

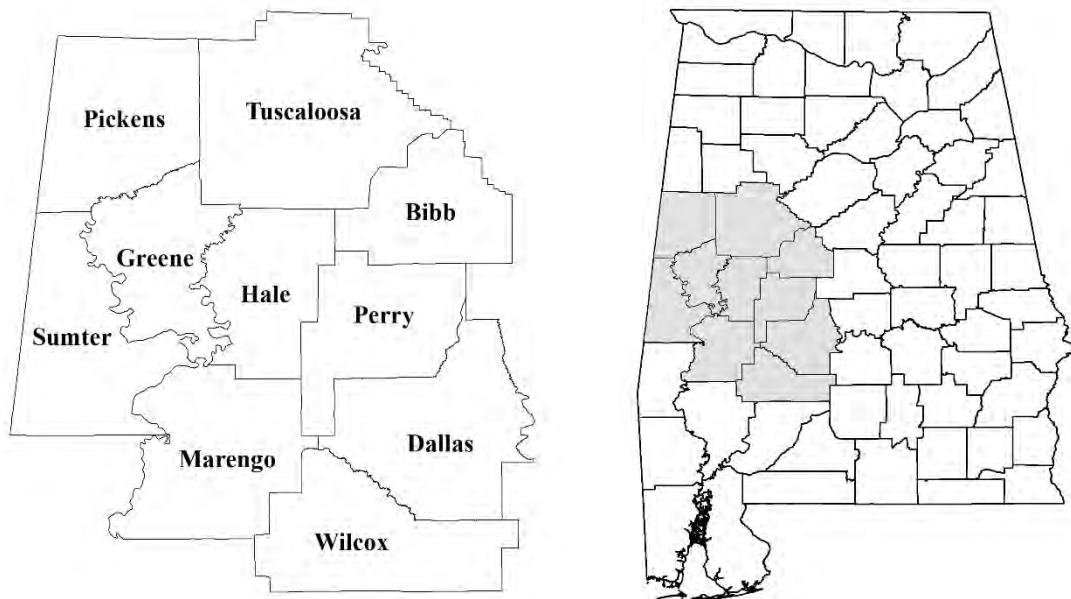
# Division C

## Regional Multi-Jurisdictional Hazard Mitigation Plan Phase II

A HAZARD MITIGATION PLAN FOR AEMA DIVISION C COUNTIES: BIBB, DALLAS, GREENE, HALE, MARENGO, PERRY, PICKENS, SUMTER, TUSCALOOSA, WILCOX, AND ELIGIBLE LOCAL JURISDICTIONS

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Adopted by ATRC & WARC

The Division C Regional Multi-Jurisdictional Hazard Mitigation Plan was developed by through a joint effort of the Alabama Tombigbee Regional Commission and West Alabama Regional Commission in conjunction with Bibb, Dallas, Greene, Hale, Marengo, Perry, Pickens, Sumter, Tuscaloosa, and Wilcox Counties.



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# **Section 1- Hazard Mitigation Plan Introduction**

## **Section Contents**

- 1.1 Plan Scope
- 1.2 Authority
- 1.3 Funding
- 1.4 Purpose

## **1.1 Plan Scope**

The Regional Multi-Jurisdictional Hazard Mitigation Plan is intended to identify and detail the hazards that affect the Alabama Emergency Management Agency's (AEMA) Division C. This division includes the following counties and the municipalities and jurisdiction within them: Bibb, Dallas, Greene, Hale, Marengo, Perry, Pickens, Sumter, Tuscaloosa, and Wilcox.

This plan will be the first regional mitigation plan for the area. Currently, each county is covered by a multi-jurisdictional county plan. Division C counties, while diverse in many aspects, have similar risks and impacts with regards to hazards. A regional plan provides this information in a more concise and effective manner. A regional planning process provides an opportunity for participants to discuss and identify mitigation strategies to address identified hazards.

## **1.2 Authority**

Hazard mitigation plans are a requirement of Section 409 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (public Law 93-228, as amended), Title 44 Code of Federal Regulations, as amended by Part 201 of the Disaster Mitigation Act of 2000. All state and local governments must develop a Hazard Mitigation Plan as a condition of receiving non-emergency federal disaster assistance including hazard mitigation grant program (HMGP), pre-disaster mitigation (PDM), and flood mitigation assistance (FMA) program funds.

## **1.3 Funding**

Funding for the AEMA Division C Regional Multi-Jurisdictional Hazard Mitigation Plan was provided through the Hazard Mitigation Grant Program (HMGP), under Disaster Recovery Declaration 4349, (DR-4349). Supplemental funding was provided by the county commissions of Bibb, Greene, Hale, Pickens, and Tuscaloosa counties, and the Alabama Tombigbee Regional Commission.

## **1.4 Purpose**

The purpose of the Division C Multi-Jurisdictional Hazard Mitigation Plan is to evaluate and identify all prioritized hazards which may affect the region. Mitigation strategies that address each of the identified hazards are presented. This plan is only one of many steps Division C jurisdictions will take to achieve a safer, more hazard resistant environment for its residents.



## **Section 2- Regional Profile**

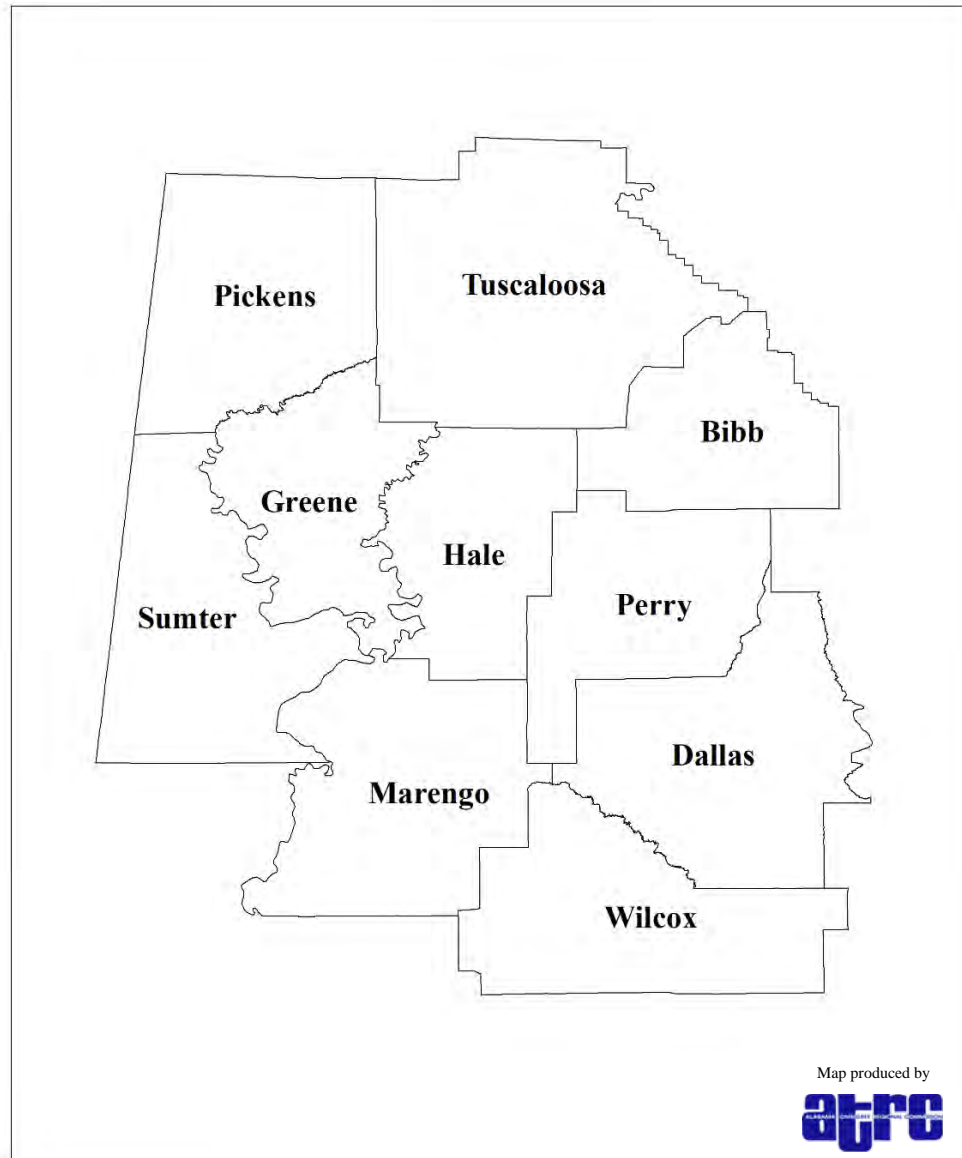
### **Section Contents**

- 2.1 Background
- 2.2 Demographics
- 2.3 Business and Industry
- 2.4 Infrastructure
- 2.5 Land Use and Development Trends

## 2.1 Background

The planning area for this plan is Alabama Emergency Management Agency (AEMA) Division C, one of the seven emergency management divisions within the state. AEMA Division C is located in west central Alabama (Figure 2.1). AEMA Division C includes the following counties: Bibb, Dallas, Greene, Hale, Marengo, Perry, Pickens, Sumter, Tuscaloosa, and Wilcox. Within these ten counties there are 53 municipalities.

**Figure 2.1 Alabama Emergency Management Division C Counties**



A large portion of AEMA Division C is in a region referred to as the Black Belt. The Alabama Black Belt is an area named for its dark rich soils although its identity is rooted in both its physical and cultural geography. Dallas, Greene, Hale, Marengo, Perry, Sumter, and Wilcox are considered traditional Black Belt counties.

The largest county by area in the division is Tuscaloosa County with 1,351 square miles. Bibb County is the smallest county with 626 square miles. The total land area of this region is 8,635 square miles, which is roughly 17% of the state. Table 2.1 provides the total area of each county located within the region.

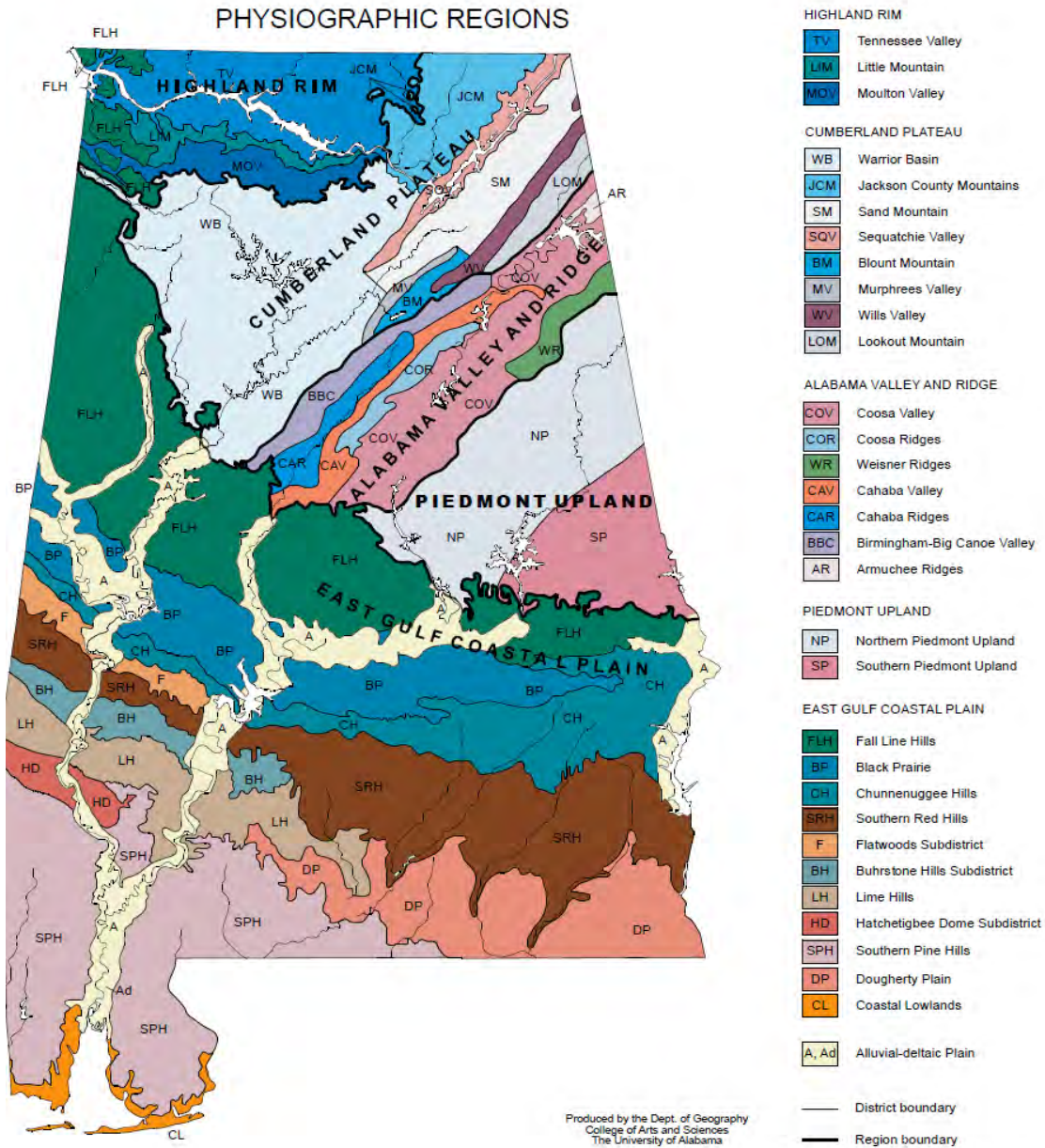
**Table 2.1: Total Area by County**

County	Total Area
Bibb County	626 square miles
Dallas County	924 square miles
Greene County	660 square miles
Hale County	657 square miles
Marengo County	983 square miles
Pickens County	890 square miles
Perry County	724 square miles
Sumter County	913 square miles
Tuscaloosa County	1,351 square miles
Wilcox County	907 square miles

*Source: U.S. Census Bureau*

The entire expanse of Division C lays within the East Gulf Coastal Plain physiographic region (Figure 2.2). This area developed on geologically young Mesozoic to Recent (from about 140 million years ago to the present) sedimentary rocks and sediment. Geologic units are composed of mainly of sediments and can be described as gravels, sands, silts, and clays. The Coastal Plain is flat and relatively featureless in some areas, but elsewhere it consists of as cuestas and flatwoods. Floodplains are located along the Alabama, Tombigbee, and Black Warrior river systems.

**Figure 2.2 Physiographic Regions of the State of Alabama**



Source : [http://alabamamaps.ua.edu/contemporarymaps/alabama/physical/al\\_physio.pdf](http://alabamamaps.ua.edu/contemporarymaps/alabama/physical/al_physio.pdf)  
 Last accessed 1/12/2020

A number of rivers flow through Division C (Figure 2.3). The Alabama River flows southwest through Dallas and Wilcox counties. The Cahaba is a tributary of the Alabama. It flows through Bibb, Perry, and Dallas County to its confluence with the Alabama near historic Cahawba. The Tombigbee River flows southerly through Pickens, Greene, Sumter, and Marengo counties. The Sipsy River flows through Tuscaloosa, Greene, and Pickens counties. It discharges into the Tombigbee River near Vienna in Pickens County. The Noxubee River is a tributary of the

Tombigbee that flows through northwest Sumter County. The Sucarnoochee River is a tributary of the Tombigbee which flows southeasterly through central Sumter County. The Sipsey River is a tributary of the Tombigbee that flows through Tuscaloosa, Greene, and Pickens counties. It joins with the Tombigbee approximately ten miles north of Gainesville.

**Figure 2.3 Map of Major Rivers in Alabama**



Source: <https://geology.com/lakes-rivers-water/alabama.shtml>  
 Last accessed 1/12/2020

## 2.2 Demographics

According to the 2010 Census, the total population of AEMA Division C is 349,230 people. This population spans over a total area of 8,635 square miles. The populations of Division C counties varies significantly. Tuscaloosa County is the most populous county with 194,656 residents. Dallas County is the second most populous with 43,820 residents. All other counties in the

division have populations less than 25,000. The division's least populous county is Greene County with a reported population of 9,045. Table 2.2 provides population counts for all jurisdictions in AEMA Division C from the 2000 and 2010 U.S. Census.

<b>Table 2.2: Regional Jurisdiction Population</b>			
<b>Jurisdiction</b>	<b>Population (2000 Census)</b>	<b>Population (2010 Census)</b>	<b>% Change</b>
<b>Bibb County</b>	<b>20,826</b>	<b>22,915</b>	<b>9.12%</b>
City of Brent	4,024	4,947	18.66%
City of Centreville	2,466	2,778	11.23%
Town of Vance	500	1,529	67.30%
Town of West Blocton	1,372	1,240	-10.65%
Town of Woodstock	0	1,428	100.00%
<b>Dallas County</b>	<b>46,365</b>	<b>43,820</b>	<b>-5.81%</b>
City of Selma	20,512	20,756	1.18%
City of Valley Grande	0	4,020	100.00%
Town of Orville	230	204	-12.75%
<b>Greene County</b>	<b>9,974</b>	<b>9,045</b>	<b>-10.27%</b>
City of Eutaw	0	2,934	100.00%
Town of Boligee	369	328	-12.50%
Town of Forkland	629	649	3.08%
Town of Union	227	237	4.22%
<b>Hale County</b>	<b>17,185</b>	<b>15,760</b>	<b>-9.04%</b>
City of Greensboro	2,731	2,497	-9.37%
City of Moundville	1,809	2,427	25.46%
Town of Akron	521	356	-46.35%
Town of Newbern	231	186	-24.19%
<b>Marengo County</b>	<b>22,539</b>	<b>21,027</b>	<b>-7.19%</b>
City of Demopolis	7,540	7,483	-0.76%
City of Linden	2,424	2,123	-14.18%
Town of Dayton	60	52	-15.38%
Town of Faunsdale	87	98	11.22%
Town of Myrtlewood	139	130	-6.92%
Town of Providence	311	223	-39.46%
Town of Sweet Water	234	258	9.30%
Town of Thomaston	383	417	8.15%
<b>Perry County</b>	<b>11,861</b>	<b>10,591</b>	<b>-11.99%</b>
City of Marion	3,511	3,686	4.75%
City of Uniontown	1,636	1,775	7.83%

**Table 2.2: Regional Jurisdiction Population (continued)**

<b>Jurisdiction</b>	<b>Population (2000 Census)</b>	<b>Population (2010 Census)</b>	<b>% Change</b>
<b>Pickens County</b>	<b>20,949</b>	<b>19,746</b>	<b>-6.09%</b>
City of Aliceville	2,567	2,486	-3.26%
Town of Ethelsville	81	81	0.00%
Town of Carrollton	987	1,019	3.14%
Town of Gordo	1,677	1,750	4.17%
Town of McMullen	66	10	-560.00%
Town of Memphis	33	29	-13.79%
Town of Pickensville	662	608	-8.88%
Town of Reform	1,978	1,702	-16.22%
<b>Sumter County</b>	<b>14,798</b>	<b>13,763</b>	<b>-7.52%</b>
City of Livingston	3,297	3,485	5.39%
City of York	2,854	2,538	-12.45%
Town of Cuba	363	346	-4.91%
Town of Emelle	31	53	41.51%
Town of Epes	206	192	-7.29%
Town of Gainsville	220	208	-5.77%
Town of Geiger	161	170	5.29%
<b>Tuscaloosa County</b>	<b>164,875</b>	<b>194,656</b>	<b>18%</b>
City of Northport	19,435	23,330	16.70%
City of Tuscaloosa	77,906	90,468	13.89%
Town of Brookwood	1,483	1,828	18.87%
Town of Coaling	1,115	1,657	32.71%
Town of Coker	808	979	17.47%
Town of Lakeview	163	143	-13.99%
Town of Vance	500	1,529	67.30%
<b>Wilcox County</b>	<b>13,183</b>	<b>11,670</b>	<b>-12.96%</b>
City of Camden	2,257	2,020	-11.73%
Town of Pine Hill	966	975	0.92%
Town of Pine Apple	145	132	-9.85%
Town of Oak Hill	37	26	-42.31%
Town of Yellow Bluff	181	188	3.72%
<b>Division C Totals</b>	<b>266,475</b>	<b>349,230</b>	<b>23.70%</b>

*Source: U.S. Census Bureau (2000 and 2010)*

Based on the 2010 U.S. Census, the median age for residents in the Division C planning region 38.5 years. Racial and ethnic characteristics from the 2010 U.S. Census are provided by county in Table 2.3.

**Table 2.3 Racial and Ethnic Demographics by County**

County	White%	Black%	Other %	Hispanic % (*)
Bibb County	76.6%	22.4%	1%	1.8%
Dallas County	29.1%	69.4%	1.5%	0.7%
Greene County	17.4%	81.5%	1.1%	0.8%
Hale County	39.8%	59%	1.2%	0.9%
Marengo County	46.4%	51.7%	1.9%	1.7%
Pickens County	56.3%	41.6%	2.1%	1.6%
Perry County	30.3%	68.7%	1%	1.1%
Sumter County	24.2%	75%	0.8%	0.6%
Tuscaloosa County	66.3%	29.6%	4.1%	3.1%
Wilcox County	26.8%	72.5%	0.7%	0.6%

*Source: U.S. Census Bureau (2010)*

*\*Hispanic Population may be of any race.*

Housing information estimates, including more vulnerable housing such as mobile homes and aging housing, are presented in Table 2.4.

**Table 2.4 Housing Demographics by County**

County	Housing Units	Mobile Homes (%)	Housing 35 Years + (%)
Bibb County	9,112	27.7%	58%
Dallas County	20,309	19.7%	39%
Greene County	5,056	40%	48%
Hale County	7,753	36%	49%
Marengo County	10,307	24%	48%
Pickens County	9,538	22.8%	48%
Perry County	4,748	22.8%	36%
Sumter County	6,833	30.2%	52%
Tuscaloosa County	89,419	9.9%	62%
Wilcox County	5,709	36.2%	59%

*Source: US Census Bureau American Community Survey 2013-2017*

Unemployment rates for counties in Division C vary. Through October 2019, unemployment rates vary from a low of 2.9% in Tuscaloosa County to a high of 7.7% in Wilcox County. Table 2.5 provides unemployment rates by county for the entire division.



**Table 2.5 Average Unemployment Rates by County**

<b>County</b>	<b>Unemployment Rate (2019 through October)</b>
Bibb County	3.3%
Dallas County	6.0%
Greene County	6.1%
Hale County	4.3%
Marengo County	3.9%
Pickens County	3.8%
Perry County	5.7%
Sumter County	4.9%
Tuscaloosa County	2.9%
Wilcox County	7.7%

*Source: Alabama Department of Labor (2019)*

## 2.3 Business and Industry

Division C has a wide variety of both commercial and industrial stakeholders. The planning region is strategically located along Interstate 20/59 and several federal and state highways transect the area. The region includes a number of navigable inland waterways, regional airports, and railroad lines. Within the planning region there is a diversified economic base which includes manufacturing, agriculture, forestry, retail trade, healthcare, and food services.

Tuscaloosa County is home to the most commercial and industrial entities in the region.

Tuscaloosa County houses the Mercedes-Benz U.S. International Assembly Plant that has one of the highest capital investments in the state, which is more than \$6 billion U.S. dollars. This plant employs over 4,000 people. Michelin/BF Goodrich and Phifer, Inc., both located in Tuscaloosa County, are manufacturers that employ over 1,000 individuals. Table 2.6 provides information on major employers in Division C.

**Table 2.6 Major Employers in AEMA Division C\***

<b>Employer</b>	<b>County</b>	<b>Product</b>	<b>Employees</b>
The University of Alabama	Tuscaloosa	Higher Education	11,403
Mercedes-Benz U.S. International, Inc.	Tuscaloosa	Automobiles (SUV)	3,900
DCH Regional Medical Center	Tuscaloosa	Medical Services	3,315
County Board of Education	Tuscaloosa	Public Education	2,277
City Board of Education	Tuscaloosa	Public Education	1,446
Warrior Met Coal	Tuscaloosa	Metallurgical Coal	1,387
Michelin/BF Goodrich Tire Manufacturing	Tuscaloosa	Aftermarket Tires	1,348
City of Tuscaloosa	Tuscaloosa	City Services	1,289

**Table 2.6 Major Employers in AEMA Division C\* (continued)**

<b>Employer</b>	<b>County</b>	<b>Product</b>	<b>Employees</b>
Veterans Administration Hospital	Tuscaloosa	Specialized Health Care	1,277
Phifer Inc.	Tuscaloosa	Aluminum/Fiberglass Screening	1,204
SMP Automotive Systems	Tuscaloosa	Automotive Components	1,107
ARD Logistics-Alabama	Tuscaloosa	Third-Party Logistics	768
Brose Tuscaloosa	Tuscaloosa	Automotive Components	645
International Paper	Dallas	Paper, Pulp	749

*\*Employers with over 500 employees*

*Source: Tuscaloosa County Industrial Development Authority, Economic Development Partnership of Alabama*

Forest products are a major industry in Division C and has been so historically. Table 2.7 is provided below, it indicates growth within the forestry industry in Division C, from 2017 to current.

**Table 2.7 Forestry Industry Growth and Expansion**

<b>Company</b>	<b>County</b>	<b>Product</b>	<b>Jobs</b>	<b>Investment (million)</b>
<b>2019</b>				
Enviva	Sumter	Wood Pellets	85	175 (New)
<b>2018</b>				
KyKenKee, Inc.	Tuscaloosa	Sawmill that produces hardwoods and southern yellow pine, specialty cut items, and Greenscape products (wood chips, bark, sawdust )	70	\$28.2 (Expansion)
Sunbelt Forest Ventures	Dallas	High tech Sawmill	52	\$21 (New)
Zilkha Biomass Selma	Dallas	Wood pellets (black) for export	63	\$20 (New)
<b>2017</b>				
Pallet One of Alabama Dallas	Dallas	Wood pallets	20	\$0.5 (Expansion)
Two Rivers Lumber	Marengo	Sawmill	95	\$64 (New)

*Source: Economic Development Partnership of Alabama (EDPA)*

It should be noted that all industries mentioned are susceptible to the natural hazards that occur in the entire planning region. The severity and impact of a loss of an industry is directly associated with the type of business and size of the facility.

## 2.4 Infrastructure

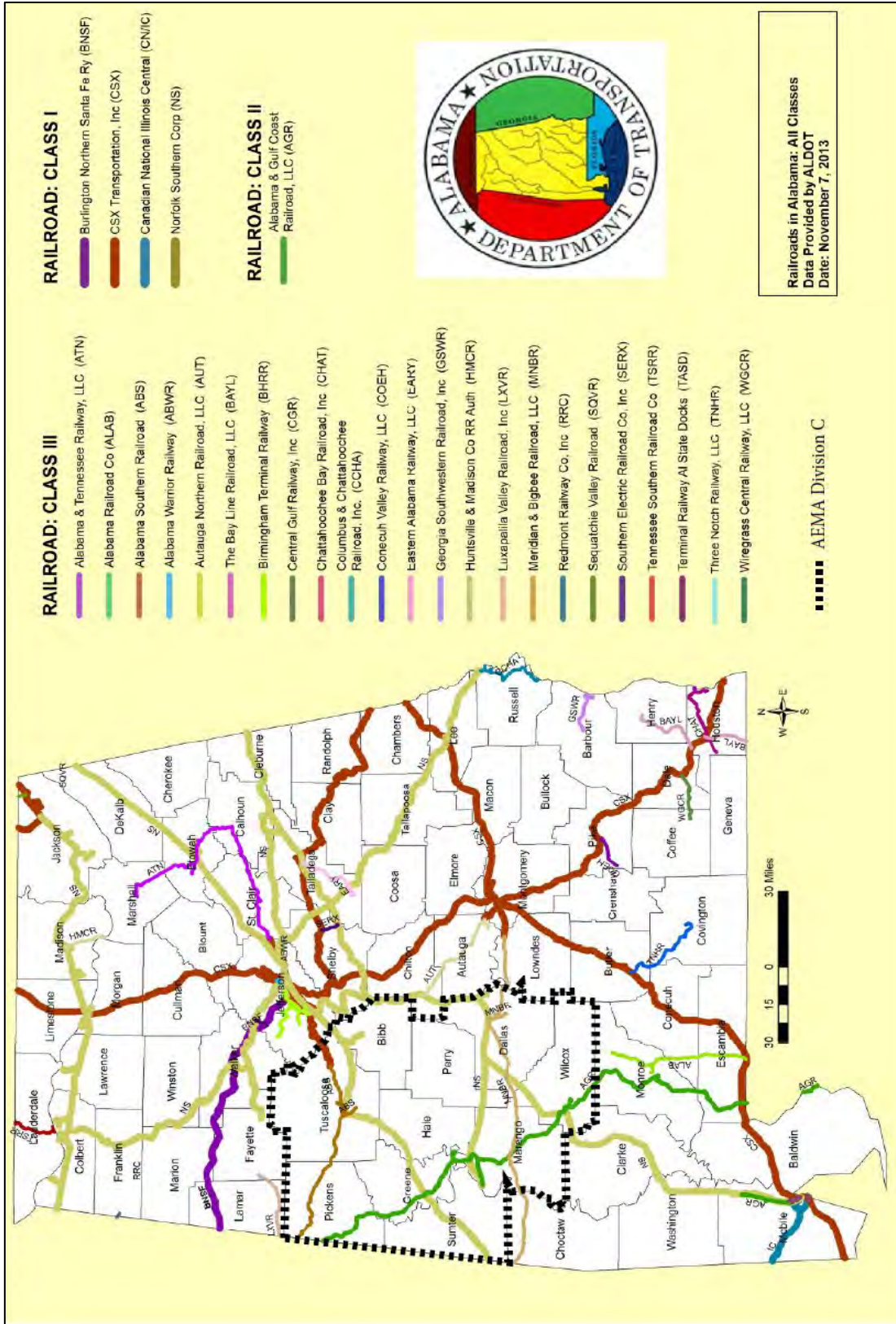
### Transportation

Division C has several major highways. Interstate Hwy 20/59 runs through Sumter, Greene and Tuscaloosa counties, northward. This interstate serves as an important trucking and evacuation route for the central gulf coast. It is a “double interstate” whereby each interstate’s traffic flow converges into a single route between Birmingham and Meridian Mississippi. Major federal highways that run through the region include U.S. Highways 43, 82, 11, and 80. U.S. 43 and U.S. 11 converge into a “double federal highway” through Greene and Tuscaloosa counties which runs parallel to Interstate 20/59. U.S. Highway 43 runs south through Tuscaloosa, Greene, and Marengo Counties. U.S. Highway 82 runs east to west through Pickens, Tuscaloosa, and Bibb Counties. U.S. Highway 11 runs east- west through Tuscaloosa, Greene, and Sumter Counties. U.S. Highway 80 runs east to west through Dallas, Marengo, and Sumter Counties. In addition to federal routes, there are numerous state and local routes that connect the communities in the region.

Division C houses several airports. There are no international airports located within the planning area. The Tuscaloosa National Airport is the only national airport in the state. The Demopolis regional Airport is the region’s only regional airport. The planning region includes several general aviation airports including George Downer Airport (Pickens County), Camden Municipal Airport (Wilcox County), Bibb County Airport (Bibb County), Greensboro Municipal Airport (Hale County), Vaiden Field (Perry County), North Pickens Airport (Pickens County), and Craig Field (Dallas County).

There are numerous railroads within Division C (Figure 2.4). Class I railroads have annual carrier operating revenues of \$250 million or more in 1991 dollars, which adjusted for inflation was \$452,653,248 in 2012. There are two Class I railroads in Division C, these lines are operated by Norfolk Southern and CSX Transportation. A Class II railroad is mid-sized in terms of operating revenue. As of 2011, a railroad with revenues greater than \$37.4 million but less than \$433.2 million for at least three consecutive years was considered Class II. The Alabama & Gulf Coast Railroad, LLC operates a Class II railroad that runs through Pickens, Greene, Marengo, and Wilcox Counties. A Class III railroad has an annual operating revenue of less than \$20 million. They are typically local short-line railroads serving a small number of towns and industries or hauling cars for one or more railroads. There are two Class III railroads in Division C, these lines are operated by the Alabama Southern Railroad (ABS) and Meridian and Bigbee Railroad, LLC.

Figure 2.4 Railroads in Alabama



Source: ALDOT Rail Directory 2014

## Utilities

Electric service throughout the planning area is provided by Alabama Power and several electric cooperatives. Greene, Hale, Marengo, Sumter and western Tuscaloosa counties are served by Black Warrior EMC. Perry County is served by Black Warrior EMC and Pioneer Electric Cooperative. Pickens County is served by Black Warrior EMC and Tombigbee Electric Co-Op, Inc. Wilcox County is served by Clarke-Washington EMC, Pioneer Electric Cooperative, and Southern Pine Electric Cooperative.

Water and sewer services are provided through municipal and county utility authorities. Most populated areas in the planning region have public water service, where there are only a few instances of areas that have no connection. The majority of the unincorporated areas throughout the region rely on septic systems for disposal of sewage and wastewater.

Natural Gas is provided by municipal and county authorities as well as Southern Natural Gas Company, Plantation Pipe Line (Hale County), Pickens County Natural Gas District, Alagasco (Pickens County), Warrior Energy, Embridge Pipeline Company, Southern Natural Gas (Tuscaloosa County), Wilcox County Gas District, and Amerigas (Bibb County).

## **2.5 Land Use and Development Trends**

With the exception of the Tuscaloosa metro area, west central Alabama is primarily rural (Figure 2.5). The area consists of numerous small towns, extensive agricultural land, and abundant livestock. Silviculture is strongly present within this region. In these rural areas, significant growth is not anticipated. These counties are projected to have a decrease in population over the next twenty years.

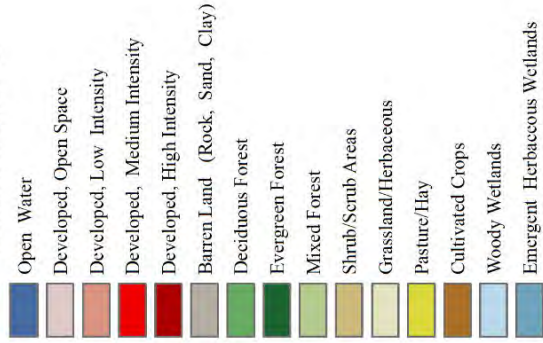
Tuscaloosa is the fifth most populated city in Alabama. It is the economic engine of west Alabama. The city is home to the University of Alabama, which reported an enrollment of 38,103 in the fall of 2019. The University's growth has contributed to the growth of the area along with the continued expansion of Mercedes Benz, which is located in Vance. Tuscaloosa is considered to be one of the fastest growing areas in the state. Northport, which lies to the northwest of Tuscaloosa, is another city experiencing rapid growth. Between the 2000 and 2010 Census, the population of Northport increased by 16.7%.



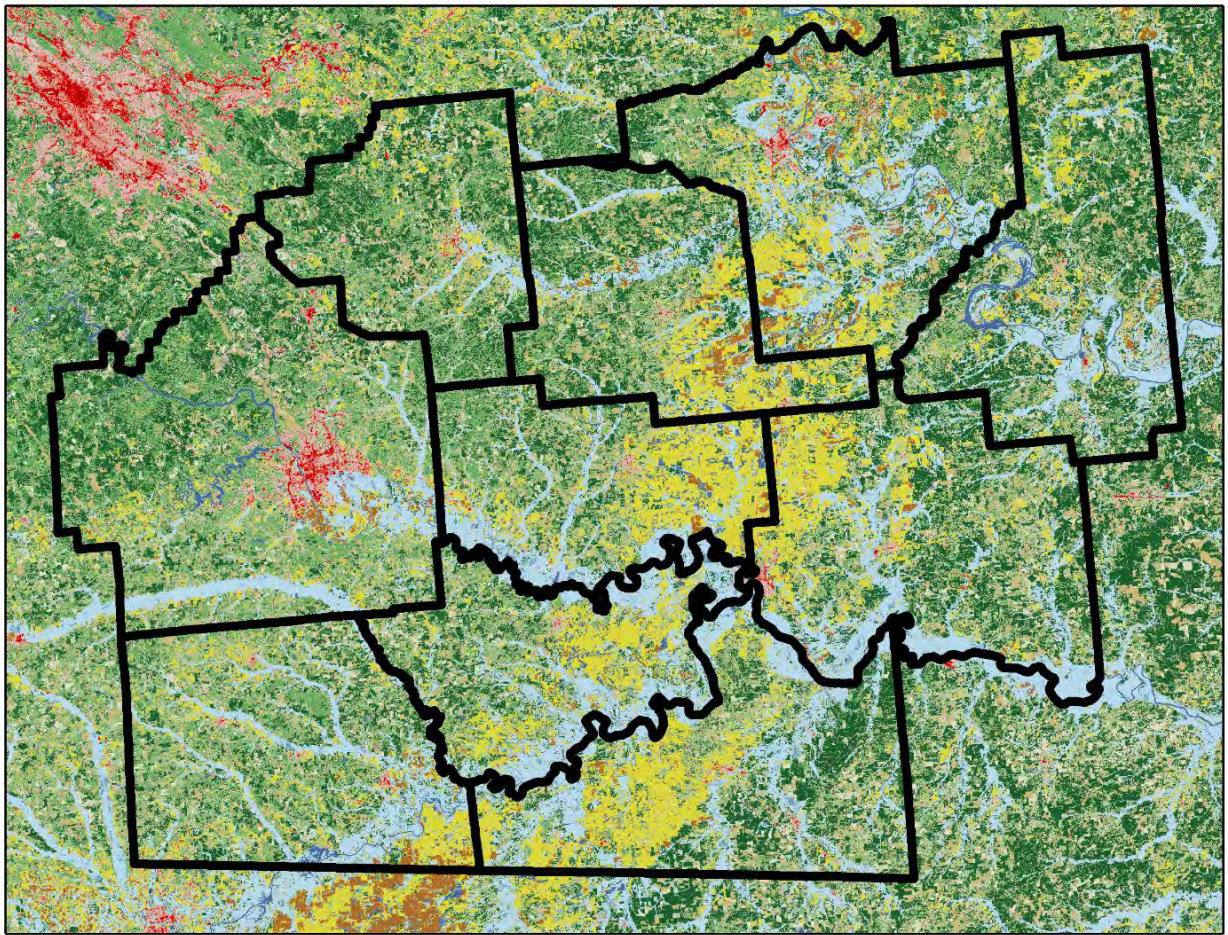
Figure 2.5 Division C Land Use/Land Cover

**Division C Land Use/Land Cover Data**

**Division C Land Cover**



Source: U.S. Geological Survey  
 NLCD 2016 Land Cover Conterminous United States



## **Section 3- Planning Process**

This section of the plan addresses the requirements of Section 201.6 (c)(1) by providing the planning process that was used to develop the plan, including how the plan was prepared, who was involved in the process and how the public participated.

### **Section Contents**

- 3.1 Multi-Jurisdictional Plan Adoption
- 3.2 Multi-Jurisdictional Plan Participation
- 3.3 Multi-Jurisdictional Action Plans
- 3.4 Hazard Mitigation Planning Process
- 3.5 Public and Other Stakeholder Involvement
- 3.6 Integration with Existing Plans

### **3.1 Multi-Jurisdictional Plan Adoption**

Participation in the planning process is open to jurisdictions and other public and private entities in Divisions C. Jurisdictions include regional planning councils, local governing bodies including municipal councils and county commissions, and local school districts. Public entities, as applicable within each county, may include health systems and institutions of higher education. Public universities and community colleges are included in the State of Alabama Hazard Mitigation plan and their participation in local plans is optional. Fire associations in Division C are considered private non-profits.

### **3.2 Multi-Jurisdictional Action Plans**

Participating jurisdictions and public entities are required to have individual mitigation action plans in order to be considered an eligible applicant for funding through HMA programs. Action plans for eligible participating entities are located in Section 5 – Mitigation Strategy. Fire associations, because they are private non-profits, must partner with an eligible jurisdiction to apply for HMGP funding and therefore are not required to have action plans.

### **3.3 Multi-Jurisdictional Planning Participation**

All eligible jurisdictions in Bibb, Dallas, Greene, Hale, Marengo, Perry, Pickens, Sumter, Tuscaloosa, and Wilcox counties have participated in the development of the regional hazard mitigation plan. These jurisdictions participated according to the standards set forth by the Regional Hazard Mitigation Planning Committee. Adoption of the plan completes the requirements to be an eligible applicant for FEMA HMA programs. Plan adoption is optional for Fire Associations. Table 3.1 provides a list of entities that will adopt the mitigation plan.



**Table 3.1 Division C Plan Participants Adopting Plan**

<b>Bibb County</b>	<b>Pickens County</b>
Bibb County Board of Education	Pickens County Commission
Bibb County Commission	Pickens County Board of Education
Bibb County Medical Center	City of Aliceville
City of Brent	City of Reform
City of Centreville	Town of Carrollton
Town of West Blocton	Town of Ethelsville
Town of Woodstock	Town of Gordo
	Town of McMullen
<b>Dallas County</b>	Town of Memphis
Dallas County School District	Town of Pickensville
Dallas County Commission	
City of Selma	<b>Sumter County</b>
City of Valley Grande	Sumter County Board of Education
Town of Orrville	Sumter County Commission
Selma City Schools	The University of West Alabama
<b>Greene County</b>	City of Livingston
Greene County Board of Education	City of York
Greene County Commission	Town of Cuba
Greene County Health System	Town of Emelle
City of Eutaw	Town of Epes
Town of Boligee	Town of Gainesville
Town of Forkland	Town of Geiger
Town of Union	Sumter County Opportunity, Inc.
	Sumter County Water Authority
<b>Hale County</b>	Sumter County Sewer Authority
Hale County Board of Education	Panola Enrichment Center
Hale County Commission	North Sumter Development Corporation
Hale County Hospital	
City of Greensboro	<b>Tuscaloosa County</b>
City of Moundville	Tuscaloosa County Board of Education
Town of Akron	Tuscaloosa County Commission
Town of Newbern	City of Northport
	City of Tuscaloosa
<b>Marengo County</b>	Tuscaloosa City Schools
Marengo County Commission	DCH Regional Health System
City of Demopolis	The University of Alabama
City of Linden	Town of Brookwood
Town of Dayton	Town of Coaling
Town of Faunsdale	Town of Coker
Town of Myrtlewood	Town of Lake View
Town of Providence	West Alabama Regional Commission
Town of Sweetwater	<b>Wilcox County</b>
Town of Thomaston	Wilcox County Board of Education
	Wilcox County Commission
	City of Camden
	Town of Oak Hill
<b>Perry County</b>	Town of Pine Apple
Perry County Commission	Town of Pine Hill
Perry County Board of Education	Town of Yellow Bluff
City of Marion	Alabama-Tombigbee Regional Commission
City of Uniontown	

### **3.4 Hazard Mitigation Planning Process**

The AEMA Division C Multi-Jurisdictional Hazard Mitigation Plan was developed through interaction between AEMA Division C EMA directors, the AEMA Division C Coordinator, the Alabama Tombigbee Regional Commission (ATRC), and the West Alabama Regional Commission (WARC). These entities comprised the Regional Hazard Mitigation Planning Committee.

The review of previous local hazard mitigation plans and development of the requirements for participating within the regional planning process were tasks undertaken by the Regional Hazard Mitigation Planning Committee. The requirements set forth by the committee were as follows:

- Attendance by them, or a representative, at each of the HMPC meetings;
- If unable to attend a meeting, follow up by communicating with the EMA Director through personal visits, phone calls, correspondence, email or fax;
- Timely submission of information necessary for the draft plan;
- Full cooperation among the members of each municipality with the participating county EMA and ATRC/WARC.

Members of the Regional Hazard Mitigation Planning Committee developed county-level planning subcommittees, primarily based from Local Emergency Planning Committees (LEPCs). County-level meetings provided local stakeholders and jurisdictions the opportunity to review the risk, vulnerability, and mitigation components of the Hazard Mitigation Plan. During December 2019, planning materials were sent to each jurisdiction for review prior to county-level stakeholder meetings. These meetings were held in early 2020. These meetings served as an opportunity to discuss recent hazard events and how they affected each jurisdiction. In addition, these meetings were used to assess the progress of each jurisdiction's mitigation goals and objectives. After these meetings, hazard profiles were consolidated and updated for the regional scope of the plan. A risk analysis was conducted using historical and local documentation. County EMAs and the regional planning commissions worked with participants to update and finalize mitigation strategies. Plan drafts were distributed to stakeholders and local jurisdictions for review and posted on the internet. The draft plan was available for public comment before submission to AEMA/FEMA.

The counties of Dallas, Hale, Marengo, and Sumter developed their plans in the later part of 2020 and first quarter of 2021. The planning process had to be modified due to the COVID-19 pandemic and state and local orders regarding public gatherings. Participating jurisdictions were provided planning materials and contacted directly to discuss the plan. The public and stakeholders were provided the opportunity to review the draft and comment.

**Table 3.2 Regional Hazard Mitigation Planning Participants by County  
Bibb County (Committee Members in BOLD)**

<b>Jurisdiction</b>	<b>Primary Contact/Title</b>	<b>Attended Meetings</b>	<b>Provided Written Comments</b>	<b>In-Person or Phone Consultation</b>
<b>Bibb County</b>	<b>Rodney Stabler, Chairman</b>			X
<b>Bibb County</b>	<b>Kirk Smith, Bibb EMA Director</b>	X	X	X
Bibb County	Rusty Price, Lt. Sheriff's Dept.	X	X	
Bibb County	Jeff McKinney, County Engineer	X	X	
Bibb County	Robert Hollifield, Pound	X		
Bibb County	Tommy Dockery, ADPH-EP Director	X	X	
Bibb County	Kenneth Weems, Chief Deputy	X		
Bibb County	Jackson Chance, Brierfield VFD	X	X	
Bibb County	Angela Hollifield, Engineering Assist.	X		
<b>Bibb County Board of Education</b>	<b>Wes Lawley, BOE Safety Coordinator</b>	X	X	
<b>Bibb County Fire Association .</b>	<b>Dennis Stripling, President</b>			X
<b>Bibb Medical Center</b>	<b>Matthew Thomas, Safety Director</b>	X	X	
<b>City of Brent</b>	<b>Bobbie White, Mayor</b>	X	X	
<b>City of Brent</b>	<b>Rosalyn Adams, City Clerk</b>	X	X	
City of Brent	David Tucker, Utilities Dept.	X		
City of Brent	Wade Snipes, Utilities Dept.	X		
City of Brent	Terry Nichols, Police Chief	X		
City of Brent	John Donner, Street Superintendent	X		
City of Brent	Jerry Pow, Chief Brent VFD	X		
<b>City of Centreville</b>	<b>Terry Morton, Mayor</b>	X	X	
City of Centreville	Rodney Smith, Police Chief	X	X	
<b>City of Centreville</b>	<b>Larry Oikle, Utilities Superintendent</b>	X		
City of Centreville	Don Mack, City Council	X		
<b>Town of West Blocton</b>	<b>James Cromer, Police Chief</b>	X	X	
<b>Town of Woodstock</b>	<b>Tiffney McCully, Town Clerk</b>	X	X	

Town of Woodstock	Len Price, Police Chief	X	X	
WARC	Cory Johnson, CED Director	X		
WARC	Countess King, Planning Assistant	X		
<b>Dallas County (Committee Members in BOLD)</b>				
<b>Jurisdiction</b>	<b>Primary Contact/Title</b>	<b>Attended Meetings</b>	<b>Provided Written Comments</b>	<b>In-Person or Phone Consultation</b>
Dallas County Commission	<b>Jimmy Nunn, Chairman</b>			X
Dallas County EMA	Toya Styles, Director			X
Town of Orrville	Louvenia Lumpkin, Mayor			X
City of Selma	Henry Thompson, Planning and Development			X
City of Valley Grande	Wayne Labbe, Mayor			X
Selma City Schools	Dr. Avis Williams, Superintendent			X
Dallas County School District	Mrs. Hattie Shelton, Superintendent			X
<b>Greene County (Committee Members in BOLD)</b>				
<b>Jurisdiction</b>	<b>Primary Contact/Title</b>	<b>Attended Meetings</b>	<b>Provided Written Comments</b>	<b>In-Person or Phone Consultation</b>
Greene County	<b>Allen Turner, Commission Chairman</b>	X		X
Greene County	<b>Iris Sermon, County EMA Director</b>	X	X	X
Greene County	Johnny L. Isaac, EMA	X		
Greene County	John Isley, Highway Department	X		
Greene County	George Hall, LEPC	X		
Greene County	Derick Coleman, LEPC	X		
Greene County	Nick Wilson, EMS Director	X		
<b>Greene County Fire Association</b>	<b>Hodges Smith, President</b>	X	X	
Greene County Fire Association	Jimmie Rice Jr., Clinton VFD	X		
Greene County Fire Association	Marstine Rice, Clinton VFD	X		
Greene County Fire Association	Willie Austin, Dollarhide VFD	X		
Greene County Fire Association	Eddie Austin Jr., Dollarhide VFD	X		
Greene County Fire Association	Keith Young, Dollarhide VFD	X		
Greene County Fire Association	Mollie M. Gaines, Dollarhide VFD	X		
Greene County Fire Association	Geraldine Walton, Dollarhid Pres.	X		

Greene County Fire Association	Mary Dunn, Dollarhide VFD	X		
Greene County Fire Association	J. E. Morrow, Dollarhide VFD	X		
Greene County Fire Association	Gerald Burns, Jena VFD	X		
Greene County Fire Association	Morris Bowie, Jena VFD	X		
Greene County Fire Association	Minnie Bowie, Jena VFD	X		
Greene County Fire Association	John Byrd, Knoxville VFD	X		
Greene County Fire Association	Harper Smith, Knoxville VFD	X		
Greene County Fire Association	John Smith, Knoxville VFD	X		
Greene County Fire Association	Ed Pearson, Lower Gainsville VFD	X		
Greene County Fire Association	Johnni Strobe-Morning, LG VFD	X		
Greene County Fire Association	Severe Strobe, LG VFD	X		
Greene County Fire Association	Jamie Cox, LG VFD	X		
Greene County Fire Association	Lucy Spann, Mantua-Lewiston VFD	X		
Greene County Fire Association	Bessie R Means, M-L VFD	X		
Greene County Fire Association	Kathy Morrow, M-L VFD	X		
Greene County Fire Association	Jenkins Morrow Jr. M-L VFD	X		
Greene County Fire Association	William Spencer, M-LVFD	X		
Greene County Fire Association	Challin Jones, M-L VFD	X		
Greene County Fire Association	F. H. Hughes, M-L VFD	X		
Greene County Fire Association	John Hill, Springfield VFD	X		
Greene County Fire Association	Lillie Thomas, Springfield VFD	X		
Greene County Fire Association	Allen Turner Sr. Tishabee VFD	X		
Greene County Fire Association	Cedric Madison, Tishabee VFD	X		
Greene County Fire Association	Kurt Turner, Tishabee VFD	X		
Greene County Fire Association	Alexander Haley, Tishabee VFD	X		
Greene County Fire Association	Allen Turner Jr. Tishabee VFD	X		
Greene County Fire Association	JB Washington, Tishabee VFD	X		

Greene County Fire Association	Gwendolyn Madison, Tishabee VFD	X		
Greene County Fire Association	Fatima Jackson, Tishabee VFD	X		
Greene County Fire Association	Willie Cooke, Tishabee VFD	X		
Greene County Fire Association	Lesley Carlisle, West Greene VFD	X		
Greene County Fire Association	Melin Carpenter, WG VFD	X		
Greene County Fire Association	Betty McCarter, WG VFD	X		
Greene County Fire Association	Marie Jordan, WG VFD	X		
Greene County Fire Association	Peggy Watkins, WG VFD	X		
Greene County Fire Association	Dorothy Carlise, WG VFD	X		
<b>Greene County BOE</b>	<b>Dr. Corey Jones, Superintendent</b>			X
<b>Greene County Hospital</b>	<b>Dr. Marcia Pugh, Hospital Admin.</b>			X
Town of Boligee	Hattie Samuels, Mayor		X	
Town of Boligee	Sharon Washington, Clerk			X
<b>Town of Boligee</b>	<b>James Morrow, Councilman</b>	X	X	
Town of Boligee	Susie Morrow, VFD	X		
Town of Boligee	Eddie Brown, VFD	X		
Town of Boligee	Jena Morrow, VFD	X	X	
<b>City of Eutaw</b>	<b>Raymond Steele, VFD</b>	X	X	
<b>City of Eutaw</b>	<b>Bennie Abrams III, VFD</b>	X	X	
<b>Town of Forkland</b>	<b>Charlie McAlpine, Mayor</b>	X	X	
<b>Town of Forkland</b>	<b>Roy Louis Jine, VFD Chief</b>	X	X	
Town of Forkland	Carrie Jones, Courts office	X		X
Town of Forkland	Juanita Jackson, VFD	X		
Town of Forkland	Earlean Isaac, VFD	X		
Town of Forkland	Wily Issac, VFD	X		
Town of Union	Idella Thompson, VFD	X		
Town of Union	Fannie P. Morrow, VFD	X		
<b>Town of Union</b>	<b>Henry Harkness, Fire Chief</b>	X		
Town of Union	Johnny Burton, VFD	X		
Town of Union	Marilyn Sanford, Clerk			X
Alabama Forestry Commission	Heath Dorman, Forest Ranger	X	X	
Alabama Forestry Commission	Jason Berry, Forestry Specialist/ Walk	X		
Alabama Forestry Commission	Karl Byrd, Regional Fire Specialist	X		
WARC	Cory Johnson, CED Director	X		

WARC	Countess King, Planning Assistant	X		
<b>Hale County (Committee Members in BOLD)</b>				
<b>Jurisdiction</b>	<b>Primary Contact/Title</b>	<b>Attended Meetings</b>	<b>Provided Written Comments</b>	<b>In-Person or Phone Consultation</b>
<b>Hale County</b>	<b>Russell Weeden, EMA Director</b>		X	X
<b>Hale County</b>	<b>Arthur Crawford, Probate Judge</b>			X
Hale County	Patty Rhodes, Commissioner (4)			X
<b>Hale County</b>	<b>Keneth Ellis, Hale Co. Sheriff</b>			X
<b>Hale County</b>	<b>Frederick Powell, County Engineer</b>			X
<b>Hale County</b>	<b>Susan Beasley, Hale E911</b>			X
<b>Hale County</b>	<b>Patrick Howard, Hale EMS Director</b>			X
Hale County	Lexi Shepherd, Project Horseshoe Farm			X
<b>Hale BOE</b>	<b>Michael Ryans, Hale BOE</b>		X	X
<b>Hale Medical Center</b>	<b>Tammy Weeden, Hale County Hospital</b>		X	X
<b>Hale Fire Assoc</b>	<b>Russell Weeden, Pres</b>		X	X
<b>Town of Akron</b>	<b>Jonathan Rossell, Mayor</b>		X	X
<b>City of Greensboro</b>	<b>Johnnie Washington, Mayor</b>			X
City of Greensboro	Lorrie Cook, Clerk		X	X
City of Greensboro	Michael Hamilton, Police Chief			X
City of Moundville	<b>Tony Lester, Mayor</b>			X
City of Moundville	Daniel Fowler, Water System Manager			X
City of Moundville	Toby Banks, Police Chief			X
City of Moundville	Carol Townsend, City Clerk		X	
<b>Town of Newbern</b>	<b>Patrick Braxton, Mayor</b>		X	X
<b>West Alabama Regional Commission</b>	<b>Cory Johnson, WARC</b>			X

Alabama Department of Public Health	Tommy Dockery, ADPH AREA 7			X
Alabama Forestry Commission	Ethan Barrett, Alabama Forestry Commission			X
<b>Marengo County (Committee Members in BOLD)</b>				
<b>Jurisdiction</b>	<b>Primary Contact/Title</b>	<b>Attended Meetings</b>	<b>Provided Written Comments</b>	<b>In-Person or Phone Consultation</b>
Marengo County EMA	Kevin McKinney, Director			X
Marengo County Commission	Freddie Armstead, Chairman			X
Town of Dayton	William Poole, Mayor			X
City of Demopolis	Woody Collins, Mayor			X
Town of Faunsdale	George Kelly, Mayor			X
City of Linden	Gwendolyn Rogers, Mayor			X
Town of Myrtlewood	Jane Vick, Mayor			X
Town of Providence	Thomas Vick, Mayor			X
Town of Sweetwater	Chad Broussard, Mayor			X
Town of Thomaston	Donna Stokes, Clerk			X
<b>Perry County (Committee Members in BOLD)</b>				
<b>Jurisdiction</b>	<b>Primary Contact/Title</b>	<b>Attended Meetings</b>	<b>Provided Written Comments</b>	<b>In-Person or Phone Consultation</b>
Perry County	DeAndrae Kimbrough, County Engineer-EMA Director	X	X	X
Perry County	Albert Turner Jr., County Commissioner	X		
Perry County	Ben Eaton, County Commissioner	X		
City of Marion	Dexter Hinton, Mayor		X	X
City of Uniontown	Alfreda Washington, City Clerk		X	X
Perry County/ Sowing Seeds of Hope	Frances Ford, Executive Director	X		



Perry County/ Sowing Seeds of Hope	Susan Jones, Director of Communications and Special Projects	X		
<b>Perry County E-911</b>	<b>Claudine Heard, Director</b>	X		
Perry County Nursing Home	Sharon Phillips, Licensed Nursing Home Administrator	X		
Perry County Nursing Home	Greg Hinton, Director of Maintenance	X		
Perry County Nursing Home	Marilyn Smith, Director of Nursing	X		
Perry County Extension Service	Katrina Easley, County Extension Coordinator	X		
<b>Perry County Sheriff's Office</b>	<b>Billy Jones, Deputy</b>	X		
<b>Perry County Board of Education</b>	<b>John Heard III, Superintendent</b>		X	X
ATRC	Mary Zimmerman, Development Assistant	X		
<b>Pickens County (Committee Members in BOLD)</b>				
<b>Jurisdiction</b>	<b>Primary Contact/Title</b>	<b>Attended Meetings</b>	<b>Provided Written Comments</b>	<b>In-Person or Phone Consultation</b>
<b>Pickens County</b>	<b>Drew Elmore, County Commissioner</b>	X	X	
<b>Pickens County</b>	<b>Laketha Bell, EMA Director</b>	X	X	X
<b>Pickens County BOE</b>	<b>Jamie Chapman, Superintendent</b>			X
Pickens County Medical Ctr	Tabatha Pate, Human Resources			X
<b>Pickens County Fire Assoc</b>	<b>Keith Cox, Chief of Fire Association</b>			X
<b>City of Aliceville</b>	<b>Marva Gipson, Mayor</b>	X	X	
City of Aliceville	Dineki McCaa, City Clerk			X
<b>Town of Carrollton</b>	<b>Mickey Walker, Mayor</b>		X	X
Town of Carrollton	Beth Goodson, Town Clerk			X
<b>Town of Ethelsville</b>	<b>Jimmie Nell Jolly, Town Clerk</b>			X
<b>Town of Gordo</b>	<b>Craig Patterson, Mayor</b>	X		
<b>Town of McMullen</b>	<b>George Clark, Councilman</b>			X
<b>Town of Memphis</b>	<b>Evelyn Hinton, Mayor</b>		X	
<b>Town of Pickensville</b>	<b>Donald Sherrod, Mayor</b>	X	X	
Town of Pickensville	Shirley Fields, Town Clerk	X		X
<b>Town of Pickensville</b>	<b>Alfred Cooper, Sr, Police/Fire Chief</b>	X		
<b>City of Reform</b>	<b>Bennie E. Harton, Mayor</b>	X	X	X

City of Reform	Annette Maughan, City Clerk			X
<b>Sumter County (Committee Members in BOLD)</b>				
<b>Jurisdiction</b>	<b>Primary Contact/Title</b>	<b>Attended Meetings</b>	<b>Provided Written Comments</b>	<b>In-Person or Phone Consultation</b>
<b>Sumter County EMA</b>	<b>Margaret Bishop-Gulley, Director</b>			<b>X</b>
<b>Sumter County Commission</b>	<b>Marcus Campbell, Chairman</b>			<b>X</b>
<b>Sumter County Commission</b>	<b>Anthony Crear, County Engineer</b>			<b>X</b>
<b>Town of Cuba</b>	<b>Carl Storey, Mayor</b>			<b>X</b>
<b>Town of Emelle</b>	<b>Roy Willingham, Mayor</b>			<b>X</b>
<b>Town of Epes</b>	<b>Walter Porter, Mayor</b>			<b>X</b>
<b>Town of Gainesville</b>	<b>Joseph Nelson, Mayor</b>			<b>X</b>
<b>Town of Geiger</b>	<b>Michael Cunningham, Mayor</b>			<b>X</b>
<b>City of Livingston</b>	<b>Tom Tartt III, Mayor</b>			<b>X</b>
<b>City of York</b>	<b>Willie Lake, Mayor</b>			<b>X</b>
<b>Sumter County BOE</b>	<b>Anthony Gardner, Superintendent</b>			<b>X</b>
<b>University of West Alabama</b>	<b>Ken Tucker, President</b>			<b>X</b>
<b>Sumter County Opportunity, Inc</b>	<b>Lena Hardaway, CEO</b>			<b>X</b>
<b>Sumter County Water Authority</b>	<b>Shirley Peeler, Manager</b>			<b>X</b>
<b>Sumter County Sewer Authority</b>	<b>Dianne Woodard, President</b>			<b>X</b>
<b>Panola Enrichment Center</b>	<b>Callie Moss, Member</b>			<b>X</b>
<b>North Sumter Development Corporation</b>	<b>Drucilla Jackson, Member</b>			<b>X</b>
<b>Tuscaloosa County (Committee Members in BOLD)</b>				
<b>Jurisdiction</b>	<b>Primary Contact/Title</b>	<b>Attended Meetings</b>	<b>Provided Written Comments</b>	<b>In-Person or Phone Consultation</b>
<b>Tuscaloosa County</b>	<b>Nick Lolley, Director TCEMA</b>	<b>X</b>	<b>X</b>	<b>X</b>
Tuscaloosa County	Dianna Dollar, Deputy Director TCEMA	X	X	X
Tuscaloosa County	Jon Lambert, Specialist TCEMA	X	X	X
Tuscaloosa County	David Hartin, Volunteer	X	X	
Tuscaloosa County	Michelle Babin, Community Develop.	X	X	X
Tuscaloosa County	Scott Anders, Engineer	X	X	

<b>Tuscaloosa County</b>	<b>Lloyd Baker, Chief of Administration Tuscaloosa Sheriff's Office</b>			X
<b>Tuscaloosa County</b>	<b>Mike Henderson, Engineer</b>	X	X	
<b>Tuscaloosa County</b>	<b>Jeanette Byrd, Public Works Mapping</b>	X	X	
Tuscaloosa County	Rod Coleman, E911 Director	X		
<b>Tuscaloosa County</b>	<b>Ryan Sabbagh, Director of Facilities</b>	X		
Tuscaloosa County	Laura Massengil, PBX Operator	X		
<b>DCH Health System</b>	<b>Sidney Bostick, Director of Safety</b>	X	X	
<b>Tuscaloosa Fire Assoc</b>	<b>Jim Ray, Training Chief</b>		X	X
<b>Tuscaloosa County Schools</b>	<b>David Patrick, Deputy Superintendent</b>	X	X	
City of Northport	Donna Aaron, Mayor			X
<b>City of Northport</b>	<b>Brooke Starnes, Dir. of Public Works</b>	X	X	
<b>City of Northport</b>	<b>John Powell Webb, Engineer</b>	X		
City of Northport	Joey Olive, Public Works AD	X	X	
City of Northport	James McKinney, Utilities AD	X	X	
<b>City of Tuscaloosa</b>	<b>Ashley Crites, Director of Planning</b>	X	X	
<b>City of Tuscaloosa</b>	<b>Savannah Howell, Director of Admin.</b>	X	X	
<b>City of Tuscaloosa</b>	<b>Howard Stuart, Assoc. Bldg Official</b>	X		
<b>City of Tuscaloosa</b>	<b>Jarrod Milligan, Deputy ED of IPS</b>	X		
City of Tuscaloosa	Stacy Vaughn, Dir. of Public Services			X
<b>City of Tuscaloosa</b>	<b>Case Odell, Watershed Manager</b>	X		
<b>Tuscaloosa City Schools</b>	<b>Deron Cameron, Executive Director, HR &amp; Operations</b>			X
Shelton State Community College	Jonathan Koh, Director of Grants			X
Stillman College	Phillip Cunningham, Dir. Safety, Facilities			X
<b>The University of Alabama</b>	<b>Donald Keith, Director, OEM</b>	X		
<b>The University of Alabama</b>	<b>Sarah Johnston, Emergency Manager, OEM</b>	X		
The University of Alabama	Ken Horst, Asst. Director, OEM		X	
The University of Alabama	Megan Campbell, Intern	X		

The University of Alabama	Logan Denson, Intern	X		
<b>Town of Brookwood</b>	<b>Duane Garner, Fire Chief</b>	X	X	
Town of Brookwood	Collins Espy, Engineer	X	X	
Town of Coaling	Gary Averett, Mayor	X	X	
<b>Town of Coaling</b>	<b>Sylvia Rouse, Clerk</b>	X		
<b>Town of Coker</b>	<b>Steve Hysaw, Mayor</b>	X	X	
Town of Coker	Pam Morris, Clerk			X
Town of Lake View	George Pickle, Building Inspector	X	X	X
<b>Town of Lake View</b>	<b>Paul Calhoun, Mayor</b>			X
<b>Town of Vance</b>	<b>Harold McAdory, Chief Vance Fire Dist.</b>		X	
Town of Vance	Brenda Morrison, Mayor	X	X	
Town of Vance	Dianne Averett, Council	X		
ADPH	Tommy Dockery, Director of EP	X	X	
WARC	Dennis Stripling, Executive Director	X		
WARC	Cory Johnson, CED Director	X		
WARC	Countess King, Planning Assistant	X		
<b>Wilcox County (Committee Members in BOLD)</b>				
<b>Jurisdiction/ Representing</b>	<b>Primary Contact/Title</b>	<b>Attended Meetings</b>	<b>Provided Written Comments</b>	<b>In-Person or Phone Consultation</b>
<b>Wilcox County</b>	<b>Melissa Dove, Wilcox County EMA/E-911 Director</b>	X	X	X
<b>Wilcox County</b>	<b>Bill Albritton, County Commissioner</b>	X		X
Wilcox County DHR	Carol Dixon Director	X		
<b>Town of Oak Hill/ Wilcox County Fire Association</b>	<b>David Fuller, Mayor</b>	X		X
<b>City of Camden</b>	<b>Philip Creswell, Mayor</b>	X		X
<b>Town of Yellow Bluff</b>	<b>Joyce Williams, Mayor</b>			X
<b>Town of Pine Hill</b>	<b>Marjorie Sheffield, Town Clerk</b>		X	X
<b>Town of Pine Apple</b>	<b>Joyce Wall, Councilwoman</b>			X
Alabama Department of Public Health	Steve Wood, Environmentalist	X		

Alabama Department of Public Health	Chad Kent, Administrator Southwestern District	X		
Alabama Department of Public Health	Barbara Etheridge, Emergency Preparedness Director Southwestern District	X		
<b>Wilcox County</b>	<b>Frederick Powell, County Engineer</b>	X		
Wilcox County	David Butts, Assistant County Engineer	X		
<b>Wilcox County BOE</b>	<b>Andre Saulsberry, Superintendent</b>		X	
ATRC	Mary Zimmerman, Development Assistant	X		

### 3.5 Public and Other Stakeholder Involvement

Opportunity for public comment was provided in multiple ways. All county stakeholder meetings were open to the public and advertised in the local newspaper. The second county-level meeting provided a review of the plan draft and an opportunity to comment. In Wilcox and Perry Counties, the second county-level meeting had to be cancelled due to the COVID-19 pandemic. In these counties, the draft plan was made available for review with a two-week comment period prior to submission. For Dallas, Hale, Marengo, and Sumter all communication was handled virtually or by phone. Due to the COVID-19 pandemic meetings were not allowed to be held. In these counties, the draft plan was made available for review with a two-week comment period prior to submission. An additional public hearing will be held by each adopting jurisdiction prior to adoption of the approvable plan. Plan drafts were available for review online at [www.atrcdevelopment.net](http://www.atrcdevelopment.net).

The public was informed of the hazard mitigation planning process and invited and encouraged to attend meetings through various media announcements, including but not limited to newspaper notices and advertisements, social media, community events, and local postings. In addition, in the counties served by ATRC, presentations on hazard mitigation were given at senior centers. As part of the State’s transition to develop mitigation plans based on AEMA divisions, EMA directors and their stakeholders in neighboring communities were provided the opportunity to participate in the planning process of the Division C plan. Neighboring communities were invited to participate in the process. These communities were sent a letter inviting them to planning meetings and/or notifying them of the availability of the draft document.

Documentation of public participation, though limited, is included in Appendix A. Bibb County carried out a survey program during 2017 -2019 to capture citizen input during open LEPC meetings; these surveys were used to inform the local risk assessment. Input from public meetings was taken into consideration during the compilation of the risk assessment and vulnerability assessment. The majority of feedback received dealt with the type of hazards the area was most susceptible to. Additionally, public input was received and incorporated into the formulation of goals and strategies. Input received included prospective projects individuals

would like to see pursued. Future updates will work to incorporate additional public involvement, as described in Section 6.3.

