

## Executive Summary

On behalf of the State of Mississippi, the Governor's Office, and the Mississippi Hazard Mitigation Council, the Mississippi Emergency Management Agency is submitting this "State of Mississippi Standard Mitigation Plan" for review by the Federal Emergency Management Agency. This Plan is the result of a monumental effort from stakeholders, staff, and technical advisors to complete a document that updates the 2018 Standard Mitigation Plan. The Updated Plan addresses natural/manmade hazards throughout the state with the expressed purpose of "Saving lives and reducing future losses" in anticipation of future events.

Mississippi's Standard Mitigation Plan has been completed with a high degree of public participation. By developing new partnerships and strengthening existing ties with local, state, and federal agencies, the Plan reflects the needs of the entire State of Mississippi. Most importantly, the Plan mirrors the mindset of the people of Mississippi, which was learned by carefully listening to ideas and initiatives for hazard mitigation.

"Mitigation Actions" that can be implemented to complete projects that are technically feasible, cost effective, and environmentally sound are included within the Plan. It is a "living document" that will be constantly reviewed and updated thus reflecting current strategies and providing opportunities for evaluating the effectiveness of the projects and programs.

While this Plan is being reviewed by the Federal Emergency Management Agency, the State of Mississippi will prepare for full adoption of the plan. This will be accomplished with the following actions:

- The Mississippi Emergency Management Agency will review and respond to comments provided by the Federal Emergency Management Agency.
- The Mississippi Hazard Mitigation Council will review the record of the process and, at the appropriate time, will recommend the adoption of the Plan.
- The Office of the Governor, upon receipt of the Plan with the addressed comments and recommendations, and by Executive Order, will adopt the Plan for the State of Mississippi.

The Standard Plan, submitted to the Federal Emergency Management Agency in August 2023 in compliance with local, state, and federal requirements, is for the benefit of the people of the State of Mississippi. It is evidence of a great effort by all participants, and the contribution of those involved is greatly appreciated.

The State of Mississippi is continuing to work towards an upgrade from the Standard Plan to "Enhanced Status." This upgrade is an indication of the State's desire to continually improve efforts to mitigate hazards through projects and programs that benefit the people of our State.

The Mississippi Emergency Management Agency hereby submits this Standard Mitigation Plan for consideration by the Federal Emergency Management Agency.

## 1.0 Introduction

In the 2018 Mississippi State Hazard Mitigation Plan, the State identified the following hazards to be widely significant when carrying out its mission and commitment to saving lives and reducing future losses:

- Flooding
- Extreme Winter Weather
- Earthquakes
- Wildfires
- Hurricanes
- Tornadoes
- Dam and Levee Failures
- Climate Change/Sea Level Rise
- Cyberterrorism

Fundamentally, the hazards will remain the same; however, Infectious Disease/Pandemic was added.

In accordance with the Code of Federal Regulations 44 (CFR 44), the Disaster Mitigation Act of 2000, and Section 322 of the Robert Stafford Disaster Relief Act, the State of Mississippi has completed this 2023 State of Mississippi Standard Mitigation Plan Update. The update continues to establish an effective framework in which state mitigation initiatives can be implemented to protect lives and property.

The 2007 Standard Mississippi Hazard Mitigation Plan cited the completion of a State of Mississippi Enhanced Hazard Mitigation Plan at the year's end. It was later determined that the State would be unable to complete the requirements of maintaining an enhanced plan due to its limited resources. The State is continuing to enhance its capabilities. However, the pursuit of an enhanced status was reevaluated again during the 2023 plan update. Although the State has improved in enhancing its capabilities, resources are still limited and fulfilling the requirements of an enhanced plan may prove difficult. As a result, the State will continue to enhance its capabilities to meet the goal of becoming an "Enhanced State." The State will continue to be efficient with its resources and use them to approach the mitigation strategies that are pertinent to Mississippi's safety.

The completion of the "2023 State of Mississippi Standard Mitigation Plan Update" is a pre-requisite for receiving Federal Disaster Assistance. The Disaster Assistance includes Hazard Mitigation Assistance that is available to the State of Mississippi, as well as local Tribes, cities, and counties. Participants of the 2023 Plan Update may be able to receive funds and use them to save lives and reduce future losses by planning for mitigation and implementation of strategies.

In 2007, Governor Haley Barbour established a State of Mississippi Hazard Mitigation Council by Executive Order. The Council was comprised of selected state agency officers, directors, and the executive directors of organizations representing counties and cities throughout the State. New members have been added to the Council since 2008. Vibrant, strong, and rich with ideas, the Council met quarterly to track completed mitigation strategies and actions, to brainstorm on new mitigation strategies, and to review current goals and initiatives. In the 2018 Plan Update, the Council decided to hold meetings twice yearly. A listing of agencies on the Council is available later in this document.

The Hazard Mitigation Council provides guidance in the development of the Plan. Nevertheless, the Council has not minimized the importance of sustaining an integrated and comprehensive approach to mitigation. Therefore, this work is an effort coordinated with State and local agencies, departments, focus groups, volunteer organizations, as well as technical committees, and representatives from Federal Emergency Management Agency in the development of the Plan. This has been accomplished by first reviewing and incorporating all local and regional hazard mitigation plans and the planning efforts of state and federal agencies. Then, the efforts of others were carefully incorporated to ensure that an effective coordination of all initiatives was central to the implementation of the plan.

The “2023 State of Mississippi Standard Mitigation Plan Update” has been completed with a high degree of public participation by stakeholders, agencies, and the general public. This was accomplished by developing a public participation process at the beginning of the planning process and effectively communicating the process as the project was developed. State Plan Surveys were posted to state agencies websites, emailed, and hand delivered to stakeholders, state partners, agencies, community-based organizations, businesses, nonprofits, and academia in an effort to increase public participation.

The “State of Mississippi Standard Mitigation Plan” is a “living document”. The Plan serves as a guide for hazard mitigation activities and provides a tool for implementing the most effective strategies. The Plan will be reviewed constantly as it is used, and this continuous improvement of the Plan will be reflected in updates and revisions, as needed, with a scheduled Plan Update to be completed at least every five years. Each section of the 2023 Mississippi Standard Hazard Mitigation Plan has been reviewed and/or updated to reflect changes from 2018, until now.

This Plan, through its strategy of saving lives and reducing future losses, will contribute to the sustainability of the State of Mississippi. This sustainability will provide a balance in the economic, social, and natural assets of the State resulting in a place that people want to be as they live, work, and play.

