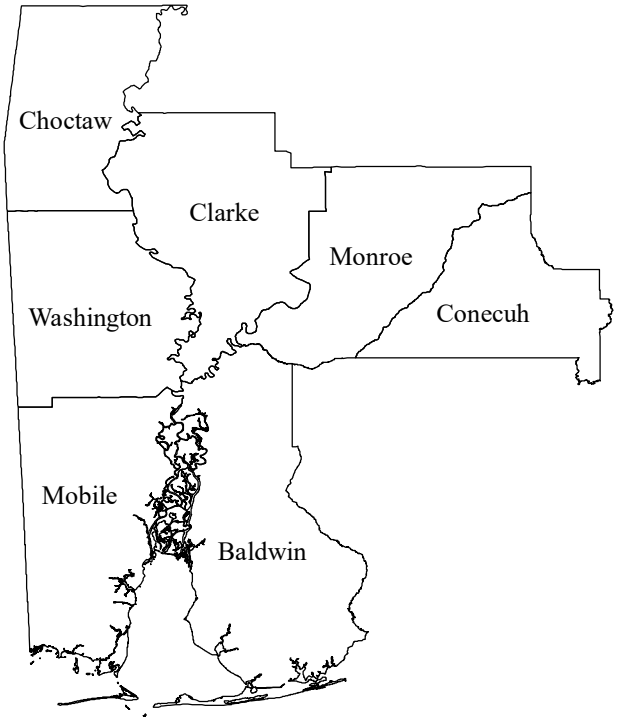
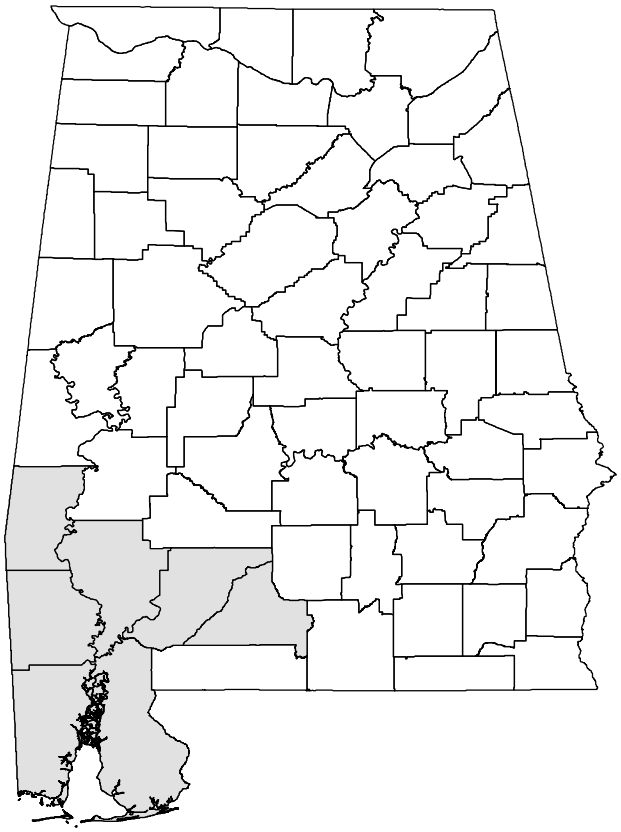
Division A
Regional Multi-Jurisdictional Hazard Mitigation Plan

A HAZARD MITIGATION PLAN FOR BALDWIN, CLARKE, CONECUH, ESCAMBIA, MOBILE, MONROE, AND WASHINGTON COUNTIES INCLUDING ELIGIBLE JURISDICTIONS





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Hazard Mitigation Plan Introduction

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 A. This division includes the following counties and the municipalities and jurisdictions within them: Baldwin, Choctaw, Clarke, Conecuh, Escambia, Mobile, Monroe, and Washington.
This plan will be the first regional mitigation plan for the area. Currently, each county is covered by a multi-jurisdictional county plan. 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.

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.

Funding

Funding for the AEMA Division A Regional Multi-Jurisdictional Hazard Mitigation Plan was provided through the Hazard Mitigation Grant Program (HMGP), under Disaster Recovery Declaration 4349, (DR-4349).

