severe thunderstorm activity in Madison County since 2016. Tornado activity is discussed separately in this plan.

Table 4.17 **Severe Thunderstorm Wind Events**

Location	Event Date	Wind speed magnitude (kts)	Deaths	Injuries	Estimated Damages	
					Property	Crop
Camden	8/20/2025	55	-	-	-	-
Robinson Springs	7/1/2025	50	-	-	-	-
Madison Campbell ARP	7/1/2025	50	-	-	-	-
Mill Town	7/1/2025	55	-	-	-	-
Flora	6/23/2025	50	-	-	1,000	-
Shocco	6/23/2025	50	-	-	1,000	-
Sharon	6/23/2025	50	-	-	1,000	-
Turnetta	6/14/2025	50	-	-	5,000	-
Flora	6/14/2025	55	-	-	5,000	-
Turnetta	5/25/2025	50	-	-	-	-
Shocco	5/20/2025	52	-	-	-	-
Truitt	5/20/2025	60	-	-	-	-
Ridgeland	3/31/2025	50	-	-	-	-
Truitt	3/15/2025	50	-	-	1,000	-
Madison	1/5/2025	50	-	-	50,000	-
Robinson Springs	8/18/2024	60	-	-	15,000	-
Shocco	8/16/2024	55	-	-	5,000	-
Revive	6/3/2024	52	-	-	5,000	-
Gluckstadt	5/27/2024	55	-	-	5	-
Mansdale	4/10/2024	55	-	-	30	-
Madison	4/9/2024	60	-	-	10	-
Gluckstadt	4/9/2024	60	-	-	150	-
Cedar Hill	4/9/2024	60	-	-	5	-
Flora	4/9/2024	55	-	-	20	-
Madison	2/11/2024	50	-	-	1	-
Gluckstadt	11/20/2023	52	-	-	-	-
Flora	11/20/2023	50	-	-	2	-
Gluckstadt	6/25/2023	65	-	-	10	-
Flora	6/16/2023	65	-	-	250	-
Ridgeland	6/10/2023	75	-	-	500	-
Camden	6/5/2023	55	-	-	2	-
Shocco	4/5/2023	52	-	-	3	-
Canton	1/12/2023	52	-	-	100	-
Rocky Hill	11/29/2022	55	-	-	5	-
Ridgeland	9/7/2022	43	-	-	2	-
Madison Station	7/9/2022	50	-	-	2,000	-
Farmhaven	7/9/2022	50	-	-	2,000	-
Revive	7/9/2022	50	-	-	500	-
Cedar Hill	6/26/2022	43	-	-	3,000	-

Location	Event Date	Wind speed magnitude (kts)	Deaths	Injuries	Estimated Damages	
Canton	6/26/2022	50	-	-	8,000	-
Mansdale	6/16/2022	52	-	-	100	-
Livingston	6/16/2022	55	-	-	15,000	-
Ridgeland	6/16/2022	48	-	-	100	-
Madison Campbell ARP	6/16/2022	50	-	-	5,000	-
Turnetta	6/10/2022	61	-	-	5,000	-
Madison Station	6/10/2022	52	-	-	1,000	-
Cameron	4/17/2022	55	-	-	2,000	-
Shocco	4/16/2022	55	-	-	55,000	-
Truitt	4/13/2022	55	-	-	1,000	-
Camden	3/30/2022	50	-	-	8,000	-
Ridgeland	3/30/2022	50	-	-	1,000	-
Rocky Hill	3/30/2022	50	-	-	3,000	-
Camden	3/22/2022	50	-	-	5,000	-
Davis	3/22/2022	50	-	-	2,000	-
Ridgeland	3/22/2022	50	-	-	10,000	-
Flora	3/22/2022	50	-	-	10,000	-
Madison	2/17/2022	50	-	-	3,000	-
Sharon	2/17/2022	50	-	-	3,000	-
Truitt	2/17/2022	50	-	-	3,000	-
Canton	2/17/2022	52	-	-	2,000	-
Canton	9/1/2021	53	-	-	10,000	-
Ridgeland	7/16/2021	35	-	-	25,000	-
Way	6/13/2021	58	-	-	80,000	-
Shocco	6/7/2021	50	-	-	1,000	-
Sharon	6/7/2021	50	-	-	1,000	-
Turnetta	6/7/2021	50	-	-	1,000	-
Flora	5/4/2021	60	-	-	150,000	-
Canton	5/4/2021	50	-	-	30,000	-
Barnett Res East	4/9/2021	50	-	-	2,000	-
Madison	4/9/2021	52	-	-	8,000	-
Cameron	3/17/2021	50	-	-	25,000	-
Flora	3/17/2021	52	-	-	4,000	-
Canton	8/16/2020	50	-	-	8,000	-
Farmhaven	8/16/2020	50	-	-	7,000	-
Camden	7/1/2020	50	-	-	1,000	-
Ridgeland	6/5/2020	52	-	-	2,000	-
Canton	6/5/2020	52	-	-	3,000	-
Madison	5/23/2020	50	-	-	10,000	-
Ridgeland	5/23/2020	50	-	-	1,000	-
Farmhaven	4/12/2020	52	-	-	10,000	-
Richton	3/4/2020	50	-	-	-	-
Flora	3/4/2020	78	-	-	1,500,000	-
Shocco	2/5/2020	52	-	-	3,000	-
Stokes	9/9/2019	50	-	-	3,000	-
Livingston	9/9/2019	50	-	-	5,000	-
Barnett Res East	9/9/2019	45	-	-	3,000	-
Madison	9/9/2019	40	-	-	2,000	-
Gluckstadt	7/7/2019	50	-	-	1,000	-

Location	Event Date	Wind speed magnitude (kts)	Deaths	Injuries	Estimated Damages	
Cameron	7/7/2019	50	-	-	2,000	-
Madison Station	6/27/2019	53	-	-	10,000	-
Sharon	6/17/2019	52	-	-	10,000	-
Stokes	5/9/2019	55	-	-	20,000	-
Madison	4/18/2019	52	-	-	20,000	-
Madison Airport	4/18/2019	55	-	-	15,000	-
Cedar Hill	4/18/2019	50	-	-	10,000	-
Revive	4/13/2019	50	-	-	10,000	-
Cameron	4/13/2019	53	-	-	12,000	-
Davis	4/13/2019	50	-	-	5,000	-
Flora	4/13/2019	60	-	-	30,000	-
Maris Town	4/6/2019	60	-	-	7,000	-
Rocky hill	4/6/2019	52	-	-	15,000	-
Madison Airport	3/30/2019	50	-	-	2,000	-
Turnetta	3/30/2019	50	-	-	3,000	-
Madison Airport	1/19/2019	50	-	-	2,000	-
Flora	1/19/2019	55	-	-	15,000	-
Truitt	12/27/2018	50	-	-	7,000	-
Stokes	12/27/2018	52	-	-	10,000	-
Ridgeland	11/1/2018	55	-	-	50,000	-
Ridgeland	11/1/2018	55	-	-	10,000	-
Cameron	8/20/2018	50	-	-	6,000	-
Davis	8/20/2018	50	-	-	2,000	-
Truitt	8/20/2018	50	-	-	2,000	-
Camden	7/21/2018	50	-	-	50,000	-
Mansdale	7/18/2018	48	-	-	8,000	-
Ridgeland	7/16/2018	50	-	-	10,000	-
Cedar Hill	7/16/2018	50	-	-	3,000	-
Madison Airport	7/16/2018	50	-	-	20,000	-
Rocky Hill	6/22/2018	50	-	-	5,000	-
Loring	5/20/2018	39	-	-	2,000	-
Gluckstadt	4/14/2018	50	-	-	7,000	-
Livingston	4/14/2018	50	-	-	7,000	-
Ridgeland	4/6/2018	53	-	-	15,000	-
Gluckstadt	4/3/2018	50	-	-	5,000	-
Way	4/3/2018	50	-	-	5,000	-
Way	4/3/2018	55	-	-	50,000	-
Flora Lane Airport	4/3/2018	50	-	-	5,000	-
Mansdale	3/11/2018	50	-	-	10,000	-
Charlton	3/11/2018	50	-	-	5,000	-
Farmhaven	3/11/2018	50	-	-	8,000	-
Truitt	2/7/2018	50	-	-	5,000	-
Rocky Hill	6/23/2017	39	-	-	3,000	-
Livingston	6/23/2017	39	-	-	3,000	-
Stokes	6/16/2017	60	-	-	15,000	-
Mansdale	4/30/2017	52	-	-	10,000	-
Cedar Hill	4/22/2017	50	-	-	3,000	-
Gluckstadt	4/2/2017	53	-	-	12,000	-
Cedar Hill	3/30/2017	50	-	-	7,000	-
Rocky Hill	11/28/2016	50	-	-	5,000	-

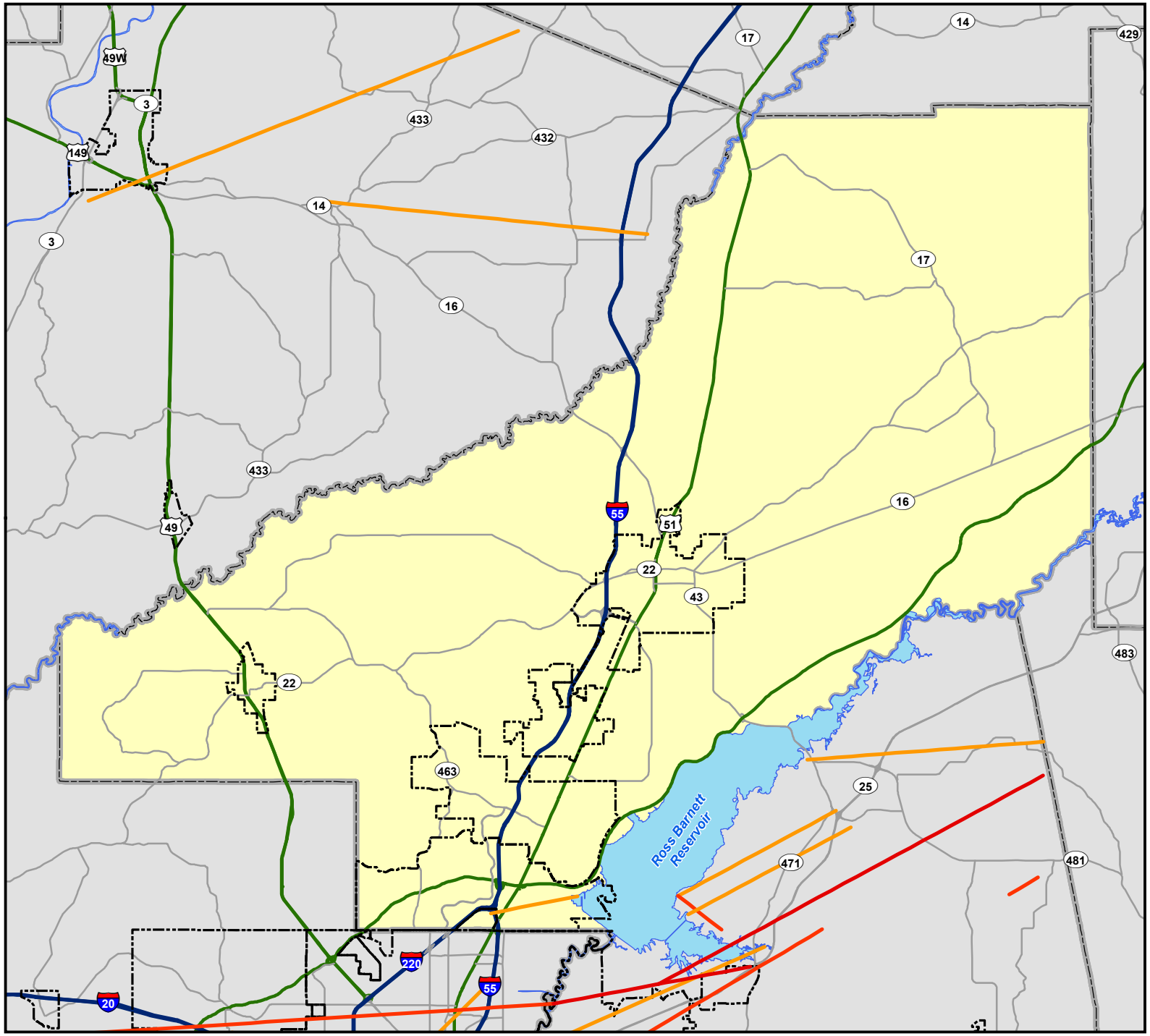
Location	Event Date	Wind speed magnitude (kts)	Deaths	Injuries	Estimated Damages	
Flora	8/6/2016	54	-	-	10,000	-
Davis	8/6/2016	43	-	-	4,000	-
Turnetta	8/5/2016	52	-	-	10,000	-
Ridgeland	7/31/2016	39	-	-	5,000	-
Farmhaven	7/14/2016	53	-	-	10,000	-
Loring	6/17/2016	52	-	-	8,000	-
Flora	5/1/2016	43	-	-	3,000	-
Gluckstadt	4/11/2016	50	-	-	5,000	-
Barnett Res East	3/31/2016	50	-	-	1,000	-
Gluckstadt	3/31/2016	50	-	-	3,000	-
Gluckstadt	3/31/2016	50	-	-	8,000	-
Madison	3/31/2016	53	-	-	4,000	-
Madison	2/23/2016	50	-	-	7,000	-
Rocky Hill	2/15/2016	50	-	-	3,000	-
Madison	1/21/2016	50	-	-	7,000	-
Location	**Event Date**	**Wind speed magnitude (kts)**	**Deaths**	**Injuries**	**Estimated Damages**	
					Property	**Crop**
Source: NOAA						

Table 4.18 **Severe Thunderstorm Hail Events**

Location	Event Date	Magnitude Inches	Deaths	Injuries	Estimated Damages	
					Property	Crop
Truitt	3/23/2025	1.25	-	-	-	-
Mansdale	4/18/2024	1.50	-	-	500,000	-
Madison Campbell ARP	4/9/2024	1.00	-	-	150,000	-
Flora Lane ARPT	4/9/2024	1.00	-	-	30,000	-
Madison Campbell ARP	3/8/2024	1.00	-	-	250,000	-
Farmhaven	2/11/2024	0.75	-	-	-	-
Madison Campbell ARP	6/25/2023	1.00	-	-	50,00	-
Camden	6/15/2023	1.00	-	-	200,000	-
Madison	6/14/2023	1.25	-	-	250,000	-
Ridgeland	6/14/2023	1.00	-	-	50,000	-
Flora	3/26/2023	1.00	-	-	50,000	-
Cameron	4/19/2020	0.88	-	-	-	-
Cedar hill	4/12/2020	1.50	-	-	10,000	-
Gluckstadt	3/4/2020	0.70	-	-	50,000	-
Flora	3/4/2020	1.00	-	-	-	-
Camden	4/7/2019	1.75	-	-	15,000	-
Sharon	4/7/2019	1.00	-	-	-	-
Charlton	1/19/2019	1.00	-	-	-	-
Cameron	3/11/2018	1.00	-	-	-	-
Flora Lane Airport	2/6/2018	1.00	-	-	-	-
Ridgeland	4/26/2017	1.00	-	-	-	-
Ridgeland	4/22/2017	1.00	-	-	-	-
Stokes	3/25/2017	1.00	-	-	-	-
Canton	2/7/2017	1.25	-	-	3,000	-
Madison Airport	2/7/2017	0.88	-	-	-	-
Richton	1/21/2017	1.00	-	-	-	-
Sloan	11/29/2016	1.00	-	-	-	-
Gluckstadt	7/12/2016	1.50	-	-	2,000	-
Gluckstadt	3/31/2016	1.00	-	-	-	-

Source: NOAA

NOAA SRVGIS Hail Data for Madison County



NOAA SRVGIS Hail Storms
Hail Diameter (Inches)

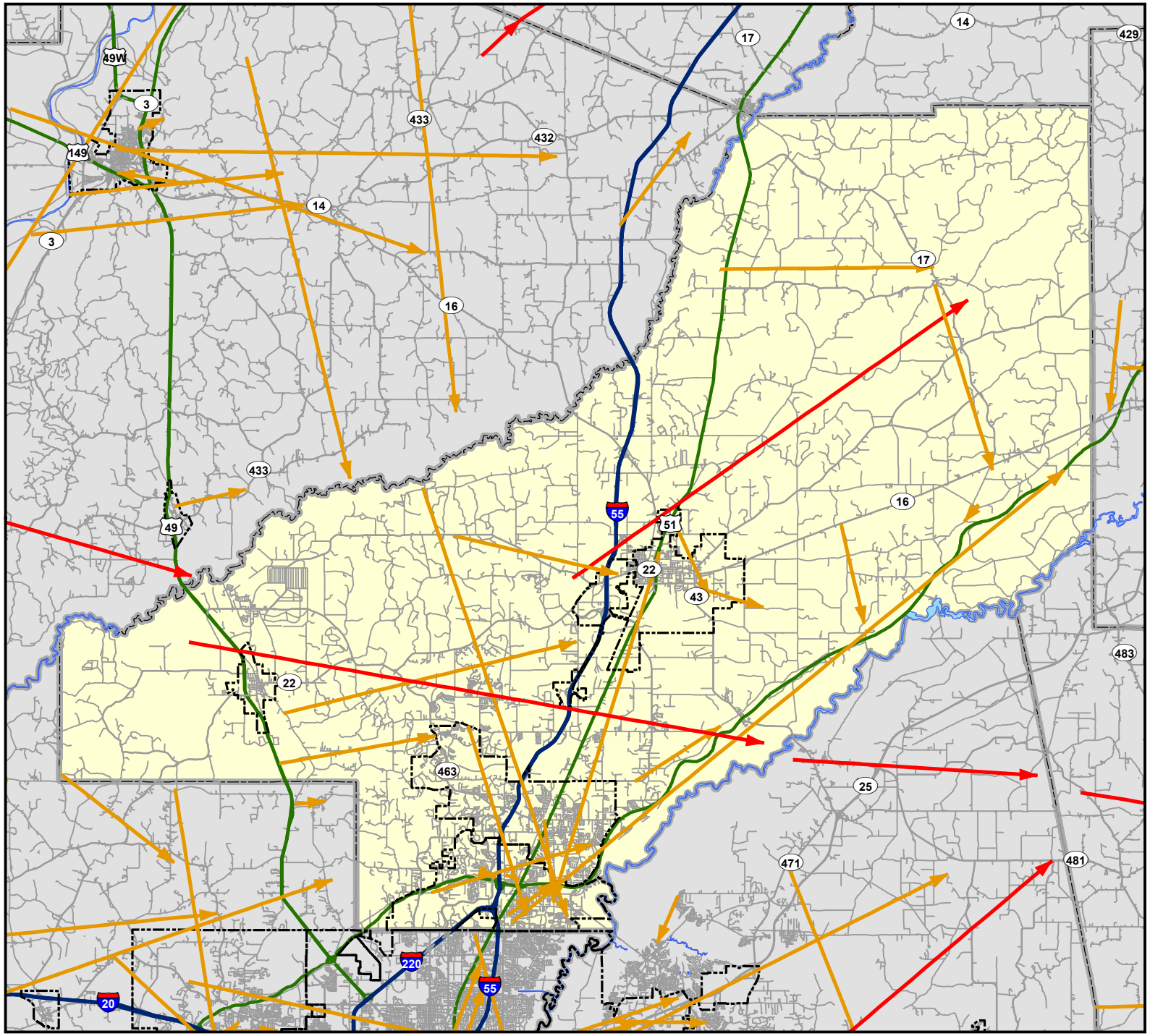
- <0.75"
- 0.75" - 1.5"
- 1.5" - 2"
- 2" - 3"
- 3" - 4"
- 4" - 5"
- Municipalities
- Interstates
- Major Highways
- Major Local Roads