## **Summary of Changes**

- Statistical information has been updated to reflect Mississippi at its current status.
- The narrative has been updated to reflect purposes set forth by the State of Mississippi.
- Section 1 has been reviewed. All figures, tables, and graphics have been updated to reflect any changes that have occurred since the 2018 plan update.
- Plan narrative updated showing 2023 State Plan Survey distributions.

# 1.1 State Characteristics

## General Information

The State of Mississippi lies in the southern portion of the United States. Mississippi is the 32<sup>nd</sup> largest State in the United States with a total land area, including water, of the 46,823.98 square miles. According to the 2021 Census information, the State is 32<sup>nd</sup> among other states with a population of 2,961,279 a change of -0.7%. The name Mississippi is derived from Ojibwa, a Native American/Algonquin language which means “Great River”. Mississippi is referred to as the “Hospitality State” and the “Magnolia State.” These nicknames reflect the welcoming spirit of Mississippi’s residents and the beautiful Magnolia Trees/flowers found here. The State is very diverse with each region exhibiting its own unique characteristics. Whether you are listening to the Blues in the Delta or relaxing on the beaches of the Mississippi Gulf Coast, Mississippi has a lot to offer.

Mississippi’s 1<sup>st</sup> flag was adopted in an 1894 special session of the Mississippi Legislature. The next official flag was adopted on April 17, 2001, by voters in the State. In 2020, Mississippi’s Legislature held a contest for the design of a new state flag. The flag was voted on and chosen by the people. The new flag became the Official State Flag on January 11, 2021.

The State of Mississippi is rich in natural, architectural, and artistic beauty. It is home to rolling hills in the northeast, the beautiful beaches of the Gulf Coast, and some of the richest farmland in the world in the Delta. It is home to famous artists, writers, and musicians such as Walter Anderson, William Faulkner, Eudora Welty, John Grisham, and B.B. King are just a few. Cultural events are held throughout the State which showcases our rich cultural heritage. Local Culture events include, but are not limited to: Blueberry festivals, downtown festivals, tomato festivals, seafood festivals, parades, and Founder’s Day celebrations are just a few.

Table 1.1.1 identifies the different state symbols of Mississippi.

**Table 1.1.1: State Symbols**

State Bird	Mockingbird
State Reptile	American Alligator
State Water Mammal	Bottlenose Dolphin
State Fish	Largemouth or Black Bass
State Land Mammal	White Tailed Deer/Red Fox
State Wildflower	Coreopsis
State Butterfly	Spicebush Swallowtail
State Insect	Honeybee
State Fossil	Pre-Historic Whale
State Stone	Petrified Wood
State Waterfowl	Wood Duck
State Shell	Oyster Shell
State Beverage	Milk
State Toy	Teddy Bear
State Flower/Tree	Magnolia
State Soil	Natchez Silt Loam
State Dance	Square Dance
State Language	English
State Grand Opera House	Grand Opera House of Meridian
State Song	“Go Mississippi”



*The State Seal has been in use since Mississippi became a state in 1817.*



*The New Magnolia flag has a Magnolia Blossom in the center, a symbol long used to represent our state and the hospitality of our citizens. The new flag is sleek and updated to represent the forward progression of Mississippi.*

Source: Office of the Mississippi Secretary of State

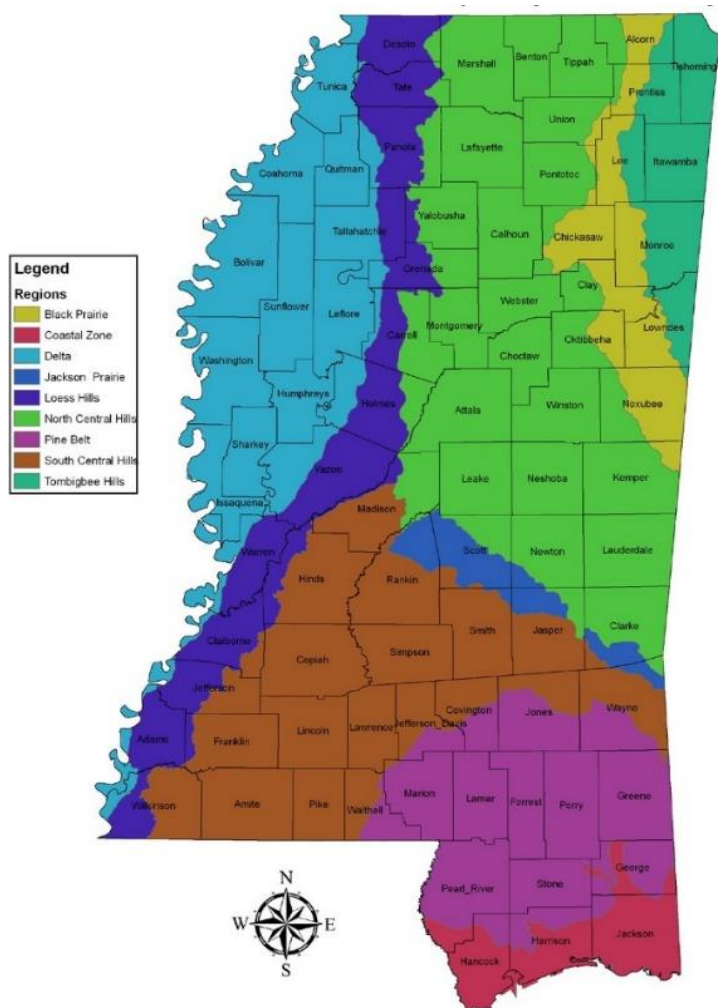
## State Capitol

The Mississippi State Capitol is located in Jackson, Mississippi. Jackson, the capitol city, is home to the Governor, Lt. Governor, House of Representatives, and the State Senate. The existing Capitol Building, one of three Capitol Facilities built, was completed in 1903. The first building was completed in 1822 (it is no longer standing) and the second one in 1833, which is known as the Old Capitol. The Old Capitol Building was used from 1917 to 1959, and has served as the State Historical Museum from 1961 to present day. The first building, completed in 1850, was constructed to help ensure that Jackson would indeed be the capitol city. The present-day Capitol Building was designed by architect Theodore Link of St. Louis, Missouri. The architectural style is Beaux Arts. The focal point of the building is the 4,750 lights that illuminate four painted scenes and the rendition of a blind-folded lady which represents "Blind Justice." The four painted scenes represent two Native Americans, a Spanish explorer, and a Confederate general. An eagle is perched atop the Capitol Dome and is made of solid copper overlain with gold leaf. The Mississippi Capitol is designated as a landmark building and is listed on the National Register of Historic Places.