Purpose

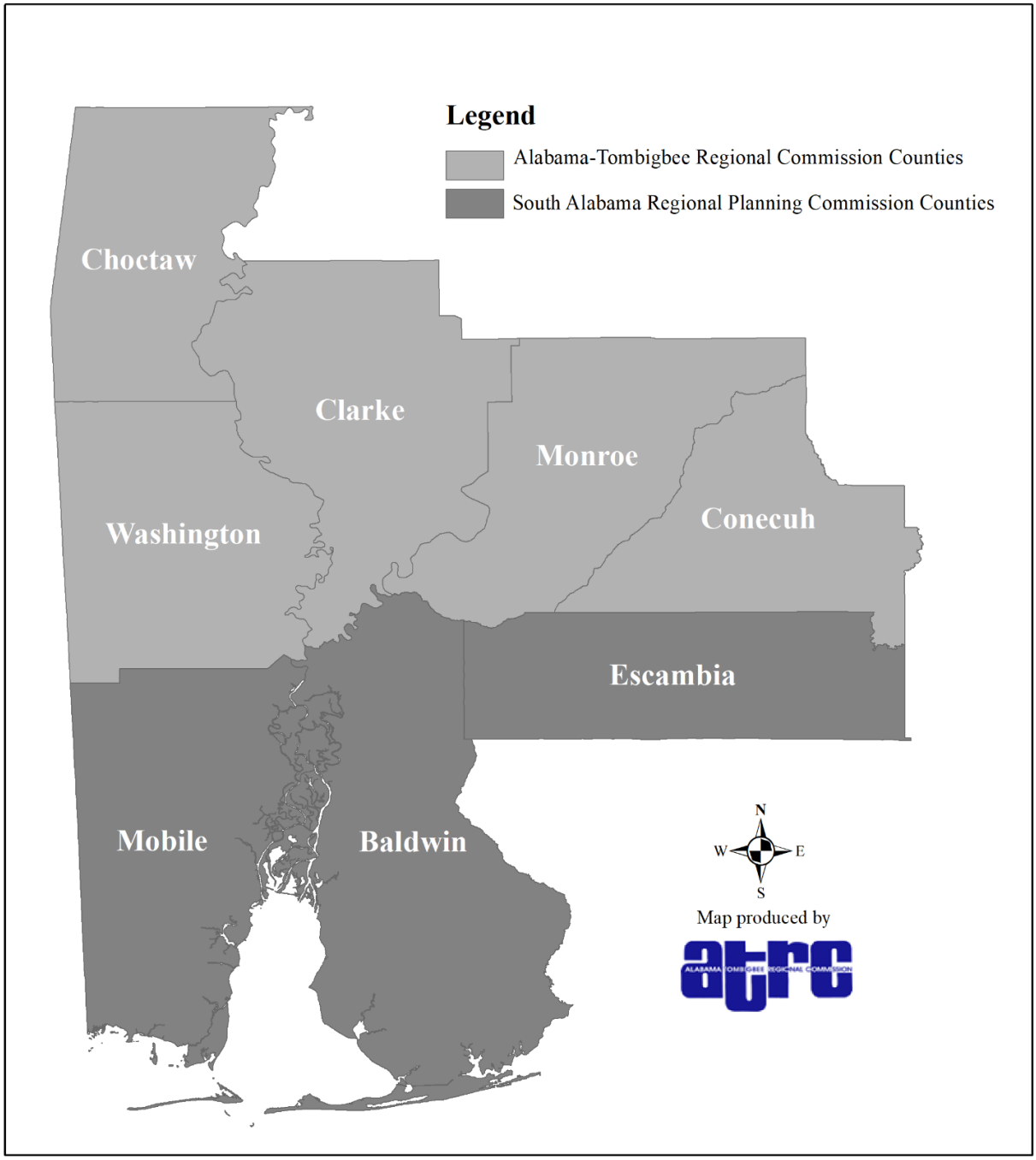
The purpose of the Division A Multi-Jurisdictional Hazard Mitigation Plan is to evaluate and identify all prioritized hazards which may affect the region. Mitigation strategies that address each of the identified hazards are presented. This plan is only one of many steps Division A jurisdictions will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

Planning Document Format

The *Division A Multi-Jurisdictional Hazard Mitigation Plan 2020* will be a multi-phase planning process. Clarke and Conecuh Counties will be included in Phase I. The remaining counties in the division will be incorporated as their current county plans expire. Choctaw County will not be part of the regional plan at this time and will continue to have a county mitigation plan.