The Alabama-Tombigbee Regional Commission and West Alabama Regional Commission (ATRC & WARC) along with local EMA directors consulted with multiple stakeholders in formation of the plan including fire associations, utilities, medical facilities, and boards of education. These stakeholders were contacted via phone or email and invited to participate or provide information. Most of the stakeholders listed attended meetings. The Emergency Preparedness Director of the Alabama Department of Public Health also attended meetings in multiple counties. The U.S. Army Corps of Engineers provided information concerning dam failure and mitigation. The Alabama Forestry Commission provided information pertaining to wildfire information. The Geological Survey of Alabama (GSA) was consulted for landslide and land subsidence hazard information. The plan update was discussed with regional partners, including EMA offices and surrounding counties.

### **3.6 Integration with Existing Plans**

Existing plans were consulted upon drafting of the Regional Hazard Mitigation Plan to gauge understanding of the region's capacity for hazard mitigation. The Plans reviewed include:

#### **Local Hazard Mitigation Plans:**

Each of the ten counties in AEMA Division C has previously developed county level local hazard mitigation plans. These plans were reviewed for consistency of information within the regional plan.

#### **Alabama State Hazard Mitigation Plan (2018 Update):**

The State Hazard Mitigation Plan was consulted to assist with consistency of information within the regional plan, including items within the Risk Assessment and local capabilities.

**Alabama Tombigbee Regional Commission Comprehensive Economic Development Strategy (CEDS) (2017 Update):** The ATRC CEDS was consulted to ensure the Hazard Mitigation Plan is consistent with the economic development strategy for the region.

**West Alabama Economic Development Playbook 2017-2021:** The WARC Development Playbook was consulted to ensure the Hazard Mitigation Plan is consistent with the economic development strategy for the region.

#### **Emergency Operations Plans**

Each county in AEMA Division C has an Emergency Operations Plan (EOP) that is utilized in an emergency. The plans summarize various hazards and provide direction for emergency personnel in disaster situations. These plans complement the hazard mitigation plan, but do not necessarily cover the same material.

#### **Alabama Drought Management Plan (2018 Update)**

The Alabama Drought Management Plan was studied to provide background information of drought impacts on the planning area.

### **Local Comprehensive Plans**

Local comprehensive plans identified in Table 5.2 were reviewed with jurisdictions during this process to ensure consistency. These plans include (list will be updated in subsequent phases):

- Forkland Strategic Plan 2018-2020
- Northport Levee Plan 2017
- Reform Community Plan 2016
- Tuscaloosa Framework Comprehensive Plan 2020

Other sources utilized for data incorporation are listed in the Section 4 – Risk Assessment.

## **Section 4- Risk Assessment**

This section of the plan addresses requirements of Section 201.6 (c)(2).

### **Section Contents**

4.1 Hazard Overview

4.2 Hazard Profiles

4.3 Vulnerability Overview

4.4 Critical Facilities/Infrastructure by Jurisdiction

4.5 Hazard Impacts



## 4.1 Hazard Overview

AEMA Division C is affected by a wide range of natural hazards that can potentially have a negative impact on life and property throughout the planning region. Current FEMA regulations under the Disaster Mitigation Act of 2000 (DMA 2000) require, at a minimum, an evaluation of a full range of natural hazards. An evaluation of human-caused hazards (i.e. technological hazards, terrorism, etc.) is allowed but not required for plan approval. This regional plan does not include human-caused hazards.

AEMA Division C has been included in 31 Federal Disaster Declarations, as shown in Table 4.1. The declared disasters have been primarily related to two major types of impact: flooding (through both tropical and non-tropical events) and high winds (through hurricanes, tornadoes, and severe thunderstorms).

**Table 4.1 AEMA Division C Federally Declared Disasters**

<b>Disaster Number</b>	<b>Declaration Date</b>	<b>Counties Declared</b>	<b>Type of Incident</b>
DR-458	March 13, 1975	Dallas, Tuscaloosa, Wilcox,	Severe Storms, Flooding
EM-3045	July 19, 1977	Entire Region	Drought
DR-578	April 17, 1979	Dallas, Pickens, Tuscaloosa, Greene, Hale	Storms, wind, flooding
DR-598	September 12, 1979	Marengo	Hurricane Frederic
DR-695	December 12, 1983	Dallas	Severe Storms, Flooding, Tornadoes
DR-856	February 16, 1990	Bibb, Dallas, Greene, Hale, Marengo, Tuscaloosa	Severe Storms, Flooding, Tornadoes
DR-861	March 20, 1990	Dallas, Wilcox	Severe Storms, Flooding, Tornadoes
EM-3096	March 14, 1993	Entire Region	Severe Snowfall and Winter Storms
DR-1108	March 19, 1996	Dallas	Storms, tornadoes, floods
DR-1214	April 8, 1998	Tuscaloosa	Severe Storms, tornadoes
DR-1322	March 16, 2000	Tuscaloosa	Severe Storms and Flooding
DR-1352	December 17, 2000	Tuscaloosa	Tornadoes
DR-1362	March 4, 2001	Tuscaloosa	Severe Storms and Flooding
DR-1442	November 13, 2002	Greene	Severe Storms and Tornadoes
DR-1466	May 11, 2003	Bibb, Tuscaloosa	Severe Storms, Tornadoes, and Flooding

**Table 4.1 AEMA Division C Federally Declared Disasters (continued)**

<b>Disaster Number</b>	<b>Declaration Date</b>	<b>Counties Declared</b>	<b>Type of Incident</b>
DR-1549	September 14, 2004	Entire Region	Hurricane Ivan
DR-1593	July 9, 2005	Entire Region	Hurricane Dennis
DR-1605	August 28, 2005	Greene, Hale, Marengo, Pickens, Sumter, Tuscaloosa	Hurricane Katrina
EM-3237	September 9, 2005	Entire Region	Hurricane Katrina
DR-1687	March 2, 2007	Dallas, Wilcox	Severe Storms and Tornadoes
EM-3292	August 29, 2008	Entire Region	Hurricane Gustav
DR-1835	April 27, 2009	Dallas, Perry, Marengo, Wilcox	Severe Storms, Flooding, Tornadoes and Straight-line Winds
EM-3319	April 26, 2011	Entire Region	Tornadoes and Straight-line Winds
DR-1971	April 27, 2011	Entire Region	Severe Storms, Tornadoes, Straight-line Winds and Flooding
DR-4052	January 31, 2012	Perry	Severe Storms, Straight-line Winds, Tornadoes and Flooding
DR-4082	September 20, 2012	Pickens, Perry, Dallas	Hurricane Isaac
DR-4176	May 1, 2014 -	Tuscaloosa, Perry, Pickens	Tornadoes, Straight-line Winds and Flooding
DR-4251	January 20, 2016	Perry	Straight-line Winds and flooding
EM-3389	September 10, 2017	Entire Region	Hurricane Irma
EM-3394	October 7, 2017	Bibb, Dallas, Greene, Hale, Marengo, Perry, Tuscaloosa, Wilcox	Hurricane Nate
DR-4426	April 16, 2019	Greene	Severe Storms, Straight-line Winds, Tornadoes

*Source: www.fema.gov*

Under a federally declared disaster, the State of Alabama and affected local jurisdictions are eligible to apply for federal reimbursement for debris removal, emergency services, and critical facility repair/replacement. Following a disaster, funding is made available for hazard mitigation grants. These grants allow for implementation of mitigation projects that are listed in mitigation plans such as this one.

## 4.2 Hazard Profiles

Multiple natural hazards affect the AEMA Division C planning region. These hazards were identified and evaluated through a process that included studying historical events, reviewing previous mitigation plans, identifying susceptible locations, and gathering input from local stakeholders. For each hazard addressed in the risk assessment, a general description of the hazard and its extent are included. Information from all ten counties is included in hazard profiles to provide a comprehensive view of regional impacts.

Due to its geographical location, AEMA Division C is vulnerable to hazards that can disrupt life at any time throughout the year. There are numerous hazard types that are not applicable to the region. These hazards include avalanche, coastal erosion, tsunami, and volcanoes. No other mention of these hazards will be made. Table 4.2 presents all potential hazards and indicates if they present risk to the planning area. In addition, information sources and the association of the hazard to a specific area of the planning region is indicated.

**Table 4.2 Potential Hazards and Data Sources**

Hazard	Risk	Source	Correlation with Region
Avalanche	No	US Forest Service National Avalanche Center ( <a href="http://www.fsavalanche.org/">http://www.fsavalanche.org/</a> )	No risk of avalanche events in Alabama
Coastal Erosion	No	FEMA Coastal Erosion Hazards Report ( <a href="http://www.fema.gov/media-library/assets/documents/8397">http://www.fema.gov/media-library/assets/documents/8397</a> )	No risk of coastal erosion in AEMA Division C
Dam Failure	Yes	USACE National Inventory of Dams ( <a href="http://geo.usace.army.mil/pgis/f?p=397:12:">http://geo.usace.army.mil/pgis/f?p=397:12:</a> )	Population downstream from dams/ flooding concerns; no state regulation of dam safety
Drought / Extreme Heat	Yes	United States Drought Monitor ( <a href="http://droughtmonitor.unl.edu/">http://droughtmonitor.unl.edu/</a> ) NOAA National Climatic Data Center ( <a href="http://www.ncdc.noaa.gov/stormevents/">http://www.ncdc.noaa.gov/stormevents/</a> )	Historic incidents with damage/ nationwide
Earthquake	Yes	USGS Earthquake Hazards Program ( <a href="http://earthquake.usgs.gov/earthquakes/">http://earthquake.usgs.gov/earthquakes/</a> )	Proximity to Southeast US seismic zones; previous occurrences
Flooding	Yes	NOAA National Climatic Data Center ( <a href="http://www.ncdc.noaa.gov/stormevents/">http://www.ncdc.noaa.gov/stormevents/</a> )	Historic incidents with damage / identified flood hazard areas
High Winds (Hurricanes, Tornadoes, Windstorms)	Yes	National Weather Service (NWS) Storm Data ( <a href="http://www.srh.noaa.gov/bmx/?n=stormdata_main">http://www.srh.noaa.gov/bmx/?n=stormdata_main</a> ) NWS Tornado Database ( <a href="http://www.srh.noaa.gov/bmx/?n=tornadodb_main">http://www.srh.noaa.gov/bmx/?n=tornadodb_main</a> ) National Hurricane Center Data Archive ( <a href="http://www.nhc.noaa.gov/data/#tcr">http://www.nhc.noaa.gov/data/#tcr</a> )	Historic incidents with damage/ nationwide

Hazard	Risk	Source	Correlation with Region
Landslides	Yes	USGS Landslides Hazard Program ( <a href="http://landslides.usgs.gov/hazards/nationalmap/">http://landslides.usgs.gov/hazards/nationalmap/</a> ) Geological Survey of Alabama, Landslides ( <a href="http://gsa.state.al.us/gsa/geologichazards/Landslides.htm">http://gsa.state.al.us/gsa/geologichazards/Landslides.htm</a> )	Susceptible areas to landslides/historic occurrences
Land Subsidence/ Sinkholes	Yes	Geological Survey of Alabama, Sinkholes in Alabama ( <a href="http://gsa.state.al.us/gsa/geologichazards/Sinkholes_AL.htm">http://gsa.state.al.us/gsa/geologichazards/Sinkholes_AL.htm</a> )	Susceptible areas to land subsidence / sinkholes
Tsunami	No	FEMA, Tsunami ( <a href="http://m.fema.gov/tsunamis">http://m.fema.gov/tsunamis</a> )	No risk: AEMA Division C is an inland area
Volcano	No	FEMA, Volcanoes ( <a href="http://m.fema.gov/volcanoes">http://m.fema.gov/volcanoes</a> )	No risk: AEMA Division C is not near an active volcanic area
Wildfire	Yes	Southern Wildfire Risk Assessment ( <a href="http://www.southernwildfirerisk.com">www.southernwildfirerisk.com</a> )	Historic incidents with damage / identified susceptible areas
Winter / Ice Storms	Yes	NOAA National Climatic Data Center ( <a href="http://www.ncdc.noaa.gov/stormevents/">http://www.ncdc.noaa.gov/stormevents/</a> )	Historic incidents with damage/regionwide

Effects from high winds (primarily from tornadoes and severe storms) and flooding are regarded the most significant natural hazards affecting the planning area.

As explained earlier, each identified hazard has its own profile. This profile includes the following:

- **Background:** Provides general definitions and brief descriptions of the hazard, its characteristics, and potential effects.
- **Locations Affected:** Provides information on the geographic areas within the planning area that are susceptible to hazard occurrences. Locations affected are described regionally, unless a specific jurisdiction has different risks, which is further explained in comparison with the rest of the planning area.
- **Extent:** Provides information on the potential strength or magnitude of the hazard.
- **Historical Occurrences:** Provides information on the history of previous hazard events in the planning area, including their impacts.
- **Probability of Future Occurrence and Loss Estimation:** Describes the likelihood of future hazard occurrences in the planning area. Many hazards may affect the entire planning area, while other hazards are more localized due to specific factors. Quantitative and/or qualitative measures are provided based on appropriateness. Qualitative descriptions are drawn from historical occurrences and other risk factors.

Quantitative measures are calculated from past occurrence data. Because of the lack of comprehensive quantitative data on many of the hazards, susceptibility to future damage will be noted by categories of High, Medium, Low, or Very Low. These categories are described below.

- **High:** Probable major damage in a 1-10 Year Period
- **Medium:** Probable major damage in a 10-50 Year Period
  - **Low:** Probable major damage in a 100 Year Period
- **Very Low:** No probable major damage in a 100 Year Period

## **DAM/LEVEE FAILURE**

### **Background**

Dam failure usually occurs when spillway capacity is inadequate, and water overtops the dam or when internal erosion through a dam's foundation occurs (also known as piping). If internal erosion or overtopping cause a full structural breach, a high-velocity, debris-laden wall of water is released and rushes downstream, damaging or destroying whatever is in its path.

Dam failures may result from one or more the following:

- Prolonged periods of rainfall and flooding (the cause of most failures);
- Inadequate spillway capacity which causes excess overtopping flows;
- Internal erosion due to embankment or foundation leakage or piping;
- Improper maintenance;
- Improper design;
- Negligent operation;
- Failure of upstream dams;
- Landslides into reservoirs;
- High winds;
- Earthquakes.

The State of Alabama is the only state without a dam safety program. Numerous attempts have been made over the years to pass dam safety legislation in the state, but all have failed. A statewide dam safety program is needed to protect lives and property, assist local officials in planning and responding to emergency situations, and to help dam owners control their liability.

### **Locations Affected**

Appendix B provides maps of dams listed in the NID by county and hazard classification. These maps can be used to visualize risk by jurisdiction. The National Inventory of Dams (NID) lists 797 dams in AEMA Division C. Of these, 28 are classified as high hazard dams. This information should be used with caution; it is considered outdated due to the lack of regulatory authority over dams in Alabama. The exact number of dams in the state is unknown due to the lack of tracking or permitting of private dams. In addition, it is estimated that the number of high risks dams is much higher.

The following dams have been identified during the planning process as having the potential for significant damage and/or loss of life in the event of failure:

- The Corps of Engineers manages several dams along the Alabama, Black Warrior, and Tombigbee Rivers in Division C. These large dams have extensive plans and procedures in place including emergency plans that would go into effect in the instance of failure. Failure of these dams would cause environmental damage, utility damage, and property damage. Human lives would potentially be at risk as a result of a failure.
- The City of Livingston and the University of West Alabama (UWA) have raised concerns regarding the Lake L.U. dam on UWA's campus. The failure of this dam could potentially result in loss of life, injuries, and property damage due to the construction of

apartment buildings four hundred feet from the structure. This high-density housing has raised concerns regarding the potential for loss of life in the event of the dam being compromised. In a report compiled by the Natural Resource Conservation Service (NRCS), it is anticipated that in the event the dam is compromised at least two of the building's bottom levels will be inundated with possibly up to six feet of water. It is also cited that with such proximity to the dam, water velocity would be high enough to cause significant structural damage to these buildings. UWA has an emergency action plan in place for this dam.

- The City of York has identified concerns with the Lake Louise Dam located on Toomsba Creek. Failure of this dam could affect 50- 60 residences in the City of York.

Participating Boards of Education, institutions of higher learning, and medical centers do not have properties located in areas with a risk for dam failure.

**Extent**

Federal Guidelines for Dam Safety presents three classifications for “hazard potential.” Extent cannot be determined in more detail than these classifications provide. Table 4.3 provides a description of these classifications.

**Table 4.3 Dam Hazard Classification**

<b>Hazard Potential Classification</b>	<b>Loss of Human Life</b>	<b>Economic, Environmental, Lifeline Losses</b>
Low	None expected	Low-generally limited to owner
Significant	None expected	Yes
High	Probable-one or more expected	Yes

*Source: Federal Guidelines for Dam Safety (Published April 2004)*

Table 4.4 includes extent by jurisdiction. A generalized discussion of extent for the entire planning region follows. Once the Office of Water Resources completes its study and furnishes a state classification of dams, a more detailed discussion will be presented in future plans.

For most of the dams in the Division C planning area, dam failure would result in flooding of several feet. Mainly agricultural areas, infrastructure, and isolated structures would be impacted. The extent would vary based on the storage of the affected dam and its proximity to infrastructure and structures. For larger dams or dams with High hazard potential, the extent of damage could be much greater and lead to loss of life along with economic, environmental, and lifeline losses. Again, without historical occurrences it is difficult to accurately predict extent.

**Historical Occurrences**

There are no sources of reliable records for dam failure in Division C. There are no documented occurrences of dam failures within the planning region.

**Probability of Future Occurrence and Loss Estimation**

There are no documented occurrences of dam failures within AEMA Division C planning area. Due to outdated and unreliable information, predicting the probability and estimated losses

resulting from dam failure accurately is impossible. Table 4.4 includes a summary of dam failure for all jurisdictions. The table indicates, if a high risk dam is located within a jurisdiction’s boundaries. The table denotes “none” in the probability and extent columns for jurisdictions, based off NID information, which have no dams within their boundaries. For all jurisdictions with dams located within their boundaries, probability and future loss estimation are listed as “unable to provide due to lack of information” due to unreliable information. Until an updated inventory of dams is compiled, proper evaluation is impossible.

**Table 4.4 Dam Failure Summary by Jurisdiction**

Jurisdiction	High Risk Dams Located in Jurisdiction	Historical Occurrences	Extent	Probability of Dam Failure	Future Loss Estimate
Bibb County (unincorporated)	Yes	0	*	*	*
City of Brent	No	0	None	None	None
City of Centreville	No	0	None	None	None
Town of West Blocton	No	0	None	None	None
Town of Woodstock	Yes	0	*	*	*
Dallas County (unincorporated)	Yes	0	*	*	*
City of Selma	No	0	None	None	None
City of Valley Grande	No	0	*	*	*
Town of Orville	No	0	None	None	None
Greene County (unincorporated)	No	0	*	*	*
City of Eutaw	No	0	None	None	None
Town of Boligee	No	0	*	*	*
Town of Forkland	No	0	None	None	None
Town of Union	No	0	None	None	None
Hale County (unincorporated)	No	0	*	*	*
City of Greensboro	No	0	None	None	None
City of Moundville	No	0	*	*	*
Town of Akron	No	0	None	None	None
Town of Newbern	No	0	None	None	None
Marengo County (unincorporated)	No	0	*	*	*
City of Demopolis	Yes	0	*	*	*
City of Linden	No	0	None	None	None
Town of Dayton	No	0	*	*	*
Town of Faunsdale	No	0	None	None	None
Town of Myrtlewood	No	0	None	None	None
Town of Providence	No	0	None	None	None
Town of Sweet Water	No	0	None	None	None
Town of Thomaston	No	0	*	*	*
Perry County (unincorporated)	No	0	*	*	*
City of Marion	No	0	*	*	*
City of Uniontown	No	0	*	*	*
Pickens County (unincorporated)	Yes	0	*	*	*
City of Aliceville	No	0	None	None	None
Town of Ethelsville	No	0	None	None	None
Town of Carrollton	No	0	*	*	*
Town of Gordo	No	0	None	None	None
Town of McMullen	No	0	None	None	None
Town of Memphis	No	0	None	None	None



<b>Jurisdiction</b>	<b>High Risk Dams Located in Jurisdiction</b>	<b>Historical Occurrences</b>	<b>Extent</b>	<b>Probability of Dam Failure</b>	<b>Loss Estimate</b>
Town of Pickensville	No	0	*	*	*
Town of Reform	No	0	*	*	*
Sumter County (unincorporated)	No	0	*	*	*
City of Livingston	No	0	*	*	*
City of York	No	0	*	*	*
Town of Cuba	No	0	None	None	None
Town of Emelle	No	0	None	None	None
Town of Epes	No	0	None	None	None
Town of Gainsville	No	0	None	None	None
Town of Geiger	No	0	None	None	None
Tuscaloosa County (unincorporated)	Yes	0	*	*	*
City of Northport	Yes	0	*	*	*
City of Tuscaloosa	Yes	0	*	*	*
Town of Brookwood	No	0	*	*	*
Town of Coaling	Yes	0	*	*	*
Town of Coker	No	0	None	None	None
Town of Lakeview	Yes	0	*	*	*
Town of Vance	No	0	None	None	None
Wilcox County (unincorporated)	No	0	*	*	*
City of Camden	No	0	None	None	None
Town of Pine Hill	No	0	None	None	None
Town of Pine Apple	No	0	None	None	None
Town of Oak Hill	No	0	None	None	None
Town of Yellow Bluff	No	0	None	None	None
<i>* Unable to provide due to lack of data</i>					

## DROUGHT/ EXTREME HEAT

### Background

#### *Drought*

The National Weather Service defines drought as a persistent and abnormal moisture deficiency having adverse impacts on vegetation, animals, and people. Meteorological, hydrological, and agricultural are the three types of droughts. Meteorological droughts occur when precipitation departs from normal amounts, high temperatures may also play a role in this type of drought. Hydrological droughts are deficiencies in surface or subsurface water levels. Agricultural droughts occur when there is not enough soil moisture to support crop growth. Drought conditions are prevalent in much of the United States during the summer months. Occurrences of drought are typically classified as described in Table 4.5.

**Table 4.5 Drought Classifications**

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

*Source: FEMA's Multi-Hazard Identification and Risk Assessment (MHIRA) (Published January 1997)*

Drought differs from other natural hazards in three ways. First, the onset and end of a drought are difficult to determine due to the slow accumulation and lingering of effects of an event after its apparent end. Second, the lack of an exact and universally accepted definition adds to the confusion of its existence and severity. Third, in contrast with other natural hazards, the impact of drought is less obvious and may be spread over a larger geographic area. These characteristics have hindered the preparation of drought contingency or mitigation plans by many governments.

The State of Alabama Office of Water Resources has produced the *Alabama Drought Management Plan* that was finalized in November 2018. The plan provides guidance and defines processes to address drought and drought-related activities. Activities addressed in the plan include monitoring climatic conditions, defining declaration levels and triggers, developing impact assessments, response recommendations, and mitigation actions.

#### ***Extreme Heat***

Extreme heat is defined as temperatures that are ten or more degrees or higher than average daily temperatures and last for several weeks. Extreme heat can damage an area economically by resulting in crop losses. The health of persons living and working within the area is also threatened. Health conditions that result from extreme heat range from mild to severe. These conditions include sunburn, heat cramps, heat exhaustion, and heat stroke. Heat can be deadly regardless of the length of time it persists. The National Weather Service issues three types of heat related advisories:

- Excessive Heat Outlooks are issued when the potential exists for an excessive heat event in the next 3-7 days. An outlook provides information to those who need considerable lead time to prepare for the event, such as public utility staff, emergency managers and public health officials.
- Excessive Heat Watches are issued when conditions are favorable for an excessive heat event in the next 24 to 72 hours. A watch is used when the risk of a heat wave has increased but its occurrence and timing are still uncertain. A watch provides enough lead time so that those who need to prepare can do so, such as cities officials who have excessive heat event mitigation plans.
- Excessive Heat Warning/Advisories are issued when an excessive heat event is expected in the next 36 hours. These products are issued when an excessive heat event is occurring, is imminent, or has a very high probability of occurring. The warning is used for conditions posing a threat to life. An advisory is for less serious conditions that cause significant discomfort or inconvenience and, if caution is not taken, could lead to a threat to life.

### **Locations Affected**

#### ***Drought & Extreme Heat***

The entire planning area is susceptible to the occurrence of extreme heat and drought. AEMA Division C is prone to unpredictable precipitation patterns including extended periods of below-average rainfall which lead to drought conditions. High, subtropical temperatures are common in Alabama's blackbelt. The area is especially susceptible to these events during the summer months. The nature of these two hazards lead to the entire area sharing the same susceptibility.

### **Extent**

#### ***Drought***

The United States Drought Monitor classifies drought in five levels of intensity. The least intense level is classified as D1 with D4 being the most intense level. An area classified as D0 is not in drought but is experiencing abnormally dry conditions. Drought intensity categories are based on numerous factors including soil moisture, vegetation health, streamflow data, precipitation data, and local observations. Table 4.6 provides a description of each level of intensity.

**Table 4.6 U.S. Drought Monitor Classification Scheme**

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

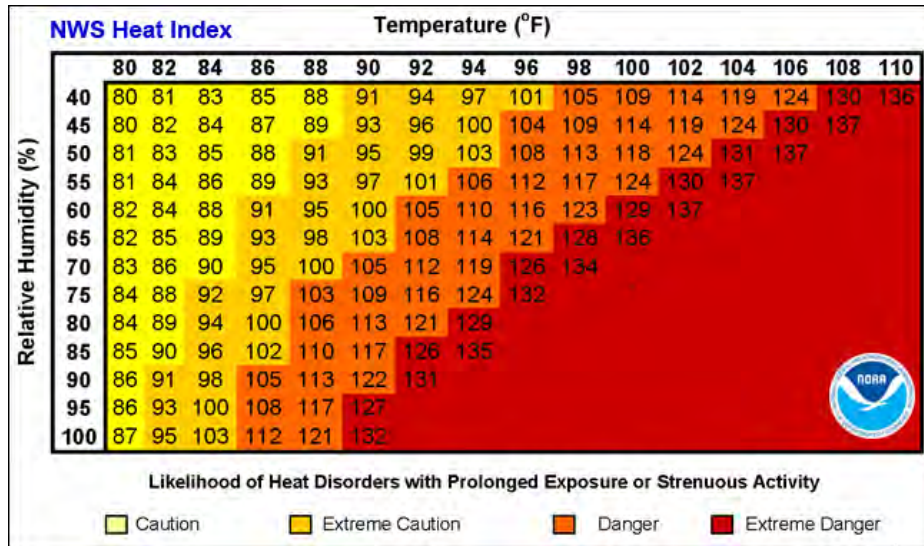
Source: <https://droughtmonitor.unl.edu/About/AbouttheData/DroughtClassification.aspx>  
Last Accessed on 1/13/20

Drought conditions will occur in Division C in the future. In the past all levels of drought have been experienced in the area. It can be expected that D0-D4 category droughts will be experienced in the future. In Division C, droughts affect the water supply available for residents in the affected areas. Residents that rely on private wells face significant issues during drought periods. Farmers that rely on water sources dependent on precipitation also face challenges watering their livestock. Drought conditions damage crops causing economic losses for farmers. Drought conditions provide an environment more susceptible to wildfire. With drought conditions in place, water supply to fight wildfires is affected. Droughts lead to recreation and navigation issues along main rivers and streams.

**Extreme Heat**

For the region, extreme heat can be defined as repeated instances of temperatures over 100 degrees Fahrenheit and associated heat index values over 100 degrees Fahrenheit. These conditions occur frequently and are expected to continue to occur in Division C in the future. Due to the regions’ climate, high temperatures coupled with high humidity are a common occurrence. There is no extent scale relating to extreme heat, but the heat index can be used to illustrate the effects of the hazard. The heat index is a measure of how hot it feels when relative humidity is considered with the actual air temperature. Table 4.7 provides a guide to how dangerous higher temperatures can be when occurring with high humidity.

**Table 4.7 Heat Index**



Source: <https://www.weather.gov/safety/heat-index>

**Historical Occurrences**

AEMA-Division C has experienced multiple instances of extreme heat and drought. Generally, occurrences of extreme heat and drought occur in short-term periods, which are less than 6 months. These events most commonly occur in the summer and fall seasons. By reviewing data from the U.S. Drought Monitor all counties in Division C experienced some degree of drought between 2010 and 2019. Table 4.8 provides a summary of drought conditions in the region since 2014. No records for this time period were found for extreme heat.

**Table 4.8 Division C Drought Occurrences 2014-2019**

Location	Beginning Date	Deaths	Injuries	Property Damage	Crop Damage	Description
Sumter, Bibb, Hale, Pickens, Greene, Marengo	10/18/2016	0	0	\$0.00	\$0.00	Extreme Drought Conditions (D3) developed.
Perry, Marengo	10/18/2016	0	0	\$0.00	\$0.00	Severe Drought Conditions (D2) developed.
Tuscaloosa	11/1/2016	0	0	\$0.00	\$0.00	Drought intensity increased from Extreme (D3) to Exceptional (D4).

**Table 4.8 Division C Drought Occurrences 2014-2019 (continued)**

<b>Location</b>	<b>Beginning Date</b>	<b>Deaths</b>	<b>Injuries</b>	<b>Property Damage</b>	<b>Crop Damage</b>	<b>Description</b>
Wilcox	11/1/2016	0	0	\$0.00	\$0.00	Extreme Drought Conditions (D3).
Perry, Marengo	11/1/2016	0	0	\$0.00	\$0.00	Drought intensity increased from Severe (D2) to Extreme (D3).
Bibb, Hale, Greene, Sumter, Pickens	11/1/2016	0	0	\$0.00	\$0.00	Drought intensity stayed at Extreme (D3).
Dallas	11/15/2016	0	0	\$0.00	\$0.00	Drought intensity increased from Moderate (D1) to Extreme (D3).
Wilcox	12/1/2016	0	0	\$0.00	\$0.00	Extreme Drought Conditions (D3).
Tuscaloosa	12/1/2016	0	0	\$0.00	\$0.00	Drought classification remained at (D4) Exceptional.
Bibb, Perry, Marengo, Hale, Greene, Pickens	12/1/2016	0	0	\$0.00	\$0.00	Drought classification remained at (D3) Extreme.
Dallas, Sumter	12/1/2016	0	0	\$0.00	\$0.00	Drought classification lowered from (D3) Extreme to (D2) Severe due to above normal rainfall.
Sumter, Greene, Hale, Perry	1/1/2017	0	0	\$0.00	\$0.00	Rainfall totals of 8-10 inches reduced the drought intensity to below D2 levels.
Pickens	1/1/2017	0	0	\$0.00	\$0.00	Above normal rainfall helped reduce the drought intensity from a D3 to a D2.
Tuscaloosa	1/1/2017	0	0	\$0.00	\$0.00	Above normal rainfall helped reduce the drought intensity from a D4 to a D3.
Bibb	1/1/2017	0	0	\$0.00	\$0.00	Above normal rainfall helped reduce the drought intensity from a D3 to a D2.
Marengo, Dallas	1/1/2017	0	0	\$0.00	\$0.00	Heavy rainfall during the first few days of January lowered the drought intensity to a D1 category.
Pickens	2/1/2017	0	0	\$0.00	\$0.00	Below normal rainfall and above normal temperatures caused the drought intensity to increase from D2 to D3.
Tuscaloosa	2/1/2017	0	0	\$0.00	\$0.00	Below normal rainfall and above normal temperatures maintained the drought intensity at D3.
Bibb	2/1/2017	0	0	\$0.00	\$0.00	Below normal rainfall and above normal temperatures maintained the drought intensity at D2.
Sumter, Hale, Greene	2/21/2017	0	0	\$0.00	\$0.00	Below normal rainfall and above normal temperatures caused the drought intensity to change from a D1 to a D2 status.
Sumter, Greene, Hale, Bibb	3/1/2017	0	0	\$0.00	\$0.00	Significant rainfall during the month of March lowered the drought intensity to a D1 category.

<b>Table 4.8 Division C Drought Occurrences 2014-2019 (continued)</b>						
<b>Location</b>	<b>Beginning Date</b>	<b>Deaths</b>	<b>Injuries</b>	<b>Property Damage</b>	<b>Crop Damage</b>	<b>Description</b>
Pickens, Tuscaloosa	3/1/2017	0	0	\$0.00	\$0.00	Near to slightly above normal rainfall during the month of March lowered the drought intensity from a D3 to a D2.
Pickens	4/1/2017	0	0	\$0.00	\$0.00	Significant rainfall during early April lowered the drought intensity to a D1 category.
Tuscaloosa	4/1/2017	0	0	\$0.00	\$0.00	Near normal rainfall during the month of April maintained the drought intensity at D2.
Tuscaloosa	5/1/2017	0	0	\$0.00	\$0.00	Significant rainfall during the month of May lowered the drought intensity to a D1 category.
Tuscaloosa	1/16/2018	0	0	\$0.00	\$0.00	Much below normal rainfall caused the drought intensity to worsen from a D1 at the beginning of the month to a D3 by the end of the month.
Bibb, Pickens	1/23/2018	0	0	\$0.00	\$0.00	Much below normal rainfall caused the drought intensity to worsen from a D1 to a D2.
Bibb, Pickens	2/1/2018	0	0	\$0.00	\$0.00	Significant rainfall during the first half of the month of February lowered the drought intensity to a D0 category.
Tuscaloosa	2/1/2018	0	0	\$0.00	\$0.00	Significant rainfall during the first half of the month of February lowered the drought intensity to a D1 category.

*Source: NOAA Storm Events Database*

Historical occurrences before 2014, can be accessed through the NOAA Storm Events Database site at <https://www.ncdc.noaa.gov/stormevents/>.

### **Probability of Future Occurrence and Loss Estimation**

The probability of drought and extreme heat occurring within the region is relatively high for every jurisdiction. The majority of jurisdictions in the region can manage milder cases of drought and heat waves that occur occasionally, which render minor impacts. The probability of an impactful drought or an extreme heat event occurring in the planning area is classified as medium (10-50 years).

The risk of losses from drought and extreme heat cannot be calculated quantitatively due to the lack of historic data. Qualitative documentation shows evidence that drought and extreme heat conditions cause agricultural losses and water quantity issues, but it is difficult to define the exact impact from this hazard. Using the probabilities discussed earlier in the risk assessment, an estimation of loss of “medium” has been assigned to drought. A medium classification correlates with probable major damage in a 10-50 year period.

Table 4.9 provides a summary of quantitative probability and losses by county. NOAA Storm Events Database info for the entire available timeframe (January 1950-June 2020) was used in these calculations. This information is only available at the county level.

**Table 4.9 Hazard Probability and Damage Estimates – Extreme Heat and Drought\***

<b>Hazard</b>	<b>Occurrences<sup>°</sup></b>	<b>Damages Recorded</b>	<b>Probability (Events per Year)</b>	<b>Estimated Future Damage</b>
Bibb	34	N/A	2.4	Medium
Dallas	27	N/A	1.9	Medium
Greene	20	N/A	1.4	Medium
Hale	27	N/A	1.9	Medium
Marengo	21	N/A	1.5	Medium
Perry	28	N/A	2.0	Medium
Pickens	24	N/A	1.7	Medium
Sumter	20	N/A	1.4	Medium
Tuscaloosa	31	N/A	2.2	Medium
Wilcox	2	N/A	0.1	Medium

\*Information available only at county level

<sup>°</sup>Occurrence data taken from the NOAA Storm Events Database and cover a 14 year time period

N/A: Historical damage data not available



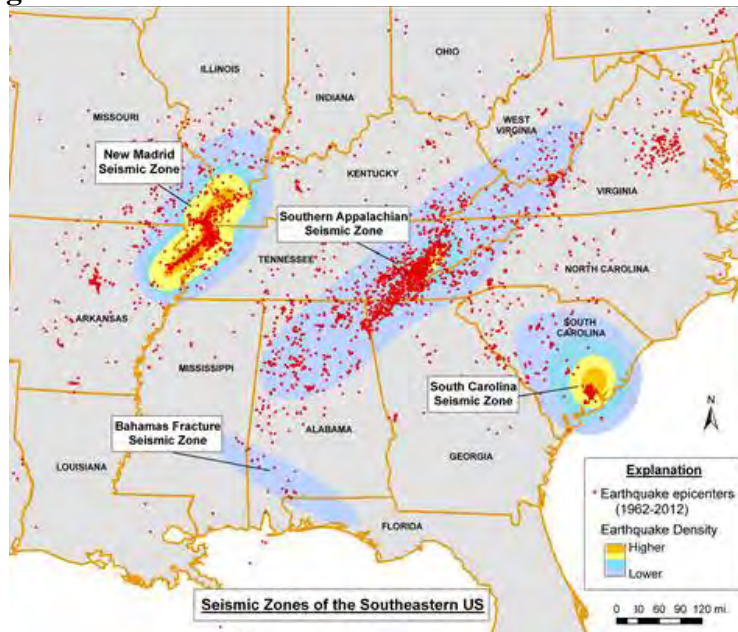
# EARTHQUAKES

## Background

The USGS defines an earthquake as a sudden slip on a fault. The Earth's tectonic plates are always moving relative to each other, but they can get stuck at their edges due to friction. When the stress on the edge of a plate overcomes the friction, there is an earthquake that releases energy in waves that travel through the earth's crust and causes the shaking that we feel. The hazards associated with earthquakes include anything that can affect the lives of humans, including surface faulting, ground shaking, landslides, liquefaction, tectonic deformation, tsunamis, and seiches. Earthquake risk is defined as the probability of damage and loss that would result if an earthquake were to occur.

Although many areas of the United States are better known for their susceptibility, earthquakes do occur in Alabama. There are four seismic zones that affect the state; these zones are the New Madrid Seismic Zone, Southern Appalachian Seismic Zone, Bahamas Fracture Seismic Zone, and the South Carolina Seismic Zone (SCSZ) (Figure 4.1). A portion of Pickens and Tuscaloosa counties lie in the Southern Appalachian Seismic Zone. No other counties in the division are located within a seismic zone.

**Figure 4.1 Seismic Zones of the Southeastern United States**



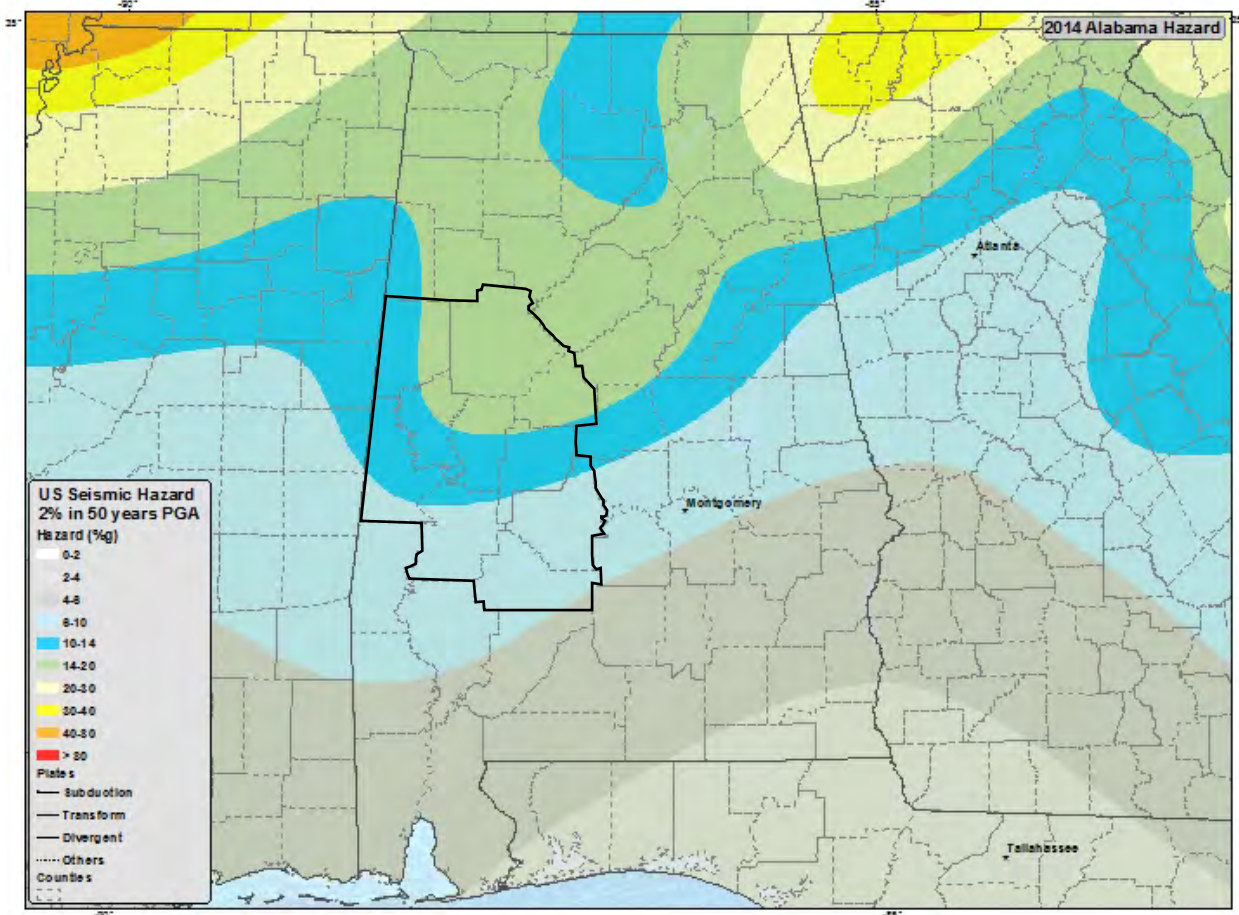
*Source: <https://www.gsa.state.al.us/gsa/geologic/hazards/earthquakes/alquakes>*

## Locations Affected

Seismic hazard is the hazard associated with potential earthquakes in an area. The United States Geological Survey (USGS) publishes maps that estimate earthquake probabilities within a radius of 50 kilometers (km) for a certain time span. These maps show likelihood of exceeding a level of earthquake shaking in each time period. The shaking intensity is measured in peak ground acceleration (PGA) which is acceleration (shaking) of the ground expressed as a percentage of gravity (%g), or as a percentage of 9.8 meters per second squared. Figure 4.2 is the seismic

hazard map for Alabama. As you move north in Division C, the seismic risk increases. Tuscaloosa, Bibb, and portions of Perry, Hale, Greene, and Pickens have the highest risk with a 2% chance of shaking exceeding between 16-20%g in the next 50 years.

**Figure 4.2 U.S. Seismic Hazard 2% in 50 Years PGA**



Source: United States Geological Survey  
<http://earthquake.usgs.gov/earthquakes/states/alabama/hazards.php>  
Accessed on 12/19/19

### Extent

Earthquakes are measured in various ways. The Richter Magnitude Scale measures an earthquake's magnitude. The magnitude is calculated from the amplitude of waves recorded by seismographs. The scale ranges from 1 to 9, with a measure of 1 being recorded but not felt, and a measure of 9 being a great earthquake that causes damage over a large area. The scale is logarithmic, meaning each whole number increase in magnitude represents a tenfold increase in measured amplitude. Each whole number step in the magnitude scale corresponds to the release of about 31 times more energy than the amount associated with the preceding whole number value.

More recently, a more uniformly applicable extension of the magnitude scale, known as moment magnitude, or  $M_w$ , was developed. For very large earthquakes, moment magnitude gives the most reliable estimate of earthquake size. It is a physical quantity proportional to the slip on the

fault multiplied by the area of the fault surface that slips. Moment magnitude can be estimated from seismograms. The moment magnitude is then converted into a number like other earthquake magnitudes by a standard formula.

The Modified Mercalli Intensity Scale measures the earthquake’s intensity, or the damage caused (Table 4.10). The Modified Mercalli Intensity Scale has measurements from I to XII, with I being hardly felt, if at all, and XII being total destruction of the surface. The scale does not have a mathematical basis; instead it is an arbitrary ranking based on observed effects.

<b>Table 4.10 Modified Mercalli Earthquake Measurement Scale</b>			
<b>PGA ( %g)</b>	<b>Magnitude (Richter)</b>	<b>Intensity (MMI)</b>	<b>Description (MMI)</b>
<0.17 – 1.4	1.0 – 3.0	I	Not felt except by a very few under especially favorable conditions.
0.17 – 1.4	3.0 – 3.9	II – III	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.
1.4 – 9.2	4.0 – 4.9	IV – V	IV. Felt indoors by many, outdoors by 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 rock noticeably.  V. Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
9.2 – 34	5.0 – 5.9	VI – VII	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.
34 – 124	6.0 – 6.9	VIII – IX	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. 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.
>124	7.0 and higher	VIII or Higher	X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

<b>Table 4.10 Modified Mercalli Earthquake Measurement Scale</b>			
<b>PGA ( %g)</b>	<b>Magnitude (Richter)</b>	<b>Intensity (MMI)</b>	<b>Description (MMI)</b>
			XI. Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly.  XII. Damage total. Lines of sight and level are distorted. Objects thrown into the air.
<i>Source: United States Geological Survey  <a href="http://earthquake.usgs.gov">http://earthquake.usgs.gov</a>            Last accessed 12/19/2019</i>			

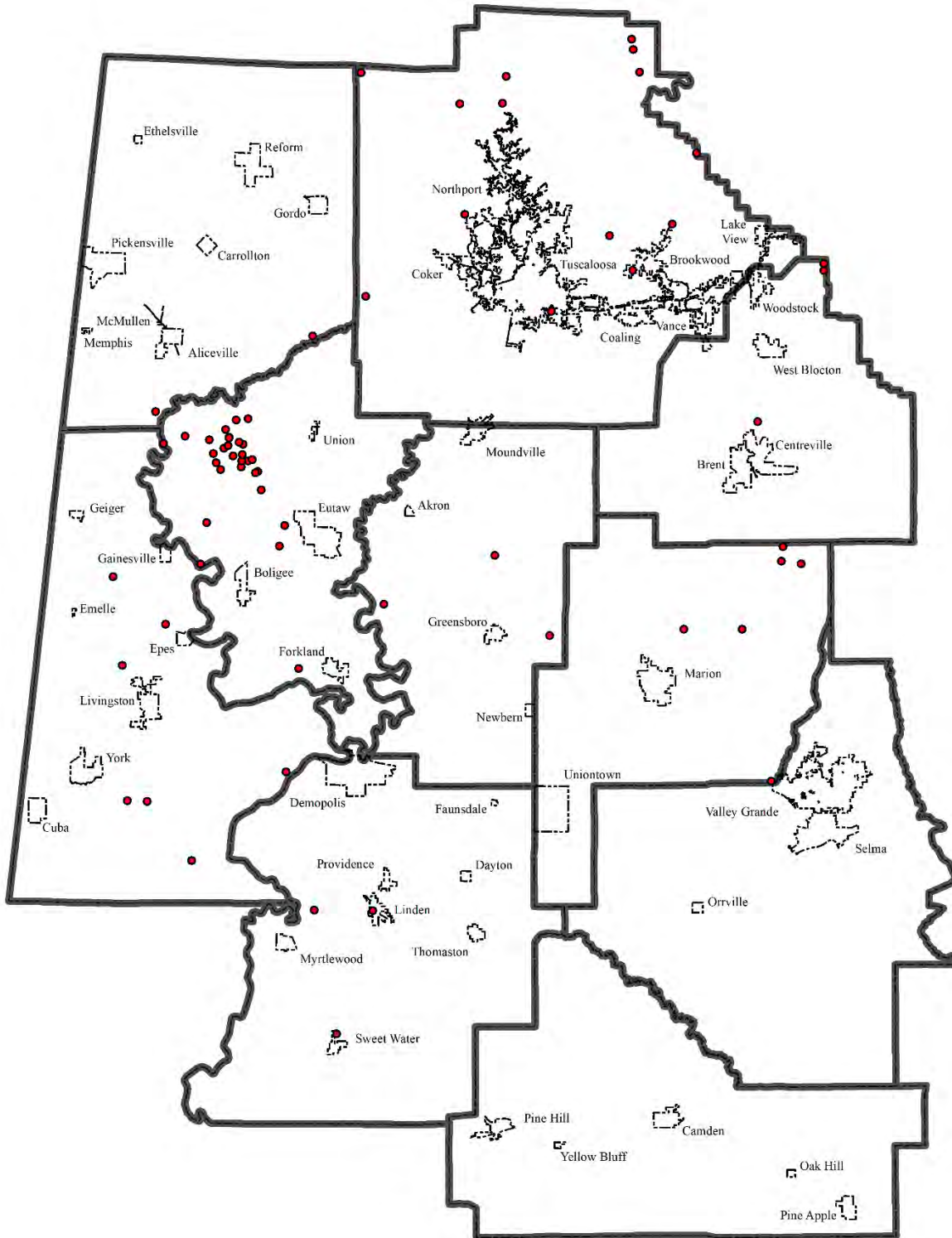
Numerous factors can affect the extent of an earthquake’s damage. The type of construction materials along with construction method is a main factor. Areas where more earthquake resistant materials and building methods are implemented experience significantly less damage. Another factor is the existence and enforcement of building codes. These regulations lead to more disaster resistant communities.

In Division C, earthquakes up to 4.5 on the Richter Scale have occurred. An earthquake of this magnitude is noticeable to people indoors primarily. The average intensity of earthquakes in the planning area is 2.7, which is a very weak earthquake. These earthquakes are usually identified by the review of seismograms. Table 4.12 includes an extent summary for each jurisdiction.

**Historical Occurrences**

There are recorded earthquake occurrences for every county in Division C except for Wilcox County (Figure 4.3 & Table 4.11). The magnitude of most of these quakes has been reported as falling between 1 and 3 on the Richter Scale. Quakes of these magnitudes are often not felt and only detected by scientific instruments. There have been four earthquakes with magnitudes over four. These events are more noticeable but do not lead to structural damage.

**Figure 4.3 Division C Historic Earthquake Occurrences**



Source Data: Geological Survey of Alabama Geospatial Data

Map Produced by





**Table 4.11 Division C Historic Earthquake Incidences**

<b>County</b>	<b>Year</b>	<b>Magnitude</b>	<b>Latitude</b>	<b>Longitude</b>
Bibb	2004	1.8	33.2300	-87.0300
Bibb	2004	2.0	33.2400	-87.0300
Dallas	2004	2.1	32.4900	-87.1200
Greene	1992	2.4	32.7440	-87.7850
Greene	1994	2.5	33.0200	-88.1800
Greene	2002	3.1	32.8000	-88.1000
Greene	2004	2.6	32.9600	-88.0800
Greene	2004	4.3	32.6500	-87.9300
Greene	2006	2.5	32.8600	-88.0900
Greene	2009	2.0	32.8570	-87.9560
Greene	2009	2.3	32.8270	-87.9650
Greene	2014	3.8	32.9410	-88.0320
Greene	2014	3.4	32.9500	-88.0200
Greene	2015	2.7	33.011	-88.021
Greene	2015	3.0	32.9080	-87.9970
Greene	2015	2.4	32.9840	-88.0530
Greene	2015	3.0	32.9500	-88.0310
Greene	2015	2.2	32.9570	-88.0460
Greene	2015	2.4	32.9680	-88.0620
Greene	2015	3.2	33.0090	-88.0410
Greene	2015	3.1	32.9370	-88.0670
Greene	2015	3.1	32.9720	-88.0550
Greene	2015	2.3	32.9470	-88.0750
Greene	2015	2.1	32.9740	-88.0290
Greene	2015	1.5	32.9850	-88.1290
Greene	2015	1.8	32.9770	-88.0360
Greene	2015	1.8	32.9770	-88.0360
Greene	2015	3.0	32.9350	-88.0030
Greene	2015	2.1	32.9830	-88.0530
Greene	2015	2.1	32.9950	-88.0590
Greene	2015	3.5	32.9590	-88.0300
Greene	2015	1.5	32.9740	-88.1660
Greene	2015	2.3	32.9520	-88.0130
Greene	2016	2.3	32.9330	-88.0070
Greene	2016	2.6	32.9800	-88.0870
Hale	1917	2.2	32.7000	-87.5000
Hale	1988	2.4	32.8160	-87.5950
Hale	1998	4.0	32.5000	-87.9500
Marengo	1886	1.2	32.3000	-87.8000
Marengo	1886	3.2	32.3000	-87.9000
Perry	1987	2.8	32.7100	-87.2700
Perry	2000	2.4	32.7100	-87.1700
Perry	2009	2.2	32.8050	-87.0690
Perry	2009	3.3	32.8300	-87.1000
Perry	2009	3.8	33.0110	-87.1440

<b>County</b>	<b>Year</b>	<b>Magnitude</b>	<b>Latitude</b>	<b>Longitude</b>
Perry	2009	2.9	32.8090	-87.1030
Pickens	1971	3.2	33.1320	-87.9110
Pickens	1999	2.1	33.5360	-87.9620
Sumter	1978	3.0	32.7800	-88.2500
Sumter	1998	2.8	32.3700	-88.1100
Sumter	2002	3.0	32.4560	-88.2210
Sumter	2006	2.6	32.7120	-88.1590
Sumter	2009	2.1	32.4550	-88.1870
Sumter	2017	2.1	32.6520	-88.2320
Tuscaloosa	1975	3.4	33.5500	-87.3600
Tuscaloosa	1986	4.5	33.2300	-87.3600
Tuscaloosa	1988	1.5	33.5100	-87.5800
Tuscaloosa	1992	3.0	33.1700	-87.5000
Tuscaloosa	1995	3.4	33.1900	-87.8200
Tuscaloosa	1995	3.3	33.4700	-87.6600
Tuscaloosa	1998	2.9	33.3100	-87.6500
Tuscaloosa	1999	4.0	33.4000	-87.2500
Tuscaloosa	2003	2.7	33.5140	-87.8310
Tuscaloosa	2008	3.1	33.2800	-87.4000
Tuscaloosa	2012	1.7	33.2970	-87.2920
Tuscaloosa	2017	2.7	33.5170	-87.3490
Tuscaloosa	2017	2.6	33.5650	-87.3630
Tuscaloosa	2017	2.3	33.4710	-87.5860

*Source: Geological Survey of Alabama*

**Probability of Future Occurrence and Loss Estimation**

Historically, earthquakes have occurred in all counties in the division except Wilcox. Overall, the occurrence of earthquakes in Division C is likely. The probability of a high intensity quake in the division is low.

Table 4.12 provides a summary of extent, probability, and estimated losses by jurisdiction.

**Table 4.12 Earthquake Summary by Jurisdiction**

<b>Jurisdiction</b>	<b>Historical Occurrences</b>	<b>Extent</b>	<b>Probability</b>	<b>Loss Estimate</b>
Bibb County (unincorporated)	2	Not felt except by a very few under especially favorable conditions.	Low	Low
City of Brent	0	*	Low	Low
City of Centreville	0	*	Low	Low
Town of West Blocton	0	*	Low	Low
Town of Woodstock	0	*	Low	Low

<b>Jurisdiction</b>	<b>Historical Occurrences</b>	<b>Extent</b>	<b>Probability</b>	<b>Loss Estimate</b>
Dallas County (unincorporated)	1	Not felt except by a very few under especially favorable conditions.	Low	Low
City of Selma	0	*	Low	Low
City of Valley Grande	0	*	Low	Low
Town of Orville	0	*	Low	Low
Greene County (unincorporated)	32	Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building.	Low	Low
City of Eutaw	0	*	Low	Low
Town of Boligee	0	*	Low	Low
Town of Forkland	0	*	Low	Low
Town of Union	0	*	Low	Low
Hale County (unincorporated)	3	Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building.	Low	Low
City of Greensboro	0	*	Low	Low
City of Moundville	0	*	Low	Low
Town of Akron	0	*	Low	Low
Town of Newbern	0	*	Low	Low
Marengo County (unincorporated)	1	Standing motor cars may rock slightly. Vibrations similar to the passing of a truck.	Low	Low
City of Demopolis	0	None	Low	Low
City of Linden	1	Not felt except by a very few under especially favorable conditions.	Low	Low
Town of Dayton	0	*	Low	Low
Town of Faunsdale	0	*	Low	Low
Town of Myrtlewood	0	*	Low	Low
Town of Providence	0	*	Low	Low
Town of Sweet Water	0	*	Low	Low
Town of Thomaston	0	*	Low	Low
Perry County (unincorporated)	5	Standing motor cars may rock slightly. Vibrations similar to the passing of a truck.	Low	Low



<b>Jurisdiction</b>	<b>Historical Occurrences</b>	<b>Extent</b>	<b>Probability</b>	<b>Loss Estimate</b>
City of Marion	0	*	Low	Low
City of Uniontown	0	*	Low	Low
Pickens County (unincorporated)	2	Standing motor cars may rock slightly. Vibrations similar to the passing of a truck.	Low	Low
City of Aliceville	0	*	Low	Low
Town of Ethelsville	0	*	Low	Low
Town of Carrollton	0	*	Low	Low
Town of Gordo	0	*	Low	Low
Town of McMullen	0	*	Low	Low
Town of Memphis	0	*	Low	Low
Town of Pickensville	0	*	Low	Low
Town of Reform	0	*	Low	Low
Sumter County (unincorporated)	7	Standing motor cars may rock slightly. Vibrations similar to the passing of a truck.	Low	Low
City of Livingston	0	*	Low	Low
City of York	0	*	Low	Low
Town of Cuba	0	*	Low	Low
Town of Emelle	0	*	Low	Low
Town of Epes	0	*	Low	Low
Town of Gainsville	0	*	Low	Low
Town of Geiger	0	*	Low	Low
Tuscaloosa County (unincorporated)	12	Standing motor cars may rock slightly. Vibrations similar to the passing of a truck.	Low	Low
City of Northport	0	*	Low	Low
City of Tuscaloosa	1	Standing motor cars may rock slightly. Vibrations similar to the passing of a truck.	Low	Low
Town of Brookwood	1	Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building.	Low	Low
Town of Coaling	0	*	Low	Low

<b>Jurisdiction</b>	<b>Historical Occurrences</b>	<b>Extent</b>	<b>Probability</b>	<b>Loss Estimate</b>
Town of Coker	0	*	Low	Low
Town of Lakeview	0	*	Low	Low
Town of Vance	0	*	Low	Low
Wilcox County (unincorporated)	0	*	Low	Low
City of Camden	0	*	Low	Low
Town of Pine Hill	0	*	Low	Low
Town of Pine Apple	0	*	Low	Low
Town of Oak Hill	0	*	Low	Low
Town of Yellow Bluff	0	*	Low	Low
<i>* unable to define due to lack of information</i>				

## **FLOODING**

### **Background**

A flood is a general and temporary condition where two or more acres of normally dry land or two or more properties are inundated by water or mudflow (floodsmart.gov). Many conditions can lead to flooding including hurricanes, overtopped levees, outdated or clogged drainage systems and rapid accumulation of rainfall. There are two primary types of flooding that affect AEMA Division C:

- **Flash flooding:** Flash floods generally develop within 6 hours of the immediate cause. Flash floods exhibit a rapid rise of water over low-lying areas. There are many reasons that flash floods occur, but one of the most common is the result of copious amounts of rainfall from thunderstorms that cause flash flooding. This can occur when slow moving or multiple thunderstorms move over the same area. In some cases, flooding may even occur well away from where heavy rain initially fell. Sudden downpours can rapidly change the water levels in a stream or creek and turn small waterways into violent, raging rivers. Urban areas are especially prone to flash floods due to the large amounts of concrete and asphalt surfaces that do not allow water to penetrate the soil easily.

Flash floods often result from the remnants of tropical systems that pass through the area. Tropical cyclones can cause flooding in the U.S. each spring through fall. While the official hurricane season runs from June to November in the Atlantic, tropical storms have been known to occur outside of this timeframe. Tropical cyclones can bring copious amounts of precipitation onshore. Most of the heaviest rain occurs to the right of the center of the storm; however, it should be noted that rain bands on both sides of the system can produce heavy rain.

- **River flooding:** River flooding occurs when river levels rise and overflow their banks or the edges of their main channel and inundate areas that are normally dry. In Division C river flooding is most often caused by heavy rainfall. The National Weather Service issues Flood Warnings for designated River Forecast Points where flood stage has been established.

### **Locations Affected**

Division C is susceptible to both flash flooding and riverine flooding. Due to the nature of flash floods, every county of AEMA Division C is at risk. Low areas and areas with poor drainage are at higher risks, but almost every area can be affected by flash flooding if enough rainfall occurs. Riverine flooding occurs along rivers and their tributaries and usually occurs after periods of heavy rainfall. Riverine flooding is a risk in the planning area. FEMA designated flood zones are shown by jurisdiction in Appendix C. This information is based on the most recent FEMA National Flood Layer.

Participating Boards of Education, institutions of higher learning, and medical centers do not have properties located in flood zone designated areas.

## **Extent**

Extent by jurisdiction is provided in Table 4.13. A generalized discussion of extent that applies to the region as a whole is provided below.

### *Flash Flooding*

Flash flooding can occur at any location due to the nature of the hazard. Flash flooding generally affects a much smaller area than riverine flooding and has a much more rapid onset. In Division C, there are many areas prone to flash flooding. The lack of drainage infrastructure, undersized drainage infrastructure, and damaged drainage infrastructure exacerbates flash flooding in many areas. Property damage and damage to roadways are the two primary concerns relating to flash flooding.

### *Riverine Flooding*

The magnitude of riverine flooding events is influenced by how much water enters the waterway upstream and the rate at which it does. The frequency of riverine flooding events largely depends on the frequency of weather events. Periodic riverine flooding on adjacent lands is a natural occurrence. The most common method used to express flood frequency is a percent chance of occurrence in a given year, or annual probability within a FEMA identified floodplain. A 100-year flood event has a one percent (1%) chance of occurring in any year within that floodplain. However, these type floods can occur multiple times during a 100-year period, as described in the Historical Occurrences below.

Within the floodplain, a flood event can be expected to inundate the area with several feet of water, which varies across the region, but can be upwards of almost two feet above flood stage as noted by the highest recorded floods described at multiple points in the region. The Black Warrior River in Tuscaloosa recorded a flood crest of 149 feet, which is 20 feet above flood stage. The Black Warrior at the Selden Lock and Dam recorded a crest of 109.9 feet in 1961, which is 20 feet over flood stage. The Tombigbee River at Demopolis recorded a crest of 92.3 feet in 1979, which is 24 feet over flood stage. The Tombigbee River at Beville Lock and Dam recorded a crest of 142.95 feet in 1991, which is 21 feet above flood stage. The Sucarnooche River recorded a crest of 33.47 feet at Livingston in 1979, which is 15 feet above flood stage. A crest of 86 feet was recorded on the Alabama River at Miller's Ferry in 1961, which is 20 feet above flood stage. On the Alabama River in Selma, a crest of 58.35 feet was recorded in 1961, which is 13 feet above flood stage. A crest 37.8 feet was recorded on the Cahaba River in Centreville in 1916, which is almost 15 feet above flood stage. In Suttle a crest of the Cahaba was recorded at 44 feet, which is 12 feet above the flood stage.

**Table 4.13 Flooding Extent by Jurisdiction**

<b>Jurisdiction</b>	<b>Extent</b>
Bibb County (unincorporated)	Flooding depths from 1±15 feet affecting agricultural lands, persons, structures, and infrastructure
City of Brent	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
City of Centreville	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of West Blocton	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Woodstock	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Dallas County (unincorporated)	Flooding depths from 1±15 feet affecting agricultural lands, persons, structures, and infrastructure
City of Selma	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
City of Valley Grande	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Orville	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Greene County (unincorporated)	Flooding depths from 1±20 feet affecting agricultural lands, persons, structures, and infrastructure
City of Eutaw	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Boligee	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Forkland	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Union	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure

<b>Jurisdiction</b>	<b>Extent</b>
Hale County (unincorporated)	Flooding depths from 1±10 feet affecting agricultural lands, persons, structures, and infrastructure
City of Greensboro	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
City of Moundville	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Akron	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Newbern	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Marengo County (unincorporated)	Flooding depths from 1±25 feet affecting agricultural lands, persons, structures, and infrastructure
City of Demopolis	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
City of Linden	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Dayton	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Faunsdale	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Myrtlewood	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Providence	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Sweet Water	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Thomaston	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Perry County (unincorporated)	Flooding depths from 1±15 feet affecting agricultural lands, persons, structures, and infrastructure

<b>Jurisdiction</b>	<b>Extent</b>
City of Marion	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
City of Uniontown	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Pickens County (unincorporated)	Flooding depths from 1±10 feet affecting agricultural lands, persons, structures, and infrastructure
City of Aliceville	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Ethelsville	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Carrollton	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Gordo	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of McMullen	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Memphis	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Pickensville	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Reform	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Sumter County (unincorporated)	Flooding depths from 1±20 feet affecting agricultural lands, persons, structures, and infrastructure
City of Livingston	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
City of York	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Cuba	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure

<b>Jurisdiction</b>	<b>Extent</b>
Town of Emelle	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Epes	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Gainsville	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Geiger	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Tuscaloosa County (unincorporated)	Flooding depths from 1±20 feet affecting agricultural lands, persons, structures, and infrastructure
City of Northport	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
City of Tuscaloosa	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Brookwood	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Coaling	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Coker	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Lakeview	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Vance	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Wilcox County (unincorporated)	Flooding depths from 1±20 feet affecting agricultural lands, persons, structures, and infrastructure
City of Camden	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Pine Hill	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure



Jurisdiction	Extent
Town of Pine Apple	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Oak Hill	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Yellow Bluff	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure

### Historical Occurrences

Information from the National Climatic Data Center reports a total of eighty-six flood events since 1990 within AEMA Division C. The total estimated property and crop damage for these events totals 2.583 million dollars. Descriptions of the events with the most damage are provided below:

- April 7, 2003 (\$197,000.00 in damages across Sumter, Greene, Hale, Dallas, and Marengo counties): Several heavy rain producing storms traversed the same locations between sunrise and early afternoon. Numerous locations experienced rainfall rates as high as three inches per hour. In Sumter County, numerous roads were flooded. Water topped several bridges along Yellow Creek near Cuba. A woman was killed as her car was swept off US Highway 11 near Livingston. Several homes received minor damage from the flooding. In Greene County, numerous roadways were impassible. In Hale and Dallas Counties, several county roads were temporary impassable, and US Highway 80 was closed due to high water. In Marengo County, US Highway was closed, and a car was swept off Highway 28 near Jefferson.
- September 19, 2009 through September 21, 2009 (\$253,000.00 in damages across Tuscaloosa, Bibb, Perry, Pickens, Sumter, Greene, and Hale Counties): A slow-moving weather system produced several days of rain which led to flash flooding.
- March 9, 2011 (\$235,000.00 in damages across Hale, Marengo, Bibb, Perry, Dallas, and Tuscaloosa Counties): Heavy rainfall caused flash flooding in areas, in addition these storms produced strong winds causing tree and structure damage. Several Roads were closed due to flooding in Marion located in Perry County. Four homes were flooded.
- May 30, 2018 (Perry, Dallas, Wilcox, and Greene Counties): Significant flooding occurred in the City of Marion as remnants of Tropical Storm Alberto passed through the area. Portions of Highway 14 were underwater. Several homes on East Lafayette Street near Rice Creek flooded and water rescues were required. Portions of Highway 219 were underwater and impassable. Several bridges washed out on Highway 183 near Marion. A Flash Flood Emergency was issued for a large portion of Perry County. In Dallas County,

County Roads 508 and 510 closed due to high water. In Wilcox County, significant flooding was reported near Highway 5 in Pine Hill. Several culverts were washed out. In Greene County, several streets in the City of Greensboro were flooded and impassable.

Table 4.14 provides historical occurrence data for flooding for the period covering 2014-2019.

**Table 4.14 Division C Flooding Occurrences 2014-2019**

Location	County	Type	Date	Deaths	Injuries	Property Damage	Crop Damage
New Lexington	Tuscaloosa	Flash Flood	4/6/2014	0	0	\$0.00	\$0.00
Greensboro	Hale	Flash Flood	4/7/2014	0	0	\$0.00	\$0.00
Cloverdale	Tuscaloosa	Flood	4/7/2014	0	0	\$0.00	\$0.00
Centreville	Bibb	Flood	4/7/2014	0	0	\$0.00	\$0.00
Abernant	Tuscaloosa	Flash Flood	9/12/2014	0	0	\$0.00	\$0.00
Martaban	Tuscaloosa	Flash Flood	9/12/2014	0	0	\$0.00	\$0.00
Gordo	Pickens	Flash Flood	1/3/2015	0	0	\$0.00	\$0.00
Northport	Tuscaloosa	Flash Flood	1/3/2015	0	0	\$0.00	\$0.00
Sterling	Tuscaloosa	Flash Flood	12/25/2015	0	0	\$0.00	\$0.00
Giles	Bibb	Flash Flood	12/25/2015	0	0	\$0.00	\$0.00
Radford	Perry	Flash Flood	2/3/2016	0	0	\$0.00	\$0.00
Augustin	Perry	Flash Flood	4/14/2018	0	0	\$0.00	\$0.00
Potter	Dallas	Flash Flood	4/14/2018	0	0	\$0.00	\$0.00
Pine Hill	Wilcox	Flash Flood	4/14/2018	0	0	\$100,000.00	\$0.00
Tuscaloosa Airport	Tuscaloosa	Flash Flood	5/29/2018	0	0	\$0.00	\$0.00
Summerfield	Dallas	Flash Flood	5/30/2018	0	0	\$0.00	\$0.00
Folsom	Perry	Flash Flood	5/30/2018	0	0	\$0.00	\$0.00
McClure	Greene	Flash Flood	5/30/2018	0	0	\$0.00	\$0.00
Eutaw	Greene	Flash Flood	5/30/2018	0	0	\$0.00	\$0.00
Rosedale	Tuscaloosa	Flash Flood	7/6/2018	0	0	\$0.00	\$0.00
Fosters	Tuscaloosa	Flood	2/22/2019	0	0	\$0.00	\$0.00

*Source: NOAA Storm Events Database*

Historical occurrences before 2014, can be accessed through the NOAA Storm Events Database site at <https://www.ncdc.noaa.gov/stormevents/>.