Source: Mississippi Department of Archives and History; <http://mdah.state.ms.us> and Mississippi Legislature; <http://billstatus.ils.state.ms.us>

## Geography

Figure 1.1.1:  
State of Mississippi Physiographic Map



Mississippi is bordered by the states of Alabama, Tennessee, Louisiana, and Arkansas. A portion of the state boundary is delineated by the Mississippi River. The river is one of the largest water bodies in the continental United States. Other major water bodies within the state include the Pearl River, Big Black River, Yazoo River, Pascagoula River, and the Tombigbee River. An important fact about the state's geography is that lakes make up 3 percent of the total area. These major lakes are actually reservoirs (Reservoirs are large natural or artificial lake that are used as water supply or as storage for excess water). The lakes/reservoirs are Sardis Lake, Grenada Lake, Arkabutla Lake, Enid Lake, and the Ross Barnett Reservoir.

The highest point in the state is Woodall Mountain in Tishomingo County. This landform has a total elevation of 806 feet above sea level. On the other hand, the lowest point in the state is the Gulf of Mexico, which is at sea level. The mean elevation for Mississippi is around 300 feet above sea level. The state can be divided into 9 physiographic regions- Black Prairie, Loess Hills, North and South-Central Hills, Pine Belt, the Delta, Coastal Zone, Black Prairie, and the Jackson Prairie. See Figure 1.1.1

**Black Prairies:** this region extends from the northeastern corner of the Noxubee County, northward to Alcorn County, and a small portion of Tishomingo County. The predominant soil type in this region is clay. The topography in the Black Prairie Region is flat.

**Coastal Zone:** this region covers portions of Pearl River, George, Hancock, Harrison, and Jackson Counties. The predominant soil type in this region is acidic soil and sand with areas of boggy soil that is high in organic matter. Flat plains are the general topography.

**Delta:** this region covers the area of the state that borders the Mississippi River from a portion of DeSoto County down to the northeast corner of Wilkinson County. Flat plains are the general topography of this region. The Delta soil is characterized as mildly acidic to mildly alkaline.

**Jackson Prairie:** this region extends from portions of Wayne County to northern Rankin County. The predominate soil types in this region are both acidic and non-acidic. The topography is somewhat rolling hills with areas of ridges and valleys.

**Loess Hills:** this region extends from DeSoto County southward to Wilkinson County. The predominant soil type in this region is both acidic and non-acidic. This part of the state is also considered to be the Brown Loam Region. The topography of this region is characterized by narrow ridges and steep-sided ravines.

**North Central Hills:** covers a large portion of Mississippi, this region extends from the northern portion of the State from Marshall County southward to Madison County, then southwestward to Wayne County. The soils in this region are mostly acidic. The topography is characterized by both ridges and valleys.

**Pine Belt:** this region covers either all or portions of Walthall, Jefferson Davis, Jones, Covington, Lamar, Forrest, Perry, Greene, Pearl River, Stone, Wayne, and Harrison counties. The soil is acidic. The topography includes rolling hills as well as areas of steep-sided ridges and valleys. This region is also known for its abundance of hardwood trees.

**South Central Hills:** extends from southern Madison County to Wayne County, and then southward to Wilkinson, Walthall, Amite, and Pike counties. The soil found here is primarily sandy loam. The topography includes rolling hills with broad valleys.

**Tombigbee Hills:** this region extends from Lowndes County northward to Tishomingo County. The soil is acidic and highly weathered. Topography in the Tombigbee Hills Region is characterized by numerous streams, ravines, and ridges. The region also contains the highest point in the state which is Woodall Mountain with an elevation of 806 feet above sea level.

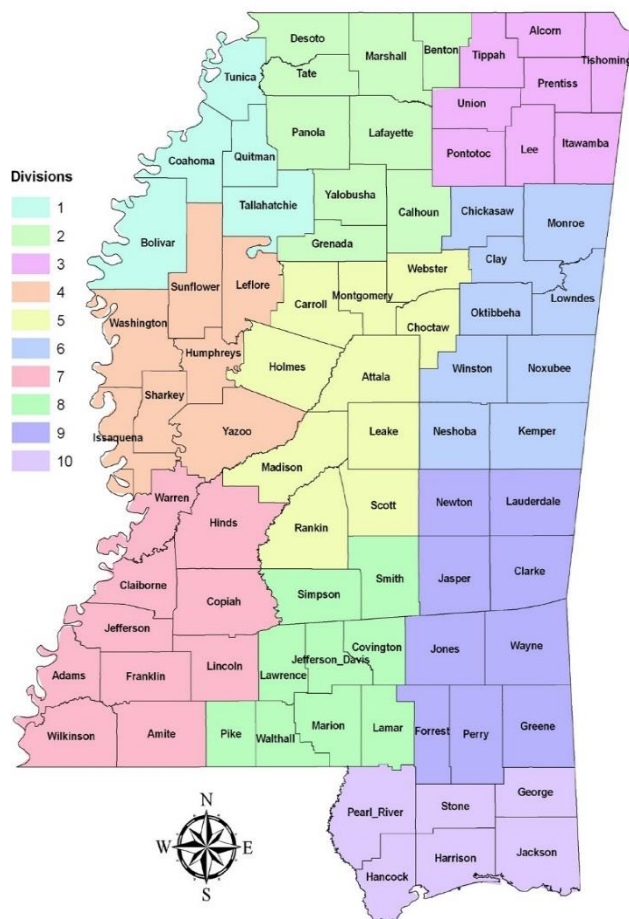
Data Sources: Mississippi State University Department of Geosciences – <http://www.msstate.edu/dept/geosciences/faculty/brown>  
Delta State University Department of Biology and Environmental Sciences – <http://www.marshdoc.com/physiography/physiograph>

## Climate

The State of Mississippi is located in the humid subtropical climate region of the United States, which is characterized by long, hot summers, temperate winters, and rainfall that is evenly distributed throughout the year. The state is divided into 10 different climate zones; 1-Upper Delta; 2- North Central; 3- Northeast; 4- Lower Delta; 5- Central; 6- East Central; 7- Southwest; 8- South Central; 9- Southeast; and 10-Coastal. The normal mean annual temperatures range from 68 degrees along the coast to 62 degrees in the north. There have been occurrences where the temperature has dropped below 16 degrees and close to zero in some areas. Mississippians have also routinely witnessed temperatures reaching 100 degrees in many areas. The record for the highest temperature was Holly Springs, MS, on July 29, 1939, when the temperature reached 115 degrees. The lowest recorded to date was minus 19 degrees, on January 30, 1966, in Corinth, Mississippi.