January 2015 - December 2025
Time Frame for all Data Represented

Incidents Per Year >	Year	Copiah Co.
	2015	0
	2016	0
	2017	1
	2018	0
	2019	0
	2020	0
	2021	0
	2022	0
	2023	0
	2024	0
	2025	0

CMPDD

NOAA SRVGIS Wind Data for Madison County, MS



NOAA SRVGIS High Wind Wind Speed

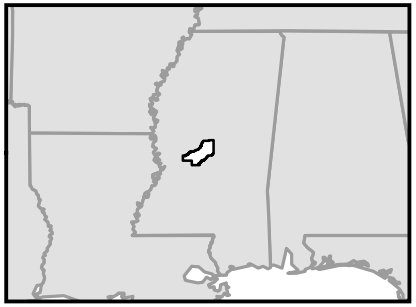
- Up to 20 Knots
- 21 - 40 Knots
- 41 - 60 Knots
- 61 - 80 Knots
- Above 80 Knots
- Municipalities
- Interstates
- Major Highways
- Major Local Roads

January 2011 - December 2020
Time Frame for all Data Represented

Incidents Per Year

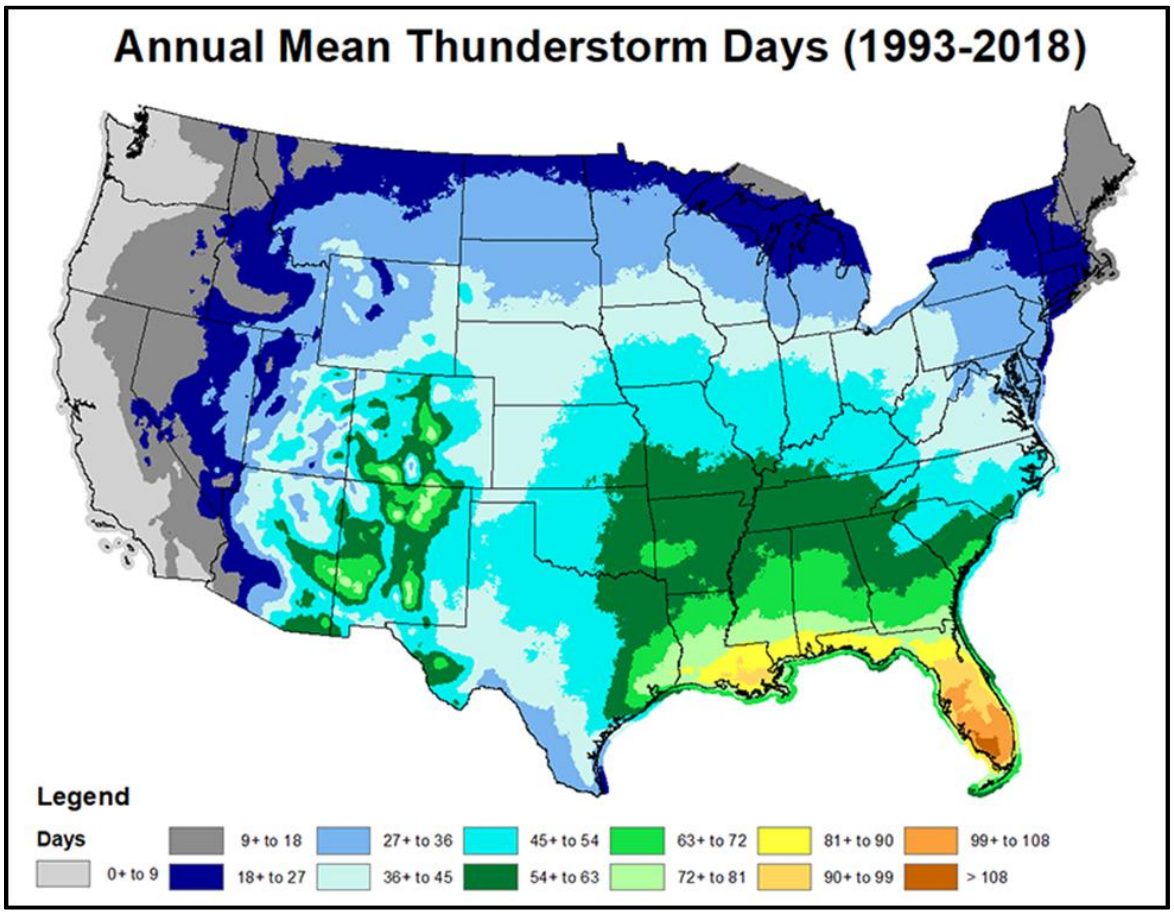
Year	Madison Co.	Statewide
2011	3	190
2012	4	147
2013	0	58
2014	0	86
2015	0	38
2016	1	93
2017	1	157
2018	6	152
2019	4	118
2020	3	134

CMPDD



Probability of Future Occurrence

Future severe thunderstorms are unavoidable in Mississippi due to its geographical location. Annual occurrences of severe thunderstorms are highly likely, meaning multiple severe thunderstorms are expected to occur annually. According to NOAA, Ridgeland averages 60 thunderstorm days per year.



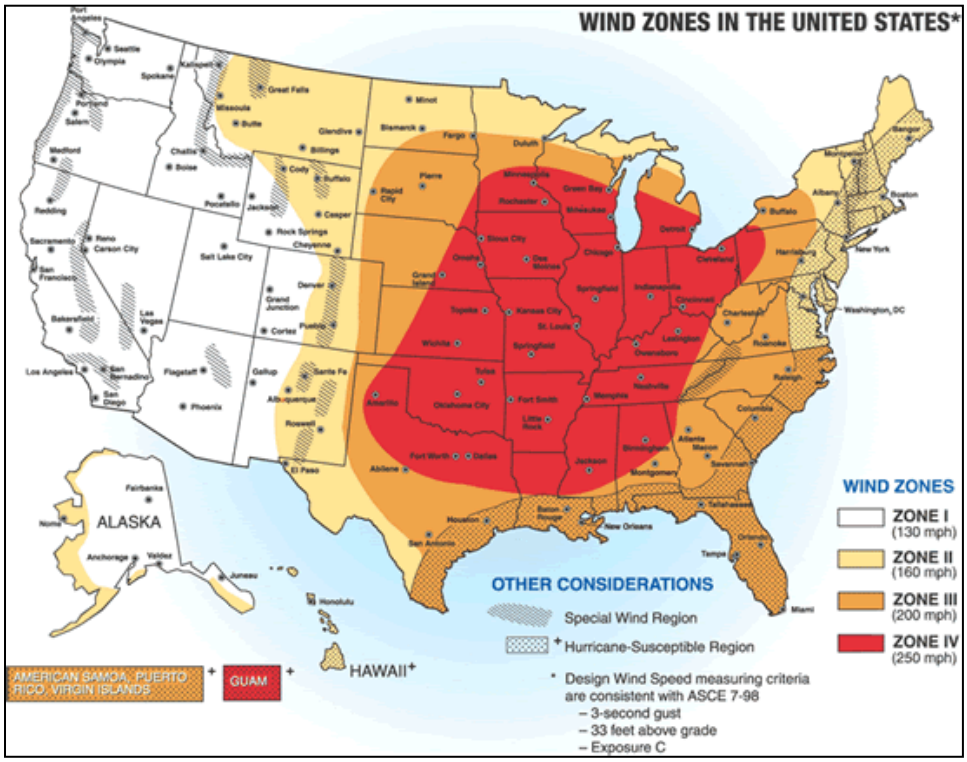
Tornados

Description

Tornadoes are one of nature's most violent storms. A tornado is a violent windstorm characterized by a rotating or twisting, funnel-shaped cloud extending to the ground. Tornadoes are most often generated by strong thunderstorm activity (but can also be spawned from hurricanes and other coastal 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. Most tornadoes are a few dozen yards wide and touch down only 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.

Location and Extent

By virtue of its location, all of the City of Ridgeland is recognized as a danger zone for tornado outbreaks. FEMA's map of Wind Zones in the United States, places Ridgeland in Zone IV, which is considered the highest risk area for tornado activity. Therefore, all of the City of Ridgeland is uniformly susceptible to the occurrence of tornadoes. Historically Wind Zone IV has experienced the greatest number and strongest tornadoes in the United States.



The Enhanced Fujita Scale (EF-scale), shown in Table 4.19, is used to categorize the strength and magnitude of tornado events based on estimated wind speeds and related damage. This represents an update to the original Fujita Scale (F-scale) and has been implemented since February 2007.

Table 4.16 **Enhanced Fujita Scale**

Scale	Wind Speed (MPH)	Potential Damage
EF0	65 – 85	**Light Damage** Peels surface off some roofs, some damage to gutters or siding, branches broken off trees, shallow-rooted trees pushed over.
EF1	86 – 110	**Moderate Damage** Roofs severely stripped; mobile homes overturned or badly damaged; loss of exterior doors, windows and other glass broken
EF2	111 – 135	**Considerable Damage** Roofs torn off well-constructed houses; foundations of frame homes shifted; mobile homes completely destroyed; large trees snapped or uprooted; cars lifted off ground
EF3	136 – 165	**Severe Damage** Entire stories of well-constructed houses destroyed; severe damage to large buildings such as shopping malls; trains overturned; trees debarked; heavy cars lifted off the ground and thrown; structures with weak foundations blown away some distance
EF4	166 – 200	**Devastating Damage** Well-constructed houses and whole frame houses completely leveled; cars thrown
EF5	>200	**Incredible Damage** Strong frame houses leveled off foundations and swept away; automobile size debris flies through the air in excess of 300 ft.; steel reinforced concrete structures badly damaged; high-rise buildings have significant structural deformation

Previous Occurrences

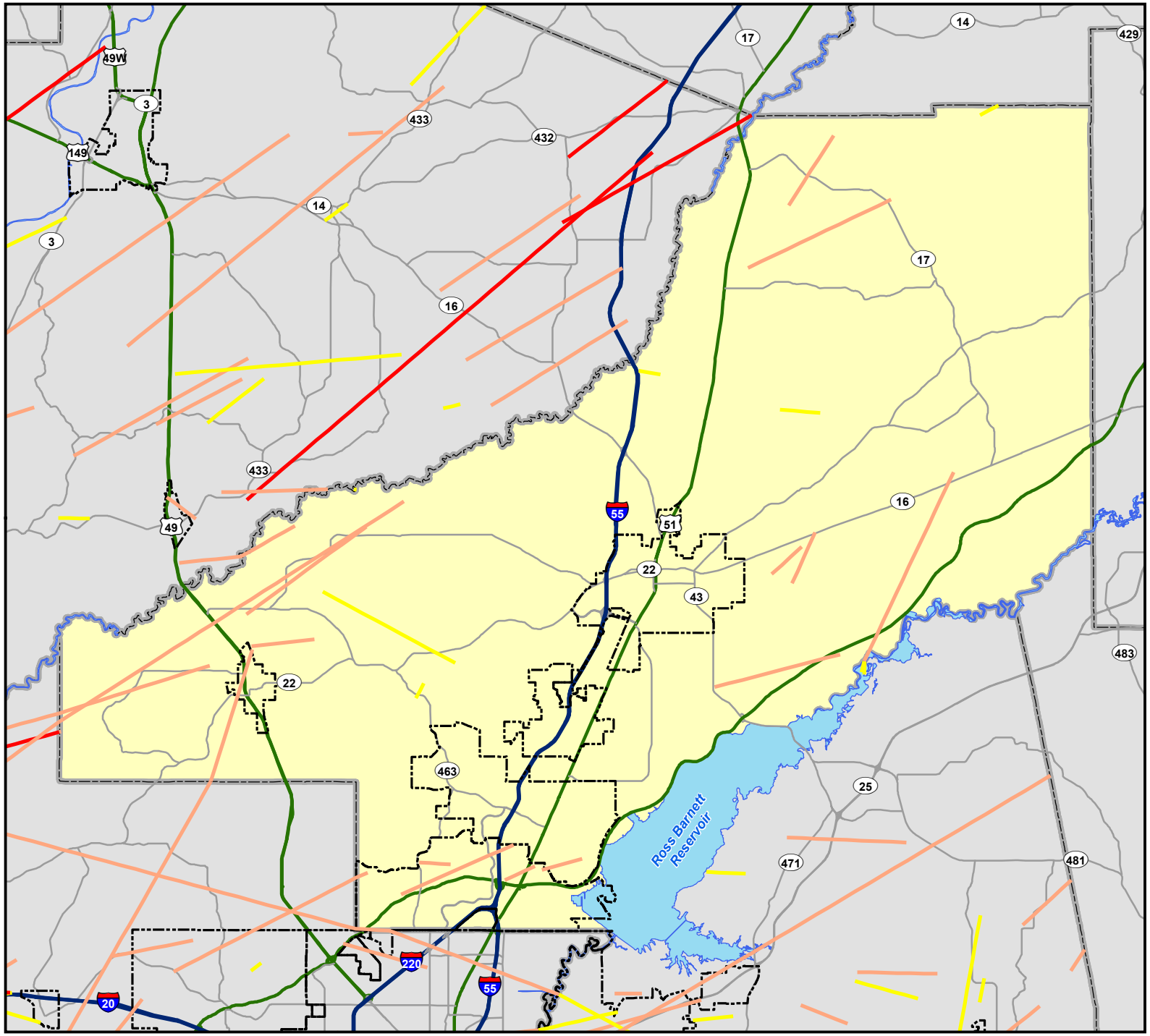
According to the National Climatic Data Center, the City of Ridgeland has not been directly impacted by a tornado in recent years. However, several tornadoes have occurred in surrounding jurisdictions. Map 4.6 indicates the track of previous occurrences in Madison County between 2016 and 2025.

Table 4.20 **Recent Tornado Activity in Madison County**

			Damage	
Location	**Date**	**Scale**	**Property**	**Crop**
Coxs Ferry	12/28/2024	EF1	75.00K	0.00K
Mansdale	04/10/2024	EF0	25.00K	0.00K
Rocky Hill	03/25/2024	EF1	10.00K	0.00K
Shocco	11/20/2023	EF1	60.00K	0.00K
Ridgeland	06/18/2023	EF1	500.00K	0.00K
Sharon	06/18/2023	EF0	15.00K	0.00K
Shocco	12/14/2022	EF1	50.00K	0.00K
Barnett Res East	03/30/2022	EF1	20.00K	0.00K
Loring	03/22/2022	EF1	50.00K	0.00K
Rocky Hill	03/22/2022	EF1	75.00K	0.00K
Scotland Fork	03/22/2022	EF0	0.10K	0.00K
Stokes	03/22/2022	EFU	0.00K	0.00K
Flora	03/22/2022	EF1	75.00K	0.00K
Rocky Hill	05/04/2021	EF1	10.00K	0.00K
Truitt	05/02/2021	EF1	8.00K	0.00K
Way	12/23/2020	EF0	5.00K	0.00K
Cameron	12/29/2019	EF0	1.00K	0.00K
Rocky Hill	11/1/2018	EF1	15.00K	0.00K
Madison Airport	8/17/2018	EF1	500.00K	0.00K
Flora Lane Airport	3/11/2018	EF0	35.00K	0.00K
Flora Lane Airport	4/30/2017	EF1	10.00K	0.00K
Flora	4/30/2017	EF1	40.00K	0.00K
Flora	4/30/2017	EF1	100.00K	0.00K

Source: National Climatic Data Center

NOAA SRVGIS Tornado Data for Madison County, MS



NOAA SRVGIS Tornado Paths
Enhanced Fujita Scale

- EF 0
- EF 1
- EF 2
- EF 3
- EF 4
- EF 5
- Municipalities
- Interstates
- Major Highways
- Major Local Roads

January 2015 - December 2025
Time Frame for all Data Represented

Incidents Per Year >	Year	Hinds Co.
	2015	1
	2016	0
	2017	3
	2018	3
	2019	1
	2020	1
	2021	2
	2022	11
	2023	3
	2024	3
	2025	0

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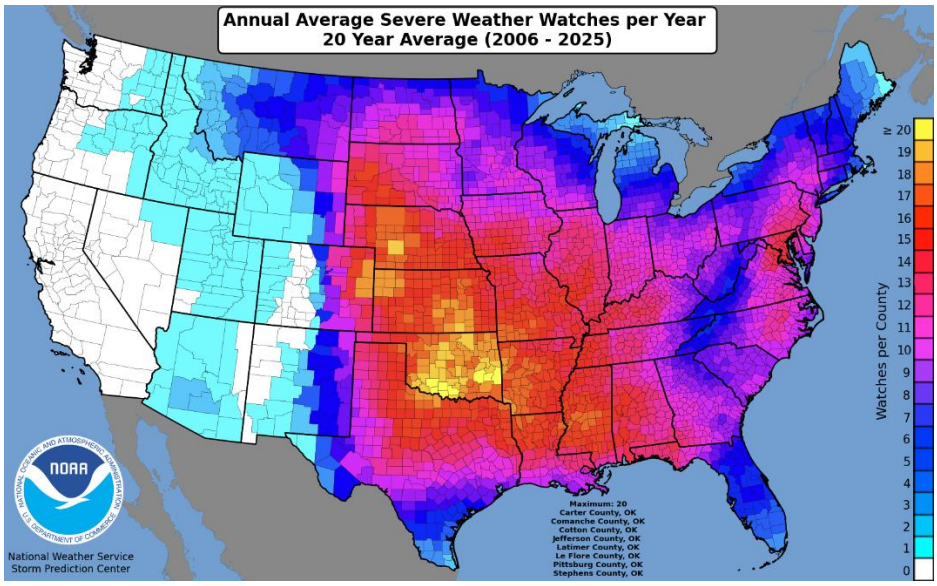
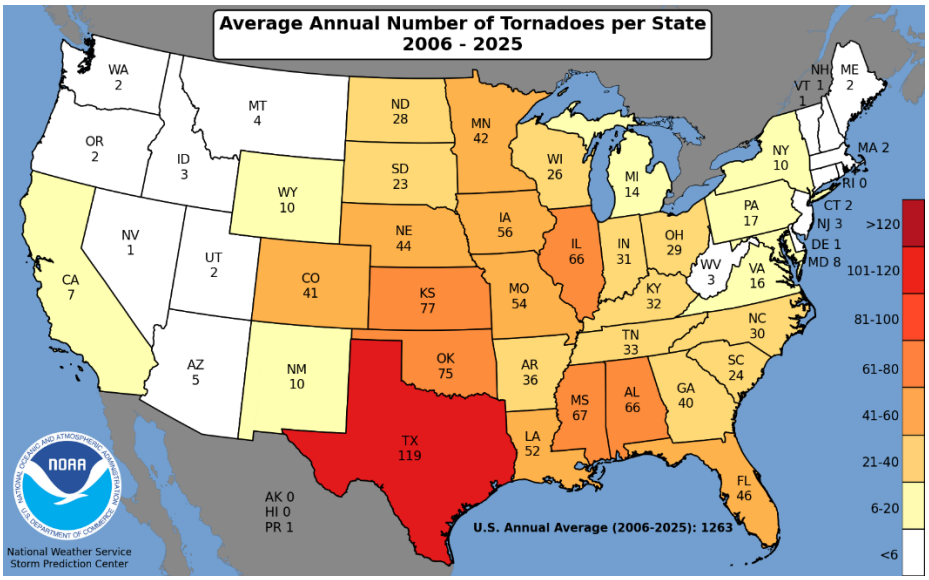
Probability of Future Occurrence

Mississippi is located in the middle latitudes, which provide some of the most favorable environment for tornado development. On average, 43 tornadoes occur in Mississippi annually according to NOAA. Therefore, future occurrences of tornado activity in the City of Ridgeland is unavoidable and highly likely with multiple annual occurrences expected. However, scientists can't predict the precise location of when and where the next tornado will occur in the City of Ridgeland. Tornadoes are the most unpredictable force of nature; they can strike anywhere at any time as long as atmospheric conditions are favorable. Tornadoes can leave a small path of destruction with very little to no visible damage, or they can leave a community destroyed with hundreds of lives lost.