### **Probability of Future Occurrence and Loss Estimation**

The division is both subject to flash and riverine flooding. Incidences and damages have been reported as a result of both. Risks vary by jurisdiction. The probability of riverine flooding occurring in the planning area is illustrated by the flood maps provided in Appendix C.

Flash flooding events are expected to increase in frequency and intensity. Rainfall levels are projected to increase leading to an increased chance of flash flooding. As development increases, the risk for flash flooding will increase as impermeable surfaces increase. Aging drainage infrastructure will contribute to an increase in flash flooding also. Based on the information provided in this profile, the probability of future flash flooding events in all jurisdictions is considered to be high.

Table 4.15 provides a quantitative calculation and probability by jurisdiction. NOAA Storm Events Database info for the entire available timeframe (January 1950-June 2020) was used in these calculations. It is important to note that NOAA records do not contain all events or all damage figures.

**Table 4.15 Flood Summary by Jurisdiction**

<b>Jurisdiction</b>	<b>Occurrences<sup>o</sup></b>	<b>Damages Recorded</b>	<b>Probability of Occurrence (Events per Year)</b>	<b>Estimated Future Damage (by event)</b>
Bibb County (unincorporated)	12	\$161,000.00	0.5	\$13,416.67
City of Brent	7	\$100,000.00	0.3	\$14,285.71
City of Centreville	8	\$1,000.00	0.3	\$125.00
Town of West Blocton	5	\$0.00	0.2	\$0.00
Town of Woodstock	5	\$0.00	0.2	\$0.00
Dallas County (unincorporated)	10	\$237,000.00	0.5	\$23,700.00
City of Selma	10	\$33,000.00	0.5	\$3,300.00
City of Valley Grande	5	\$0.00	0.2	\$0.00
Town of Orville	5	\$0.00	0.2	\$0.00
Greene County (unincorporated)	9	\$103,000.00	0.6	\$11,444.44
City of Eutaw	10	\$0.00	0.7	\$0.00
Town of Boligee	9	\$0.00	0.6	\$0.00
Town of Forkland	9	\$0.00	0.6	\$0.00
Town of Union	9	\$0.00	0.6	\$0.00
Hale County (unincorporated)	10	\$53,000.00	0.7	\$5,300.00
City of Greensboro	14	\$10,000.00	0.6	\$714.29
City of Moundville	12	\$100,000.00	0.5	\$8,333.33
Town of Akron	10	\$0.00	0.5	\$0.00
Town of Newbern	10	\$0.00	0.5	\$0.00
Marengo County (unincorporated)	10	\$95,000.00	0.5	\$9,500.00
City of Demopolis	11	\$3,000.00	0.5	\$272.73
City of Linden	10	\$0.00	0.5	\$0.00
Town of Dayton	11	\$0.00	0.5	\$0.00
Town of Faunsdale	11	\$75,000.00	0.5	\$6,818.18
Town of Myrtlewood	10	\$0.00	0.5	\$0.00
Town of Providence	10	\$0.00	0.5	\$0.00
Town of Sweet Water	10	\$0.00	0.5	\$0.00
Town of Thomaston	10	\$0.00	0.5	\$0.00

<b>Jurisdiction</b>	<b>Occurrences<sup>o</sup></b>	<b>Damages Recorded</b>	<b>Probability of Occurrence (Events per Year)</b>	<b>Estimated Future Damage (by event)</b>
Perry County (unincorporated)	9	\$65,000.00	0.4	\$7,222.22
City of Marion	3	\$0.00	0.1	\$0.00
City of Uniontown	4	\$4,000.00	0.2	\$1,000.00
Pickens County (unincorporated)	12	\$76,000.00	0.5	\$6,333.33
City of Aliceville	9	\$0.00	0.4	\$0.00
Town of Ethelsville	9	\$0.00	0.4	\$0.00
Town of Carrollton	11	\$0.00	0.5	\$0.00
Town of Gordo	12	\$25,000.00	0.5	\$2,083.33
Town of McMullen	9	\$0.00	0.4	\$0.00
Town of Memphis	9	\$0.00	0.4	\$0.00
Town of Pickensville	11	\$60,000.00	0.5	\$5,454.55
Town of Reform	10	\$0.00	0.4	\$0.00
Sumter County (unincorporated)	18	\$391,000.00	0.8	\$21,722.22
City of Livingston	17	\$0.00	0.8	\$0.00
City of York	17	\$5,000.00	0.8	\$294.12
Town of Cuba	17	\$0.00	0.8	\$0.00
Town of Emelle	16	\$0.00	0.7	\$0.00
Town of Epes	17	\$5,000.00	0.8	\$294.12
Town of Gainsville	16	\$0.00	0.7	\$0.00
Town of Geiger	17	\$0.00	0.8	\$0.00
Tuscaloosa County (unincorporated)	38	\$191,000.00	1.7	\$5,026.32
City of Northport	12	\$10,000.00	0.5	\$833.33
City of Tuscaloosa	20	\$158,000.00	0.9	\$7,900.00
Town of Brookwood	7	\$0.00	0.3	\$0.00
Town of Coaling	7	\$0.00	0.3	\$0.00
Town of Coker	7	\$0.00	0.3	\$0.00
Town of Lakeview	7	\$0.00	0.3	\$0.00
Town of Vance	7	\$0.00	0.3	\$0.00
Wilcox County (unincorporated)	8	\$27,000.00	0.3	\$3,375.00
City of Camden	3	\$0.00	0.1	\$0.00
Town of Pine Hill	4	\$100,000.00	0.2	\$25,000.00
Town of Pine Apple	3	\$0.00	0.1	\$0.00
Town of Oak Hill	3	\$0.00	0.1	\$0.00
Town of Yellow Bluff	3	\$0.00	0.1	\$0.00

<sup>o</sup>Occurrence data taken from the NOAA Storm Events Database (time periods covered vary by county)

## **HIGH WINDS (HURRICANES, TORNADOES, AND SEVERE THUNDERSTORM: HIGH WINDS/HAIL/LIGHTNING)**

AEMA Division C is susceptible to high wind events from hurricanes, tornadoes, and severe thunderstorms. High wind events may occur any time of year, but occur more often in spring, summer and fall seasons. A more specific description of each major hazard storm type is provided as follows.

### **HURRICANES**

#### **Background**

Tropical systems are best described by the National Hurricane Center:

“A tropical cyclone is a rotating, organized system of clouds and thunderstorms that originates 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 (33 knots) or less.
- Tropical Storm: A tropical cyclone with maximum sustained winds of 39 to 73 mph (34 to 63 knots).
- Hurricane: A tropical cyclone with maximum sustained winds of 74 mph (64 knots) or higher. In the western North Pacific, hurricanes are called typhoons; similar storms in the Indian Ocean and South Pacific Ocean are called cyclone
- Major Hurricane: A tropical cyclone with maximum sustained winds of 111 mph (96 knots) or higher, corresponding to a Category 3, 4 or 5 on the Saffir-Simpson Hurricane Wind Scale.

Tropical cyclones forming between 5 and 30 degrees North latitude typically move toward the west. Sometimes the winds in the middle and upper levels of the atmosphere change and steer the cyclone toward the north and northwest. When tropical cyclones reach latitudes near 30 degrees north, they often move northeast.”

#### **Locations Affected**

AEMA Division C is at risk of experiencing the effects of the Atlantic Hurricane Season which occurs between June 1st and November 30th annually.

#### **Extent**

Once a tropical system reaches hurricane strength, the Saffir-Simpson scale estimates potential property damage based on a hurricane’s sustained wind speed. The scale gives a 1-5 ranking. Hurricanes rated Category 3 and higher are considered major hurricanes. They are associated with significant damage and loss of life. Table 4.16 gives a basic description of the scale.

**Table 4.16 Saffir Simpson Hurricane Wind Scale**

Category	Sustained Winds	Types of Damage Due to Hurricane Winds
1	74-95 mph 64-82 kt 119-153 km/h	Very 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.
2	96-110 mph 83-95 kt 154-177 km/h	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.
3 (major)	111-129 mph 96-112 kt 178-208 km/h	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.
4 (major)	130-156 mph 113-136 kt 209-251 km/h	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 possibly months. Most of the area will be uninhabitable for weeks or months.
5 (major)	157 mph or higher 137 kt or higher 252 km/h 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 <http://www.nhc.noaa.gov/aboutsshws.php>  
Last Accessed: 1/17/20*

Hurricanes as strong as Category 5 have made landfall along the Gulf Coast of Alabama. In rare instances, such as Hurricane Ivan, storms have maintained hurricane strength for up to 200 miles inland. In general though, these storms have historically weakened to tropical storms before affecting the Division C area. Primarily, the area is at risk for high winds, heavy rainfall, and spin off tornadoes associated with tropical systems moving inland. The impact of these events can range from localized to extensive.

### **Historical Occurrences**

In AEMA Division C, the greatest threat from hurricanes and tropical storms is damage received from high winds, heavy rains, and spin off tornadoes. Numerous tropical systems have affected the planning area over the last 50 years.

- In 1995 Hurricane Opal brought high winds to the planning region.
- In September 2004, Hurricane Ivan made landfall in Orange Beach, Alabama as a strong Category 3 hurricane. Counties in Division C felt the effects of Ivan also suffering damage, due predominantly to high winds. The storm remained a hurricane until it reached Perry County.

- In August 2005 Division C felt the after effects of Hurricane Katrina as trees and power lines were damaged from strong storms.

Some counties within AEMA Division C have been included in federal disaster declarations for hurricanes Frederick (1979), Ivan (2004), Dennis (2005), Katrina (2005), Gustav (2008), Isaac (2012), Irma (2017), and Nate (2017).

There are no hurricane events listed in the NOAA Storm Events Database for the 2014-2019 timeframe. Historical occurrences before 2014, can be accessed through the NOAA Storm Events Database site at <https://www.ncdc.noaa.gov/stormevents/>.

### **Probability of Future Occurrences and Lost Estimates**

The probability of future hurricane events directly affecting jurisdictions in the planning area is low. As discussed earlier, Division C is more susceptible to high winds and spin off tornadoes associated with weakening tropical systems as they move inland. With regards to loss estimates, it is probable that jurisdictions in the region will experience major damage resulting from a hurricane in the next 100 years.

## TORNADOES

### Background

The National Weather Service defines a tornado as, “A violently rotating column of air in contact with the ground and extending from the base of a thunderstorm (<http://www.srh.noaa.gov/oun/severewx/glossary4.php#Tornado>.)” The occurrence of tornadoes cannot be predicted, but past occurrences and basic weather patterns can be used to identify areas more susceptible.

### Extent

Table 4.17 shows the Fujita-Pearson scale. The scale gives wind speeds and general damage descriptions. The original F scale uses damage caused by a tornado and relates the damage to the fastest 1/4-mile wind at the height of a damaged structure. The EF or Enhanced Fujita scale is an update to the original F-scale by a team of meteorologists and wind engineers. It was implemented in the U.S. in February 2007. It uses three-second gusts estimated at the point of damage based on a judgment of 8 levels of damage to 28 indicators.

**Table 4.17 Fujita- Pearson Tornado Scale**

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

*Source: National Oceanic and Atmospheric Administration*



The percentage of historic occurrences in Division C based on Fujita Scale classifications is provided in Table 4.18.

**Table 4.18 Historic Occurrences by Scale Classification**

Tornado Scale Classification	Percentage of Historical Occurrences
F0/EF0	31%
F1/EF1	38%
F2/EF2	19%
F3/EF3	9%
F4/EF4	2%
F5/EF5	1%

*Source: National Weather Service*

It can be seen that the Division has experienced tornadic events of each classification. While stronger EF3, EF4, and EF5 events are a small percentage of overall occurrences, they have occurred and are possible in the area.

**Locations Affected**

All areas of the planning area are susceptible to tornadoes. Tornadoes have affected locations throughout Division C. Tornadoes can occur throughout the year; however, the most likely time for occurrence is spring and fall. The spring tornado season in Alabama is March through May. There is a secondary season from November to December.

**Historical Occurrences**

According to the National Weather Service’s Alabama Tornado Database, 295 tornadoes have occurred in the region since 1950. These storms have resulted in 156 fatalities, 2,687 injuries, and in excess of \$1.7 billion in damages.

Division C has experienced numerous notable tornado events. A brief synopsis of the most significant is provided below.

- December 16, 2000 (Tuscaloosa County): An F4 tornado moved from the southwestern portion of the county northeast. The tornado was on the ground for a total of 18 miles. This storm was responsible for eleven fatalities, 144 injuries, and \$12.5 in damages.
- March 1, 2007 (Wilcox County): An EF4 tornado hit Miller’s Ferry resulting in one death, 2 injuries, and \$2.0 million in damages.
- April 15, 2011 Outbreak (Marengo, Sumter, Greene, Tuscaloosa, Hale, Bibb, Perry, and Dallas): Twenty tornadoes were reported within Division C. The strongest of the storms were rated EF3. The Town of Geiger in Sumter County suffered \$6.88 million in damages from an EF3 rated storm. Tuscaloosa County experienced \$7.06 million in damages from an EF3. The unincorporated area of Nanafalia in Marengo County, experienced one death, four injuries, and \$3.99 million in damages resulting from an EF3 tornado.
- April 27, 2011(Tuscaloosa, Pickens, Sumter, Greene, Hale, Bibb, and Perry): Twenty-two tornadoes were reported in Division C on this date. The strongest being a violent, EF

4 tornado that devastated the City of Tuscaloosa. This tornado was responsible for 44 deaths, 800 injuries, and \$1.5 billion dollars' worth of damage.

In Hale County, an EF 3 tornado touched down near Sawyerville leading to six deaths, forty injuries, and \$17 million in damages. In Bibb County, an EF 3 tornado touched down near Mertz which lead to one death, ten injuries, and \$14 million in damages. Overall, there was one EF4, six EF3, eight EF2, and seven EF1 tornadoes reported in Division C.

Table 4.19 is a summary of the annual tornado activity in AEMA Division C since 1950.

<b>Table 4.19 Annual Tornado Summary- AEMA Division C</b>										
<b>Year</b>	<b>Tornadoes</b>	<b>Fatalities</b>	<b>Injuries</b>	<b>Damages (\$)</b>	<b>FO/EFO</b>	<b>F1/EF1</b>	<b>F2/EF2</b>	<b>F3/EF3</b>	<b>F4/EF4</b>	<b>F5/EF5</b>
1950	0	0	0	-						
1951	0	0	0	-						
1952	2	1	20	50,000				2		
1953	1	0	0	27,500		1				
1954	0	0	0	-						
1955	1	0	1	25,000			1			
1956	0	0	0	-						
1957	6	0	11	850,000	1	4	1			
1958	0	0	0	-						
1959	2	0	3	27,750		1	1			
1960	0	0	0	-						
1961	1	0	0	-		1				
1962	0	0	0	-						
1963	1	0	0	25,000			1			
1964	0	0	0	-						
1965	2	0	18	252,500		1		1		
1966	2	1	27	750,000			1			1
1967	2	0	0	2,550,000		1	1			
1968	0	0	0	-						
1969	0	0	0	-						
1970	2	0	0	275,000			2			
1971	2	0	0	250,000				2		
1972	2	0	0	275,000			2			
1973	5	7	199	75,800		2	2		1	
1974	4	3	184	25,250,000	1		2		1	
1975	5	1	49	25,052,750	1	3			1	
1976	5	0	4	575,000	1	2	2			
1977	4	0	1	52,500		2	2			
1978	4	0	0	5,050,000	1	2	1			

**Table 4.19 Annual Tornado Summary- AEMA Division C (continued)**

Year	Tornadoes	Fatalities	Injuries	Damages (\$)	FO/EFO	F1/EF1	F2/EF2	F3/EF3	F4/EF4	F5/EF5
1979	3	0	2	275,000	2		1			
1980	2	0	0	252,500		1	1			
1981	2	0	0	27,500		2				
1982	1	0	0	-		1				
1983	12	1	21	3,380,000	1	8	2	1		
1984	7	0	0	3,025,500	2	1	4			
1985	0	0	0	-						
1986	1	2	0	-				1		
1987	0	0	0	-						
1988	12	0	8	2,775,000		4		8		
1989	0	0	0	-						
1990	4	0	3	2,550,000	3	1				
1991	1	0	0	250,000	1					
1992	4	3	14	5,500,000	1		2	1		
1993	1	0	3	-			1			
1994	2	0	0	505,000		2				
1995	2	0	0	56,000	2					
1996	4	4	40	8,295,000		3		1		
1997	2	1	11	5,085,000			2			
1998	5	32	260	938,000	3			1		1
1999	0	0	0	-						
2000	8	11	144	12,575,000	5	1	1		1	
2001	7	2	1	214,000	4	2		1		
2002	3	0	3	305,000	1	1	1			
2003	8	0	2	412,000	5	3				
2004	4	0	3	285,000	2	1	1			
2005	17	0	2	1,258,000	14	3				
2006	7	0	0	76,000	3	4				
2007	8	1	4	2,572,000	1	6			1	
2008	8	0	4	-	2	3	2	1		
2009	11	0	0	400,500	2	9				
2010	4	0	2	425,000	2	2				
2011	35	85	1614	1,612,297,050	5	10	10	8	2	
2012	12	1	1	-	3	4	5			
2013	1	0	0	-		1				
2014	6	0	18	250,000	1	4	1			
2015	5	0	0	10,000	3	2				
2016	7	0	1	-	2	4	1			
2017	6	0	6	-	2	3	1			

2018	5	0	0	-	4	1				
2019	15	0	3	-	10	4	1	0	0	0

*Source: National Weather Service Tornado Database*

Table 4.20 provides a summary of tornado occurrences in the planning area since 2014 when the present county-level mitigation plans were compiled. Historical occurrences before 2014, can be accessed through the NOAA Storm Events Database site at <https://www.ncdc.noaa.gov/stormevents/>.

Location	County	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
Siloam	Sumter	4/28/2014	Tornado	EF1	0	0	0.00K	0.00K
Hull	Tuscaloosa	4/28/2014	Tornado	EF1	0	13	0.00K	0.00K
Yolande	Tuscaloosa	4/28/2014	Tornado	EF1	0	0	0.00K	0.00K
Stafford	Pickens	4/28/2014	Tornado	EF2	0	5	0.00K	0.00K
Folsom	Perry	11/17/2014	Tornado	EF1	0	0	0.00K	0.00K
Forkland	Greene	11/23/2014	Tornado	EF0	0	0	0.00K	0.00K
West Greene	Greene	1/3/2015	Tornado	EF1	0	0	0.00K	0.00K
Snoddy	Greene	1/3/2015	Tornado	EF0	0	0	0.00K	0.00K
Cuba	Sumter	1/3/2015	Tornado	EF0	0	0	0.00K	0.00K
Bodka	Sumter	1/3/2015	Tornado	EF1	0	0	0.00K	0.00K
Ralph	Tuscaloosa	1/3/2015	Tornado	EF0	0	0	0.00K	0.00K
Coaling	Tuscaloosa	12/25/2015	Tornado	EF0	0	0	0.00K	0.00K
Dancy	Pickens	2/2/2016	Tornado	EF2	0	1	0.00K	0.00K
Melrose	Pickens	2/2/2016	Tornado	EF0	0	0	0.00K	0.00K
Reform	Pickens	2/23/2016	Tornado	EF0	0	0	0.00K	0.00K
Stafford	Pickens	3/31/2016	Tornado	EF1	0	0	0.00K	0.00K
Ethelsville	Pickens	3/31/2016	Tornado	EF1	0	0	0.00K	0.00K
Melrose	Pickens	11/29/2016	Tornado	EF1	0	0	0.00K	0.00K
Gallion	Hale	11/30/2016	Tornado	EF1	0	0	0.00K	0.00K
Allenville	Marengo	11/30/2016	Tornado	EF1	0	0	0.00K	0.00K
Democrat	Marengo	1/21/2017	Tornado	EF1	0	0	0.00K	0.00K
Wayne	Marengo	1/21/2017	Tornado	EF1	0	0	0.00K	0.00K
Hagler	Tuscaloosa	1/22/2017	Tornado	EF0	0	0	0.00K	0.00K
Pondville	Bibb	8/31/2017	Tornado	EF1	0	0	0.00K	0.00K
River Bend	Bibb	8/31/2017	Tornado	EF1	0	0	0.00K	0.00K
Giles	Bibb	8/31/2017	Tornado	EF0	0	0	0.00K	0.00K
Reform	Pickens	8/31/2017	Tornado	EF2	0	6	0.00K	0.00K
Bibb Mill	Bibb	2/7/2018	Tornado	EF0	0	0	0.00K	0.00K
Gallion	Hale	2/7/2018	Tornado	EF0	0	0	0.00K	0.00K

**Table 4.20 Division C Tornado Occurrences 2014-2019**

Location	County	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
Old Spring Hill	Marengo	2/7/2018	Tornado	EF1	0	0	0.00K	0.00K
Nicholsville	Marengo	2/7/2018	Tornado	EF0	0	0	0.00K	0.00K
Siloam	Sumter	2/7/2018	Tornado	EF0	0	0	0.00K	0.00K
Vaiden	Perry	12/1/2018	Tornado	EF0	0	0	0.00K	0.00K
Tyler	Dallas	1/19/2019	Tornado	EF1	0	0	0.00K	0.00K
Dancy	Pickens	2/23/2019	Tornado	EF0	0	0	0.00K	0.00K
Blalock	Dallas	3/14/2019	Tornado	EF0	0	0	0.00K	0.00K
Siddonsville	Marengo	3/14/2019	Tornado	EF0	0	0	0.00K	0.00K
Morgan Springs	Perry	3/14/2019	Tornado	EF0	0	0	0.00K	0.00K
Bethlehem	Perry	3/14/2019	Tornado	EF1	0	0	0.00K	0.00K
Ellawhite	Perry	3/14/2019	Tornado	EF0	0	0	0.00K	0.00K
Kellerman	Tuscaloosa	3/14/2019	Tornado	EF0	0	0	0.00K	0.00K
Gallion	Hale	4/14/2019	Tornado	EF0	0	0	0.00K	0.00K
Sprott	Perry	4/14/2019	Tornado	EF0	0	0	0.00K	0.00K
Hagler	Tuscaloosa	4/14/2019	Tornado	EF1	0	0	0.00K	0.00K
Lake Lanier	Dallas	6/6/2019	Tornado	EF0	0	0	0.00K	0.00K
Vick	Bibb	12/16/2019	Tornado	EF0	0	0	0.00K	0.00K
Brierfield	Bibb	12/16/2019	Tornado	EF1	0	0	0.00K	0.00K
Hogglesville	Hale	12/16/2019	Tornado	EF0	0	0	0.00K	0.00K
Demopolis	Marengo	12/16/2019	Tornado	EF2	0	3	0.00K	0.00K
Morgan Springs	Perry	12/16/2019	Tornado	EF0	0	0	0.00K	0.00K
Totals					0	28	0.00K	0.00K

*Source: NOAA Storm Events Database*

### **Probability of Future Events**

Since 1950, AEMA Division C has experienced tornadoes almost every year. Based on historic data, the annual probability for tornadoes is high.

## **SEVERE THUNDERSTORMS (HIGH WINDS/ HAIL/LIGHTNING)**

Thunderstorms, lightning, hail, and high winds will all be grouped into the category of severe storms in this analysis.

### **Background**

#### *Thunderstorms*

A thunderstorm is a rain storm accompanied by lightning and thunder. According to the National Weather Service there are four types of thunderstorms:

- **Ordinary Cell:** A single cell consisting of a onetime updraft and one time downdraft. They are short lived and typically not severe.
- **Multi-cell Cluster:** Thunderstorms that form in clusters with numerous cells in various stages of development merging together.
- **Multi-cell Line:** Thunderstorms which form in a line which can extend laterally for hundreds of miles. Also known as “squall lines”, they can persist for many hours and produce damaging winds and hail. Tornadoes may form on the leading edge of squall lines, but they primarily produce “straight line” winds. Derechos are long-lived strong squall lines that can travel hundreds of miles and can produce considerable wind and hail damage.
- **Supercell:** Highly organized storms characterized by updrafts that can attain speeds over 100 mph. They are able to produce large hail and strong, violent tornadoes that can produce damaging outflow in excess of 100 mph.

#### *High Winds*

High winds are defined as winds 40 mph or greater lasting for an hour or longer, or winds of 58 mph or greater for any duration. High winds can lead to property damage and interruption in utility services. Trees may fall into homes and structures. Varying degrees of damage may occur depending on the structure and size of the tree. Persons in these structures are at risk of death and injury. Trees can fall across power lines leading to outages that can last several days.

#### *Hail*

Hail is precipitation in the form of irregular pellets or balls of ice more than 5 mm in diameter. Hail forms when thunderstorm updrafts are strong enough to carry water droplets well above the freezing level. This freezing process forms a hailstone, which can grow as additional water freezes onto it. Eventually, the hailstone becomes too heavy for the updrafts to support it and it falls to the ground.

#### *Lightning*

“Lightning is a rapid discharge of electrical energy in the atmosphere. The resulting clap of thunder is the result of a shock wave created by the rapid heating and cooling of the air in the lightning channel. ([http://www.lightningsafety.noaa.gov/resources/lightning3\\_050714.pdf](http://www.lightningsafety.noaa.gov/resources/lightning3_050714.pdf))”. During thunderstorms, winds within the storms cause collisions between various precipitation particles in the storm cloud. These collisions lead to very small ice crystals losing electrons and larger hail particles gaining electrons. Winds redistribute these causing a negative charge buildup

near the middle and lower part of the storm and a positive buildup on the ground beneath the storm cloud. The charge difference eventually increases and the negative charge starts moving toward the ground. Its movement creates a conductive path toward the ground. When the negative charge from the cloud makes contact with the positive charge on the ground, current surges creating a visible flash of lightning.

Lightning is a very dangerous hazard. Lightning is responsible for deaths every year in the state. People often believe they are not at risk and stay outside when lightning is near. A lightning strike can lead to death or serious injury. Lightning can strike homes and trees leading to property damage. Lightning strikes can also cause a disruption in utility services.

**Locations Affected**

The entire planning area is susceptible to the occurrence of severe thunderstorms. These events are assumed to be able to potentially affect any location due to their nature.

**Extent**

Severe thunderstorms are defined by the National Weather service as having winds of 58mph or higher. Severe thunderstorms with straight line winds, which occur throughout various locations in the planning area, have the potential to ignite wind gusts that are comparable to an EF1 tornado. It is difficult to predict the extent of damage and area will undergo due to the unpredictable nature of severe thunderstorms and the random impact of lightning and hail production.

**Historical Occurrences**

From 1950-2019, the number of reported occurrences of severe thunderstorm events is over fifteen hundred. These severe weather events have occurred in all 10 counties of the planning area. According to the National Climatic Data Center (NCDC), there have been over 500 reported high wind events in Division C resulting in more than \$10 million in property damage. One death and eighty-one injuries have occurred. There have been 815 hail events since 1950 in the AEMA Division C planning area. There were 39 lightning events during this same period, which resulted in 2 deaths, 11 injuries, and \$1.1 million dollars in damages.

Tables 4.21-4.23 provide past occurrence data for the 2014-2019 timeframe for severe thunderstorms, hail, and lightning. Historical occurrences before 2014, can be accessed through the NOAA Storm Events Database site at <https://www.ncdc.noaa.gov/stormevents/>.

**Table 4.21 Division C Severe Thunderstorm Occurrences 2014-2019**

Location	County	Date	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
Hugo	Marengo	4/6/2014	60 kts. EG	0	0	\$0.00	\$0.00
Cunningham	Pickens	4/6/2014	50 kts. EG	0	0	\$0.00	\$0.00
Benevola	Pickens	4/6/2014	50 kts. EG	0	0	\$0.00	\$0.00
Buhl	Tuscaloosa	4/6/2014	60 kts. EG	0	0	\$0.00	\$0.00
Coker	Tuscaloosa	4/6/2014	60 kts. EG	0	0	\$0.00	\$0.00
Cloverdale	Tuscaloosa	4/6/2014	50 kts. EG	0	0	\$0.00	\$0.00
Stafford	Pickens	4/28/2014	70 kts. EG	0	0	\$0.00	\$0.00
Maxwell	Tuscaloosa	4/28/2014	85 kts. EG	0	0	\$0.00	\$0.00

**Table 4.21 Division C Severe Thunderstorm Occurrences 2014-2019  
(continued)**

<b>Location</b>	<b>County</b>	<b>Date</b>	<b>Magnitude</b>	<b>Deaths</b>	<b>Injuries</b>	<b>Property Damage</b>	<b>Crop Damage</b>
Maxwell	Tuscaloosa	4/28/2014	69 kts. EG	0	0	\$0.00	\$0.00
Cedar Cove	Tuscaloosa	4/28/2014	65 kts. EG	0	0	\$0.00	\$0.00
Grimes	Tuscaloosa	4/28/2014	76 kts. EG	0	0	\$0.00	\$0.00
Coker	Tuscaloosa	5/27/2014	60 kts. EG	0	0	\$0.00	\$0.00
Abernant	Tuscaloosa	6/6/2014	50 kts. EG	0	0	\$0.00	\$0.00
Jefferson	Marengo	7/2/2014	50 kts. EG	0	0	\$0.00	\$0.00
Melrose	Pickens	7/2/2014	50 kts. EG	0	0	\$0.00	\$0.00
Cuba	Sumter	7/2/2014	50 kts. EG	0	0	\$0.00	\$0.00
Randolph	Bibb	7/2/2014	50 kts. EG	0	0	\$0.00	\$0.00
Spocari	Marengo	10/13/2014	50 kts. EG	0	0	\$0.00	\$0.00
Fairdale	Bibb	10/13/2014	50 kts. EG	0	0	\$0.00	\$0.00
Giles	Bibb	10/13/2014	50 kts. EG	0	0	\$0.00	\$0.00
Brookwood	Tuscaloosa	10/13/2014	50 kts. EG	0	0	\$0.00	\$0.00
Samantha	Tuscaloosa	10/13/2014	50 kts. EG	0	0	\$0.00	\$0.00
Sawyer ville	Hale	10/13/2014	50 kts. EG	0	0	\$0.00	\$0.00
Holt Junction	Tuscaloosa	10/13/2014	50 kts. EG	0	0	\$0.00	\$0.00
Cedarville	Hale	10/13/2014	50 kts. EG	0	0	\$0.00	\$0.00
Buhl	Tuscaloosa	10/13/2014	50 kts. EG	0	0	\$0.00	\$0.00
Newbern	Hale	10/13/2014	50 kts. EG	0	0	\$0.00	\$0.00
Sawyer ville	Hale	12/23/2014	50 kts. EG	0	0	\$0.00	\$0.00
York	Sumter	12/23/2014	50 kts. EG	0	0	\$0.00	\$0.00
Hogglesville	Hale	12/23/2014	50 kts. EG	0	0	\$0.00	\$0.00
Sledge	Hale	12/23/2014	50 kts. EG	0	0	\$0.00	\$0.00
Union Chapel	Pickens	1/3/2015	50 kts. EG	0	0	\$0.00	\$0.00
Reform	Pickens	1/3/2015	50 kts. EG	0	0	\$0.00	\$0.00
Box Springs	Tuscaloosa	1/3/2015	43 kts. EG	0	1	\$0.00	\$0.00
Samantha	Tuscaloosa	1/25/2015	50 kts. EG	0	0	\$0.00	\$0.00
Tuscaloosa Airport	Tuscaloosa	1/25/2015	51 kts. MG	0	0	\$0.00	\$0.00
Allison	Greene	4/3/2015	50 kts. EG	0	0	\$0.00	\$0.00
Akron	Hale	4/3/2015	60 kts. EG	0	0	\$0.00	\$0.00
Ridge	Greene	5/20/2015	50 kts. EG	0	0	\$0.00	\$0.00
Forkland	Greene	5/20/2015	50 kts. EG	0	0	\$0.00	\$0.00
Reform	Pickens	5/24/2015	50 kts. EG	0	0	\$0.00	\$0.00
Boykin	Wilcox	6/24/2015	52 kts. EG	0	0	\$5,000.00	\$0.00
Camden	Wilcox	6/24/2015	52 kts. EG	0	0	\$5,000.00	\$0.00
Ashby	Bibb	7/15/2015	50 kts. EG	0	0	\$0.00	\$0.00
Brierfield	Bibb	7/15/2015	50 kts. EG	0	0	\$0.00	\$0.00
Rosemary	Hale	7/15/2015	50 kts. EG	0	0	\$0.00	\$0.00
Aliceville	Pickens	7/15/2015	50 kts. EG	0	0	\$0.00	\$0.00
Shortleaf	Marengo	7/15/2015	50 kts. EG	0	0	\$0.00	\$0.00
McCainville	Sumter	8/7/2015	50 kts. EG	0	0	\$0.00	\$0.00
Coatopa	Sumter	8/7/2015	50 kts. EG	0	0	\$0.00	\$0.00
Selma	Dallas	8/8/2015	50 kts. EG	0	0	\$0.00	\$0.00
Siloam	Sumter	8/10/2015	50 kts. EG	0	0	\$0.00	\$0.00
Samantha	Tuscaloosa	8/10/2015	50 kts. EG	0	0	\$0.00	\$0.00
Memphis	Pickens	11/18/2015	60 kts. EG	0	0	\$0.00	\$0.00
Milelr	Greene	2/2/2016	60 kts. EG	0	0	\$0.00	\$0.00
Akron	Hale	2/3/2016	55 kts. EG	0	0	\$0.00	\$0.00



**Table 4.21 Division C Severe Thunderstorm Occurrences 2014-2019  
(continued)**

<b>Location</b>	<b>County</b>	<b>Date</b>	<b>Magnitude</b>	<b>Deaths</b>	<b>Injuries</b>	<b>Property Damage</b>	<b>Crop Damage</b>
Oak Hill	Wilcox	2/15/2016	52 kts. EG	0	0	\$5,000.00	\$0.00
Pine Hill	Wilcox	2/15/2016	52 kts. EG	0	0	\$3,000.00	\$0.00
Siloam	Sumter	2/23/2016	50 kts. EG	0	0	\$0.00	\$0.00
Hamburg	Perry	4/27/2016	50 kts. EG	0	0	\$0.00	\$0.00
Samantha	Tuscaloosa	6/17/2016	50 kts. EG	0	0	\$0.00	\$0.00
Pearson	Tuscaloosa	6/17/2016	50 kts. EG	0	0	\$0.00	\$0.00
River Bend	Bibb	6/17/2016	50 kts. EG	0	0	\$0.00	\$0.00
Moscow	Sumter	6/17/2016	50 kts. EG	0	0	\$0.00	\$0.00
Western Junction	Dallas	6/17/2016	51 kts. MG	0	0	\$0.00	\$0.00
Ralph	Tuscaloosa	7/5/2016	50 kts. EG	0	0	\$0.00	\$0.00
Kellerman	Tuscaloosa	7/9/2016	50 kts. EG	0	0	\$0.00	\$0.00
Cuba	Sumter	11/28/2016	55 kts. EG	0	0	\$0.00	\$0.00
Centreville	Bibb	1/22/2017	50 kts. EG	0	0	\$0.00	\$0.00
Stewart	Hale	3/1/2017	50 kts. EG	0	0	\$0.00	\$0.00
Havana	Hale	3/1/2017	50 kts. EG	0	0	\$0.00	\$0.00
Boligee	Greene	3/1/2017	50 kts. EG	0	0	\$0.00	\$0.00
Epes	Sumter	3/1/2017	50 kts. EG	0	0	\$0.00	\$0.00
Pine Hill	Wilcox	3/1/2017	52 kts. EG	0	0	\$10,000.00	\$0.00
Cuba	Sumter	4/3/2017	50 kts. EG	0	0	\$0.00	\$0.00
York	Sumter	4/3/2017	50 kts. EG	0	0	\$0.00	\$0.00
Siloam	Sumter	4/3/2017	50 kts. EG	0	1	\$0.00	\$0.00
Dancy	Pickens	4/30/2017	50 kts. EG	0	0	\$0.00	\$0.00
Brownville	Tuscaloosa	4/30/2017	50 kts. EG	0	0	\$0.00	\$0.00
Aliceville	Pickens	4/30/2017	50 kts. EG	0	0	\$0.00	\$0.00
Owens	Pickens	4/30/2017	50 kts. EG	0	1	\$0.00	\$0.00
Potter	Dallas	7/1/2017	50 kts. EG	0	0	\$0.00	\$0.00
Potter	Dallas	7/1/2017	50 kts. EG	0	0	\$0.00	\$0.00
Summerfield	Dallas	7/26/2017	50 kts. EG	0	0	\$0.00	\$0.00
Selma-Selfield	Dallas	7/26/2017	50 kts. EG	0	0	\$0.00	\$0.00
Summerfield	Dallas	7/26/2017	50 kts. EG	0	0	\$0.00	\$0.00
Selma	Dallas	7/26/2017	50 kts. EG	0	0	\$0.00	\$0.00
Hazen	Dallas	7/26/2017	50 kts. EG	0	0	\$0.00	\$0.00
Boyd	Sumter	2/7/2018	50 kts. EG	0	0	\$0.00	\$0.00
Akron	Hale	4/22/2018	50 kts. EG	0	0	\$0.00	\$0.00
Havana	Hale	4/22/2018	50 kts. EG	0	0	\$0.00	\$0.00
Greensboro	Hale	4/22/2018	50 kts. EG	0	0	\$0.00	\$0.00
Tuscaloosa	Tuscaloosa	6/28/2018	50 kts. EG	0	0	\$0.00	\$0.00
Selma-Selfield	Dallas	6/28/2018	50 kts. EG	0	0	\$0.00	\$0.00
Moundville	Hale	6/28/2018	50 kts. EG	0	0	\$0.00	\$0.00
Greensboro	Hale	6/28/2018	50 kts. EG	0	0	\$0.00	\$0.00
NEWBERN	Hale	6/28/2018	50 kts. EG	0	0	\$0.00	\$0.00
Faunsdale	Marengo	6/28/2018	50 kts. EG	0	0	\$0.00	\$0.00
Camden	Wilcox	6/28/2018	61 kts. EG	0	0	\$5,000.00	\$0.00
Sweet Water	Marengo	6/28/2018	50 kts. EG	0	0	\$0.00	\$0.00
Akron	Hale	3/14/2019	50 kts. EG	0	0	\$0.00	\$0.00
Six Mile	Bibb	3/25/2019	50 kts. EG	0	0	\$0.00	\$0.00
Gallion	Hale	3/25/2019	50 kts. EG	0	0	\$0.00	\$0.00
Burnsville	Dallas	3/25/2019	50 kts. EG	0	0	\$0.00	\$0.00
Burnsville	Dallas	3/25/2019	50 kts. EG	0	0	\$0.00	\$0.00

**Table 4.21 Division C Severe Thunderstorm Occurrences 2014-2019  
(continued)**

<b>Location</b>	<b>County</b>	<b>Date</b>	<b>Magnitude</b>	<b>Deaths</b>	<b>Injuries</b>	<b>Property Damage</b>	<b>Crop Damage</b>
Sardis	Dallas	3/25/2019	50 kts. EG	0	0	\$0.00	\$0.00
Tyler	Dallas	3/25/2019	50 kts. EG	0	0	\$0.00	\$0.00
McCainville	Sumter	4/13/2019	50 kts. EG	0	0	\$0.00	\$0.00
Dudley	Tuscaloosa	4/14/2019	50 kts. EG	0	0	\$0.00	\$0.00
Geiger	Sumter	4/18/2019	50 kts. EG	0	0	\$0.00	\$0.00
Dancy	Pickens	4/18/2019	50 kts. EG	0	0	\$0.00	\$0.00
Aliceville	Pickens	4/18/2019	50 kts. EG	0	0	\$0.00	\$0.00
Pickensville	Pickens	4/18/2019	50 kts. EG	0	0	\$0.00	\$0.00
Coker	Tuscaloosa	4/18/2019	50 kts. EG	0	0	\$0.00	\$0.00
River View	Tuscaloosa	4/18/2019	50 kts. EG	0	0	\$0.00	\$0.00
Fox	Tuscaloosa	4/18/2019	50 kts. EG	0	0	\$0.00	\$0.00
Newbern	Hale	4/18/2019	50 kts. EG	0	0	\$0.00	\$0.00
Sweet Water	Marengo	6/7/2019	50 kts. EG	0	0	\$0.00	\$0.00
Stafford	Pickens	6/7/2019	50 kts. EG	0	0	\$0.00	\$0.00
Ingate	Bibb	6/8/2019	50 kts. EG	0	0	\$0.00	\$0.00
Northport	Tuscaloosa	6/20/2019	50 kts. EG	0	0	\$0.00	\$0.00
Abernant	Tuscaloosa	6/20/2019	50 kts. EG	0	0	\$0.00	\$0.00
Stokes	Tuscaloosa	6/22/2019	50 kts. EG	0	0	\$0.00	\$0.00
Snoddy	Greene	6/27/2019	45 kts. EG	0	1	\$0.00	\$0.00
Shortleaf	Marengo	6/27/2019	45 kts. EG	0	1	\$0.00	\$0.00
Gordo	Pickens	7/8/2019	50 kts. EG	0	0	\$0.00	\$0.00
Shook	Tuscaloosa	8/13/2019	50 kts. EG	0	0	\$0.00	\$0.00
Heiberger	Perry	8/19/2019	50 kts. EG	0	0	\$0.00	\$0.00
River View	Tuscaloosa	8/27/2019	50 kts. EG	0	0	\$0.00	\$0.00
Holt Junction	Tuscaloosa	8/27/2019	50 kts. EG	0	0	\$0.00	\$0.00
Moundville	Hale	8/27/2019	50 kts. EG	0	0	\$0.00	\$0.00
Vine Hill	Tuscaloosa	8/27/2019	50 kts. EG	0	0	\$0.00	\$0.00
Greensboro	Hale	8/27/2019	50 kts. EG	0	0	\$0.00	\$0.00
Sledge	Hale	8/27/2019	50 kts. EG	0	0	\$0.00	\$0.00
Dayton	Marengo	8/27/2019	50 kts. EG	0	0	\$0.00	\$0.00
Coy	Wilcox	10/5/2019	52 kts. EG	0	0	\$0.00	\$0.00
Persimmon Grove	Sumter	12/16/2019	50 kts. EG	0	0	\$0.00	\$0.00

*Source: NOAA Storm Events Database*

**Table 4.22 Division C Hail Occurrences 2014-2019**

<b>Location</b>	<b>County</b>	<b>Date</b>	<b>Magnitude</b>	<b>Deaths</b>	<b>Injuries</b>	<b>Property Damage</b>	<b>Crop Damage</b>
Myrtlewood	Marengo	4/6/2014	0.75 in.	0	0	\$0.00	\$0.00
Aliceville	Pickens	6/8/2014	1.75 in.	0	0	\$0.00	\$0.00
Summerfield	Dallas	6/8/2014	1.75 in.	0	0	\$0.00	\$0.00
Summerfield	Dallas	6/8/2014	1.75 in.	0	0	\$0.00	\$0.00
Palmetto	Pickens	6/9/2014	1.50 in.	0	0	\$0.00	\$0.00
Livingston	Sumter	6/22/2014	1.00 in.	0	0	\$0.00	\$0.00
Octagon	Maerngo	7/2/2014	1.00 in.	0	0	\$0.00	\$0.00
Stafford	Pickens	3/31/2015	1.25 in.	0	0	\$0.00	\$0.00
Reform	Pickens	3/31/2015	1.00 in.	0	0	\$0.00	\$0.00
Gordo	Pickens	3/31/2015	1.00 in.	0	0	\$0.00	\$0.00

<b>Table 4.22 Division C Hail Occurrences 2014-2019 (continued)</b>							
<b>Location</b>	<b>County</b>	<b>Date</b>	<b>Magnitude</b>	<b>Deaths</b>	<b>Injuries</b>	<b>Property Damage</b>	<b>Crop Damage</b>
Shirley	Tuscaloosa	3/31/2015	1.00 in.	0	0	\$0.00	\$0.00
Coker	Tuscaloosa	3/31/2015	1.75 in.	0	0	\$0.00	\$0.00
Rosedale	Tuscaloosa	3/31/2015	1.75 in.	0	0	\$0.00	\$0.00
Northport	Tuscaloosa	3/31/2015	1.00 in.	0	0	\$0.00	\$0.00
Northport	Tuscaloosa	3/31/2015	1.75 in.	0	0	\$0.00	\$0.00
Coleanor	Bibb	3/31/2015	1.00 in.	0	0	\$0.00	\$0.00
Eutaw	Greene	5/20/2015	1.25 in.	0	0	\$0.00	\$0.00
Alfalfa	Marengo	6/30/2015	1.75 in.	0	0	\$0.00	\$0.00
Centreville	Bibb	7/3/2015	1.50 in.	0	0	\$0.00	\$0.00
Lasca	Marengo	3/31/2016	1.00 in.	0	0	\$0.00	\$0.00
Northport	Tuscaloosa	3/31/2016	1.25 in.	0	0	\$0.00	\$0.00
Samantha	Tuscaloosa	4/29/2016	2.50 in.	0	0	\$0.00	\$0.00
Hamner	Sumter	1/2/2017	1.00 in.	0	0	\$0.00	\$0.00
Bodka	Sumter	1/2/2017	1.00 in.	0	0	\$0.00	\$0.00
Hogglesville	Hale	4/5/2017	1.00 in.	0	0	\$0.00	\$0.00
Vance	Tuscaloosa	4/5/2017	1.00 in.	0	0	\$0.00	\$0.00
Brierfield	Bibb	4/5/2017	1.00 in.	0	0	\$0.00	\$0.00
Camden	Wilcox	4/5/2017	1.00 in.	0	0	\$0.00	\$0.00
Camden	Wilcox	4/5/2017	1.75 in.	0	0	\$0.00	\$0.00
Greensboro	Hale	4/5/2017	1.00 in.	0	0	\$0.00	\$0.00
McCainville	Sumter	12/27/2018	1.00 in.	0	0	\$0.00	\$0.00
Kellerman	Tuscaloosa	2/19/2019	1.00 in.	0	0	\$0.00	\$0.00
Palmetto	Pickens	3/14/2019	1.00 in.	0	0	\$0.00	\$0.00
Moore's Bridge	Tuscaloosa	3/14/2019	0.88 in.	0	0	\$0.00	\$0.00
New Lexington	Tuscaloosa	3/14/2019	1.00 in.	0	0	\$0.00	\$0.00
New Lexington	Tuscaloosa	3/14/2019	0.88 in.	0	0	\$0.00	\$0.00
Coker	Tuscaloosa	3/14/2019	0.75 in.	0	0	\$0.00	\$0.00
Palmetto	Pickens	3/14/2019	1.00 in.	0	0	\$0.00	\$0.00
Wedgeworth	Hale	3/25/2019	1.25 in.	0	0	\$0.00	\$0.00
Evansville	Hale	3/25/2019	0.88 in.	0	0	\$0.00	\$0.00
Greensboro	Hale	3/25/2019	1.00 in.	0	0	\$0.00	\$0.00
Siloam	Sumter	3/25/2019	0.88 in.	0	0	\$0.00	\$0.00
Cloverdale	Tuscaloosa	6/22/2019	1.00 in.	0	0	\$0.00	\$0.00
Woodstock	Bibb	6/27/2019	0.75 in.	0	0	\$0.00	\$0.00

*Source: NOAA Storm Events Database*

**Table 4.23 Division C Lightning Occurrences 2014-2019**

<b>Location</b>	<b>County</b>	<b>Date</b>	<b>Deaths</b>	<b>Injuries</b>	<b>Property Damage</b>	<b>Crop Damage</b>
Camden	Wilcox	3/24/2016	0	0	\$25,000.00	\$0.00
Centreville	Bibb	7/17/2017	0	1	\$0.00	\$0.00

*Source: NOAA Storm Events Database*

**Probability of Future Occurrence and Loss Estimation**

AEMA Division C has a high probability of experiencing severe thunderstorms including high winds, lightning, and hail throughout the year. Numerous historical data and documented events within the last few decades lead AEMA Division C to determine that there is a high probability of severe thunderstorm occurrences. With regards to loss estimates, it is probable that jurisdictions in the region will experience major damage resulting from severe thunderstorms in the next 1-10 years.

## **LANDSLIDES**

### **Background**

Landslides are the downward and outward movement of soil and rocks under the influence of gravity (<http://www.gsa.state.al.us/>). Naturally induced landslides occur as a result of weakened rock composition, heavy rain, changes in ground water levels, and seismic activity. Typically, areas that are prone to landslides are on or at the base of steep slopes, base of drainage channels, developed hillsides where leach field septic systems are used.

### **Locations Affected**

Appendix D contains maps of AEMA Division C counties illustrating susceptibility to landslides. By examining these maps, one can see that the majority of AEMA- Division C is classified as having low susceptibility. Susceptibility is defined as the probable degree of response of rocks and soils to natural or artificial cutting of slopes, or to anomalously high precipitation. Low susceptibility translates to less than 1.5% of the planning being affected by landslides.

Participating Boards of Education, institutions of higher learning, and medical centers do not have properties located in areas with a high susceptibility to landslides.

### **Extent**

There is no widely accepted magnitude scale for landslides. Defining the extent of landslides is subjective and could vary greatly. Due to low susceptibility throughout the planning area, the extent of landslide incidents are estimated to be primarily isolated damages to structures and infrastructure. Table 4.24 provides an extent for each jurisdiction.

### **Historical Occurrences**

Historical occurrences are provided on the maps in Appendix D. It is important to note that there is no date listed on the GSA map detailing time frame, so it is impossible to determine the time period over which these events occurred. Pickens, Tuscaloosa, Bibb, Perry, Dallas, and Sumter counties all have historic incidences. There is no specific documentation available for these events, leading to the belief that each incident was very localized and minor in nature.

### **Probability of Future Events**

AEMA Division C as an entire region has low susceptibility to landslide incidences. Based on susceptibility and historical data, AEMA-Division C has an assessed susceptibility to landslide events that is low. Low risk is described as probable major damage occurring in a 100 year period.

The estimated risk of losses from landslides cannot be calculated based on historic records due to lack of data. Though incidents of landslides have been recorded in Pickens, Tuscaloosa, Bibb, Perry, Dallas, and Sumter there are no damage estimates attached to those events.

Table 4.24 provides a summary of the extent, probability, and loss estimates associated with landslides in AEMA Division C.

**Table 4.24 Landslide Summary by Jurisdiction**

<b>Jurisdiction</b>	<b>Extent</b>	<b>Probability of Occurrence</b>	<b>Estimated Losses</b>
Bibb County (unincorporated)	Isolated damage to structures and infrastructure	Low	*
City of Brent	Isolated damage to structures and infrastructure	Low	*
City of Centreville	Isolated damage to structures and infrastructure	Low	*
Town of West Blocton	Isolated damage to structures and infrastructure	Low	*
Town of Woodstock	Isolated damage to structures and infrastructure	Low	*
Dallas County (unincorporated)	Isolated damage to structures and infrastructure	Low	*
City of Selma	Isolated damage to structures and infrastructure	Low	*
City of Valley Grande	Isolated damage to structures and infrastructure	Low	*
Town of Orville	Isolated damage to structures and infrastructure	Low	*
Greene County (unincorporated)	Isolated damage to structures and infrastructure	Low	*
City of Eutaw	Isolated damage to structures and infrastructure	Low	*
Town of Boligee	Isolated damage to structures and infrastructure	Low	*
Town of Forkland	Isolated damage to structures and infrastructure	Low	*
Town of Union	Isolated damage to structures and infrastructure	Low	*
Hale County (unincorporated)	Isolated damage to structures and infrastructure	Low	*
City of Greensboro	Isolated damage to structures and infrastructure	Low	*
City of Moundville	Isolated damage to structures and infrastructure	Low	*
Town of Akron	Isolated damage to structures and infrastructure	Low	*
Town of Newbern	Isolated damage to structures and infrastructure	Low	*
Marengo County (unincorporated)	Isolated damage to structures and infrastructure	Low	*
City of Demopolis	Isolated damage to structures and infrastructure	Low	*
City of Linden	Isolated damage to structures and infrastructure	Low	*

<b>Jurisdiction</b>	<b>Extent</b>	<b>Probability of Occurrence</b>	<b>Estimated Losses</b>
Town of Dayton	Isolated damage to structures and infrastructure	Low	*
Town of Faunsdale	Isolated damage to structures and infrastructure	Low	*
Town of Myrtlewood	Isolated damage to structures and infrastructure	Low	*
Town of Providence	Isolated damage to structures and infrastructure	Low	*
Town of Sweet Water	Isolated damage to structures and infrastructure	Low	*
Town of Thomaston	Isolated damage to structures and infrastructure	Low	*
Perry County (unincorporated)	Isolated damage to structures and infrastructure	Low	*
City of Marion	Isolated damage to structures and infrastructure	Low	*
City of Uniontown	Isolated damage to structures and infrastructure	Low	*
Pickens County (unincorporated)	Isolated damage to structures and infrastructure	Low	*
City of Aliceville	Isolated damage to structures and infrastructure	Low	*
Town of Ethelsville	Isolated damage to structures and infrastructure	Low	*
Town of Carrollton	Isolated damage to structures and infrastructure	Low	*
Town of Gordo	Isolated damage to structures and infrastructure	Low	*
Town of McMullen	Isolated damage to structures and infrastructure	Low	*
Town of Memphis	Isolated damage to structures and infrastructure	Low	*
Town of Pickensville	Isolated damage to structures and infrastructure	Low	*
Town of Reform	Isolated damage to structures and infrastructure	Low	*
Sumter County (unincorporated)	Isolated damage to structures and infrastructure	Low	*
City of Livingston	Isolated damage to structures and infrastructure	Low	*
City of York	Isolated damage to structures and infrastructure	Low	*
Town of Cuba	Isolated damage to structures and infrastructure	Low	*
Town of Emelle	Isolated damage to structures and infrastructure	Low	*
Town of Epes	Isolated damage to structures and infrastructure	Low	*

<b>Jurisdiction</b>	<b>Extent</b>	<b>Probability of Occurrence</b>	<b>Estimated Losses</b>
Town of Gainsville	Isolated damage to structures and infrastructure	Low	*
Town of Geiger	Isolated damage to structures and infrastructure	Low	*
Tuscaloosa County (unincorporated)	Isolated damage to structures and infrastructure	Low	*
City of Northport	Isolated damage to structures and infrastructure	Low	*
City of Tuscaloosa	Isolated damage to structures and infrastructure	Low	*
Town of Brookwood	Isolated damage to structures and infrastructure	Low	*
Town of Coaling	Isolated damage to structures and infrastructure	Low	*
Town of Coker	Isolated damage to structures and infrastructure	Low	*
Town of Lakeview	Isolated damage to structures and infrastructure	Low	*
Town of Vance	Isolated damage to structures and infrastructure	Low	*
Wilcox County (unincorporated)	Isolated damage to structures and infrastructure	Low	*
City of Camden	Isolated damage to structures and infrastructure	Low	*
Town of Pine Hill	Isolated damage to structures and infrastructure	Low	*
Town of Pine Apple	Isolated damage to structures and infrastructure	Low	*
Town of Oak Hill	Isolated damage to structures and infrastructure	Low	*
Town of Yellow Bluff	Isolated damage to structures and infrastructure	Low	*



## LAND SUBSIDENCE/SINKHOLES

### Background

Land subsidence occurs when large amounts of groundwater have been withdrawn from certain types of rocks, such as fine-grained sediments. The rock compacts because the water is partly responsible for holding the ground up. When the water is withdrawn, the rocks collapse. Subsidence can occur over large areas and in more localized locations. Smaller localized areas of subsidence are referred to as sinkholes.

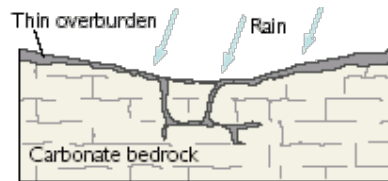
Sinkholes can form from a variety of causes including natural and man-made activities and include ground collapse related to:

- Naturally dissolved voids in rock
- A drop in the water table from drought or pumping of nearby wells
- Heavy construction or weight at the ground surface
- Drainage problems
- Collapse of underground mines
- Excessive rainfall.

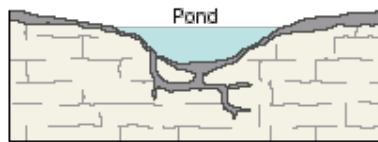
There are three types of sinkholes. A description and illustration (Figure 4.4) of each follows:

**Figure 4.4 Types of Sinkholes**

- Dissolution:



Rainfall and surface water percolate through joints in the limestone. Dissolved carbonate rock is carried away from the surface and a small depression gradually forms.



On exposed carbonate surfaces, a depression may focus surface drainage, accelerating the dissolution process. Debris carried into the developing sinkhole may plug the outflow, ponding water and creating wetlands.

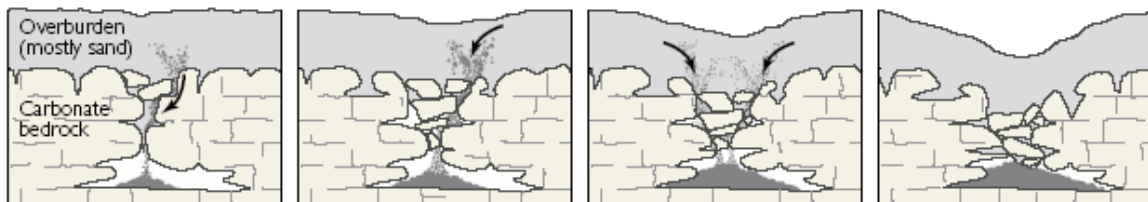
- Cover subsidence:

Granular sediments spall into secondary openings in the underlying carbonate rocks.

A column of overlying sediments settles into the vacated spaces (a process termed "piping").

Dissolution and infilling continue, forming a noticeable depression in the land surface.

The slow downward erosion eventually forms small surface depressions 1 inch to several feet in depth and diameter.



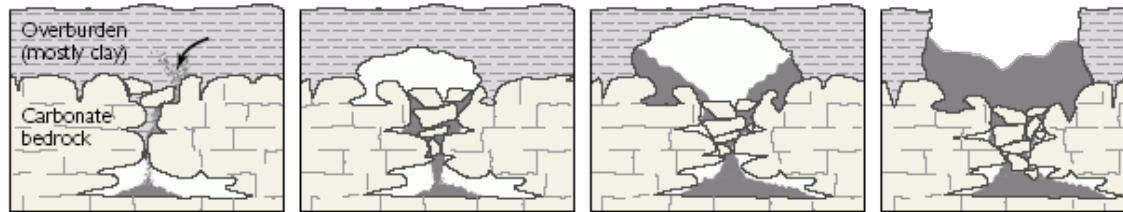
- **Cover collapse**

Sediments spill into a cavity.

As spalling continues, the cohesive covering sediments form a structural arch.

The cavity migrates upward by progressive roof collapse.

The cavity eventually breaches the ground surface, creating sudden and dramatic sinkholes.



*Source: United States Geological Survey  
<http://water.usgs.gov/edu/sinkholes.html>  
 Last Accessed on 1/1/20*

### **Locations Affected**

Sinkholes are more prevalent in north Alabama, but there are areas of susceptibility and incidence in Division C. Appendix E illustrates areas by jurisdiction with karst topography. Karst topography is a landscape characterized by numerous caves, sinkholes, fissures, and underground streams. These features occur in areas with underlying carbonate bedrock. These areas present throughout the division but are widespread in the southern portion.

Several participating Boards of Education have properties located within areas underlain by karst or pseudo karst terrain; these areas are more likely for sinkhole development. Although several facilities are in these areas it does not mean subsidence will occur. The risk is small, and the predicted extent of an occurrence would be localized. There are facilities of participating medical centers or institutions of higher education located in these areas.

### **Extent**

There is no magnitude scale for land subsidence. Subsidence can lead to changes in elevation; damage to structures such as storm drains, sanitary sewers, roads, railroads, canals, levees and bridges; structural damage to public and private buildings; and damage to wells. Due to the lack of historical data pertaining to land subsidence in Division C, the extent of these incidents in the area are estimated to be primarily isolated damages to structures and infrastructure. A summary of extent u jurisdiction is provided in Table 4.25.

### **Historical Occurrences**

There are historical occurrences of subsidence in AEMA Division C. The Geologic Survey of Alabama digitized historical topographic depression features on historical 1:24,000-scale topographic maps. The maps included in Appendix E include these occurrences. It is important to note that while most of the topographic depressions are related to sinkholes, some may also be related to mine subsidence.

### **Probability of Future Occurrences and Loss Estimation**

Based on the information presented, it is difficult to quantify any future incidence of land subsidence. Areas of potential subsidence can be identified based on knowledge of subsurface

conditions, but future occurrence is unpredictable. Land subsidence research including limited documentation of previous occurrences lead to the belief that future occurrences would have a minimal impact. The probability of these incidents is classified as low.

The risk of losses from land subsidence events, such as sinkholes, cannot be calculated based on historic records due to lack of data. Though much of the planning area has depressions noted on topographic maps or has karst terrain, information about previous incidents are limited at best with no damage estimates. Any land subsidence occurrence in the planning area would most likely be minor in impact due to the localized nature of these events.

Table 4.25 provides a summary of extent, probability, and estimated losses by jurisdiction for land subsidence.

**Table 4.25 Land Subsidence Summary for Division C**

<b>Jurisdiction</b>	<b>Extent</b>	<b>Probability of Occurrence</b>	<b>Estimated Losses</b>
Bibb County (unincorporated)	minor localized impacts to structures and infrastructure	Low	*
City of Brent	minor localized impacts to structures and infrastructure	Low	*
City of Centreville	minor localized impacts to structures and infrastructure	Low	*
Town of West Blocton	minor localized impacts to structures and infrastructure	Low	*
Town of Woodstock	minor localized impacts to structures and infrastructure	Low	*
Dallas County (unincorporated)	minor localized impacts to structures and infrastructure	Low	*
City of Selma	minor localized impacts to structures and infrastructure	Low	*
City of Valley Grande	minor localized impacts to structures and infrastructure	Low	*
Town of Orville	minor localized impacts to structures and infrastructure	Low	*
Greene County (unincorporated)	minor localized impacts to structures and infrastructure	Low	*
City of Eutaw	minor localized impacts to structures and infrastructure	Low	*
Town of Boligee	minor localized impacts to structures and infrastructure	Low	*
Town of Forkland	minor localized impacts to structures and infrastructure	Low	*
Town of Union	minor localized impacts to structures and infrastructure	Low	*

<b>Jurisdiction</b>	<b>Extent</b>	<b>Probability of Occurrence</b>	<b>Estimated Losses</b>
Hale County (unincorporated)	minor localized impacts to structures and infrastructure	Low	*
City of Greensboro	minor localized impacts to structures and infrastructure	Low	*
City of Moundville	minor localized impacts to structures and infrastructure	Low	*
Town of Akron	minor localized impacts to structures and infrastructure	Low	*
Town of Newbern	minor localized impacts to structures and infrastructure	Low	*
Marengo County (unincorporated)	minor localized impacts to structures and infrastructure	Low	*
City of Demopolis	minor localized impacts to structures and infrastructure	Low	*
City of Linden	minor localized impacts to structures and infrastructure	Low	*
Town of Dayton	minor localized impacts to structures and infrastructure	Low	*
Town of Faunsdale	minor localized impacts to structures and infrastructure	Low	*
Town of Myrtlewood	minor localized impacts to structures and infrastructure	Low	*
Town of Providence	minor localized impacts to structures and infrastructure	Low	*
Town of Sweet Water	minor localized impacts to structures and infrastructure	Low	*
Town of Thomaston	minor localized impacts to structures and infrastructure	Low	*
Perry County (unincorporated)	minor localized impacts to structures and infrastructure	Low	*
City of Marion	minor localized impacts to structures and infrastructure	Low	*
City of Uniontown	minor localized impacts to structures and infrastructure	Low	*
Pickens County (unincorporated)	minor localized impacts to structures and infrastructure	Low	*
City of Aliceville	minor localized impacts to structures and infrastructure	Low	*
Town of Ethelsville	minor localized impacts to structures and infrastructure	Low	*
Town of Carrollton	minor localized impacts to structures and infrastructure	Low	*

<b>Jurisdiction</b>	<b>Extent</b>	<b>Probability of Occurrence</b>	<b>Estimated Losses</b>
Town of Gordo	minor localized impacts to structures and infrastructure	Low	*
Town of McMullen	minor localized impacts to structures and infrastructure	Low	*
Town of Memphis	minor localized impacts to structures and infrastructure	Low	*
Town of Pickensville	minor localized impacts to structures and infrastructure	Low	*
Town of Reform	minor localized impacts to structures and infrastructure	Low	*
Sumter County (unincorporated)	minor localized impacts to structures and infrastructure	Low	*
City of Livingston	minor localized impacts to structures and infrastructure	Low	*
City of York	minor localized impacts to structures and infrastructure	Low	*
Town of Cuba	minor localized impacts to structures and infrastructure	Low	*
Town of Emelle	minor localized impacts to structures and infrastructure	Low	*
Town of Epes	minor localized impacts to structures and infrastructure	Low	*
Town of Gainsville	minor localized impacts to structures and infrastructure	Low	*
Town of Geiger	minor localized impacts to structures and infrastructure	Low	*
Tuscaloosa County (unincorporated)	minor localized impacts to structures and infrastructure	Low	*
City of Northport	minor localized impacts to structures and infrastructure	Low	*
City of Tuscaloosa	minor localized impacts to structures and infrastructure	Low	*
Town of Brookwood	minor localized impacts to structures and infrastructure	Low	*
Town of Coaling	minor localized impacts to structures and infrastructure	Low	*
Town of Coker	minor localized impacts to structures and infrastructure	Low	*
Town of Lakeview	minor localized impacts to structures and infrastructure	Low	*
Town of Vance	minor localized impacts to structures and infrastructure	Low	*

<b>Jurisdiction</b>	<b>Extent</b>	<b>Probability of Occurrence</b>	<b>Estimated Losses</b>
Wilcox County (unincorporated)	minor localized impacts to structures and infrastructure	Low	*
City of Camden	minor localized impacts to structures and infrastructure	Low	*
Town of Pine Hill	minor localized impacts to structures and infrastructure	Low	*
Town of Pine Apple	minor localized impacts to structures and infrastructure	Low	*
Town of Oak Hill	minor localized impacts to structures and infrastructure	Low	*
Town of Yellow Bluff	minor localized impacts to structures and infrastructure	Low	*
<i>* Unable to provide due to lack of data</i>			

## **WILDFIRE**

### **Background**

Wildfires are responsible for burning thousands of acres of land each year. There are two types of wildfires; these are wildland fires and urban wildland interface fires. Wildland fires are those fires that occur in areas where the only development is utilities or infrastructure. Urban-wildland fires occur in areas where development occurs near or within the vegetative cover.

### **Locations Affected**

ATRC used the Southern Wildfire Risk Assessment Summary Report for Division C to analyze the area's susceptibility to wildfires. Appendix F contains maps by county/jurisdiction illustrating the Wildland Urban Interface (WUI) Risk Index layer. The WUI Risk is a rating of the potential impact a wildfire would have on people and their homes. Urban, more densely populated areas have a higher WUI risk.

Maps illustrating potential fire intensity by jurisdiction are provided in Appendix F. The Characteristic Fire Intensity Scale (FIS) identifies areas where significant fuel hazards and associated dangerous fire behavior potential exist based on a weighted average of four percentile weather categories. FIS consist of 5 classes where the order of magnitude between classes is ten-fold. The minimum class, Class 1, represents very low wildfire intensities and the maximum class, Class 5, represents very high wildfire intensities.

No facility operated by participating Boards of Education, institutions of higher learning, and medical centers is in a high-risk area for wildfire. Most of these facilities are in more developed areas which have adequate fire protection.

### **Extent**

The magnitude of wildfire events is generally classified by the total acres burned and the amount/type of damage they cause. Wildfires can ignite and spread quickly, charring everything in their path. The destructiveness of a wildfire is dependent on many factors including weather conditions, available fuel, topography, and existing wildfire mitigation capabilities.

In AEMA Division C, wildfires are a threat to the residents' property and health. The average number of acres burned by wildfires in the region was 8.6 for a period between 2000 and 2019. The area has been fortunate to not have any major wildfires in recent history. As population and development increases in high growth areas, such as Tuscaloosa and Northport, the wildland urban interface should be closely monitored for potential effects. Table 4.26 provides extent by jurisdiction for wildfires in Division C.