Northern portions of the state receive approximately fifty inches of rainfall annually, with that number increasing toward the south to approximately sixty-five inches per year on the Gulf Coast. Traceable amounts of snow and sleet are typical in the northernmost counties. These northern counties have also experienced moderate to severe ice storms. A more detailed description of occurrences can be found in Section 3.5.

**Figure 1.1.2  
Climate Divisions of Mississippi**



## Recreation

The State of Mississippi is home to over 25 State parks (Figure 1.1.3), which are easily accessible to the public. Each park offers a variety of recreational activities such as boating, wildlife watching, fishing, hiking, and swimming. It was estimated by the Fish and Wildlife Service that anglers and hunters spend around \$240 million a year and generate a total economic impact of approximately \$1.5 billion. Both Mississippi residents and nonresidents participate in wildlife associated recreation in Mississippi. Accordingly, the MS Department of Wildlife and Fisheries estimates that 94 percent of licensed anglers fish in freshwater, 72 percent live in rural area, and 44 percent are women.

In a study by the U.S. Department of Commerce, almost \$1.1 billion was contributed to the State's economy because of recreational activities. The Mississippi Department of Wildlife, Fisheries, and Parks oversees the state's parks and fisheries and operates 18 fishing lakes (Figure 1.1.4) that span 6,044 acres. The agency is also responsible for 38 Wildlife Management Areas reserved for public hunting. In addition to the substantial number of parks and wildlife related activities, they maintain parks across the state for residents and visitors.

Golf also serves as the recreation of choice for residents as well as tourists and business travelers. The state has more than 150 public and private golf courses statewide. The location and climate of Mississippi makes golf one of the more popular forms of recreation. Many PGA sponsored events have been held in the state and have attracted top-ranked professionals. There are many other forms of recreational opportunities that exist other than the traditional forms. Among these are: disk golf, pickleball, paintball, sports, bicycling, and gambling. The State of Mississippi Tourism Board estimates that tourists spent an average of \$6.25 billion in a six-year span.

Figure 1.1.3  
Mississippi State Parks and Destinations



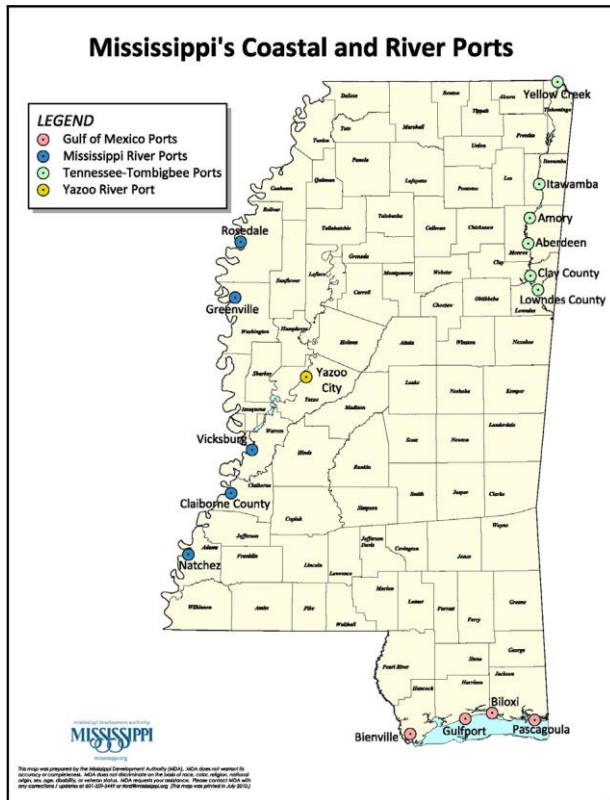
Figure 1.1.4  
Mississippi Parks with Public Lakes





# Transportation

**Figure 1.1.5**  
**Mississippi Coastal and River Ports**

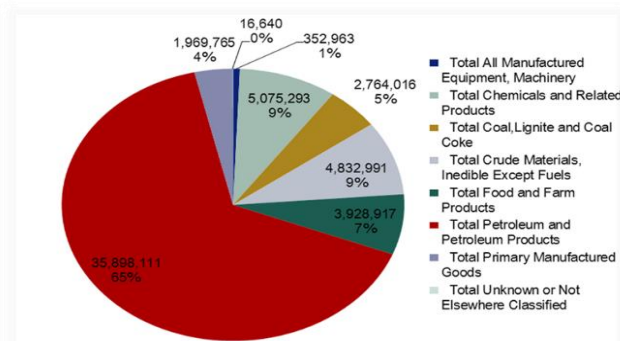


Mississippi’s highway network includes approximately 73,500 miles and has more than 16,500 bridges under the jurisdiction of federal, state, and local governments. The state highway network’s characteristics support the view of Mississippi as a rural state. The Mississippi Department of Transportation (MDOT) is the state agency responsible for the “higher order” of highway miles (interstates, freeways, and other principal arterials), and facilitate general overview/collaboration on highways connectivity with ports, airports, and railroads. The highway system typically handles more than 35 billion vehicle miles of travel annually and is ranked 28<sup>th</sup> in the nation. County-owned highways make up 72 percent of the state’s highway network, while state and city owned highways balance (15 percent state, and 12 percent city). The remaining 1 percent of roadways in Mississippi fall under federal jurisdiction. While higher order highways comprise fewer highway miles than rural roadways, they carry the bulk of Mississippi’s traffic.

Mississippi has 16 water ports (Figure 1.1.5). Of this total, only two are controlled by the State. All the others are privately owned and operated. The ports are located along the Mississippi River, near the Gulf of Mexico, and on the Tennessee-Tombigbee River. The ports contribute \$5.4 billion in revenue and nearly \$16 billion in gross state product. They also account for 16 percent of the state’s economy. The ports located in the state generate around 125,000 direct and indirect jobs according to the Mississippi Department of Transportation. There are multiple things transported though Mississippi’s waterways and ports (see Figure 1.1.6).

Source: Mississippi Department of Transportation: <http://gomdot.com/ports>  
<http://www.mdpt.state.ms.us> <http://artabridgereport.org>  
 Mississippi Development Authority-  
 Federal Highway Administration <http://www.fhwa.dot.gov>

**Figure 1.1.6**  
**Waterborne Commerce**



Source: Mississippi Department of Transportation  
 MS Core of Engineers; Waterborne Commerce of Mississippi

Mississippi is also home to 74 public use airports. Many of Mississippi’s population lives within a one-hour drive of seven of the airports, which provides regularly scheduled passenger airline services. There are 8 commercial service airports that house large industries. The airports are used for a variety of reasons ranging from agriculture pesticide spraying, ambulance services, law enforcement, and aerospace operations. There are 6 aerospace manufacturers located on Mississippi’s airport grounds for the easy runway access and taxiway services.