Division A is served by two regional planning commissions, the Alabama-Tombigbee Regional Commission (ATRC) and the South Alabama Regional Planning Commission (SARPC) (Figure 1.1). ATRC serves Choctaw, Clarke, Conecuh, Monroe, and Washington Counties. SARPC serves Baldwin, Escambia, and Mobile Counties. There are considerable differences between the counties served by ATRC and those served by SARPC. Due to these differences and the phased planning process, the Division A plan will be divided into two parts: Division A-ATRC Region and Division A- SARPC Region.

Alabama Emergency Management Division A



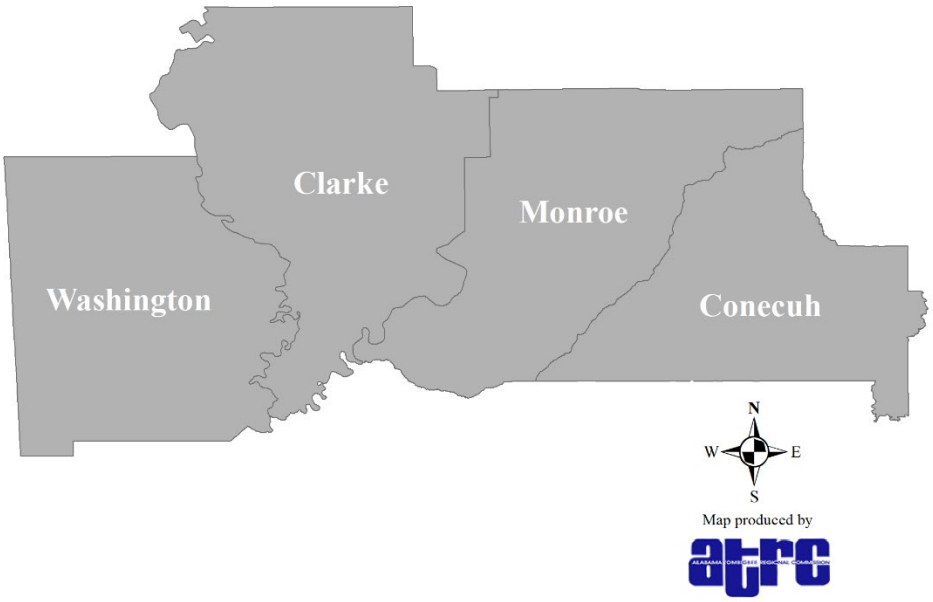
Part I- ATRC Planning Area

Clarke County

Conecuh County

Monroe County

Washington County



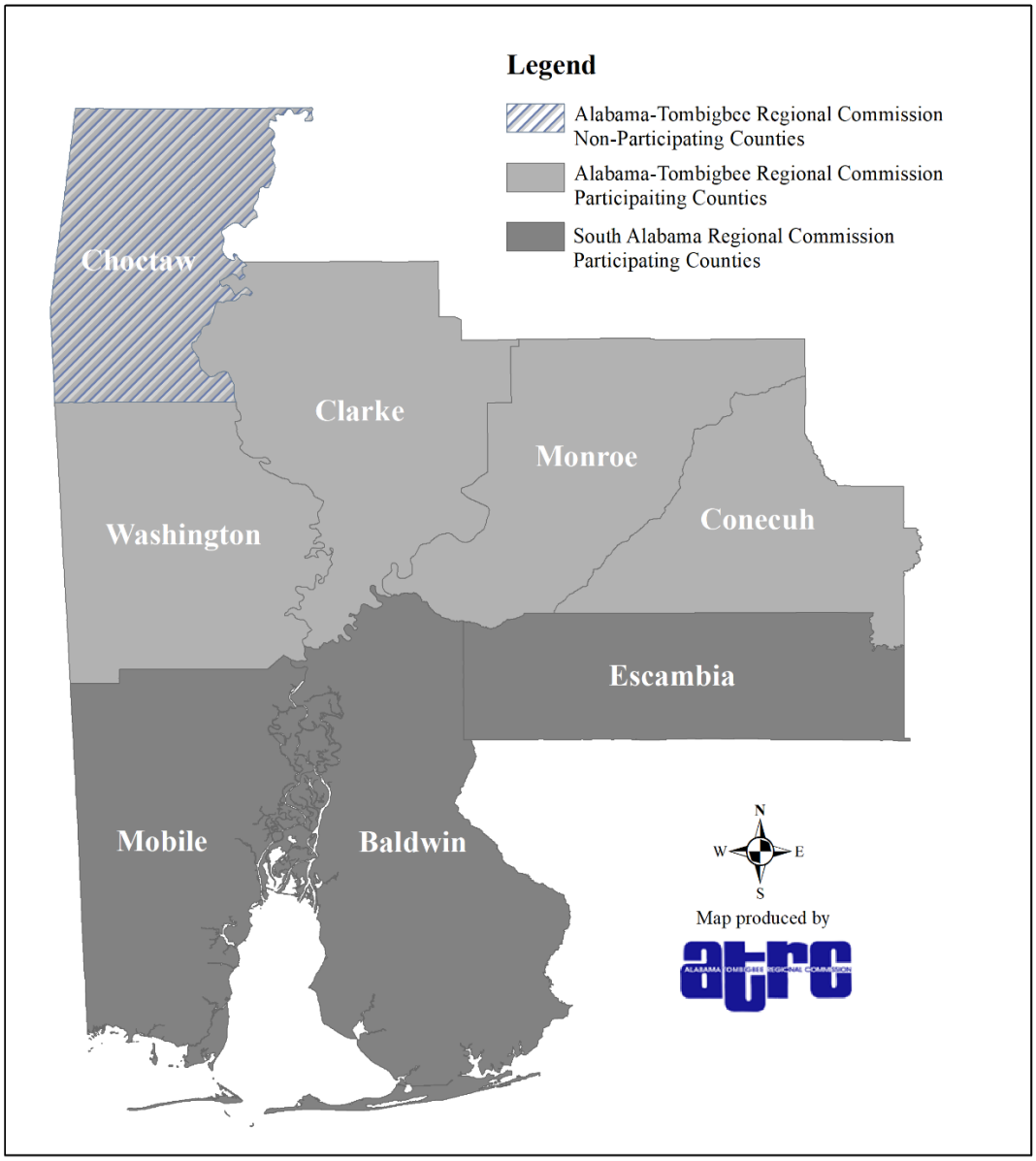
Section I. ATRC Planning Area Profile

Section Contents

1.1 Background

The planning area for this part of the plan is the Alabama Emergency Management Agency (AEMA) Division A counties served by the Alabama Tombigbee Regional Commission with the exception of Choctaw County. Counties included in the planning area are Clarke, Conecuh, Monroe, and Washington. Within these four counties there are sixteen municipalities. This version of the multi-jurisdictional hazard mitigation plan (Phase I) will include Clarke and Conecuh Counties. A subsequent update will include the remaining counties of Monroe and Washington. Both of the counties in the second phase are currently covered by individual county mitigation plans. This profile includes information covering the entire planning area of Clarke, Conecuh, Monroe, and Washington Counties.

Figure 1.1 Alabama Emergency Management Division A Counties



The largest county in the planning area is Clarke County which is 1,238.46 square miles, making it the third largest county with regards to area in the state. The total land area of this four county area is 4,194.5 square miles, which is roughly 8% of the state. Table 1.1 provides the total area and population density of each county located within the planning area.