**Table 4.26 Wildfire Extent by Jurisdiction Division C**

<b>Jurisdiction</b>	<b>Extent</b>
Bibb County (unincorporated)	Property and timber damage over a large area acreage (50+)
City of Brent	Property and timber damage over a small acreage (5+)
City of Centreville	Property and timber damage over a small acreage (5+)
Town of West Blocton	Property and timber damage over a small acreage (5+)
Town of Woodstock	Property and timber damage over a small acreage (5+)
Dallas County (unincorporated)	Property and timber damage over a large area acreage (50+)
City of Selma	Property and timber damage over a small acreage (5+)
City of Valley Grande	Property and timber damage over a small acreage (5+)
Town of Orville	Property and timber damage over a small acreage (5+)
Greene County (unincorporated)	Property and timber damage over a large area acreage (50+)
City of Eutaw	Property and timber damage over a small acreage (5+)
Town of Boligee	Property and timber damage over a small acreage (5+)
Town of Forkland	Property and timber damage over a small acreage (5+)
Town of Union	Property and timber damage over a small acreage (5+)
Hale County (unincorporated)	Property and timber damage over a large area acreage (50+)
City of Greensboro	Property and timber damage over a small acreage (5+)
City of Moundville	Property and timber damage over a small acreage (5+)
Town of Akron	Property and timber damage over a small acreage (5+)
Town of Newbern	Property and timber damage over a small acreage (5+)
Marengo County (unincorporated)	Property and timber damage over a large area acreage (50+)
City of Demopolis	Property and timber damage over a small acreage (5+)
City of Linden	Property and timber damage over a small acreage (5+)
Town of Dayton	Property and timber damage over a small acreage (5+)
Town of Faunsdale	Property and timber damage over a small acreage (5+)
Town of Myrtlewood	Property and timber damage over a small acreage (5+)
Town of Providence	Property and timber damage over a small acreage (5+)
Town of Sweet Water	Property and timber damage over a small acreage (5+)
Town of Thomaston	Property and timber damage over a small acreage (5+)
Perry County (unincorporated)	Property and timber damage over a large area acreage (50+)
City of Marion	Property and timber damage over a small acreage (5+)
City of Uniontown	Property and timber damage over a small acreage (5+)
Pickens County (unincorporated)	Property and timber damage over a large area acreage (50+)
City of Aliceville	Property and timber damage over a small acreage (5+)



<b>Jurisdiction</b>	<b>Extent</b>
Town of Ethelsville	Property and timber damage over a small acreage (5+)
Town of Carrollton	Property and timber damage over a small acreage (5+)
Town of Gordo	Property and timber damage over a small acreage (5+)
Town of McMullen	Property and timber damage over a small acreage (5+)
Town of Memphis	Property and timber damage over a small acreage (5+)
Town of Pickensville	Property and timber damage over a small acreage (5+)
Town of Reform	Property and timber damage over a small acreage (5+)
Sumter County (unincorporated)	Property and timber damage over a large area acreage (100+)
City of Livingston	Property and timber damage over a small acreage (5+)
City of York	Property and timber damage over a small acreage (5+)
Town of Cuba	Property and timber damage over a small acreage (5+)
Town of Emelle	Property and timber damage over a small acreage (5+)
Town of Epes	Property and timber damage over a small acreage (5+)
Town of Gainsville	Property and timber damage over a small acreage (5+)
Town of Geiger	Property and timber damage over a small acreage (5+)
Tuscaloosa County (unincorporated)	Property and timber damage over a large area acreage (50+)
City of Northport	Property and timber damage over a small acreage (5+)
City of Tuscaloosa	Property and timber damage over a small acreage (5+)
Town of Brookwood	Property and timber damage over a small acreage (5+)
Town of Coaling	Property and timber damage over a small acreage (5+)
Town of Coker	Property and timber damage over a small acreage (5+)
Town of Lakeview	Property and timber damage over a small acreage (5+)
Town of Vance	Property and timber damage over a small acreage (5+)
Wilcox County (unincorporated)	Property and timber damage over a large area acreage (50+)
City of Camden	Property and timber damage over a small acreage (5+)
Town of Pine Hill	Property and timber damage over a small acreage (5+)
Town of Pine Apple	Property and timber damage over a small acreage (5+)
Town of Oak Hill	Property and timber damage over a small acreage (5+)
Town of Yellow Bluff	Property and timber damage over a small acreage (5+)

### **Historical Occurrences**

AEMA Division C has not had any major wildfires recorded in recent history. Throughout the planning region, “controlled burns” through land management are performed, this practice often aids in the prevention/limits the impact of wildfires throughout the area. Rivers, streams, cultivated fields, wide roadways all serve as natural and manmade firebreaks.

The majority of the planning area has low to medium historical occurrences according to data provided by the Alabama Forestry Commission. In AEMA Division C, the counties of Dallas,

Perry and Wilcox, located in the southern part of the region, have each recorded over 400 fire occurrences between January 2000 and November 2019. Tuscaloosa County reports over 500 occurrences, with a little over 5,000 total acres burned in the specified time period. These counties have a Moderate to High Risk of Wildfires. The remaining counties in the planning region are classified as having a Low to Medium risk. Table 4.27 provides the number of fires and acres burned, per county.

**Table 4.27 Wildfire Summary for AEMA Division C**

<b>Number of Wildfire Occurrences Between January 2000 and November 2019</b>		
<b>County</b>	<b>Number of Fires</b>	<b>Acres Burned</b>
Bibb	326	3,480.40
Dallas	410	2,693.00
Greene	244	2,041.88
Hale	312	1,250.55
Marengo	323	2,834.36
Perry	491	3,594.54
Pickens	217	1,993.25
Sumter	121	2,461.75
Tuscaloosa	542	5,063.60
Wilcox	444	4,194.55
<b>Totals</b>	<b>3,430</b>	<b>29,607.88</b>

*Source: Alabama Forestry Commission (2019)*

**Probability of Future Occurrence and Loss Estimation**

The Southern Wildfire Risk Assessment Summary Report classifies most of the planning area as having a low to moderate burn probability. Multiple isolated wildfires occur each year in the planning area, the majority of these have been minor in nature and have not greatly impacted the planning area.

Appendix F contains maps illustrating the burn probability of participating jurisdictions. The burn probability of an area is the probability of an area burning given current landscape conditions, percentile weather, historical ignition patterns and historical fire prevention and suppression efforts. Burn probability is intended to support an actuarial approach to quantitative wildfire risk analysis, not depict fire return intervals or routes of travel. It is measured on a scale from 1-10, with 1 being the lowest probability and 10 being the highest. In Division C, there are no land areas classified as having a risk higher than a 6.

## **WINTERSTORMS**

### **Background**

Winter storms can encompass any of the following:

- **Blizzard:** Winds of 35 mph or more with snow and blowing snow reducing visibility to less than ¼ mile for 3 hours or more.
- **Blowing snow:** Wind-driven snow that reduces visibility. Blowing snow may be falling snow and/or snow on the ground picked up by the wind.
- **Snow squalls:** Brief, intense snow showers accompanied by strong, gusty winds. Accumulation may be significant.
- **Snow showers:** Snow falling at varying intensities for brief periods of time. Some accumulation is possible.
- **Snow flurries:** Light snow falling for short durations with little or no accumulation.
- **Freezing rain:** Frozen precipitation melts in warm air, as rain falls and freezes on cold surfaces as a sheet of ice.
- **Sleet:** Frozen precipitation melts and refreezes into sleet before hitting ground

The National Weather Service monitors winter weather conditions and may issue the following type of alerts:

- **Winter Storm Outlook -** Winter storm conditions are possible in the next 2 to 5 days.
- **Winter Weather Advisory -** Winter weather conditions are expected to cause significant inconveniences and may be hazardous. When caution is used, these situations should not be life threatening.
- **Winter Storm Watch -** Winter storm conditions are possible within the next 36 to 48 hours. People in a watch area should review their winter storm plans and stay informed about weather conditions.
- **Winter Storm Warning -** Life-threatening, severe winter conditions have begun or will begin within 24 hours. People in a warning area should take precautions immediately.

### **Locations Affected**

Winter storms are a rare occurrence in AEMA Division C, but when they do occur, they have a significant impact. Local governments have improved their response to winter storm events with pretreatments and clearing operations, but must address the road network need based on priorities. Local drivers are not accustomed to driving in adverse conditions and automobile accidents are common occurrences. Ice and snow weigh down limbs and power lines causing them to break under pressure, resulting in power failure and property damage. During extended times of power failure, most residents and businesses are not equipped with backup generators. The impacts of these storms are generally the result of the infrequency of their occurrence. All residents of the planning area are vulnerable to severe winter storms because these storms have no defined track.

### **Extent**

The planning area experiences winter weather infrequently. The few winter storms documented in the area have caused a few inches of ice and/or snow. Most local governments and private citizens are unprepared when they do occur. Snow can immobilize the area, stranding

commuters and disrupting emergency and medical services. Snow and ice can lead to downed trees and power lines. Ice can disrupt communications and power for days while utility companies repair the damage. Even small accumulations of ice and snow are extremely dangerous to motorists and pedestrians. Bridges and overpasses are particularly dangerous because they freeze before other surfaces. Normally during a winter storm most non-essential businesses close for a few days until the weather improves, which results in economic losses.

### **Historical Occurrences**

The “Blizzard of 1993” was a significant winter weather event in west-central Alabama. There were minor winter weather events over portions of the planning area in 2002 and 2010. Most recently, in January 2014, a system moved through that caused a layer of one to two inches of mixed precipitation (mostly ice) to freeze on roads throughout the region. This system caused most normal operations to shut down for at least two days and caused some property damage due to falling trees and frozen pipes in the region.

### **Probability of Future Events**

Winter storms in west-central Alabama are infrequent and generally short-term events; therefore, they have a low probability of causing major damage in Division C.

### 4.3 Vulnerability Summary by Jurisdiction

#### Vulnerability Overview

It should be noted that this version of the Regional Hazard Mitigation Plan was unable to use FEMA’s HAZUS-MH software to assist in the vulnerability assessment. The next revision of the Plan will be able to have scenarios developed using HAZUS to assist in estimating damage and financial losses for prioritized hazards.

This section presents a qualitative assessment of the risk and potential impact of each identified hazard. Assigned risk levels were determined based on the hazard profiles developed earlier in this section. The classifications generated from this table assists in the prioritization of hazard risk through objectively looking at the possible scope of the studied hazards. In order to quantify the risk classifications, varying degrees of risk factors (probability, impact, location extent, warning time, and duration) were assigned a value of “1” to “4” and weighted in order to create a total value with a maximum score of 4.0.

**Table 4.28 Risk Index for Regional Hazards**

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

Table 4.29 assigns a qualitative risk impact assessment for each hazard, based from the hazard profiles created in this section and other input from plan stakeholders. The results were used in calculating the values for each hazard in order to prioritize the regional impacts of identified hazards in this plan. It should be noted that this assessment is just a categorization of most likely factors for each hazard.

**Table 4.29 Summary of Regional Hazard Risk Impact**

Hazard	Degree of Risk					
	Probability	Impact	Location Extent	Warning Time	Duration	Weighted Score
<b>Dam Failure</b>	Very Low	Critical	Small	6-12 hours	Less than 24 hours	2.1
<b>Drought/ Extreme Heat</b>	Medium	Minor	Small	More than 24 hours	More than one week	2.1
<b>Flooding</b>	High	Critical	Moderate	6-12 hours	Less than one week	3.3
<b>High Winds- Hurricanes</b>	Low	Critical	Large	More than 24 hours	Less than 24 hours	2.6
<b>High Winds- Tornadoes</b>	High	Critical	Small	Less than 6 hours	Less than 6 hours	3.0
<b>High Winds- Severe Thunderstorms</b>	Medium	Minor	Moderate	Less than 6 hours	Less than 6 hours	2.6
<b>Landslides</b>	Low	Minor	Negligible	Less than 6 hours	Less than 6 hours	1.6
<b>Land Subsidence/ Sinkholes</b>	Low	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
<b>Wildfire</b>	High	Minor	Small	Less than 6 hours	Less than one week	2.3
<b>Winter Storms</b>	Low	Limited	Large	More than 24 hours	Less than one week	2.4

Based from the results of the hazard assessment summary, the highest priority hazards for the planning area are Flooding (3.3 Score), High Winds-Tornadoes (3.0 Score), and High Winds-Severe Storms/Hurricanes (2.6 Score).

Jurisdictions in the division share similar vulnerabilities with respect to natural hazards. A discussion of these vulnerabilities are discussed below:

**Bibb County**

- Over twenty-percent of the population is over the age of 62 in two of the five jurisdictions. Vulnerability to hazards is higher for those with increased health risks due to aging.
- Lower income individuals are also classified as having higher vulnerability due to lack of resources to prepare and to recover from disasters. Brent is the only jurisdiction with a population living below the poverty level that exceeds 20 percent.
- Over half the housing in Bibb County is over 35 years old and includes many mobile homes (see table 2.4). Mobile homes represent over 20% of the housing stock in three of the five jurisdictions; increasing these individual’s vulnerability to the effects of all

hazards. Brent is the only jurisdiction with a Housing Authority; these residents are low income and have increased vulnerability to natural hazards.

- Group quarters in Bibb County have higher population density and higher vulnerability to hazards such as High Wind Events (Hurricanes, Tornadoes, Severe Thunderstorms) and Wildfires. Group quarters in the county include the county jail and Bibb Medical Center Nursing Home in Centreville.
- The county has many areas vulnerable to flooding and flash flooding. Floodplain areas are present throughout the county, but primarily affect parts of Brent and Centreville (refer to Figure 4.4). All of the jurisdictions participate in the NFIP; but only the county has a Floodplain Manager. In addition to NFIP vulnerabilities, the municipalities all have sanitary sewer facilities that, to varying degrees, require improvements to address inflow and infiltration issues during periods of heavy rain or flooding. Flash flooding vulnerability exists in limited areas throughout the county that are prone to flooding due to a lack of drainage facilities or inadequate infrastructure.
- The timber industry provides employment for a large number of workers in Bibb County. Strong winds (Hurricanes, Tornadoes, Severe Thunderstorms) and wildfires are two hazards for which the county has an increased vulnerability. Should one of these events occur and damage the county's timber stock, the local economy would be significantly affected. Manufacturing is increasing at the Scott G. Davis Industrial Park; the new Mercedes Global Logistics Center is expected to employ over 600 by 2022. This park represents a concentration of the majority of manufacturing jobs in the county, and would be economically crippling if lost to a natural disaster.
- The need for backup power generation at critical facilities is still considerable in nearly all jurisdictions. This deficit increases vulnerability to all hazards across the entire county.
- All the jurisdictions have funding challenges. The lack of dedicated funds for mitigation projects significantly increases their vulnerability to all hazards.

### **Dallas County**

- With respect to vulnerable populations, the Town of Orrville has over forty percent of its populations being over the age of 62. Older individuals are generally accepted to have higher vulnerability to hazards due to lessened physical and often mental capacity. Additionally, lower income individuals are classified as having higher vulnerability due lack of resources to prepare and to recover from disasters. In Selma, forty-one percent of residents are living below the poverty line and in Orrville this percentage is just over thirty-five.
- Housing stock in the City of Valley Grande consists of a significant percentage of mobile homes (25.8%). These homes makes individuals more vulnerable to the effects of all hazards. Also in unincorporated areas there are large percentages of mobile homes, particularly in the west-central part of the county.
- There is a significant amount of high density, low income housing units in the City of Selma. These units are managed by the Selma Housing Authority. These residents are low income and have increased vulnerability to natural hazards.
- In Dallas County there are a number of group quarters, these facilities have higher population density which makes them more vulnerable to hazards. Specifically these locations are more vulnerable to High Wind Events (Hurricanes, Tornadoes, Severe Thunderstorms) and Wildfires. Group quarters in the county include the following, all of

which are located in Selma: Dallas County Jail, two nursing homes, and four assisted living facilities. Vaughn Regional Medical Center is located in Selma also, it is a 175 bed hospital.

- A number of factors influence jurisdiction's vulnerability to flooding and flash flooding. There are floodplain areas located throughout the county (refer to Figure 4.5). All jurisdictions in the county participate in the NFIP but none have a certified floodplain manager. The City of Selma house multiple homes affected by flooding in Ward 8. Flash flooding vulnerability is influenced by multiple areas throughout the county that flood due to nonexistent, undersized, or deteriorated drainage infrastructure.
- The county is reliant upon a number of major employers. If an event were to occur that damaged any of these facilities it would cripple the economy. Strong winds (Hurricanes, Tornadoes, Severe Thunderstorms) and wildfires are two hazards for which the county has an increased vulnerability. These facilities include: International Paper, Seoyon E-Hwa Interior Systems Alabama, Plantation Patterns, Honda Lock America, and Bush Hog.
- Although many critical facilities have backup power generation in the county, there are still a significant number in need of this capability. The lack of this capability increases vulnerability to all hazards.
- The jurisdictions and the county have limited to no funding to support mitigation efforts. This lack of funding to dedicate to mitigation projects influences its' vulnerability to all hazards.

### **Greene County**

- The percent of the population over age 62 in the county exceeds twenty-five percent. This is also the case in three of the 4 municipal jurisdictions; the city of Eutaw has the highest rate at 40 percent. These individuals have a higher vulnerability to hazards due to the natural decline in overall health that occurs with advanced age.
- Lower income individuals are also classified as having higher vulnerability due to lack of resources to prepare and to recover from disasters. County-wide the population living below the poverty level is 38.7%; three of the four municipal jurisdictions have a rate over 20%, with the poverty rate in Boligee being the highest at 70.5%.
- Housing stock in the county consists of a high number of mobile homes and older homes (see table 2.4). Mobile homes exceed 35% of the housing stock in three jurisdictions. Forkland has the highest rate at 60.2%. These individuals are far more vulnerable to the effects of all hazards. Two Housing Authorities are present in Eutaw; these residents are low income and more vulnerable.
- Group quarters present in Greene County have higher population density and higher vulnerability to hazards such as High Wind Events (Hurricanes, Tornadoes, Severe Thunderstorms) and Wildfires. Group quarters in the county include the county jail and one nursing home, Greene County Residential Care in Eutaw.
- Due to its borders being the Tombigbee and Black Warrior rivers, the unincorporated county has many areas vulnerable to flooding and flash flooding. There are floodplain areas located throughout the county; the four jurisdictions are, however, positioned primarily outside of the flood hazard areas (refer to Figure 4.6). Three of the jurisdictions do not currently participate in the NFIP; and only the county has a Floodplain Manager. In addition to NFIP vulnerabilities, Eutaw and Boligee operate WWTP facilities. The City of Eutaw's system is the oldest and needs upgrades to



eliminate inflow and infiltration problems that occur during heavy rain and flooding events. Flash flooding vulnerability exists in most areas throughout the county that are prone to flooding due to a lack of drainage facilities or inadequate infrastructure. Areas along the river that have vacation homes and fish camps are especially vulnerable.

- The electronic bingo facilities collectively employ the highest number of workers in Greene County. Protecting these facilities and another large employer, Love's Travel Stop, located near Interstate I/20/59 is important to the economic health of the entire county. Other large employers, such as the hospital, school system and two large industries are concentrated in the City of Eutaw, the county seat.
- The need for backup power generation at critical facilities remains high in nearly all jurisdictions. This deficit increases vulnerability to all hazards across the entire county.
- Inability to fund mitigation efforts is prevalent in all the jurisdictions of this Black Belt county, considered one of the poorest in the state. The lack of dedicated funds for mitigation projects, or even the ability to provide matching funds for grants, renders the county and its jurisdictions highly vulnerable to all hazards.

### **Hale County**

- Over twenty-percent of the population is over the age of 62 in three of the five jurisdictions. Vulnerability to hazards is higher for older populations likely to be experiencing a decline in overall health.
- Lower income individuals are also classified as having higher vulnerability due to lack of resources to prepare and to recover from disasters. Three jurisdictions have over 30% of their population living below the poverty level.
- Nearly half of the housing stock in the county is over 35 years old and many mobile homes are present (see table 2.4). Mobile homes exceed 35% of the housing stock in the county overall; and, in two jurisdictions the rate exceeds 44%. These individuals are far more vulnerable to the effects of all hazards. One Housing Authority is present in the City of Greensboro; these residents are low income and more vulnerable to hazards.
- Group quarters present in Hale County have higher population density and higher vulnerability to hazards such as High Wind Events (Hurricanes, Tornadoes, Severe Thunderstorms) and Wildfires. Group quarters in the county include the county jail and two nursing homes; Colonial Haven in Greensboro and Moundville Health and Rehabilitation Center.
- The county, due to its western border being the Black Warrior River, is vulnerable to flooding and flash flooding in many areas. Floodplain areas are prevalent within the county and affect the majority of the jurisdictions (refer to Figure 4.7). Two of the jurisdictions do not participate in the NFIP; and, only the county has a Floodplain Manager. In addition to NFIP vulnerabilities, Akron, Greensboro and Moundville operate WWTP facilities; upgrades have been made to these systems but work is still needed. Drainage facilities are either not present, limited, or inadequate in most all areas of the county. Vulnerability to flash flooding exists in most areas throughout the county that are prone to flooding due to insufficient infrastructure. Areas along the river that have vacation homes and fish camps are especially vulnerable.
- The timber industry is a major employer in Hale County. Strong winds (Hurricanes, Tornadoes, Severe Thunderstorms) and wildfires are two hazards for which the county has an increased vulnerability. The local economy would be significantly affected if one of these events damaged the county's timber stock.

- Critical facilities in all jurisdictions continue to have a need for backup power generation. Vulnerability to all hazards will remain high across the entire county until this is addressed.
- The lack of dedicated funds for mitigation projects significantly increases the county's vulnerability to all hazards. Lack of funding to support mitigation efforts is prevalent in nearly all the jurisdictions, especially the smallest towns such as Akron and Newbern that have few sources of revenue.

### **Marengo County**

- With respect to vulnerable populations, Dayton, Faunsdale, Linden, Myrtlewood, and Providence all have over 20 % of their populations being over the age of 62. Older individuals are generally accepted to have higher vulnerability to hazards due to lessened physical and often mental capacity. Additionally, lower income individuals are classified as having higher vulnerability due lack of resources to prepare and to recover from disasters. In both Dayton and Linden, 25% of the population live below the poverty line.
- Housing stock in Dayton, Faunsdale, Myrtlewood, Providence, and Thomaston consists of a significant percentage of mobile homes (>25%). These homes makes individuals more vulnerable to the effects of all hazards. Also in unincorporated areas there are large percentages of mobile homes.
- Both the City of Demopolis and City of Linden have housing authorities that provide housing to low income households. In Demopolis there are high concentrations of low income housing units in the eastern area of the city. In Linden there are a large number for low income limits in the MLK area of the city.
- In Marengo County there are a number of group quarters, these facilities have higher population density which makes them more vulnerable to hazards. Specifically these locations are more vulnerable to High Wind Events (Hurricanes, Tornadoes, Severe Thunderstorms) and Wildfires. Group quarters in the county include the following: Marengo County Jail (Linden), Linden Nursing Home, Woodhaven Manor Nursing Home (Demopolis) and two assisted living facilities. Whitfield Regional Hospital is located in Demopolis, it is a 99 bed hospital.
- A number of factors influence jurisdiction's vulnerability to flooding and flash flooding. There are floodplain areas located throughout the county (refer to Figure 4.8). Dayton, Myrtlewood, and Sweetwater are not NFIP participants. Faunsdale is unmapped by the NFIP. All remaining jurisdictions are NFIP participants but none have a certified floodplain manager. Flash flooding vulnerability is influenced by multiple areas throughout the county that flood due to nonexistent, undersized, or deteriorated drainage infrastructure.
- The county is reliant upon a number of major employers, many of them timber related. If an event were to occur that damaged any of these facilities it would cripple the economy. Also damage to the county and surrounding area's timber stock would adversely affect the economy. Strong winds (Hurricanes, Tornadoes, Severe Thunderstorms) and wildfires are two hazards for which the county has an increased vulnerability. These facilities include: WestRock, Linden Lumber, Two Rivers Lumber, and Foster Farms.
- Although many critical facilities have backup power generation in the county, there are still a significant number in need of this capability. The lack of this capability increases vulnerability to all hazards.

- The jurisdictions and the county have limited to no funding to support mitigation efforts. This lack of funding to dedicate to mitigation projects influences its' vulnerability to all hazards.

### **Perry County**

- With respect to vulnerable populations, all three jurisdictions have over twenty-percent of their populations being over the age of 62. Older individuals are generally accepted to have higher vulnerability to hazards due to lessened physical and often mental capacity. Additionally, lower income individuals are classified as having higher vulnerability due lack of resources to prepare and to recover from disasters. All three jurisdictions have roughly half of their population living below the poverty line, these percentages makes Perry County one of the poorest counties in the state.
- Housing stock in the county consists of a significant number of mobile homes in all jurisdictions. These homes makes individuals more vulnerable to the effects of all hazards.
- In Perry County there are a number of group quarters, these facilities have higher population density which makes them more vulnerable to hazards. Specifically these locations are more vulnerable to High Wind Events (Hurricanes, Tornadoes, Severe Thunderstorms) and Wildfires. Group quarters in the county include the following, all of which are located in Marion: Perry County Jail, Southland Nursing Home, Perry County Nursing Home, Marion Military Institute dormitories, and Judson College dormitories.
- A number of factors influence jurisdiction's vulnerability to flooding and flash flooding. There are floodplain areas located throughout the county (refer to Figure 4.9). At this time the City of Marion is the only jurisdiction participating in the NFIP, both Uniontown and the county are sanctioned communities. In Marion, there is no certified floodplain manager. In addition to NFIP vulnerabilities, both Marion and Uniontown's WWTPs are older facilities that are easily overloaded during periods of rainfall leading to wastewater overflows. These conditions are exacerbated by sewer lines in need of rehabilitation that result in significant inflow and infiltration into the systems. Flash flooding vulnerability is influenced by multiple areas throughout the county that flood due to nonexistent, undersized, or deteriorated drainage infrastructure.
- The county is reliant upon the timber industry. If an event occurred that damaged the county's timber stock, it would cripple the economy. Strong winds (Hurricanes, Tornadoes, Severe Thunderstorms) and wildfires are two hazards for which the county has an increased vulnerability. In addition, the City of Uniontown is dependent upon Harvest Select, a catfish processing plant, for employment for the community. The loss of this facility to a natural hazard would devastate the city's economy.
- Although many critical facilities have backup power generation in the county, there are still a significant number in need of this capability. The lack of this capability increases vulnerability to all hazards.
- The jurisdictions in the county have limited to no funding to support mitigation efforts. This lack of funding to dedicate to mitigation projects influences its' vulnerability to all hazards.

### **Pickens County**

- Over twenty-percent of the population is over the age of 62 in five of the nine jurisdictions. These individuals have higher vulnerability to hazards due to a possible decline in physical and mental capacities.

- Lower income individuals are also classified as having higher vulnerability due to lack of resources to prepare and to recover from disasters. Six jurisdictions have over 35% of their population living below the poverty level.
- Just under half of the housing stock in the county consists of older homes and includes a modest number of mobile homes (see table 2.4). Mobile homes exceed 35% of the housing stock in two jurisdictions. These individuals are far more vulnerable to the effects of all hazards. Housing Authorities are present in Aliceville, Gordo and Reform; these residents are low income and more vulnerable to hazards.
- Group quarters present in Pickens County have higher population density and higher vulnerability to hazards such as High Wind Events (Hurricanes, Tornadoes, Severe Thunderstorms) and Wildfires. Group quarters in the county include FCI Aliceville (federal women’s prison); the county jail, and two nursing home facilities; Aliceville Manor and Arbor Woods Health and Rehab in Reform.
- The county has many areas vulnerable to flooding and flash flooding. There are floodplain areas located throughout the county that affect nearly every jurisdiction (refer to Figure 4.10). All but three of the jurisdictions participate in the NFIP; but only the county and one municipality have a Floodplain Manager. In addition to NFIP vulnerabilities, Aliceville, Carrollton, Gordo and Reform have aged WWTP facilities or collections systems that need upgrades to eliminate inflow and infiltration problems that occur during heavy rain and flooding events. Flash flooding vulnerability exists in most areas throughout the county that are prone to flooding due to a lack of drainage facilities or inadequate infrastructure. Areas along the Tombigbee river that have vacation homes and year-round residents are most vulnerable, especially the Rivermont area in Pickensville.
- The timber industry provides employment for a large number of workers in Pickens County. Strong winds (Hurricanes, Tornadoes, Severe Thunderstorms) and wildfires are two hazards for which the county has an increased vulnerability. Should one of these events occur and damage the county’s timber stock, the local economy would be significantly affected. FCI Aliceville is the largest single employer in the county. Protecting these jobs from losses due to natural hazards is even more important now that the Pickens County Medical Center has closed; it had been one of the top 5 employers in the county.
- The need for backup power generation at critical facilities is still considerable in nearly all jurisdictions. This deficit increases vulnerability to all hazards across the entire county.
- Lack of funding to support mitigation efforts is prevalent in nearly all the jurisdictions, especially the smallest towns that have few sources of revenue such as Ethelseville, Memphis and McMullen. The lack of dedicated funds for mitigation projects significantly increases their vulnerability to all hazards.

### **Sumter County**

- With respect to vulnerable populations, all three jurisdictions have over twenty-percent of their populations being over the age of 62. Older individuals are generally accepted to have higher vulnerability to hazards due to lessened physical and often mental capacity. Over 30% of Cuba’s population is over 62 years old. Over 20% of both Emelle and Geiger’s populations are over 62 years old. Additionally, lower income individuals are classified as having higher vulnerability due lack of resources to prepare and to recover

from disasters. Three jurisdictions in the county have over one third of their populations living below the poverty line: Gainesville (46.6%), Livingston (42.3%), and York (36.2%).

- A high percentage of housing stock is mobile homes in Emelle (38%), Epes (28%), Gainesville (67%), and Geiger (58%). These homes makes individuals more vulnerable to the effects of all hazards.
- In Sumter County there are a number of group quarters, these facilities have higher population density which makes them more vulnerable to hazards. Specifically these locations are more vulnerable to High Wind Events (Hurricanes, Tornadoes, Severe Thunderstorms) and Wildfires. Group quarters in the county include the following: Sumter County Jail (Livingston), Sumter Health and Rehabilitation (York) and University of West Alabama dormitories (Livingston).
- Regarding dam failure, both Livingston and York have vulnerable areas. In Livingston, there are apartments in proximity to the Lake LU dam which are at risk in the event of dam failure. In York, there are approximately 50-60 residences vulnerable to the dam failure for the dam on Toomsuba Creek.
- In Sumter County, the Waste Management- Emelle Hazardous Waste Facility poses a vulnerability to the surrounding area due to the presence of hazardous materials.
- A number of factors influence jurisdiction's vulnerability to flooding and flash flooding. There are floodplain areas located throughout the county (refer to Figure 4. 11). At this time all jurisdictions with the exceptions of Gainesville (sanctioned) and Emelle (unmapped) participate in the NFIP. No jurisdiction has a certified floodplain manager. Flash flooding vulnerability is influenced by multiple areas throughout the county that flood due to nonexistent, undersized, or deteriorated drainage infrastructure.
- The county is reliant upon the timber industry. If an event occurred that damaged the county's timber stock, it would cripple the economy. Strong winds (Hurricanes, Tornadoes, Severe Thunderstorms) and wildfires are two hazards for which the county has an increased vulnerability.
- Although many critical facilities have backup power generation in the county, there are still a significant number in need of this capability. The lack of this capability increases vulnerability to all hazards.
- The jurisdictions in the county have limited to no funding to support mitigation efforts. This lack of funding to dedicate to mitigation projects influences its' vulnerability to all hazards.

### **Tuscaloosa County**

- Lower income individuals are more vulnerable to hazard events due to lack of resources to prepare and to recover from disasters. The City of Tuscaloosa has the highest rate (24.2%) of their population living below the poverty level within the county.
- The housing stock in Tuscaloosa County does not reflect a high percentage of mobile homes; however, in actual number, it significantly exceeds the other counties. Mobile homes are located primarily in the unincorporated areas and the towns of Brookwood and Coaling. The overall age of housing in Tuscaloosa County is also higher than other counties in Division C (see table 2.4). These residents are far more vulnerable to the effects of all hazards. Housing Authorities are present in Tuscaloosa and Northport; these residents are low income and more vulnerable. In addition, the City of Tuscaloosa has a

significant number of large, population-dense, apartment complexes. These high concentrations of multi-unit residential structures present an inherent vulnerability.

- Group quarters present in Tuscaloosa County also have higher population density and higher vulnerability to hazards such as High Wind Events (Hurricanes, Tornadoes, Severe Thunderstorms) and Wildfires. Group quarters in the county include the University of Alabama and Stillman College dormitories; the county jail; Taylor-Hardin Secure Medical Facility; Tuscaloosa Juvenile Detention Center; the Tuscaloosa Veteran's Hospital; Bryce Hospital; and six long-term care facilities in Northport and one in Tuscaloosa.
- The county has many areas, particularly along the Black Warrior River, vulnerable to flooding and flash flooding (refer to Figure 4.12). The county's two largest municipalities, Northport and Tuscaloosa, are located directly along the river. The City of Moundville, partially located in Tuscaloosa County, is also on the river. All of the jurisdictions participate in the NFIP; but only the County and the cities of Northport and Tuscaloosa have a Floodplain Manager. Flash flooding vulnerability exists in most areas throughout the county that are prone to flooding due to a lack of drainage facilities or inadequate infrastructure. The City of Tuscaloosa has areas prone to flash flooding that require upgrades to stormwater infrastructure.
- The University of Alabama, Mercedes Benz and its suppliers, and DCH Regional Medical Center are the biggest employers in the county. These, and many other manufacturers and additional educational institutions, serve to provide employment for surrounding counties as well as local residents and are vital to the welfare of the region. The University and DCH were just barely missed in the 2011 tornado path, revealing that the impact could have been even more devastating.
- The availability of backup power generation at critical facilities is still needed in many of the smaller jurisdictions. Until fully addressed, vulnerability to all hazards will remain high in these jurisdictions.
- The lack of dedicated funds for mitigation projects is an issue for most of the smaller jurisdictions and increases their vulnerability to all hazards.

#### **Wilcox County**

- With respect to vulnerable populations all jurisdictions have over twenty-percent of their populations being over the age of 62, except Pine Hill. Older individuals are generally accepted to have higher vulnerability to hazards due to lessened physical and often mental capacity. Additionally, lower income individuals are classified as having higher vulnerability due to lack of resources to prepare and to recover from disasters. All jurisdictions have at least 20% of their population living below the poverty line.
- A high percentage of housing stock is mobile homes in Oak Hill (70%) and Yellow Bluff (69%). These homes make individuals more vulnerable to the effects of all hazards.
- In Wilcox County there are a number of group quarters, these facilities have higher population density which makes them more vulnerable to hazards. Specifically these locations are more vulnerable to High Wind Events (Hurricanes, Tornadoes, Severe Thunderstorms) and Wildfires. Group quarters in the county include the Wilcox County Jail and the Camden Nursing Facility.
- A number of factors influence jurisdiction's vulnerability to flooding and flash flooding. There are floodplain areas located throughout the county (refer to Figure 4.13). All jurisdictions with the exception of Oak Hill and Pine Apple participate in the NFIP. Both

Oak Hill and Pine Apple are unmapped. No jurisdiction has a certified floodplain manager. Flash flooding vulnerability is influenced by multiple areas throughout the county that flood due to nonexistent, undersized, or deteriorated drainage infrastructure.

- The county is reliant upon the timber industry. If an event occurred that damaged the county's timber stock, it would cripple the economy. Strong winds (Hurricanes, Tornadoes, Severe Thunderstorms) and wildfires are two hazards for which the county has an increased vulnerability. The county's largest employer is International Paper in Pine Hill.
- Although many critical facilities have backup power generation in the county, there are still a significant number in need of this capability. The lack of this capability increases vulnerability to all hazards.
- The jurisdictions in the county have limited to no funding to support mitigation efforts. This lack of funding to dedicate to mitigation projects influences its' vulnerability to all hazards.

### **Vulnerability and Changes in Development**

Overall, the population in the majority of Division C counties has been declining for many years. These are primarily rural counties with limited manufacturing and sluggish commercial activity. There have been some bright spots with some small local businesses opening; however, many have downtowns with a high percentage of vacant store fronts; and, struggling schools and hospitals. The Pickens County Medical Center, a major employer in Pickens County, closed March 6, 2020 during the preparation of this plan. The hospital had participated in the planning process and was included as a lead agency for select actions in the Carrollton Mitigation Action Plan. These references have been removed in the finalized action plan as the hospital will no longer be able to adopt the plan. If, at a later date, the hospital re-opens, the plan will be updated to reflect this change in status. The closure of the hospital affects the vulnerability of the area the hospital served. Without a hospital those injured in the event of a hazard event would have to be transported to other hospitals in the area, which may in turn overload those facilities.

The majority of development in Division C is occurring in Tuscaloosa and Bibb counties. The City of Tuscaloosa, historically the area's most populous jurisdiction, has continued to grow due to a high level of enrollment at the University of Alabama which, in turn, has fueled a significant increase in the construction of large apartment complexes and numerous hotels to support sports tourism. Rebuilding of commercial areas after the 2011 tornado and a strong manufacturing presence from Mercedes-Benz U.S. International (MBUSI) and its suppliers has also contributed significantly to the surge of development in the City of Tuscaloosa as well as the City of Northport, particularly along the Highway 82 commercial corridor, and the surrounding county. The economy has been so robust that neighboring Bibb County's Scott G. Davis Industrial Park was selected for the new battery plant, North American Parts hub, and logistics center for MBUSI. The county's location between Tuscaloosa and Birmingham has resulted in significant commercial activities for towns such as Woodstock that are along the Interstate I-20/59 corridor. Exit 100 (Hwy 216) located in Woodstock's jurisdiction has numerous commercial business currently under construction, building on the presence of Love's Travel Stop and Petro Truck Stop; Tuscaloosa County constructed the new East Tuscaloosa Activity Center on Hwy 216 less than one mile from this exit.

The increased development in Tuscaloosa and Bibb counties affects vulnerability. The more development, the more individuals that will be attracted into these areas. Development leads to more structures being vulnerable to the effects of hazards. In particular, the dynamic of the wildland urban interface is affected leading to a higher risk of WUI wildfires occurring. With regards to developments effect on floodplain areas, all growing jurisdictions discussed here are active participants in the NFIP. It will be vital for these communities to enforce their flood ordinances in order to minimize vulnerability.



## 4.4 Critical Facilities/Infrastructure by Jurisdiction

Critical facilities are defined as facilities that are essential to the community, or may be crucial to the delivery of vital services, such as utilities and public safety. These facilities are critical to the health and welfare of the entire jurisdiction. They become essential in the event of a natural disaster. Examples of these facilities include police stations, fire stations, schools, and hospitals. Critical facilities are lifelines that provide the jurisdiction with necessities such as potable water. Critical facilities include the transportation corridors necessary to keep the jurisdiction connected. Critical facilities include those facilities that house persons with special needs or at-risk populations (schools, jails, nursing homes). They may also include locations where large groups often meet. Critical facilities include those in which potential losses, both human and economic, are high.

A concerted effort was made using information from the public, EMA, local government officials and industry stakeholders to identify the critical facilities. While only a summary is provided in the table, each jurisdiction has a list of critical facilities with the most current estimated replacement cost on file. The information listed below was provided by the individual jurisdictions. Other critical facilities are locations that store Extremely Hazardous Substances (EPCRA Section 302-Extremely Hazardous Substances, CERCLA Hazardous Substances, EPCRA, Section 313 Toxic Chemicals, CAA 122®) Regulated Chemicals for Accidental Release Prevention and other facilities that are covered. Local EMA offices maintain these lists.

Table 4.30 lists a summary of critical facilities summarized by type in the planning area. This list is not all-inclusive and includes facilities prioritized by specific jurisdictions. An inventory of critical facilities will be reviewed periodically and continually updated to reflect any changes in each of the jurisdictions.

**Table 4.30 Critical Facilities Summary**

Facilities	Bibb	Dallas	Greene	Hale	Marengo	Perry	Pickens	Sumter	Tuscaloosa	Wilcox
Continuity of Government	12	10	10	7	11	7	16	16	67	10
Hospital/Health Department	6	11	5	9	9	5	4	4	41	5
Public Safety	32	26	29	18	19	27	60	20	100	49
Schools	14	25	7	12	11	11	15	10	72	7

*Source: Division C Steering Committee Members*

## 4.5 Hazard Impacts

This section provides a narrative overview of each hazard’s impact on the planning area, based on previous finding within this section. These descriptions were compiled using guidance from FEMA Region IV, which recommends using the strongest reported incidence when describing impact.

### DAM FAILURE

According to the Risk Impact Assessment, the dam failure hazard scored a value of 2.1 (on a scale of 0 to 4).

**Table 4.31 Risk Impact Assessment for Dam Failure**

Probability	Very Low
Impact	Critical
Location Extent	Small
Warning Time	6 to 12 hours
Duration	Less than 24 hours

There are 797 dams listed in the National Inventory of Dams (NID) database for Division C. Of these dams, 33 are classified as high hazard dams. High hazard dams in the division have the following designated uses: recreation, flood control, fish and wildlife, and navigation.

Dam regulation and research is an ongoing hazard mitigation issue in the State of Alabama. Currently, there are no state laws to regulate existing private dams or the construction of new private dams that do not require federal licenses or inspections. The ADECA Office of Water Resources is currently conducting a dam study, as data listed within the National Inventory of Dams (NID) is outdated and not entirely accurate. Once ADECA’s dam assessment is complete, information regarding high hazard dams should allow for additional studies pertaining to potential vulnerability of this hazard.

Due to the lack of dam data, information pertaining to potential damages from dam failure is limited at the current time. An estimate of potential dam failure damages regionally over a long period of time yields a very low loss estimate in Division C. As better data becomes available, more detailed impacts by jurisdiction can be provided.

## **DROUGHT/EXTREME HEAT**

According to the Risk Impact Assessment, the drought/extreme heat hazard scored a value of 2.1 (on a scale of 0 to 4).

**Table 4.32 Risk Impact Assessment for Drought/Extreme Heat**

Probability	Medium
Impact	Minor
Location Extent	Small
Warning Time	More than 24 hours
Duration	More than one week

Both extreme heat and drought can occur at any location in Division C making the potential impact across all jurisdictions in the division constant. All new and existing buildings/infrastructure, facilities, natural resources, wildlife, and the general population are vulnerable to these hazards and their impacts. Due to the nature of these hazards, it is difficult to estimate losses that may result as little methodology exists.

Droughts can have wide ranging impacts. In Division C, all jurisdictions have historically experienced D4 drought conditions. D4 drought conditions can lead to economic losses due to insufficient water for large agricultural operations. Households that depends on private wells for potable water are affected as groundwater levels decrease. There is an increased risk of wildfires resulting from these conditions.

The most significant impact of extreme heat is on vulnerable populations' health. Vulnerable populations include the very young, the elderly, and those with respiratory problems. Extreme heat can lead to heatstroke, heat cramps, and heat exhaustion. A widespread extreme heat event could possibly overcrowd local clinics with persons suffering from the heat's effects. In addition to health related effects, increased use of electricity to run fans and air conditioners may overextend electric utilities.

Due to ongoing planning and these hazards being relatively common in Alabama due to its subtropical climate, anticipated future damages or losses are expected to be minimal.

## FLOODING

According to the Risk Impact Assessment, the flooding hazard scored a value of 3.3 (on a scale of 0 to 4).

**Table 4.33 Risk Impact Assessment for Flooding**

Probability	High
Impact	Critical
Location Extent	Moderate
Warning Time	6 to 12 hours
Duration	Less than one week

Appendix C provides floodplain areas by jurisdiction for Division C. River flooding is classified as minor, moderate, or major based on water height and impacts along the river that have been coordinated with the NWS and local officials. Minor river flooding means that low-lying areas adjacent to the stream or river, mainly rural areas and farmland and secondary roadways near the river, flood. This level of flooding is common in Division C. Moderate flooding means water levels rise high enough to impact homes and businesses near the river and some evacuations may be needed. This level of flooding occurs less often in the area but is expected to happen annually. Major flooding means that extensive rural and/or urban flooding is expected. Towns may become isolated and major traffic routes may be flooded. Evacuation of numerous homes and business may be required. This level of flooding is rare in the planning area.

Flash floods may lead to property damage or loss depending on severity. Their rapid onset makes them even more deadly. Often waters rise so quickly that people have little time to protect themselves. These floods can also lead to death and injury. Flash flooding on roadways is a major risk. Many times, drivers underestimate water depth and become stranded in floodwaters. Residents in the areas identified as flooding frequently are at the greatest danger for this hazard.

As development increases, the risk for flash flooding will increase as impermeable surfaces increase. Aging drainage infrastructure will contribute to an increase in flash flooding also. Based on the information provided in this profile, the probability of future flood events is High. Roads often suffer the greatest impacts as their base layer becomes compromised from standing water. Standing water also lead to cracks and damage to asphalt. Due to their nature, these floods are very dangerous. Often these events are localized and have a rapid onset, making them hard to predict. Deaths occur each year from vehicles being swept away in flood waters. A mere six inches of fast-moving flood water can knock over an adult. It takes only two feet of rushing water to carry away most vehicles, including pickups and SUVs.

Total potential loss data is incomplete due to the incompatibility of HAZUS-MH with the GIS system. Therefore, analysis from the HAZUS-MH flood model will be incorporated in the next plan update. However, in the last quarter century, well over \$200 million of damages have occurred from flooding in the planning area. Information pertaining to historical insured flood losses and repetitive flooded properties are included to provide more detailed information of areal losses based from flooding.

## Repetitive Loss Properties

A repetitive loss property is an insurable structure that has had two or more claims of more than \$1,000 within any ten-year period since 1978. A repetitive loss property may or may not be currently insured by the National Flood Insurance Program (NFIP). Table 4.34 provides information on repetitive loss properties in Division C.

**Table 4.34 Repetitive Loss Properties in Division C**

Community Name	Occupancy	FMA RL Properties	Insured FMA RL Properties	Total Paid in Claims on FMA RL Properties	NFIP RL Properties	Insured NFIP RL Properties	Total Paid in Claims on NFIP RL Properties
Bibb County							
Brent	Single Family	-	-	\$ -	1	1	\$ 4,355
Dallas County							
Dallas County	Other- Non-residential	-	-	\$ -	1	-	\$ 15,797
Dallas County	Single Family	-	-	\$ -	2	1	\$ 46,274
Selma	2-4 family	-	-	\$ -	1	-	\$ 9,883
Selma	Assmd Condo	-	-	\$ -	1	-	\$ 6,427
Selma	Single Family	-	-	\$ -	4	1	\$ 143,362
Greene County							
Greene County	Single Family	-	-	\$ -	11	1	\$ 226,054
Greene County	Single Family	-	-	\$ -	3	-	\$ 192,164
Hale County							
Greensboro	Single Family	-	-	\$ -	1	-	\$ 18,942
Hale County	Other-Residential	-	-	\$ -	1	-	\$ 5,046
Hale County	Single Family	-	-	\$ -	15	2	\$ 127,427
Pickens County							
Pickens County	Single Family	-	-	\$ -	3	-	\$ 78,680
Pickensville	Single Family	-	-	\$ -	7	1	\$ 161,521
Pickensville	Single Family	-	-	\$ -	2	1	\$ 149,736
Reform	Other- Non-residential	-	-	\$ -	1	-	\$ 36,717
Sumter County							
Sumter County	Single Family	-	-	\$ -	1	-	\$ 4,057
Tuscaloosa County							
Northport	Other- Non-residential	-	-	\$ -	1	-	\$ 23,606
Northpot	Single Family	-	-	\$ -	2	1	\$ 19,713
Tuscaloosa	Single Family	-	-	\$ -	1	-	\$ 93,868
Tuscaloosa County	Single Family	-	-	\$ -	1	1	\$ 119,859
Wilcox County							
Wilcox County	Other- Non-residential	-	-	\$ -	1	-	\$ 12,473

# HIGH WINDS (HURRICANES, TORNADOES, AND SEVERE THUNDERSTORMS)

## HURRICANES

According to the Risk Impact Assessment, the hurricane hazard scored a value of 2.6 (on a scale of 0 to 4).

**Table 4.35 Risk Impact Assessment for Hurricanes**

Probability	Medium
Impact	Critical
Location Extent	Large
Warning Time	More than 24 hours
Duration	Less than 24 hours

Because hurricanes and other tropical events commonly affect a large spatial area, all existing and future buildings, facilities, and the general population in Division C are vulnerable to this hazard and its impacts. The planning area is an inland location and will not receive the brunt of the intensity and extent of these storms, but the magnitude of hurricanes affecting the Gulf Coast can remain high as these storms travel inland into the region. Some hurricanes such as Ivan maintained hurricane strength for hundreds of miles. Ivan was classified as a hurricane until it reached Uniontown in Perry County.

With a Category 1 storm the following damage can be expected: Well-constructed frame homes could have damage to roof, shingles, and 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. The probability of an area being affected by a stronger tropical storm increases as you go further south in the division, meaning counties such as Wilcox and Marengo have a higher probability of experiencing impacts from stronger storms.

Severe storms, tornadoes, high winds, hail, torrential rains, river flooding, and flash flooding are all associated with tropical systems as they move inland. The entire region shares the same potential impact of these occurrences. The loss of life, property, and possessions is common. Interruption of utility and communication service is expected. In instances such as spawned tornadoes and flash flooding where warning time may be short or nonexistent the risk factors are higher. Low-lying areas and areas prone to flooding are at higher risk of hurricane related damage. Another concern regarding hurricanes is the large amount of debris that results. Hurricanes will provide those widespread effects during the summer and early autumn portions of the year. Normally there are a few days of warnings before a hurricane impacts the planning area allowing for preparations.

The landscape of the counties within Division C is heavily wooded, which leads to the possibility of significant tree and property damage. Debris removal can become a major cost for local governments. Flooding may lead to property damage, disruption in utility services, roadway damage, injury to residents, and death. High winds can also cause significant damage to homes, buildings, and utility infrastructure. The threat of injury and death is present.

## TORNADOES

According to the Risk Impact Assessment, the tornado hazard scored a value of 3.0 (on a scale of 0 to 4).

**Table 4.36 Risk Impact Assessment for Tornadoes**

Probability	High
Impact	Critical
Location Extent	Small
Warning Time	Less than 6 hours
Duration	Less than 6 hours

Tornadoes are not constrained to follow any definite path, so every area and every resident AEMA Division C is at risk. A tornadoes path is generally 300-400 yards wide and four miles long (NOAA 1973). Areas within that path may suffer from slight to severe damage depending on the tornado's strength. Injury and death can occur as a result of even the weakest tornado.

Because tornadoes may touch down anywhere within the division, all existing and future buildings, facilities, and the general population in the ten counties are vulnerable to this hazard and its impacts. Tornadoes can occur during hurricane events or other severe thunderstorm events, which can create multiple impacts. The most likely time for tornadoes is during the spring months from March through May, with a secondary peak of tornado activity in November, but tornadoes can occur in every month of the year.

Tornadoes present the most frequent hazard and most likely source of property damage and injury in the planning area from a natural hazard. Tornadoes are possibly more destructive than hurricanes, but impacts are far more localized. Even though favorable conditions for tornadoes can be forecasted in advance, the location of a tornado is unknown until a few moments before the storm occurs.

The effects of any tornado may be far reaching. Life, property, and personal items are all at risk. Interruption of electric, telephone and other utility and communications services may occur. Transportation corridors may be blocked or in some cases destroyed. Debris must be removed, and this is often a costly task. Citizens may suffer from posttraumatic syndrome, depression, anxiety, and grief for lost loved ones. When large storms with widespread damage and injuries occur, rural areas have a more difficult time responding to all calls they receive.

Table 4.37 provides a county by county description of impact based on historical data.

**Table 4.37 Potential Impact of Tornadoic Events by County\***  
**Division C**

Bibb County	Devastating damage: Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown and large missiles generated.
Dallas	Severe damage: Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.
Greene	Severe damage: Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.
Hale	Devastating damage: Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown and large missiles generated.
Marengo	Severe damage: Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.
Perry	Devastating damage: Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown and large missiles generated.
Pickens	Incredible damage: Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 100 meters (109 yds); trees debarked; incredible phenomena will occur.
Sumter	Severe damage: Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.
Tuscaloosa	Incredible damage: Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 100 meters (109 yds); trees debarked; incredible phenomena will occur.
Wilcox	Devastating damage: Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown and large missiles generated.

*\*includes all jurisdictions within*

*Source: NOAA Storms Database/ Fujita Damage Scale*



## SEVERE THUNDERSTORMS

According to the Risk Impact Assessment, the severe thunderstorm hazard scored a value of 2.6 (on a scale of 0 to 4).

**Table 4.38 Risk Impact Assessment for Severe Thunderstorms**

Probability	High
Impact	Minor
Location Extent	Moderate
Warning Time	Less than 6 hours
Duration	Less than 6 hours

Because severe thunderstorms with high winds may occur at any location within the planning area, all existing and future buildings, facilities, and the general population in the planning area are vulnerable to this hazard and its impacts.

Severe thunderstorms with high winds can produce similar effects to tornadoes and hurricanes. These effects will be more localized than hurricane events but more widespread than tornadoes. Past occurrences of high winds associated with severe thunderstorms have been recorded in each county in Division C. Tuscaloosa County has an 85 mph wind gust on record. Greene, Hale, Perry, and Wilcox have 60 mph gusts on record. Bibb, Dallas, Marengo, Pickens and Sumter all have 50 mph gusts recorded. Winds this high can be expected to cause downed trees and power lines, and flying debris. They may lead to power outages, transportation disruptions, damage to buildings and vehicles, and injury or death.

## LANDSLIDES

According to the Risk Impact Assessment, the landslide hazard scored a value of (from a scale of 0 to 4).

**Table 4.39 Risk Impact Assessment for Landslides**

Probability	Low
Impact	Minor
Location Extent	Negligible
Warning Time	Less than 6 hours
Duration	Less than 6 hours

Information from the Geological Survey of Alabama shows that historical landslide events have occurred in the planning area, but information about specific slides is sparse. One can get a general idea of areas more likely for landslides to occur by examining the maps provided in Appendix D. Due to the lack of substantive documentation of previous events, it is assumed that landslides events may occur at any location within the planning area, all existing and future buildings, facilities, and the general population in the planning area is considered to be vulnerable to this hazard and its impacts. With little recorded activity and documentation, it is believed that any potential losses in the planning area would be minor in scope.

## LAND SUBSIDENCE / SINKHOLES

According to the Risk Impact Assessment, the land subsidence / sinkhole hazard scored a value of 1.8 (on a scale of 0 to 4).

**Table 4.40 Risk Impact Assessment for Land Subsidence / Sinkholes**

Probability	Low
Impact	Minor
Location Extent	Small
Warning Time	Less than 6 hours
Duration	Less than 6 hours

Information from the Geological Survey of Alabama shows that geology conducive to sinkholes and other forms of land subsidence exists within the planning area. One can get a general idea of areas more likely for land subsidence to occur by examining the maps provided in Appendix E. Due to the lack of substantive documentation of previous events, it is assumed that land subsidence events may occur at any location within the planning area, all existing and future buildings, facilities, and the general population in the planning area is considered to be vulnerable to this hazard and its impacts. With little recorded activity and documentation, it is believed that any potential losses in the planning area would be minor in scope.

## **WILDFIRE**

According to the Risk Impact Assessment, the wildfire hazard scored a value of 2.3 (on a scale of 0 to 4).

**Table 4.41 Risk Impact Assessment for Wildfires**

Probability	High
Impact	Minor
Location Extent	Small
Warning Time	Less than 6 hours
Duration	Less than one week

Due to the large areas of forest-covered land in Division C, wildfires are a threat to all ten counties. Potential risk by jurisdiction can be seen from examining maps provided in Appendix F. The potential impact of wildfires is consistent across all jurisdictions in the division. Damage to timber land and wildlife habitat are the primary impacts. If factors such as winds and drought are present, wildfires may spread from forested areas to areas with residential structures.

In the event of wildfires, structures in less populated areas in the proximity of the forested areas could be at risk of fire damage. Though all the planning area's residents are at least somewhat vulnerable to wildfires, areas in isolated unincorporated areas are at a higher vulnerability according to the Alabama Forestry Commission. Residents living in the Talladega National Forest are at an increased risk.

The impact of a wildfire event is dependent on many factors including weather conditions, available fuel, topography, and existing wildfire mitigation capabilities. In more densely populated areas the impact of a wildfire is expected to be much greater. At a significantly higher risk of impact from a wildfire are those residents and structures within the Talladega National Forest. The USDA Forest Service estimates that there are 1,400 privately owned structures within the forest of these 450 are private residences. They estimate up to 600 private citizens live within the forest.

## **WINTER STORM**

According to the Risk Impact Assessment, the winter storm hazard scored a value of 2.4 (on a scale of 0 to 4).

**Table 4.42 Risk Impact Assessment for Winter Storms**

Probability	Low
Impact	Limited
Location Extent	Large
Warning Time	More than 24 hours
Duration	Less than one week

Historical records show the planning area has occasional instances of winter weather, which is primarily through frozen precipitation (snow/ice) that only affects the area for a few days at the most. The impacts of these storms are generally the result of the infrequency of their occurrence.

Because winter weather events may occur at any location within the planning area, all existing and future buildings, facilities, and the general population in the planning area are vulnerable to this hazard and its impacts. Winter weather events will affect those in vulnerable housing more severely than other areas.

## **Section 5- Mitigation Strategy**

This Mitigation Strategy section of the plan addresses requirements of Section 201.6(c)(3) through providing the blueprint for participating jurisdictions in the AEMA Division C to practice in order to become less vulnerable to the identified hazards in the Risk Assessment.

### **Section Contents**

- 5.1 Mitigation Planning Process
- 5.2 Regional Mitigation Goals
- 5.3 Regional Mitigation Strategies
- 5.4 Capabilities Assessment for Local Jurisdictions
- 5.5 Jurisdictional Mitigation Action Plans
  - 5.5.1 ATRC & WARC Mitigation Action Plans
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  - 5.5.6 Marengo County Mitigation Action Plans
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  - 5.5.8 Pickens County Mitigation Action Plans
  - 5.5.9 Sumter County Mitigation Action Plans
  - 5.5.10 Tuscaloosa County Mitigation Action Plans
  - 5.5.11 Wilcox County Mitigation Action Plans

## **5.1 Mitigation Planning Process**

Local planning stakeholders were asked to review the progress of their previously adopted mitigation goals and to reevaluate those strategies based on updated information from the Risk Assessment and vulnerability to each profiled hazard. The goals and strategies were reviewed considering the impact and extent of hazard occurrences in local jurisdictions and the region.

## **5.2 Mitigation Goals**

Mitigation goals are broad policy-type statements that focus on long-term visions to reduce or avoid vulnerabilities to identified hazards within the region. Through the planning process, six primary goals were developed from corresponding goals in previous local mitigation plans. The mitigation goals expected to be achieved by development, adoption, and continuation of the new Division C plan include:

1. Manage the development of land and buildings to minimize risk of life and property loss due to hazard events (PREVENTION).
2. Protect structures and their occupants and contents from the damaging effects of hazard events (PROPERTY PROTECTION).
3. Preserve, rehabilitate, and enhance the beneficial functions of the natural environment to promote a balance between natural systems and social and economic demands (NATURAL RESOURCE PROTECTION).
4. Apply engineered structural modifications to natural systems and public infrastructure to reduce the potentially damaging impacts of hazards, where those modifications are feasible and environmentally suitable (STRUCTURAL MITIGATION).
5. Improve the efficiency, timing, and effectiveness of response and recovery efforts for hazard events (EMERGENCY SERVICES).
6. Educate and foster public awareness of hazards and techniques available for mitigation (PUBLIC EDUCATION AND AWARENESS).

## **5.3 Mitigation Strategies**

Mitigation strategies are more defined actions that help further define mitigation goals. A wide range of activities that are aligned with the six goal categorizations were considered. These activities were analyzed by their ability to help achieve established mitigation goals, emphasizing actions addressing new and existing buildings and infrastructure. These strategies provide additional background to addressing specific hazard concerns.

Land use planning capacity in most of the region is limited due to the lack of regulatory authority in unincorporated areas, except for floodplain management and subdivision regulations. Many small municipalities have limited to no planning and building enforcement function due to fiscal constraints and lack of expertise. The majority choose not to implement land use, zoning, or code enforcement mechanisms.

The six goal categorizations used for mitigation strategies include: Prevention, Property Protection, Natural Resource Protection, Structural Mitigation, Emergency Services, and Public Awareness and Education. These are discussed in detail below. This discussion includes identifying the appropriate hazard(s) that are mitigated through these approaches.

### **Goal #1: Prevention**

Prevention activities are primarily intended to address future development and to keep hazard effects from increasing. Prevention activities are often administered through government programs or regulatory actions that influence the built environment. These activities are particularly effective in hazard mitigation for areas with little current capital investment or development. Examples of prevention activities include:

1. Land use planning and zoning administration (All Hazards, primarily Flooding)
2. Building code enforcement program (Flooding, High Winds)
3. Open space preservation (Flooding)
4. Floodplain management regulations (Flooding)
5. Stormwater management regulations (Flooding)
6. Participation in National Flood Insurance Program (NFIP) (Flooding)
7. Capital improvements planning (All Hazards)

### **Goal #2: Property Protection**

Property protection activities primarily concentrate on the modification of existing buildings and adjacent areas to strengthen their ability to withstand hazard events, or to remove an at-risk structure from hazardous locations. Examples of property protection activities include:

1. Acquisition of flood prone properties (Flooding)
2. Relocation of flood prone structures (Flooding)
3. Elevation of flood prone structures (Flooding)
4. Retrofitting of critical facilities and other structures (All Hazards)

### **Goal #3: Natural Resource Protection**

Natural resource protection activities reduce the impact of hazard events by preserving, rehabilitating, or enhancing the natural environment and its protective functions. These activities would include areas such as floodplains, wetlands, and steep slopes. Examples of natural resource protection activities include:

1. Floodplain protection (Flooding)
2. Watershed management (Flooding)
3. Riparian buffers (Flooding)
4. Forest and vegetation management (Flooding, Wildfire)
5. Conservation easements (Flooding, Land Subsidence)

### **Goal #4: Structural Mitigation**

Structural mitigation protection activities are intended to lessen the impact of a hazard by utilizing construction of an appropriate structure. Examples of structural mitigation protection activities include:



1. Reservoirs (Flooding)
2. Levees and dams (Flooding)
3. Stormwater diversion (Flooding)
4. Retention and detention structures (Flooding)
5. Safe rooms and shelters (High Winds, Extreme Temperatures)

**Goal #5: Emergency Services**

Emergency services protection activities involve protecting people and property before, during, and after a hazard event. These activities assist in providing capable actions regarding hazard events. Examples of emergency services activities include:

1. Warning alert systems (All Hazards)
2. Continuity of operations (All Hazards)
3. Evacuation routes (All Hazards)
4. Emergency responder training (All Hazards)
5. Provision of alternative power (e.g. generators) (All Hazards)
6. Debris removal (All Hazards)

**Goal #6: Public Education and Awareness**

Public education and awareness activities inform and remind residents, business owners, elected officials, and other stakeholders about hazards, vulnerable locations, and mitigation actions that can be used to avoid losses. Examples of public education and awareness activities include:

1. Information dissemination, including maps and websites displaying hazard information (All Hazards)
2. Public exposition or workshops (All Hazards)
3. Educational programs (All Hazards)
4. Real estate disclosures (Dam Failure, Flooding, Technological Hazards)

## Section 5.4 Capabilities Assessment for Local Jurisdictions

A capability assessment examines the ability of each jurisdiction to implement a comprehensive mitigation strategy through examining existing programs, regulations, resources, and practices. This determination allows a jurisdiction to assess whether mitigation actions are feasible by considering funding options, political support, public support, legality, preservation of the environment, and staff capability.

The Alabama Emergency Management Agency (AEMA) Division C is a ten-county region composed of 57 municipalities with a myriad of governmental powers. All county governments are governed by an elected commission. All municipalities have a Mayor/Council form of government.

The mitigation strategies listed in Section 5.3 above are framed by the capacity and capability of local jurisdictions to implement those actions through existing authorities, policies, programs, and resources. For most jurisdictions in the planning area, these are limited. Authority to control development through land use planning and zoning, a critical tool in hazard mitigation, is vested in municipalities that choose to exercise this practice. However, capacity is limited for enforcement due to local expertise, financial constraints, and public acceptance. The State of Alabama does not require a jurisdiction to implement land use planning and associated regulations; therefore, most local jurisdictions avoid the practice for general purposes and for hazard mitigation. In unincorporated areas within county jurisdictions, this authority is largely absent except as it applies to flood control and public street and subdivision regulation. Flood control, more broadly, is authorized for each local jurisdiction to practice through a local ordinance regulating the placement and construction of new structures. Most municipalities and all counties except for Perry participate in the National Flood Insurance Program (NFIP) and maintain compliance with the applicable regulations (Table 5.3). Likewise, the authority to enforce building codes is primarily restricted to municipalities and is only practiced by a limited number of these due to capacity constraints in the form of personnel, financial ability, and public acceptance.

Financial and technical capacity is limiting factors for implementation in most participating jurisdictions. The need for assistance in local planning and implementation is well established. Communities work together through the local EMA and their regional commissions (ATRC and WARC) to meet gaps in technical capacity related to planning for mitigation. Local jurisdictions work with county EMAs to implement specific strategies. Authority over spending is vested in local elected or appointed boards and commissions. Primarily, the county commissions and local municipal councils have been the leaders in deciding which mitigation strategies are worthy of investment. Other eligible jurisdictions have traditionally channeled mitigation projects through these local governmental bodies for sponsoring; however, in some cases they may sponsor the project directly. The use of federal and state grants is a prevalent feature of the financial strategy for mitigation projects involving new construction and major rehabilitation of public facilities or expenditures.

The capabilities of each participating jurisdiction are defined by the authorities, policies, programs, and resources that each utilizes in pursuit of hazard mitigation. Each jurisdiction falls into one of several categories, which possesses distinct authorities and resources to establish hazard mitigation actions. For example, counties and municipalities differ in terms of statutory authority to pursue hazard mitigation. Meanwhile, two communities with the same authority may approach mitigation entirely differently in terms of the exercise of their authority. School and utility boards are subject to even greater restrictions on their authority.

The authorities and capabilities are summarized based on the powers granted by different units of government that participated in the planning process. A listing of these participants can be found in Table 3.1 of this plan.

Table 5.1 below summarizes the statutory authority and resources of each jurisdiction and its present use or intended future use of these powers to implement potential actions and types of actions listed in the hazard mitigation plan. The table describes powers or policies that are granted to different types of jurisdictions in general terms, describes the jurisdictions that currently apply those policies in their mitigation efforts, describes the jurisdictions that intend to apply those authorities and policies for future implementation, and describes the means by which each jurisdiction will incorporate the mitigation action into its existing powers, authorities, policies, and capabilities. In every case, the primary means of incorporation involves review of proposed actions and implementation through the appropriate governmental authority such as the city council, county commission, school board, or utility board.

**Table 5.1 Statutory Authority and Resources**

Division C Hazard Mitigation Action Plan: Capabilities Assessment	Authorized for...	Practiced by...	Proposed for...	Incorporated through...
<p>Police power: Ability to regulate activities of individuals in the jurisdiction for purposes of health, safety, and public welfare</p>	<p>Municipalities, Counties</p>	<p><b>Bibb County:</b> Bibb County Sheriff, Brent, Centreville, West Blocton, Woodstock  <b>Dallas County:</b> Dallas County Sheriff, City of Selma  <b>Greene County:</b> Greene County Sheriff, Eutaw, Forkland*  <b>Hale County:</b> Hale County Sheriff, Greensboro, Moundville  <b>Marengo County:</b> Marengo County Sheriff, Demopolis, Linden, Sweetwater, Thomaston  <b>Perry County:</b> Perry County Sheriff, Marion, Uniontown  <b>Pickens County:</b> Pickens County Sheriff, Aliceville, Carrollton, Gordo, Pickensville, Reform  <b>Sumter County:</b> Sumter County Sheriff, Livingston, York  <b>Tuscaloosa County:</b> Tuscaloosa County Sheriff, Brookwood, Coaling, Lake View, Northport, Tuscaloosa, University of Alabama, Stillman College, Vance  <b>Wilcox County:</b> Wilcox County Sheriff, Camden, Pine Hill</p>	<p>All municipal jurisdictions</p>	<p>Council or Commission action to enact and enforce regulations</p>

**Table 5.1 Statutory Authority and Resources (continued)**

<b>Division C Hazard Mitigation Action Plan: Capabilities Assessment</b>	<b>Authorized for...</b>	<b>Practiced by...</b>	<b>Proposed for...</b>	<b>Incorporated through...</b>
Control of public expenditures: Ability to acquire property and improve property owned by the jurisdiction, capacity to borrow and expend funds	Municipalities, Counties, School Boards, Utilities	All jurisdictions	All jurisdictions	Action to approve expenditures by local county commission, city council, school board, or utility board
Building code enforcement: Ability to enforce codes related to building materials and construction standards outside of flood hazard areas	Municipalities, Counties	<p><b>Bibb County:</b> Centreville, Woodstock</p> <p><b>Dallas County:</b> Selma, Valley Grande</p> <p><b>Greene County:</b> Eutaw, Akron</p> <p><b>Hale County:</b> Greensboro, Moundville</p> <p><b>Marengo County:</b> Demopolis, Linden</p> <p><b>Pickens County:</b> Aliceville, Carrollton, Gordo, Reform</p> <p><b>Sumter County:</b> Livingston, York</p> <p><b>Tuscaloosa County:</b> Brookwood, Lake View, Northport, Tuscaloosa, Vance</p> <p><b>Wilcox County:</b> Camden</p>		Council action to enact and enforce regulations

**Table 5.1 Statutory Authority and Resources (continued)**

<b>Division C Hazard Mitigation Action Plan: Capabilities Assessment</b>	<b>Authorized for...</b>	<b>Practiced by...</b>	<b>Proposed for...</b>	<b>Incorporated through...</b>
Floodplain management authority: Ability to regulate development in areas of special flood hazard in compliance with NFIP standards; includes authority to regulate land use and subdivisions inside of flood hazard areas	Municipalities, Counties	All participating NFIP jurisdictions	All participating NFIP jurisdictions	Council or Commission action to enact and enforce regulations
Purchase properties subject to flooding and maintain as permanent open space.	Municipalities, Counties, School Boards, Utilities	All Jurisdictions		Action to approve expenditures by local county commission, city council, school board, or utility board
Capital improvements: Ability to plan public infrastructure to mitigate hazards	Municipalities, Counties, School Boards, Utilities	All jurisdictions	All jurisdictions	Action to approve expenditures by local county commission, city council, school board, or utility board

**Table 5.1 Statutory Authority and Resources (continued)**

Division C Hazard Mitigation Action Plan: Capabilities Assessment	Authorized for...	Practiced by...	Proposed for...	Incorporated through...
<p>Zoning authority: Ability to divide political jurisdiction into districts for purposes of regulating buildings and their use (inside and outside of flood hazard areas)</p>	<p>Municipalities</p>	<p><b>Bibb County:</b> Centreville, West Blocton, Woodstock</p> <p><b>Dallas County:</b> Selma</p> <p><b>Greene County:</b> Eutaw</p> <p><b>Hale County:</b> Greensboro, Moundville, Newbern</p> <p><b>Marengo County:</b> Demopolis, Linden</p> <p><b>Pickens County:</b> Aliceville, Carrollton, Gordo, Reform</p> <p><b>Sumter County:</b> Livingston, York</p> <p><b>Tuscaloosa County:</b> Brookwood, Coaling, Lake View, Northport, Tuscaloosa, Vance</p> <p><b>Wilcox County:</b> Camden</p>		<p>Council action to enact and enforce regulations</p>

**Table 5.1 Statutory Authority and Resources (continued)**

<b>Division C Hazard Mitigation Action Plan: Capabilities Assessment</b>	<b>Authorized for...</b>	<b>Practiced by...</b>	<b>Proposed for...</b>	<b>Incorporated through...</b>
Subdivision regulations: A ability to control new developments involving new lot lines and infrastructure (inside and outside of flood hazard areas)	Municipalities, Counties	<b>Bibb County:</b> Woodstock  <b>Dallas County :</b> Selma  <b>Greene County:</b> Greene County, Eutaw  <b>Hale County:</b> Moundville  <b>Marengo County:</b> Demopolis, Linden  <b>Pickens County:</b> Pickens County, Aliceville, Carrollton, Gordo, Reform  <b>Sumter County:</b> Livingston, York  <b>Tuscaloosa County:</b> Tuscaloosa County, Brookwood, Lake View, Northport, Tuscaloosa, Vance  <b>Wilcox County:</b> Camden		Council or Commission action to enact and enforce regulations
Storm water management program: Ability to regulate retention, detention, and release of storm water runoff	Municipalities	<b>Tuscaloosa County:</b> Northport, Tuscaloosa		Council action to enact and enforce regulations

Table 5.2 below provides a summary of local plans, ordinances, and programs currently in place, or being developed within jurisdictions in Division C. A “Yes” (Y) indicates the item is currently in place and being implemented. A “No” (N) indicates the items is not in place or being implemented. An asterisk (\*) indicates the item is currently being developed for future implementation.