**Figure 1.1.7  
Mississippi Airports**



Source: <https://ms.gov.documents/reports/Mississippi>

In addition to economic benefits, Mississippi airports support numerous qualitative benefits. Qualitative benefits are related to the health, welfare, safety, and overall quality of life, that cannot be assigned a dollar amounts.

Some Examples are:

- Providing support to highway patrol and law enforcement.
- Facilitating emergency medical transport.
- Providing youth outreach programs.
- Conducting search and rescue
- Conducting disaster relief missions
- Supporting aerial surveying, photography, and utility inspection operations
- Supporting the US Military and other government organizations
- Supporting aviation-related higher education

They include:

- Airbus Helicopters
- Advanced Technologies
- Mississippi State University-RASPET Flight Research Laboratory
- Northrop Grumman \*\*
- Aurora Flight Sciences \*\*
- Stark Aerospace \*\*

\*\*Indicates they manufacture Unmanned Aerial Systems (UAS)

Mississippi airports also have a significant presence of aviation-related to military units. The largest Military Aviation presence is at the Jackson-Evers International Airport. The 172<sup>nd</sup> Airlift Wing is stationed there and they employ over 900 personnel with a payroll of \$172 million in economic output. The Naval Special Warfare Command is stationed at Stennis Space Center (NASA), which employs over 150 personnel. Six Mississippi airports support 9 air ambulance bases across the State.

Advanced University Programs supply a steady influx of talented aviation workers specializing in polymer science (USM), aerospace engineering (MS State University), and jet engine mechanics. Cleveland Municipal Airport is the home to the flight school of Delta State University where students can receive a Bachelor or a Masters of Commercial Aviation Degree.

Mississippi's Airport System accounts for \$2.5 billion in economic activity. It also supports around 20,000 employees with salaries totaling more than \$722 million.

## Population

The 2021 US Census estimated the population of Mississippi to be 2,961,279. This number indicates a -0.7 percent decrease from the 2010 figure of 2,982,785. The State of Mississippi is composed of 82 counties ranging in population from Issaquena County, the smallest with a total of 1,338 individuals to Hinds County, the largest with a population of 227,742. Hinds County comprises 7.94% of the state's total population, but has had a decline of 3.53 % since the 2010 census. Based on the 2020 Census, the state averages 63.1 people per square mile as compared to the United States with 93.8 people per square mile. The counties that are the most densely populated are DeSoto (399.19), Harrison (370.3), and Hinds (257.81).

The following is a breakdown of other population characteristics for the state:

- 42 cities have populations of 10,000 and above.
- 15 counties have populations of 50,000 and above.
- Four Metropolitan Areas, with the largest being the Memphis, Tennessee, and DeSoto County, MS, that has a population of 1,324,108 and a population density of 426.2. The Metropolitan Statistical Area (MSA) ranked 41<sup>st</sup>. The next largest is Biloxi-Gulfport-Pascagoula USA, with a population density of 237.
- The median age is 37.7 years.
- 48.7 percent of the population is male.
- 51.3 percent of the population is female.
- 76.5 percent of the population is 18 years or older, and 18.8 percent are 65 and older.
- The largest race is White/Caucasian at 58.8 percent followed by African American/Black at 38 percent.
- Per Capita income for 2020 was \$25,444.
- The poverty rate in 2020 was 19.4 percent. This is higher than the national average of 11.4 percent.
- The average household size is 2.59 persons.

Mississippi is classified as a mostly rural state. Fifty-four percent of the state is classified as rural compared to 46 percent as urban. The definition of urban is those areas that are densely populated in and around large cities having a population over 50,000. Rural is defined as those areas outside of the city with a population under 2,500. There is a total of 129 Census Designated Places (CDP) in the State of Mississippi. There are 82 counties in Mississippi, of those 65 (79.3 percent) are considered rural.

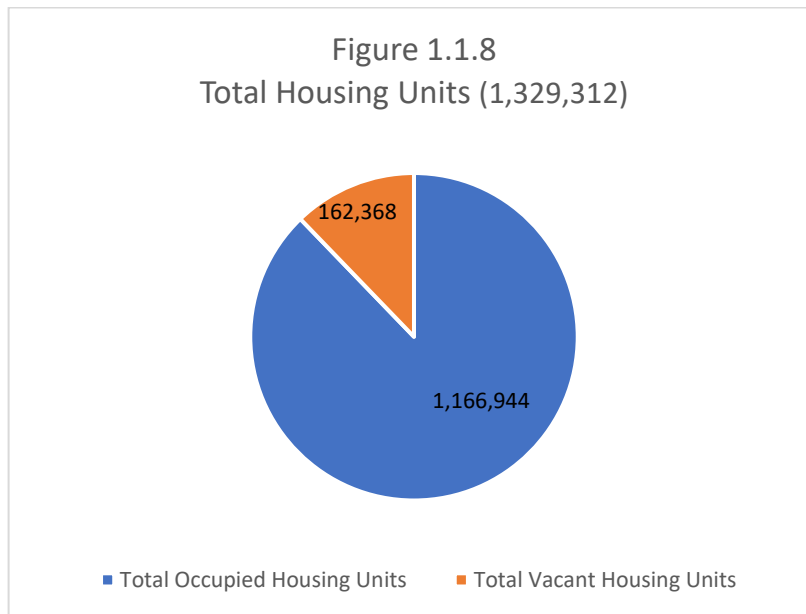
In order of size and based on 2020 US Census estimates, the populations of the top eight cities in Mississippi are:

- Jackson 149,761
- Gulfport 72,105
- Southaven 55,429
- Biloxi 49,241
- Hattiesburg 47,068
- Olive Branch 40,276
- Tupelo 37,667
- Meridian 34,424