Tropical Storms

Description

According to the National Hurricane Center, a tropical cyclone is a rotating, organized system of clouds and thunderstorms that originate over tropical or subtropical waters and has a closed low-level circulation. Tropical cyclones rotate counterclockwise in the Northern Hemisphere. They are classified as follows:

Tropical Depression: a tropical cyclone with maximum sustained winds of 38 mph or less.

Tropical Storm: a tropical cyclone with maximum sustained winds of 39 to 73 mph.

Hurricane: a tropical cyclone with maximum sustained winds of 74 mph or higher.

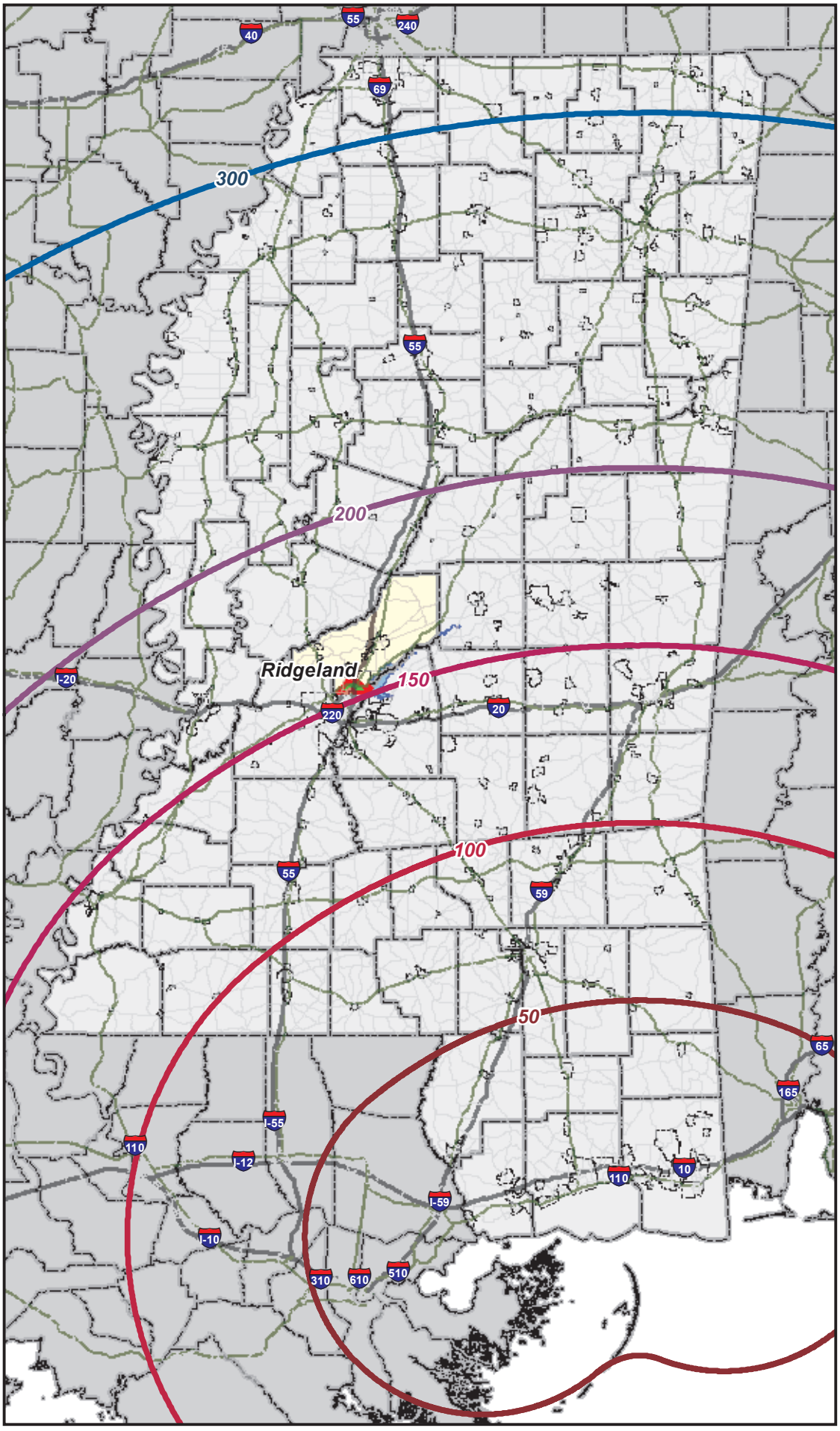
Major Hurricane: A tropical cyclone with maximum sustained winds of 111 mph or higher, corresponding to a Category 3,4, or 5 on the Saffir-Simpson Hurricane Wind Scale.

Hurricanes can produce extremely powerful winds, torrential rain, high waves, damaging storm surge, tornadoes, and even flash flooding. Cyclones feed on heat released in the ocean when moist air rises. 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. Once cyclones move over land they begin to lose their strength. Coastal areas are most vulnerable to the impacts of cyclones, but their wrath can be felt well inland depending upon the size and strength of the storm. Hurricane season in the Atlantic begins, June 1st and ends November 30th.

Location and Extent

The City of Ridgeland, located just over 170 miles north of Mississippi's Gulf Coast, is not vulnerable to a direct impact of tropical storms; however, all of the City of Ridgeland is susceptible to the impacts of Hurricanes and other tropical storms as they come ashore the Gulf Coast and move inland. The City of Ridgeland is most susceptible to the spinoff effects of hurricanes such as possible tornadoes and heavy downpours, which can result in local flooding. In addition, strong winds can damage roof tops, vinyl siding, and unsecured items outside, as well as down trees and power lines.

Proximity to Mississippi Gulf Coast



Radius From MS Gulf Coast Distance

- 300 Miles
- 200 Miles
- 150 Miles
- 100 Miles
- 50 Miles
- Municipalities
- Interstates
- Major Highways
- Major Local Roads

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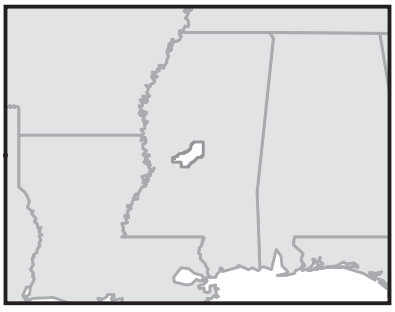


The strength and magnitude of a hurricane is measured using the Saffir-Simpson Wind Scale. The scale uses a 1 to 5 categorization distinguished by the intensities of a storm's sustained winds. Table 4.21 explains the various categories associated with the Saffir-Simpson Scale and the type of damage associated with each rising category.

Table 4.21 **Saffir-Simpson Wind Scale**

Category	Wind Speed (mph)	Summary	Types of Damage
One	74 – 95	Dangerous winds will produce some damage	Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.
Two	96 – 110	Extremely dangerous winds will cause extensive damage	Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.
Three	111 – 129	Devastating damage will occur	Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.
Four	130 – 156	Catastrophic damage will occur	Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possible months. Most of the area will be uninhabitable for weeks or months.
Five	157 or higher	Catastrophic damage will occur	A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

Source: National Hurricane Center

Previous Occurrences

Over the years, Mississippi has seen the wrath of many hurricanes, most notably Hurricane Camille in 1969 and Hurricane Katrina in 2005. Hurricane Camille produced winds in excess of 200 mph and tides over 20 feet as it smashed into the Gulf Coast. At least 250 lives were lost, with another 100 missing. Some 5,000 homes were totally destroyed and 40,000 were heavily damaged. Hurricane Katrina, which is one of the nations' most costly natural disasters with over $81 billion in damage, caused catastrophic damage across large portions of the Gulf Coast including Louisiana, Alabama and Mississippi. Entire neighborhoods were completely destroyed by the storm surge along the coast. However, the devastation was not only confined to the coastal region, widespread and significant damage was reported well inland including damage in parts of Madison County. Hurricane force winds which were reported as far north as Central Mississippi, destroyed thousands of acres of forestland and damaged countless rooftops. Katrina produced winds in excess of 130 mph and storm surge over 35 feet as it came ashore. Over 1,600 deaths are attributed to Katrina with 231 reported in Mississippi. Recent hurricanes and/or tropical storms that have come ashore and impacted Mississippi are included in Table 4.22 and Map 4.8.

Table 4.22 **Recent Tropical Storm Events**

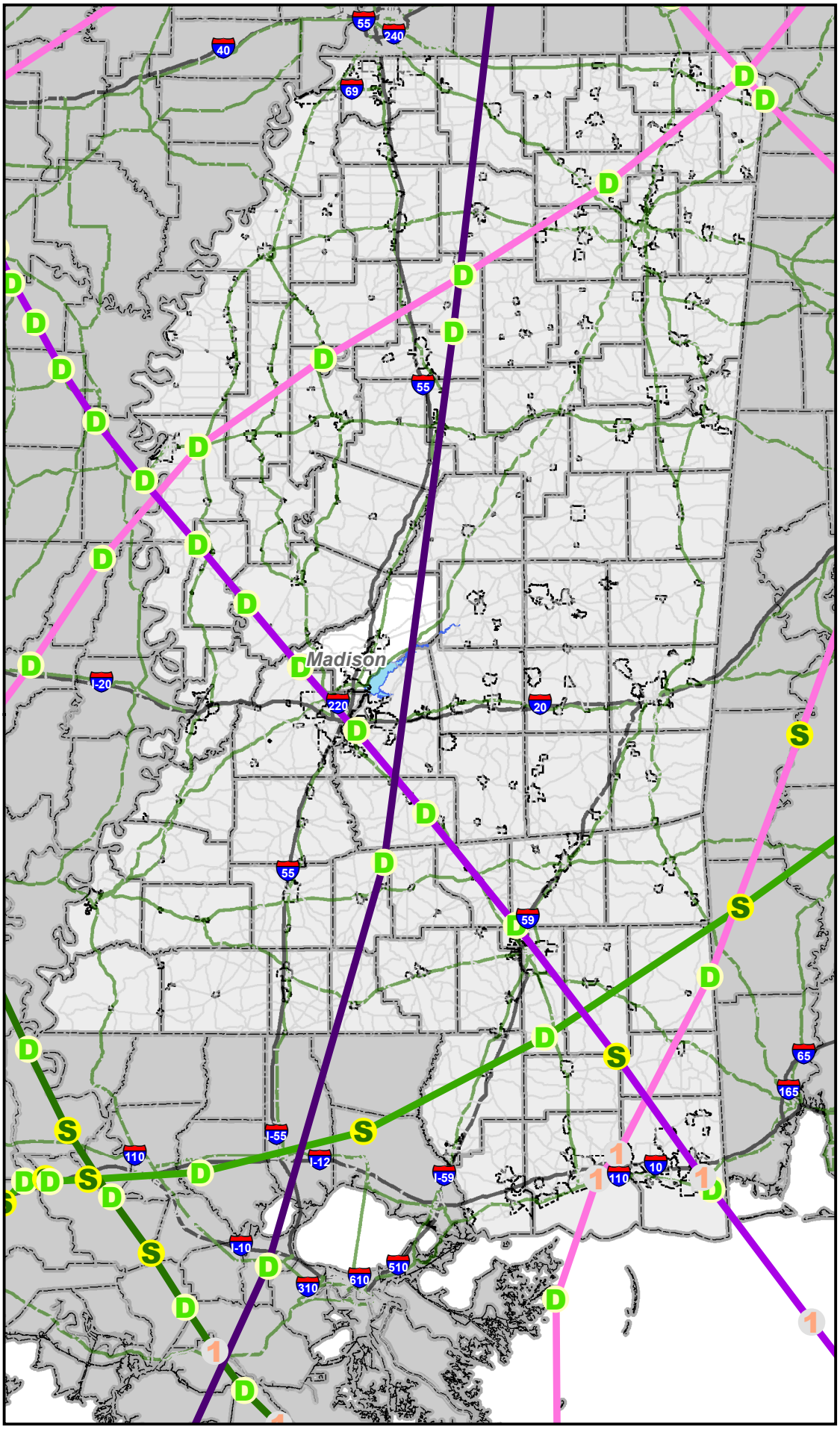
Date	Event
August 30, 2021	Hurricane Ida
September 4, 2018	Tropical Storm Gordon
June 21, 2017	Tropical Storm Cindy

Event Summary: Hurricane Katrina

As Katrina moved northward, the impact across Central, East-Central and Northeast Mississippi was widespread and significant. The region east of Monticello to Brandon to Ackerman saw millions of trees and power lines blown down. Three fatalities occurred across Simpson, Lauderdale and Leake counties. Each of these fatalities were from fallen trees. The agricultural industry was severely impacted across the region with the biggest losses in the timber and poultry industries. Thousands of power poles and countless miles of power lines were taken down by fallen trees and wind. The power outages across the region were widespread and lasted for a period of a few days to as long as 4 weeks. An example of how widespread the power outages were can be shown from the Jackson Metro area, which includes Hinds, Madison and Rankin counties. The first night, the Metro Area had 97% of the area out of power.

Source: National Climatic Data Center

NOAA Mississippi Tropical Storm Data for Madison County



National Hurricane Center Wind Intensity

- 5 Category 5
- 4 Category 4
- 3 Category 3
- 2 Category 2
- 1 Category 1
- S Tropical Storm
- D Tropical Depression

Tropical Storm Path Season

- 2011
- 2012
- 2013
- 2014
- 2015
- 2016
- 2017
- 2018
- 2019
- 2020
- Municipalities
- Interstates
- Major Highways
- Major Local Roads

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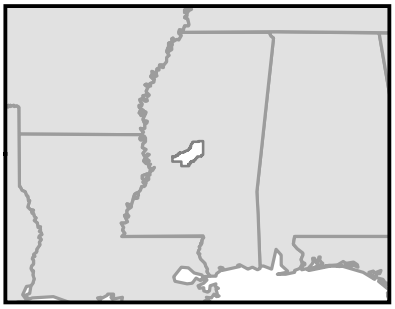
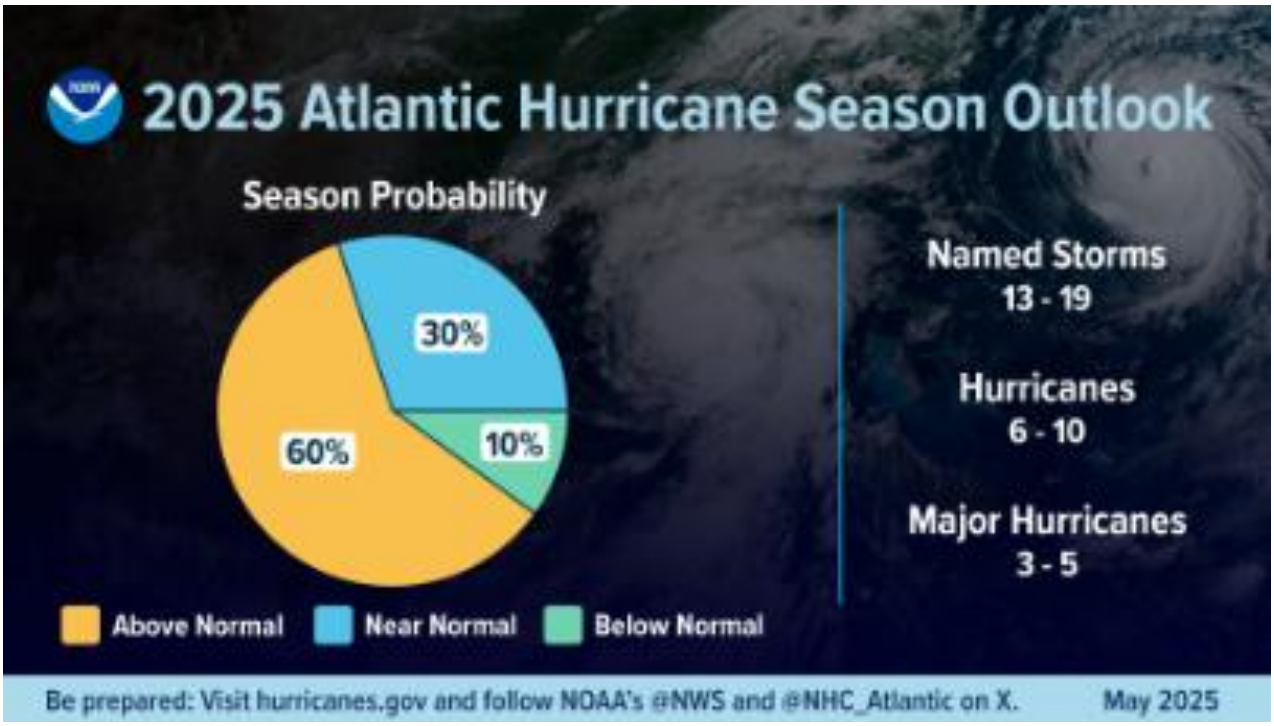


Probability of Future Occurrence

Future tropical related storms are unavoidable in Mississippi due to its geographical location. Forecasters with NOAA's Climate Prediction Center release an annual hurricane season outlook, which predicts tropical storm activity. The 2025 Atlantic Hurricane Season Outlook predicted a 60% chance of an above-normal season, a 30% chance of a near-normal season and a 10% chance of a below-normal season. Predictions for the upcoming 2026 Atlantic Hurricane Season are not yet available.