**Table 5.2 Relevant Plans, Ordinances, and Programs**

<b>Jurisdiction</b>	<b>Zoning Ordinance</b>	<b>Code Enforcement</b>	<b>Recent Master Plan</b>	<b>Certified Flood Manager</b>	<b>NFIP Participation</b>
<b>Bibb County</b>	N	N	N	Y	Y
City of Brent	N	N	N	N	Y
City of Centreville	Y	Y	N	N	Y
Town of West Blocton	Y	Y	N	N	Y
Town of Woodstock	Y	Y	N	N	Y
<b>Dallas County</b>	N	N	N	N	Y
Town of Orrville	N	N	N	N	Y
City of Selma	Y	Y	N	N	Y
City of Valley Grande	N	Y	N	N	Y
<b>Greene County</b>	N	N	N	Y	Y
Town of Boligee	N	N	N	N	N
City of Eutaw	Y	Y	N	N	Y
Town of Forkland	N	Y	Y	N	N
Town of Union	N	N	N	N	N
<b>Hale County</b>	N	N	N	Y	Y
Town of Akron	N	Y	N	N	N
City of Greensboro	Y	Y	N	N	Y
City of Moundville	Y	Y	Y	N	Y
Town of Newbern	Y	Y	N	N	N
<b>Marengo County</b>	N	N	N	N	Y
Town of Dayton	N	N	N	N	N
City of Demopolis	Y	Y	N*	N	Y
Town of Faunsdale	N	N	N	N	unmapped
City of Linden	Y	Y	N	N	Y
Town of Myrtlewood	N	N	N	N	N
Town of Providence	N	N	N	N	Y
Town of Sweetwater	N	N	N	N	N
Town of Thomaston	N	N	N	N	Y
<b>Perry County</b>	N	N	N	N	N
City of Marion	Y	N	N	N	Y
City of Uniontown	N	N	N	N	N
<b>Pickens County</b>	N	N	N	Y	Y
City of Aliceville	Y	Y	N	N	Y
Town of Carrollton	Y	Y	N	N	Y
Town of Ethelsville	N	N	N	N	N
Town of Gordo	Y	Y	N	N	Y
Town of McMullen	N	N	N	N	N
Town of Memphis	N	N	N	N	N
Town of Pickensville	N	Y	N	N	Y
City of Reform	Y	Y	Y	Y	Y
<b>Sumter County</b>	N	N	N	N	Y
Town of Cuba	N	N	N	N	Y

**Table 5.2 Relevant Plans, Ordinances, and Programs (continued)**

<b>Jurisdiction</b>	<b>Zoning Ordinance</b>	<b>Code Enforcement</b>	<b>Recent Master Plan</b>	<b>Certified Flood Manager</b>	<b>NFIP Participation</b>
Town of Emelle	N	N	N	N	unmapped
Town of Epes	N	N	N	N	Y
Town of Gainesville	N	N	N	N	N
Town of Geiger	N	N	N	N	Y
City of Livingston	Y	Y	N	N	Y
City of York	Y	Y	N	N	Y
<b>Tuscaloosa County</b>	N	Y/LSG	N	Y	Y
Town of Brookwood	Y	Y	N	N	Y
Town of Coaling	Y	Y	N	N	Y
Town of Coker	N	Y	N	N	Y
Town of Lake View	Y	Y	N	N	Y
City of Northport	Y	Y	N	Y	Y
City of Tuscaloosa	Y	Y	Y	Y	Y
Town of Vance	Y	Y	N	N	Y
<b>Wilcox County</b>	N	N	N	N	Y
City of Camden	Y	Y	N	N	Y
Town of Oak Hill	N	N	N	N	Unmapped
Town of Pine Apple	N	N	N	N	Unmapped
Town of Pine Hill	Y	N	N	N	Y
Town of Yellow Bluff	N	N	N	N	N

Tuscaloosa has limited self-governance; Tuscaloosa in CRS at Class 8 (2019)

Table 5.3 below summarizes NFIP participation and policy statistics for each jurisdiction in the planning area as of January 18, 2020. More site-specific information on at-risk structures and repetitive loss properties is provided in Section 4.8 in the Risk Assessment. A number of jurisdictions that are currently not participating in the NFIP Program participated in the hazard mitigation planning process and have Mitigation Actions to address their status.

**Table 5.3 National Flood Insurance (NFIP) Status**

Jurisdiction	County	Participation Status	Initial FBHM Identified	Initial FIRM Identified	Current Effective Map Date
<b>Bibb County</b>	Bibb	Yes	2/14/1975	8/1/1987	8/18/2009
Brent	Bibb	Yes	4/11/1975	9/4/1985	8/18/2009
Centreville	Bibb	Yes	10/5/1976	8/19/1985	8/18/2009
West Blocton	Bibb	Yes	11/8/1974	9/18/1985	8/18/2009
Woodstock	Tuscaloosa/ Bibb	Yes	N/A	8/1/1987	1/16/2014
<b>Dallas County</b>	Dallas	Yes	1/3/1975	09/29/86	9/29/1986
Orrville	Dallas	Yes	8/30/1974	2/17/2010	(NSFHA)
Selma	Dallas	Yes	5/21/1976	3/4/1986	9/3/2014
Valley Grande	Dallas	Yes	1/3/1975	9/29/1986	9/3/2014
<b>Greene County</b>	Greene	Yes	1/28/1977	4/16/1990	8/5/2010
Boligee	Greene	unmapped			
Eutaw	Greene	Yes	11/8/1974	8/19/1985	08/05/10(M)
Forkland	Greene	No	8/5/2010	8/5/2010	8/5/2010
Union	Greene	No	N/A	8/5/2010	8/5/2010
<b>Hale County</b>	Hale	Yes	9/19/1980	7/1/1987	01/06/10(M)
Akron	Hale	No	7/18/1975	7/18/1975	1/6/2010
Greensboro	Hale	Yes	12/10/1976	8/19/1985	01/06/10(M)
Newbern	Hale	No	1/6/2010	1/6/2010	1/6/2010
Moundville	Tuscaloosa/ Hale	Yes	6/21/1974	7/18/1985	01/16/2014(M)
<b>Marengo County</b>	Marengo	Yes	9/1/1978	1/17/1990	11/2/2011
Dayton	Marengo	No	N/A	9/19/2007	11/2/2011
Demopolis	Marengo	Yes	6/7/1974	12/17/1987	11/2/2011
Faunsdale	Marengo	unmapped			
Linden	Marengo	Yes	6/28/1974	9/18/1985	11/02/11(M)
Myrtlewood	Marengo	No	N/A	9/19/2007	11/2/2011
Providence	Marengo	Yes	11/1/1974	11/17/1978	11/02/11(M)

**Table 5.3 National Flood Insurance (NFIP) Status (continued)**

Jurisdiction	County	Participation Status	Initial FBHM Identified	Initial FIRM Identified	Current Effective Map Date
Sweetwater	Marengo	No	7/18/1975	7/18/1975	9/19/2007
Thomaston	Marengo	Yes	1/10/1975	8/19/1985	11/02/11(M)
<b>Perry County</b>	Perry	No	N/A	12/16/2005	9/2/2011
Marion	Perry	Yes	6/7/1975	6/17/1986	09/02/11(M)
Uniontown	Perry	No	9/12/1975	12/2/2005	9/2/2011
<b>Pickens County</b>	Pickens	Yes	1/17/1975	6/4/1990	9/17/2010
Aliceville	Pickens	Yes	4/11/1975	7/17/1978	9/17/2010
Carrollton	Pickens	Yes	8/23/1974	8/15/1978	9/17/2010
Ethelsville	Pickens	unmapped			
Gordo	Pickens	Yes	2/14/1975	8/15/1978	9/17/2010
McMullen	Pickens	No	N/A	9/17/2010	9/17/2011
Memphis	Pickens	No	N/A	9/17/2010	9/17/2011
Pickensville	Pickens	Yes	N/A	6/4/1990	9/17/2010
Reform	Pickens	Yes	12/27/1974	7/3/1978	9/17/2010
<b>Sumter County</b>	Sumter	Yes	4/7/1978	8/1/1987	4/3/2012
Cuba	Sumter	Yes	3/16/1979	4/3/2012	04/03/12(M)
Emelle	Sumter	unmapped			
Epes	Sumter	Yes	10/20/1978	4/3/2012	4/3/2012
Gainesville	Sumter	No	10/15/1976	4/3/2012	4/3/2012
Geiger	Sumter	Yes	11/30/1979	4/3/2012	04/03/12(M)
Livingston	Sumter	Yes	5/31/1974	8/15/1980	4/3/2012
York	Sumter	Yes	7/11/1975	8/1/1980	4/3/2012
<b>Tuscaloosa County</b>	Tuscaloosa	Yes	5/5/1978	1/20/1982	1/16/2014
Brookwood	Tuscaloosa	Yes	N/A	9/7/2000	1/16/2014
Coker	Tuscaloosa	Yes	N/A	9/28/2007	1/16/2014

**Table 5.3 National Flood Insurance (NFIP) Status (continued)**

<b>Jurisdiction</b>	<b>County</b>	<b>Participation Status</b>	<b>Initial FBHM Identified</b>	<b>Initial FIRM Identified</b>	<b>Current Effective Map Date</b>
Coaling	Tuscaloosa	Yes	N/A	9/28/2007	1/16/2014
Lake View	Jefferson/ Tuscaloosa	Yes	N/A	9/28/2007	1/16/2014
Northport	Tuscaloosa	Yes	12/28/1973	9/5/1979	1/16/2014
Tuscaloosa	Tuscaloosa	Yes	10/24/1975	2/1/1979	1/16/2014
Vance	Tuscaloosa/ Bibb	Yes	9/7/2000	1/16/2014	6/26/2006
<b>Wilcox County</b>	Wilcox	Yes	6/16/1978	5/1/1987	04/19/2010(M)
Camden	Wilcox	Yes	N/A	4/19/2010	4/19/2010
Oak Hill	Wilcox	unmapped			
Pine Apple	Wilcox	unmapped			
Pine Hill	Wilcox	Yes	11/17/1978	4/19/2010	4/19/2010
Yellow Bluff	Wilcox	Yes	N/A	4/19/2010	4/19/2010

*Source: NFIP Community Status Book (01/18/2020)*

## 5.5 Jurisdictional Mitigation Action Plans

This section identifies and analyzes a range of mitigation actions under consideration to help achieve the regional mitigation goals identified in this plan. Local planning stakeholders thoroughly reviewed and considered the Risk Assessment and their local capabilities to determine the most appropriate plan of action for their jurisdictions. Each action or project listed has accessory information, such as designation of a lead agency, hazard(s) addressed, and potential funding source(s). The following table describes the key elements of the Mitigation Action Plans.

It is important to note that this is a completely new first-time plan developed for a newly established multi-county planning area. As this table format, as well as the order and definition of the goals, are new and differ from the previous county plans, it was necessary for jurisdictions to develop new action plans to provide current information and complete Priority/Status and Benefit/Cost Score assignments. As a baseline reference, actions from prior county-level plans were reviewed to develop the new actions; note completed actions in order to illustrate prior progress; or, remove actions that, due to a change in capacity or priority, were no longer relevant to the jurisdiction.

<b>Jurisdiction Name</b>	
Goal	Category of goal that is met: #1: Manage the development of land and buildings to minimize risk of life and property loss due to hazard events (PREVENTION) #2: Protect structures and their occupants and contents from the damaging effects of hazard events (PROPERTY PROTECTION) #3: Preserve, rehabilitate, and enhance the beneficial functions of the natural environment to promote a balance between natural systems and social and economic demands (NATURAL RESOURCE PROTECTION) #4: Apply engineered structural modifications to natural systems and public infrastructure to reduce the potentially damaging impacts of hazards, where those modifications are feasible and environmentally suitable (STRUCTURAL MITIGATION) #5: Improve the efficiency, timing, and effectiveness of response and recovery efforts for hazard events (EMERGENCY SERVICES) #6: Educate and foster public awareness of hazards and techniques available for mitigation (PUBLIC EDUCATION AND AWARENESS)
Action Description	Title and description of action to be undertaken
Hazards Addressed	Hazard which the action addresses
Lead Agency	Entity responsible for undertaking the action
Funding Source	Level of funding required for action, where applicable

<p>Priority/Status</p>	<p>Participants prioritized the available mitigation measures and projects considering the following criteria:</p> <ul style="list-style-type: none"> <li>•Economic considerations including but not limited to the availability of funds, benefits to be derived from the proposed measure, costs, economic feasibility, impact on the local economy, and economic development goals.</li> <li>•Social considerations including but not limited to environmental justice, neighborhood impact, community support, and impact on social and cultural resources.</li> <li>•Environmental considerations including but not limited to compliance with the National Environmental Policy Act (NEPA), state and local environmental regulations, and environmental conservation goals.</li> <li>•Administrative, legal, and political considerations including but not limited to staffing, maintenance, timing, legal authority, and political support.</li> <li>•Technical considerations including but not limited to technical feasibility.</li> </ul> <p>Each action was classified using the following designations:  Completed: Notable mitigation projects implemented in the past five years  Ongoing: Action in progress / perennial occurrence  High: Projected implementation within five years  Medium: Projected implementation between five and ten years Low:  Projected implementation beyond ten years</p> <p>Overall, the participating jurisdictions priorities have not changed since the previous planning cycle. There was an emphasis placed on identifying low cost, effective projects.</p>
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Benefit/Cost Score	<p>The Benefit/Cost score included in the jurisdictional Mitigation Action Plans are considered at the planning level and does not include a full analysis of all costs and benefits associated with action implementation. For example, a mitigation action that scores “High” in benefits and “Low” in costs will be listed as “Moderate” in the plan due to providing a long-term solution, but with a high implementation cost. For some projects, such as routine or ongoing operations conducted with local operating funds and existing staff, this may be the only explicit comparison of costs and benefits. For projects of which grant funding or bond issues may be sought, more in-depth evaluations of costs and benefits may be required. As specific project scopes are detailed, the benefits and costs of an action can be identified with more precision and the benefit-cost ratio (BCR) that results from a full benefit-cost analysis may differ from the planning level Benefit/Cost score presented in the plan.</p> <p><b><u>Low:</u></b> Benefits: Projects that only benefit a limited population, or provides short-term benefits / Costs: projects likely to cost over \$100,000 and requiring additional funding or staffing outside of normal operations, and is complicated to implement.</p> <p><b><u>Moderate:</u></b> Benefits: Projects that would be felt by moderate amount of population in jurisdiction, or solves a problem for several years / Costs: projects that may need additional funding or continued study or staffing outside of normal operations, with estimated costs between \$10,000 and \$100,000.</p> <p><b><u>High:</u></b> Benefits: Projects that benefit many in the jurisdiction that are long- term solutions / Costs: projects that can be implemented by existing personnel with little additional burden on budget and uncomplicated to implement.</p>
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### ATRC & WARC Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	ATRC & WARC will maintain the mitigation plan by seeking additional grant funding, as needed	All	ATRC & WARC	HMGP/Local Funds	High	High
1	ATCR & WARC will work to incorporate the counties of Wilcox, Dallas, Hale, Bibb, Perry, Marengo, Tuscaloosa, Sumter and their jurisdictions not part of this plan as their plans expire	All	ATRC & WARC	HMGP/Local Funds	High	High
1	ATRC & WARC will facilitate multi-jurisdiction collaboration by attending AEMA Division c meetings on at least an annual basis	All	ATRC & WARC	Local Funds	High	High
1	ATRC & WARC will incorporate HAZUS-MH and Risk MAP information in Risk Assessment for future plan updates	Flooding / High Winds	ATRC & WARC	HMGP/Local Funds	High	High

### Bibb County Board of Education Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Construct storm retrofits to educational buildings.	Thunderstorms, Tornadoes, Hurricanes	Bibb County Board of Education	FEMA HMA/ Local	Medium	Moderate
4.1	Construct/install community safe rooms to educational buildings to include generators.	Thunderstorms, Tornadoes, Hurricanes	Bibb County Board of Education	FEMA HMA/ Local	High	Moderate
4.2	Construct/install individual storm shelters to educational buildings.	Thunderstorms, Tornadoes, Hurricanes	Bibb County Board of Education	FEMA HMA/ Local	Low	High
5	Provide emergency generators at educational buildings.	All	Bibb County Board of Education	FEMA HMA/ Local	High	High

## Bibb County Commission Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Enforce floodplain management requirements, regulate construction or improvements in Special Flood Hazard Areas (SFHAs)	Flooding	Bibb County Engineer	Local	Ongoing	High
1.1	Develop a library of guidance materials to assist local floodplain managers.	Flooding	Bibb County Engineer	Grants/ Local	Ongoing	Moderate
1.2	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Flooding, Tornadoes, Hurricanes, Severe Storms and Earthquakes	Bibb County Engineer	Grants/ Local	Ongoing	High
4	Construct new community safe rooms with generators in accessible locations and add safe rooms within new and existing public and government buildings.	Thunderstorms, Tornadoes, Hurricanes	Bibb County EMA, Bibb County Commission	FEMA HMA/ Local	Ongoing	Moderate
4.1	Encourage the construction of safe rooms in new and existing homes and buildings.	Thunderstorms, Tornadoes, Hurricanes	Bibb County EMA, Bibb County Commission	Local	Ongoing	High
4.2	Construct storm retrofits to critical facilities to include fire buildings.	Thunderstorms, Tornadoes, Hurricanes	Bibb County EMA, Bibb Fire Association	FEMA HMA/ Local	Medium	Moderate
5	Upgrade critical communications infrastructure.	All	Bibb County EMA, Bibb County Commission	Grants/ Local	Ongoing	Moderate
5.1	Install permanent emergency generators at critical facilities.	All	Bibb County EMA, Bibb Fire Association	Grants/ Local	High	High
5.2	Use of phone messaging system for weather alerts/warnings	All	Bibb County EMA, Bibb County Commission	Local	Ongoing	High

## Bibb County Commission Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5.3	Maintain/upgrade sheriff's department equipment	All	Bibb County Sheriff	ADECA, ALEA, Local	Ongoing	Moderate
5.4	Maintain/upgrade fire department equipment	All	Bibb Fire Association	Grants/ Local	Ongoing	Moderate
6	Conduct outreach activities to residents using multiple media platforms or workshops to implement hazard mitigation measures in the home.	All	Bibb County EMA	Local	Ongoing	High

Table 4-13: 2015 Bibb County Mitigation Actions

<b>Mitigation Action 1.1.1</b>	Install an outdoor weather siren at Eoline Fire Department	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Thunderstorm, Tornado, Hurricane	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Bibb County EMA, Bibb County	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	30,000 each	
<b>Funding Sources</b>	Local, Grants	
<b>Priority</b>	Medium	
<b>Mitigation Action 1.2.2</b>	Construct individual storm shelters	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Thunderstorm, Tornado	
<b>Applies to new/existing asset</b>	New and Existing	
<b>Local Planning Mechanism</b>	Bibb County EMA, Bibb County	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	5,000 each	
<b>Funding Sources</b>	Local, Grants	
<b>Priority</b>	High	
<b>Mitigation Action 2.1.1</b>	Install security measures at Bibb County critical facilities	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Man-made hazards	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Bibb County EMA, Bibb County	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	\$500,000	
<b>Funding Sources</b>	Local, Grants	
<b>Priority</b>	Medium	

Table 5-31: 2015 Bibb County Fire Association Mitigation Actions

ALL REMOVED 2020 – combined with Bibb County Action plan

<b>Mitigation Action</b>	Construct storm retrofits to fire buildings
<b>Hazard(s) Addressed</b>	Thunderstorms, Tornados, Hurricanes
<b>Applies to new/existing asset</b>	Existing
<b>Local Planning Mechanism</b>	Bibb County Fire Association
<b>Time frame for Completion</b>	One year from funding availability
<b>Estimated Cost</b>	\$250,000 each
<b>Funding Sources</b>	Grants, local
<b>Priority</b>	Low
<b>Mitigation Action</b>	Construct/install community safe rooms to fire buildings to include generators
<b>Hazard(s) Addressed</b>	Thunderstorm, Tornado
<b>Applies to new/existing asset</b>	New and Existing
<b>Local Planning Mechanism</b>	Bibb County Fire Association
<b>Time frame for Completion</b>	One year from funding availability
<b>Estimated Cost</b>	\$100,000 each
<b>Funding Sources</b>	Local; Grants
<b>Priority</b>	High
<b>Mitigation Action</b>	Construct/install individual storm shelters to fire buildings
<b>Hazard(s) Addressed</b>	Thunderstorm, Tornado
<b>Applies to new/existing asset</b>	New and Existing
<b>Local Planning Mechanism</b>	Bibb County Fire Association
<b>Time frame for Completion</b>	One year from funding availability
<b>Estimated Cost</b>	\$5,000 each
<b>Funding Sources</b>	Local; Grants
<b>Priority</b>	Low
<b>Mitigation Action</b>	Provide generators for fire buildings
<b>Hazard(s) Addressed</b>	All
<b>Applies to new/existing asset</b>	Existing
<b>Local Planning Mechanism</b>	Bibb County Fire Association
<b>Time frame for Completion</b>	One year from funding availability
<b>Estimated Cost</b>	\$25,000 ea
<b>Funding Sources</b>	Grants, local
<b>Priority</b>	High

## Bibb County Medical Center Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Construct storm retrofits to medical buildings.	Thunderstorms, Tornadoes, Hurricanes	Bibb County Medical Center	FEMA HMA/ Local	Medium	Moderate
4.1	Construct/install community safe rooms to medical buildings to include generators.	Thunderstorms, Tornadoes, Hurricanes	Bibb County Medical Center	FEMA HMA/ Local	High	Moderate
5	Provide emergency generators at medical buildings.	All	Bibb County Medical Center	FEMA HMA/ Local	High	High

Table 5-32: 2015 Bibb County Medical Center Mitigation Actions

<b>Mitigation Action</b>	Install security measures at Bibb County Medical Center <b>2020</b>	<b>REMOVED</b>
<b>Hazard(s) Addressed</b>	Man-made hazards	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Bibb County Medical Center	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	\$500,000	
<b>Funding Sources</b>	Local, Grants	
<b>Priority</b>	Medium	

### City of Brent Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Enforce floodplain management requirements, regulate construction or improvements in Special Flood Hazard Areas (SFHAs)	Flooding	Mayor/Council	Local	Ongoing	High
4	Upgrade drainage system to enlarge ditches and add storm drain, to include the Partridge Drive/ Camp Road area	Flooding	Mayor/Council	Grants/ Local	Completed	N/A
4.1	Construct new community safe rooms with generators in accessible locations and add safe rooms within new and existing public and government buildings.	Thunderstorms, Tornadoes, Hurricanes	Mayor/Council	FEMA HMA/ Local	Completed	N/A
4.2	Encourage the construction of safe rooms in new and existing homes and buildings.	Thunderstorms, Tornadoes, Hurricanes	Bibb County EMA, Mayor/Council	Local	Ongoing	High
4.3	Construct storm retrofits to critical facilities to include fire buildings.	Thunderstorms, Tornadoes, Hurricanes	Mayor/Council, Fire Dept.	FEMA HMA/ Local	High	Moderate
5	Install permanent emergency generators at critical facilities.	All	Bibb County EMA, Mayor/Council, Fire Dept.	Grants/ Local	Ongoing	Moderate
5.1	Install NOAA indoor warning system at critical facilities and Brent Library	All	Bibb County EMA, Mayor/Council	Local	High	Moderate

Table 5-6: 2015 City of Brent Mitigation Actions

<b>Mitigation Action</b>	Install security measures at critical facilities	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Man-made hazards	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Bibb County EMA, City of Brent, Bibb County	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	\$150,000	
<b>Funding Sources</b>	Local, Grants	
<b>Priority</b>	Medium	
<b>Mitigation Action</b>	Install outdoor warning sirens throughout city	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	All	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Bibb County EMA, City of Brent	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	\$25,000	
<b>Funding Sources</b>	Local, Grants	
<b>Priority</b>	Medium	

### City of Centreville Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Enforce floodplain management requirements, regulate construction or improvements in Special Flood Hazards Areas (SFHAs).	Flooding	Mayor/Council	Grants/ Local	Ongoing	High
4	Construct/install community safe rooms to include generators.	Hurricanes, Tornadoes, Severe Storms	Bibb County EMA, Mayor/Council	FEMA HMA/Local	Medium	Low
4.1	Encourage the construction of safe rooms in new and existing homes and buildings.	Hurricanes, Tornadoes, Severe Storms	Bibb County EMA, County Commission, City Public Works	Local	Low	High
4.2	Construct storm retrofits to critical facilities.	Hurricanes, Tornadoes, Severe Storms	Mayor/Council	FEMA HMA/Local	Medium	Low
5	Install generators at critical facilities.	All	Bibb County EMA, Mayor/Council, Fire Dept.	Grants/ Local	Ongoing	Moderate
6	Conduct outreach activities to residents using multiple media platforms or workshops to implement hazard mitigation measures in the home.	All	Mayor/Council	Local	Ongoing	Moderate

Table 5-12: 2015 City of Centreville Mitigation Actions

<b>Mitigation Action</b>	Install security measures at critical facilities	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Man-made hazards	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Bibb County EMA, City of Centreville, Bibb County	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	\$150,000	
<b>Funding Sources</b>	Local, Grants	
<b>Priority</b>	Medium	



## Town of West Blocton Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Enforce floodplain management requirements, regulate construction or improvements in Special Flood Hazards Areas (SFHAs)	Flooding	Mayor/Council	Local	Ongoing	High
4	Upgrade drainage system to enlarge pipes and ditches, add storm drains	Flooding	Bibb County EMA, Mayor/Council	Grants/ Local	Ongoing	Moderate
4.1	Construct new community safe rooms with generators in accessible locations and add safe rooms within new and existing public and government buildings.	Thunderstorms, Tornadoes, Hurricanes	Mayor/Council	FEMA HMA/ Local	Medium	Moderate
4.2	Encourage the construction of safe rooms in new and existing homes and buildings.	Thunderstorms, Tornadoes, Hurricanes	Bibb County EMA, Mayor/Council	Local	Ongoing	High
4.3	Construct storm retrofits to critical facilities to include fire buildings	Thunderstorms, Tornadoes, Hurricanes	Bibb County EMA, Fire Dept.	FEMA HMA/ Local	Medium	Moderate
5	Install emergency generators at critical facilities	All	Bibb County EMA, Mayor/Council, Fire Department	Grants/ Local	Medium	Moderate
5.1	Install lighting arrestors at all water and sewer pumps	Lightning	Public Works Dept.	Grants/Local	Medium	Moderate

Table 5-24: 2015 Town of West Blocton Mitigation Actions

<b>Mitigation Action</b>	Install security measures at critical facilities	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Man-made hazards	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Bibb County EMA, Town of West Blocton	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	\$100,000	
<b>Funding Sources</b>	Local, Grants	
<b>Priority</b>	High	
<b>Mitigation Action</b>	Upgrade fire hydrants to add security access device	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Chemical agent	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Bibb County EMA, Town of West Blocton	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	\$100,000	
<b>Funding Sources</b>	Local, Grants	

<b>Dallas County Commission Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
1	Continue to Participate in NFIP and enforce County's flood ordinance	Flooding	Dallas County Floodplain Manager	Local	Ongoing	High
5	Continue to clear debris from roads and drainage ways	All	Dallas County Road and Bridge Dept.	Local	Ongoing	High
5	Continue to perform maintenance on roads, drainage culverts, creeks, and streams to mitigate the threat of floods	Flooding	Dallas County Road and Bridge Dept.	Local	Ongoing	High
1	Continue to maintain and improve the county road system	All	Dallas County Road and Bridge Dept.	Local	Ongoing	High
4	Drainage projects in areas that are flood prone	Flooding	Dallas County Road and Bridge Dept.	Local/HMA/ CDBG	Medium	Moderate
4	Storm Water Management Project throughout the County	Flooding	Dallas County Road and Bridge Dept.	Local/HMA/ CDBG	Medium	Moderate
6	Explore ways to use Social Media to provide mitigation and emergency information to the public	All	Dallas County EMA	Local	Ongoing	High
2	Retrofitting of critical facilities	High Winds	Dallas County Commission	Local/HMA/CDBG	Low	Moderate
1	Acquire desktop GIS software for maintaining risk assessment data.	All	Dallas County EMA	Local/HMA	Low	Low
1	Complete a comprehensive inventory of critical facilities within all jurisdictions and maintain with GIS.	All	Dallas County EMA	Local	Low	Moderate
1	Integrate FEMA HAZUS-MH applications for hazard loss estimations within local GIS programs.	All	Dallas County EMA	Local	Low	Moderate

1	Maintain up-to-date data within GIS to apply the full loss estimation capabilities of HAZUS.	All	Dallas County EMA	Local	Low	Moderate
1	Consider large lot size restrictions on flood-prone areas designated on Flood Insurance Rate Maps.	Flooding	Dallas County Commission	Local	Low	Moderate
1	Evaluate additional land use restrictions within designated flood zones, such as prohibition of storage of buoyant materials, storage of hazardous materials, restrictive development of flood ways, etc.	Flooding	Dallas County Commission	Local	Low	Moderate
1	Train local floodplains managers through programs offered through the State Floodplain Manager and FEMA'S training center in Emmetsburg, Maryland	Flooding	Dallas County EMA	Local	Moderate	Moderate
2	Maintain a library of technical assistance and guidance materials to support the local flood plain manager.	All	Dallas County EMA	Local	Ongoing	High
2	Obtain membership for local flood plain managers in the Association of State Flood plain manager.	Flooding	Dallas County EMA	Local	Ongoing	High
1	Evaluate the effectiveness of higher regulatory standards, such as additional building elevation and limitation of fill within flood plains, to be included in local flood plain management regulations.	Flooding	Dallas County EMA	Local	Low	Moderate
1	Evaluate building code standards for roof construction to assure protection against wind damage from hurricanes, tornadoes, and windstorms; require installation of "hurricane clips"	High Winds	Dallas County Commission	Local	Low	Moderate
4	Enact local ordinances to require community storm shelters within sizeable mobile home parks and subdivisions.	High Winds	Dallas County Commission	Local	Medium	Moderate

4	Require the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	High Winds	Dallas County Commission	Local	Medium	Moderate
4	Continue program to subsidize safe room construction in existing homes.	High Winds	Dallas County Commission	Local	Ongoing	High
4	Construct free-standing public safe rooms in vulnerable locations.	High Winds	Dallas County Commission	Local/HMA/ CDBG	Medium	Moderate
1	Apply for and maintain membership in the CRS Program.	Flooding	Dallas County Commission	Local	Low	Moderate
1	Provide technical assistance to owners of pre-FIRM buildings to advise on available retrofits to protect against flood damage.	Flooding	Dallas County Commission	Local	Low	Moderate
4	Seek funding sources, such as Community Development Block Grant funds, to assist low-income homeowners with building retrofits to protect against flood damage.	Flooding	Dallas County Commission	Local/HMA/ CDBG	Ongoing	Moderate
6	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Flooding	Dallas County EMA	Local	Ongoing	High
6	Establish an annual Severe Weather Awareness Day in conjunction with NWS.	All	Dallas County EMA	Local	Ongoing	High
6	Identify other environmental awareness events to integrate public information on hazard exposure and protection measures.	All	Dallas County EMA	Local	Ongoing	High
1	Arrange with the Multiple Listing Service MLS to require flood plain location disclosure as a condition for each real estate listing.	Flooding	Dallas County EMA	Local	Low	Moderate
6	Obtain free publications from FEMA, NWS, USGS, and other federal and state agencies and deposit these materials with local libraries.	All	Dallas County EMA	Local	Ongoing	High

6	Maintain local library repositories with the latest available publications.	All	Dallas County EMA	Local	Ongoing	High
6	Distribute hazard mitigation brochures to area schools for distribution to students.	All	Dallas County EMA	Local	Ongoing	High
1	Enact and enforce dumping regulations.	All	Dallas County Commission	Local	Low	Moderate
1	Enact and enforce erosion and sedimentation control regulations.	Flooding	Dallas County Commission	Local	Low	Moderate
3	Seek technical assistance through the Alabama Cooperative Extension System with Best Management Practices (BMP) for channel and drainage system maintenance.	Flooding	Dallas County Commission	Local	Ongoing	Moderate
5	Install warning sirens at all public schools and other locations as needed.	High Winds	Dallas County Commission	Local/HMA	Ongoing	Moderate
5	Install an automated weather monitoring system that transmits data to the County EMA and the NWS, including all-weather stations, precipitation gages, wind gages, and temperature gages.	All	Dallas County Commission	Local	Ongoing	Moderate
5	Support the Alabama Skywarn Foundation efforts to distribute weather radios to low-income households, especially in rural areas outside of siren coverage areas.	High Winds	Dallas County Commission	Local	Ongoing	High
5	Promote the use of weather radios in households and businesses.	All	Dallas County Commission	Local	Ongoing	High
5	Purchase emergency generators for disaster mitigation, as needed. In particular, for the Dallas County Volunteer Reception Center, Dallas County VOAD, and the Dallas County Medical Reserve Corporation all located at 115 Vaughn Memorial Drive in Selma; Pioneer and Central Alabama Electric Cooperative that serve Dallas County; and at the Water	All	Dallas County Commission	Local/HMA	Partially Complete/ Planned	Moderate

	Works Facilities and other facilities as needed.					
1	Update county mitigation plan	All	Dallas County Commission	Local/HMA/CDBG	Medium	High

Action DC12 from the previous County mitigation plan has been deleted due to the action being completed at the time of that plan which is over 5 years ago.

<b>Town of Orrville Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
1/3	Continue to Participate in NFIP	Flooding	Town of Orrville Town Council	Local	Ongoing	High
5	Continue to clear debris from roads and drainage ways	All	Town of Orrville Town Council	Local	Ongoing	High
5	Continue to perform maintenance on roads, drainage culverts, creeks, and streams to mitigate the threat of floods	Flooding	Town of Orrville Town Council	Local	Ongoing	High
1	Continue to maintain and improve the town's road system	All	Town of Orrville Town Council	Local	Ongoing	High
4	Drainage projects in areas that are flood prone	Flooding	Town of Orrville Town Council	Local/HMA/CDBG	Medium	Moderate
4	Storm Water Management Project throughout the town	Flooding	Town of Orrville Town Council	Local/HMA/CDBG	Medium	Moderate
4	Promote safe rooms in residences	High Winds	Town of Orrville Town Council	Local	Ongoing	High
2/4	Construct free standing public safe rooms in vulnerable locations.	High Winds	Town of Orrville Town Council	Local/HMA/CDBG	Medium	Low
5	Support the Alabama Skywarn Foundation efforts to distribute weather radios to low-income households, especially in rural areas outside of siren coverage areas.	High Winds	Town of Orrville Town Council	Local	Ongoing	High
5	Promote the use of weather radios in households and businesses.	All	Town of Orrville Town Council	Local	Ongoing	High

5	Purchase emergency generators for post-disaster mitigation, as needed.	All	Town of Orrville Town Council	Local/HMA	Medium	Moderate
5	Purchase tornado sirens for areas where people congregate outdoors	High Winds	Town of Orrville Town Council	Local/HMA	Low	Moderate



<b>City of Selma Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
1/3	Continue to Participate in NFIP and enforce City's flood ordinance	Flooding	City of Selma Floodplain Manager	Local	High	High
5	Continue to clear debris from roads and drainage ways	All	City of Selma Public Works	Local	High	High
5	Continue to perform maintenance on roads, drainage culverts, creeks, and streams to mitigate the threat of floods	Flooding	City of Selma Public Works	Local	High	High
1	Continue to maintain and improve the city road system	All	City of Selma Public Works	Local	High	High
6	Explore ways to use Social Media to provide mitigation and emergency information to the public	All	City of Selma City Council	Local	High	High
1	Continue to enforce building codes	All	City of Selma Code Enforcement	Local	High	High
1	Continue to enforce subdivision regulations	Flooding	City of Selma Code Enforcement	Local	High	High
1	Continue to enforce zoning regulations	Flooding/High Winds	City of Selma Code Enforcement	Local	High	High
5	Continue to send law enforcement and fire personnel to emergency response training	All	City of Selma City Council	Local	High	High
4	Encourage inclusion of safe rooms in new construction	High Winds	City of Selma Building Inspector	Local	High	High
4	Drainage projects in areas that are flood prone	Flooding	City of Selma City Council/Public Works	Local/HMA/ CDBG	High	Moderate
4	Storm Water Management Project throughout the City	Flooding	City of Selma City Council/Public Works	Local/HMA/ CDBG	High	Moderate

2	Retrofitting of Critical Facilities	High Winds	City of Selma City Council	Local/HMA	High	Low
5	Purchase of warning systems	High Winds	City of Selma City Council	Local/HMA	High	Moderate
4	Community Safe Rooms	High Winds	City of Selma City Council	Local/HMA	High	Low
2	Acquisition, relocation, and elevation projects to address flood prone structure	Flooding	City of Selma City Council	Local/HMA	High	Low

The City of Selma has completed two CDBG drainage projects in the last five years. The total costs of these projects was approximately \$1,000,000.

<b>City of Valley Grande Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
1/3	Continue to Participate in NFIP and enforce City's flood ordinance	Flooding	City of Valley Grande City Council	Local	High	High
5	Continue to clear debris from roads and drainage ways	All	City of Valley Grande City Council	Local	High	High
5	Continue to perform maintenance on roads, drainage culverts, creeks, and streams to mitigate the threat of floods	Flooding	City of Valley Grande City Council	Local	High	High
1	Continue to maintain and improve the city road system	All	City of Valley Grande City Council	Local	High	High
6	Explore ways to use Social Media to provide mitigation and emergency information to the public	All	City of Valley Grande City Council	Local	High	High
1	Continue to enforce building codes	All	City of Valley Grande Code Enforcement	Local	High	High
1	Continue to enforce subdivision regulations	Flooding	City of Valley Grande Code Enforcement	Local	High	High
5	Continue to send law enforcement and fire personnel to emergency response training	All	City of Valley Grande City Council	Local	High	High
4	Encourage inclusion of safe rooms in new construction	High Winds	City of Valley Grande City Council	Local	High	High
4	Drainage projects in areas that are flood prone	Flooding	City of Valley Grande City Council	Local/HMA	Low	Moderate
4	Storm Water Management Project throughout the City	Flooding	City of Valley Grande City Council	Local	Medium	Moderate
2	Retrofitting of Critical Facilities	High Winds	City of Valley Grande City Council	Local	High	High

5	Purchase of warning systems	High Winds	City of Valley Grande City Council	Local	Medium	Moderate
4	Community Safe Rooms	High Winds	City of Valley Grande City Council	Local	High	High

**Dallas County School District Mitigation Action  
Plan**

<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
4	Provide storm shelters at all county schools	High Winds	Dallas County School Board	Local/FMA/ALSDE	Medium	Moderate
5	Purchase generators for each school	All	Dallas County School Board	Local/FMA/ALSDE	Medium	Moderate
2	Retrofitting of schools	High Winds	Dallas County School Board	Local/FMA/ALSDE	Low	Low
5	Tornado Sirens	High Winds	Dallas County School Board	Local/FMA/ALSDE	Medium	Moderate
4	Correct storm water/ drainage issues on school campuses	Flooding	Dallas County School Board	Local/FMA/ALSDE	Medium	Moderate
6	Train all staff in hazard safety	All	Dallas County School Board	Local	Ongoing	High

<b>Selma City Schools Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
4	Provide storm shelters at all city schools	High Winds	Selma City School Board	Local/FMA/ALSDE	Medium	Moderate
5	Purchase generators for each school	All	Selma City School Board	Local/FMA/ALSDE	Medium	Moderate
2	Retrofitting of Elementary School	High Winds	Selma City School Board	Local/FMA/ALSDE	Low	Low
5	Tornado Sirens	High Winds	Selma City School Board	Local/FMA/ALSDE	Medium	Moderate
4	Correct storm water/ drainage issues on school campuses	Flooding	Selma City School Board	Local/FMA/ALSDE	Medium	Moderate
6	Train all staff in hazard safety	All	Selma City School Board	Local	Ongoing	High

## Greene County Board of Education Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Construct storm retrofits to educational buildings.	Thunderstorms, Tornadoes, Hurricanes	Greene County Board of Education	FEMA HMA/ Local	Medium	Moderate
4.1	Construct/install community safe rooms to educational buildings to include generators.	Thunderstorms, Tornadoes, Hurricanes	Greene County Board of Education	FEMA HMA/ Local	High	Moderate
4.2	Construct/install individual storm shelters to educational buildings.	Thunderstorms, Tornadoes, Hurricanes	Greene County Board of Education	FEMA HMA/ Local	Low	High
5	Provide emergency generators at educational buildings.	All	Greene County Board of Education	FEMA HMA/ Local	High	High

The Greene County Board of Education action plan is new for 2020.

## Greene County Commission Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Enforce floodplain management requirements regulate construction or improvements in Special Flood Hazard Areas (SFHAs)	Flood	Greene County EMA, County Engineer	Local	Low/ Ongoing	High
4	Construct short-term individual storm shelters at fire departments to include generators and outdoor warning sirens if needed.	Thunderstorms, Tornados, Hurricanes	Greene County EMA, Individual VFD's	HMA Grants, Local	Complete	N/A
4.1	Install/ construct community safe rooms to include generators and outdoor warning sirens, if needed	Thunderstorms, Tornados, Hurricanes	Greene County EMA	HMA Grants, Local	High/ Partially complete, Ongoing	Moderate
4.2	Install individual safe rooms	Thunderstorms, Tornados, Hurricanes	Greene County EMA, Greene County Commission	HMA Grants, Private	High/ Partially complete, Ongoing	Moderate
4.3	Improve drainage systems	Flood	Greene County EMA, Greene County Highway Dept.	HMA Grants, ADECA, Local	Medium/ Ongoing	Moderate
4.4	Construct storm retrofits to critical facilities	Thunderstorms, Tornados, Hurricanes	Greene County EMA	HMA Grants, Local	Low	Moderate
4.5	Construct/ install safe rooms at government buildings to include generators	Thunderstorms, Tornados, Hurricanes	Greene County EMA	HMA Grants, Local	High	Moderate
5	Install additional outdoor warning sirens throughout county	All	Greene County EMA	HMA Grants, Local	Medium/ Partially complete, Ongoing	Moderate
5.1	Upgrade facilities at volunteer fire departments	Wildfires, Thunderstorms, Tornados, Hurricanes	Greene County EMA, Individual VFD's	HMA Grants, Local	Low/ Partially complete, ongoing	Moderate



## Greene County Commission Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5.2	Purchase and implement countywide communications systems for first responders	All	Greene County Commission, Volunteer Fire Association	HMA Grants, Local	High/ ongoing	Moderate
5.3	Provide emergency generators at critical facilities	All	Greene County EMA, Greene County Commission	HMA Grants, Local	Medium/ New	Moderate
5.3	Establish volunteer emergency dispatcher program and training	All	Greene County EMA	Local	Medium	High
6	Participate in public awareness events such as City/County Day, Hurricane Awareness Week, and Severe Weather Week	All	Greene County EMA	Local	High	High

Table 4-12 2015 Greene County Mitigation Actions

<b>Mitigation Action 1.2.2</b>	Construct short-term individual storm shelters at fire departments to include outdoor warning sirens if needed	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Chemical agent, Conventional Bomb/Explosive	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Greene County EMA, Individual VFD's	
<b>Time frame for Completion</b>	Two year from funding availability	
<b>Estimated Cost</b>	\$50,000	
<b>Funding Sources</b>	Grants, Local	
<b>Priority</b>	High	
<b>Mitigation Action 2.1.2</b>	Install security measures at critical facilities	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Misc. Man Made hazards	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Greene County EMA, Greene County, Fosters/Ralph Water Authority	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	\$10,000	
<b>Funding Sources</b>	Grants, Local	
<b>Priority</b>	Medium	

## Greene County Health System Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Construct storm retrofits to medical buildings.	Thunderstorms, Tornadoes, Hurricanes	Greene County Health System	FEMA HMA/ Local	Medium	Moderate
4.1	Construct/install community safe rooms to medical buildings to include generators.	Thunderstorms, Tornadoes, Hurricanes	Greene County Health System	FEMA HMA/ Local	High	Moderate
4.2	Construct secured storage area for food, water, medications in preparation for emergency hazard events.	Thunderstorms, Tornadoes, Hurricanes	Greene County Health System	FEMA HMA/ Local	Medium	Moderate
5	Provide emergency generators at medical buildings.	All	Greene County Health System	FEMA HMA/ Local	High	High

The Greene County Health system action plan is new for 2020.

## City of Eutaw Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Enforce floodplain management requirements; regulate construction or improvements in Special Flood Hazard Areas (SFHAs).	Flood	Mayor/Council	Local	Low, Ongoing	High
4	Install /construct community safe rooms to include generators and outdoor warning sirens, if needed	Thunderstorms, Tornados, Hurricanes	Greene County EMA, Mayor/Council	HMA Grants, Local	Medium	Moderate
4.1	Install transfer switch, connect existing generators at City Hall and National Guard building	All	Mayor/Council	HMA Grants, Local	High	High
4.2	Improve drainage systems throughout city	Flood	Mayor/Council	HMA Grants, ADECA, Local	Low, Ongoing	Moderate
4.3	Construct storm retrofits to government buildings	Thunderstorms, Tornados, Hurricanes	Mayor/Council	HMA Grants, Local	Low	Moderate
4.4	Construct/ install community safe rooms at buildings to include generators	Thunderstorms, Tornados, Hurricanes	Mayor/Council	HMA Grants, Local	High	Moderate
5	Provide emergency generators at critical facilities	All	Mayor/Council, Fire Dept.	HMA Grants, Local	Medium, <i>Ongoing</i>	High
5.1	Install additional outdoor warning sirens throughout city	Thunderstorms, Tornados, Hurricanes	Greene County EMA, Mayor/Council	HMA Grants, Local	High	Moderate

Table 5-12 2015 City of Eutaw Mitigation Actions

<b>Mitigation Action 2.1.1</b>	Install security measures at critical facilities	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Chemical agent, Conventional Bomb/Explosive	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	City of Eutaw	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	\$70,000	
<b>Funding Sources</b>	Grants, Local	
<b>Priority</b>	Low	

## Town of Boligee Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Participation in the NFIP	Flood	Greene County EMA, Mayor/Council	Local	Low	High
4	Construct community safe room	Thunderstorms, Tornados, Hurricanes	Greene County EMA, Mayor/Council	HMA Grants, Local	High, New	Moderate
4.1	Install/construct individual safe rooms	Thunderstorms, Tornados, Hurricanes	Greene County EMA, Mayor/Council	HMA Grant/Private	High	High
5	Construct new Fire Station	Wildfires, Thunderstorms, Tornados, Hurricanes	Greene County EMA, Mayor/Council, Fire Dept.	HMA Grants, Local	High, Complete New	N/A
5.1	Purchase and implement communications system for first responders	All	Greene County EMA, Mayor/Council	HMA Grants, Local	Medium	Moderate
5.2	Encourage provision and use of NOAA all-weather radios by individuals and businesses	All	Greene County EMA, Mayor/Council	HMA Grants, Local	High, New	High
5.3	Provide emergency generators at critical facilities	All	Greene County EMA, Mayor/Council	HMA Grants, Local	Medium, New	Moderate
6	Participate in public awareness events such as City/County Day, Hurricane Awareness Week, and Severe Weather Week	All	Mayor/Council	Local	High	High

Table 5-6 2015 Town of Boligee Actions

<b>Mitigation Action 2.1.1</b>	Install security measures at critical facilities	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Misc. Man-made hazards	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Greene County EMA, Greene County Board of Education	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	\$25,000	
<b>Funding Sources</b>	Grants, Local	
<b>Priority</b>	Medium	

## Town of Forkland Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Participate in NFIP program	Flood	Mayor/Council	Local	Low	High
4	Install Community Safe Room with Generator	Thunderstorms, Tornados, Hurricanes	Greene County EMA, Mayor/Council	HMA Grants, Local	High, Completed	N/A
5	Install outdoor warning sirens throughout town	Thunderstorms, Tornados, Hurricanes	Greene County EMA, Mayor/Council	Local	Medium	Moderate
5.1	Encourage provision and use of NOAA all-weather radios by individuals and businesses	All	Greene County EMA, Mayor/Council	HMA Grants, Local	High, New	High
5.2	Construct Public Safety Building to house Fire and Police Dept.	Wildfires, Thunderstorms, Tornados, Hurricanes	Mayor/Council, Police Dept., Fire Dept.	USDA, Local	High, New	Low
5.3	Provide backup emergency generators to critical facilities	All	Mayor/Council, Fire Dept.	HMA Grants, Local	High	High

Table 5-18 2015 Town of Forkland Mitigation Actions

<b>Mitigation Action 2.1.1</b>	Install security measures at critical facilities	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Misc. Man-made hazards	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Town of Forkland	
<b>Time frame for Completion</b>	6 months from funding availability	
<b>Estimated Cost</b>	\$15,000	
<b>Funding Sources</b>	Grants, Local	
<b>Priority</b>	Low	

## Town of Union Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Participate in NFIP program	Flood	Mayor/Council	Local	Medium	High
4	Install/ construct community safe room to include generators and outdoor warning sirens, if needed	Thunderstorms, Tornados, Hurricanes	Greene County EMA, Mayor/Council	HMA Grants, Local	High /Ongoing	Moderate
4.1	Improve drainage systems (enlarge ditches; storm drains)	Flood	Greene County EMA, Mayor/Council	HMA Grants, ADECA, Local	Medium	Moderate
4.2	Repair bridges	Flood	Greene County EMA, Mayor/Council	ADECA, ALDOT, Local	Low	Low
5	Provide emergency generators at critical facilities	All	Greene County EMA, Mayor/Council	HMA Grants, Local	Medium	High

Table 5-24 2015 Town of Union Mitigation Actions

<b>Mitigation Action 2.1.1</b>	Install security measures at critical facilities	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Misc. Man-made hazards	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Town of Union	
<b>Time frame for Completion</b>	6 months from funding availability	
<b>Estimated Cost</b>	\$15,000	
<b>Funding Sources</b>	Grants, Local	
<b>Priority</b>	Low	

## Hale County Board of Education Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Construct storm retrofits to educational buildings	Severe Thunderstorms, Tornados, Hurricanes	Hale County BOE	FEMA HMA/Local	Medium	Low
4.1	Construct/install community safe rooms to educational buildings to include generators	Severe Thunderstorms, Tornados, Hurricanes	Hale County BOE	FEMA HMA/Local	Medium	Moderate
4.2	Construct/install individual storm shelters to educational buildings	Severe Thunderstorms, Tornados, Hurricanes	Hale County BOE	FEMA HMA/Local	Medium	High
5	Provide generators for educational buildings	All	Hale County BOE	Grants/Local	High	High

## Hale County Commission Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Construct/install community safe rooms to include generators at critical facilities.	Severe Thunderstorms, Tornados, Hurricanes	Hale County EMA, Hale County	FEMA HMA/Local	High	Moderate
4.1	Construct storm retrofits to schools and critical facilities.	Severe Thunderstorms, Tornados, Hurricanes	Hale County EMA, Hale County	FEMA HMA/Local	Medium	Low
4.3	Upgrade communication systems. Meetings in progress to make the communication systems P-25 compliant.	All	Hale County EMA, Hale County	FEMA HMA/Local	Ongoing	Low
5	Install outdoor warning sirens.	Severe Thunderstorms, Tornados, Hurricanes	Hale County EMA	Grants/Local	Low	Moderate
5.1	Update Emergency Operation Center by purchasing new computers and monitors	All	Hale County EMA, Hale County	Grants/Local	Medium	Moderate

Actions from the 2015 plan were reorganized into the new plan goal areas and modified as deemed necessary.



## Hale County Hospital Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Provide generators for Hale County Hospital, HCH's Greensboro Clinic, and HCH's Moundville Clinic	All	Hale County Hospital	FEMA HMA, Local	Medium	High

**Table 5-27 2015 Hale County Hospital Mitigation Actions**

<b>Mitigation Action</b>	Construct storm retrofits to medical buildings	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Thunderstorms, Tornados, Hurricanes	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Hale County Hospital	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	\$400,000 each	
<b>Funding Sources</b>	HMGP, ADECA, Local	
<b>Priority</b>	Low	
<b>Mitigation Action</b>	Install security measures at Hale County Hospital	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Manmade Hazards	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Hale County Hospital	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	\$500,000	
<b>Funding Sources</b>	HMGP, Local	
<b>Priority</b>	Medium	

The removed actions were determined by the jurisdiction to no longer be relevant or feasible at this time. Remaining actions from the 2015 plan were reorganized into the new plan goal areas and modified as deemed necessary.

## City of Greensboro Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Enforce floodplain management requirements, regulate construction or improvements in Special Flood Hazard Areas (SFHAs)	Flooding	City of Greensboro	Local	Completed	High
4	Upgrade drainage systems to enlarge ditches and install pipe and storm drains	Flooding	Hale County EMA, City of Greensboro	Grants, Local	Low	Low
4.1	Construct/install community safe rooms to include generators	Severe Thunderstorms, Tornados, Hurricanes	Hale County EMA, City of Greensboro	FEMA HMA, Local	High	Moderate
5	Provide additional outdoor warning sirens throughout each district	Severe Thunderstorms, Tornados, Hurricanes	Hale County EMA, City of Greensboro	FEMA HMA, Local	Low	Moderate
5.1	Install emergency generators at critical facilities	All	Hale County EMA, City of Greensboro	Grants, Local	High	Moderate

**Table 5-12: 2015 City of Greensboro Mitigation Actions**

<b>Mitigation Action</b>	Construct long-term underground community storm shelters	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	All	
<b>Applies to new/existing asset</b>	New	
<b>Local Planning Mechanism</b>	Hale County EMA; City of Greensboro	
<b>Time frame for Completion</b>	Two years from funding availability	
<b>Estimated Cost</b>	\$500,000 each	
<b>Funding Sources</b>	Local; Grants	
<b>Priority</b>	Low	

The removed actions were determined by the jurisdiction to no longer be relevant or feasible at this time. Remaining actions from the 2015 plan were reorganized into the new plan goal areas and modified as deemed necessary.

## City of Moundville Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Enforce floodplain managements requirements, regulate construction or improvements in Special Flood Hazard Areas (SFHAs).	Flooding	City of Moundville	Local	Ongoing	High
1.1	Determine base flood elevations of the Black Warrior River, Elliott Creek, and Carthage Branch for use in ordinance	Flooding	City of Moundville	Local	Completed	Moderate
3	Improve drainage at Elliott Creek	Flooding	City of Moundville	FEMA HMA, Local	High	High
4	Install backflow prevention valves to keep sewer from entering homes during flood and high water events	Flooding	City of Moundville	Grants, Local	High	High
4.1	Construct/install community safe rooms to include generators	Severe Thunderstorms, Tornados, Hurricanes	Hale County EMA, City of Moundville	FEMA HMA, Local	Medium	Low
5.1	Upgrade communications equipment	All	Hale County EMA, City of Moundville	Grants, Local	Completed	High
5.2	Install emergency generators at critical facilities	All	Hale County EMA, City of Moundville	Grants, Local	High	Moderate

**Table 5-18: 2015 City of Moundville Mitigation Actions**

<b>Mitigation Action</b>	Install security measures at critical facilities	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Manmade Hazards	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Hale County EMA, City of Moundville	
<b>Time frame for Completion</b>	2018	
<b>Estimated Cost</b>	\$130,000	
<b>Funding Sources</b>	Local, Grants	
<b>Priority</b>	High	

The removed actions were determined by the jurisdiction to no longer be relevant or feasible at this time. Remaining actions from the 2015 plan were reorganized into the new plan goal areas and modified as deemed necessary.

## Town of Akron Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Participate in NFIP	Flooding	Town of Akron	Local	High	High
4	Replace concrete drainage covers along streets in town	Flooding	Hale County EMA, Town of Akron	Grants, Local	High	High
4.1	Construct/install multi-use community safe rooms with back-up generators (one will be used for a town hall)	Severe Thunderstorms, Tornados, Hurricanes	Hale County EMA, Town of Akron	FEMA HMA, Local	Medium	Low
5	Install additional outdoor warning sirens	Severe Thunderstorms, Tornados, Hurricanes	Hale County EMA, Town of Akron	Grants, Local	Medium	Moderate
5.1	Install emergency generators at critical facilities	All	Hale County EMA, Town of Akron	Grants, Local	High	Moderate

**Table 5-6: 2015 Town of Akron Mitigation Actions**

<b>Mitigation Action</b>	Install security measures at critical facilities	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Manmade Hazards	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Hale County EMA, Town of Akron	
<b>Time frame for Completion</b>	2019	
<b>Estimated Cost</b>	\$100,000	
<b>Funding Sources</b>	Grants, Local	
<b>Priority</b>	Medium	

The removed actions were determined by the jurisdiction to no longer be relevant or feasible at this time. Remaining actions from the 2015 plan were reorganized into the new plan goal areas and modified as deemed necessary.

## Town of Newbern Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Participate in NFIP	Flooding	Town of Newbern	Local	High	High
4	Construct/install community safe rooms to include generators	Severe Thunderstorms, Tornados, Hurricanes	Hale County EMA, Town of Newbern	FEMA HMA, Local	Medium	Low
5	Upgrade and relocate weather warning siren	Severe Thunderstorms, Tornados, Hurricanes	Hale County EMA, Town of Newbern	Grants, Local	Low	Moderate
5.1	Install emergency generators at critical facilities	All	Hale County EMA, Town of Newbern	Grants, Local	Medium	Moderate

**Table 5-24: 2015 Town of Newbern Mitigation Actions**

<b>Mitigation Action</b>	Install security measures at critical facilities	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Manmade Hazards	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Hale County EMA, Town of Newbern	
<b>Time frame for Completion</b>	2022	
<b>Estimated Cost</b>	\$25,000	
<b>Funding Sources</b>	Grants, Local	
<b>Priority</b>	Medium	

The removed actions were determined by the jurisdiction to no longer be relevant or feasible at this time. Remaining actions from the 2015 plan were reorganized into the new plan goal areas and modified as deemed necessary.

<b>Marengo County Commission Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
6	Maintain a centralized countywide natural hazards and risk assessment database in GIS that is accessible to all personnel including flood zones, geohazards, major drainage structures, dams/levees; tornado tracks	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Effectively administer and enforce local floodplain management regulations	Flooding	Marengo County Floodplain Manager	Local	Ongoing	High
1	Train local floodplain managers through programs offered at the State and Federal level.	Flooding	Marengo County EMA	Local	Ongoing	High
1	The participating community has adopted and enforces floodplain management ordinances that meet or exceed the minimum requirements of the NFIP. These requirements are intended to prevent loss of life and property and reduce taxpayer costs for disaster relief, as well as minimize economic and social hardships that result from flooding.	Flooding	Marengo County Floodplain Manager	Local	Ongoing	High
6	Maintain a library of technical assistance and guidance materials for local floodplain managers and use Marengo County EMA website for implementation	All	Marengo County EMA	Local	Medium	Moderate

1	Promote adoption of uniform flood hazard prevention ordinance among all the NFIP communities in Marengo County.	Flooding	Marengo County Floodplain Manager	Local	Ongoing	High
1/6	Acquire GIS software for maintaining risk assessment data	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Prepare and adopt a comprehensive plan	All	Marengo County Commission	Local/CDBG	Medium	Moderate
4	Require the construction of Safe Rooms in new public buildings, such as new schools, libraries, community centers and other public buildings when feasible	High Winds	Marengo County Commission	Local	Medium	Moderate
4	Construct freestanding Public Safe Rooms in existing vulnerable locations	High Winds	Marengo County Commission	Local/HMA	Medium	Moderate
1	Apply for funding to update/revise mitigation plan when needed	All	Marengo County Commission	Local/HMA	Medium	Moderate
1	Conduct special studies as needed to identify hazard risks and mitigation measures	All	Marengo County Commission	Local/HMA	Medium	Moderate
2	Encourage retrofits of older homes constructed before the enactment of floodplain regulations	High Winds	Marengo County Commission	Local	Medium	Moderate
2	Maintain insurance riders on existing properties	All	Marengo County Commission	Local	Ongoing	High
5	Provide back-up power for critical facilities and fire stations	All	Marengo County Commission	Local/HMA	Medium	Moderate
1	Promote good construction practices and proper code enforcement to	All	Marengo County Commission	Local	Ongoing	High

	eliminate most structural problems during natural hazard events					
4	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	High Winds	Marengo County Commission	Local	Ongoing	High
2	Retrofit public schools and critical facilities with community Safe Rooms.	High Winds	Marengo County Commission	Local/HMA	Medium	Moderate
1/6	Increase access to Flood Insurance Rate Maps.	Flooding	Marengo County Floodplain Manager	Local	Ongoing	High
6	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.	Flooding	Marengo County Commission	Local	Ongoing	High
6	Continue to send law enforcement and fire personnel to emergency response training	All	Marengo County Commission	Local	Ongoing	High
2	Install water infrastructure and Fire hydrants in rural areas	Wildfire	Marengo County Commission	Local/CDBG/USDA/DRA	Medium	Moderate
4	Encourage the construction of safe rooms in new and existing construction.	High Winds	Marengo County Commission	Local	Ongoing	High
6	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	All	Marengo County Commission	Local	Medium	Moderate
6	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and	Flooding	Marengo County Commission	Local	Medium	Moderate



	newspaper announcements.					
6	Conduct regular public meetings of hazards and mitigation measures	All	Marengo County Commission	Local	Ongoing	High
3	Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wildfires within urban and rural areas	Wildfire	Marengo County Commission	Local/USDA	Medium	Moderate
3	Seek technical assistance through the Alabama Cooperative Extension System and/or the Alabama Forestry Commission with Best Management Practices (BMPs) for channel and drainage system maintenance.	Flooding	Marengo County Commission	Local	Medium	Moderate
3	Enact and enforce dumping regulations	All	Marengo County Commission	Local	Medium	Moderate
3	Enact and enforce erosion and sedimentation control regulations	Flooding	Marengo County Commission	Local	Medium	Moderate
3	Encourage land acquisition programs to acquire habitat throughout Marengo County	All	Marengo County Commission	Local	Medium	Moderate
3	Improve maintenance programs for streams and drainage ways.	Flooding	Marengo County Commission	Local	Medium	Moderate
4	Implement drainage improvement in watersheds throughout Marengo County	Flooding	Marengo County Commission	Local/HMA/CDBG	Medium	Moderate
2	Continue to clear debris from roads and drainage ways	All	Marengo County Commission	Local	Medium	Moderate
1/2	Continue to improve and maintain county road system	All	Marengo County Commission	Local/CDBG	Medium	Moderate
1	Prepare and implement standard operation procedures for drainage system maintenance	Flooding	Marengo County Commission	Local	Medium	Moderate

5	Improve public warning systems	All	Marengo County Commission	Local/HMA	Medium	Moderate
5	Improve public access to weather alerts	All	Marengo County Commission	Local/HMA	Medium	Moderate
6	Use social media to provide information about the public about dangerous weather	All	Marengo County Commission	Local	Ongoing	High
5	Purchase emergency generators for post- disaster mitigation as needed. In particular for the Volunteer Fire Departments, schools, critical facilities Marengo County Courthouse, and all water and sewer facilities throughout Marengo County.	All	Marengo County Commission	Local/HMA	Medium	Moderate
5	Install an automated weather monitoring system that transmit data to the County EMA and the NWS, including all-weather stations, precipitation gauges, wind gauges, and temperature gauges	All	Marengo County Commission	Local	Medium	Moderate
5	Promote the use of weather radios in households and businesses. Purchase radios and distribute to the public.	All	Marengo County Commission	Local	Ongoing	High
5/6	Upgrade Critical Communication Infrastructure	All	Marengo County Commission	Local/HMA/AFG	Medium	Moderate
5	Continue to offer shelter to individuals and families affected by natural hazards. This includes opening public buildings during times of extreme heat.	All	Marengo County Commission	Local	Ongoing	High
2	Contact utilities in the event of natural hazard so they can inspect their infrastructure for damage	All	Marengo County Commission	Local	Ongoing	High

1	Encourage jurisdictions to commit matches for grants dealing with mitigation	All	Marengo County EMA	Local	Ongoing	High
4	Seek weatherization funding for low income residents	All	Marengo County Commission	Local/CDBG/ Community Action	Medium	Moderate
1	Continue to maintain an inventory of critical facilities and contact information	All	Marengo County EMA	Local	Ongoing	High
1	Research procedures for keeping historical storm data with location, magnitude, and loss value for each event.	All	Marengo County EMA	Local	Medium	Moderate

Action 31 from the 2015 plan was deleted due to it being redundant with action 28.