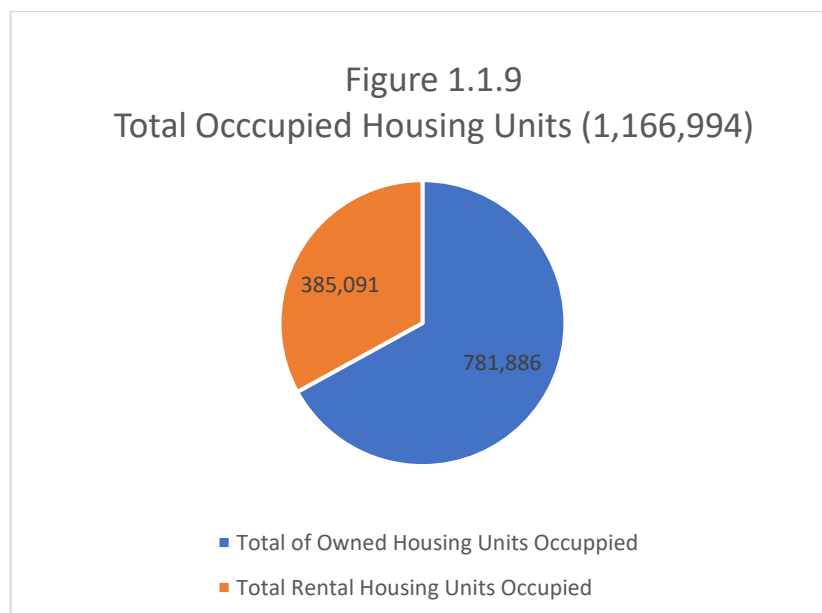
Source: [www.extension.msstate.edu/food-and-health/ruralhealth/](http://www.extension.msstate.edu/food-and-health/ruralhealth/); <http://mcbn.hrsa.gov/indes.html>; <http://worldmappopulationreveiw/populationbycounty/mississippi2022>; <https://www.census.gov/quickfacts/fact/table/MS>

## Housing

The total number of housing units in Mississippi based on the Mississippi Development Authority (2022) estimate was 1,329,312. Of this total, 86 percent or 1,166,944 were occupied. The total number of vacant housing units was 162,368 or 14 percent. This can be seen in Figure 1.1.8.

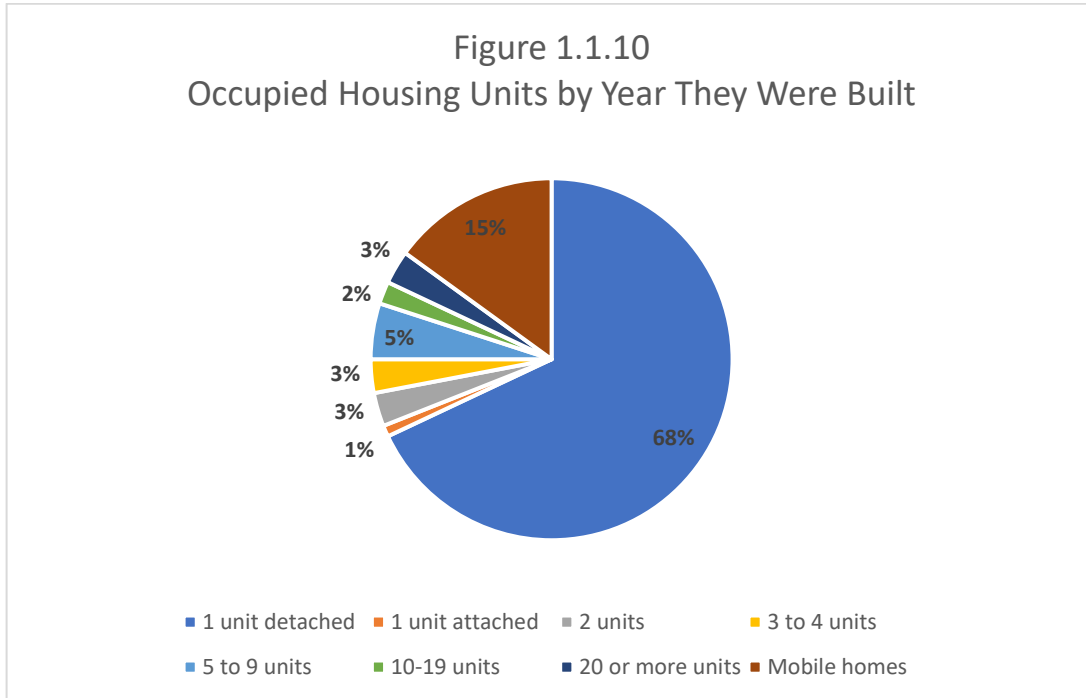


The total number of housing units in Mississippi as based on the Mississippi Development Authority (2022) estimates that there are 1,166,994 of occupied homes. Of the occupied homes, 385,091 or 33 percent are rental housing units, and 781,866 or 67 percent are owned housing units. This can be seen in Figure 1.1.9.

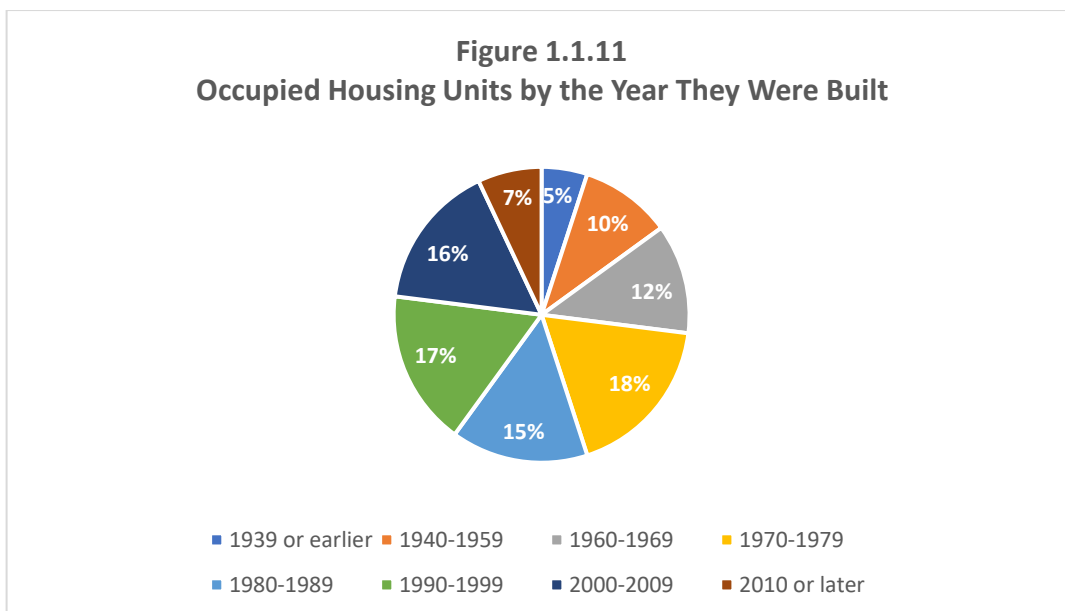


Source: for figures 1.1.8- 1.1.11 is the 2022 Mississippi Development Authority and the American Community Survey

According to the 2020 American Community Survey, the total number of occupied housings increased from 1,274,719 to 1,329,312. Of this total, 68 percent are classified as one unit detached while the second most common type of housing was mobile home/other housing at 15 percent. It can be deduced from these numbers that most Mississippians live in single-family housing or in mobile home/other forms of housing. However, 5 percent live in those structures that are classified as having 10 or more units. This can be seen on Figure 1.1.10.