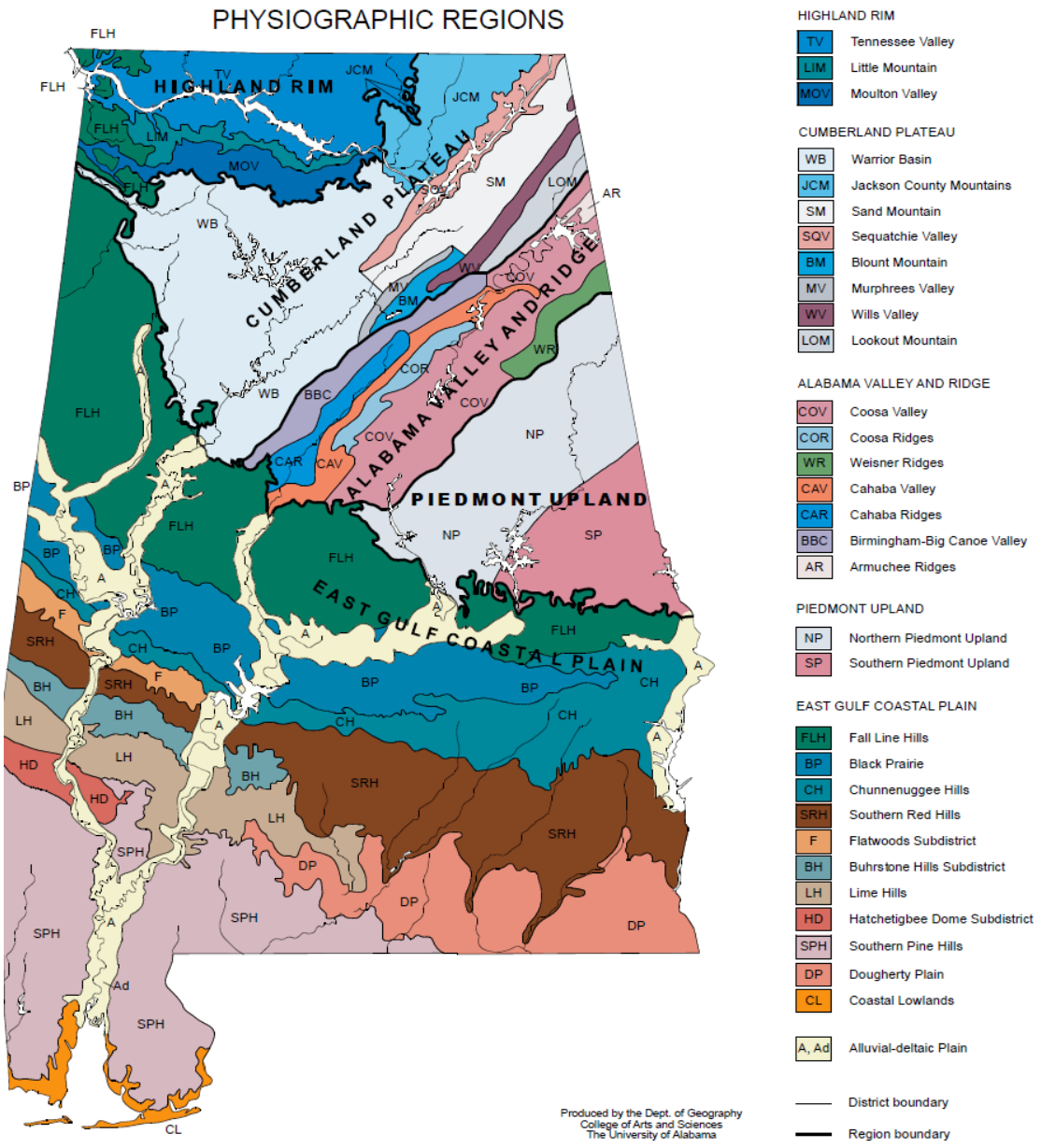
Table 1.1: Total Area by County

County	Total Area	Population per Square Mile
Clarke	1,238.46	20.9
Conecuh	850.16	15.6
Monroe	1,025.67	22.5
Washington	1,080.21	16.3

Source: U.S. Census Bureau

The entire expanse of the planning area lays within the East Gulf Coastal Plain physiographic region (Figure 1.2). 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, Escatawpa, Tombigbee, and Sepulga river systems.

Figure 1.2 Physiographic Regions of the State of Alabama



Source : http://alabamamaps.ua.edu/contemporarymaps/alabama/physical/al_physio.pdf
Last accessed 1/12/2020

A number of rivers flow through the planning area (Figure 1.3). The Alabama River flows southwest through Clarke and Monroe counties. The Escatawpa River is a tributary of the Pascagoula River and flows south through Washington County. The Sepulga River flows southeasterly through Conecuh County, it originates at the confluence of the East Sepulga and West Sepulga Rivers and discharges into the Conecuh River near the northwestern border of the Conecuh National Forest. The Tombigbee River flows southerly through Clarke and Washington Counties.

Figure 1.3 Map of Major Rivers in Alabama

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

1.2 Demographics

According to the 2018 American Community Survey data from the Census, the total population of the planning area is 75,056 people. This population spans over a total area of 4,194.5 square miles. The populations of the counties in the planning area varies. Clarke County is the most populous county with 24,387 residents. Monroe County is the second most populous with 21,512 residents. Both Washington and Conecuh have populations less than 20,000. Table 1.2 provides population counts for all jurisdictions in the ATRC planning area for AEMA Division A from the 2010 Census and the 2018 American Community Survey.