Wildfires

Description

A wildfire is an uncontrolled fire burning in an area of vegetative fuels such as grasslands, brush, or woodlands. Other names such as brush fire or forest fire may be used to describe a wildfire depending on the type of vegetation being burned. Heavier fuels with high continuity, steep slopes, high temperatures, low humidity, low rainfall, and high winds all work to increase the frequency and severity of wildfire for people and property located within wildfire hazard areas, and particularly for those in rural areas with limited capabilities for rapid fire suppression. When not quickly detected and contained, wildfires have the potential to cause extensive damage to property and threaten human life.

A wildfire can occur naturally such as a spark from lightning igniting a fire or as a result of human actions. However, the vast majority of wildfires across the United States are started as a result of human actions such as improperly discarding cigarettes, burning debris, or not extinguishing campfires.

Location and Extent

The magnitude of wildfire events are often characterized by their speed of propagation, total number of acres burned, and potential destructive impacts to people and property. The magnitude and severity of wildfires is greatly dependent on weather; fuel conditions; topography; and existing fire detection, control and suppression capabilities.

According to the forest inventory and analysis report by the Mississippi Forestry Commission, the area of forestland in Madison County totaled 257,918 acres.

Table 4.23 **Forest Inventory**

County	Pine (acres)	Hardwood (acres)	Forested (acres)
Madison County	154,750	103,168	257,918

Source: Mississippi Forestry Commission

Previous Occurrences

Map 4.9 depicts each recorded fire by the Mississippi Forestry Commission (MFC) for 2013 through 2022 for Madison County, color coded by fiscal year. The data collected by the MFC illustrates that 213 fires occurred between 2013 and 2022.

Table 4.24 Reported Wildfire Occurrences 2013 – 2022

County	Number of Fires	Total Acres Burned	Average Fire Size (Acres)
Madison County	213	3,632	17.05

Source: Mississippi Forestry Commission

Table 4.25 Wildfire Incident Reports 2013 – 2022 in City

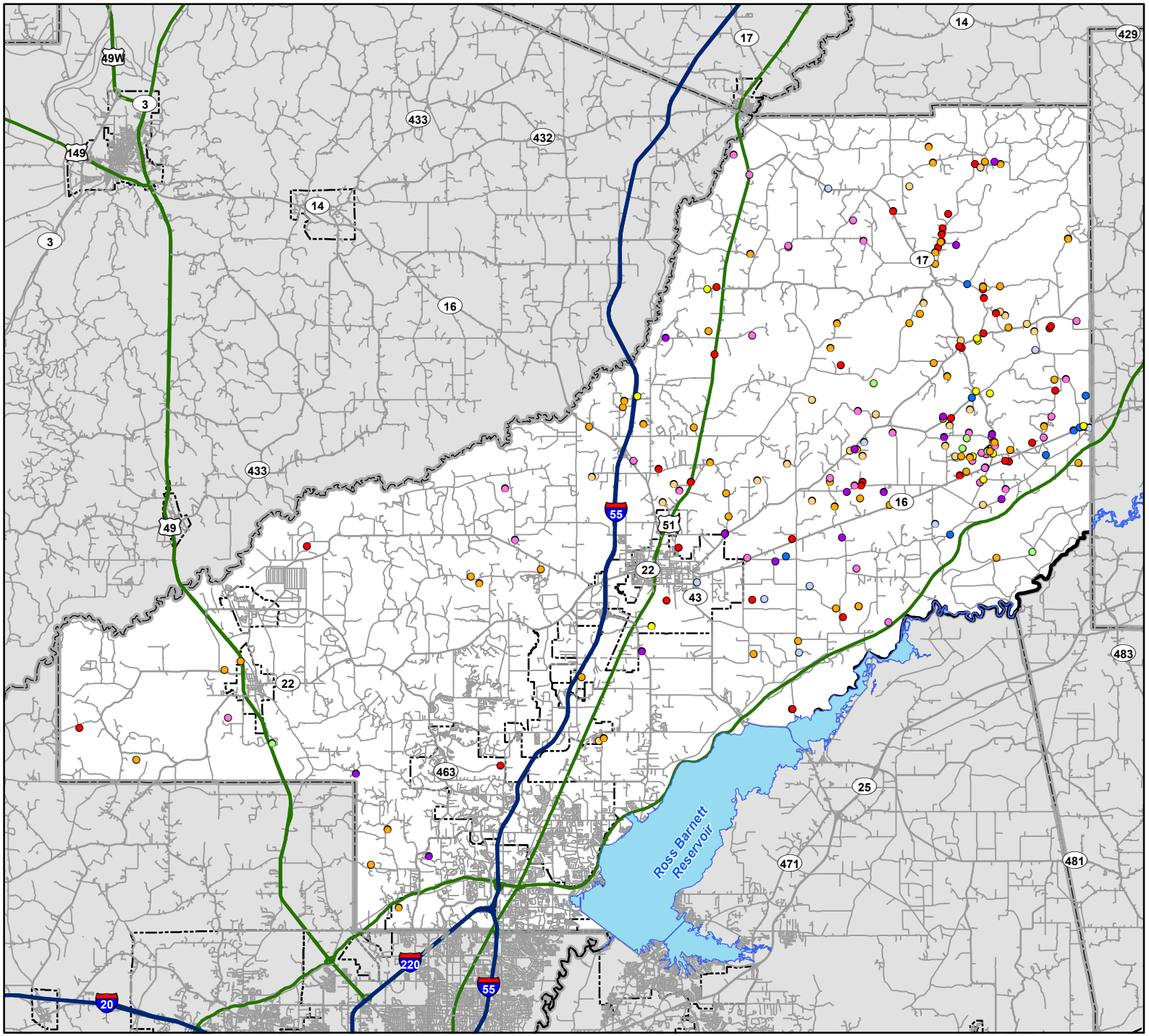
2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	TOTAL
25	26	39	35	16	10	9	6	12	35	213

Source: Mississippi Forestry Commission

Probability of Future Occurrence

Due to the annual occurrence of wildfires throughout Madison County, they will continue to be a highly likely occurrence, meaning multiple annual occurrences are expected throughout the county. Furthermore, wildfires are a natural part of the ecosystem, and future fires are unavailable. However, through outreach and education programs the number of manmade wildfires can be significantly reduced. To determine possible locations of future wildfires, Map 4.10 was created. The high occurrence fire areas were calculated by determining the distance between each fire recorded from 2013 through 2023.

MFC Wildfire Fiscal Year Data for Madison County, MS



MS Forestry Commission

Wildfire Year

- 2013
- 2014
- 2015
- 2016
- 2017
- 2018
- 2019
- 2020
- 2021
- 2022
- 2023

Interstates

Major Highways

Major Local Roads

Municipalities

January 2013 - December 2023
Time Frame for all Data Represented

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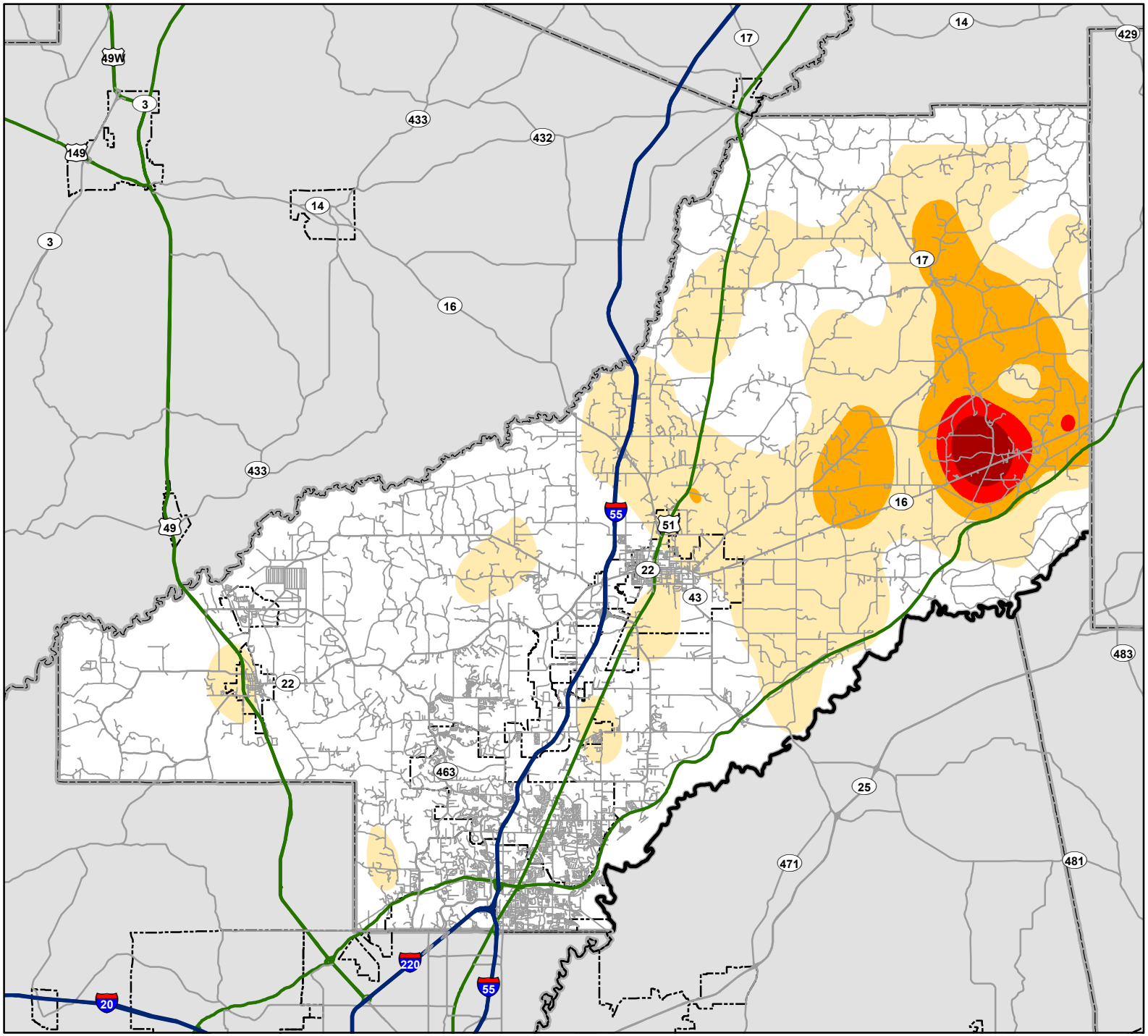
MFC High Occurrence Wildfire Areas for Madison County, MS



MS Forestry Commission
Occurrence Density

- High Concentration
- Medium Concentration
- Moderate Concentration
- Low Concentration
- Other
- Municipalities
- Interstates
- Major Highways
- Major Local Roads

January 2013 - December 2023
Time Frame for all Data Represented

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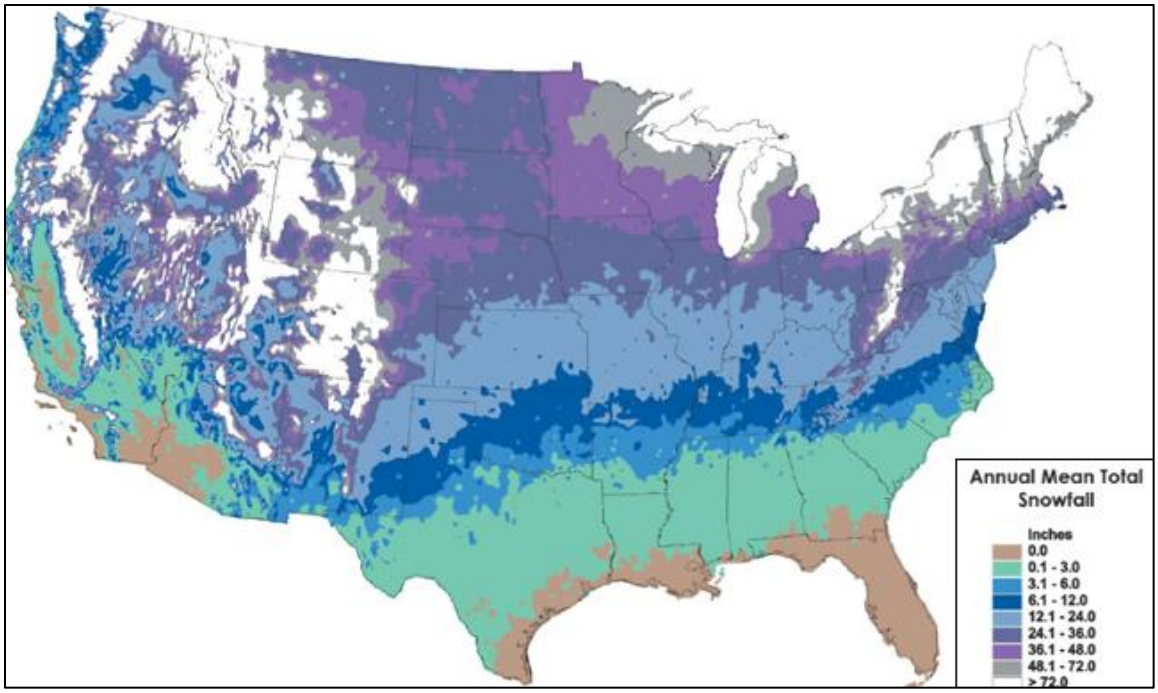
Winter Storms

Description

Typically, a winter storm in the south lasts several days and is accompanied by any combination of freezing rain, sleet, light snow, dangerously cold temperatures, and/or high winds.

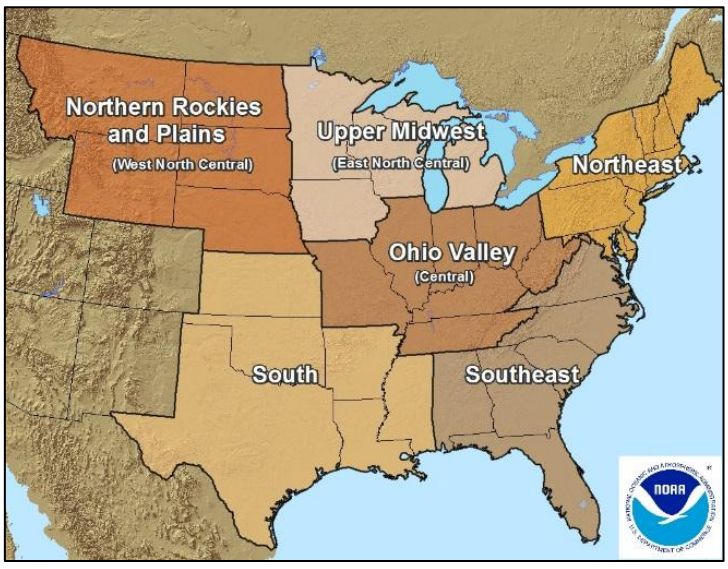
Snow	Sleet	Freezing Rain
Occurs when cloud temperature is cold enough for snow to form and the air above the ground does not melt it. **Flurries:** Light snow falling for short durations. No accumulation. **Showers:** Snow falling at varying intensities for brief periods of time. Some accumulation is possible. **Blowing Snow:** Wind driven snow that reduces visibility and causes significant drifting. Blowing snow is mostly loose snow on the ground that is picked up by the wind. **Blizzard:** Winds at least 35 mph with snow and blowing snow reducing visibility to ¼ mile or less.	Rain drops that freeze into ice pellets before reaching the ground. Sleet usually bounces when hitting a surface and does not stick to objects. However, it can accumulate like snow and cause a hazard to motorist. A ½ inch of sleet accumulation can be a serious hazard.	Rain that falls onto a surface with a temperature below freezing. This causes it to freeze to surfaces, such as trees, cars, and roads, forming a coating or glaze of ice. Even small accumulations of ice can cause a significant hazard.



Location and Extent

All of the City of Ridgeland is susceptible to the occurrence of winter storms. According to the State of Mississippi Standard Hazard Mitigation Plan, an ice storm, heavy snow, or winter storm event is more likely to occur in areas north of Interstate 20 but occur throughout Central Mississippi on occasion.

Recently, the National Climatic Data Center (NCDC) developed the Regional Snowfall Index (RSI), which ranks the impacts of snowstorms from 0 to 5, similar to the Fajita scale for tornadoes or the Saffir-Simpson scale for hurricanes, using a mathematical equation that takes into account different thresholds. However, the RSI differs from other indices because it includes population. RSI is based on spatial extent of the storm, the amount of snowfall, and the juxtaposition of these elements with population. The RSI includes a separate index for each of the six NCDC climate regions in the eastern two-thirds of the nation. Mississippi falls in the NCDC South region. Obviously, the amount of snowfall in the Northeast region is very different from the Southeast



region, which is why it is important to place snowstorms into perspective on a regional scale to understand their true impacts. For example, a snowstorm in the Southeast may receive less snow than the Northeast for the same storm, but the societal impacts may be similar. This is because the Northeast is more resilient to snowstorms, having more snow removal equipment and people with more experience driving in snowstorms, whereas a small storm may create the same impacts of a larger storm in the Northeast because the Southeast is not as resilient to snowstorms. The regional snowfall thresholds for the south are 2", 5", 10", and 15" while thresholds for the Upper Midwest region are 3", 7", 14" and 21". Table 4.26 list the regional snowfall thresholds for all NCDC regions.