<b>Town of Dayton Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
6	Maintain a centralized countywide natural hazards and risk assessment database in GIS that is accessible to all personnel including flood zones, geohazards, major drainage structures, dams/levees; tornado tracks	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Join the National Flood Insurance Program	Flooding	Town of Dayton Council	Local	Ongoing	High
1	Train local floodplain managers through programs offered at the State and Federal level.	Flooding	Marengo County EMA	Local	Ongoing	High
6	Maintain a library of technical assistance and guidance materials for local floodplain managers and use Marengo County EMA website for implementation	All	Marengo County EMA	Local	Medium	Moderate
1	Promote adoption of uniform flood hazard prevention ordinance among all the NFIP communities in Marengo County.	Flooding	Marengo County Floodplain Manager	Local	Ongoing	High
1/6	Acquire GIS software for maintaining risk assessment data	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Prepare and adopt a comprehensive plan	All	Town of Dayton Town Council	Local/CDBG	Medium	Moderate
4	Require the construction of Safe Rooms in new public buildings, such as new schools, libraries, community centers	High Winds	Town of Dayton Town Council	Local	Medium	Moderate

	and other public buildings when feasible					
4	Construct freestanding Public Safe Rooms in existing vulnerable locations	High Winds	Town of Dayton Town Council	Local/HMA	Medium	Moderate
1	Apply for funding to update/revise mitigation plan when needed	All	Town of Dayton Town Council	Local/HMA	Medium	Moderate
1	Conduct special studies as needed to identify hazard risks and mitigation measures	All	Town of Dayton Town Council	Local/HMA	Medium	Moderate
2	Encourage retrofits of older homes constructed before the enactment of floodplain regulations	High Winds	Town of Dayton Town Council	Local	Medium	Moderate
2	Maintain insurance riders on existing properties	All	Town of Dayton Town Council	Local	Ongoing	High
5	Provide back-up power for critical facilities and fire stations	All	Town of Dayton Town Council	Local/HMA	Medium	Moderate
1	Promote good construction practices and proper code enforcement to eliminate most structural problems during natural hazard events	All	Town of Dayton Town Council	Local	Ongoing	High
4	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	High Winds	Town of Dayton Town Council	Local	Ongoing	High
2	Retrofit public schools and critical facilities with community Safe Rooms.	High Winds	Town of Dayton Town Council	Local/HMA	Medium	Moderate
1/6	Increase access to Flood Insurance Rate Maps.	Flooding	Town of Dayton Town Council	Local	Ongoing	High

6	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.	Flooding	Town of Dayton Town Council	Local	Ongoing	High
6	Continue to send law enforcement and fire personnel to emergency response training	All	Town of Dayton Town Council	Local	Ongoing	High
2	Install water infrastructure and Fire hydrants in rural areas	Wildfire	Town of Dayton Town Council	Local/CDBG/USDA/DRA	Medium	Moderate
4	Encourage the construction of safe rooms in new and existing construction.	High Winds	Town of Dayton Town Council	Local	Ongoing	High
6	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	All	Town of Dayton Town Council	Local	Medium	Moderate
6	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Flooding	Town of Dayton Town Council	Local	Medium	Moderate
6	Conduct regular public meetings of hazards and mitigation measures	All	Town of Dayton Town Council	Local	Ongoing	High
3	Maintain a healthy forest that can help mitigation the damaging impacts of flooding, erosion, landslides, and wildfires within urban and rural areas	Wildfire	Town of Dayton Town Council	Local/USDA	Medium	Moderate
3	Seek technical assistance through the Alabama Cooperative Extension System and/or the Alabama Forestry Commission with Best Management Practices (BMPs) for channel and drainage system maintenance.	Flooding	Town of Dayton Town Council	Local	Medium	Moderate

3	Enact and enforce dumping regulations	All	Town of Dayton Town Council	Local	Medium	Moderate
3	Enact and enforce erosion and sedimentation control regulations	Flooding	Town of Dayton Town Council	Local	Medium	Moderate
3	Encourage land acquisition programs to acquire habitat throughout Marengo County	All	Town of Dayton Town Council	Local	Medium	Moderate
3	Improve maintenance programs for streams and drainage ways.	Flooding	Town of Dayton Town Council	Local	Medium	Moderate
4	Implement drainage improvement in watersheds throughout Marengo County	Flooding	Town of Dayton Town Council	Local/HMA/CDBG	Medium	Moderate
2	Continue to clear debris from roads and drainage ways	All	Town of Dayton Town Council	Local	Medium	Moderate
1/2	Continue to improve and maintain town road system	All	Town of Dayton Town Council	Local/CDBG	Medium	Moderate
1	Prepare and implement standard operation procedures for drainage system maintenance	Flooding	Town of Dayton Town Council	Local	Medium	Moderate
5	Improve public warning systems	All	Town of Dayton Town Council	Local/HMA	Medium	Moderate
5	Improve public access to weather alerts	All	Town of Dayton Town Council	Local/HMA	Medium	Moderate
6	Use social media to provide information about the public about dangerous weather	All	Town of Dayton Town Council	Local	Ongoing	High
5	Purchase emergency generators for post- disaster mitigation as needed. In particular for the Volunteer Fire Departments, schools, critical facilities Marengo County Courthouse, and all water and sewer facilities throughout	All	Town of Dayton Town Council	Local/HMA	Medium	Moderate

	Marengo County.					
5	Install an automated weather monitoring system that transmit data to the County EMA and the NWS, including all-weather stations, precipitation gauges, wind gauges, and temperature gauges	All	Town of Dayton Town Council	Local	Medium	Moderate
5	Promote the use of weather radios in households and businesses. Purchase radios and distribute to the public.	All	Town of Dayton Town Council	Local	Ongoing	High
5/6	Upgrade Critical Communication Infrastructure	All	Town of Dayton Town Council	Local/HMA/AFG	Medium	Moderate

Action 31 from the 2015 plan was deleted due to it being redundant with action 28.



<b>City of Demopolis Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
6	Maintain a centralized countywide natural hazards and risk assessment database in GIS that is accessible to all personnel including flood zones, geohazards, major drainage structures, dams/levees; tornado tracks	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Effectively administer and enforce local floodplain management regulations along with enforcement of International Building Codes, zoning ordinance and subdivision regulations	Flooding	City of Demopolis Floodplain Manager	Local	Ongoing	High
1	Train local floodplain managers through programs offered at the State and Federal level.	Flooding	Marengo County EMA	Local	Ongoing	High
1	The participating community has adopted and enforces floodplain management ordinances that meet or exceed the minimum requirements of the NFIP. These requirements are intended to prevent loss of life and property and reduce taxpayer costs for disaster relief, as well as minimize economic and social hardships that result from flooding.	Flooding	City of Demopolis Floodplain Manager	Local	Ongoing	High
6	Maintain a library of technical assistance and guidance materials for local floodplain managers and use Marengo County EMA website for implementation	All	Marengo County EMA	Local	Medium	Moderate

1	Promote adoption of uniform flood hazard prevention ordinance among all the NFIP communities in Marengo County.	Flooding	Marengo County Floodplain Manager	Local	Ongoing	High
1/6	Acquire GIS software for maintaining risk assessment data	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Prepare and adopt a comprehensive plan	All	City of Demopolis City Council	Local/CDBG	Medium	Moderate
4	Require the construction of Safe Rooms in new public buildings, such as new schools, libraries, community centers and other public buildings when feasible	High Winds	City of Demopolis City Council	Local	Medium	Moderate
4	Construct freestanding Public Safe Rooms in existing vulnerable locations	High Winds	City of Demopolis City Council	Local/HMA	Medium	Moderate
1	Apply for funding to update/revise mitigation plan when needed	All	City of Demopolis City Council	Local/HMA	Medium	Moderate
1	Conduct special studies as needed to identify hazard risks and mitigation measures	All	City of Demopolis City Council	Local/HMA	Medium	Moderate
2	Encourage retrofits of older homes constructed before the enactment of floodplain regulations	High Winds	City of Demopolis City Council	Local	Medium	Moderate
2	Maintain insurance riders on existing properties	All	City of Demopolis City Council	Local	Ongoing	High
5	Provide back-up power for critical facilities and fire stations	All	City of Demopolis City Council	Local/HMA	Medium	Moderate
1	Promote good construction practices and proper code enforcement to	All	City of Demopolis City Council	Local	Ongoing	High

	eliminate most structural problems during natural hazard events					
4	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	High Winds	City of Demopolis City Council	Local	Ongoing	High
2	Retrofit public schools and critical facilities with community Safe Rooms.	High Winds	City of Demopolis City Council	Local/HMA	Medium	Moderate
1/6	Increase access to Flood Insurance Rate Maps.	Flooding	City of Demopolis Floodplain Manager	Local	Ongoing	High
6	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.	Flooding	City of Demopolis City Council	Local	Ongoing	High
6	Continue to send law enforcement and fire personnel to emergency response training	All	City of Demopolis City Council	Local	Ongoing	High
2	Install water infrastructure and Fire hydrants in rural areas	Wildfire	City of Demopolis City Council	Local/CDBG/USDA/DRA	Medium	Moderate
4	Encourage the construction of safe rooms in new and existing construction.	High Winds	City of Demopolis City Council	Local	Ongoing	High
6	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	All	City of Demopolis City Council	Local	Medium	Moderate
6	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and	Flooding	City of Demopolis City Council	Local	Medium	Moderate

	newspaper announcements.					
6	Conduct regular public meetings of hazards and mitigation measures	All	City of Demopolis City Council	Local	Ongoing	High
3	Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wildfires within urban and rural areas	Wildfire	City of Demopolis City Council	Local/USDA	Medium	Moderate
3	Seek technical assistance through the Alabama Cooperative Extension System and/or the Alabama Forestry Commission with Best Management Practices (BMPs) for channel and drainage system maintenance.	Flooding	City of Demopolis City Council	Local	Medium	Moderate
3	Enact and enforce dumping regulations	All	City of Demopolis City Council	Local	Medium	Moderate
3	Enact and enforce erosion and sedimentation control regulations	Flooding	City of Demopolis City Council	Local	Medium	Moderate
3	Encourage land acquisition programs to acquire habitat throughout Marengo County	All	City of Demopolis City Council	Local	Medium	Moderate
3	Improve maintenance programs for streams and drainage ways.	Flooding	City of Demopolis City Council	Local	Medium	Moderate
4	Implement drainage improvement in watersheds throughout Marengo County	Flooding	City of Demopolis City Council	Local/HMA/CDBG	Medium	Moderate
2	Continue to clear debris from roads and drainage ways	All	City of Demopolis City Council	Local	Medium	Moderate
1/2	Continue to improve and maintain city road system	All	City of Demopolis City Council	Local/CDBG	Medium	Moderate
1	Prepare and implement standard operation procedures for drainage system maintenance	Flooding	City of Demopolis City Council	Local	Medium	Moderate

5	Improve public warning systems	All	City of Demopolis City Council	Local/HMA	Medium	Moderate
5	Improve public access to weather alerts	All	City of Demopolis City Council	Local/HMA	Medium	Moderate
6	Use social media to provide information about the public about dangerous weather	All	City of Demopolis City Council	Local	Ongoing	High
5	Purchase emergency generators for post- disaster mitigation as needed. In particular for the Volunteer Fire Departments, schools, critical facilities Marengo County Courthouse, and all water and sewer facilities throughout Marengo County.	All	City of Demopolis City Council	Local/HMA	Medium	Moderate
5	Install an automated weather monitoring system that transmit data to the County EMA and the NWS, including all-weather stations, precipitation gauges, wind gauges, and temperature gauges	All	City of Demopolis City Council	Local	Medium	Moderate
5	Promote the use of weather radios in households and businesses. Purchase radios and distribute to the public.	All	City of Demopolis City Council	Local	Ongoing	High
5/6	Upgrade Critical Communication Infrastructure	All	City of Demopolis City Council	Local/HMA/AFG	Medium	Moderate

Action 31 from the 2015 plan was deleted due to it being redundant with action 28.

The City of Demopolis completed a CDBG drainage project in the Brickyard Community within the last five years, the approximate cost of this project was \$500,000.

<b>Town of Faunsdale Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
6	Maintain a centralized countywide natural hazards and risk assessment database in GIS that is accessible to all personnel including flood zones, geohazards, major drainage structures, dams/levees; tornado tracks	All	Marengo County EMA	Local/HMA	Medium	Moderate
6	Provide information to the public about flooding safety.	Flooding	Town of Faunsdale Town Council	Local	Medium	Moderate
6	Maintain a library of technical assistance and guidance materials for local floodplain managers and use Marengo County EMA website for implementation	All	Marengo County EMA	Local	Medium	Moderate
1	Promote adoption of uniform flood hazard prevention ordinance among all the NFIP communities in Marengo County.	Flooding	Marengo County Floodplain Manager	Local	Ongoing	High
1/6	Acquire GIS software for maintaining risk assessment data	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Prepare and adopt a comprehensive plan	All	Town of Faunsdale Town Council	Local/CDBG	Medium	Moderate
4	Require the construction of Safe Rooms in new public buildings, such as new schools, libraries, community centers and other public buildings when feasible	High Winds	Town of Faunsdale Town Council	Local	Medium	Moderate

4	Construct freestanding Public Safe Rooms in existing vulnerable locations	High Winds	Town of Faunsdale Town Council	Local/HMA	Medium	Moderate
1	Apply for funding to update/revise mitigation plan when needed	All	Town of Faunsdale Town Council	Local/HMA	Medium	Moderate
1	Conduct special studies as needed to identify hazard risks and mitigation measures	All	Town of Faunsdale Town Council	Local/HMA	Medium	Moderate
2	Encourage retrofits of older homes constructed before the enactment of floodplain regulations	High Winds	Town of Faunsdale Town Council	Local	Medium	Moderate
2	Maintain insurance riders on existing properties	All	Town of Faunsdale Town Council	Local	Ongoing	High
5	Provide back-up power for critical facilities and fire stations	All	Town of Faunsdale Town Council	Local/HMA	Medium	Moderate
1	Promote good construction practices and proper code enforcement to eliminate most structural problems during natural hazard events	All	Town of Faunsdale Town Council	Local	Ongoing	High
4	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	High Winds	Town of Faunsdale Town Council	Local	Ongoing	High
2	Retrofit public schools and critical facilities with community Safe Rooms.	High Winds	Town of Faunsdale Town Council	Local/HMA	Medium	Moderate
1/6	Increase access to Flood Insurance Rate Maps.	Flooding	Town of Faunsdale Town Council	Local	Ongoing	High

6	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.	Flooding	Town of Faunsdale Town Council	Local	Ongoing	High
6	Continue to send law enforcement and fire personnel to emergency response training	All	Town of Faunsdale Town Council	Local	Ongoing	High
2	Install water infrastructure and Fire hydrants in rural areas	Wildfire	Town of Faunsdale Town Council	Local/CDBG/USDA/DRA	Medium	Moderate
4	Encourage the construction of safe rooms in new and existing construction.	High Winds	Town of Faunsdale Town Council	Local	Ongoing	High
6	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	All	Town of Faunsdale Town Council	Local	Medium	Moderate
6	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Flooding	Town of Faunsdale Town Council	Local	Medium	Moderate
6	Conduct regular public meetings of hazards and mitigation measures	All	Town of Faunsdale Town Council	Local	Ongoing	High
3	Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wildfires within urban and rural areas	Wildfire	Town of Faunsdale Town Council	Local/USDA	Medium	Moderate
3	Seek technical assistance through the Alabama Cooperative Extension System and/or the Alabama Forestry Commission with Best Management Practices (BMPs) for channel and drainage system maintenance.	Flooding	Town of Faunsdale Town Council	Local	Medium	Moderate



3	Enact and enforce dumping regulations	All	Town of Faunsdale Town Council	Local	Medium	Moderate
3	Enact and enforce erosion and sedimentation control regulations	Flooding	Town of Faunsdale Town Council	Local	Medium	Moderate
3	Encourage land acquisition programs to acquire habitat throughout Marengo County	All	Town of Faunsdale Town Council	Local	Medium	Moderate
3	Improve maintenance programs for streams and drainage ways.	Flooding	Town of Faunsdale Town Council	Local	Medium	Moderate
4	Implement drainage improvement in watersheds throughout Marengo County	Flooding	Town of Faunsdale Town Council	Local/HMA/CDBG	Medium	Moderate
2	Continue to clear debris from roads and drainage ways	All	Town of Faunsdale Town Council	Local	Medium	Moderate
½	Continue to improve and maintain town road system	All	Town of Faunsdale Town Council	Local/CDBG	Medium	Moderate
1	Prepare and implement standard operation procedures for drainage system maintenance	Flooding	Town of Faunsdale Town Council	Local	Medium	Moderate
5	Improve public warning systems	All	Town of Faunsdale Town Council	Local/HMA	Medium	Moderate
5	Improve public access to weather alerts	All	Town of Faunsdale Town Council	Local/HMA	Medium	Moderate
6	Use social media to provide information about the public about dangerous weather	All	Town of Faunsdale Town Council	Local	Ongoing	High
5	Purchase emergency generators for post- disaster mitigation as needed. In particular for the Volunteer Fire Departments, schools, critical facilities Marengo County Courthouse, and all water and sewer facilities throughout	All	Town of Faunsdale Town Council	Local/HMA	Medium	Moderate

	Marengo County.					
5	Install an automated weather monitoring system that transmit data to the County EMA and the NWS, including all-weather stations, precipitation gauges, wind gauges, and temperature gauges	All	Town of Faunsdale Town Council	Local	Medium	Moderate
5	Promote the use of weather radios in households and businesses. Purchase radios and distribute to the public.	All	Town of Faunsdale Town Council	Local	Ongoing	High
5/6	Upgrade Critical Communication Infrastructure	All	Town of Faunsdale Town Council	Local/HMA/AFG	Medium	Moderate

Action 31 from the 2015 plan was deleted due to it being redundant with action 28.

<b>City of Linden Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
6	Maintain a centralized countywide natural hazards and risk assessment database in GIS that is accessible to all personnel including flood zones, geohazards, major drainage structures, dams/levees; tornado tracks	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Effectively administer and enforce local floodplain management regulations along with enforcement of International Building Codes, zoning ordinance and subdivision regulations	Flooding	City of Linden Floodplain Manager	Local	Ongoing	High
1	Train local floodplain managers through programs offered at the State and Federal level.	Flooding	Marengo County EMA	Local	Ongoing	High
1	The participating community has adopted and enforces floodplain management ordinances that meet or exceed the minimum requirements of the NFIP. These requirements are intended to prevent loss of life and property and reduce taxpayer costs for disaster relief, as well as minimize economic and social hardships that result from flooding.	Flooding	City of Linden Floodplain Manager	Local	Ongoing	High
6	Maintain a library of technical assistance and guidance materials for local floodplain managers and use Marengo County EMA website for implementation	All	Marengo County EMA	Local	Medium	Moderate

1	Promote adoption of uniform flood hazard prevention ordinance among all the NFIP communities in Marengo County.	Flooding	Marengo County Floodplain Manager	Local	Ongoing	High
1/6	Acquire GIS software for maintaining risk assessment data	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Prepare and adopt a comprehensive plan	All	City of Linden City Council	Local/CDBG	Medium	Moderate
4	Require the construction of Safe Rooms in new public buildings, such as new schools, libraries, community centers and other public buildings when feasible	High Winds	City of Linden City Council	Local	Medium	Moderate
4	Construct freestanding Public Safe Rooms in existing vulnerable locations	High Winds	City of Linden City Council	Local/HMA	Medium	Moderate
1	Apply for funding to update/revise mitigation plan when needed	All	City of Linden City Council	Local/HMA	Medium	Moderate
1	Conduct special studies as needed to identify hazard risks and mitigation measures	All	City of Linden City Council	Local/HMA	Medium	Moderate
2	Encourage retrofits of older homes constructed before the enactment of floodplain regulations	High Winds	City of Linden City Council	Local	Medium	Moderate
2	Maintain insurance riders on existing properties	All	City of Linden City Council	Local	Ongoing	High
5	Provide back-up power for critical facilities and fire stations	All	City of Linden City Council	Local/HMA	Medium	Moderate
1	Promote good construction practices and proper code enforcement to	All	City of Linden City Council	Local	Ongoing	High

	eliminate most structural problems during natural hazard events					
4	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	High Winds	City of Linden City Council	Local	Ongoing	High
2	Retrofit public schools and critical facilities with community Safe Rooms.	High Winds	City of Linden City Council	Local/HMA	Medium	Moderate
1/6	Increase access to Flood Insurance Rate Maps.	Flooding	City of Linden Floodplain Manager	Local	Ongoing	High
6	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.	Flooding	City of Linden City Council	Local	Ongoing	High
6	Continue to send law enforcement and fire personnel to emergency response training	All	City of Linden City Council	Local	Ongoing	High
2	Install water infrastructure and Fire hydrants in rural areas	Wildfire	City of Linden City Council	Local/CDBG/USDA/DRA	Medium	Moderate
4	Encourage the construction of safe rooms in new and existing construction.	High Winds	City of Linden City Council	Local	Ongoing	High
6	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	All	City of Linden City Council	Local	Medium	Moderate
6	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and	Flooding	City of Linden City Council	Local	Medium	Moderate

	newspaper announcements.					
6	Conduct regular public meetings of hazards and mitigation measures	All	City of Linden City Council	Local	Ongoing	High
3	Maintain a healthy forest that can help mitigation the damaging impacts of flooding, erosion, landslides, and wildfires within urban and rural areas	Wildfire	City of Linden City Council	Local/USDA	Medium	Moderate
3	Seek technical assistance through the Alabama Cooperative Extension System and/or the Alabama Forestry Commission with Best Management Practices (BMPs) for channel and drainage system maintenance.	Flooding	City of Linden City Council	Local	Medium	Moderate
3	Enact and enforce dumping regulations	All	City of Linden City Council	Local	Medium	Moderate
3	Enact and enforce erosion and sedimentation control regulations	Flooding	City of Linden City Council	Local	Medium	Moderate
3	Encourage land acquisition programs to acquire habitat throughout Marengo County	All	City of Linden City Council	Local	Medium	Moderate
3	Improve maintenance programs for streams and drainage ways.	Flooding	City of Linden City Council	Local	Medium	Moderate
4	Implement drainage improvement in watersheds throughout Marengo County	Flooding	City of Linden City Council	Local/HMA/CDBG	Medium	Moderate
2	Continue to clear debris from roads and drainage ways	All	City of Linden City Council	Local	Medium	Moderate
1/2	Continue to improve and maintain city road system	All	City of Linden City Council	Local/CDBG	Medium	Moderate
1	Prepare and implement standard operation procedures for drainage system maintenance	Flooding	City of Linden City Council	Local	Medium	Moderate

5	Improve public warning systems	All	City of Linden City Council	Local/HMA	Medium	Moderate
5	Improve public access to weather alerts	All	City of Linden City Council	Local/HMA	Medium	Moderate
6	Use social media to provide information about the public about dangerous weather	All	City of Linden City Council	Local	Ongoing	High
5	Purchase emergency generators for post- disaster mitigation as needed. In particular for the Volunteer Fire Departments, schools, critical facilities Marengo County Courthouse, and all water and sewer facilities throughout Marengo County.	All	City of Linden City Council	Local/HMA	Medium	Moderate
5	Install an automated weather monitoring system that transmit data to the County EMA and the NWS, including all-weather stations, precipitation gauges, wind gauges, and temperature gauges	All	City of Linden City Council	Local	Medium	Moderate
5	Promote the use of weather radios in households and businesses. Purchase radios and distribute to the public.	All	City of Linden City Council	Local	Ongoing	High
5/6	Upgrade Critical Communication Infrastructure	All	City of Linden City Council	Local/HMA/AFG	Medium	Moderate

Action 31 from the 2015 plan was deleted due to it being redundant with action 28.

<b>Town of Myrtlewood Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
6	Maintain a centralized countywide natural hazards and risk assessment database in GIS that is accessible to all personnel including flood zones, geohazards, major drainage structures, dams/levees; tornado tracks	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Provide information to the public about flooding safety.	Flooding	Town of Myrtlewood Town Council	Local	Ongoing	High
1	Train local floodplain managers through programs offered at the State and Federal level.	Flooding	Marengo County EMA	Local	Ongoing	High
1	The participating community has adopted and enforces floodplain management ordinances that meet or exceed the minimum requirements of the NFIP. These requirements are intended to prevent loss of life and property and reduce taxpayer costs for disaster relief, as well as minimize economic and social hardships that result from flooding.	Flooding	Town of Myrtlewood Floodplain Manager	Local	Ongoing	High
6	Maintain a library of technical assistance and guidance materials for local floodplain managers and use Marengo County EMA website for implementation	All	Marengo County EMA	Local	Medium	Moderate
1	Promote adoption of uniform flood hazard prevention ordinance among all the NFIP communities in Marengo County.	Flooding	Marengo County Floodplain Manager	Local	Ongoing	High



1/6	Acquire GIS software for maintaining risk assessment data	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Prepare and adopt a comprehensive plan	All	Town of Myrtlewood Town Council	Local/CDBG	Medium	Moderate
4	Require the construction of Safe Rooms in new public buildings, such as new schools, libraries, community centers and other public buildings when feasible	High Winds	Town of Myrtlewood Town Council	Local	Medium	Moderate
4	Construct freestanding Public Safe Rooms in existing vulnerable locations	High Winds	Town of Myrtlewood Town Council	Local/HMA	Medium	Moderate
1	Apply for funding to update/revise mitigation plan when needed	All	Town of Myrtlewood Town Council	Local/HMA	Medium	Moderate
1	Conduct special studies as needed to identify hazard risks and mitigation measures	All	Town of Myrtlewood Town Council	Local/HMA	Medium	Moderate
2	Encourage retrofits of older homes constructed before the enactment of floodplain regulations	High Winds	Town of Myrtlewood Town Council	Local	Medium	Moderate
2	Maintain insurance riders on existing properties	All	Town of Myrtlewood Town Council	Local	Ongoing	High
5	Provide back-up power for critical facilities and fire stations	All	Town of Myrtlewood Town Council	Local/HMA	Medium	Moderate
1	Promote good construction practices and proper code enforcement to eliminate most structural problems during natural hazard events	All	Town of Myrtlewood Town Council	Local	Ongoing	High

4	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	High Winds	Town of Myrtlewood Town Council	Local	Ongoing	High
2	Retrofit public schools and critical facilities with community Safe Rooms.	High Winds	Town of Myrtlewood Town Council	Local/HMA	Medium	Moderate
1/6	Increase access to Flood Insurance Rate Maps.	Flooding	Town of Myrtlewood Floodplain Manager	Local	Ongoing	High
6	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.	Flooding	Town of Myrtlewood Town Council	Local	Ongoing	High
6	Continue to send law enforcement and fire personnel to emergency response training	All	Town of Myrtlewood Town Council	Local	Ongoing	High
2	Install water infrastructure and Fire hydrants in rural areas	Wildfire	Town of Myrtlewood Town Council	Local/CDBG/USDA/ DRA	Medium	Moderate
4	Encourage the construction of safe rooms in new and existing construction.	High Winds	Town of Myrtlewood Town Council	Local	Ongoing	High
6	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	All	Town of Myrtlewood Town Council	Local	Medium	Moderate
6	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Flooding	Town of Myrtlewood Town Council	Local	Medium	Moderate

6	Conduct regular public meetings of hazards and mitigation measures	All	Town of Myrtlewood Town Council	Local	Ongoing	High
3	Maintain a healthy forest that can help mitigation the damaging impacts of flooding, erosion, landslides, and wildfires within urban and rural areas	Wildfire	Town of Myrtlewood Town Council	Local/USDA	Medium	Moderate
3	Seek technical assistance through the Alabama Cooperative Extension System and/or the Alabama Forestry Commission with Best Management Practices (BMPs) for channel and drainage system maintenance.	Flooding	Town of Myrtlewood Town Council	Local	Medium	Moderate
3	Enact and enforce dumping regulations	All	Town of Myrtlewood Town Council	Local	Medium	Moderate
3	Enact and enforce erosion and sedimentation control regulations	Flooding	Town of Myrtlewood Town Council	Local	Medium	Moderate
3	Encourage land acquisition programs to acquire habitat throughout Marengo County	All	Town of Myrtlewood Town Council	Local	Medium	Moderate
3	Improve maintenance programs for streams and drainage ways.	Flooding	Town of Myrtlewood Town Council	Local	Medium	Moderate
4	Implement drainage improvement in watersheds throughout Marengo County	Flooding	Town of Myrtlewood Town Council	Local/HMA/CDBG	Medium	Moderate
2	Continue to clear debris from roads and drainage ways	All	Town of Myrtlewood Town Council	Local	Medium	Moderate
½	Continue to improve and maintain Town road system	All	Town of Myrtlewood Town Council	Local/CDBG	Medium	Moderate
1	Prepare and implement standard operation procedures for drainage system maintenance	Flooding	Town of Myrtlewood Town Council	Local	Medium	Moderate

5	Improve public warning systems	All	Town of Myrtlewood Town Council	Local/HMA	Medium	Moderate
5	Improve public access to weather alerts	All	Town of Myrtlewood Town Council	Local/HMA	Medium	Moderate
6	Use social media to provide information about the public about dangerous weather	All	Town of Myrtlewood Town Council	Local	Ongoing	High
5	Purchase emergency generators for post- disaster mitigation as needed. In particular for the Volunteer Fire Departments, schools, critical facilities Marengo County Courthouse, and all water and sewer facilities throughout Marengo County.	All	Town of Myrtlewood Town Council	Local/HMA	Medium	Moderate
5	Install an automated weather monitoring system that transmit data to the County EMA and the NWS, including all-weather stations, precipitation gauges, wind gauges, and temperature gauges	All	Town of Myrtlewood Town Council	Local	Medium	Moderate
5	Promote the use of weather radios in households and businesses. Purchase radios and distribute to the public.	All	Town of Myrtlewood Town Council	Local	Ongoing	High
5/6	Upgrade Critical Communication Infrastructure	All	Town of Myrtlewood Town Council	Local/HMA/AFG	Medium	Moderate

Action 31 from the 2015 plan was deleted due to it being redundant with action 28.

<b>Town of Providence Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
6	Maintain a centralized countywide natural hazards and risk assessment database in GIS that is accessible to all personnel including flood zones, geohazards, major drainage structures, dams/levees; tornado tracks	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Continue participation in the National Flood Insurance Program	Flooding	Town of Providence Floodplain Manager	Local	Ongoing	High
1	Train local floodplain managers through programs offered at the State and Federal level.	Flooding	Marengo County EMA	Local	Ongoing	High
1	The participating community has adopted and enforces floodplain management ordinances that meet or exceed the minimum requirements of the NFIP. These requirements are intended to prevent loss of life and property and reduce taxpayer costs for disaster relief, as well as minimize economic and social hardships that result from flooding.	Flooding	Town of Providence Floodplain Manager	Local	Ongoing	High
6	Maintain a library of technical assistance and guidance materials for local floodplain managers and use Marengo County EMA website for implementation	All	Marengo County EMA	Local	Medium	Moderate
1	Promote adoption of uniform flood hazard prevention ordinance among all the NFIP communities in Marengo County.	Flooding	Marengo County Floodplain Manager	Local	Ongoing	High

1/6	Acquire GIS software for maintaining risk assessment data	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Prepare and adopt a comprehensive plan	All	Town of Providence Town Council	Local/CDBG	Medium	Moderate
4	Require the construction of Safe Rooms in new public buildings, such as new schools, libraries, community centers and other public buildings when feasible	High Winds	Town of Providence Town Council	Local	Medium	Moderate
4	Construct freestanding Public Safe Rooms in existing vulnerable locations	High Winds	Town of Providence Town Council	Local/HMA	Medium	Moderate
1	Apply for funding to update/revise mitigation plan when needed	All	Town of Providence Town Council	Local/HMA	Medium	Moderate
1	Conduct special studies as needed to identify hazard risks and mitigation measures	All	Town of Providence Town Council	Local/HMA	Medium	Moderate
2	Encourage retrofits of older homes constructed before the enactment of floodplain regulations	High Winds	Town of Providence Town Council	Local	Medium	Moderate
2	Maintain insurance riders on existing properties	All	Town of Providence Town Council	Local	Ongoing	High
5	Provide back-up power for critical facilities and fire stations	All	Town of Providence Town Council	Local/HMA	Medium	Moderate
1	Promote good construction practices and proper code enforcement to eliminate most structural problems during natural hazard events	All	Town of Providence Town Council	Local	Ongoing	High

4	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	High Winds	Town of Providence Town Council	Local	Ongoing	High
2	Retrofit public schools and critical facilities with community Safe Rooms.	High Winds	Town of Providence Town Council	Local/HMA	Medium	Moderate
1/6	Increase access to Flood Insurance Rate Maps.	Flooding	Town of Providence Floodplain Manager	Local	Ongoing	High
6	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.	Flooding	Town of Providence Town Council	Local	Ongoing	High
6	Continue to send law enforcement and fire personnel to emergency response training	All	Town of Providence Town Council	Local	Ongoing	High
2	Install water infrastructure and Fire hydrants in rural areas	Wildfire	Town of Providence Town Council	Local/CDBG/USDA/DRA	Medium	Moderate
4	Encourage the construction of safe rooms in new and existing construction.	High Winds	Town of Providence Town Council	Local	Ongoing	High
6	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	All	Town of Providence Town Council	Local	Medium	Moderate
6	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Flooding	Town of Providence Town Council	Local	Medium	Moderate

6	Conduct regular public meetings of hazards and mitigation measures	All	Town of Providence Town Council	Local	Ongoing	High
3	Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wildfires within urban and rural areas	Wildfire	Town of Providence Town Council	Local/USDA	Medium	Moderate
3	Seek technical assistance through the Alabama Cooperative Extension System and/or the Alabama Forestry Commission with Best Management Practices (BMPs) for channel and drainage system maintenance.	Flooding	Town of Providence Town Council	Local	Medium	Moderate
3	Enact and enforce dumping regulations	All	Town of Providence Town Council	Local	Medium	Moderate
3	Enact and enforce erosion and sedimentation control regulations	Flooding	Town of Providence Town Council	Local	Medium	Moderate
3	Encourage land acquisition programs to acquire habitat throughout Marengo County	All	Town of Providence Town Council	Local	Medium	Moderate
3	Improve maintenance programs for streams and drainage ways.	Flooding	Town of Providence Town Council	Local	Medium	Moderate
4	Implement drainage improvement in watersheds throughout Marengo County	Flooding	Town of Providence Town Council	Local/HMA/CDBG	Medium	Moderate
2	Continue to clear debris from roads and drainage ways	All	Town of Providence Town Council	Local	Medium	Moderate
1/2	Continue to improve and maintain Town road system	All	Town of Providence Town Council	Local/CDBG	Medium	Moderate
1	Prepare and implement standard operation procedures for drainage system maintenance	Flooding	Town of Providence Town Council	Local	Medium	Moderate



5	Improve public warning systems	All	Town of Providence Town Council	Local/HMA	Medium	Moderate
5	Improve public access to weather alerts	All	Town of Providence Town Council	Local/HMA	Medium	Moderate
6	Use social media to provide information about the public about dangerous weather	All	Town of Providence Town Council	Local	Ongoing	High
5	Purchase emergency generators for post- disaster mitigation as needed. In particular for the Volunteer Fire Departments, schools, critical facilities Marengo County Courthouse, and all water and sewer facilities throughout Marengo County.	All	Town of Providence Town Council	Local/HMA	Medium	Moderate
5	Install an automated weather monitoring system that transmit data to the County EMA and the NWS, including all-weather stations, precipitation gauges, wind gauges, and temperature gauges	All	Town of Providence Town Council	Local	Medium	Moderate
5	Promote the use of weather radios in households and businesses. Purchase radios and distribute to the public.	All	Town of Providence Town Council	Local	Ongoing	High
5/6	Upgrade Critical Communication Infrastructure	All	Town of Providence Town Council	Local/HMA/AFG	Medium	Moderate

Action 31 from the 2015 plan was deleted due to it being redundant with action 28.

<b>Town of Sweet Water Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
6	Maintain a centralized countywide natural hazards and risk assessment database in GIS that is accessible to all personnel including flood zones, geohazards, major drainage structures, dams/levees; tornado tracks	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Provide information to the public about flooding safety.	Flooding	Town of Sweet Water Town Council	Local	Ongoing	High
1	Train local floodplain managers through programs offered at the State and Federal level.	Flooding	Marengo County EMA	Local	Ongoing	High
1	The participating community has adopted and enforces floodplain management ordinances that meet or exceed the minimum requirements of the NFIP. These requirements are intended to prevent loss of life and property and reduce taxpayer costs for disaster relief, as well as minimize economic and social hardships that result from flooding.	Flooding	Town of Sweet Water Floodplain Manager	Local	Ongoing	High
6	Maintain a library of technical assistance and guidance materials for local floodplain managers and use Marengo County EMA website for implementation	All	Marengo County EMA	Local	Medium	Moderate
1	Promote adoption of uniform flood hazard prevention ordinance among all the NFIP communities in Marengo County.	Flooding	Marengo County Floodplain Manager	Local	Ongoing	High

1/6	Acquire GIS software for maintaining risk assessment data	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Prepare and adopt a comprehensive plan	All	Town of Sweet Water Town Council	Local/CDBG	Medium	Moderate
4	Require the construction of Safe Rooms in new public buildings, such as new schools, libraries, community centers and other public buildings when feasible	High Winds	Town of Sweet Water Town Council	Local	Medium	Moderate
4	Construct freestanding Public Safe Rooms in existing vulnerable locations	High Winds	Town of Sweet Water Town Council	Local/HMA	Medium	Moderate
1	Apply for funding to update/revise mitigation plan when needed	All	Town of Sweet Water Town Council	Local/HMA	Medium	Moderate
1	Conduct special studies as needed to identify hazard risks and mitigation measures	All	Town of Sweet Water Town Council	Local/HMA	Medium	Moderate
2	Encourage retrofits of older homes constructed before the enactment of floodplain regulations	High Winds	Town of Sweet Water Town Council	Local	Medium	Moderate
2	Maintain insurance riders on existing properties	All	Town of Sweet Water Town Council	Local	Ongoing	High
5	Provide back-up power for critical facilities and fire stations	All	Town of Sweet Water Town Council	Local/HMA	Medium	Moderate
1	Promote good construction practices and proper code enforcement to eliminate most structural problems during natural hazard events	All	Town of Sweet Water Town Council	Local	Ongoing	High

4	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	High Winds	Town of Sweet Water Town Council	Local	Ongoing	High
2	Retrofit public schools and critical facilities with community Safe Rooms.	High Winds	Town of Sweet Water Town Council	Local/HMA	Medium	Moderate
1/6	Increase access to Flood Insurance Rate Maps.	Flooding	Town of Sweet Water Floodplain Manager	Local	Ongoing	High
6	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.	Flooding	Town of Sweet Water Town Council	Local	Ongoing	High
6	Continue to send law enforcement and fire personnel to emergency response training	All	Town of Sweet Water Town Council	Local	Ongoing	High
2	Install water infrastructure and Fire hydrants in rural areas	Wildfire	Town of Sweet Water Town Council	Local/CDBG/USDA/ DRA	Medium	Moderate
4	Encourage the construction of safe rooms in new and existing construction.	High Winds	Town of Sweet Water Town Council	Local	Ongoing	High
6	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	All	Town of Sweet Water Town Council	Local	Medium	Moderate
6	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Flooding	Town of Sweet Water Town Council	Local	Medium	Moderate

6	Conduct regular public meetings of hazards and mitigation measures	All	Town of Sweet Water Town Council	Local	Ongoing	High
3	Maintain a healthy forest that can help mitigation the damaging impacts of flooding, erosion, landslides, and wildfires within urban and rural areas	Wildfire	Town of Sweet Water Town Council	Local/USDA	Medium	Moderate
3	Seek technical assistance through the Alabama Cooperative Extension System and/or the Alabama Forestry Commission with Best Management Practices (BMPs) for channel and drainage system maintenance.	Flooding	Town of Sweet Water Town Council	Local	Medium	Moderate
3	Enact and enforce dumping regulations	All	Town of Sweet Water Town Council	Local	Medium	Moderate
3	Enact and enforce erosion and sedimentation control regulations	Flooding	Town of Sweet Water Town Council	Local	Medium	Moderate
3	Encourage land acquisition programs to acquire habitat throughout Marengo County	All	Town of Sweet Water Town Council	Local	Medium	Moderate
3	Improve maintenance programs for streams and drainage ways.	Flooding	Town of Sweet Water Town Council	Local	Medium	Moderate
4	Implement drainage improvement in watersheds throughout Marengo County	Flooding	Town of Sweet Water Town Council	Local/HMA/CDBG	Medium	Moderate
2	Continue to clear debris from roads and drainage ways	All	Town of Sweet Water Town Council	Local	Medium	Moderate
1/2	Continue to improve and maintain Town road system	All	Town of Sweet Water Town Council	Local/CDBG	Medium	Moderate
1	Prepare and implement standard operation procedures for drainage system maintenance	Flooding	Town of Sweet Water Town Council	Local	Medium	Moderate

5	Improve public warning systems	All	Town of Sweet Water Town Council	Local/HMA	Medium	Moderate
5	Improve public access to weather alerts	All	Town of Sweet Water Town Council	Local/HMA	Medium	Moderate
6	Use social media to provide information about the public about dangerous weather	All	Town of Sweet Water Town Council	Local	Ongoing	High
5	Purchase emergency generators for post- disaster mitigation as needed. In particular for the Volunteer Fire Departments, schools, critical facilities Marengo County Courthouse, and all water and sewer facilities throughout Marengo County.	All	Town of Sweet Water Town Council	Local/HMA	Medium	Moderate
5	Install an automated weather monitoring system that transmit data to the County EMA and the NWS, including all-weather stations, precipitation gauges, wind gauges, and temperature gauges	All	Town of Sweet Water Town Council	Local	Medium	Moderate
5	Promote the use of weather radios in households and businesses. Purchase radios and distribute to the public.	All	Town of Sweet Water Town Council	Local	Ongoing	High
5/6	Upgrade Critical Communication Infrastructure	All	Town of Sweet Water Town Council	Local/HMA/AFG	Medium	Moderate

Action 31 from the 2015 plan was deleted due to it being redundant with action 28.

<b>Town of Thomaston Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
6	Maintain a centralized countywide natural hazards and risk assessment database in GIS that is accessible to all personnel including flood zones, geohazards, major drainage structures, dams/levees; tornado tracks	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Effectively administer and enforce local floodplain management regulations.	Flooding	Town of Thomaston Floodplain Manager	Local	Ongoing	High
1	Train local floodplain managers through programs offered at the State and Federal level.	Flooding	Marengo County EMA	Local	Ongoing	High
1	The participating community has adopted and enforces floodplain management ordinances that meet or exceed the minimum requirements of the NFIP. These requirements are intended to prevent loss of life and property and reduce taxpayer costs for disaster relief, as well as minimize economic and social hardships that result from flooding.	Flooding	Town of Thomaston Floodplain Manager	Local	Ongoing	High
6	Maintain a library of technical assistance and guidance materials for local floodplain managers and use Marengo County EMA website for implementation	All	Marengo County EMA	Local	Medium	Moderate
1	Promote adoption of uniform flood hazard prevention ordinance among all the NFIP communities in Marengo County.	Flooding	Marengo County Floodplain Manager	Local	Ongoing	High

1/6	Acquire GIS software for maintaining risk assessment data	All	Marengo County EMA	Local/HMA	Medium	Moderate
1	Prepare and adopt a comprehensive plan	All	Town of Thomaston Town Council	Local/CDBG	Medium	Moderate
4	Require the construction of Safe Rooms in new public buildings, such as new schools, libraries, community centers and other public buildings when feasible	High Winds	Town of Thomaston Town Council	Local	Medium	Moderate
4	Construct freestanding Public Safe Rooms in existing vulnerable locations	High Winds	Town of Thomaston Town Council	Local/HMA	Medium	Moderate
1	Apply for funding to update/revise mitigation plan when needed	All	Town of Thomaston Town Council	Local/HMA	Medium	Moderate
1	Conduct special studies as needed to identify hazard risks and mitigation measures	All	Town of Thomaston Town Council	Local/HMA	Medium	Moderate
2	Encourage retrofits of older homes constructed before the enactment of floodplain regulations	High Winds	Town of Thomaston Town Council	Local	Medium	Moderate
2	Maintain insurance riders on existing properties	All	Town of Thomaston Town Council	Local	Ongoing	High
5	Provide back-up power for critical facilities and fire stations	All	Town of Thomaston Town Council	Local/HMA	Medium	Moderate
1	Promote good construction practices and proper code enforcement to eliminate most structural problems during natural hazard events	All	Town of Thomaston Town Council	Local	Ongoing	High



4	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	High Winds	Town of Thomaston Town Council	Local	Ongoing	High
2	Retrofit public schools and critical facilities with community Safe Rooms.	High Winds	Town of Thomaston Town Council	Local/HMA	Medium	Moderate
1/6	Increase access to Flood Insurance Rate Maps.	Flooding	Town of Thomaston Floodplain Manager	Local	Ongoing	High
6	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.	Flooding	Town of Thomaston Town Council	Local	Ongoing	High
6	Continue to send law enforcement and fire personnel to emergency response training	All	Town of Thomaston Town Council	Local	Ongoing	High
2	Install water infrastructure and Fire hydrants in rural areas	Wildfire	Town of Thomaston Town Council	Local/CDBG/USDA/DRA	Medium	Moderate
4	Encourage the construction of safe rooms in new and existing construction.	High Winds	Town of Thomaston Town Council	Local	Ongoing	High
6	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	All	Town of Thomaston Town Council	Local	Medium	Moderate
6	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Flooding	Town of Thomaston Town Council	Local	Medium	Moderate

6	Conduct regular public meetings of hazards and mitigation measures	All	Town of Thomaston Town Council	Local	Ongoing	High
3	Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wildfires within urban and rural areas	Wildfire	Town of Thomaston Town Council	Local/USDA	Medium	Moderate
3	Seek technical assistance through the Alabama Cooperative Extension System and/or the Alabama Forestry Commission with Best Management Practices (BMPs) for channel and drainage system maintenance.	Flooding	Town of Thomaston Town Council	Local	Medium	Moderate
3	Enact and enforce dumping regulations	All	Town of Thomaston Town Council	Local	Medium	Moderate
3	Enact and enforce erosion and sedimentation control regulations	Flooding	Town of Thomaston Town Council	Local	Medium	Moderate
3	Encourage land acquisition programs to acquire habitat throughout Marengo County	All	Town of Thomaston Town Council	Local	Medium	Moderate
3	Improve maintenance programs for streams and drainage ways.	Flooding	Town of Thomaston Town Council	Local	Medium	Moderate
4	Implement drainage improvement in watersheds throughout Marengo County	Flooding	Town of Thomaston Town Council	Local/HMA/CDBG	Medium	Moderate
2	Continue to clear debris from roads and drainage ways	All	Town of Thomaston Town Council	Local	Medium	Moderate
½	Continue to improve and maintain Town road system	All	Town of Thomaston Town Council	Local/CDBG	Medium	Moderate
1	Prepare and implement standard operation procedures for drainage system maintenance	Flooding	Town of Thomaston Town Council	Local	Medium	Moderate

5	Improve public warning systems	All	Town of Thomaston Town Council	Local/HMA	Medium	Moderate
5	Improve public access to weather alerts	All	Town of Thomaston Town Council	Local/HMA	Medium	Moderate
6	Use social media to provide information about the public about dangerous weather	All	Town of Thomaston Town Council	Local	Ongoing	High
5	Purchase emergency generators for post- disaster mitigation as needed. In particular for the Volunteer Fire Departments, schools, critical facilities Marengo County Courthouse, and all water and sewer facilities throughout Marengo County.	All	Town of Thomaston Town Council	Local/HMA	Medium	Moderate
5	Install an automated weather monitoring system that transmit data to the County EMA and the NWS, including all-weather stations, precipitation gauges, wind gauges, and temperature gauges	All	Town of Thomaston Town Council	Local	Medium	Moderate
5	Promote the use of weather radios in households and businesses. Purchase radios and distribute to the public.	All	Town of Thomaston Town Council	Local	Ongoing	High
5/6	Upgrade Critical Communication Infrastructure	All	Town of Thomaston Town Council	Local/HMA/AFG	Medium	Moderate

Action 31 from the 2015 plan was deleted due to it being redundant with action 28.

<b>Perry County Commission Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
2	Continue to clear debris from roads and drainage ways	Flood	County Road and Bridge Department	Perry County Local Funds	High/Ongoing	High
2	Continue to improve and maintain county road system and drainage infrastructure	All	County Road and Bridge Department	Perry County Local Funds	High/Ongoing	High
5	Continue to offer shelter to individuals and families affected by natural hazards	All	Perry County Emergency Management	Perry County Local Funds	High/Ongoing	High
2	Contact utilities in the event of natural hazard so they can inspect their infrastructure for damage	All	Perry County Emergency Management	Perry County Local Funds	High/Ongoing	High
1	Encourage jurisdictions to commit matches for grants dealing with mitigation	All	Perry County Emergency Management	Perry County Local Funds	High/Ongoing	High
6	Provide the public information on actions to take during severe weather through newspaper and radio announcements	All	Perry County Emergency Management	Perry County Local Funds	High/Ongoing	High
5	Provide information to municipalities regarding natural hazards and general principles outlining procedures	All	Perry County Emergency Management	Perry County Local Funds	High/Ongoing	High
6	Provide information to citizens regarding natural hazards safety	All	Perry County Emergency Management	Perry County Local Funds	High/Ongoing	High
1	Join NFIP Program	Flood	Perry County Commission	Perry County Local Funds	Medium	Moderate

1	Apply for funding to update/revise mitigation plan when needed	All	Perry County Commission	Perry County Local Funds/FEMA Grant Funds	High	High
5	Early Warning Alert Notification Systems	All	Perry County Commission	Perry County Local Funds/FEMA Grant Funds	High/Ongoing	High
5	Purchase generators for critical facilities and fire stations	All	Perry County Commission	Perry County Local Funds/FEMA Grant Funds	High/Ongoing	High
5	Purchase NOAA weather radios	All	Perry County Commission	Perry County Local Funds/FEMA Grant Funds	High/Ongoing	High
4	Community Storm Shelters	High Winds, Tornadoes, Hurricanes	Perry County Commission	Perry County Local Funds/FEMA Grant Funds/CDBG Funds	High/Ongoing	High
4	Individual Storm Shelters	High Winds, Tornadoes	Perry County Commission	Perry County Local Funds/FEMA Grant Funds	High/Ongoing	High
4	Promotion of safe rooms in new residences.	High Winds, Tornadoes, Hurricanes	Perry County Commission/Perry County EMA	Perry County Local Funds	High/Ongoing	High
5	Purchase of tornado sirens for areas with concentrations of population	Tornadoes	Perry County Commission	Perry County Local Funds/FEMA Grant Funds	High	Moderate
4	Provide storm shelters in areas of high population density and mobile home communities	High Winds, Tornadoes, Hurricanes	Perry County Commission	Perry County Local Funds/FEMA Grant Funds/CDBG Funds	High	High

2	Improve drainage infrastructure throughout County	Flash Floods/Severe Storms	Perry County Commission/Perry County Road and Bridge Department	Perry County Local Funds/FEMA Grant Funds/CDBG Funds	Medium/Ongoing	Moderate
2	Drainage projects in areas identified as being flood prone	Flash Floods/Severe Storms	Perry County Commission/Perry County Road and Bridge Department	Perry County Local Funds/FEMA Grant Funds/CDBG Funds	Medium/Ongoing	Moderate
2	Stormwater Management Projects throughout the County	Flash Floods/Severe Storms	Perry County Commission/Perry County Road and Bridge Department	Perry County Local Funds/FEMA Grant Funds/CDBG Funds	Medium/Ongoing	Moderate
5	Open buildings to the public during extreme heat	Extreme Heat	Perry County Commission	Perry County Local Funds	Medium/Ongoing	Moderate
2	Retrofitting of critical facilities	Wind Events	Perry County Commission	Perry County Local Funds	Medium	Moderate
3	Fire hydrants in rural areas	Wildfires	Perry County Commission/Perry County Road and Bridge Department	Perry County Local Funds/CDBG Funds/Other Federal Funds	Medium/Ongoing	Moderate
2	Seek weatherization funding for low income residents	All	Perry County Commission	Perry County Commission/Community Action Agencies/ADECA	Medium	Moderate
1	Begin maintaining an inventory of critical facilities with value and contact information	All	Perry County Commission/Perry County EMA	Perry County Local Funds	Medium/Ongoing	Low
3	Work closely with Perry Forester to mitigate wildfire dangers	Wildfire	Perry County Commission/Perry County EMA	Perry County Local Funds	Medium/Ongoing	Low

6	Research procedures for keeping historical storm data with location, magnitude, and loss values for each event	All	Perry County EMA	Perry County Local Funds	Medium/Ongoing	Low
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<b>City of Marion Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
5	Continue to send law enforcement and fire personnel to emergency response training	All	City of Marion-Mayor/Council	City of Marion	High/Ongoing	High
1	Continue to participate in the National Flood Insurance Program	Flood	City of Marion-Mayor/Council	City of Marion	High/Ongoing	Moderate
5	Purchase generators for critical facilities including water and sewer systems and fire stations	All	City of Marion-Mayor/Council	City of Marion/FEMA Grant Funds	Medium	High
4	Safe rooms in community center buildings	High Winds, Tornadoes, Hurricanes	City of Marion-Mayor/Council	City of Marion	Medium	Moderate
5	Purchase of tornado sirens for areas with concentrations of population	Tornadoes	City of Marion-Mayor/Council	City of Marion/FEMA Grant Funds	Medium	Moderate
4	Provide storm shelters in areas of high population density and mobile home communities	High Winds, Tornadoes, Hurricanes	City of Marion-Mayor/Council	City of Marion/FEMA Grant Funds/CDBG Funds	Medium	High
2	Drainage projects in areas identified as being flood prone	Flash Floods/Severe Storms	City of Marion-Mayor/Council	City of Marion/FEMA Grant Funds/CDBG Funds	Medium	Moderate
2	Stormwater Management Projects throughout the city	Flash Floods/Severe Storms	City of Marion-Mayor/Council	City of Marion/FEMA Grant Funds/CDBG Funds	Medium	Moderate



2	Retrofitting of critical facilities	Wind Events	City of Marion-Mayor/Council	City of Marion	Medium	Moderate
3	Work closely with Perry Forester to mitigate wildfire dangers	Wildfire	City of Marion-Mayor/Council	City of Marion	Medium/Ongoing	Low
2	Continue to clear debris from roads and drainage ways	Flood	City of Marion-Street Department	City of Marion	High/Ongoing	High
2	Continue to improve and maintain city road system and drainage infrastructure	All	City of Marion-Street Department	City of Marion	High/Ongoing	High
4	Individual Storm Shelters	High Winds, Tornadoes	City of Marion	City of Marion/FEMA Grant Funds	Medium	Moderate

<b>City of Uniontown Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
5	Continue to send law enforcement and fire personnel to emergency response training	All	City of Uniontown-Mayor/Council	City of Uniontown	High/Ongoing	High
1	Join and participate in the National Flood Insurance Program	Flood	City of Uniontown-Mayor/Council	City of Uniontown	Medium	Moderate
5	Purchase generators for critical facilities including water and sewer systems and fire stations	All	City of Uniontown-Mayor/Council	City of Uniontown/FEMA Grant Funds	Medium	High
5	Purchase of tornado sirens for areas with concentrations of population	Tornadoes	City of Uniontown-Mayor/Council	City of Uniontown/FEMA Grant Funds	Medium	Moderate
4	Provide storm shelters in areas of high population density and mobile home communities	High Winds, Tornadoes, Hurricanes	City of Uniontown-Mayor/Council	City of Uniontown/FEMA Grant Funds/CDBG Funds	Medium	High
4	Safe rooms in community center buildings	High Winds, Tornadoes, Hurricanes	City of Uniontown-Mayor/Council	City of Uniontown	Medium	Moderate
2	Stormwater Management Projects throughout the city	Flash Floods/Severe Storms	City of Uniontown-Mayor/Council	City of Uniontown/FEMA Grant Funds/CDBG Funds	Medium	Moderate
2	Drainage projects in areas identified as being flood prone	Flash Floods/Severe Storms	City of Uniontown-Mayor/Council	City of Uniontown/FEMA Grant Funds/CDBG Funds	Medium	Moderate

2	Retrofitting of critical facilities	Wind Events	City of Uniontown- Mayor/Council	City of Uniontown	Medium	Moderate
3	Work closely with Perry Forester to mitigate wildfire dangers	Wildfire	City of Uniontown- Mayor/Council	City of Uniontown	Medium/ Ongoing	Low
2	Continue to clear debris from roads and drainage ways	Flood	City of Uniontown-Street Department	City of Uniontown	High/Ongoing	High
2	Continue to improve and maintain city road system and drainage infrastructure	All	City of Uniontown-Street Department	City of Uniontown	High/Ongoing	High
4	Individual Storm Shelters	High Winds, Tornadoes	City of Uniontown	City of Uniontown/FEMA Grant Funds	Medium	Moderate

**Perry County Board of Education Mitigation Action Plan**

<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
5	Continue to offer shelter to individuals and families affected by natural hazards	All	Perry County School Board	Perry County BOE	High/Ongoing	Moderate
5	Purchase generators for critical facilities	All	Perry County School Board	Perry BOE/FEMA Grant Funds	Medium	Low
4	Provide storm shelters at schools	Tornado, Severe Storms	Perry County School Board	Perry BOE/FEMA Grant Funds	Medium	Moderate
2	Retrofitting of schools	Severe Storms, Hurricanes	Perry County School Board	Perry BOE/FEMA Grant Funds	Medium	Low
2	Correct storm water management/ drainage issues on school grounds	Flood	Perry County School Board	Perry BOE/FEMA Grant Funds	Medium	Low

### Pickens County Board of Education Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Construct storm retrofits to educational buildings	Thunderstorms, Tornados, Hurricanes	Pickens County BOE	HMA Grants, Local	Low	Moderate
4.1	Construct/ install community safe rooms to educational buildings to include backup generators	Thunderstorms, Tornados, Hurricanes	Pickens County BOE	HMA Grants, Local	High	Moderate
4.2	Construct/install individual storm shelter to educational buildings	Thunderstorms, Tornados, Hurricanes	Pickens County BOE	HMA Grants, Local	Low	High
5	Provide generators for educational buildings	All	Pickens County BOE	HMA Grants, Local	High	High

## Pickens County Commission Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Enforce floodplain management requirements, regulate construction or improvements in Special Flood Hazards Areas (SFHAs)	Flood	County Engineer	HMA grants/ Local	Low	High
4	Install/ construct community safe rooms to include generators and outdoor warning sirens if needed	Thunderstorms, Tornados, Hurricanes	Pickens County EMA	HMA grants/ Local	High/ Ongoing	Moderate
4.1	Install/construct individual safe rooms	Thunderstorms, Tornados, Hurricanes	Pickens County EMA	HMA grants/ Local	High/ Ongoing	Moderate
4.2	Construct storm retrofits to critical facilities	Thunderstorms, Tornados, Hurricanes	County Commission, Pickens County Fire Association	HMA grants/ Local	Low	Moderate
4.3	Construct/ install safe rooms at critical facility buildings to include generators as needed	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, County Fire Association	HMA grants/ Local	High	Moderate
5	Install emergency generators at critical facilities	All	Pickens County EMA, Fire Assoc., Water Authority	HMA grants/ Local	High/ Ongoing	High
5.1	Upgrade communication systems	All	Pickens County EMA, Pickens County Commission	HMA grants/ Local	High	Moderate
5.2	Distribute NOAA Weather Radios and/ or Alert FM Receivers to residents	All	Pickens County EMA	HMA grants/ Local	High	High

Table 4-14 2014 Pickens County Mitigation Actions

<b>Mitigation Action 2.4.1</b>	Upgrade drainage systems	<b>REMOVED 2020</b>
<b>Hazard(s) Addressed</b>	Flood	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Pickens County EMA & Pickens County	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>		
<b>Funding Sources</b>	NFIP, CDBG, HMGP, Local	
<b>Priority</b>		

Table 5-49: Pickens County Fire Association Mitigation Actions

<b>Mitigation Action</b>	Construct storm retrofits to fire buildings	ALL REMOVED 2020 – Combined with Pickens County Action plan
<b>Hazard(s) Addressed</b>	Thunderstorms, Tornados, Hurricanes	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Pickens County Fire Association	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	\$250,000 each	
<b>Funding Sources</b>	HMGP, ADECA, Governor’s Emergency Relief Fund, Local	
<b>Priority</b>	Low	
<b>Mitigation Action</b>	Construct/install community safe rooms to fire buildings to include generators	
<b>Hazard(s) Addressed</b>	Thunderstorm, Tornado	
<b>Applies to new/existing asset</b>	New and Existing	
<b>Local Planning Mechanism</b>	Pickens County Fire Association	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	\$100,000 each	
<b>Funding Sources</b>	HMGP, ADECA, Governor’s Emergency Relief Fund, Local	
<b>Priority</b>	High	
<b>Mitigation Action</b>	Construct/install individual storm shelters to fire buildings	
<b>Hazard(s) Addressed</b>	Thunderstorm, Tornado	
<b>Applies to new/existing asset</b>	New and Existing	
<b>Local Planning Mechanism</b>	Pickens County Fire Association	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	\$5,000 each	
<b>Funding Sources</b>	HMGP, ADECA, Governor’s Emergency Relief Fund, Local	
<b>Priority</b>	Low	
<b>Mitigation Action</b>	Provide generators for fire buildings	
<b>Hazard(s) Addressed</b>	All	
<b>Applies to new/existing asset</b>	Existing	
<b>Local Planning Mechanism</b>	Pickens County Fire Association	
<b>Time frame for Completion</b>	One year from funding availability	
<b>Estimated Cost</b>	\$25,000 ea	
<b>Funding Sources</b>	HMGP, ADECA, Local	
<b>Priority</b>	High	

The Pickens County Medical Center Action Plan has been deleted for 2020 due to the closure of the medical center March 6, 2020.

## City of Aliceville Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Enforce floodplain management requirements, regulate construction or improvements in Special Flood Hazards Areas (SFHAs)	Flood	Mayor/Council	Local	Low	High
4	Construct community safe rooms with generators	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	Medium	Moderate
4.1	Construct/ install safe rooms at educational buildings to include generators as needed	Thunderstorms, Tornados, Hurricanes	Pickens County BOE	HMA grants/ Local	High	Moderate
4.2	Construct storm retrofits to educational buildings	Thunderstorms, Tornados, Hurricanes	Pickens County BOE	HMA grants/ Local	Low	Moderate
4.3	Construct public safety building	All	Mayor/Council	Local	Low	Moderate
4.4	Upgrade drainage systems	Flood	Mayor/Council	HMA grants/ Local	Low	Moderate
5	Provide adequate kilowatt generators to critical facilities	All	Pickens County EMA, Mayor/Council	HMA grants/ Local	High	High
5.1	Upgrade/expand communication systems	All	Pickens County EMA, Mayor/Council	HMA grants/ Local	High	Moderate
5.2	Install additional outdoor warning sirens	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	Medium	Moderate
6	Participate in public awareness events such as City/County Day, Hurricane Awareness Week, and Severe Weather Week	All	Mayor/Council	Local	High	High



## City of Reform Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Enforce floodplain management requirements, regulate construction or improvements in Special Flood Hazards Areas (SFHAs)	Flood	Mayor/Council,	Local	Low	High
4	Construct/ install community safe rooms with emergency backup generators	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	High	Moderate
4.1	Construct/ install safe rooms at government buildings to include generators as needed	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	High	Moderate
4.2	Construct storm retrofits to government buildings	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	Low	Moderate
5	Install additional outdoor warning sirens	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	Medium	Moderate
5.1	Provide generators at critical facilities	All	Pickens County EMA, Mayor/Council	HMA grants/ Local	Medium	Moderate

## Town of Carrollton Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Enforce floodplain management requirements, regulate construction or improvements in Special Flood Hazards Areas (SFHAs)	Flood	Mayor/Council	Local	Low	High
4	Construct/ install community safe rooms with emergency backup generators	Thunderstorms, Tornados, Hurricanes	Mayor/Council	HMA grants/ Local	High	Moderate
4.1	Construct/install individual safe rooms	Thunderstorms, Tornados, Hurricanes	Mayor/Council	HMA grants/ Local	High	Moderate
4.2	Upgrade drainage systems	Flood	Pickens County EMA, Mayor/Council	HMA grants/ Local	Medium	Moderate
4.3	Construct storm retrofits to government buildings	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	Low	Moderate
4.4	Construct/ install safe rooms at government buildings and critical facilities	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	High	Moderate
5	Provide emergency backup generators to all critical facilities	All	Pickens County EMA, Mayor/Council	HMA grants/ Local	High	High
5.1	Upgrade communication systems	All	Mayor/Council	HMA grants/ Local	Medium	Moderate

## Town of Ethelsville Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Join NFIP upon identification of Special Flood Hazards Areas	Flood	Mayor/Council	Local	Low	High
4	Construct/ install community safe rooms with backup generators	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	High	Moderate
4.1	Encourage individual safe rooms	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Individuals	HMA/Private	Medium	Moderate
5	Install additional outdoor warning sirens	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	High	Moderate
5.1	Provide generators at critical facilities	All	Pickens County EMA, Mayor/Council	HMA grants/ Local	Medium	Moderate

## Town of Gordo Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Enforce floodplain management requirements, regulate construction or improvements in Special Flood Hazards Areas (SFHAs)	Flood	Mayor/Council	Local	Low	High
4	Develop a drainage plan and implement actions that will divert flood waters	Flood	Mayor/Council	ADECA/Local	Medium	Moderate
4.1	Construct/ install community safe rooms with backup generators	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	High/ Ongoing	Moderate
4.2	Construct/ install safe rooms at government buildings to include generators as needed	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	High	Moderate
4.3	Encourage individual safe rooms	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Individuals	HMA/Private	Medium	Moderate
4.4	Construct storm retrofits to government buildings	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	Low	Moderate
4.5	Replace wooden bridges with new bridges meeting current Department of Transportation standards	Flood	Mayor/Council	HMA/ALDOT/ Local	Medium/ Ongoing	Moderate
5	Make operable the existing outdoor warning siren and install additional outdoor warning sirens	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA/Local	High/ Ongoing	Moderate
5.1	Provide generators at critical facilities	All	Pickens County EMA, Mayor/Council	HMA grants/ Local	High/ Ongoing	Moderate

### Town of McMullen Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Become participant in NFIP upon identification of Special Flood Hazards Areas	Flood	Pickens County EMA, Mayor/Council	Local	Medium	High
4	Construct/ install community safe rooms with emergency backup generators	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	High	Moderate
4.1	Encourage individual safe rooms	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Individuals	HMA/Private	Medium	Moderate
5	Provide generators at critical facilities	All	Pickens County EMA, Mayor/Council	HMA / Local	Medium	Moderate

### Town of Memphis Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Become member of the NFIP	Flood	Mayor/Council	Local	Medium	High
4	Construct community safe rooms with emergency backup generators	Thunderstorms, Tornados, Hurricanes	Pickens County EMA Mayor/Council,	HMA grants/ Local	High/ Ongoing	Moderate
4.1	Install/ construct a multi-purpose community safe room with backup generator (town Hall will be co-located here)	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	High	Moderate
5	Upgrade/ make operable the existing outdoor warning siren located on Williams Price Road	Thunderstorms, Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	High	Moderate
5.1	Provide generators at critical facilities	All	Pickens County EMA, Mayor/Council	HMA grants/ Local	Medium	Moderate

## Town of Pickensville Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Enforce floodplain management requirements, regulate construction or improvements in Special Flood Hazards Areas (SFHAs)	Flood	Mayor/Council	Local	Low	High
4	Construct/ install community safe rooms with emergency backup generators, sirens if necessary	Thunderstorms Tornados, Hurricanes	Pickens County EMA, Mayor/Council	HMA grants/ Local	High/ Ongoing	Moderate
4.1	Install additional fire hydrants throughout town limits	Wildlife	Mayor/Council	CDBG/Fire Grant, Local	Medium	Moderate
4.2	Upgrade drainage system to include new pipe and culverts and enlarge ditches	Flood	Mayor/Council	ADECA/ Local	Medium	Moderate
5	Install emergency generators at critical facilities	All	Pickens County EMA, Mayor/Council	HMA grants/ Local	High	Moderate

<b>Sumter County Commission Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
1	Continue to participate in the National Flood Insurance Program by enforcement of flood ordinance	Flooding	Sumter County Floodplain Manager/County Commission	Local	Ongoing	High
1	Provide technical and policy information regarding flood hazards to developers, interested parties and the public.	Flooding	Sumter County Floodplain Manager/County Commission	Local	Ongoing	High
5	Continue to clear debris from roads and drainage ways	All	Sumter County Road and Bridge Dept.	Local	Ongoing	High
5	Continue to perform maintenance on roads, drainage culverts, creeks, and streams to mitigate the threat of floods	Flooding	Sumter County Road and Bridge Dept.	Local	Ongoing	High
1	Continue to improve and maintain the county road system	All	Sumter County Road and Bridge Dept.	Local	Ongoing	High
6	Provide the public information on actions to take during severe weather through newspaper, publications, social media, and radio announcements	All	Sumter County Commission/EMA	Local	Ongoing	High
4	Promotion of safe rooms in new residences	High Winds	Sumter County Commission/EMA	Local	Ongoing	High
4	Promotion of safe rooms/individual shelters in existing residences	High Winds	Sumter County Commission/EMA	Local	Ongoing	High
6	Provide information to municipalities regarding natural hazards and general principles outlining procedures	All	Sumter County Commission/EMA	Local	Ongoing	High

6	Educate local governments and groups on mitigation activities and grant funding	All	Sumter County Commission/EMA	Local	Ongoing	High
6	Provide information to the public through local media	All	Sumter County Commission/EMA	Local	Ongoing	High
5	Open buildings to the public during extreme heat	Extreme Heat	Sumter County Commission	Local	Ongoing	High
4	Seek weatherization funding for low-income residents	All	Sumter County Commission	Local/Community Action/CDBG	High	Moderate
2/3	Work closely with the Sumter County Forester to mitigate wildfire dangers	Wildfire	Sumter County Commission	Local	Ongoing	High
5	Early Warning Alert Notification Systems	All	Sumter County Commission	Local/HMA	Medium	Moderate
5	Additional Tornado Sirens	High Winds	Sumter County Commission	Local/HMA	Low	Moderate
4	Provide storm shelters in areas of high population densities and mobile home communities	High Winds	Sumter County Commission	Local/HMA	Medium	Moderate
5	Purchase generators for critical facilities	All	Sumter County Commission	Local/HMA	High	High
4	Drainage Projects in areas identified as being prone to flooding.	Flooding	Sumter County Commission	Local/HMA	Medium	Moderate
4	Storm water Management Projects throughout the county	Flooding	Sumter County Commission	Local/HMA	Medium	Moderate
2	Buyouts of homes in flood prone areas	Flooding	Sumter County Commission	Local/HMA	Low	Low
2	Retrofitting of critical facilities	High Winds	Sumter County Commission	Local/HMA	Low	Low



6	Weather Training	All	Sumter County Commission	Local	Ongoing	High
5	Purchase NOAA weather radios	All	Sumter County Commission	Local/HMA	Medium	Moderate
2/3	Fire hydrants in rural areas	Wildfire	Sumter County Commission	Local/CDBG	Medium	Moderate
1	Research procedures for keeping historical storm data with location magnitude and loss of each event	All	Sumter County Commission/EMA	Local	Low	Low
1	Begin maintaining an inventory of critical facilities with values and contact information	All	Sumter County Commission/EMA	Local	Low	Low

<b>Town of Cuba Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
1	Continue enforcement of flood ordinance	Flooding	Town of Cuba Floodplain Manager	Local	Ongoing	High
2	Provide technical and policy information regarding flood hazards to developers, interested parties and the public.	Flooding	Town of Cuba Floodplain Manager	Local	Ongoing	High
6	Post drought and extreme heat notices in town	Extreme Heat & Drought	Town of Cuba Town Council	Local	Ongoing	High
1	Maintain and improve streets, culverts, and drainage infrastructure in town	All	Town of Cuba Town Council	Local/CDBG/HMA	Ongoing/Low	High
5	Open public buildings during extreme heat	Extreme Heat	Town of Cuba Town Council	Local	Ongoing	High
4	Seek weatherization funding for low-income residents	All	Town of Cuba Town Council	Local/CDBG/Community Action	Medium	Moderate
2/3	Work closely with Sumter County forester to mitigate wildfire dangers	Wildfire	Town of Cuba Town Council	Local	Ongoing	High
5	Tornado sirens	High Winds	Town of Cuba Town Council	Local/HMA	Medium	Moderate
5	Purchase of tornado sirens for areas with concentrations of population	High Winds	Town of Cuba Town Council	Local/HMA	Medium	Moderate
4	Provide storm shelters in areas of high population density and mobile home communities	High Winds	Town of Cuba Town Council	Local/HMA/CDBG	Low	Moderate

4	Storm water management projects throughout town	Flooding	Town of Cuba Town Council	Local/HMA/CDBG	Low	Moderate
4	Individual in Residences	High Winds	Town of Cuba Town Council	Local/HMA	Low	Moderate
4	Drainage Projects in Flood Prone Areas	Flooding	Town of Cuba Town Council	Local/HMA/CDBG	Medium	Moderate
5	Purchase NOAA Weather Radios for Town's Residents	All	Town of Cuba Town Council	Local/HMA	Medium	Moderate
5	Purchase of generators for critical facilities and utilities	All	Town of Cuba Town Council	Local/HMA	Medium	Moderate
3	Sediment Control Projects	Flooding	Town of Cuba Town Council	Local/HMA/CDBG	Medium	Moderate
5	Early Warning Alert Notification Systems	High Winds	Town of Cuba Town Council	Local/HMA	Medium	Moderate
5	Build new fire station	All	Town of Cuba Town Council	Local/USDA/CDBG	Medium	Moderate
4	New treatment lagoon	All	Town of Cuba Town Council	Local/USDA/CDBG	Medium	Moderate
2	Retrofit Critical Facilities	High Winds	Town of Cuba Town Council	Local/HMA	Medium	Moderate

Actions C1, C4, C5, and C6 from the 2015 plan were removed. C1 was completed at the time of the 2015 plan. C4, C5, and C6 are not active.