Table 1.2 Division A- ATRC Planning Area Population Change

	2010 CENSUS	2018 ACS	% Change
Clarke County	25,833	24,387	-5.60
Coffeeville	352	420	19.32
Fulton	272	208	-23.53
Grove Hill	1,570	1,573	0.19
Jackson	5,228	4,851	-7.21
Thomasville	4,209	3,997	-5.04
Conecuh County	13,236	12,514	-5.45
Castleberry	583	510	-12.52
Evergreen	3,944	3,705	-6.06
Repton	282	288	2.13
Monroe County	23,067	21,512	-6.74
Beatrice	301	310	2.99
Excel	723	1,013	40.11
Frisco City	1,309	1,459	11.46
Monroeville	6,519	6,011	-7.79
Vredenburgh	312	363	16.35
Washington County	17,580	16,643	-5.33
Chatom	1,288	980	-23.91
McInotsh	238	431	81.09
Millry	546	602	10.26

Source: U.S. Census Bureau (2010 and 2018)

Racial and ethnic characteristics from the 2019 U.S. Census estimates are provided by county in Table 1.3. The median age for the planning area is 43.25 years.

Table 1.3 Racial and Ethnic Demographics by County

	White	Black	Other	Hispanic
Clarke	53.00%	45.00%	2.00%	1.30%
Conecuh	52.00%	46.00%	2.00%	2.30%
Monroe	55.00%	41.00%	4.00%	1.70%
Washington	66.00%	23.00%	11.00%	1.60%

Source: U.S. Census Bureau (2019 Estimates)
****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 1.4.

Table 1.4 Housing Demographics by County

County	Occupied Housing Units	% Mobile Homes	% Over 35 years old
Clarke	9,358	26.91%	42.85%
Conecuh	4,574	26.21%	39.55%
Monroe	8,149	21.88%	41.72%
Washington	6,007	28.53%	39.92%

Source: US Census Bureau American Community Survey 2018

Unemployment rates for counties in the planning area vary. For 2019, unemployment rates vary from a low of 4.0% in Conecuh County to a high of 5.8% in Clarke County. Table 1.5 provides unemployment rates by county.

Table 1.5 Average Unemployment Rates by County

County	Unemployment Rate 2019
Clarke	5.8%
Conecuh	4.0%
Monroe	4.9%
Washington	4.6%

Source: Alabama Department of Labor (2019)

1.3 Business and Industry

Division A has a wide variety of both commercial and industrial stakeholders. The ATRC planning region is located along United States Highway 43 and United States Highway 84. The region includes a number of navigable inland waterways, local airports, and railroad lines. Within the planning region the economic base relies heavily on wood products.

Table 1.6 Largest Employers in AEMA Division A-ATRC Planning Area

County	Employer	Product	Employees
Clarke	Boise Cascade	Paper	570
Conecuh	Guyoung Tech	Automobile Parts	450
Monroe	Georgia Pacific- Alabama River Cellulose	Fluff Pulp	479
Washington	BASF	Chemical	400

Source: EDPA, Local Economic Developers

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.