Table 4.26 **Regional Snowfall Index Thresholds**

Northeast	Northern Rockies and Plains	Ohio Valley	Southeast	South	Upper Midwest
>=4"	>=3"	>=3"	>=2"	>=2"	>=3"
>=10"	>=7"	>=6"	>=5"	>=5"	>=7"
>=20"	>=14"	>=12"	>=10"	>=10"	>=14"
>=30"	>=21"	>=18"	>=15"	>=15"	>=21"

Source: National Climatic Data Center

RSI is reported as both a raw index value and a categorical value from 0 through 5. The raw index value can range from 0.01 to 35.00. These values are converted to categories, which are detailed in Table 4.27. Nationally, a Category 5 snowstorm is a very rare event while Category 0 and 1 snowstorms are quite typical.

Table 4.27 **Regional Snowfall Index**

Category	RSI Value	Description
5	>18	Extreme
4	10-18	Crippling
3	6-10	Major
2	3-6	Significant
1	1-3	Notable
0	<1	--

Source: National Climatic Data Center

Previous Occurrences

Table 4.28 Historical Winter Weather Activity

Event Type	Date	Magnitude	Death	Injuries	Damage	
					Property	Crop
Winter Weather	01/10/2025	0.1 inches sleet	0	0	0.00K	0.00K
Winter Weather	01/15/2024	Light freezing rain and sleet	0	0	100.00K	0.00K
Heavy Snow	01/16/2022	1.5-4 inches snowfall	0	0	0.00K	0.00K
Winter Storm	02/17/2021	Sleet, freezing rain, ice	0	0	50.00K	0.00K
Winter Weather	02/12/2021	Light freezing rain	0	0	3.00K	0.00K
Heavy Snow	01/10/2021	2-3 inches of snowfall	0	0	0.00K	0.00K
Winter Weather	01/16/2018	Light snow and sleet	0	0	0.00K	0.00K
Heavy Snow	12/08/2017	4.5" of snowfall	0	0	0.00K	0.00K

Source: National Climatic Data Center

Table 4.29 Regional Snowfall Index Event Ratings

Region	Event Date	Category	Index
South	February 28-30, 2025		
South	February 18-20,2025	1	1.311
South	January 20-22, 2025	1	2.562
South	January 9-11, 2025	2	4.130
South	January 7-10, 2024	1	1.638
South	February 1-5, 2022	2	3.111
South	February 13-20, 2021	3	8.048
South	December 30.2020-January 3, 2021	1	1.788
South	January 11-14, 2019	1	1.233
South	December 8 – 10, 2017	1	1.038

Source: National Climatic Data Center

Probability of Future Occurrence

Winter weather events will continue to be a likely occurrence within the City of Ridgeland meaning at least one annual occurrence of light sleet, flurries, and/or snow accumulation is expected annually. According to the National Climatic Data Center, a snowfall greater than one inch occurs every 2 ½ years in Central Mississippi, heavy snowfall (three inches or greater) occurs once every four years, and the longest period between one-inch snow fall has been seven years.

Man-Made Hazard Profiles

Although mitigation planning traditionally focuses on planning for and mitigating against natural hazards, federal and state officials encourage communities to take an all-hazard approach by looking at the impact of both man-made and natural hazards. Therefore, the City of Ridgeland has elected to include two (2) human-caused hazard profiles in the development of this Hazard Mitigation Plan. However, at this time these two (2) human-caused hazards will not be analyzed in great length. Rather a brief explanation of why they pose a risk will be provided. However, this does not prevent these hazards from being profiled in more detail as future updates are made to this plan, and additional information is made available.

Nuclear Power Plants

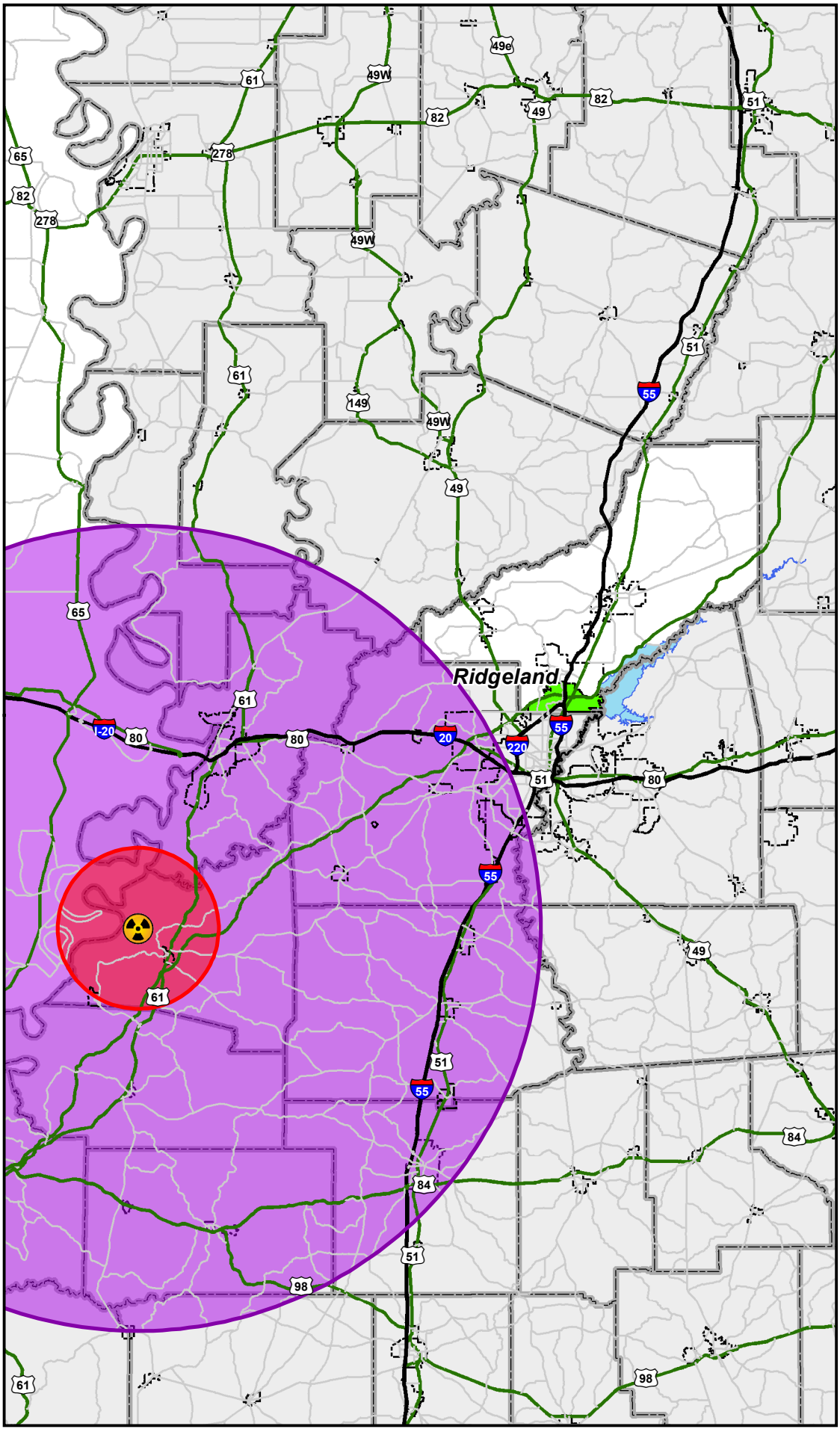
According to MEMA, there are two (2) commercial nuclear power plants, which may affect the health, safety and property of Mississippi residents. The first facility, River Bend Station, is located outside of Mississippi near St. Francisville, Louisiana approximately seventeen (17) miles south of Wilkinson County, and is a concern for South-West Mississippi. The second facility, Grand Gulf Nuclear Station is located approximately five (5) miles northwest of Port Gibson in Claiborne County, and is a concern for Central Mississippi.

Grand Gulf is the only nuclear power plant in Mississippi. In 2012, Grand Gulf completed a power upgrade that made the facility the largest single-unit nuclear power plant in the country and the fifth largest in the world. The facility operates a boiling water reactor with output to 1,443 megawatts. Mississippi maintains a Radiological Emergency Response Plan to prepare for radiological emergencies. The plan includes a Plume Exposure Pathway Zone (EPZ) with a 10-miles radius from the reactor, where the primary concern is people being harmed by direct radiation exposure. The second zone, an Ingestion Exposure Pathway Zone (IEP) includes a 50-mile radius from the facility, and the primary concern for this area is contamination by radioactive material of the water supplies, food crops and livestock. Mississippi counties at risk for an impact by nuclear facilities include:

County	Grand Gulf Nuclear Station	River Bend Station, LA
Claiborne	Plume exposure	
Warren	Ingestion	
Hinds	Ingestion	
Copiah	Ingestion	
Adams	Ingestion	Ingestion
Amite	Ingestion	Ingestion
Wilkinson	Ingestion	Ingestion
Franklin	Ingestion	Ingestion
Pike		Ingestion
Jefferson	Ingestion	
Lincoln	Ingestion	
Simpson	Ingestion	
Rankin	Ingestion	
Madison	**Ingestion**	
Yazoo	Ingestion	
Sharkey	Ingestion	
Issaquena	Ingestion	

The construction and operation of nuclear facilities are closely monitored and regulated by the Nuclear Regulatory Commission (NRC); however, accidents are still possible. According to FEMA, the primary concern following an incident or accident involving nuclear radiation is the extent of radiation inhalation and ingestion of radioactive isotopes, which can cause acute health effects (e.g. death, burns, and severe impairment), chronic health effects (e.g. cancer), and psychological effects.

Grand Gulf Nuclear Station 10 & 50 Mile Radius



GGNS 10- & 50-Mile Radius

- Grand Gulf Nuclear Station
- 10 Mile Radius
- 50 Mile Radius
- Interstates
- Major Highways
- Major Local Roads
- Municipalities
- County Boundaries

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Hazardous Materials Transportation Accidents

Hazardous materials are materials or substances which, because of their chemical, physical, or biological nature, pose a potential risk to life, health, property, or the environment if they are released. In today's society, all modes of transportation including air, rail, water, and roadways carry thousands of shipments of hazardous materials on a daily basis. Therefore, the City of Ridgeland is subject to hazardous material accidents on any of its modes of transportation.

Major thoroughfares in the City of Ridgeland include:

Highways: 51
Interstates: 55, 220
Railways: Canadian National/Kansas City Southern

Large-scale or serous hazardous material transportation incidents that involve a widespread release of harmful material can adversely impact the health, safety, and welfare of those in the immediate vicinity of the accident site, as well as those who come in contact with the spill or airborne plume. Almost all hazardous material transportation incidents are the result of an accident or other human error. Rarely are they caused by mechanical failure of the carrying vessel. While it is unlikely that small accidents would significantly impact a region, certain accidents could have regional secondary impacts such as a large-scale evacuation or disruption of critical transportation routes.

The City of Ridgeland has been fortunate to not experience a major hazardous material transportation incident in recent history. However, numerous minor incidents have occurred, but none that resulted in multiple deaths or injuries.

Public Health Emergency Profile

Continuing the all-hazard mitigation planning approach, the City of Ridgeland has elected to include Public Health hazards to this plan considering the massive previous threat of COVID-19. The Mitigation Council of Ridgeland recognizes public health threats as generally rare, but still possible. Public health threats are considered bacterial and/or viral diseases as well as food and water borne illnesses that could spread rapidly through an environment.

A pandemic is a global outbreak of disease. Pandemics happen when a new virus emerges to infect people and can spread between people sustainably. Because there is little to no pre-existing immunity against the new virus, it spreads worldwide. The virus that causes COVID-19 is infecting people and spreading easily from person-to-person. This profile will include data related to the COVID-19 pandemic in Madison County, the state of Mississippi, as well as other information related to the potentiality of a Public Health Emergency in the City of Ridgeland and/or Madison County. In development of this profile, a review was conducted of the guidelines stated in "Public Health Emergency Preparedness and Response Capabilities: National Standards for State, Local, Tribal and Territorial Public Health", a document produced by the Center for Disease Control (CDC) in October of 2018 and updated in January 2019.

Public Health Emergencies

According to the World Health Organization, a Public Health Emergency (hereafter referred to as a PHE) is defined as:

> an occurrence or imminent threat of an illness or health condition, caused by bio terrorism, epidemic or pandemic disease, or (a) novel and highly fatal infectious agent or biological toxin, that poses a substantial risk of a significant number of human facilities or incidents or permanent or long-term disability

The declaration of a state of a Public Health Emergency permits the governor to suspend state regulations, change the functions of state agencies. In the event of a PHE, local governments will be required to balance a diverse set of roles in both response and consistent collaboration with State and Federal public health agencies.

COVID-19

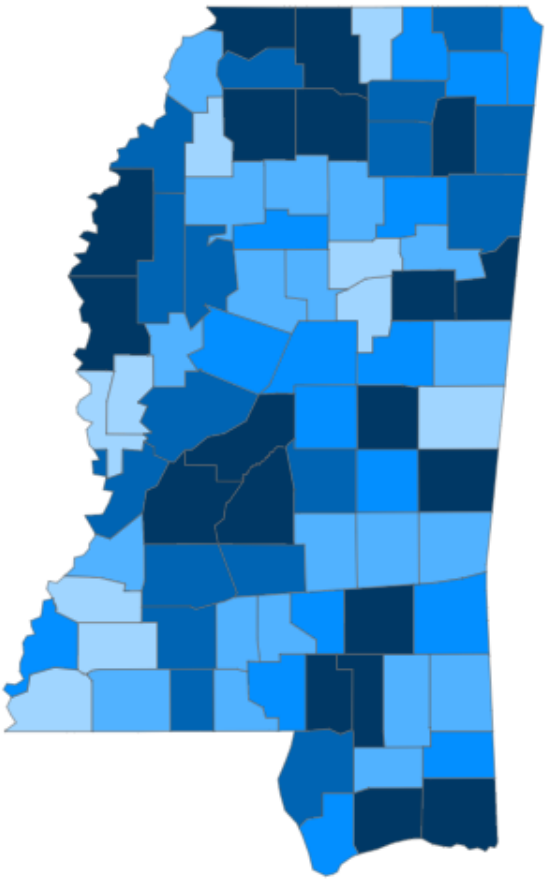
On March 11, 2020, the Mississippi State Department of Health (MSDH) confirmed the first presumptive case of the novel coronavirus (COVID-19) in the state of Mississippi. This was followed by a State of Emergency Declaration issued by Governor Tate Reeves on March 14, 2020.

The Mississippi State Department of Health describes COVID-19 as "a new respiratory virus that causes flu-like illness ranging from mild to severe, with symptoms of fever, coughing, fatigue and difficulty breathing. Like the flu, COVID-19 spreads person-to-person by close contact (within 6 feet) and by coughing or sneezing. COVID-19 may also spread by touching surfaces contaminated by the virus".

On April 1, 2020, Governor Tate Reeves signed Executive Order No. 1466, declaring that beginning at 5:00pm on April 3 through April 20 at 8:00am, all individuals currently living in the State of Mississippi are ordered to stay at home or in their place of residence unless otherwise exempted in the Executive Order. Testing sites were provided by local medical providers as well as drive thru testing in select areas. Home isolation became mandatory for those that have tested positive for the virus per a statewide order issued by State Health Officer Thomas Dobbs. Various Executive Orders from Governor Reeves instituted restrictions on public gatherings and events, limitations of customers for select businesses, mask mandates and other requirements throughout the ongoing COVID-19 pandemic.

Statewide Data as of November 2020

Mississippi COVID-19
Cases and Deaths by Race with Ethnicity
as of 6 pm CT, November 29, 2020



Total Cases

153,270

	American Indian or Alaska Native	Asian	Black	White	Other	Unknown
Non Hispanic	669	461	44,845	51,470	1,670	850
Hispanic	23	18	204	1,193	2,225	234
Unknown Ethnicity	811	123	9,914	12,824	5,315	20,421

Total Deaths

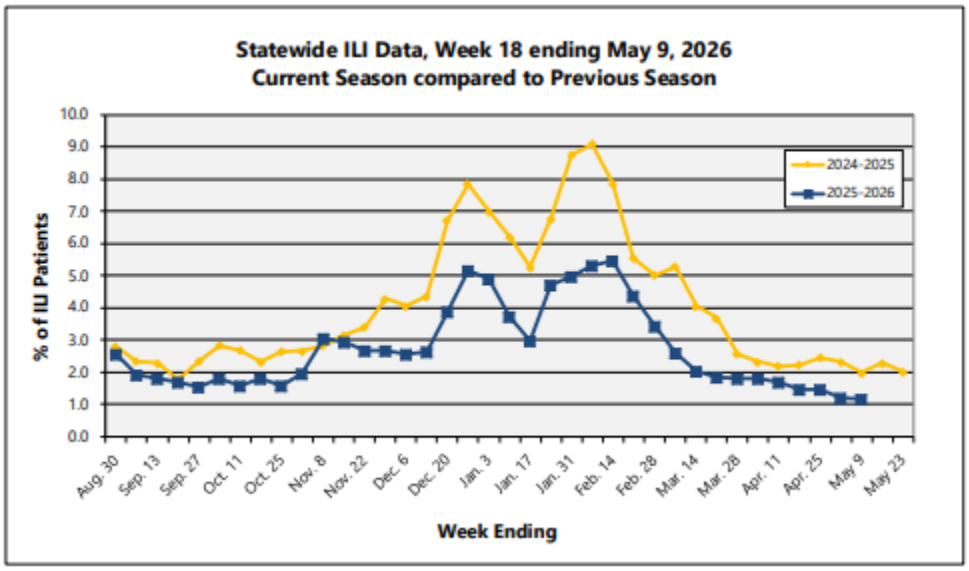
3,807

	American Indian or Alaska Native	Asian	Black	White	Other	Unknown
Non Hispanic	68	5	1,474	1,577	19	6
Hispanic	1	0	7	20	16	1
Unknown Ethnicity	21	6	196	271	30	89

Source: MSDH

Seasonal Flu

Each flu season brings new strains of flu that you need protection against. Flu vaccination can reduce flu illnesses, doctors' visits, and missed work and school due to flu, as well as prevent flu-related hospitalizations. The Flu vaccination is available are available at local health departments, hospitals, urgent care clinics, and at select private retail stores. As the seasonal flu vaccination is not effective for children under the age of 6 months, others receiving the vaccination can reduce the likelihood of the flu spreading to this unvaccinated population. Shown below is a graphic illustrating the percentage of patients that had influenza like illnesses (ILI) as defined by the MSDH.