<b>Town of Emelle Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
4	Community storm shelters	High Winds	Town of Emelle Town Council	Local/HMA	Medium	Low
4	Tornado sirens	High Winds	Town of Emelle Town Council	Local/HMA	Medium	Low
5	Provide air-conditioned buildings during periods of extreme heat	Extreme Heat	Town of Emelle Town Council	Local	Ongoing	High
1/2	Maintain and improve streets, culverts, and drainage infrastructure in town	Flooding	Town of Emelle Town Council	Local/HMA/CDBG	Ongoing/Medium	High/Moderate
4	Seek weatherization funding for low-income residents	All	Town of Emelle Town Council	Local/CDBG/Community Action	Medium	Moderate
1	Work Closely with Sumter County Forester to mitigate wildfire dangers	Wildfire	Town of Emelle Town Council	Local	Ongoing	High
5	Early Warning Alert Notification Systems	All	Town of Emelle Town Council	Local/HMA	Medium	Moderate
3	Improve Water Supply	All	Town of Emelle Town Council	Local/CDBG/USDA	Medium	Moderate
5	Purchase of tornado sirens for areas with concentrations of population	High Winds	Town of Emelle Town Council	Local/HMA	Medium	Moderate
4	Provide storm shelters in areas of high population density and mobile home communities	High Winds	Town of Emelle Town Council	Local/HMA	Medium	Low
4	Storm water management projects throughout town	Flooding	Town of Emelle Town Council	Local/HMA/CDBG	Medium	Moderate

4	Individual Shelters in Residences	High Winds	Town of Emelle Town Council	Local/HMA	Medium	Moderate
5	Purchase NOAA Weather Radios for Town's Residents	All	Town of Emelle Town Council	Local/HMA	Medium	Moderate
5	Purchase of generators for critical facilities and utilities	All	Town of Emelle Town Council	Local/HMA	Medium	Moderate
2	Retrofit Critical Facilities	High Winds	Town of Emelle Town Council	Local/HMA	Low	Low

<b>Town of Epes Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
1	Continue to participate in the national Flood Insurance Program by enforcing flood ordinances	Flooding	Town of Epes Floodplain Manager	Local	Ongoing	High
1	Provide technical and policy information regarding flood hazards to developers, interested parties and the public.	Flooding	Town of Epes Floodplain Manager	Local	Ongoing	High
5	Post drought and extreme heat notices in town	Extreme Heat	Town of Epes Town Council	Local	Ongoing	High
1/2	Maintain and improve streets, culverts, and drainage infrastructure in town	All	Town of Epes Town Council	Local/FMA/CDBG	Ongoing/ Medium	High
5	Provide air-conditioned buildings for the public during extreme heat	Extreme Heat	Town of Epes Town Council	Local	Ongoing	High
1	Work with Sumter County Forester to mitigate wildfire dangers	Wildfire	Town of Epes Town Council	Local	Ongoing	High
4	Seek weatherization funding for low-income residents	All	Town of Epes Town Council	Local/CDBG/ Community Action	Medium	Moderate
4	Provide storm shelters in areas of high population density and mobile home communities	High Winds	Town of Epes Town Council	Local/FMA/CDBG	Medium	Moderate
4	Storm water management projects throughout town	Flooding	Town of Epes Town Council	Local/FMA/CDBG	Medium	Moderate
4	Individual Shelters in Residences	High Winds	Town of Epes Town Council	Local/FMA	Medium	Moderate

4	Drainage Projects in Flood Prone Areas	Flooding	Town of Epes Town Council	Local/FMA/CDBG	Medium	Moderate
5	Purchase of generators for critical facilities and utilities	All	Town of Epes Town Council	Local/FMA/CDBG	Medium	Moderate
2	Housing Rehabilitation	All	Town of Epes Town Council	Local/FMA/CDBG	Medium	Moderate
2/3	Extend and Provide Sewer service to all residents	All	Town of Epes Town Council	Local/FMA/CDBG	Medium	Moderate
2	Retrofitting of Critical Facilities	High Winds	Town of Epes Town Council	Local/FMA/CDBG	Low	Low
5	Tornado Sirens	High Winds	Town of Epes Town Council	Local/FMA/CDBG	Medium	Moderate

Action EP1 from the 2015 plan has been removed because that action was completed prior to that plan's adoption.

<b>Town of Gainesville Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
1	Become a member of the national Flood Insurance Program	Flooding	Town of Gainesville Town Council	Local	Medium	High
5	Post drought and extreme heat notices in town	Drought/ Extreme Heat	Town of Gainesville Town Council	Local	High	High
1/2	Maintain and improve streets, culverts, and drainage infrastructure in town	Flooding	Town of Gainesville Town Council	Local/CDBG/HMA	Medium	Moderate
5	Provide air-conditioned buildings	Extreme Heat	Town of Gainesville Town Council	Local	Ongoing	High
1	Seek weatherization funds for low-income households	All	Town of Gainesville Town Council	Local/CDBG/ Community Action	Medium	Moderate
1/3	Work closely with the Sumter County Forester to mitigate wildfire dangers	Wildfire	Town of Gainesville Town Council	Local	Ongoing	High
5	Tornado Sirens	High Winds	Town of Gainesville Town Council	Local/HMA	Medium	Moderate
5	Early Warning Alert Notification Systems	All	Town of Gainesville Town Council	Local/HMA	Medium	Moderate
4	Provide storm shelters in areas of high population density and mobile home communities	High Winds	Town of Gainesville Town Council	Local/HMA/CDBG	Medium	Moderate
4	Storm water management projects throughout town	Flooding	Town of Gainesville Town Council	Local/HMA/CDBG	Medium	Moderate



4	Individual Shelters in Residences	High Winds	Town of Gainesville Town Council	Local/HMA	Medium	Moderate
4	Drainage Projects in Flood Prone Areas	Flooding	Town of Gainesville Town Council	Local/HMA/CDBG	Medium	Moderate
5	Purchase of generators for critical facilities and utilities	All	Town of Gainesville Town Council	Local/HMA	Medium	Moderate
2	Housing Rehabilitation	All	Town of Gainesville Town Council	Local/CDBG	Medium	Moderate
4	Retrofitting of Critical Facilities	High Winds	Town of Gainesville Town Council	Local/HMA	Medium	Low

<b>Town of Geiger Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
1	Provide technical and policy information regarding flood hazards to developers, interested parties and the public.	Flooding	Town of Geiger Floodplain Manager	Local	High	High
1	Maintain membership in NFIP by enforcing flood ordinance	Flooding	Town of Geiger Floodplain Manager	Local	High	High
5	Post drought and extreme heat notices in town	Drought/ Extreme Heat	Town of Geiger Town Council	Local	High	High
1/2	Maintain and improve streets, culverts, and drainage infrastructure in town	Flooding	Town of Geiger Town Council	Local/CDBG/ HMA	Medium	Moderate
1	Seek weatherization funds for low-income households	Extreme Heat	Town of Geiger Town Council	Local	Ongoing	High
1/3	Work closely with the Sumter County Forester to mitigate wildfire dangers	All	Town of Geiger Town Council	Local/CDBG/ Community Action	Medium	Moderate
5	Tornado Sirens	Wildfire	Town of Geiger Town Council	Local	Ongoing	High
5	Early Warning Alert Notification Systems	High Winds	Town of Geiger Town Council	Local/HMA	Medium	Moderate
4	Provide storm in areas of high population density and mobile home communities	All	Town of Geiger Town Council	Local/HMA	Medium	Moderate
4	Storm water management projects throughout town	High Winds	Town of Geiger Town Council	Local/HMA/ CDBG	Medium	Moderate

4	Individual Shelters in Residences	Flooding	Town of Geiger Town Council	Local/HMA/CDBG	Medium	Moderate
5	Drainage Projects in Flood Prone Areas	High Winds	Town of Geiger Town Council	Local/HMA	Medium	Moderate
4	Purchase of generators for critical facilities and utilities	Flooding	Town of Geiger Town Council	Local/HMA/CDBG	Medium	Moderate
2	Housing Rehabilitation	All	Town of Geiger Town Council	Local/HMA	Medium	Moderate
4	Retrofitting of Critical Facilities	All	Town of Geiger Town Council	Local/CDBG	Medium	Moderate

Action GE1 from the 2015 plan due to it being completed prior to that plan.

<b>City of Livingston Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
1	Continued compliance in NFIP by enforcement of Flood Ordinance	Flooding	City of Livingston Floodplain Manager	Local	High	High
1	Provide technical and policy information regarding flood hazards to developers, interested parties and the public.	Flooding	City of Livingston Floodplain Manager	Local	High	High
1	Continue to enforce zoning ordinances	All	City of Livingston Code Compliance	Local	High	High
1	Continue to enforce building codes	All	City of Livingston Code Compliance	Local	High	High
1	Continue to enforce subdivision regulations	All	City of Livingston Code Compliance	Local	High	High
5	Open buildings to the public during extreme heat	Extreme Heat	City of Livingston City Council	Local	High	High
1	Continue to help UWA monitor Lake LU dam	Dam Failure	City of Livingston Public Works	Local	High	High
6	Keep public informed of drought conditions and water conservation efforts	Drought	City of Livingston City Council	Local	High	High
1/2	Continue to maintain drainage infrastructure and city streets	Flooding	City of Livingston Public Works	Local	High	High
5	Purchase of tornado sirens for areas with concentrations of population	High Winds	City of Livingston City Council	Local/HMA	Medium	Moderate
5	Early Warning Notification Systems	All	City of Livingston City Council	Local/HMA	Medium	Moderate

4	Provide storm shelters in areas of high population density and mobile home communities	High Winds	City of Livingston City Council	Local/HMA/CDBG	Medium	Moderate
5	Purchase generators for critical facilities and fire stations	All	City of Livingston City Council	Local/HMA	Medium	Moderate
4	Drainage Projects in areas identified as being prone to flooding.	Flooding	City of Livingston City Council	Local/HMA/CDBG	Medium	Moderate
4	Storm water Management Projects throughout City.	Flooding	City of Livingston City Council	Local/HMA/CDBG	Medium	Moderate
5	Purchase NOAA Weather Radios	All	City of Livingston City Council	Local/HMA	Medium	Moderate
4	Improve drainage infrastructure	Flooding	City of Livingston City Council	Local/HMA/CDBG	Medium	Moderate
2	Retrofitting of critical facilities	High Winds	City of Livingston City Council	Local/HMA	Medium	Moderate
1	Seek weatherization funding for low-income residents	All	City of Livingston City Council	Local/CDBG/ Community Action	Medium	Moderate
1	Work closely with Sumter Forester to mitigate wildfire dangers	Wildfire	City of Livingston City Council	Local	Medium	Moderate
4	Community Storm Shelters	High Winds	City of Livingston City Council	Local/HMA/CDBG	Medium	Moderate
2	Flood buyouts	Flooding	City of Livingston City Council	Local/HMA	Medium	Moderate
4	Bridge Work- Hopkins Street	Flooding	City of Livingston City Council	Local/HMA/CDBG	Medium	Moderate
4	Bridge Work on Arrington Street	Flooding	City of Livingston City Council	Local/HMA/CDBG	Medium	Moderate
4	Bridge on Pickens Street	Flooding	City of Livingston City Council	Local/HMA/CDBG	Medium	Moderate
4	Storm drainage off N. Washington between Hudson and Underwood.	Flooding	City of Livingston City Council	Local/HMA/CDBG	Medium	Moderate

<b>City of York Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
1	Continued compliance in NFIP by enforcement of Flood Ordinance	Flooding	City of York Floodplain Manager	Local	Ongoing	High
1	Provide technical and policy information regarding flood hazards to developers, interested parties and the public.	Flooding	City of York Floodplain Manager	Local	Ongoing	High
1	Continue to enforce zoning ordinances	All	City of York Code Enforcement	Local	Ongoing	High
1	Continue to enforce building codes	All	City of York Code Enforcement	Local	Ongoing	High
1	Continue to enforce subdivision regulations	All	City of York Code Enforcement	Local	Ongoing	High
5	Open buildings to the public during extreme heat	Extreme Heat	City of York City Council	Local	Ongoing	High
5	Apply for funding for fire and rescue	All	City of York City Council	Local	High	High
1	Develop a dam safety plan for Lake Lurleen Dam	Dam Failure	City of York City Council	Local/HMA	Medium	Moderate
6	Keep public informed of drought conditions and water conservation efforts	Drought	City of York City Council	Local	Ongoing	High
½	Continue to maintain drainage infrastructure and city streets	Flooding	City of York City Council	Local/HMA/CDBG	Ongoing	High
5	Purchase of tornado sirens for areas with concentrations of population	High Winds	City of York City Council	Local/HMA	Medium	Moderate
5	Early Warning Notification Systems	All	City of York City Council	Local/HMA	Medium	Moderate

4	Provide storm shelters in areas of high population density and mobile home communities	High Winds	City of York City Council	Local/HMA	Medium	Moderate
5	Purchase generators for critical facilities and utilities	All	City of York City Council	Local/HMA	Medium	Moderate
4	Drainage Projects in areas identified as being prone to flooding.	Flooding	City of York City Council	Local/HMA/CDBG	Medium	Moderate
4	Storm water Management Projects throughout City	Flooding	City of York City Council	Local/HMA/CDBG	Medium	Moderate
6	Purchase NOAA Weather Radios	All	City of York City Council	Local/HMA	Medium	Moderate
4	Improve drainage infrastructure	Flooding	City of York City Council	Local/HMA/CDBG	Medium	Moderate
2	Retrofitting of critical facilities	High Winds	City of York City Council	Local/HMA	Medium	Moderate
1	Seek weatherization funding for low-income residents	All	City of York City Council	Local/CDBG/ Community Action	Medium	Moderate
1	Work closely with Sumter Forester to mitigate wildfire dangers	Wildfire	City of York City Council	Local	Medium	Moderate
4	Community Storm Shelters	High Winds	City of York City Council	Local/HMA/CDBG	Medium	Moderate
2	Flood control on east side of city, Rabbit Branch area	Flooding	City of York City Council	Local/HMA/CDBG	Medium	Moderate

Actions Y24 and Y25 from the 2015 plan were deleted due to their not being deemed relevant at this time.

<b>Sumter County Board of Education Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
6	Help distribute hazard safety information to students	All	Sumter County School Board	Local	Ongoing	High
3	Work closely with Sumter County Forester to mitigate wildfire danger	Wildfire	Sumter County School Board	Local	Ongoing	High
5	Provide storm shelters at school	High Winds	Sumter County School Board	Local/HMA	Medium	Moderate
5	Purchase generators for critical facilities	All	Sumter County School Board	Local/HMA	Medium	Moderate
2	Retrofitting of Schools	High Winds	Sumter County School Board	Local/HMA/ALSDE	Medium	Moderate
4	Correct storm water management/drainage issue on school grounds	Flooding	Sumter County School Board	Local/HMA	Medium	Moderate
5	Early Warning Alert Notification Systems	All	Sumter County School Board	Local/HMA	Medium	Moderate
5	Purchase NOAA Weather Radios	All	Sumter County School Board	Local/HMA	Medium	Moderate



<b>Sumter County Water Authority Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
5	Purchase generators for all facilities SCWA has identified as critical facilities	All	Sumter County Water Authority Board	Local/HMA	Medium	Moderate
5	Early Warning Alert Notification Systems	All	Sumter County Water Authority Board	Local/HMA	Medium	Moderate

<b>Sumter County Sewer Authority Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
2	Add one lift station in Geiger, AL to improve wastewater flow rate	All	Sumter County Sewer Board	Local/CDBG/DRA	Medium	Moderate
2	Add generators to two lift stations	All	Sumter County Sewer Board	Local/HMA	Medium	Moderate
2	Improve physical security of lift stations and lagoon using audio and video	All	Sumter County Sewer Board	Local/HMA	Medium	Moderate

**University of West Alabama Mitigation  
Action Plan**

<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
2/3	Monitor and maintain Lake LU dam	Dam Failure	University of West Alabama	Local	Ongoing	High
5	Provide shelter facilities	All	University of West Alabama	Local/HMA	Ongoing	High

<b>Sumter County Opportunity, Inc. Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
2	Retrofit head start facilities	High Winds	Sumter County Opportunity Board	Local/HMA	Medium	Moderate
5	Provide warning systems at each center	All	Sumter County Opportunity Board	Local/HMA	Medium	Moderate
5	Provide generators at each center	All	Sumter County Opportunity Board	Local/HMA	Medium	Moderate

<b>North Sumter Development Corporation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
5	Weather radios for residents	All	North Sumter Development Corporation Board	Local/HMA	Medium	Moderate
6	Provide hazard information to members	All	North Sumter Development Corporation Board	Local	Medium	Moderate

<b>Panola Enrichment Center Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
5	Weather radios for residents	All	Panola Enrichment Center Board	Local/HMA	Medium	Moderate
6	Provide hazard information to members	All	Panola Enrichment Center Board	Local	Medium	Moderate
5	Backup generator for Panola Community Center	All	Panola Enrichment Center Board	Local/HMA	Medium	Moderate

## Tuscaloosa County Board of Education Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Construct storm retrofits to educational buildings	Thunderstorms, Tornados, Hurricanes	Tuscaloosa County BOE	HMA Grants, Local	High	Moderate
4.1	Construct/ install community safe rooms to educational buildings to include backup generators	Thunderstorms, Tornados, Hurricanes	Tuscaloosa County BOE	HMA Grants, Local	High	Moderate
4.2	Construct/install individual storm shelter to educational buildings	Thunderstorms, Tornados, Hurricanes	Tuscaloosa County BOE	HMA Grants, Local	Low	High
5	Provide generators for educational buildings	All	Tuscaloosa County BOE	HMA Grants, Local	High	High

## Tuscaloosa County Commission Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Identify flood prone areas; conduct engineering studies, and construct drainage improvements to reduce flood damages.	Flooding	County Engineer	Local, FEMA HMA, ADECA	Ongoing	Low
1.1	Train and certify local flood plain managers through programs offered by the State Flood Plain Coordinator and FEMA.	Flooding	County Engineer	Local, State	Ongoing	High
1.2	Develop a library of guidance materials to assist local floodplain managers.	Flooding	County Engineer	Local	Ongoing	High
1.3	Maintain membership of local flood plain managers in the Association of State Flood Plain Managers and the Alabama Association Flood Plain Managers; encourage active participation.	Flooding	County Engineer	Local	Ongoing	High
1.4	Participate in the “Turn Around Don’t Drown” program; acquire and place signs at bridge and overpass locations known to flood.	Flooding	County Commission	Local	Medium	High
1.5	Promote the adoption/enforcement of storm water management regulations that, at a minimum, maintain pre-development runoff rates.	Flooding	County Engineer	ADEM	Ongoing	High
1.6	As feasible, apply for/maintain membership in the CRS Program. Seek to upgrade rating when possible.	Flooding	County Engineer	Local	High	High
1.7	Develop a comprehensive inventory and vulnerability assessment of critical facilities and residential properties located in high and moderate wildfire risk areas.	Wildfire	Alabama State Forestry Commission	Local	Medium	Moderate
2	Encourage property owners and renters to purchase insurance coverage for flood damages when located in high-risk areas.	Flood	Financial Institutions	Financial Institutions	Ongoing	High
2.1	Identify need and install lightning and/or surge protection on critical facilities.	Severe Storms	County EMA	Local	Ongoing	Moderate



## Tuscaloosa County Commission Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2.2	Conduct ongoing tree trimming programs along electrical transmission lines.	Severe Storms, Wildfires, Winter Storms	Electrical Service Providers	Providers	Ongoing	Low
3	Enact and/or enforce regulations prohibiting littering and dumping within stream and river corridors.	Flooding	ADEM	Local	Ongoing	High
3.1	Promote use of Best Management Practices (BMP); encourage use of technical assistance from the Alabama Cooperative Extension System.	Flooding	County Engineer	Local	Ongoing	High
4	Install drainage improvements in identified problem drainage areas to reduce or eliminate localized flooding.	Flooding	County Engineer	Local, ADECA	Ongoing	Moderate
4.1	Maintain or upgrade water supply systems to conserve water during drought events; eliminate breaks and leaks to reduce system-wide water loss.	Drought	Local water systems	Local, ADECA	High	Moderate
4.2	Construct new community safe rooms and include safe rooms in new and existing public and institutional buildings.	Hurricanes, Tornadoes, Severe Storms	County Commission, County Fire Associations	Local, FEMA HMA	Ongoing	Low
4.4	Develop a program for subsidizing individual and community safe room construction in prioritized locations and facilities.	Hurricanes, Tornadoes, Severe Storms	County Commission	Local, FEMA HMA	Ongoing	Low
5	Upgrade outdoor siren-warning systems to ensure complete coverage to all jurisdictions.	All	County Commission, County EMA	Local	Ongoing	Moderate
5.1	Maintain, upgrade, or expand critical communications infrastructure.	All	County Commission, County Fire Association	Local, ALEA	Ongoing	Moderate

### Tuscaloosa County Commission Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit/ Cost Score
5.2	Install backup power generators at critical facilities.	Hurricanes, Tornadoes, Severe Storms	County Commission, County Fire Association	Local	Ongoing	Moderate
6	Conduct outreach activities to residents using multiple media platforms or workshops to implement hazard mitigation measures in the home.	All	County EMA, LEPC	Local	Ongoing	High
6.1	Promote and increase disaster resilience for local businesses through workshops, educational materials and planning guides.	All	County EMA	Local	Ongoing	High
6.2	Distribute outreach materials to citizens, builders and business owners inquiring about a flood problem, a building permit or other natural hazard related questions.	Flooding	County Engineer	Local	Ongoing	High
6.3	Promote water conservation; educate citizens on water saving tips and available resources.	Drought	County Agent	Local	Ongoing	High
6.4	Encourage farmers to use available resources to adopt soil and water conservation practices.	Drought	County Agent	Local	Ongoing	High
6.5	Provide resources and technical assistance to homeowners, builders, and developers on flood protection measures and alternatives.	Flooding	County Engineer	Local	Ongoing	High

## 2014 Tuscaloosa County Community Action Program - Actions Removed 2020

	Goal, Objectives and Mitigation Measures	Hazards Addressed	Priority	Timeline	Lead Responsibility for Carrying Out Measure	Action or Project	Estimated Cost	Funding Source	
1	<b>Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.</b>								
1.1.1	Maintain up-to-date comprehensive plans for all jurisdictions. Each plan should address natural hazards exposure and include long term disaster resistance measures. The vulnerability and environmental suitability of lands for future development should be clearly addressed. Local plans should assess the vulnerability of designated hazard areas and encourage open space planning to create amenities for recreation and conservation of fragile resources.	All	Medium	Mid-Range	County Commission	Action	TBD	TBD	Removed
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	All	Medium	Mid-Range	County Commission	Action	TBD	TBD	Removed
1.1.3	Prepare a five-year capital improvements plan (CIP) to include capital projects that implements the natural hazards element of the community's comprehensive plan or projects identified in the Community Mitigation Action Program of this multi-hazard mitigation plan.	All	Medium	Mid-Range	County Commission	Action	TBD	TBD	Removed
1.2.1	Maintain a centralized, countywide natural hazards and risk assessment database in GIS that is accessible to local planners and emergency management personnel, including such data as, flood zones, geohazards, major drainages structures, dams/levees, hurricane surge areas, tornado tracks, disaster events and their extents, and a comprehensive inventory of critical facilities within all jurisdictions.	All	Medium	Mid-Range	County Commission	Action	No Additional Cost	Existing Funds	Removed
1.2.2	Integrate FEMA HAZUS-MH applications for hazard loss estimations within local GIS programs. Maintain up-to-date data within GIS to apply the full loss estimation capabilities of HAZUS.	All	H-M-L	S-M-L	County Commission	Action	TBD	TBD	Removed
1.3.2	Identify existing culturally or socially significant structures and critical facilities within participating jurisdictions that have the most potential for losses from natural hazard events and identify needed structural upgrades.	All	Medium	Mid-Range	County Engineer	Action	No Additional Cost	Existing Funds	Removed
1.3.3	Evaluate elevation and culvert sizing of existing roadways in flash flood-prone areas to ensure compliance with current standards for design year floods, and develop a program for construction upgrades as appropriate.	Flooding	Medium	Mid-Range	County Engineer	Action	No Additional Cost	Existing Funds	Removed
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Wildfires	Low	Long-Range	Fire Department	Action	No Additional Cost	Existing Funds	Removed
1.4.3	Require delineation of flood plain fringe, floodways, and wetlands on all plans submitted with a permit for development within a flood plain.	Flooding	Medium	Mid-Range	County Engineer	Action	No Additional Cost	Existing Funds	Removed
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Flooding	Low	Long-Range	County Engineer	Action	No Additional Cost	Existing Funds	Removed

1.9.2	Develop, adopt and implement subdivision regulations that require proper stormwater infrastructure design and construction.	Flooding	Low	Long-Range	County Commission	Action	No Additional Cost	Existing Funds	Removed
1.10.1	Support legislation to establish a State dam safety program.	Dam/Levee Failure	Low	Long-Range	County Commission	Action	No Additional Cost	Existing Funds	Removed
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Flooding, Tornadoes, Hurricanes, Severe Storms and Earthquakes	High	Mid-Range	TBD	Action	TBD	TBD	Removed
2	<b>Goal for Property Protection: Protect structures and their occupants and contents from the damaging effects of natural hazards.</b>								
2.1.1	Relocate buildings out of hazardous flood areas, with emphasis on pre-FIRM residential buildings, where deemed more cost effective than property acquisition or building elevation.	Flooding	Medium	Ongoing	County Engineer	Project	TBD	FEMA HMA Grant	Removed
2.2.1	Acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Flooding	Medium	Ongoing	County Engineer	Project	TBD	FEMA HMA Grant	Removed
2.2.2	Utilize the most recent NFIP repetitive loss property list, and other appropriate sources, to create and maintain a prioritized list of acquisition mitigation projects based on claims paid.	Flooding	Medium	Ongoing	County Engineer	Project	TBD	FEMA HMA Grant	Removed
2.3.1	Elevate certain buildings in flood prone areas where acquisition or relocation is not feasible, with emphasis on Pre-FIRM buildings; where feasible, elevation is preferable to flood proofing.	Flooding	Medium	Ongoing	County Engineer	Project	TBD	FEMA HMA Grant	Removed
2.3.2	Repair, elevate and weatherize existing homes for low- to moderate-income families.	Flooding	Medium	Ongoing	County Engineer	Project	TBD	FEMA HMA Grant	Removed
2.4.1	Flood proof pre-FIRM non-residential buildings, where feasible.	Flooding	Medium	Ongoing	County Engineer	Project	TBD	FEMA HMA Grant	Removed
2.4.2	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non- structural mitigation techniques.	Flooding	Medium	Ongoing	County Engineer	Project	TBD	FEMA HMA Grant	Removed
2.5.1	Retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Flooding, Tornadoes, Hurricanes, Severe Storms and Earthquakes	Medium	Mid-Range	County Engineer	Action	TBD	FEMA HMA Grant	Removed
2.5.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Flooding, Tornadoes, Hurricanes, Severe Storms and Earthquakes	Medium	Ongoing	County Engineer	Action	TBD	FEMA HMA Grant	Removed
3	<b>Goal for Public Education and Outreach. Educate and inform the public about the risks of hazards and the techniques available to reduce threats to life and property.</b>								
3.2.1	Continue to participate in environmental awareness events to provide the public information on hazard exposure and mitigation measures, such as City/County Day, Hurricane Awareness Week, and Severe Weather Week.	All	High	Ongoing	County Commission	Action	No Additional Cost	Existing Funds	Removed
3.6.1	Distribute the 2014 plan to local officials, stakeholders, and interested individuals through internet download.	All	Medium	Ongoing	County Commission	Action	No Additional Cost	Existing Funds	REMOVED
3.8.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	All	Medium	Ongoing	County Commission	Action	No Additional Cost	Existing Funds	Removed

3.9.1	Promote the use of weather radios in households and businesses. 280	All	Medium	Ongoing	County Commission	Action	No Additional Cost	Existing Funds	Removed
3.9.2	Encourage the installation of weather radios in all public buildings and places of public assembly.	All	High	Short-Range	County Commission	Action	No Additional Cost	Existing Funds	Removed
3.9.3	Distribute weather radios and emergency response instructions to municipal residents.	All	Medium	Mid-Range	County Commission	Action	TBD	FEMA HMA Grant	Removed
4	<b>Goal for Natural Resources Protection.</b> Preserve and restore the beneficial functions of the natural environment to promote sustainable community development that balances the constraints of nature with the social and economic demands of the community.								
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	Flooding	Medium	Mid-Range	County Commission	Project	TBD	FEMA HMA Grant	Removed
5	<b>Goal for Structural Projects.</b> Apply engineered structural modifications to natural systems and public infrastructure to reduce the potentially damaging impacts of hazards, where feasible, cost effective, and environmentally suitable.								
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Flooding	Medium	Ongoing	County Engineer	Action	No Additional Cost	Existing Funds	Removed
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	Hurricanes, Tornadoes, Severe Storms	High	Ongoing	County Commission	Project	No Additional Cost	Existing Funds	Removed

The removed actions were determined by the jurisdiction to no longer be relevant or feasible at this time. Remaining actions from the 2014 plan were reorganized into the new plan goal areas and modified as deemed necessary.

## City of Northport Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Maintain a current comprehensive plan to include natural hazard threats and long-term disaster resistance measures.	All	Mayor and Council	TBD	High	Moderate
1.1	Integrate recommendations of the Division C Hazard Mitigation plan into current or future comprehensive plans.	All	Mayor and Council	TBD	High	High
1.2	Mark and catalog depths of flooding and storm surge events and maintain data for historical records in GIS.	Flooding	Floodplain Manager	Existing Funds	Ongoing	High
1.3	Perform planning and engineering studies for sub-basins in critical flood hazard areas to identify actions to address flooding.	Flooding	City Engineer	TBD	Low	Moderate
1.4	Identify structural upgrades for culturally or socially significant critical facilities and structures.	All	Building Inspector	Existing Funds	High	High
1.5	Identify needed upgrades to elevation and culvert sizing of existing roadways in flood-prone areas and develop a program for construction improvements.	Flooding	City Engineer	Existing Funds	High	High
1.6	Identify flood prone areas; conduct engineering studies, and construct drainage improvements to reduce flood damages.	Flooding	City Engineer	TBD	High	Moderate
1.7	Require flood plain fringe, floodways, and wetlands be identified on all plans submitted with a permit for development within a flood plain.	Flooding	City Engineer	Existing Funds	High	High
1.8	Adopt policy to prioritize the acquisition and development of open space areas for recreation, landscaping, and drainage control.	Flooding	Planning Dept.	Existing Funds	Low	High
1.9	Train and certify local flood plain managers through programs offered by the State Flood Plain Coordinator and FEMA.	Flooding	Mayor and Council	Existing Funds	High	High
1.10	Develop a library of guidance materials to assist local floodplain managers.	Flooding	Floodplain Manager	Existing Funds	High	High

### City of Northport Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1.11	Encourage NFIP communities to adopt uniform flood hazard prevention ordinances that encourage retaining the natural and beneficial functions of flood plains.	Flooding	Mayor and Council, Floodplain Manager	Existing Funds	Low	High
1.12	Maintain membership of local flood plain managers in the Association of State Flood Plain Managers and the Alabama Association Flood Plain Managers; encourage active participation.	Flooding	Mayor and Council	Existing Funds	High	High
1.13	Improve flood risk assessments by providing post-event high water mark readings, verification of FEMA's repetitive loss inventory, and other data as identified.	Flooding	Floodplain Manager	Existing Funds	Ongoing	High
1.14	Promote construction best management practices and apply code enforcement to reduce and mitigate structural failures from hazard events.	All	Building Inspector	Existing Funds	Ongoing	High
1.15	Evaluate and increase building code requirements for roof construction to maximize protection from wind events; encourage installation of "hurricane clips."	Tornadoes, Hurricanes, Severe Storms	Building Inspector	Existing Funds	Ongoing	High
1.16	Adopt and enforce fire safety ordinances that effectively address and regulate open burning and the use of liquid fuels.	Wildfires	Fire Department	Existing Funds	Ongoing	High
1.17	Adopt and enforce by code or ordinance, minimum property maintenance standards to reduce or eliminate unsafe structures.	All	Building Inspector	Existing Funds	Ongoing	High
1.18	Where feasible, require the construction of safe rooms within new public buildings, such as schools, libraries, community centers, or others as appropriate.	Tornadoes, Hurricanes, Severe Storms	Mayor and Council	Existing Funds	Ongoing	High
1.19	Promote use of green infrastructure methods to encourage and manage natural infiltration of rainwater.	Flooding	Mayor and Council	Existing Funds	Low	Moderate

### City of Northport Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1.20	Promote the adoption/enforcement of storm water management regulations that, at a minimum, maintain pre-development runoff rates.	Flooding	Mayor and Council, City Engineer	Existing Funds	Low	High
1.21	Adopt subdivision regulations that require adequate stormwater infrastructure design and construction.	Flooding	Mayor and Council, City Engineer	Existing Funds	Medium	High
1.22	Encourage and support legislation to establish a State dam safety program.	Dam/Levee Failure	Mayor and Council	Existing Funds	Low	High
1.23	As feasible, apply for/maintain membership in the CRS Program. Seek to upgrade rating when possible.	Flooding	Floodplain Manager	Existing Funds	High	High
1.24	Carry out vulnerability assessments of critical facilities to identify retrofit projects to mitigate damages from hazards.	Flooding, Tornadoes, Hurricanes, Severe Storms and Earthquakes	City Engineer	TBD	High	High
2	Require new utility lines be placed underground for large residential subdivisions and commercial developments through enforcement of local subdivision and land development regulations. Move existing utility lines underground, where feasible and cost effective.	Tornadoes, severe storms, winter storms/freezes, hurricanes	Mayor and Council	TBD	Ongoing	Low
2.1	Relocate buildings out of hazardous flood areas when deemed more cost effective than property acquisition or building elevation.	Flooding	Mayor and Council, Building Inspector	FEMA HMA Grant	Ongoing	Low
2.2	Acquire and demolish substantially damaged flood prone structures; replace with permanent open space.	Flooding	Mayor and Council, Building Inspector	FEMA HMA Grant	Ongoing	Low
2.3	Develop and maintain a prioritized list of acquisition mitigation projects based on repetitive loss claims paid.	Flooding	Building Inspector, Floodplain Manager	FEMA HMA Grant	Ongoing	High



### City of Northport Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2.4	Elevate prioritized Pre-FIRM buildings in flood prone areas where acquisition or relocation is not feasible.	Flooding	Mayor and Council, Building Inspector	FEMA HMA Grant	Ongoing	Low
2.5	Where feasible, flood proof pre-FIRM non-residential buildings.	Flooding	Mayor and Council, Building Inspector	FEMA HMA Grant	Ongoing	Low
2.6	Provide assistance to building owners on available building retrofits to protect against damages from natural hazards.	Flooding, Tornadoes, Hurricanes, Severe Storms and Earthquakes	Building Inspector	FEMA HMA Grant	Ongoing	High
2.7	Identify need and install lightning and/or surge protection on critical facilities.	Severe storms	Information Technology Dept.	TBD	Ongoing	Moderate
3	Increase open space acquisitions and other flood plain acquisition efforts.	Flooding	Mayor and Council	FEMA HMA Grant	High	Low
3.1	Enact and/or enforce regulations prohibiting littering and dumping within stream and river corridors.	Flooding	City Engineer	Existing Funds	Ongoing	High
3.2	Promote use of Best Management Practices (BMP); encourage use of technical assistance from the Alabama Cooperative Extension System.	Flooding	Mayor and Council	Existing Funds	Low	High
3.3	Establish and enforce water use policies and restrictions during periods of drought.	Droughts/heat waves, wildfires	Mayor and Council	Existing Funds	Ongoing	High
4	Develop and implement guidelines and standard operating procedures for drainage system maintenance.	Flooding	Public Works Dept.	Existing Funds	Ongoing	High
4.1	Install drainage improvements in identified problem drainage areas to reduce or eliminate localized flooding.	Flooding	Public Works Dept.	FEMA HMA Grant	High	Low

### City of Northport Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Maintain, upgrade, or expand critical communications infrastructure.	All	Mayor and Council	FEMA HMA Grant	High	High
5.1	Install backup power generators at critical facilities.	Hurricanes, Tornadoes, Severe Storms	Public Works Dept.	FEMA HMA Grant	Ongoing	Low
6	Increase access and use of FIRM information by real estate agents, builders, developers, and homeowners through announcements in local trade publications and newspapers.	Flooding	Floodplain Manager	Existing Funds	Low	High
6.1	Participate in public awareness events such as City/County Day, Hurricane Awareness Week, and Severe Weather Week.	All	Mayor and Council	Existing Funds	Ongoing	High
6.2	Conduct outreach activities to residents using multiple media platforms or workshops to implement hazard mitigation measures in the home.	All	Mayor and Council	Existing Funds	Ongoing	High
6.3	Promote and increase disaster resilience for local businesses through workshops, educational materials and planning guides.	All	Mayor and Council	Existing Funds	Ongoing	High
6.4	Distribute outreach materials to citizens, builders and business owners inquiring about a flood problem, a building permit or other natural hazard related questions.	Flooding	Mayor and Council	Existing Funds	Ongoing	Moderate
6.5	Promote water conservation; educate citizens on water saving tips and available resources.	Drought	Public Works Dept.	Existing Funds	Ongoing	High
6.6	Distribute the 2020 Division C Hazard Mitigation plan to local officials, stakeholders, and interested individuals via web posting and as requested.	All	Mayor and Council	Existing Funds	Ongoing	High
6.7	Ensure the public is informed of hazard threats and mitigation measures to reduce damages and loss of life through local and social media outlets.	All	Mayor and Council	Existing Funds	Ongoing	High

	Goal, Objectives and Mitigation Measures	Hazards Addressed	Priority	Timeline	Lead Responsibility for Carrying Out Measure	Action or Project	Estimated Cost	Funding Source		
1	<b>Goal for Prevention.</b> Manage the development of land and buildings to minimize risks of loss due to natural hazards.									
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Wildfires	Low	Long-Range	Fire Department	Action	No Additional Cost	Existing Funds	REMOVED	
1.3.6	Develop an inventory of public and commercial building vulnerable to earthquake damage, focusing on pre 1940 construction and buildings with cripple wall foundations.	Earthquake	Low	Long-Range	Mayor and Council	Project	TBD	TBD	REMOVED	
1.4.1	Consider large lot size restrictions on flood prone areas designated on Flood Insurance Rate Maps.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED	
1.4.2	Evaluate additional land use restrictions within designated flood zones, such as prohibition of storage of buoyant materials, storage of hazardous materials, and restrictive development of flood ways, among others.	Flooding	Low	Long-Range	Mayor and Council, Floodplain Manager	Action	No Additional Cost	Existing Funds	REMOVED	
1.4.4	Enact local ordinance that require community storm shelters within sizeable mobile home parks and subdivisions.	Tornadoes, Hurricanes, Severe Storms	High	Short-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED	
1.6.5	Participate in the "Turn Around Don't Drown" program by purchasing and installing signs in known flash flood bridge overpass locations.	Flooding	Medium	Mid-Range	Mayor and Council	Project	No Additional Cost	Existing Funds	REMOVED	
1.9.3	Establish urban forestry program to help mitigate storm water runoff common in areas with large impervious surfaces.	Flooding	Low	Long-Range	Mayor and Council	Action	TBD	TBD	REMOVED	
2	<b>Goal for Property Protection.</b> Protect structures and their occupants and contents from the damaging effects of natural hazards.									
2.3.2	Repair, elevate and weatherize existing homes for low- to moderate-income families.	Flooding	Medium	Ongoing	Building Inspector	Project	TBD	FEMA HMA Grant	REMOVED	
2.5.1	Retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Flooding, Tornadoes, Hurricanes, Severe Storms and Earthquakes	Medium	Mid-Range	Mayor and Council, Building Inspector	Action	TBD	FEMA HMA Grant	REMOVED	
2.6.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	All	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED	
3	<b>Goal for Public Education and Outreach.</b> Educate and inform the public about the risks of hazards and the techniques available to reduce threats to life and property.									
3.3.1	Arrange with the Multiple Listing Service (MLS) to require floodplain location disclosure as a condition for each real estate listing.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED	
3.3.2	Consider the enactment of a local ordinance or state law to require floodplain location disclosure when a property is listed for sale.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED	
3.5.2	Educate homeowners about structural and non-structural retrofitting of vulnerable homes.	Earthquake	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED	

3.6.1	Distribute the 2014 plan to local officials, stakeholders, and interested individuals through internet download.	All	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
3.7.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Flooding	Low	Ongoing	Floodplain Manager	Action	No Additional Cost	Existing Funds	REMOVED
3.9.1	Promote the use of weather radios in households and businesses.	All	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
3.9.2	Require the installation of weather radios in all public buildings and places of public assembly.	All	High	Short-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
3.9.3	Distribute weather radios and emergency response instructions to municipal residents.	All	Medium	Mid-Range	Mayor and Council	Action	TBD	FEMA HMA Grant	REMOVED
3.10.1	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	REMOVED
4	<b>Goal for Natural Resources Protection. Preserve and restore the beneficial functions of the natural environment to promote sustainable community development that balances the constraints of nature with the social and economic demands of the community.</b>								
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Flooding	Medium	Ongoing	Building Inspector	Action	No Additional Cost	Existing Funds	REMOVED
5	<b>Goal for Structural Projects. Apply engineered structural modifications to natural systems and public infrastructure to reduce the potentially damaging impacts of hazards, where feasible, cost effective, and environmentally suitable.</b>								
5.2.2	Improve and retrofit water supply systems to save water during drought events and to eliminate breaks and leaks.	Drought	Low	Mid-Range	City Engineer	Project	TBD	FEMA HMA Grant	REMOVED
5.3.1	Construct new community safe rooms in accessible locations and add safe rooms within new and existing public and institutional buildings, such as schools, colleges and universities, senior centers, community centers, hospitals, and government buildings.	Hurricanes, Tornadoes, Severe Storms	High	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	REMOVED
5.3.2	Establish a program for subsidizing individual and community safe room construction in appropriate locations and facilities.	Hurricanes, Tornadoes, Severe Storms	High	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	REMOVED
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	Hurricanes, Tornadoes, Severe Storms	High	Ongoing	Mayor and Council	Project	No Additional Cost	Existing Funds	REMOVED

The removed actions were determined by the jurisdiction to no longer be relevant or feasible at this time. Remaining actions from the 2014 plan were reorganized into the new plan goal areas and modified as deemed necessary.

## City of Tuscaloosa Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Maintain a current comprehensive plan to include natural hazard threats and long-term disaster resistance measures.	All	Mayor/Council	Existing Funds	Ongoing	Moderate
1.1	Integrate recommendations of the Division C Hazard Mitigation plan into current or future comprehensive plans.	All	Mayor/Council	Existing Funds	Ongoing	Moderate
1.2	Develop a five-year capital improvement plan (CIP) to include capital projects from this multi-hazard mitigation plan.	All	Mayor/Council	Existing Funds	Ongoing	High
1.3	Maintain a countywide centralized GIS database to include a comprehensive inventory of critical facilities within all jurisdictions.	All	Mayor/Council	Existing Funds	Medium	Moderate
1.4	Integrate FEMA HAZUS-MH within local GIS programs and maintain up-to-date data within GIS fully utilize the capabilities of HAZUS.	All	Mayor/Council	Existing Funds	Low	Moderate
1.5	Mark and catalog depths of flooding and storm surge events and maintain data for historical records in GIS.	Flooding	City Engineer	Existing Funds	High	High
1.6	Perform planning and engineering studies for sub-basins in critical flood hazard areas to identify actions to address flooding.	Flooding	City Engineer	TBD	Ongoing	Low
1.7	Identify needed upgrades to elevation and culvert sizing of existing roadways in flood-prone areas and develop a program for construction improvements.	Flooding	City Engineer	Existing Funds	Medium	Moderate
1.8	Map and assess existing fire hydrants and identify areas in need of new fire hydrants.	Flooding	City IPS Dept., Fire Dept.	Existing Funds	Low	High
1.9	Identify flood prone areas; conduct engineering studies, and construct drainage improvements to reduce flood damages.	Flooding	City Engineer	TBD	Medium	Low

### City of Tuscaloosa Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1.10	Develop an inventory of critical facilities vulnerable to earthquake damage, noting pre 1940 construction and buildings with cripple wall foundations.	Earthquake	City Engineer, Building Inspector	TBD	Low	Low
1.11	Enact large lot size restrictions in flood prone areas designated on Flood Insurance Rate Maps.	Flooding	Mayor/Council, City Planning and Zoning	Existing Funds	Ongoing	Moderate
1.12	Evaluate additional land use restrictions within designated flood zones, such as prohibition of storage of buoyant materials, storage of hazardous materials, restrictive development of flood ways.	Flooding	City Engineer, Building Inspector	Existing Funds	Medium	Low
1.13	Require flood plain fringe, floodways, and wetlands be identified on all plans submitted with a permit for development within a flood plain.	Flooding	City Engineer, Building Inspector	Existing Funds	Ongoing	High
1.14	Enact local ordinance to require large scale mobile home parks and subdivisions to provide community safe room(s).	Tornadoes, Hurricanes, Severe Storms	Mayor/Council, City Planning and Zoning	Existing Funds	High	High
1.15	Adopt policy to prioritize the acquisition and development of open space areas for recreation, landscaping, and drainage control.	Flooding	Mayor/Council, City Planning and Zoning	Existing Funds	Medium	High
1.16	Train and certify local flood plain managers through programs offered by the State Flood Plain Coordinator and FEMA.	Flooding	City Engineer	Existing Funds	Ongoing	High
1.17	Develop a library of guidance materials to assist local floodplain managers.	Flooding	City Engineer	Existing Funds	Ongoing	High
1.18	Maintain membership of local flood plain managers in the Association of State Flood Plain Managers and the Alabama Association Flood Plain Managers; encourage active participation.	Flooding	City Engineer	Existing Funds	Ongoing	High
1.19	Participate in the "Turn Around Don't Drown" program; acquire and place signs at bridge and overpass locations known to flood.	Flooding	Mayor/Council	Existing Funds	Ongoing	High

### City of Tuscaloosa Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1.20	Improve flood risk assessments by providing post-event high water mark readings, verification of FEMA's repetitive loss inventory, and other data as identified.	Flooding	City Floodplain Manager	Existing Funds	Ongoing	High
1.21	Promote construction best management practices and apply code enforcement to reduce and mitigate structural failures from hazard events.	All	Building Inspector	Existing Funds	Ongoing	High
1.22	Evaluate and increase building code requirements for roof construction to maximize protection from wind events; encourage installation of "hurricane clips."	Tornadoes, Hurricanes, Severe Storms	Building Inspector	Existing Funds	Ongoing	High
1.23	Adopt and enforce fire safety ordinances that effectively address and regulate open burning and the use of liquid fuels.	Wildfires	Building Inspector	Existing Funds	Ongoing	High
1.24	Adopt and enforce by code or ordinance, minimum property maintenance standards to reduce or eliminate unsafe structures.	Wildfire	Building Inspector	Existing Funds	Ongoing	High
1.25	Where feasible, require the construction of safe rooms within new public buildings, such as schools, libraries, community centers, or others as appropriate.	Tornadoes, Hurricanes, Severe Storms	Mayor/Council	Existing Funds	Ongoing	High
1.26	Adopt subdivision regulations that require adequate stormwater infrastructure design and construction.	Flooding	Mayor/Council, City Planning and Zoning	Existing Funds	Ongoing	High
1.27	Encourage and support legislation to establish a State dam safety program.	Dam/Levee Failure	Mayor/Council	Existing Funds	Low	High
1.28	As feasible, apply for/maintain membership in the CRS Program. Seek to upgrade rating when possible.	Flooding	City Floodplain Manager	Existing Funds	Ongoing	High

### City of Tuscaloosa Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1.29	Carry out vulnerability assessments of critical facilities to identify retrofit projects to mitigate damages from hazards.	All	City IPS Dept, Building Inspector	TBD	High	Low
1.30	Develop a comprehensive inventory and vulnerability assessment of critical facilities and residential properties located in high and moderate wildfire risk areas.	Wildfires	Fire Dept.	Existing Funds	Low	High
1.31	Promote use of green infrastructure methods to encourage and manage natural infiltration of rainwater.	Flooding	Mayor/Council, City Engineer	Existing Funds	Ongoing	Moderate
1.32	Promote the adoption/enforcement of storm water management regulations that, at a minimum, maintain pre-development runoff rates.	Flooding	Mayor/Council, City Engineer	Existing Funds	Ongoing	High
2	Elevate prioritized Pre-FIRM buildings in flood prone areas where acquisition or relocation is not feasible.	Flooding	Mayor/Council, City Floodplain Manager	FEMA HMA Grant	Medium	Moderate
2.1	Repair, elevate and weatherize existing homes for low- to moderate-income families.	Flooding	Mayor/Council, Building Inspector	FEMA HMA Grant	Medium	Moderate
2.2	Where feasible, flood proof pre-FIRM non-residential buildings.	Flooding	Mayor/Council	FEMA HMA Grant	Medium	Moderate
2.3	Retrofit existing infrastructure, critical facilities and other buildings to minimize damages from natural hazards.	All	Mayor/Council, City Engineer	FEMA HMA Grant	Medium	Moderate
2.4	Encourage property owners and renters to purchase insurance coverage for flood damages when located in high-risk areas.	Flooding	Mayor/Council, City Floodplain Manager	Existing Funds	Ongoing	High
2.5	Encourage farmers purchase crop insurance to cover potential losses due to drought.	Drought	Mayor/Council	Existing Funds	Ongoing	High



## City of Tuscaloosa Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2.6	Require new utility lines be placed underground for large residential subdivisions and commercial developments through enforcement of local subdivision and land development regulations. Move existing utility lines underground, where feasible and cost effective.	All	Mayor/Council	Existing Funds	Ongoing	Moderate
2.7	Develop and maintain a prioritized list of acquisition mitigation projects based on repetitive loss claims paid.	Flooding	City Engineer, City Floodplain Manager	FEMA HMA Grant	Medium	Moderate
2.8	Acquire and relocate or demolish structures located in landslide hazard areas; enforce permanent restrictions against rebuilding in area.	Landslide	Mayor/Council, City Engineer	FEMA HMA Grant	Low	Moderate
2.9	Provide assistance to building owners on available building retrofits to protect against damages from natural hazards.	All	Mayor/Council	Existing Funds	Ongoing	Moderate
2.10	Conduct ongoing tree trimming programs along electrical transmission lines.	Severe Storms, Wildfire	TBD	TBD	Medium	Moderate
3	Increase open space acquisitions and other flood plain acquisition efforts.	Flooding	Mayor/Council, City Floodplain Manager	FEMA HMA Grant	Medium	Moderate
3.1	Ensure builders and developers follow Federal wetlands permitting requirements of the Corps of Engineers.	Flooding	City Engineer	FEMA HMA Grant	Medium	High
3.2	Enact and/or enforce regulations prohibiting littering and dumping within stream and river corridors.	Flooding	Mayor/Council	FEMA HMA Grant	Medium	High
3.3	Promote use of Best Management Practices (BMP); encourage use of technical assistance from the Alabama Cooperative Extension System.	Flooding	City Engineer	Existing funds	Low	High

### City of Tuscaloosa Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
3.4	Establish and enforce water use policies and restrictions during periods of drought.	Drought, Heat Waves, Wildfires	Mayor/Council	Existing Funds	Medium	Moderate
4	Develop and implement guidelines and standard operating procedures for drainage system maintenance.	Flooding	City Engineer	Existing Funds	Medium	Moderate
4.1	Install drainage improvements in identified problem drainage areas to reduce or eliminate localized flooding.	Flooding	City Engineer	FEMA HMA Grant	Medium	Low
4.2	Maintain or upgrade water supply systems to conserve water during drought events; eliminate breaks and leaks to reduce system-wide water loss.	Flooding	Mayor/Council, Public Works Dept.	FEMA HMA Grant	Ongoing	Low
4.3	Construct new community safe rooms and include safe rooms in new and existing public and institutional buildings.	Tornadoes, Hurricanes, Severe Storms	Mayor/Council	FEMA HMA Grant	Ongoing	Moderate
4.4	Encourage the construction of safe rooms in new and existing homes and buildings.	Tornadoes, Hurricanes, Severe Storms	Mayor/Council, Building inspector	FEMA HMA Grant	Ongoing	High
5	Provide for public signage to indicate areas of safety from hazards.	Hurricanes, Tornadoes, Severe Storms	Mayor/Council	Existing Funds	Medium	Moderate
5.1	Promote the provision and use of weather radios and emergency response instructions for households and businesses.	All	Mayor/Council, Police/Fire Depts.	Existing Funds	Medium	Moderate
5.2	Continue the use of the Everbridge alert system to provide notifications to all jurisdictions	All	Mayor/Council	Existing Funds	Medium	Moderate

### City of Tuscaloosa Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5.3	Use electronic billboards and DOT message boards to inform citizens of weather warnings or evacuation procedures.	All	Mayor/Council, ALDOT	Existing Funds	High	Moderate
6	Increase access and use of FIRM information by real estate agents, builders, developers, and homeowners through announcements in local trade publications and newspapers.	Flooding	Mayor/Council	Existing Funds	Ongoing	High
6.1	Participate in public awareness events such as City/County Day, Hurricane Awareness Week, and Severe Weather Week.	All	Mayor/Council	Existing Funds	Ongoing	Moderate
6.2	Conduct outreach activities to residents using multiple media platforms or workshops to implement hazard mitigation measures in the home.	All	Mayor/Council	Existing Funds	Ongoing	Moderate
6.3	Promote and increase disaster resilience for local businesses through workshops, educational materials and planning guides.	All	Mayor/Council	Existing Funds	Ongoing	Moderate
6.4	Distribute hazard mitigation resources and brochures to students through area schools.	All	Mayor/Council, Public Library system	Existing Funds	Ongoing	Moderate
6.5	Provide information and resources to homeowners about structural and non-structural retrofitting of vulnerable homes.	High Wind, Tornadoes, Earthquake	Mayor/Council, Building Inspector	Existing Funds	Ongoing	Moderate
6.6	Distribute the 2020 Division C Hazard Mitigation plan to local officials, stakeholders, and interested individuals via web posting and as requested.	All	Mayor/Council,	Existing Funds	High	Moderate
6.7	Ensure the public is informed of hazard threats and mitigation measures to reduce damages and loss of life through local and social media outlets.	All	Mayor/Council, Police/Fire Depts.	Existing Funds	High	Moderate

**2014 City of Tuscaloosa Community Action Program - Actions Removed 2020**

295 Goal, Objectives and Mitigation Measures	Hazards Addressed	Priority	Timeline	Lead Responsibility for Carrying Out Measure	Action or Project	Estimated Cost	Funding Source		
<b>1</b> <u>Goal for Prevention.</u> Manage the development of land and buildings to minimize risks of loss due to natural hazards.									
1.6.3	Promote the adoption of uniform flood hazard prevention ordinance among all NFIP communities. The ordinance standards should encourage flood plain management that maintains the natural and beneficial functions of flood plains by maximizing the credits that could be obtained for "Higher Regulatory Standards" under the Community Rating System (CRS) Program.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
1.8.2	Establish ordinances to help mitigate fire hazards related to fuel buildup due to recent hurricanes, by raising tree canopies close to homes, thinning forests near urban areas, and removing trees that are too close to homes.	Wildfires	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
<b>2</b> <u>Goal for Property Protection:</u> Protect structures and their occupants and contents from the damaging effects of natural hazards.									
2.1.1	Relocate buildings out of hazardous flood areas, with emphasis on pre-FIRM residential buildings, where deemed more cost effective than property acquisition or building elevation.	Flooding	Medium	Ongoing	Building Inspector	Project	TBD	FEMA HMA Grant	REMOVED
2.2.2	Utilize the most recent NFIP repetitive loss property list, and other appropriate sources, to create and maintain a prioritized list of acquisition mitigation projects based on claims paid.	Flooding	Medium	Ongoing	Building Inspector	Project	TBD	FEMA HMA Grant	REMOVED
2.4.2	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non- structural mitigation techniques.	Flooding	Medium	Ongoing	City Engineer, Building Inspector	Project	TBD	FEMA HMA Grant	REMOVED
<b>3</b> <u>Goal for Public Education and Outreach.</u> Educate and inform the public about the risks of hazards and the techniques available to reduce threats to life and property.									
3.2.5	Educate citizens on water saving techniques.	Drought	High	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
3.2.6	Educate farmers on soil and water conservation practices.	Drought	High	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
3.3.1	Arrange with the Multiple Listing Service (MLS) to require floodplain location disclosure as a condition for each real estate listing.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
3.3.2	Consider the enactment of a local ordinance or state law to require floodplain location disclosure when a property is listed for sale.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
3.6.1	Distribute the 2014 plan to local officials, stakeholders, and interested individuals through internet download.	All	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
<b>4</b> <u>Goal for Natural Resources Protection.</u> Preserve and restore the beneficial functions of the natural environment to promote sustainable community development that balances the constraints of nature with the social and economic demands of the community.									
<b>5</b> <u>Goal for Structural Projects.</u> Apply engineered structural modifications to natural systems and public infrastructure to reduce the potentially damaging impacts of hazards, where feasible, cost effective, and environmentally suitable.									
5.3.2	Establish a program for subsidizing individual and community safe room construction in appropriate locations and facilities.	Hurricanes, Tornadoes, Severe Storms	High	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	REMOVED

The removed actions were determined by the jurisdiction to no longer be relevant or feasible at this time. Remaining actions from the 2014 plan were reorganized into the new plan goal areas and modified as deemed necessary.

## Tuscaloosa City Schools Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Construct storm retrofits to educational buildings	Thunderstorms, Tornados, Hurricanes	Tuscaloosa City Schools	HMA Grants, Local	High	Moderate
4.1	Construct/ install community safe rooms to educational buildings to include backup generators	Thunderstorms, Tornados, Hurricanes	Tuscaloosa City Schools	HMA Grants, Local	High	Moderate
4.2	Construct/install individual storm shelter to educational buildings	Thunderstorms, Tornados, Hurricanes	Tuscaloosa City Schools	HMA Grants, Local	Low	High
5	Provide generators for educational buildings	All	Tuscaloosa City Schools	HMA Grants, Local	High	High

## DCH Regional Health System Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Construct storm retrofits to medical buildings	Thunderstorms, Tornados, Hurricanes	DCH	HMA Grants, Local	High	Moderate
4.1	Construct/ install community safe rooms to medical buildings to include backup generators	Thunderstorms, Tornados, Hurricanes	DCH	HMA Grants, Local	High	Moderate
4.2	Construct/install individual storm shelters to medical buildings	Thunderstorms, Tornados, Hurricanes	DCH	HMA Grants, Local	Low	High
5	Provide emergency generators for medical facilities	All	DCH	HMA Grants, Local	High	High
5.1	Provide for public signage to indicate areas of safety from hazards.	Thunderstorms, Tornados, Hurricanes	DCH	Existing Funds	Medium	Moderate
5.2	Promote the provision and use of weather radios and emergency response instructions for households and businesses.	All	DCH	Existing Funds	Medium	Moderate
5.3	Continue to use the Everbridge alert system to provide notifications to all jurisdictions.	All	DCH	Existing Funds	Medium	Moderate

## University of Alabama Mitigation Action Plan

Goal/ Number	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1.1	Identify, discover, or locate threats and/or hazards through active and passive surveillance equipment and search procedures.	All	UA-OEM	Existing, HMA Grants	Ongoing	Moderate
2.1	Implement, exercise, and maintain plans to ensure continuity of operations.	All	UA-OEM	Existing, HMA Grants	Ongoing	Moderate
3.1	Reduce the long-term impact of all-hazards by deploying effective grounds maintenance and management through existing and new infrastructure development and land-use planning.	All	UA-OEM	Existing, HMA Grants	Ongoing	High
4.1	Build storm shelters and/or identify best available refuge areas (BARA) in campus buildings. <del>Inform the public on locations of these safe spaces.</del>	Thunderstorms, Tornadoes, Hurricanes	UA-OEM	Existing, HMA Grants	Ongoing	High
4.2	Renovate existing facilities to enhance security and prevent potential damage. <del>from all hazards.</del>	Thunderstorms, Tornadoes, Hurricanes	UA-OEM	Existing, HMA Grants	Ongoing	High
5.1	Deliver credible and actionable information to the campus community using multiple, varied, and redundant communication tools and equipment.	All	UA-OEM	Existing, HMA Grants	Ongoing	High
5.2	Enhance and maintain command, control, and coordination structures (NIMS) and equipment.	All	UA-OEM	Existing, HMA Grants	Ongoing	High
5.3	Enhance the capacity of the emergency operations center to respond to larger and/or more complex incidents.	All	UA-OEM	Existing, HMA Grants	Ongoing	Moderate
6.1	Promote and provide educational material to the campus community on all-hazards.	All	UA-OEM	Existing	Ongoing	Moderate

## Town of Brookwood Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Maintain a current comprehensive plan to include natural hazard threats and long-term disaster resistance measures.	All	Mayor and Council	TBD	High	Moderate
1.1	Integrate recommendations of the Division C Hazard Mitigation plan into current or future comprehensive plans.	All	Mayor and Council	TBD	High	High
1.2	Develop a five-year capital improvement plan (CIP) to include capital projects from this multi-hazard mitigation plan.	All	Mayor and Council	TBD	High	High
1.3	Map and assess existing fire hydrants and identify areas in need of new fire hydrants.	Wildfire	Fire Department	Existing Funds	Ongoing	Moderate
1.4	Enact local ordinance to require large scale mobile home parks and subdivisions to provide community safe room(s).	Tornadoes, Hurricanes, Severe Storms	Mayor and Council	Existing Funds	High	High
1.5	Participate in the “Turn Around Don’t Drown” program; acquire and place signs at bridge and overpass locations known to Flooding.	Flooding	Mayor and Council	Existing Funds	High	High
1.6	Promote construction best management practices and apply code enforcement to reduce and mitigate structural failures from hazard events.	All	Mayor and Council	Existing Funds	Ongoing	High
1.7	Evaluate and increase building code requirements for roof construction to maximize protection from wind events; encourage installation of “hurricane clips.”	Tornadoes, Hurricanes, Severe Storms	Mayor and Council	Existing Funds	Ongoing	High
1.8	Adopt and enforce fire safety ordinances that effectively address and regulate open burning and the use of liquid fuels.	Wildfires	Mayor and Council	Existing Funds	Ongoing	High
1.9	Adopt and enforce by code or ordinance, minimum property maintenance standards to reduce or eliminate unsafe structures.	All	Mayor and Council	Existing Funds	Ongoing	Moderate
1.10	Where feasible, require the construction of safe rooms within new public buildings, such as schools, libraries, community centers, or others as appropriate.	Tornadoes, Hurricanes, Severe Storms	Mayor and Council	Existing Funds	Ongoing	High



### Town of Brookwood Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit/ Cost Score
1.11	Establish ordinances to mitigate fire hazards to homes through management of surrounding vegetation and other best practices. See <a href="http://www.forestry.alabama.gov/">http://www.forestry.alabama.gov/</a>	Wildfires	Mayor and Council	Existing Funds	Low	High
1.12	Promote the adoption/enforcement of storm water management regulations that, at a minimum, maintain pre-development runoff rates.	Flooding	Mayor and Council	Existing Funds	Ongoing	High
1.13	Adopt subdivision regulations that require adequate stormwater infrastructure design and construction.	Flooding	Mayor and Council	Existing Funds	Complete	N/A
2	Require new utility lines be placed underground for large residential subdivisions and commercial developments through enforcement of local subdivision and land development regulations.	Tornadoes, Severe Storms, Winter storms/freezes, Hurricanes	Mayor and Council	TBD	Complete	N/A
2.1	Retrofit existing infrastructure, critical facilities and other buildings to minimize damages from natural hazards.	Flooding, Tornadoes, Hurricanes, Severe Storms, Earthquakes	Mayor and Council	FEMA HMA Grant	High	Low
2.2	Provide assistance to building owners on available building retrofits to protect against damages from natural hazards.	Flooding, Tornadoes, Hurricanes, Severe Storms, Earthquakes	Mayor and Council	FEMA HMA Grant	Ongoing	High
2.3	Encourage property owners and renters to purchase insurance coverage for Flooding damages when located in high-risk areas.	Flooding	Mayor and Council	Existing Funds	Ongoing	High
3	Increase open space acquisitions and other Flooding plain acquisition efforts.	Flooding	Mayor and Council	FEMA HMA Grant	Low	Low
3.1	Ensure builders and developers follow Federal wetlands permitting requirements of the Corps of Engineers.	Flooding	Mayor and Council	Existing Funds	Ongoing	High

### Town of Brookwood Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit/ Cost Score
3.2	Enact and/or enforce regulations prohibiting littering and dumping within stream and river corridors.	Flooding	Mayor and Council	Existing Funds	Ongoing	High
3.3	Promote use of Best Management Practices (BMP); encourage use of technical assistance from the Alabama Cooperative Extension System.	Flooding	Mayor and Council	Existing Funds	Ongoing	High
3.4	Establish and enforce water use policies and restrictions during periods of drought.	Droughts/heat waves, Wildfires	Mayor and Council	Existing Funds	Ongoing	High
4	Develop minor structural projects such as small berm or Flood walls in areas where non-structural mitigation techniques cannot be used.	Flooding	Mayor and Council	FEMA HMA Grant	Ongoing	Moderate
4.1	Install drainage improvements in identified problem drainage areas to reduce or eliminate localized Flooding.	Flooding	Mayor and Council	FEMA HMA Grant	Medium	Moderate
4.2	Construct new community safe rooms and include safe rooms in new and existing public and institutional buildings (schools, colleges and universities, senior centers, community centers, hospitals, and government buildings).	Hurricanes, Tornadoes, Severe Storms	Mayor and Council	FEMA HMA Grant	Ongoing	Moderate
4.3	Develop a program for subsidizing individual and community safe room construction in prioritized locations and facilities.	Hurricanes, Tornadoes, Severe Storms	Mayor and Council	FEMA HMA Grant	Ongoing	Moderate
4.4	Encourage the construction of safe rooms in new and existing homes and buildings.	Hurricanes, Tornadoes, Severe Storms	Mayor and Council	Existing Funds	Ongoing	High
5	Promote the provision and use of weather radios and emergency response instructions for households and businesses.	All	Mayor and Council	Existing Funds	Ongoing	High

### Town of Brookwood Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit/ Cost Score
5.1	Require weather radios be maintained in good working order in all public buildings and places of public assembly.	All	Mayor and Council	Existing Funds	High	High
5.2	Upgrade outdoor siren-warning systems to ensure complete coverage to all jurisdictions.	All	Mayor and Council	FEMA HMA Grant	Ongoing	Moderate
5.3	Install backup power generators at critical facilities.	Hurricanes, Tornadoes, Severe Storms	Mayor and Council	Existing Funds	Ongoing	Moderate
5.4	Maintain, upgrade, or expand critical communications infrastructure.	All	Mayor and Council	FEMA HMA Grant	High	Moderate
6	Increase access and use of FIRM information by real estate agents, builders, developers, and homeowners through announcements in local trade publications and newspapers.	Flooding	Mayor and Council	Existing Funds	Ongoing	High
6.1	Distribute hazard mitigation resources and brochures to students through area schools.	All	Mayor and Council	Existing Funds	Ongoing	High
6.2	Distribute the 2020 Division C Hazard Mitigation plan to local officials, stakeholders, and interested individuals via web posting and as requested.	All	Mayor and Council	Existing Funds	High	High
6.3	Provide resources and technical assistance to homeowners, builders, and developers on Flooding protection measures and alternatives.	Flooding	Mayor and Council	Existing Funds	Ongoing	High
6.4	Ensure the public is informed of hazard threats and mitigation measures to reduce damages and loss of life through local and social media outlets.	All	Mayor and Council	Existing Funds	Ongoing	High

**2014 Town of Brookwood Community Action Program - Actions REMOVED 2020**

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	Goal, Objectives and Mitigation Measures	Hazards Addressed	Priority	Timeline	Lead Responsibility for Carrying Out Measure	Action or Project	Estimated Cost	Funding Source
1	<b>Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.</b>							
1.3.1	Carry out detailed planning and engineering studies for sub- basins in critical flood hazard areas to determine watershed- wide solutions to flooding.	Flooding	Low	Long-Range	Mayor and Council	Action	TBD	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within participating jurisdictions that have the most potential for losses from natural hazard events and identify needed structural upgrades.	All	Medium	Mid- Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.3.3	Evaluate elevation and culvert sizing of existing roadways in flash flood-prone areas to ensure compliance with current standards for design year floods, and develop a program for construction upgrades as appropriate.	Flooding	Medium	Mid- Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	Flooding	Medium	Mid- Range	Mayor and Council	Action	TBD	TBD
1.4.1	Consider large lot size restrictions on flood prone areas designated on Flood Insurance Rate Maps.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.4.2	Evaluate additional land use restrictions within designated flood zones, such as prohibition of storage of buoyant materials, storage of hazardous materials, and restrictive development of flood ways, among others.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.4.3	Require delineation of flood plain fringe, floodways, and wetlands on all plans submitted with a permit for development within a flood plain.	Flooding	Medium	Mid- Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.6.1	Train local flood plain managers through programs offered by the State Flood Plain Coordinator and FEMA's training center in Emmitsburg, Maryland.	Flooding	Medium	Mid- Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.6.2	Maintain a library of technical assistance and guidance materials to support the local Mayor and Council.	Flooding	Medium	Mid- Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.6.3	Promote the adoption of uniform flood hazard prevention ordinance among all NFIP communities. The ordinance standards should encourage flood plain management that maintains the natural and beneficial functions of flood plains by maximizing the credits that could be obtained for "Higher Regulatory Standards" under the Community Rating System (CRS) Program.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.6.4	Maintain membership for locally designated flood plain managers in the Association of State Flood Plain Managers and the Alabama Association Flood Plain Managers and encourage active participation.	Flooding	Medium	Mid- Range	Mayor and Council	Action	No Additional Cost	Existing Funds

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1.6.6	Improve flood risk assessment by documenting high water marks post event, verification of FEMA's repetitive loss inventory and revising and updating regulatory floodplain maps.	Flooding	Medium	Ongoing	Mayor and Council	Project	No Additional Cost	Existing Funds	REMOVED
1.8.3	Establish ordinance for the planting of new urban forests or replacement of hurricane damaged urban forests using hurricane resistant tree species to mitigate wind and erosion problems, help beautify and promote healthy urban environments and reduce heating, cooling and storm runoff costs.	Wildfires	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
1.11.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Flooding	Medium	Short-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
2	<b>Goal for Property Protection: Protect structures and their occupants and contents from the damaging effects of natural hazards.</b>								
2.2.1	Acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	REMOVED
2.2.2	Utilize the most recent NFIP repetitive loss property list, and other appropriate sources, to create and maintain a prioritized list of acquisition mitigation projects based on claims paid.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	REMOVED
2.3.1	Elevate certain buildings in flood prone areas where acquisition or relocation is not feasible, with emphasis on Pre- FIRM buildings; where feasible, elevation is preferable to flood proofing.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	REMOVED
2.4.1	Flood proof pre-FIRM non-residential buildings, where feasible.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	REMOVED
2.7.1	Install lightning and/or surge protection on existing critical facilities.	Severe storms	High	Ongoing	Mayor and Council	Project	TBD	TBD	REMOVED
2.7.2	Conduct ongoing tree trimming programs along power lines.	Severe storms	High	Ongoing	TBD	Action	TBD	TBD	REMOVED
3	<b>Goal for Public Education and Outreach. Educate and inform the public about the risks of hazards and the techniques available to reduce threats to life and property.</b>								
3.9.3	Distribute weather radios and emergency response instructions to municipal residents.	All	Medium	Mid-Range	Mayor and Council	Action	TBD	FEMA HMA Grant	REMOVED
4	<b>Goal for Natural Resources Protection. Preserve and restore the beneficial functions of the natural environment to promote sustainable community development that balances the constraints of nature with the social and economic demands of the community.</b>								
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	Wildfire	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
5	<b>Goal for Structural Projects. Apply engineered structural modifications to natural systems and public infrastructure to reduce the potentially damaging impacts of hazards, where feasible, cost effective, and environmentally suitable.</b>								
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Flooding	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
5.2.2	Improve and retrofit water supply systems to save water during drought events and to eliminate breaks and leaks.	Drought	Low	Mid-Range	Mayor and Council	Project	TBD	FEMA HMA Grant	REMOVED

The removed actions were determined by the jurisdiction to no longer be relevant or feasible at this time. Remaining actions from the 2014 plan were reorganized into the new plan goal areas and modified as deemed necessary.