Most structures were built between the years of 1970-1999. These years accounted for 50 percent of the total. This was followed by those built between the years of 2000 or later with 23 percent of the total. This shows that even though the housing stock tends to be older, newer homes are being built which signals progress and growth. Less than 1 percent lack plumbing facilities. See Figure 1.1.11.



## Economy

The State of Mississippi is home to many different industries. The industries range from agriculturally based in the Delta to casino management on the Gulf Coast. The following list of the leading industries in the state.

**Table 1.1.2**

Industry Type	%	Industry Type	%
Health Care and Social Assistance	19%	Professional, Scientific, and Tech Services	4%
Retail Trade	15%	Construction	4%
Accommodations, Food Service, Arts and Entertainment	13%	Other Services (except Public Administration)	4%
Manufacturing	10%	Wholesale Trade	4%
Administration, Business Support, and Waste Management	6%	Utilities	2%
Educational Services	6%	Real Estate, Rentals, and Leasing	2%
Transportation/ Warehousing	5%	Agriculture, Forestry, Fishing, and Hunting	0.9%
Information	5%	Mining, Oil and Gas Extracting, and Quarrying	0.4%
<b>(Percents are Rounded)</b>		<b>Total Rounded Percent</b>	<b>100%</b>

Source: <https://www.ibisworld.com/2021/Mississippi>

Table 1.1.2 above indicates that 19 percent of Mississippi’s employment is through the Health Care and Social Assistance. Health Care and Social Assistance, Retail Trade, and Accommodations, Food Service, Arts, and Entertainment employ 47 percent of Mississippians. Mississippi has a large manufacturing industry that makes up 10 Percent of Mississippi’s employment. Mississippi has large manufacturing plants such as Nissan North America, Huntington Ingalls Industry, Tyson, Howard Industries, Toyota Motor Manufacturing, and Cooper Tire and Rubber. There are more names that could be added to the list as some of the leading employers in the state.

The industries with the largest revenue in the state are Hospitals (14 b), Petroleum and Refining (10.9 b), and Agricultural, Beef, Meat, Poultry, and Processing (8.3 b). Mississippi’s GDP (Gross Domestic Product) by sector leaders are Manufacturing (18 b), Real Estate (12.5 b), and Retail Trade (8.5 b). The combined GDP for these three sectors are 44 percent of the state’s GDP.

Amazon recently opened a 700,000 square foot fulfillment facility that brought more than 1000 full time jobs to the area (Amazon representatives state that this number could increase to 1500 during the holiday season). This plant is in Canton, MS, which is in Madison County (Nissan is also located in this area). This facility is the first in Mississippi to feature Amazon’s Robotics Technology. It began production on July 24, 2022.

Many companies claim Mississippi as their home base or were started in Mississippi. Some of the industries are: Engle’s Shipyard, Continental Tire, C-Spire, Sanderson Farms, and Pine-Sol are just a few. Corinth, Mississippi is one of the two places that National Geographic is printed. Mississippi is also home to more than 20 Aerospace and Defense companies, has more than 13,000 miles of interstate pipeline, is home to Grand Gulf Nuclear Power Plant, and has a NASA test site (Stennis Space Center).

Companies do not choose to locate in areas lacking skilled workforce. Mississippi offers industries a population of workers willing to be trained through various programs. According to the State Department of Education, in 2022, the State of Mississippi had an 88.4 percent high school graduation rate with an 8.5 percent dropout rate (The National Average Graduation Rate is 86 percent). Starting in the 9<sup>th</sup> grade, Mississippi students can choose too either maintain the typical diploma track, or they can add an endorsement to their diploma. They could choose to get a distinguished academic or technical diploma endorsement (Students can also earn more than one endorsement).

These endorsements allow the students to take additional classes following their endorsement track. This gives the student's academic advantages and qualifies them for an automatic admission into any of the state's public universities. Each option prepares Mississippi students for the workforce, military, technical training, or college. The class of 2022 was the 1<sup>st</sup> graduating class in this program. Since its implementation, in 2018, graduation rates have continued to grow, and dropout rates have continued to decline. In 2014, the graduation rates in Mississippi was only 74.5 percent with a dropout rate of 13.9 percent. As you can see, Mississippi's students are being equipped to meet the needs of manufacturers and technical companies through adequate public education at the high school and college level.

## Summary

The State of Mississippi is divided into many different regions, as determined by the climate and physiography. These regions face different threat levels of hazards related to these criteria. The topography ranges from the low-lying areas of the Mississippi Delta to the coastline of the Mississippi Gulf Coast. The Gulf Coast (Coastal Zone) is threatened annually by hurricanes. One of the worst disasters in the U.S. history occurred along the State's coastline in August 2005: Hurricane Katrina, which destroyed homes as well as entire communities. Almost 18 years later, many of these communities have still not fully recovered. Many areas of the Delta lie near the Mississippi River, which creates the ideal conditions for flooding after large amounts of rain. The State's climate is characterized by long, hot summers and temperate winters. While the amount of rainfall is typically evenly distributed flooding does occur. The long hot summers have led to occurrences of droughts in the past, and during the winter season, ice storms have occurred in the northern and central regions of the state.

The threat of any major hazard could greatly affect many of the state's industries. Among these are, but not limited to tourism (gaming, culturally based, and recreational), transportation (state's ports contribute around \$5 billion annually to the economy), and manufacturing (10 percent of the state's industry). In addition, the state's recreational industry would suffer due to a major hazard. There are over 25 state parks in Mississippi and almost \$1.1 billion dollars are contributed to the state's economy by these activities. In the aftermath of Katrina, the tourism and transportation industries were greatly affected by road and bridge closures, extensive damage to casinos, the permanent closure of some state parks, and countless other devastating impacts. The population of the state decreased from 2,982,785 to 2,961,279. This marked a decrease of 0.7 percent. Even with slight population decrease, the population continues to remain steady and the housing units available are up 6.7 percent and the vacancies are down to 9.7 percent. With the increase of housing, our population, and the changing weather patterns, the threat to the loss of life and property damage could rise as well. It is for this and the aforementioned reasons, that this plan considers the efforts of local governments and addresses all hazard-related issues, as well as their lasting impacts to the lives and landscape of Mississippi.