Source: MSDH

Health Indicators

Table 4.30 **Health Behaviors**

Behavior	Mississippi	Madison County
Adult Smoking	20%	21%
Adult Obesity	40%	36%
Physical inactivity*	32%	22%
Excessive drinking	14%	15%

*Percentage of adults age 20 and over reporting no leisure-time physical activity
Source: CountyHealthRankings.org

Community Assets

Community assets are broadly described as anything that is important to the character and function of a community and generally include four categories: people, economy, the built environment, and the natural environment. Although all assets may be affected by hazards, some assets are more vulnerable because of their physical characteristics or socioeconomic uses. To better understand what is at risk in the city to the hazards identified, the City of Ridgeland has identified Community Assets in this portion of the plan.

People

The total population in the City of Ridgeland according to the 2020 Census is 24,340. Table 4.30 lists 2020 population numbers along with populations that may have unique vulnerabilities (elderly age 65 and over; youth under the age of 20; and population below the poverty level).

Table 4.30 City of Ridgeland Population

Jurisdiction	2020 U.S. Census					2024 American Community Survey	
	Total Population	Pop. 65+	% Pop. 65+	Pop. <20	% Pop. <20	Pop. Below Poverty Level	% Below Poverty
Ridgeland	24,340	5,315	21.8%	7,428	30.5%	3,578	14.7%

Source: U.S. Census Bureau

Additional sectors of the population with unique vulnerabilities include students and visiting populations associated with colleges and universities. Populations with unique vulnerabilities may also include special needs populations such as hospitals and long-term care patients.

Table 4.31 Colleges and Universities

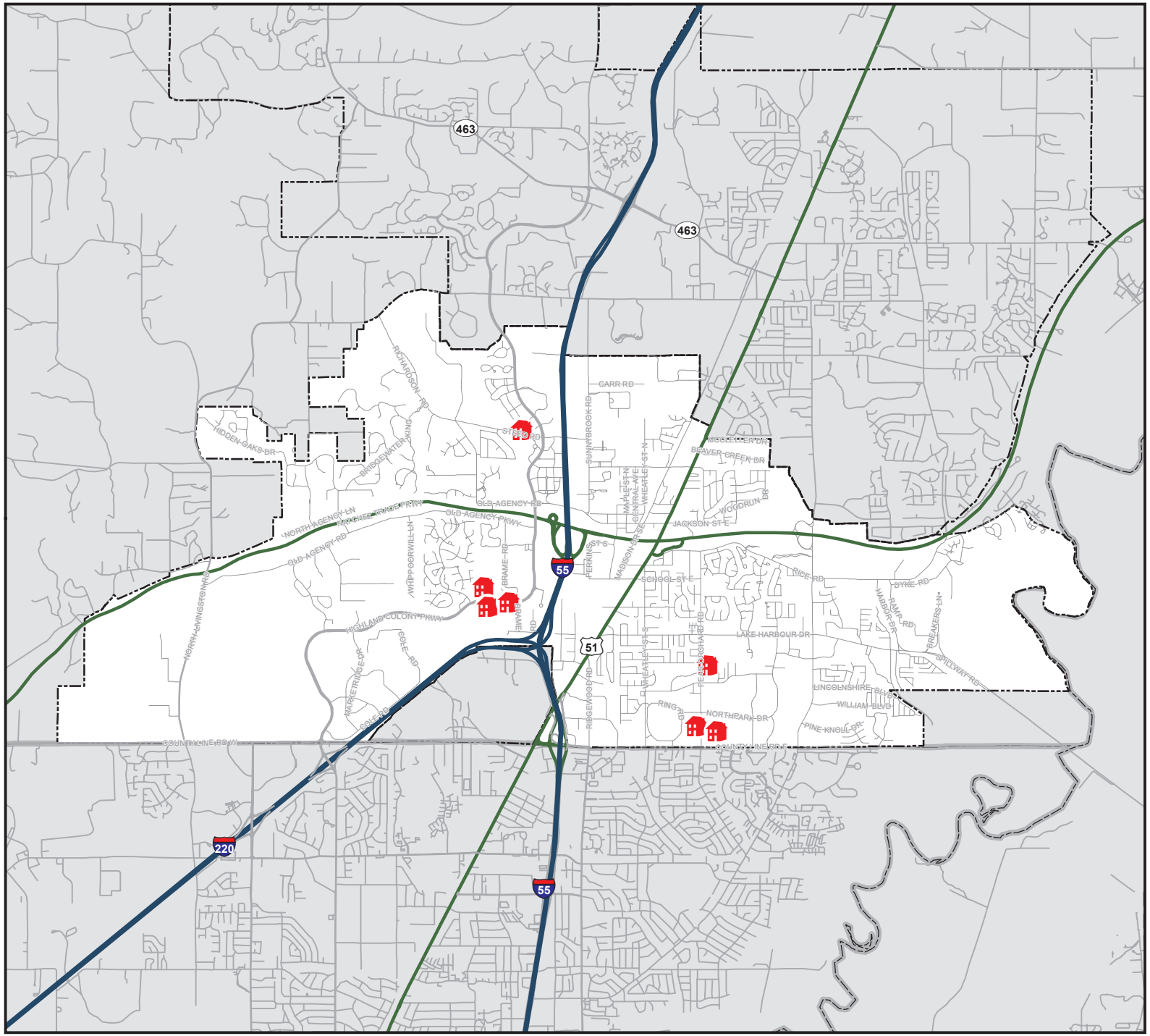
College/University	Address	City	2025-2026 Enrollment
Holmes Community College	412 West Ridgeland Ave.	Ridgeland	3,600

Table 4.32 Assisted Living /Long Term Care Facilities

Facility	Location
The Waterford	619 Highland Colony Parkway
Highland Home	638 Highland Colony Parkway
SummerHouse Beau Ridge	650 Highland Colony Parkway
The Blake	600 Steed Road
Chateau Ridgeland	745 S Pear Orchard Road
The Pointe	410 Orchard Park
The Orchard	600 Pear Orchard Road

Source: Local Mitigation Council

Assisted Living & Long Term Care Facility Data for the City of Ridgeland, MS



LEGEND

- Asst. Living/Long Term Care
- Municipalities
- Interstates
- Major Highways
- Major Local Roads

Prepared by

Central Mississippi Planning & Development District

Economy

After a disaster, economic resiliency drives recovery. The loss or inoperability of major employers in the City of Ridgeland could severely hamper the city's ability to recover from a disaster. Major employers identified by the Local Mitigation Council are listed in Table 4.33.

Table 4.33 **Major Employers**

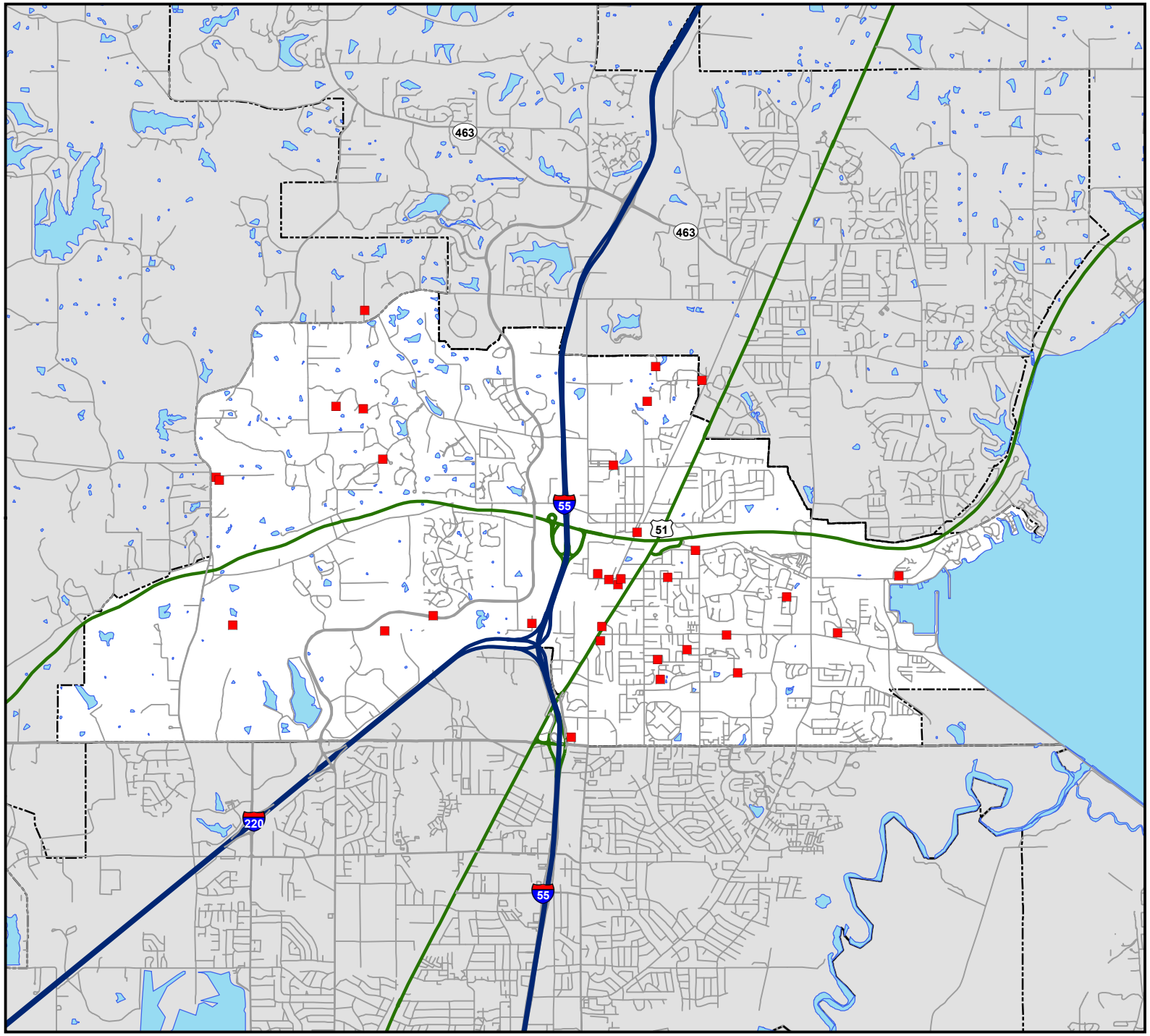
Facility	**Type of Facility**	**Estimated Employees**
C Spire Wireless	Telecommunications	700-900
Southern Farm Bureau	Insurance	600-800
BankPlus	Banking	600-900
Trustmark Bank	Banking	500-700
Cal-Maine Foods	Headquarters	450-650
BDO	Office	400-700
Madison County Schools	School	400-600
Southern Beverage	Industrial	350-500
Beyond Trust	Information Tech	150-250
Walmart Supercenter	Retail	300-400
Costco	Retail	250-350
Butler Snow	Legal	225-325
Holmes CC	School	150-250
Source: City of Ridgeland		

Critical Facilities

According to the State of Mississippi Standard Mitigation Plan, a critical facility is defined as any structure providing or housing critical services necessary to ensure the health and welfare of the population following a natural or man-made hazard event, including any facilities designated by the local governments in their Hazard Mitigation Plan. Critical infrastructure is defined as systems so vital to the State of Mississippi the incapacity of those systems would have a debilitating impact on security, economics, public health, safety, or any combination of those factors, including any infrastructure designated by local governments in their Hazard Mitigation Plan. Currently, the City of Ridgeland has identified thirty-two (32) critical facilities and infrastructure components. Each component has been identified as an essential service whose presence or operation is vital to the health, safety, and welfare of the city's residents. Table 4.34 and Map 4.13 provides a summary report of the critical facilities identified. There are four (4) critical facilities located in the floodplain, shown in bold.

Asset Name	Function	Address (from PDF)	Longitude	Latitude
CHARITY CHURCH WELL	Drinking Water	339 Charity Church Road	-90.102194	32.414238
LAKE HARBOUR WELL	Drinking Water	555 Lake Harbour Drive	-90.119345	32.413943
PEACH ORCHARD WELL	Drinking Water	220 Peach Orchard	-90.129952	32.410776
SCHOOL STREET WELL	Drinking Water	129 W. School Street	-90.136005	32.420578
OLD CANTON ROAD WELL	Drinking Water	7113 Old Canton Road	-90.110065	32.418876
NATCHEZ TRACE TANK	Drinking Water	184 Old Town Crossing	-90.133090	32.427366
HARDY ROAD WELL	Drinking Water	120 Hardy Road	-90.174962	32.456448
NORTHPARK WATER TANK	Drinking Water	250 Towne Center Blvd.	-90.129584	32.408157
WESTERN WATER TANK (Walter Payton)	Drinking Water	574 North Livingston Road	-90.197920	32.434680
HIGHLAND COLONY WELL	Drinking Water	414 Highland Colony Parkway	-90.171987	32.414534
SOUTH LIVINGSTON WELL	Drinking Water	318 North Livingston Road	-90.195365	32.415331
COLONY PARK BLVD. WELL	Drinking Water	1131 Colony Park Blvd.	-90.131502	32.444531
SALEM SQUARE LIFT STATION	Sanitary Sewer	230 Salem Square	-90.128416	32.421434
WHATABURGER LIFT STATION	Sanitary Sewer	125-Z Dyess Road	-90.143294	32.400599
M&F LIFT STATION	Sanitary Sewer	291 US-51	-90.138511	32.415051
WINDSONG COVE LIFT STATION	Sanitary Sewer	101 Windsong Cove	-90.172251	32.437011
BRAME ROAD LIFT STATION	Sanitary Sewer	303 Brame Road	-90.149300	32.415517
STOKES ROAD LIFT STATION	Sanitary Sewer	544 Stokes Road	-90.130198	32.449068
MATTHEWS ROAD LIFT STATION	Sanitary Sewer	401 Matthews Road	-90.123068	32.447217
RICE ROAD LIFT STATION	Sanitary Sewer	860 Rice Road Unit A	-90.124100	32.425000
TICO'S LIFT STATION	Sanitary Sewer	1536-Z E. County Line Road	-90.125400	32.412000
WHATABURGER LIFT STATION	Sanitary Sewer	125-Z Dyess Road	-90.175200	32.443600
WOODMONT 2	Sanitary Sewer	151 Woodmont Way	-90.179400	32.443900
CENTRAL FIRE STATION	Fire Safety	456 Towne Center Blvd.	-90.117635	32.408986
FIRE STATION #2	Fire Safety	408 W. Ridgeland Avenue	-90.136699	32.436199
FIRE STATION #3	Fire Safety	880 Rice Road	-90.092771	32.421621
FIRE STATION #4	Fire Safety	567 Highland Colony Parkway	-90.164514	32.416570
FIRE STATION #5	Fire Safety	572 North Livingston Road	-90.197434	32.434329
CITY HALL	Government	100 W. School Street	-90.138779	32.413268
POLICE STATION	Communications	115 W. School Street	-90.135571	32.421300
PUBLIC WORKS COMPLEX	Warehouse	240 W. School Street	-90.139171	32.421947
PUBLIC WORKS STREET DEPT.	Warehouse	131 W. School Street	-90.137431	32.421255

Critical Facility Data for the City of Ridgeland, MS



LEGEND

- Critical Facilities
- Municipalities
- Interstates
- Major Highways
- Major Local Roads

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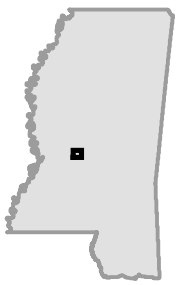
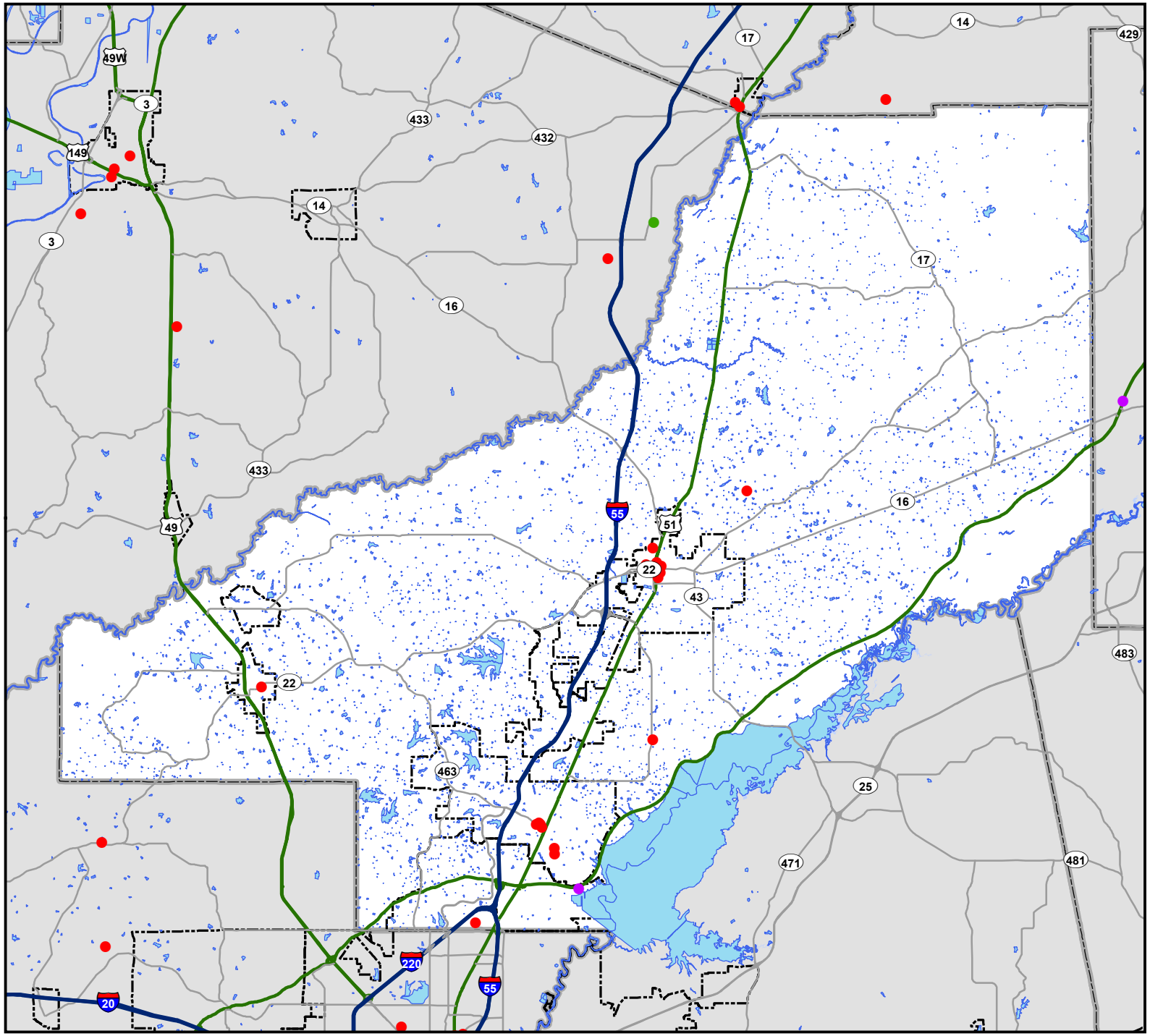


Cultural Resources

Cultural resources and historic assets are generally unique or irreplaceable in nature due to their age or unique properties or characteristics. The National Register of Historic Places has identified the Natchez Trace Parkway in Ridgeland as a cultural resource. Portions of the Natchez Trace Parkway are located in the floodplain.