## Town of Coaling Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Maintain a current comprehensive plan to include natural hazard threats and long-term disaster resistance measures.	All	Mayor and Council	TBD	High	Moderate
1.1	Integrate recommendations of the Division C Hazard Mitigation plan into current or future comprehensive plans.	All	Mayor and Council	TBD	High	High
1.2	Enact local ordinance to require large scale mobile home parks and subdivisions to provide community safe room(s).	Tornadoes, Hurricanes, Severe Storms	Mayor and Council	Existing Funds	High	High
1.3	Promote construction best management practices and apply code enforcement to reduce and mitigate structural failures from hazard events.	All	Mayor and Council	Existing Funds	Ongoing	High
1.4	Adopt and enforce fire safety ordinances that effectively address and regulate open burning and the use of liquid fuels.	Wildfires	Fire Department	Existing Funds	Ongoing	High
1.5	Adopt and enforce by code or ordinance, minimum property maintenance standards to reduce or eliminate unsafe structures.	All	Mayor and Council	Existing Funds	Ongoing	High
1.6	Where feasible, require the construction of safe rooms within new public buildings, such as schools, libraries, community centers, or others as appropriate.	Tornadoes, Hurricanes, Severe Storms	Mayor and Council	Existing Funds	Ongoing	High
1.7	Carry out vulnerability assessments of critical facilities to identify retrofit projects to mitigate damages from hazards.	All	Mayor and Council	TBD	High	High
2	Retrofit existing infrastructure, critical facilities and other buildings to minimize damages from natural hazards.	All	Mayor and Council	FEMA HMA Grant	High	Low
2.1	Encourage property owners and renters to purchase insurance coverage for flood damages when located in high-risk areas.	Flooding	Mayor and Council	Existing Funds	Ongoing	High

### Town of Coaling Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2.2	Identify need and install lightning and/or surge protection on critical facilities.	Severe Storms	Mayor and Council	TBD	Ongoing	Moderate
2.3	Conduct ongoing tree trimming programs along electrical transmission lines.	Severe Storms	TBD	TBD	Ongoing	Low
3	Increase open space acquisitions and other flood plain acquisition efforts.	Flooding	Mayor and Council	FEMA HMA Grant	Medium	Low
3.1	Establish and enforce water use policies and restrictions during periods of drought.	Droughts/heat waves, wildfires	Mayor and Council	Existing Funds	Ongoing	High
4	Develop minor structural projects such as small berm or floodwalls in areas where non-structural mitigation techniques cannot be used.	Flooding	Mayor and Council	FEMA HMA Grant	Ongoing	Moderate
4.1	Install drainage improvements in identified problem drainage areas to reduce or eliminate localized flooding.	Flooding	Mayor and Council	FEMA HMA Grant	High	Moderate
4.2	Construct new community safe rooms and include safe rooms in new and existing public and institutional buildings (schools, colleges and universities, senior centers, community centers, hospitals, and government buildings).	Hurricanes, Tornadoes, Severe Storms	Mayor and Council	FEMA HMA Grant	Ongoing	Low
4.3	Develop a program for subsidizing individual and community safe room construction in prioritized locations and facilities.	Hurricanes, Tornadoes, Severe Storms	Mayor and Council	FEMA HMA Grant	Ongoing	Moderate
4.4	Encourage the construction of safe rooms in new and existing homes and buildings.	Hurricanes, Tornadoes, Severe Storms	Mayor and Council	Existing Funds	Ongoing	High

### Town of Coaling Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Promote the provision and use of weather radios and emergency response instructions for households and businesses.	All	Mayor and Council	Existing Funds	Ongoing	High
5.1	Install backup power generators at critical facilities.	Hurricanes, Tornadoes, Severe Storms	Mayor and Council	FEMA HMA Grant	Ongoing	High
5.2	Require weather radios be maintained in good working order in all public buildings and places of public assembly.	All	Mayor and Council	Existing Funds	High	High
5.3	Upgrade outdoor siren-warning systems to ensure complete coverage to all jurisdictions.	All	Mayor and Council	FEMA HMA Grant	Ongoing	Moderate
5.4	Maintain, upgrade, or expand critical communications infrastructure.	All	Mayor and Council	FEMA HMA Grant	High	Moderate
6	Participate in public awareness events such as City/County Day, Hurricane Awareness Week, and Severe Weather Week.	All	Mayor and Council	Existing Funds	Ongoing	High
6.1	Promote water conservation; educate citizens on water saving tips and available resources.	Drought	Mayor and Council	Existing Funds	Ongoing	High
6.2	Distribute hazard mitigation resources and brochures to students through area schools.	All	Mayor and Council	Existing Funds	Ongoing	High
6.3	Distribute the 2020 Division C Hazard Mitigation plan to local officials, stakeholders, and interested individuals via web posting and as requested.	All	Mayor and Council	Existing Funds	Ongoing	High



**2014 Town of Coaling Community Action Program - Actions REMOVED 2020**

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Goal, Objectives and Mitigation Measures		Hazards Addressed	Priority	Timeline	Lead Responsibility for Carrying Out Measure	Action or Project	Estimated Cost	Funding Source	
1	<b>Goal for Prevention.</b> Manage the development of land and buildings to minimize risks of loss due to natural hazards.								
2	<b>Goal for Property Protection:</b> Protect structures and their occupants and contents from the damaging effects of natural hazards.								
2.1.1	Relocate buildings out of hazardous flood areas, with emphasis on pre-FIRM residential buildings, where deemed more cost effective than property acquisition or building elevation.	Flooding	Medium	Ongoing	Mayor and Council, Building Inspector	Project	TBD	FEMA HMA Grant	Removed
2.2.1	Acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Flooding	Medium	Ongoing	Mayor and Council, Building Inspector	Project	TBD	FEMA HMA Grant	Removed
2.2.2	Utilize the most recent NFIP repetitive loss property list, and other appropriate sources, to create and maintain a prioritized list of acquisition mitigation projects based on claims paid.	Flooding	Medium	Ongoing	Building Inspector, Floodplain Manager	Project	TBD	FEMA HMA Grant	Removed
2.3.1	Elevate certain buildings in flood prone areas where acquisition or relocation is not feasible, with emphasis on Pre- FIRM buildings; where feasible, elevation is preferable to flood proofing.	Flooding	Medium	Ongoing	Mayor and Council, Building Inspector	Project	TBD	FEMA HMA Grant	Removed
2.3.2	Repair, elevate and weatherize existing homes for low- to moderate-income families.	Flooding	Medium	Ongoing	Building Inspector	Project	TBD	FEMA HMA Grant	Removed
2.4.1	Flood proof pre-FIRM non-residential buildings, where feasible.	Flooding	Medium	Ongoing	Mayor and Council, Building Inspector	Project	TBD	FEMA HMA Grant	Removed
2.5	<b>Building Retrofits.</b> Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.								
2.5.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Flooding, Tornadoes, Hurricanes, Severe Storms and Earthquakes	Medium	Ongoing	Building Inspector	Action	TBD	FEMA HMA Grant	Removed
3	<b>Goal for Public Education and Outreach.</b> Educate and inform the public about the risks of hazards and the techniques available to reduce threats to life and property.								
3.5.2	Educate homeowners about structural and non-structural retrofitting of vulnerable homes.	Earthquake	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
4	<b>Goal for Natural Resources Protection.</b> Preserve and restore the beneficial functions of the natural environment to promote sustainable community development that balances the constraints of nature with the social and economic demands of the community.								
5	<b>Goal for Structural Projects.</b> Apply engineered structural modifications to natural systems and public infrastructure to reduce the potentially damaging impacts of hazards, where feasible, cost effective, and environmentally suitable.								
5.2.2	Improve and retrofit water supply systems to save water during drought events and to eliminate breaks and leaks.	Drought	Low	Mid- Range	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed

The removed actions were determined by the jurisdiction to no longer be relevant or feasible at this time. Remaining actions from the 2014 plan were reorganized into the new plan goal areas and modified as deemed necessary.

## Town of Coker Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Maintain a current comprehensive plan to include natural hazard threats and long-term disaster resistance measures.	All	Mayor and Council	TBD	High	Moderate
1.1	Integrate recommendations of the Division C Hazard Mitigation plan into current or future comprehensive plans.	All	Mayor and Council	TBD	High	High
1.2	Develop a five-year capital improvement plan (CIP) to include capital projects from this multi-hazard mitigation plan.	All	Mayor and Council	TBD	High	High
1.3	Mark and catalog depths of flooding and storm surge events and maintain data for historical records in GIS.	Flooding	Mayor and Council	Existing Funds	Ongoing	High
1.4	Map and assess existing fire hydrants and identify areas in need of new fire hydrants.	Wildfire	Fire Department	Existing Funds	Ongoing	High
1.5	Identify flood prone areas; conduct engineering studies, and construct drainage improvements to reduce flood damages.	Flooding	Mayor and Council	TBD	High	Moderate
1.6	Adopt policy to prioritize the acquisition and development of open space areas for recreation, landscaping, and drainage control.	Flooding	Mayor and Council	Existing Funds	High	High
2	Retrofit existing infrastructure, critical facilities and other buildings to minimize damages from natural hazards.	All	Mayor and Council	FEMA HMA Grant	High	Low
2.1	Provide assistance to building owners on available building retrofits to protect against damages from natural hazards.	All	Mayor and Council	FEMA HMA Grant	Medium	High
2.2	Encourage property owners and renters to purchase insurance coverage for flood damages when located in high-risk areas.	Flooding	Mayor and Council	Existing Funds	High	High
2.3	Encourage farmers purchase crop insurance to cover potential losses due to drought.	Drought	Mayor and Council	Existing Funds	Ongoing	High

### Town of Coker Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2.4	Identify need and install lightning and/or surge protection on critical facilities.	Severe storms	Mayor and Council	TBD	Ongoing	Moderate
4	Construct new community safe rooms and include safe rooms in new and existing public and institutional buildings (schools, colleges and universities, senior centers, community centers, hospitals, and government buildings).	Hurricanes, Tornadoes, Severe Storms	Mayor and Council	FEMA HMA Grant	Complete	N/A
5	Install backup power generators at critical facilities.	Hurricanes, Tornadoes, Severe Storms	Mayor and Council	FEMA HMA Grant	Ongoing	Moderate
5.1	Promote the provision and use of weather radios and emergency response instructions for households and businesses.	All	Mayor and Council	Existing Funds	Ongoing	High
5.2	Require weather radios be maintained in good working order in all public buildings and places of public assembly.	All	Mayor and Council	Existing Funds	High	High
6	Participate in public awareness events such as City/County Day, Hurricane Awareness Week, and Severe Weather Week.	All	Mayor and Council	Existing Funds	Ongoing	High
6.1	Conduct outreach activities to residents using multiple media platforms or workshops to implement hazard mitigation measures in the home.	All	Mayor and Council	Existing Funds	Medium	High
6.2	Encourage local libraries to maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	All	Mayor and Council	Existing Funds	Ongoing	High
6.3	Ensure the public is informed of hazard threats and mitigation measures to reduce damages and loss of life through local and social media outlets.	All	Mayor and Council	Existing Funds	High	High

**2014 Town of Coker Community Action Program - Actions REMOVED 2020**

311 Goal, Objectives and Mitigation Measures		Hazards Addressed	Priority	Timeline	Lead Responsibility for Carrying Out Measure	Action or Project	Estimated Cost	Funding Source
1	<b>Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.</b>							
1.2.1	Maintain a centralized, countywide natural hazards and risk assessment database in GIS that is accessible to local planners and emergency management personnel, including such data as, flood zones, geohazards, major drainages structures, dams/levees, hurricane surge areas, tornado tracks, disaster events and their extents, and a comprehensive inventory of critical facilities within all jurisdictions.	All	Medium	Mid-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.2.2	Integrate FEMA HAZUS-MH applications for hazard loss estimations within local GIS programs. Maintain up-to-date data within GIS to apply the full loss estimation capabilities of HAZUS.	All	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.3.1	Carry out detailed planning and engineering studies for sub-basins in critical flood hazard areas to determine watershed-wide solutions to flooding.	Flooding	Low	Long-Range	Mayor and Council	Action	TBD	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within participating jurisdictions that have the most potential for losses from natural hazard events and identify needed structural upgrades.	All	Medium	Mid-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.3.3	Evaluate elevation and culvert sizing of existing roadways in flash flood-prone areas to ensure compliance with current standards for design year floods, and develop a program for construction upgrades as appropriate.	Flooding	Medium	Mid-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.3.6	Develop an inventory of public and commercial building vulnerable to earthquake damage, focusing on pre 1940 construction and buildings with cripple wall foundations.	Earthquake	Low	Long-Range	Mayor and Council	Project	TBD	TBD
1.4.1	Consider large lot size restrictions on flood prone areas designated on Flood Insurance Rate Maps.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.4.2	Evaluate additional land use restrictions within designated flood zones, such as prohibition of storage of buoyant materials, storage of hazardous materials, and restrictive development of flood ways, among others.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.4.3	Require delineation of flood plain fringe, floodways, and wetlands on all plans submitted with a permit for development within a flood plain.	Flooding	Medium	Mid-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.4.4	Enact local ordinance that require community storm shelters within sizeable mobile home parks and subdivisions.	Tornadoes, Hurricanes, Severe Storms	High	Short-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.6.1	Train local flood plain managers through programs offered by the State Flood Plain Coordinator and FEMA's training center in Emmitsburg, Maryland.	Flooding	Medium	Mid-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Flooding	Medium	Mid-Range	Mayor and Council	Action	No Additional Cost	Existing Funds

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1.6.3	Promote the adoption of uniform flood hazard prevention ordinance among all NFIP communities. The ordinance standards should encourage flood plain management that maintains the natural and beneficial functions of flood plains by maximizing the credits that could be obtained for "Higher Regulatory Standards" under the Community Rating System (CRS) Program.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.6.4	Maintain membership for locally designated flood plain managers in the Association of State Flood Plain Managers and the Alabama Association Flood Plain Managers and encourage active participation.	Flooding	Medium	Mid-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.6.5	Participate in the "Turn Around Don't Drown" program by purchasing and installing signs in known flash flood bridge overpass locations.	Flooding	Medium	Mid-Range	Mayor and Council	Project	No Additional Cost	Existing Funds	Removed
1.6.6	Improve flood risk assessment by documenting high water marks post event, verification of FEMA's repetitive loss inventory and revising and updating regulatory floodplain maps.	Flooding	Medium	Ongoing	Mayor and Council	Project	No Additional Cost	Existing Funds	Removed
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	All	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.7.2	Evaluate and revise as appropriate, building codes for roof construction to maximize protection against wind damage from hurricanes, tornadoes, and windstorms; encourage installation of "hurricane clips."	Tornadoes, Hurricanes, Severe Storms	High	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.7.3	Relocate existing utility lines underground, where feasible and cost effective, and require, through local subdivision and land development regulations, the placement of all new utility lines underground for large residential subdivisions and commercial developments.	Tornadoes, severe storms, winter storms/freezes, hurricanes	Low	Ongoing	Mayor and Council	Action	TBD	TBD	Removed
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	Wildfires	High	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	All	High	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.7.6	Require the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	Tornadoes, Hurricanes, Severe Storms	High	Ongoing	Mayor and Council	Project	No Additional Cost	Existing Funds	Removed
1.8.1	Review and revise as necessary, landscaping standards for parking lots that reduce the size of impervious surfaces and encourage natural infiltration of rainwater.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.8.2	Establish ordinances to help mitigate fire hazards related to fuel buildup due to recent hurricanes, by raising tree canopies close to homes, thinning forests near urban areas, and removing trees that are too close to homes.	Wildfires	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.8.3	Establish ordinance for the planting of new urban forests or replacement of hurricane damaged urban forests using hurricane resistant tree species to mitigate wind and erosion problems, help beautify and promote healthy urban environments and reduce heating, cooling and storm runoff costs.	Wildfires	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.9.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Flooding	Medium	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.9.2	Develop, adopt and implement subdivision regulations that require proper stormwater infrastructure design and construction.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed

1.9.3	Establish urban forestry program to help mitigate storm water runoff common in areas with large impervious surfaces.	Flooding	Low	Long-Range	Mayor and Council	Action	TBD	TBD	Removed
1.11.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Flooding	Medium	Short-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.12.2	Conduct wildfire vulnerability assessments, including the vulnerability of critical facilities and number of residential properties in these risk areas, and prepare a comprehensive inventory to identify high and moderate wildfire risk areas.	Wildfire	Low	Long-Range	Fire Department	Project	No Additional Cost	Existing Funds	Removed
<b>2</b>	<b>Goal for Property Protection: Protect structures and their occupants and contents from the damaging effects of natural hazards.</b>								
2.1.1	Relocate buildings out of hazardous flood areas, with emphasis on pre-FIRM residential buildings, where deemed more cost effective than property acquisition or building elevation.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
2.2.1	Acquire and demolish flood prone or substantially damaged structures	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA	Removed
2.2.2	Utilize the most recent NFIP repetitive loss property list, and other appropriate sources, to create and maintain a prioritized list of acquisition mitigation projects based on claims paid.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
2.3.1	Elevate certain buildings in flood prone areas where acquisition or relocation is not feasible, with emphasis on Pre-FIRM buildings; where feasible, elevation is preferable to flood proofing.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
2.3.2	Repair, elevate and weatherize existing homes for low- to moderate-income families.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
2.4.1	Flood proof pre-FIRM non-residential buildings, where feasible.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
2.4.2	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non- structural mitigation techniques.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
2.7.2	Conduct ongoing tree trimming programs along power lines.	Severe storms	High	Ongoing	TBD	Action	TBD	TBD	Removed
<b>3</b>	<b>Goal for Public Education and Outreach: Educate and inform the public about the risks of hazards and the techniques available to reduce threats to life and property.</b>								
3.2.3	Promote disaster resilience within the business community through workshops, educational materials and planning guides, intended to assist business owners in recovering from a disaster event in a timely manner.	All	High	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
3.2.4	Distribute outreach materials to citizens, builders and business owners inquiring about a flood problem, a building permit or other natural hazard related questions.	Flooding	High	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
3.2.5	Educate citizens on water saving techniques.	Drought	High	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
3.2.6	Educate farmers on soil and water conservation practices.	Drought	High	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
3.3.1	Arrange with the Multiple Listing Service (MLS) to require floodplain location disclosure as a condition for each real estate listing.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
3.3.2	Consider the enactment of a local ordinance or state law to require floodplain location disclosure when a property is listed for sale.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
3.5.1	Distribute hazard mitigation brochures to students through area schools.	All	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed

3.5.2	Educate homeowners about structural and non-structural retrofitting of vulnerable homes. 314	Earthquake	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
3.6.1	Distribute the 2014 plan to local officials, stakeholders, and interested individuals through internet download.	All	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
3.7.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Flooding	Low	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
3.9.3	Distribute weather radios and emergency response instructions to municipal residents.	All	Medium	Mid-Range	Mayor and Council	Action	TBD	FEMA HMA Grant	Removed
3.10.1	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
3.10.2	Upgrade critical communications infrastructure.	Flooding	Medium	Mid-Range	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
4	<b>Goal for Natural Resources Protection. Preserve and restore the beneficial functions of the natural environment to promote sustainable community development that balances the constraints of nature with the social and economic demands of the community.</b>								
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	Flooding	Medium	Mid-Range	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Flooding	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Flooding	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	Wildfire	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Droughts/heat waves, wildfires	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
5	<b>Goal for Structural Projects. Apply engineered structural modifications to natural systems and public infrastructure to reduce the potentially damaging impacts of hazards, where feasible, cost effective, and environmentally suitable.</b>								
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Flooding	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Flooding	Medium	Mid-Range	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
5.2.2	Improve and retrofit water supply systems to save water during drought events and to eliminate breaks and leaks.	Drought	Low	Mid-Range	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
5.3.2	Establish a program for subsidizing individual and community safe room construction in appropriate locations and facilities.	Hurricanes, Tornadoes, Severe Storms	High	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed

The removed actions were determined by the jurisdiction to no longer be relevant or feasible at this time. Remaining actions from the 2014 plan were reorganized into the new plan goal areas and modified as deemed necessary.

### Town of Lake View Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Map and assess existing fire hydrants and identify areas in need of new fire hydrants.	Flooding	Lake View VFD	Existing Funds	Low	High
1.1	Enact large lot size restrictions in flood prone areas designated on Flood Insurance Rate Maps.	Flooding	Mayor/Council	Existing Funds	Medium	High
1.2	Evaluate additional land use restrictions within designated flood zones, such as prohibition of storage of buoyant materials, storage of hazardous materials, restrictive development of flood ways.	Flooding	Mayor/Council	Existing Funds	High	High
1.3	Enact local ordinance to require large scale mobile home parks and subdivisions to provide community safe room(s).	Tornadoes, Hurricanes, Severe Storms	Mayor/Council	Existing Funds	Moderate	High
1.4	Adopt policy to prioritize the acquisition and development of open space areas for recreation, landscaping, and drainage control.	Flooding	Mayor/Council	Existing Funds	Medium	High
1.5	Train and certify local flood plain managers through programs offered by the State Flood Plain Coordinator and FEMA.	Flooding	Mayor/Council	Existing Funds	Completed	N/A
1.6	Develop a library of guidance materials to assist local floodplain managers.	Flooding	Mayor/Council	Existing Funds	High	High
1.7	Maintain membership of local flood plain managers in the Association of State Flood Plain Managers and the Alabama Association Flood Plain Managers; encourage active participation.	Flooding	Mayor/Council	Existing Funds	Ongoing	High
1.8	Participate in the “Turn Around Don’t Drown” program; acquire and place signs at bridge and overpass locations known to flood.	Flooding	Mayor/Council	Existing Funds	Ongoing	High
1.9	Improve flood risk assessments by providing post-event high water mark readings, verification of FEMA’s repetitive loss inventory, and other data as identified.	Flooding	Mayor/Council	Existing Funds	Ongoing	High



### Town of Lake View Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1.10	Promote construction best management practices and apply code enforcement to reduce and mitigate structural failures from hazard events.	All	Mayor/Council, Building Inspector	Existing Funds	Ongoing	High
1.11	Evaluate and increase building code requirements for roof construction to maximize protection from wind events; encourage installation of “hurricane clips.”	Tornadoes, Hurricanes, Severe Storms	Mayor/Council, Building Inspector	Existing Funds	Ongoing	High
1.12	Adopt and enforce fire safety ordinances that effectively address and regulate open burning and the use of liquid fuels.	Wildfires	Mayor/Council	Existing Funds	Ongoing	High
1.13	Adopt and enforce by code or ordinance, minimum property maintenance standards to reduce or eliminate unsafe structures.	Wildfire	Mayor/Council	Existing Funds	Ongoing	High
1.14	Where feasible, require the construction of safe rooms within new public buildings, such as schools, libraries, community centers, or others as appropriate.	Tornadoes, Hurricanes, Severe Storms	Mayor/Council	Existing Funds	Ongoing	High
1.15	Promote use of green infrastructure methods to encourage and manage natural infiltration of rainwater.	Flooding	Mayor/Council	Existing Funds	Ongoing	High
1.16	Promote the adoption/enforcement of storm water management regulations that, at a minimum, maintain pre-development runoff rates.	Flooding	Mayor/Council	Existing Funds	Ongoing	High
1.17	Adopt subdivision regulations that require adequate stormwater infrastructure design and construction.	Flooding	Mayor/Council	Existing Funds	Ongoing	High
1.18	As feasible, apply for/maintain membership in the CRS Program. Seek to upgrade rating when possible.	Flooding	Mayor/Council	Existing Funds	Ongoing	High
1.19	Carry out vulnerability assessments of critical facilities to identify retrofit projects to mitigate damages from hazards.	All	Mayor/Council	TBD	Medium	Moderate

<b>Town of Lake View Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
1.20	Develop a comprehensive inventory and vulnerability assessment of critical facilities and residential properties located in high and moderate wildfire risk areas.	Wildfires	Mayor/Council, Lake View VFD	Existing Funds	Medium	Moderate
2	Require new utility lines be placed underground for large residential subdivisions and commercial developments through enforcement of local subdivision and land development regulations. Move existing utility lines underground, where feasible and cost effective.	Hurricanes, Tornadoes, Severe Storms, Winter storms	Mayor/Council	TBD	High	Low
2.1	Develop and maintain a prioritized list of acquisition mitigation projects based on repetitive loss claims paid.	Flooding	Mayor/Council	Existing Funds	Ongoing	High
2.2	Retrofit existing infrastructure, critical facilities and other buildings to minimize damages from natural hazards.	All	Mayor/Council, Building Inspector	Existing Funds	Ongoing	High
2.3	Encourage property owners and renters to purchase insurance coverage for flood damages when located in high-risk areas.	Flooding	Mayor/Council	Existing Funds	Ongoing	High
2.4	Identify need and install lightning and/or surge protection on critical facilities.	Hurricanes, Tornadoes, Severe Storms	Mayor/Council, Building Inspector	Existing Funds	Ongoing	High
4	Construct new community safe rooms and include safe rooms in new and existing public and institutional buildings (schools, colleges and universities, senior centers, community centers, hospitals, and government buildings).	Hurricanes, Tornadoes, Severe Storms	Mayor/Council	FEMA HMA, Local	Ongoing	Moderate
4.1	Develop a program for subsidizing individual and community safe room construction in prioritized locations and facilities.	Hurricanes, Tornadoes, Severe Storms	Mayor/Council	Grants, Local	Ongoing	High
4.2	Encourage the construction of safe rooms in new and existing homes and buildings.	Hurricanes, Tornadoes, Severe Storms	Mayor/Council	Existing Funds	Ongoing	High

<b>Town of Lake View Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
5	Install backup power generators at critical facilities.	Hurricanes, Tornadoes, Severe Storms	Mayor/Council	Existing Funds	Ongoing	High
5.1	Promote the provision and use of weather radios and emergency response instructions for households and businesses.	All	Mayor/Council	Existing Funds	Ongoing	High
5.2	Require weather radios be maintained in good working order in all public buildings and places of public assembly.	All	Mayor/Council	Existing Funds	Ongoing	High
5.3	Install/upgrade outdoor siren-warning systems to ensure complete coverage to all jurisdictions.	All	Mayor/Council	Grants, Local	Ongoing	Moderate
5.4	Maintain, upgrade, or expand critical communications infrastructure.	All	Mayor/Council	Grants, Local	High	Moderate
6	Conduct outreach activities to residents using multiple media platforms or workshops to implement hazard mitigation measures in the home.	All	Mayor/Council	Existing Funds	Ongoing	High
6.1	Distribute the 2020 Division C Hazard Mitigation plan to local officials, stakeholders, and interested individuals via web posting and as requested.	All	Mayor/Council	Existing Funds	High	High
6.2	Provide resources and technical assistance to homeowners, builders, and developers on flood protection measures and alternatives.	Flooding	Mayor/Council, Building Inspector	Existing Funds	Ongoing	High

**2014 Town of Lake View Community Action Program - Actions REMOVED 2020**

319	Goal, Objectives and Mitigation Measures	Hazards Addressed	Priority	Timeline	Lead Responsibility for Carrying Out Measure	Action or Project	Estimated Cost	Funding Source	
1	<u>Goal for Prevention.</u> Manage the development of land and buildings to minimize risks of loss due to natural hazards.								
1.1.1	Maintain up-to-date comprehensive plans for all jurisdictions. Each plan should address natural hazards exposure and include long-term disaster resistance measures. The vulnerability and environmental suitability of lands for future development should be clearly addressed. Local plans should assess the vulnerability of designated hazard areas and encourage open space planning to create amenities for recreation and conservation of fragile resources.	All	Medium	Mid-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	All	Medium	Mid-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.1.3	Prepare a five-year capital improvements plan (CIP) to include capital projects that implements the natural hazards element of the community's comprehensive plan or projects identified in the Community Mitigation Action Program of this multi-hazard mitigation plan.	All	Medium	Mid-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.2.1	Maintain a centralized, countywide natural hazards and risk assessment database in GIS that is accessible to local planners and emergency management personnel, including such data as, flood zones, geohazards, major drainages structures, dams/levees, hurricane surge areas, tornado tracks, disaster events and their extents, and a comprehensive inventory of critical facilities within all jurisdictions.	All	Medium	Mid-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.2.2	Integrate FEMA HAZUS-MH applications for hazard loss estimations within local GIS programs. Maintain up-to- date data within GIS to apply the full loss estimation capabilities of HAZUS.	All	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	Flooding	High	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.3.1	Carry out detailed planning and engineering studies for sub-basins in critical flood hazard areas to determine watershed-wide solutions to flooding.	Flooding	Medium	Mid-Range	Mayor and Council	Action	TBD	TBD	Removed
1.3.2	Identify existing culturally or socially significant structures and critical facilities within participating jurisdictions that have the most potential for losses from natural hazard events and identify needed structural upgrades.	All	Medium	Mid-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.3.3	Evaluate elevation and culvert sizing of existing roadways in flash flood-prone areas to ensure compliance with current standards for design year floods, and develop a program for construction upgrades as appropriate.	Flooding	Medium	Mid-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	Flooding	Medium	Mid-Range	Mayor and Council	Action	TBD	TBD	Removed

1.3.6	Develop an inventory of public and commercial building vulnerable to earthquake damage, focusing on pre 1940 construction and buildings with cripple wall foundations.	Earthquake	Low	Long-Range	Mayor and Council	Project	TBD	TBD	Removed
1.6.3	Promote the adoption of uniform flood hazard prevention ordinance among all NFIP communities. The ordinance standards should encourage flood plain management that maintains the natural and beneficial functions of flood plains by maximizing the credits that could be obtained for "Higher Regulatory Standards" under the Community Rating System (CRS) Program.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
1.11.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Flooding	Medium	Short-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
<b>2</b>	<b>Goal for Property Protection: Protect structures and their occupants and contents from the damaging effects of natural hazards.</b>								
2.1.1	Relocate buildings out of hazardous flood areas, with emphasis on pre-FIRM residential buildings, where deemed more cost effective than property acquisition or building elevation.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
2.2.1	Acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
2.3.1	Elevate certain buildings in flood prone areas where acquisition or relocation is not feasible, with emphasis on Pre-FIRM buildings; where feasible, elevation is preferable to flood proofing.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
2.3.2	Repair, elevate and weatherize existing homes for low- to moderate-income families.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
2.4.1	Flood proof pre-FIRM non-residential buildings, where feasible.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
2.4.2	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non- structural mitigation techniques.	Flooding	Medium	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
2.6.2	Promote the purchase of crop insurance to cover potential losses due to drought.	Drought	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
<b>3</b>	<b>Goal for Public Education and Outreach. Educate and inform the public about the risks of hazards and the techniques available to reduce threats to life and property.</b>								
3.2.1	Continue to participate in environmental awareness events to provide the public information on hazard exposure and mitigation measures, such as City/County Day, Hurricane Awareness Week, and Severe Weather Week.	All	High	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
3.3.1	Arrange with the Multiple Listing Service (MLS) to require floodplain location disclosure as a condition for each real estate listing.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
3.3.2	Consider the enactment of a local ordinance or state law to require floodplain location disclosure when a property is listed for sale.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
3.4.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	All	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
3.5.1	Distribute hazard mitigation brochures to students through area schools.	All	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed

3.8.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	All	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
4	<b>Goal for Natural Resources Protection.</b> Preserve and restore the beneficial functions of the natural environment to promote sustainable community development that balances the constraints of nature with the social and economic demands of the community.								
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	Flooding	Medium	Mid-Range	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Droughts/heat waves, wildfires	Medium	Ongoing	Mayor and Council	Action	No Additional Cost	Existing Funds	Removed
5	<b>Goal for Structural Projects.</b> Apply engineered structural modifications to natural systems and public infrastructure to reduce the potentially damaging impacts of hazards, where feasible, cost effective, and environmentally suitable.								
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Flooding	Medium	Mid-Range	Mayor and Council	Project	TBD	FEMA HMA Grant	Removed

The removed actions were determined by the jurisdiction to no longer be relevant or feasible at this time. Remaining actions from the 2014 plan were reorganized into the new plan goal areas and modified as deemed necessary.

## Town of Vance Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Maintain a current comprehensive plan to include natural hazard threats and long-term disaster resistance measures.	All	Mayor and Council	TBD	Completed	N/A
1.1	Map and assess existing fire hydrants and identify areas in need of new fire hydrants.	Wildfire	Fire Department	Existing Funds	Ongoing	High
1.2	Promote construction best management practices and apply code enforcement to reduce and mitigate structural failures from hazard events.	All	Building Inspector	Existing Funds	Ongoing	High
1.3	Adopt and enforce fire safety ordinances that effectively address and regulate open burning and the use of liquid fuels.	Wildfires	Fire Department	Existing Funds	Ongoing	High
1.4	Adopt and enforce by code or ordinance, minimum property maintenance standards to reduce or eliminate unsafe structures.	All	Building Inspector	Existing Funds	Ongoing	High
1.5	Adopt subdivision regulations that require adequate stormwater infrastructure design and construction.	Flooding	Town Engineer	Existing Funds	Completed	N/A
2	Identify need and install lightning and/or surge protection on critical facilities.	Severe Storms	Town Engineer	TBD	Ongoing	Moderate
3	Ensure builders and developers follow Federal wetlands permitting requirements of the Corps of Engineers.	Flooding	Building Inspector, Town Engineer	Existing Funds	Ongoing	High
3.1	Develop minor structural projects such as small berm or floodwalls in areas where non-structural mitigation techniques cannot be used.	Flooding	Mayor and Council, Building Inspector	FEMA HMA Grant	Ongoing	Moderate
4	Construct new community safe rooms and include safe rooms in new and existing public and institutional buildings (schools, colleges and universities, senior centers, community centers, hospitals, and government buildings).	Hurricanes, Tornadoes, Severe Storms	Mayor and Council	FEMA HMA Grant	Completed/ Ongoing	Low
4.1	Encourage the construction of safe rooms in new and existing homes and buildings.	Hurricanes, Tornadoes, Severe Storms	Mayor and Council	Existing Funds	Ongoing	High

### Town of Vance Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Install backup power generators at critical facilities.	Hurricanes, Tornadoes, Severe Storms	Town Engineer	FEMA HMA Grant	Ongoing	Moderate
5.1	Promote the provision and use of weather radios and emergency response instructions for households and businesses.	All	Mayor and Council	Existing Funds	Ongoing	High
5.2	Upgrade outdoor siren-warning systems to ensure complete coverage to all jurisdictions.	All	Mayor and Council	FEMA HMA Grant	Ongoing	Moderate
5.3	Maintain, upgrade, or expand critical communications infrastructure.	All	Mayor and Council	FEMA HMA Grant	Completed	N/A
6	Distribute the 2020 Division C Hazard Mitigation plan to local officials, stakeholders, and interested individuals via web posting and as requested.	All	Mayor and Council	Existing Funds	High	High
6.1	Provide resources and technical assistance to homeowners, builders, and developers on flood protection measures and alternatives.	Flooding	Building Inspector, Town Engineer	Existing Funds	Ongoing	High



**2014 Town of Vance Community Action Program - Actions REMOVED 2020**

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	Goal, Objectives and Mitigation Measures	Hazards Addressed	Priority	Timeline	Lead Responsibility for Carrying Out Measure	Action or Project	Estimated Cost	Funding Source
1	<b>Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.</b>							
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	All	Medium	Mid-Range	Mayor and Council	Action	TBD	TBD
1.1.3	Prepare a five-year capital improvements plan (CIP) to include capital projects that implements the natural hazards element of the community's comprehensive plan or projects identified in the Community Mitigation Action Program of this multi-hazard mitigation plan.	All	Medium	Mid-Range	Mayor and Council	Action	TBD	TBD
1.2.1	Maintain a centralized, countywide natural hazards and risk assessment database in GIS that is accessible to local planners and emergency management personnel, including such data as, flood zones, geohazards, major drainages structures, dams/levees, hurricane surge areas, tornado tracks, disaster events and their extents, and a comprehensive inventory of critical facilities within all jurisdictions.	All	Medium	Mid-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.2.2	Integrate FEMA HAZUS-MH applications for hazard loss estimations within local GIS programs. Maintain up-to-date data within GIS to apply the full loss estimation capabilities of HAZUS.	All	Low	Long-Range	Mayor and Council	Action	TBD	TBD
1.4.1	Consider large lot size restrictions on flood prone areas designated on Flood Insurance Rate Maps.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.4.2	Evaluate additional land use restrictions within designated flood zones, such as prohibition of storage of buoyant materials, storage of hazardous materials, and restrictive development of flood ways, among others.	Flooding	Low	Long-Range	City Engineer	Action	No Additional Cost	Existing Funds
1.6.1	Train local flood plain managers through programs offered by the State Flood Plain Coordinator and FEMA's training center in Emmitsburg, Maryland.	Flooding	Medium	Mid-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Flooding	Medium	Mid-Range	Floodplain Manager	Action	No Additional Cost	Existing Funds
1.6.3	Promote the adoption of uniform flood hazard prevention ordinance among all NFIP communities. The ordinance standards should encourage flood plain management that maintains the natural and beneficial functions of flood plains by maximizing the credits that could be obtained for "Higher Regulatory Standards" under the Community Rating System (CRS) Program.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.6.4	Maintain membership for locally designated flood plain managers in the Association of State Flood Plain Managers and the Alabama Association Flood Plain Managers and encourage active participation.	Flooding	Medium	Mid-Range	Mayor and Council	Action	No Additional Cost	Existing Funds
1.7.2	Evaluate and revise as appropriate, building codes for roof construction to maximize protection against wind damage from hurricanes, tornadoes, and windstorms; encourage installation of "hurricane clips."	Tornadoes, Hurricanes, Severe Storms	High	Ongoing	Building Inspector	Action	No Additional Cost	Existing Funds

REMOVED

REMOVED

REMOVED

REMOVED

REMOVED

REMOVED

REMOVED

REMOVED

REMOVED

REMOVED

REMOVED

1.8	<b>Landscape Ordinances. Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.</b>								
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1.8.1	Review and revise as necessary, landscaping standards for parking lots that reduce the size of impervious surfaces and encourage natural infiltration of rainwater.	Flooding	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
1.9.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Flooding	Medium	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
1.10.1	Support legislation to establish a State dam safety program.	Dam/Levee Failure	Low	Long-Range	Mayor and Council	Action	No Additional Cost	Existing Funds	REMOVED
2	<b>Goal for Property Protection: Protect structures and their occupants and contents from the damaging effects of natural hazards.</b>								
2.1.1	Relocate buildings out of hazardous flood areas, with emphasis on pre-FIRM residential buildings, where deemed more cost effective than property acquisition or building elevation.	Flooding	Medium	Ongoing	Mayor and Council, Building Inspector	Project	TBD	FEMA HMA Grant	REMOVED
2.2.1	Acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Flooding	Medium	Ongoing	Mayor and Council, Building Inspector	Project	TBD	FEMA HMA Grant	REMOVED
2.3.1	Elevate certain buildings in flood prone areas where acquisition or relocation is not feasible, with emphasis on Pre-FIRM buildings; where feasible, elevation is preferable to flood proofing.	Flooding	Medium	Ongoing	Mayor and Council, Building Inspector	Project	TBD	FEMA HMA Grant	REMOVED
2.4.1	Flood proof pre-FIRM non-residential buildings, where feasible.	Flooding	Medium	Ongoing	Mayor and Council, Building Inspector	Project	TBD	FEMA HMA Grant	REMOVED
2.5.1	Retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Flooding, Tornadoes, Hurricanes, Severe Storms and Earthquakes	Medium	Mid-Range	Mayor and Council, Building Inspector	Action	TBD	FEMA HMA Grant	REMOVED
2.5.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Flooding, Tornadoes, Hurricanes, Severe Storms and Earthquakes	Medium	Ongoing	Mayor and Council, Building Inspector	Action	TBD	FEMA HMA Grant	REMOVED
3	<b>Goal for Public Education and Outreach. Educate and inform the public about the risks of hazards and the techniques available to reduce threats to life and property.</b>								
4	<b>Goal for Natural Resources Protection. Preserve and restore the beneficial functions of the natural environment to promote sustainable community development that balances the constraints of nature with the social and economic demands of the community.</b>								
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	Flooding	Medium	Mid-Range	Mayor and Council	Project	TBD	FEMA HMA Grant	REMOVED
5	<b>Goal for Structural Projects. Apply engineered structural modifications to natural systems and public infrastructure to reduce the potentially damaging impacts of hazards, where feasible, cost effective, and environmentally suitable.</b>								
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Flooding	Medium	Mid-Range	Mayor and Council, City Engineer	Project	TBD	FEMA HMA Grant	REMOVED
5.2.2	Improve and retrofit water supply systems to save water during drought events and to eliminate breaks and leaks.	Drought	Low	Mid-Range	Mayor and Council, City Engineer	Project	TBD	FEMA HMA Grant	REMOVED
5.3.2	Establish a program for subsidizing individual and community safe room construction in appropriate locations and facilities.	Hurricanes, Tornadoes, Severe Storms	High	Ongoing	Mayor and Council	Project	TBD	FEMA HMA Grant	REMOVED

The removed actions were determined by the jurisdiction to no longer be relevant or feasible at this time. Remaining actions from the 2014 plan were reorganized into the new plan goal areas and modified as deemed necessary.

<b>Wilcox County Commission Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
2	Continue to clear debris from roads and drainage ways	Flood	Wilcox County Road and Bridge Department	Wilcox County Local Funds	High/Ongoing	High
2	Continue to improve and maintain county road system and drainage infrastructure	Floods, Severe Storms	Wilcox County Road and Bridge Department	Wilcox County Local Funds	High/Ongoing	High
2	Contact utilities in the event of natural hazard so they can inspect their infrastructure for damage	All	Wilcox County Emergency Management	Wilcox County Local Funds	High/Ongoing	High
5	Continue to offer shelter to individuals and families affected by natural hazards	All	Wilcox County Commission	Wilcox County Local Funds	High/Ongoing	High
1	Continue to enforce the County's Flood Damage Prevention Ordinance	Flooding	County Flood Plain Manager	Wilcox County Local Funds	High/Ongoing	High
6	Provide the public information on actions to take during severe weather through newspaper and radio announcements	All	Wilcox County Emergency Management	Wilcox County Local Funds	High/Ongoing	High
1	Encourage jurisdictions to commit matches for grants dealing with mitigation	All	Wilcox County Emergency Management	Wilcox County Local Funds	High/Ongoing	High
5	Open buildings to the public during extreme heat	Extreme Heat	Wilcox County Commission/Wilcox County Emergency Management	Wilcox County Local Funds	High/Ongoing	High
6	Keep public informed of drought conditions and water conservation efforts	Drought	Wilcox County Commission/Wilcox County Emergency Management	Wilcox County Local Funds	High/Ongoing	High

2	Seek weatherization funding for low income residents	Flood, Severe Storms, Extreme Heat, Winter Storms	Wilcox County Commission	Wilcox Local Funds/Community Action/Homeowner Funds	High	Moderate/High
3	Work closely with Wilcox Forester to mitigate wildfire dangers	Wildfire	Wilcox County Commission/Wilcox County Emergency Management	Wilcox County Local Funds	High/Ongoing	Hugh
4	Promotion of safe rooms in new residences.	Tornado, Severe Storms	Wilcox County Commission/Wilcox County Emergency Management	Wilcox County Local Funds	High/Ongoing	Moderate/High
2	Drainage Projects in areas identified as being prone to flooding	Flood, Severe Storms	Wilcox County Commission/Wilcox County Road and Bridge Department	Wilcox County Local Funds/CDBG/FEMA Grant Funds	High	Low
2	Stormwater Management Projects throughout county	Flood, Severe Storms	Wilcox County Commission/Wilcox County Road and Bridge Department	Wilcox County Local Funds/CDBG/FEMA Grant Funds	High	Low
2	Retrofitting of critical facilities	Severe Storms, Hurricanes	Wilcox County Commission	Wilcox County Local Funds/FEMA Grant Funds	High	Low
1	Apply for funding to update mitigation plan as needed	All	Wilcox County Commission/Wilcox County Emergency Management	Wilcox County Local Funds/FEMA Grant Funds	High	Moderate
5	Purchase generators for critical facilities and fire stations	All	Wilcox County Commission/Wilcox County Emergency Management/Volunteer Fire Departments	Wilcox County Local Funds/CDBG/FEMA Grant Funds	High	Moderate

5	Construct new Emergency Operations Center in Camden	All	Wilcox County Commission/Wilcox County Emergency Management	Wilcox County Local Funds/USDA/ FEMA Grant Funds	High	High
4	Community Storm Shelters	Severe Storms, Tornadoes, Hurricanes	Wilcox County Commission/Wilcox County Emergency Management	Wilcox County Local Funds/CDBG/FEMA Grant Funds	High	High
4	Individual Storm Shelters	Severe Storms, Tornadoes, Hurricanes	Wilcox County Commission/Wilcox County Emergency Management	Wilcox County Local Funds/FEMA Grant Funds	High	High
6	Public information system to call all residents in emergencies	All	Wilcox County Commission/Wilcox County Emergency Management	Wilcox County Local Funds/FEMA Grant Funds	Medium	Moderate
6	Research procedures for keeping historical storm data with location, magnitude, and loss values for each event	All	Wilcox County Emergency Management	Wilcox County Local Funds	Low	Moderate
6	Begin maintaining an inventory of critical facilities with value and contact information	All	Wilcox County Emergency Management	Wilcox County Local Funds	Low	Moderate

<b>City of Camden Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
2	Continue to clear debris from roads and drainage ways	Flood	City of Camden Street Department	City of Camden	High/ Ongoing	High
5	Research possible grants for first responder training and equipment	All	City of Camden Police Department	City of Camden	High/ Ongoing	High
5	Open buildings to the public during extreme heat	Extreme Heat	City of Camden Mayor/City Council	City of Camden	High/ Ongoing	High
6	Keep public informed of drought conditions and water conservation efforts	Drought	City of Camden Mayor/City Council	City of Camden	High/ Ongoing	High
2	Continue to improve and maintain city road system and drainage infrastructure	Flood, Severe Storms	City of Camden Street Department	City of Camden/CDBG-FEMA Grant Funds	High/ Ongoing	High
3	Work closely with Wilcox Forester to mitigate wildfire dangers	Wildfires	City of Camden Mayor/City Council	City of Camden	High/ Ongoing	High
1	Enforce flood ordinance	Flooding	City of Camden Mayor/City Council	City of Camden	High/ Ongoing	High
2	Drainage Projects in areas identified as being prone to flooding	Flood	City of Camden Mayor/City Council/ Street Department	City of Camden/CDBG-FEMA Grant Funds	High	Low
2	Storm Water Management Projects throughout city	Flood	City of Camden Mayor/City Council/ Street Department	City of Camden/CDBG-FEMA Grant Funds	High	Low

2	Retrofitting of critical facilities	Severe Storms, Hurricanes	City of Camden Mayor/City Council	City of Camden/CDBG-FEMA Grant Funds	High	Low
2	Seek weatherization funding for low income residents	Flood, Severe Storms, Extreme Heat, Winter Storms	City of Camden Mayor/City Council	City of Camden/ADECA/Community Action Programs	Medium	Moderate/High
4	Community storm shelters in highly populated and mobile home communities	Severe Storms, Tornadoes	City of Camden Mayor/City Council	City of Camden/CDBG-FEMA Grant Funds	Medium	High
5	Tornado Sirens	Severe Storms, Tornadoes		Grants	Medium	High
1	Prepare an Emergency Response Plan for the City of Camden	All	City of Camden Mayor/City Council	City of Camden	Low	Moderate

<b>Town of Oak Hill Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
5	Research possible grants for first responder training and equipment	All	Town of Oak Hill/Oak Hill Volunteer Fire Department	Town of Oak Hill/Oak Hill Volunteer Fire Department	High/Ongoing	High
3	Work closely with Wilcox Forester to mitigate wildfire dangers	Wildfires	Town of Oak Hill/Mayor/Town Council	Town of Oak Hill	High/Ongoing	High
5	Open buildings to the public during extreme heat	Extreme Heat	Town of Oak Hill/Mayor/Town Council	Town of Oak Hill	High/Ongoing	High
6	Keep public informed of drought conditions and water conservation efforts	Drought	Town of Oak Hill/Mayor/Town Council	Town of Oak Hill	High/Ongoing	High
2	Drainage Projects in areas identified as being prone to flooding	Flood	Town of Oak Hill/Mayor/Town Council	Town of Oak Hill/CDBG-FEMA Grant Funds	High	Low
2	Storm Water Management Projects throughout city	Flood	Town of Oak Hill/Mayor/Town Council	Town of Oak Hill/CDBG-FEMA Grant Funds	High	Low
2	Retrofitting of critical facilities	Severe Storms, Hurricanes	Town of Oak Hill/Mayor/Town Council	Town of Oak Hill/CDBG-FEMA Grant Funds	High	Low
2	Seek weatherization funding for low income residents	Flood, Severe Storms, Extreme Heat, Winter Storms	Town of Oak Hill/Mayor/Town Council	Town of Oak Hill/ADECA/Community Action Programs	Medium	Low



4	Community storm shelters in highly populated and mobile home communities	Severe Storms, Tornadoes	Town of Oak Hill/Mayor/Town Council	Town of Oak Hill/CDBG-FEMA Grant Funds	Medium	Low
5	Tornado Sirens	Severe Storms, Tornadoes	Town of Oak Hill/Mayor/Town Council	Town of Oak Hill/FEMA Grant Funds	Medium	Low
5	Purchase NOAA Weather Radios for Residents	All	Town of Oak Hill/Mayor/Town Council	Town of Oak Hill/FEMA Grant Funds	Medium	Low

### Town of Pine Apple Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Research possible grants for first responder training and equipment	All	Town of Pine Apple/Oak Hill Volunteer Fire Department	Town of Pine Apple/Pine Apple Volunteer Fire Department	High/Ongoing	High
2	Drainage Projects in areas identified as being prone to flooding	Flood	Town of Pine Apple/Mayor/Town Council	Town of Pine Apple/CDBG-FEMA Grant Funds	High	Low
2	Storm Water Management Projects throughout city	Flood	Town of Pine Apple/Mayor/Town Council	Town of Pine Apple/CDBG-FEMA Grant Funds	High	Low
2	Retrofitting of critical facilities	Severe Storms, Hurricanes	Town of Pine Apple/Mayor/Town Council	Town of Pine Apple/CDBG-FEMA Grant Funds	High	Low
5	Open buildings to the public during extreme heat	Extreme Heat	Town of Pine Apple/Mayor/Town Council	Town of Pine Apple	High/Ongoing	High
6	Keep public informed of drought conditions and water conservation efforts	Drought	Town of Pine Apple/Mayor/Town Council	Town of Pine Apple	High/Ongoing	High
5	Purchase generators for town hall and volunteer fire department	All	Town of Pine Apple/Mayor/Town Council	Town of Pine Apple/FEMA Grant Funds	High	Moderate
2	Seek weatherization funding for low income residents	Flood, Severe Storms, Extreme Heat, Winter Storms	Town of Pine Apple/Mayor/Town Council	Town of Pine Apple/ADECA/Community Action Programs	Medium	Moderate

3	Work closely with Wilcox Forester to mitigate wildfire dangers	Wildfires	Town of Pine Apple/Mayor/Town Council	Town of Pine Apple	High/Ongoing	High
4	Community storm shelters in highly populated and mobile home communities	Severe Storms, Tornadoes	Town of Pine Apple/Mayor/Town Council	Town of Pine Apple/CDBG-FEMA Grant Funds	Medium	High
5	Tornado Sirens	Severe Storms, Tornadoes	Town of Pine Apple/Mayor/Town Council	Town of Pine Apple/FEMA Grant Funds	Medium	Moderate
5	Purchase NOAA Weather Radios for Residents	All	Town of Pine Apple/Mayor/Town Council	Town of Pine Apple/FEMA Grant Funds	Medium	Moderate
1	Prepare an emergency response plan for the Town of Pine Apple	All	Town of Pine Apple/Mayor/Town Council	Town of Pine Apple	Low	Medium

<b>Town of Pine Hill Mitigation Action Plan</b>						
<b>Goal</b>	<b>Action Description</b>	<b>Hazards Addressed</b>	<b>Lead Agency</b>	<b>Funding Source</b>	<b>Priority / Status</b>	<b>Benefit / Cost Score</b>
5	Open buildings to the public during extreme heat	Extreme Heat	Town of Pine Hill Mayor/Town Council	Town of Pine Hill	High/ Ongoing	High
6	Keep public informed of drought conditions and water conservation efforts	Drought	Town of Pine Hill Mayor/Town Council	Town of Pine Hill	High/ Ongoing	High
1	Continue to enforce flood ordinance	Flood	Town of Pine Hill Mayor/Town Council	Town of Pine Hill	High/ Ongoing	High
3	Work closely with Wilcox Forester to mitigate wildfire dangers	Wildfires	Town of Pine Hill Mayor/Town Council	Town of Pine Hill	High/ Ongoing	High
6	Educate public on actions to take during severe weather	All	Town of Pine Hill/Wilcox EMA	Town of Pine Hill/Wilcox EMA	High/ Ongoing	High
2	Continue to improve and maintain city road system and drainage infrastructure	Flood, Severe Storms	Town of Pine Hill Mayor/Town Council/Street Department	Town of Pine Hill/CDBG-FEMA Grant Funds	High/ Ongoing	High
5	Purchase back up power generators for sewer system	All	Town of Pine Hill Mayor/Town Council	Town of Pine Hill/FEMA Grant Funds	High	Moderate
5	Purchase generator for City Hall	All	Town of Pine Hill Mayor/Town Council	Town of Pine Hill/FEMA Grant Funds	High	Moderate
5	Purchase portable generators for Pine Hill VFD	All	Town of Pine Hill Mayor/Town Council	Town of Pine Hill/FEMA Grant Funds	High	Moderate

2	Drainage Projects in areas identified as being prone to flooding	Flood	Town of Pine Hill Mayor/Town Council	Town of Pine Hill/CDBG-FEMA Grant Funds	Medium	Low
2	Storm Water Management Projects throughout city	Flood, Rain	Town of Pine Hill Mayor/Town Council/Street Department	Town of Pine Hill/CDBG-FEMA Grant Funds	Medium	Low
2	Retrofitting of critical facilities	Severe Storms, Hurricanes	Town of Pine Hill Mayor/Town Council	Town of Pine Hill/CDBG-FEMA Grant Funds	Medium	Low
2	Seek weatherization funding for low income residents	Flood, Severe Storms, Extreme Heat, Winter Storms	Town of Pine Hill Mayor/Town Council	Town of Pine Hill/ADECA/Community Action Programs	Medium	Moderate/High
5	Tornado Sirens	Severe Storms, Tornadoes	Town of Pine Hill Mayor/Town Council	Town of Pine Hill/FEMA Grant Funds	Medium	High
4	Community storm shelters in highly populated and mobile home communities	Severe Storms, Tornadoes	Town of Pine Hill Mayor/Town Council	Town of Pine Hill/CDBG-FEMA Grant Funds	Medium	High
5	Purchase NOAA Weather Radios	All	Town of Pine Hill Mayor/Town Council	Town of Pine Hill/FEMA Grant Funds	Medium	
5	Research possible grants for first responder training and equipment	All	Town of Pine Hill Police Department	Town of Pine Hill	Medium/Ongoing	High
3	Tree management and maintenance program	Severe storms, Tornadoes, Hurricanes, High Winds	Town of Pine Hill Street Department	Town of Pine Hill	High/Ongoing	High
2	Continue to clear debris from roads and drainage ways	Flood, Severe Storms, Extreme Heat, Winter Storms	Town of Pine Hill Street Department	Town of Pine Hill	High/Ongoing	High

### Town of Yellow Bluff Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to enforce flood ordinance	Flood	Town of Yellow Bluff Mayor/Town Council	Town of Yellow Bluff	High/ Ongoing	Low
2	Continue to improve and maintain city road system and drainage infrastructure	Flood, Severe Storms	Town of Yellow Bluff Mayor/Town Council	Town of Yellow Bluff/CDBG-FEMA Grant Funds	High/ Ongoing	Moderate
3	Open buildings to the public during extreme heat	Extreme Heat	Town of Yellow Bluff Mayor/Town Council	Town of Yellow Bluff	High/ Ongoing	High
6	Keep public informed of drought conditions and water conservation efforts	Drought	Town of Yellow Bluff Mayor/Town Council	Town of Yellow Bluff	High/ Ongoing	High
2	Seek weatherization funding for low income residents	Flood, Severe Storms, Extreme Heat, Winter Storms	Town of Yellow Bluff Mayor/Town Council	Town of Yellow Bluff/ADECA/Community Action Programs	High	High
3	Work closely with Wilcox Forester to mitigate wildfire dangers	Wildfires	Town of Yellow Bluff Mayor/Town Council	Town of Yellow Bluff	High/ Ongoing	High
2	Drainage Projects in areas identified as being prone to flooding	Flood	Town of Yellow Bluff Mayor/Town Council	Town of Yellow Bluff/CDBG-FEMA Grant Funds	Medium	Low
4	Community storm shelters in highly populated and mobile home communities	Severe Storms, Tornadoes	Town of Yellow Bluff Mayor/Town Council	Town of Yellow Bluff/CDBG-FEMA Grant Funds	Medium	Low

5	Tornado Sirens	Severe Storms, Tornadoes	Town of Yellow Bluff Mayor/Town Council	Town of Yellow Bluff/ FEMA Grant Funds	Medium	Moderate
5	Purchase NOAA Weather Radios	All	Town of Yellow Bluff Mayor/Town Council	Town of Yellow Bluff/ FEMA Grant Funds	Medium	Moderate

### Wilcox County Board of Education Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Provide storm shelters at schools	Tornado, Severe Storms	Wilcox County School Board	Wilcox BOE/FEMA Grant Funds	High	
5	Purchase generators for schools	All	Wilcox County School Board	Wilcox BOE/FEMA Grant Funds	High	Low
2	Retrofitting of schools	Severe Storms, Hurricanes	Wilcox County School Board	Wilcox BOE/FEMA Grant Funds	High	Low
2	Correct storm water management/ drainage issues on school grounds	Flood	Wilcox County School Board	Wilcox BOE/FEMA Grant Funds	Medium	Low
6	Work with County to provide information to students regarding hazards	Extreme Heat & Drought	Wilcox County School Board	Wilcox BOE	High/Ongoing	High
6	Work with forestry commission to disseminate information regarding wildfire prevention	Wildfires	Wilcox County School Board	Wilcox BOE	High/Ongoing	High



## **Section 6- Plan Maintenance Process**

This section of the plan addressed requirements of Interim Final Rule (IFR) Section 201. (c)(4).

### **Section Contents**

- 6.1 Hazard Mitigation Plan Monitoring, Evaluation, and Update Process
- 6.2 Hazard Mitigation Plan Incorporation
- 6.3 Public Awareness/Participation

## **6.1 Hazard Mitigation Plan Monitoring, Evaluation, and Update Process**

The Alabama Tombigbee Regional Commission (ATRC) and the West Alabama Regional Commission (WARC) will facilitate plan maintenance activities with assistance from local EMA directors throughout the five-year framework of the Hazard Mitigation Plan. Local EMA directors will serve as a liaison to participating jurisdictions within their respective counties through their local processes, such as Local Emergency Planning Committee (LEPC) or similar stakeholder groups. The public, neighboring communities, and other stakeholders will be encouraged to participate throughout this process. ATRC and WARC will facilitate the annual update process at the regional level. During the fourth quarter of each calendar year, ATRC and WARC will convene a meeting of all EMA directors in the division to discuss the results of their county-level review.

Periodic review and revision of the Hazard Mitigation Plan is important to ensure the plan's appropriateness and compliance with applicable regulations and to assess the progress of local mitigation actions. County-level reviews will include:

- Evaluation of the effectiveness of previously implemented mitigation actions;
- Review of the status of high priority or ongoing mitigation actions;
- Addressing changing land use patterns and new developments; and
- Identification of any changes in the risk assessment and/or risk vulnerability.

Prior to the regional meeting, local EMA directors shall collect pertinent information from local jurisdictions and stakeholders, including the general public, in their counties. This information will be used for plan review and evaluation purposes. The general public will be invited to attend the review meeting and encouraged to provide input. The public will be invited through public notices and public outreach. In addition, the plan review process will include the provision of a post-disaster review that merits a reevaluation of hazard priorities and mitigation actions in order to reflect fluctuating conditions within the region.

At any time during the planning cycle, a jurisdiction may revise its mitigation action plan. For jurisdiction specific revisions, only the jurisdiction making the revision will have to approve the change. The jurisdiction will work with its EMA director to submit these changes to ATRC/WARC for incorporation into the plan.

A thorough review of the Hazard Mitigation Plan will begin 18 months prior to the five-year expiration date of the plan. This review shall be held to identify any significant changes in the AEMA Division C planning area that may affect the region's vulnerability to hazard impacts. An evaluation of the mitigation strategy and jurisdictional action plans developed as part of this process will be evaluated. This plan update shall incorporate any changes to federal or state regulations that may affect the Hazard Mitigation Plan contents. Upon completion of this review and update, the updated Hazard Mitigation Plan will be submitted to the AEMA and FEMA for review and approval. Public participation will be solicited and encouraged throughout this process.

## **6.2 Hazard Mitigation Plan Incorporation**

The AEMA Division C Regional Hazard Mitigation Plan will be incorporated into existing planning mechanisms in all participating jurisdictions. Once the Regional Hazard Mitigation Plan is “approvable upon adoption” by FEMA, each jurisdiction shall proceed with adoption procedures. Each proposed action listed in the jurisdictional mitigation action plans is assigned to one or multiple lead agencies or departments. Designation of a lead agency or department assigns responsibility and accountability to each action. In addition to the assigned local agency or department, each mitigation action plan has a priority or status assigned that roughly coincides with an implementation timeline. Local jurisdictions in AEMA Division C will work to continue providing operational funding for actions that are ongoing and will seek outside funding for capital projects that are outside the realm of normal funding during both pre-disaster and post-disaster periods.

Participating jurisdictions will integrate this Hazard Mitigation Plan into appropriate and relevant municipal and county government decision-making processes, when feasible. It is important to note that the majority of jurisdictions in Division C do not have formal planning processes in place. For those who do, local EMA officials or planning staffs of the appropriate regional planning council will provide technical assistance for incorporation, upon request. The process for all jurisdictions in the division will include integrating the findings of the Hazard Mitigation Plan into planning documents, such as comprehensive or master plans, future land use plans, subdivision regulations, building regulations, capital improvement plans, or similar mechanisms. The mitigation plan will be incorporated by ensuring the goals and actions of local planning documents are consistent with the goals and mitigation actions of the Hazard Mitigation Plan. Jurisdictions will not introduce additional hazard vulnerabilities to local areas and the region at-large. Mitigation projects will be incorporated into project lists and priorities, as appropriate. This integration process will involve reviewing the jurisdiction’s mitigation goals and action plans and comparing that to the proposed planning document. Local EMA directors will continue to incorporate applicable information from this Hazard Mitigation Plan into other required emergency management plans, including each county’s Emergency Operations Plan and Threat and Hazard Identification and Risk Assessment. During county-level plan reviews, participating communities will be asked to record the planning documents in which elements of the Hazard Mitigation Plan were incorporated. Since the last plans were adopted, the county-level plans have not been incorporated into any planning mechanisms outside of those performed by the county EMAs.

The Hazard Mitigation Plan will be provided to the Alabama Tombigbee Regional Commission (ATRC) and the West Alabama Regional Commission (WARC), as well as local economic development councils, for consistency with other regional planning and economic development activities.

## **6.3 Public Awareness/Participation**

Public participation is a key component in the hazard mitigation planning process. Outreach activities give jurisdictions the ability to garner the public’s opinions and ideas regarding hazard mitigation. In addition, outreach gives jurisdictions an opportunity to educate the public about

hazards and mitigation strategies being undertaken. Participation throughout the planning process is important. Division C planning efforts will continue to encourage all local and state government agencies, businesses, academia, and the general public to participate in the ongoing mitigation planning process to the maximum extent possible.

Any significant changes or amendments to the Hazard Mitigation Plan shall require a public hearing prior to adoption. Significant amendments would be those changes that affect the entire Division. The public will be informed of public hearings and other Hazard Mitigation related meetings through a variety of media sources, including but not limited to: local newspaper advertisements and notices, radio advertisements, postings at high traffic community areas, social media posts, telephone messages, and announcements on various websites (such as local EMA offices, ATRC, and WARC). ATRC, WARC, and local EMA offices will keep public copies of the plan on hand. Copies will be provided to each County Commission office, each municipal seat of government, and other appropriate public locations. ATRC and WARC will post a copy of the Hazard Mitigation Plan on their websites. Press releases will be published via various media to inform the general public and stakeholders of the availability of the plan for review, locations where the plan can be accessed, and how they can play a role in its creation and future revisions.