## 1.2: Plan Adoption

**44 CFR §201.4(c)(6): The State mitigation strategy shall include the following elements:**

**A Plan Adoption Process. The plan must be formally adopted by the State prior to submittal to FEMA for final review and approval.**

The State of Mississippi Standard Mitigation Plan meets the requirements of Section 409 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (commonly referred to as the Stafford Act-Public Law 93-288 as amended). Additionally, this plan meets the minimum planning requirements under 44 Code of Federal Regulations (CFR), Part 78 (Flood Mitigation Assistance).

It is intended that this plan also meet the requirements of the Disaster Mitigation Act of 2000 (DMA2K), Section

322. Section 322 of the Act requires that states, as a condition of receiving federal disaster recovery funds, have a mitigation plan in place that describes the planning process for identifying hazards, risks, and vulnerabilities; identifying and prioritizes mitigation actions; encouraging the development of local mitigation; and providing technical support for these efforts. In addition, the Act also requires local and Tribal governments to have mitigation plans.

The development and implementation of this strategy is authorized and/or required by the following state statutes:

Mississippi Emergency Management Law, Mississippi Code of 1972, Title 33-15, as amended.

Executive Order(s) by the Governor

The final draft of the State of Mississippi Standard Mitigation Plan was submitted to the Governor's Authorized Representative (GAR) for review and recommendation. From here it was sent to Governor Tate Reeves for Adoption by the State of Mississippi under the executive powers of the Governor on August \_\_\_\_, 2023. The Promulgation Statement issued by Governor Reeves is presented on the subsequent page.



## PROMULGATION STATEMENT

Transmitted herewith is the updated *Mississippi Hazard Mitigation Plan*, as required under Section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as enacted under Section 104 of the Disaster Mitigation Act of 2000 (Public Law 106-390).

This plan provides a significant opportunity to reduce Mississippi's disaster risk through the identification of hazards, an analysis of the risk, an assessment of vulnerability, and the recognition of strategies and specific mitigation activities that when implemented will eliminate or significantly reduce disaster losses.

Coupled with regional and community hazard mitigation plans, this plan serves as the mitigation platform in the emergency management framework of preparedness, response, recovery and mitigation.

This plan was developed in accordance with Federal hazard mitigation planning standards contained in 44 CFR 201.4. This plan will be updated as needed, but at least every five years, as required.

Therefore, by virtue of the authority vested in me, by the constitution of Mississippi and Title 33, Chapter 15, Mississippi Code of 1972, as amended. I hereby promulgate and issue the *Mississippi Hazard Mitigation Plan* as the official guidance for all concerned.

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Tate Reeves  
Governor

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Date

## 1.3: Assurances (Compliance with Federal Laws and Regulations)

**44 CFR 201.4(c)(7):** *The State mitigation strategy shall include the following elements:*

**Assurances.** *The plan must include assurances that the State will comply with all applicable Federal statutes and regulations in effect with respect to the periods for which it receives grant funding, in compliance with CFR 13.11(c). The State will amend its plan whenever necessary to reflect changes in State or Federal laws and statutes as required in CFR 13.11(d).*

### 44 CFR

Through the development and enforcement of this plan, the State of Mississippi will comply with all provisions in 44 Code of Federal Regulations:

- I. Part 7, Nondiscrimination in Federally Assisted Programs.
- II. Part 9, Floodplain Management and Protection of Wetlands.
- III. Part 10, Environmental Considerations.
- IV. Part 13, Uniform Administrative Requirements for Grants and Cooperative Agreements to States and Local Governments.
- V. Part 14, Reserved
- VI. Part 17, Government-Wide Debarment and Suspension and Government-Wide Requirements of Drug-Free Workplace.
- VII. Part 18, New restrictions on lobbying.
- VIII. Part 201, Mitigation Planning
- IX. Part 206, Federal Disaster Assistance.
- X. Subchapter B- Insurance and Mitigation
- XI. Subchapter D- Disaster Assistance
- XII. Subchapter F- Preparedness

Additionally, the laws listed below are provided as documentation that the State or any subsequent subgrantee (recipients) that receive federal grant funds will comply with all applicable State and Federal statutes and regulations. The State will update the plan whenever necessary to reflect changes in Federal statutes and regulations or material changes in state law, organization, policy, or state agency operations.

The following provisions apply to the award of assistance:

### Federal Law

- I. Public Law 93-288, Disaster Relief Act of 1974, as amended by Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, Public Law 100-707 and further amended by Disaster Mitigation Act of 2000, Public Law 106-390.
- II. Public Law 93-234, Flood Disaster Protection Act of 1973.
- III. Public Law 103-181, Hazard Mitigation and Relocation Assistance Act of 1993.
- IV. Public Law 98-502, Single Audit Act.
- V. Public Law 81-920, Federal Civil Defense Act.
- VI. Title 31 CFR Part 205.6, Funding Techniques.

## **Executive Orders**

- I. Executive Order 11988, Floodplain Management.
- II. Executive Order 11990, Protection of Wetlands.
- III. Executive Order 12612, Federalism.
- IV. Executive Order 12699, Seismic Safety.
- V. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Population.

## **Office of Management and Budget**

- I. OMB Circular A-21, Cost Principles for Educational Institutions.
- II. OMB Circular A-87, Cost Principles for State and Local Governments.
- III. OMB Circular A-94, Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs
- IV. OMB Circular A-102, Uniform Administrative Requirements for Grants and Cooperative Agreements with State and Local Governments.
- V. OMB Circular A-110, Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and other Non-Profit Organizations.
- VI. OMB Circular A-122, Cost Principles for Non-Profit Organizations.
- VII. OMB Circular A- 133, Audits of Local Governments, and Non-Profit Organizations.

## **State Authorities**

- I. Mississippi Emergency Management Law, Mississippi Code of 1972, Title 33-15, as amended.
- II. Other Applicable Mississippi Laws refer to “Compendium of Legislation” Mississippi Administrative Plan, Volume I to Mississippi Emergency Management Plan.
- III. Executive Order(s) of the Governor
  - E. O. 252, August 11, 1977; Relocation of State Government.
  - E. O. 573, March 3, 1987; Mississippi Emergency Response Commission.
  - E. O. 653, 1990, et. Seq.; Emergency Management Responsibilities.
  - E. O. 985, 2007; Mississippi State Hazard Mitigation Council.