Cultural Resource Data for Madison County, MS



National Park Services Data

Cultural Resources

- Buildings
- Structures
- Sites
- Objects
- Interstates
- Major Highways
- Major Local Roads
- Municipalities
- County Boundaries
- USA_Counties

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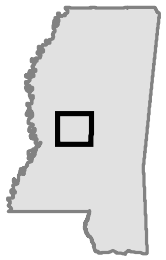

Community Asset Summary

There are 9,650 parcels in the City of Ridgeland with a total appraised value of $3,198,172,570 and a total assessed value of $569,784,361, according to county tax records. The tables below provide details regarding the number of assets at risk to each identified hazard.

Table 4.35 **Ridgeland Community Assets**

Type of Hazard	Identified Hazard Area	Population at Risk[2]	Estimated Housing Units at Risk[3]	Critical Facilities[4]	Historic Assets[5]
Dam/Levee Failure[1]	1	305	140	0	0
Drought	Citywide	24,340	10,782	32	1
Earthquake	Citywide	24,340	10,782	32	1
Expansive Soil	Isolated Areas	N/A	N/A	N/A	1
Flooding[6]					
100 year Floodplain	18.03%	861	395	2	1
500 year Floodplain	2.21%	449	206	2	1
Tropical Storms	Citywide	24,340	10,782	32	1
Severe Storms	Citywide	24,340	10,782	32	1
Tornado	Citywide	24,340	10,782	32	1
Wildfires	Citywide	24,340	10,782	32	1
Winter Storms	Citywide	24,340	10,782	32	1

[1] Identifies the number of High Hazard Dams
[2] Floodplain population is estimated using land use data
[3] Based on estimated land use data
[4] Based on data provided by the Mitigation Council
[5] Based on National Park Service Register of Historic Places
[6] Results are not cumulative

Table 4.36 **Ridgeland Assessed Real Property**

Real Property	Assessment
Total Assessed Value of Realty	$569,784,361
Total Appraised Value	$3,198,172,570
Number of Parcels	9,650

Vulnerability Summary

As a result of the risk assessment conducted, the Mitigation Council determined the overall vulnerability to each hazard for the City of Ridgeland remains the same as stated in previous hazard mitigation plans. To maintain consistency with the State of Mississippi's Standard Hazard Mitigation Plan, Ridgeland examined six (6) risk characteristics to determine the overall vulnerability level each jurisdiction, faces from natural hazards and they included:

1. The percentage of the entity at risk to an impact from each hazard;
2. The health and safety consequences that can occur;
3. The amount of property damage that can occur;
4. The environmental damage that can occur;
5. The economic disruption that can occur; and
6. The probability of a future occurrence.

Risk Characteristic (Vulnerability)		Score
Area Impacted	No area in the community directly impacted	0
	Less than 25% of the community impacted	1
	Less than 50% of the community impacted	2
	Less than 75% of the community impacted	3
	Over 75% of the community impacted	4
Health and Safety Consequences	No health and safety impact	0
	Few injuries or illnesses	1
	Few fatalities but many injuries or illnesses	2
	Numerous fatalities	3
Property Damage	No property damage	0
	Few properties destroyed or damaged	1
	Few destroyed but many damaged	2
	Few damaged and many destroyed	2
	Many properties destroyed and damaged	4
Environmental Damage	Little or no environmental damage	0
	Resources damaged with short term recovery	1
	Resources damaged with long term recovery	2
	Resources destroyed beyond recovery	3
Economic Disruption	No economic impact	0
	Low direct and/or indirect costs	1
	High direct and low indirect costs	2
	Low direct and high indirect costs	2
	High direct and high indirect costs	3
Future Occurrence		
Probability of Future Occurrence	Unknown but anticipate rare occurrence	1
	1 - 4 documented occurrences over last 10 years	2
	5 - 7 documented occurrences over last 10 years	3
	8 – 10 documented occurrences over last 10 years	4
	More than 10 occurrences over last 10 years	5

Once the risk characterization was completed for each natural hazard by the Mitigation Council, the sum of the risk characteristics were added together for each hazard and multiplied by the probability of occurrence characteristic to determine each natural hazards total risk rating score.

Risk X Probability of Occurrence = Vulnerability Summary

Based upon each risk rating a determination was then made on whether each natural hazard poses a high, moderate, or low risk to the City of Ridgeland based on the following criteria:

Risk Level	Total Rating Score
LOW	**0 – 15**
A hazard with a LOW RISK RATING is expected to have little to no impact upon the community. The hazard poses very minimal health and safety consequences to the community's residences and is expected to cause little to no property damage. The occurrence of a hazard with a LOW RISK RATING is rare; however, due to other factors such as geographical location it is still possible for such a hazard to occur and even cause significant damage based upon the magnitude of the event.	
MEDIUM	**16 – 30**
A hazard with a MEDIUM RISK RATING is expected to have a slight impact upon the community. The hazard poses minor health and safety consequences with minor injuries expected and few to no fatalities. The hazard may cause some properties to be damaged or destroyed. The occurrence of a hazard with a MEDIUM RISK RATING is likely at least once within the next 25 years.	
HIGH	**31 OR MORE**
A hazard with a HIGH RISK RATING is expected to have a significant impact upon the community. The hazard poses high health and safety consequences with numerous injuries and fatalities possible. The hazard may even cause some properties to be damaged or destroyed. A hazard with a HIGH RISK RATING is expected to occur at least once within a 12 month period, but can occur multiple times within a year.	

Table 4.37 **City of Ridgeland Vulnerability Summary Assessment**

the city of RIDGELAND	Earthquake	Expansive Soil	Dam/Levee Failure	Flooding	Drought	Tropical Storms	Severe Storms (hail & lightning)	Tornadoes	Wildfires	Winter Storms
Area Impacted	4	1	1	4	4	4	4	4	1	4
Health and Safety Consequences	1	0	1	1	1	1	1	2	1	1
Property Damage	1	1	4	2	1	1	2	4	2	1
Environmental Damage	0	1	1	2	1	1	2	2	2	1
Economic Disruption	1	1	3	2	2	1	2	3	2	3
TOTAL RISK CHARACTERISTIC SCORE	7	4	10	11	9	8	11	15	8	10
Probability of Occurrence	1	1	2	5	3	2	5	5	1	4
Total Risk Rating for Each Hazard (Sum of Vulnerability X Probability of Occurrence)	7	4	20	55	27	16	55	75	8	40

Table 4.38 **Vulnerability Summary**

Hazard	Overall Risk Level
Earthquakes	Low
Expansive Soil	Low
Dam/Levee Failure	Medium
Flooding	High
Drought	Medium
Tropical Storms	Medium
Severe Storms (hail & lightning)	High
Tornadoes	High
Wildfires	Low
Winter Storms	High

Capability Assessment

The purpose of conducting a capability assessment as part of this document is to identify the strengths, weaknesses, gaps, and opportunities for local entities to address mitigating risks. A capability assessment serves as the foundation for designing an effective hazard mitigation strategy. It not only helps establish the goals and objectives for the mitigation plan, but it ensures that those goals and objectives are realistically achievable under given local conditions. While the capability assessment serves as a good instrument for identifying local capabilities, it also provides a means for recognizing gaps and weaknesses that can be resolved through future mitigation actions.

NFIP Participation Findings

Capabilities for conducting community floodplain management and flood mitigation activities are typically guided, evaluated and enhanced through participation in the National Flood Insurance Program (NFIP). Participation in the NFIP requires specific regulatory and administrative measures that enable government officials to determine where and how growth occurs relative to flood hazards. Participation in the NFIP is voluntary, but participation by jurisdictions enables property owners within the community to purchase federally backed flood insurance for buildings and personal belongings.

The City of Ridgeland participates in the NFIP and is in good standing. Table 5.1 summarizes NFIP participation and policy statistics for Ridgeland. Furthermore, the City of Ridgeland participates in the NFIP's Community Rating System (CRS), and the city is currently a class 6. Under the CRS program, policyholders can receive premium discounts of 5 to 45 percent as their local jurisdiction adopts and enforces more comprehensive flood mitigation measures.

Table 5.1 **NFIP Participating Communities**

Jurisdiction	Community ID	Current Effective Map Date	Policies In-Force	CRS Class Rating
Ridgeland	280110#	03/17/10	286	6
According to the MS Emergency Management Agency, there are five (5) properties identified as repetitive loss properties and no severe repetitive loss properties identified for the City of Ridgeland. Furthermore, as of September 2015, the City of Ridgeland has a total of eleven (11) flood losses claimed totaling $156,258.88 in claim payments.				
Source: FEMA as of 1/21/2016 (latest available data)				

The City of Ridgeland has adopted and enforces floodplain management regulations in compliance with NFIP standards. The city's current Flood Damage Prevention Ordinance requires new construction and substantial improvement of any residential or non-residential structures to have the lowest floor elevated to no lower than 18 inches above the base flood elevation. It is the intent of the City of Ridgeland to maintain continued compliance with all NFIP regulations.

Planning and Regulatory Findings

Planning and regulatory capabilities for Ridgeland are based on what plans and programs exist and how they are implemented within the city. Some of the most important planning and regulatory capabilities that can be utilized for hazard mitigation include policies that establish goals and restrict development in identified hazard areas such as comprehensive plans, building codes, floodplain ordinances, subdivision regulations, and zoning ordinances. The existence and use of any of these planning and regulatory capabilities indicates a jurisdiction's commitment and ability to manage development in a safe and effective manner. Table 5.2 summarizes the planning capabilities identified within the City of Ridgeland as it relates to the existence of each planning and/or regulatory capability.

Table 5.2 **Planning and Regulatory Findings**

Planning and Regulatory Capability	Document in Place	Date of Last Update
Comprehensive Plan	Yes	2023
Capital Improvements Plan	No	--
Economic Development Plan	No	--
Local Emergency Operations Plan	Yes	2025
Continuity of Operations Plan	No	--
Transportation Plan	Yes	2012
Stormwater Management Plan	Yes	2009
Community Wildfire Protection Plan	No	--
Building Codes	Yes	2021
Site Plan Review	Yes	2014
Zoning Ordinance	Yes	2026
Subdivision Ordinance	Yes	2009
Floodplain Management Ordnance	Yes	2009
Master Plan	Yes	2008
Tree Ordinance	Yes	2006
Litter Ordinance	Yes	1990

Source: Mitigation Council

Administrative and Technical Findings

Administrative and technical resources are an indication of a jurisdiction's ability to implement hazard mitigation actions. Existing administrative capabilities indicate how mitigation activities may be designated to specific departments, and technical capabilities indicate the level of knowledge or expertise held by jurisdiction employees. Common examples of skill sets and technical personnel needed for hazard mitigation include: planners with the knowledge of land and development practices, engineers or building officials trained in construction practices, emergency mangers trained in preparedness and response practices, etc. Table 5.3 summarizes the administrative and technical capability within the City of Ridgeland.

Table 5.3 **Administrative and Technical Findings**

Personnel Capability	Position Type	Staff Size
Building Inspector	Full-time	3
Floodplain Manager	Full-time	1
Emergency Manager	Full-time	1
Community Planner	Full-time	1
Zoning Administrator	Full-time	1
Civil Engineer	Full-time	2
GIS Specialist	Full-time	1
Fire Department	Full-time	77
Law Enforcement	Full-time	100
Public Works Department	Full-time	69
Source: Mitigation Council		

Financial Findings

The ability for a local government to implement mitigation actions is closely tied to the amount of funding available to them. This availability is largely based on a jurisdiction's ability to apply for state and federal funding and the ability to levy local taxes. Table 5.4 summaries financial options available within the City of Ridgeland.

Table 5.4 **Financial Findings**

Financial Resources	
Capital Improvement Project Funds	Yes
Authority to Levy Taxes for Specific Purposes	Yes
Fees for water, sewer, gas, or electric services	Yes
Incur Debt through Bonds	Yes
Eligible for State Grant Programs (e.g. CDGB Program)	Yes
Eligible for Federal Grant Programs (e.g. Pre-Disaster Mitigation Grants)	Yes
Source: Mitigation Council	

Education and Early Warning Findings

Education and outreach activities can be cost-effective mitigation actions that are often overlooked. Table 5.5 summaries current outreach activities in place within the City of Ridgeland, as well as early warning capabilities.

Table 5.5 Education and Early Warning Findings

Outreach Activities	
Outdoor Warning Sirens	Yes
Community Notification System	Yes
Other Efforts: (mail outs, social media & community meetings)	Yes

Source: Mitigation Council

Mitigation Strategy

This section of the mitigation plan contains a blueprint to help reduce future losses from natural hazards. This section describes the goals and objectives established by the Mitigation Council and an explanation of the prioritization process used to develop the action plan for the City of Ridgeland based on their specific vulnerabilities and capabilities.

Goals and Objectives

Mitigation goals are general guidelines that explain what the City of Ridgeland wants to achieve. At the beginning of the planning process, the Mitigation Council reviewed the goals and objectives included in the Mitigation Plan previously developed for Ridgeland to determine which goals are still relevant and whether or not new goals should be developed as part of the planning process. The result of this review is the development of five (5) goal statements listed below. The goals established are considered to be broad general guidance statements that define the long-term direction for the City of Ridgeland's mitigation planning process. Each goal statement has two or more objectives that provide more specific actions to be taken. The goals and objectives established by the Mitigation Council for the City of Ridgeland include:

GOAL 1: **Engage all the City of Ridgeland in the development, implementation, and maintenance of a Hazard Mitigation Plan.**	
Objectives	
1.1	Appoint members to the Ridgeland Mitigation Council
1.2	Local officials shall promote Ridgeland's Plan and support community mitigation programs
1.3	Develop a plan that is feasible, beneficial and easy to understand
1.4	Establish a process to keep the plan up-to-date
GOAL 2: **Develop an understanding of the hazards threatening the City of Ridgeland and the techniques to minimize Ridgeland's vulnerability to those hazards.**	
Objectives	
2.1	Increase local knowledge of hazards and hazard mitigation approaches
2.2	Establish a method to gather and maintain information needed for defining risk and understanding vulnerabilities
2.3	Utilize the best available data to identify the location and potential impacts of hazards on people, property, and the natural environment
2.4	The public, especially those living or working in identified hazard areas, should have facilitated access to information needed to understand their vulnerability to hazards and the effective techniques to reduce those risks
GOAL 3: **To protect life and property to the best of the City of Ridgeland's ability.**	
Objectives	
3.1	Protect and maintain critical facilities in the City of Ridgeland
3.2	Improve the enforcement of requirements for building in the floodplain and removal of repetitive flood properties when appropriate
3.3	Identify adequate resources to meet health and safety needs after a disaster
3.4	Improve systems that provide warning and emergency communications
GOAL 4: **Promote public awareness.**	
Objectives	
4.1	Inform the public of the risk to natural hazards and ways to increase the public's capability to prepare, respond, recover and mitigate the impacts of natural hazards
4.2	Form public and private partnerships to promote mitigation practices
GOAL 5: **Encourage the development and implementation of long-term cost effective and environmentally sound mitigation projects**	
Objectives	
5.1	Identify projects that provide maximum risk protection
5.2	Local officials shall promote the mitigation plan and seek assistance to carry-out mitigation programs

Mitigation Action Plan Review

As part of the planning process, the City of Ridgeland reviewed the action plan included in the previous mitigation plan to track the progress being made to implement mitigation practices throughout the city. During this review, the Mitigation Council determined the status of each action included in the previous plan, and noted if each action had been successfully completed, is no longer relevant, or if the action is still ongoing. Below is an overview of the 2016 Mitigation Action Plan. Ongoing actions are those that are continuous on an annual basis and/or actions that have not been implemented due to limited funding or community support.

Action 1: Ongoing
Maintain a public outreach strategy designed to educate citizens of the risks posed by natural hazards and the protective measures they can take to avoid or minimize those risks.
The City informs the public of hazards by utilizing the Ridgeland Alert notification system, social media, newspapers, websites, etc.

Action 2: Ongoing as part of the public outreach strategy (action 1)
Coordinate with all available media outlets to assist with informing residents on what to do, where to go, and how to recover from hazard events
The City informs the public of hazards by utilizing the Ridgeland Alert notification system, social media, newspapers, websites, etc.

Action 3: Ongoing
Organize and conduct training seminars for key personnel members to become reliable weather spotters who can provide the city with advanced warning of approaching weather conditions.
There is no significant change regarding this Mitigation Action.

Action 4: Ongoing
Purchase and maintain emergency generators for use by key critical facilities throughout the city.
The City will continue to maintain them as needed.

Action 5: Ongoing
As future updates are made to the city's existing policies and regulations, and as the city adopts new policies and regulations, they should be reviewed to incorporate hazard mitigation practices to reduce the effect of natural hazards on new and existing infrastructure and buildings.
There is no significant change regarding this Mitigation Action.

Action 6: Ongoing
Seek funding to assist with the construction of a community shelters.
There is no significant change regarding this Mitigation Action.

Action 7: Ongoing
Encourage residents to construct individual safe rooms.
There is no significant change regarding this Mitigation Action.

Action 8: Ongoing
Maintain compliance with the National Flood Insurance Program by maintaining compliance with the three basic components of the program
The City will continue to maintain compliance with the National Flood Insurance Program

Action 9: Ongoing
Continue to apply floodplain management strategies to development in the floodplain and look for ways to strengthen development requirements
There is no significant change regarding this Mitigation Action.

Action 10: Ongoing as part of the public outreach strategy (action 1)
Assist residents who want to participate in the "Buy-Out" program for repetitive loss properties.
There is no significant change regarding this Mitigation Action.

Action 11: Ongoing
Seek funding assistance to retrofit critical facilities to better withstand the impacts of hazards.
There is no significant change regarding this Mitigation Action.

Action 12: Ongoing
Seek funding assistance to maintain the City of Ridgeland's Hazard Mitigation Plan.
The City will continue to seek funds to maintain this Hazard Mitigation Plan.

Action 13: Ongoing
Maintain an effective warning system that can be used to warn residents during emergencies of approaching weather conditions and other hazards.
The City informs the public of hazards by utilizing the Ridgeland Alert notification system, social media, newspapers, websites, etc.

Action 14: Ongoing
Work with city engineers to find solutions to the identified flooding problems in the city. Once solutions have been identified, the city should work to seek funding to carry-out feasible solutions that alleviate flooding problems in the city.
There is no significant change regarding this Mitigation Action.

2026 – 2031 Mitigation Action Plan

Once the Mitigation Council completed the review of previously developed mitigation strategies, the Mitigation Council then used the goals developed as part of this plan and the information from the Risk Assessment Section to revise, update and develop a new mitigation strategy for the city. Furthermore, each action identified is based on the results of the capability assessment completed by the city as part of this plan. The capability assessment identified, reviewed and analyzed local and state programs, policies, regulations, funding and practices that are currently in place that may either facilitate or hinder local mitigation efforts. Therefore, each action identified as part of this planning process is designed to reduce future losses, decrease risk, and improve disaster recovery efforts based on realistic local capabilities. Each action item identifies:

1. **Mitigation Action:** Identifies the specific action that, if accomplished, will reduce a jurisdiction's vulnerability to natural hazards.
2. **Entity:** The Jurisdiction adopting the mitigation action.
3. **New or Reoccurring Action:** Identifies if the action is new or a reoccurring action from a previously adopted Mitigation Plan.
4. **Hazard Addressed:** Identifies the hazard(s), which the action attempts to mitigate.
5. **Priority:** Indicates whether the action is a high, medium or low priority based on a general cost-benefit review. The broad review conducted for each action takes into account the following factors: a) effect on overall risk to life and property; b) ease of implementation; c) community support; d) estimated cost of the project, and e) funding availability. An action receiving a low priority could have tremendous benefits to life and property but may be considered too costly with limited funding options and/or limited community support. An action receiving a medium priority is considered to have broad community support, funding options, and tremendous benefits. An action receiving high priority is considered to have vast community support, funding options and tremendous benefits for a more urgent need.
6. **Estimated Cost:** Indicates an estimated general cost to accomplish the mitigation action. A more detailed cost analysis will need to be conducted prior to applying for grant funds or appropriating general funds.
7. **Potential Funding Sources:** Indicates possible funding sources to assist with accomplishing the mitigation action.
8. **Lead Agency:** Identifies the local or regional agency that is best suited to accomplish the mitigation action.
9. **Implementation Schedule:** Indicates the timeframe in which the mitigation action is proposed for implementation.

The completion of each action listed is dependent upon available resources and funding to complete each action. This Action Plan may be modified from time to time, as detailed in Section 7 of this plan, as priorities change, or as resources within the City of Ridgeland increase or decrease. The 2026 – 2031 Mitigation Action Plan reflects an increase in priority of matters related to Public Health Emergencies. Specific mitigation actions have been included to improve the City of Ridgeland's resilience during all Public Health Emergencies.

Mitigation Action 1	
Maintain a public outreach strategy designed to educate citizens of the risks posed by natural hazards and the protective measures they can take to avoid or minimize those risks	
Hazard Addressed:	All Hazards
Entity:	City of Ridgeland
New or Reoccurring Action:	Reoccurring
Priority (Low, Medium, High)	High
Estimated Cost:	$10,000 annually
Potential Funding Sources:	General Funds, MEMA, FEMA
Lead Agency:	Mayor, Board of Alderman, Police, & Fire Departments
Implementation Schedule:	Ongoing annually

Mitigation Action 2	
Coordinate with all available media outlets to assist with informing residents on what to do, where to go, and how to recover from hazard events (e.g. TV stations, local radio and newspapers, Facebook and other social media accounts, websites, etc.)	
Hazard Addressed:	All Hazards
Entity:	City of Ridgeland
New or Reoccurring Action:	Reoccurring
Priority (Low, Medium, High)	High
Estimated Cost:	No Cost
Potential Funding Sources:	General Funds
Lead Agency:	Mayor's Office / Public Relations Director
Implementation Schedule:	Ongoing annually

Mitigation Action 3	
Organize and conduct training seminars for key personnel members to become reliable weather spotters who can provide the city with advanced warning of approaching weather conditions	
Hazard Addressed:	Tornado, Severe Storms
Entity:	City of Ridgeland
New or Reoccurring Action:	Reoccurring
Priority (Low, Medium, High)	Med
Estimated Cost:	$5,000 annually
Potential Funding Sources:	General Funds
Lead Agency:	Fire & Police Departments, National Weather Service
Implementation Schedule:	Ongoing annually

Mitigation Action 4	
Purchase and maintain emergency generators for use by key critical facilities throughout the city	
Hazard Addressed:	All Hazards
Entity:	City of Ridgeland
New or Reoccurring Action:	Reoccurring
Priority (Low, Medium, High)	High
Estimated Cost:	$300,000
Potential Funding Sources:	PURF Funds, MEMA, State Homeland Security Program
Lead Agency:	Public Works, Police and Fire Departments
Implementation Schedule:	Ongoing annually

Mitigation Action 5	
As future updates are made to the city's existing policies and regulations, and as the city adopts new policies and regulations, they should be reviewed to incorporate hazard mitigation practices to reduce the effect of natural hazards on new and existing infrastructure and buildings.	
Hazard Addressed:	All Hazards
Entity:	City of Ridgeland
New or Reoccurring Action:	Reoccurring
Priority (Low, Medium, High)	Low
Estimated Cost:	No Cost
Potential Funding Sources:	General Funds
Lead Agency:	Mayor, Board of Alderman, and Community Development
Implementation Schedule:	Ongoing annually

Mitigation Action 6	
Seek funding to assist with the construction of a community shelters.	
Hazard Addressed:	All Hazards
Entity:	City of Ridgeland
New or Reoccurring Action:	Reoccurring
Priority (Low, Medium, High)	High
Estimated Cost:	$4,000,000
Potential Funding Sources:	General Funds, MEMA, FEMA
Lead Agency:	Public Works, Mayor's Office
Implementation Schedule:	Ongoing

Mitigation Action 7	
Encourage residents to construct individual safe rooms	
Hazard Addressed:	Tornado, Severe Storms
Entity:	City of Ridgeland
New or Reoccurring Action:	Reoccurring
Priority (Low, Medium, High)	Med
Estimated Cost:	No Cost
Potential Funding Sources:	General Funds
Lead Agency:	Community Development, Police and Fire Departments
Implementation Schedule:	Ongoing annually

Mitigation Action 8	
Maintain compliance with the National Flood Insurance Program by maintaining compliance with the three basic components of the program 1) floodplain identification and mapping risk, 2) responsible floodplain management, and 3) flood insurance education with actions such as maintaining copies of flood insurance rating maps, enforcing a floodplain management ordinance, tracking development in the floodplain, and educating residents about flood insurance	
Hazard Addressed:	Flooding
Entity:	City of Ridgeland
New or Reoccurring Action:	Reoccurring
Priority (Low, Medium, High)	High
Estimated Cost:	$25,000 annually
Potential Funding Sources:	General funds, MEMA
Lead Agency:	Floodplain Manager, Mayor and Board of Alderman
Implementation Schedule:	Ongoing annually

Mitigation Action 9	
Continue to apply floodplain management strategies to development in the floodplain and look for ways to strengthen development requirements	
Hazard Addressed:	Flooding
Entity:	City of Ridgeland
New or Reoccurring Action:	Reoccurring
Priority (Low, Medium, High)	High
Estimated Cost:	No Cost
Potential Funding Sources:	General Funds
Lead Agency:	Floodplain Manager & Community Development
Implementation Schedule:	Ongoing annually

Mitigation Action 10	
Assist residents who want to participate in the "Buy-Out" program for repetitive loss properties	
Hazard Addressed:	Flooding
Entity:	City of Ridgeland
New or Reoccurring Action:	Reoccurring
Priority (Low, Medium, High)	Low
Estimated Cost:	No Cost
Potential Funding Sources:	General Funds
Lead Agency:	Floodplain Manager, City Clerk, & Mayor
Implementation Schedule:	Ongoing annually

Mitigation Action 11	
Seek funding assistance to retrofit critical facilities to better withstand the impacts of hazards	
Hazard Addressed:	All Hazards
Entity:	City of Ridgeland
New or Reoccurring Action:	Reoccurring
Priority (Low, Medium, High)	Low
Estimated Cost:	$500,000
Potential Funding Sources:	General Funds, CDBG, MEMA, FEMA
Lead Agency:	Mayor and Board of Alderman
Implementation Schedule:	10-years

Mitigation Action 12	
Seek funding assistance to maintain the City of Ridgeland's Hazard Mitigation Plan	
Hazard Addressed:	All Hazards
Entity:	City of Ridgeland
New or Reoccurring Action:	Reoccurring
Priority (Low, Medium, High)	High
Estimated Cost:	$1,500 annually /$25,000-every 5 years
Potential Funding Sources:	General Funds, MEMA, FEMA
Lead Agency:	Mayor and Board of Alderman
Implementation Schedule:	Ongoing annually

Mitigation Action 13	
Maintain an effective warning system that can be used to warn residents during emergencies of approaching weather conditions and other hazards	
Hazard Addressed:	All Hazards
Entity:	City of Ridgeland
New or Reoccurring Action:	Reoccurring
Priority (Low, Medium, High)	High
Estimated Cost:	$15,000 annually
Potential Funding Sources:	General Funds, MEMA
Lead Agency:	Police Department
Implementation Schedule:	Ongoing annually

Mitigation Action 14	
Work with city engineers to find solutions to the identified flooding problems in the city. Once solutions have been identified, the city should work to seek funding to carry-out feasible solutions that alleviate flooding problems in the city	
Hazard Addressed:	Flooding
Entity:	City of Ridgeland
New or Reoccurring Action:	Reoccurring
Priority (Low, Medium, High)	High
Estimated Cost:	N/A
Potential Funding Sources:	General Funds, MEMA, FEMA, CDBG
Lead Agency:	Public Works
Implementation Schedule:	Ongoing Annually

Mitigation Action 15	
Seek funding assistance to improve capacity of "Personal Protective Equipment" (to also include but not be limited to Hazardous Material suits, air quality monitors, etc) Hazardous Materials training, sanitization services, and develop a protocol to make select supplies available to the public during a Public Health Emergency or Hazardous Materials Transport Accidents	
Hazard Addressed:	Public Health Emergency, Hazardous Material Transport Accidents
Entity:	City of Ridgeland
New or Reoccurring Action:	New
Priority (Low, Medium, High)	High
Estimated Cost:	$100,000
Potential Funding Sources:	General Funds, MEMA, FEMA, State Homeland Security
Lead Agency:	City Clerk, Police and Fire Departments
Implementation Schedule:	Ongoing annually

Mitigation Action 16	
Improve cellular tower capability throughout the City to upgrade communication efficiency	
Hazard Addressed:	All Hazards
Entity:	City of Ridgeland
New or Reoccurring Action:	New
Priority (Low, Medium, High)	Med
Estimated Cost:	No Cost
Potential Funding Sources:	General Funds
Lead Agency:	Mayor and Board of Alderman, Community Development, Public Works
Implementation Schedule:	Ongoing annually

Mitigation Action 17	
Seek funding assistance to improve high-speed internet capabilities throughout the City	
Hazard Addressed:	All Hazards
Entity:	City of Ridgeland
New or Reoccurring Action:	New
Priority (Low, Medium, High)	Low
Estimated Cost:	$1,000,000
Potential Funding Sources:	General Funds, MEMA, FEMA, State Homeland Security
Lead Agency:	Mayor and Board of Alderman, City Clerk
Implementation Schedule:	Ongoing annually

Mitigation Action 18	
Seek funding assistance to upgrade remote capabilities allowing employees to work off-site if required during hazard events and develop a protocol for activation	
Hazard Addressed:	All Hazards
Entity:	City of Ridgeland
New or Reoccurring Action:	New
Priority (Low, Medium, High)	High
Estimated Cost:	$250,000
Potential Funding Sources:	General Funds, MEMA, FEMA, State Homeland Security
Lead Agency:	Mayor and Board of Alderman, City Clerk
Implementation Schedule:	Ongoing annually

Mitigation Action 19	
Seek funding assistance to maintain retention ponds throughout the City	
Hazard Addressed:	Flooding
Entity:	City of Ridgeland
New or Reoccurring Action:	New
Priority (Low, Medium, High)	High
Estimated Cost:	$2,000,000
Potential Funding Sources:	General Funds, MEMA, FEMA, State Homeland Security
Lead Agency:	Public Works
Implementation Schedule:	Ongoing annually

Plan Maintenance

This section of the Mitigation Plan for the City of Ridgeland outlines how this plan will continue to be monitored, evaluated, and updated within a five-year cycle as required by federal regulations. This section explains who will be responsible for maintenance activities. It also provides a methodology and schedule of maintenance activities including a description of how the public will be involved on a continued basis, and how mitigation practices outlined in this plan will be incorporated into future planning mechanisms.

Monitoring, Evaluating, and Updating the Plan

Key components to any successful planning document are the efforts used to keep the plan current after it has been developed through monitoring, evaluating and updating the document on a regular basis. FEMA defines these terms as:

Monitoring is a means of tracking the implementation of the plan over time by identifying how, when, and by whom the plan will be monitored.

Evaluating is a means of assessing the effectiveness of the plan at achieving its stated purpose and goals by identifying how, when, and by whom the plan will be evaluated.

Updating is a means of reviewing and revising the plan at least once every five-years to reflect changes in development, progress, and priorities. Updating also includes identifying how, when and by whom the plan will be updated.

Prior to the required five-year update, the Mitigation Council for Ridgeland shall meet on an annual basis, at a minimum, to look at the plan and discuss possible updates and progress implementing mitigation actions. The form detailed in Figure 7.1 will be distributed to the City of Ridgeland Mitigation Council members annually. This form will be used by committee members and other local officials assigned with responsibility for implementing mitigation actions to track and report progress implementing mitigation actions included in this document. This form can also be used to submit new actions identified for inclusion in this document between the five-year required update. The City of Ridgeland Mitigation Council members are responsible for collecting additional mitigation actions and completing the form as needed to provide updates to existing actions.

The City of Ridgeland Mitigation Council will use the Plan Update Evaluation Worksheet identified in Figure 7.2 to evaluate this plan and make recommendations for future updates. The worksheet should be completed annually by Mitigation Council members. It is the City of Ridgeland Mitigation Council members' responsibility to collect information related to their field of work for the annual evaluation.

In the event of a large-scale disaster prior to the required five-year update, the City of Ridgeland will review the plan to verify the plan's accuracy. A meeting, if necessary, will be called of the Mitigation Council for the City of Ridgeland to discuss any plan changes. The Board of Aldermen have final authority to adopt any updates or revisions to this document once submitted to them for consideration.

Continued Public Involvement

Preliminary Monitoring, Evaluating, and Updating Plan Schedule

May 2026 – Plan adopted

March 2027, '28 & '29 – Worksheets for evaluating and monitoring mailed to Mitigation Council members

April 2027, '28 & '29 – Annual Mitigation Council Meeting held

March 2029 – Apply for grant funding to assist with five-year update

March 2030 – Start the five-year update process based on funding availability

April 2031 – Updated plan approved and adopted

Public involvement was a key component to the development of this plan and will continue to be an essential element utilized as changes are made to this plan over time. As is the case with any officially adopted plan, any significant changes to this plan will require additional advertised public review and comment opportunities. The public will have access to the current Hazard Mitigation Plan through the City of Ridgeland's Public Works office. The public is encouraged to submit comments regarding this plan at any time. The City of Ridgeland Mitigation Council will review and consider all relevant comments received during the next update of the plan.

In addition, the City of Ridgeland may seek continued public involvement through activities such as press releases, town hall style meetings and/or involvement solicited through the city's website as needed before the five-year update begins.

Plan Incorporation into Existing Planning Mechanisms

Integrating components of this plan with other planning mechanisms identified in Section 5 of this document is the responsibility of the Board of Aldermen. Whenever appropriate, the City will integrate the goals and objectives as well as other components of this plan into local planning mechanisms such as, Comprehensive Plans, Capital Improvement Plans, Zoning Regulations, etc. The integration process and schedule of incorporating elements of this plan will vary based on the document's update cycle. The annual City of Ridgeland Mitigation Council meeting will provide an opportunity to track the progress on the integration of this plan into local planning mechanisms.

Figure 7.1 **Mitigation Action Progress Report Form**

Progress Report Period	From Date: _____ To Date: _____
Mitigation Action Title:	
Project Description:	
Responsible Agency:	
Contact Name:	
Contact Phone/Email:	

Project Status:

_____ Project Completed ___ Project Canceled

_____ Project on schedule ___ Project Delayed

Anticipated Completion Date _____

Project Cost: _____

What was accomplished for this project during this reporting period?

What obstacles, problems or delays did the project encounter?

Plans for the next reporting period?

Other Comments?

Figure 7.2 **Plan Update Evaluation Worksheet**

Jurisdiction: _____

Completed by: _____ Date: _____

Plan Section	Considerations	Explanation
Planning Process	Should other jurisdictions be invited to participate in future plan updates	
	Can any procedures (e.g. meeting, announcements) be handled differently or more efficiently?	
	Has the Planning Team undertaken any public outreach activities?	
	Have there been any changes in public support and/or decision maker priorities related to hazard mitigation?	
Capability Assessment	Has your jurisdiction adopted new policies, plans, regulations, or reports that could be incorporated into this plan?	
	Are there different or additional administrative, human, technical and/or financial resources available for mitigation planning?	
	Are there different or new education and outreach programs and resources available for mitigation activities?	
	Has your National Flood Insurance Program participation changed?	
Risk Assessment	Has a natural and/or human caused major disaster occurred?	
	Should the list of hazards addressed in the plan be modified?	
	Are there new data sources and/or additional maps and studies available? If so, what are they?	

Plan Section	Considerations	Explanation
Risk Assessment	Do you have any new critical facilities?	
	Have any significant changes in development trends occurred that could create additional risks?	
	Have any losses occurred from natural hazards and/or human caused events that should be documented?	
Mitigation Strategy	Is the mitigation strategy being implemented as anticipated? Were the cost and timeline estimates accurate?	
	Should new mitigation actions be added to the Action Plan? Should existing mitigation actions be revised or eliminated from the plan?	
	Are there new obstacles that were not anticipated in the plan that will need to be considered in the next plan update?	
	Are there new funding sources to consider?	
	Have elements of the plan been incorporated into other planning mechanisms?	
Plan Maintenance Procedures	Was the plan monitored and evaluated as anticipated?	
	What are some needed improvements to these procedures?	

Plan Adoption

This section of the City of Ridgeland's Mitigation Plan documents completion of the plan adoption procedures. This section will be updated upon the adoption of the plan by the City of Ridgeland.

This section of the plan also includes a copy of the signed adoption resolution.