1.4 Infrastructure

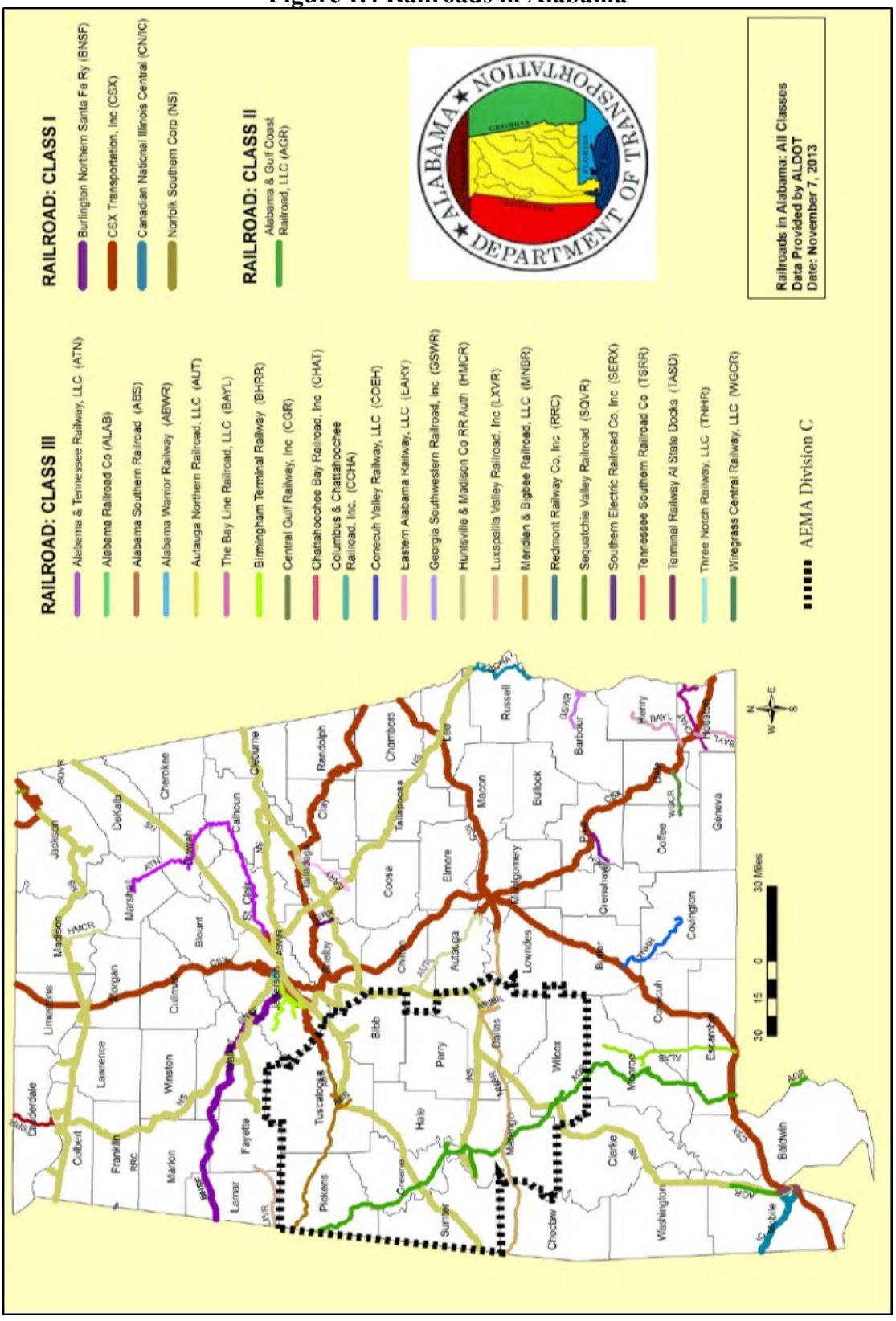
Transportation

The ATRC portion of Division A has several major federal highways. United States Highway 43 runs north-south through Clarke and Washington County. This highway serves as an important trucking and evacuation route for the central gulf coast. United States Highway 84 runs east-west through Clarke and Monroe County. It is a major truck route. United States Highway 45 runs through southern Washington County. In addition to federal routes, there are numerous state and local routes that connect the communities in the region.

ATRC Division A counties house several airports. There are no international airports located within the planning area. The planning region includes several general aviation airports including Jackson Municipal Airport (Clarke County), Monroe County Airport (Monroe County), Middleton Field (Conecuh County), and Roy Wilcox Field (Washington County). There are plans to construct a regional airport facility in Thomasville in Clarke County.

There are three railroads within the ATRC Division A planning area (Figure1.4). 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 is one Class I railroads in the planning area, this line is operated by Norfolk Southern. This line runs through Clarke and Washington Counties. 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 Monroe County. 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 is one Class III railroad in the planning area, this line is operated by the Alabama Railroad Company (ALAB) and runs through Monroe and Conecuh Counties.

Figure 1.4 Railroads in Alabama



Source: ALDOT Rail Directory 2014

Utilities

Electric service throughout the planning area is provided by Alabama Power and electric cooperatives. Clarke, Washington, and a portion of Monroe County is served by the Clarke Washington Electric Membership Co-Op. The Southern Pine Electric Co-Op serves portions of Conecuh and Monroe Counties.

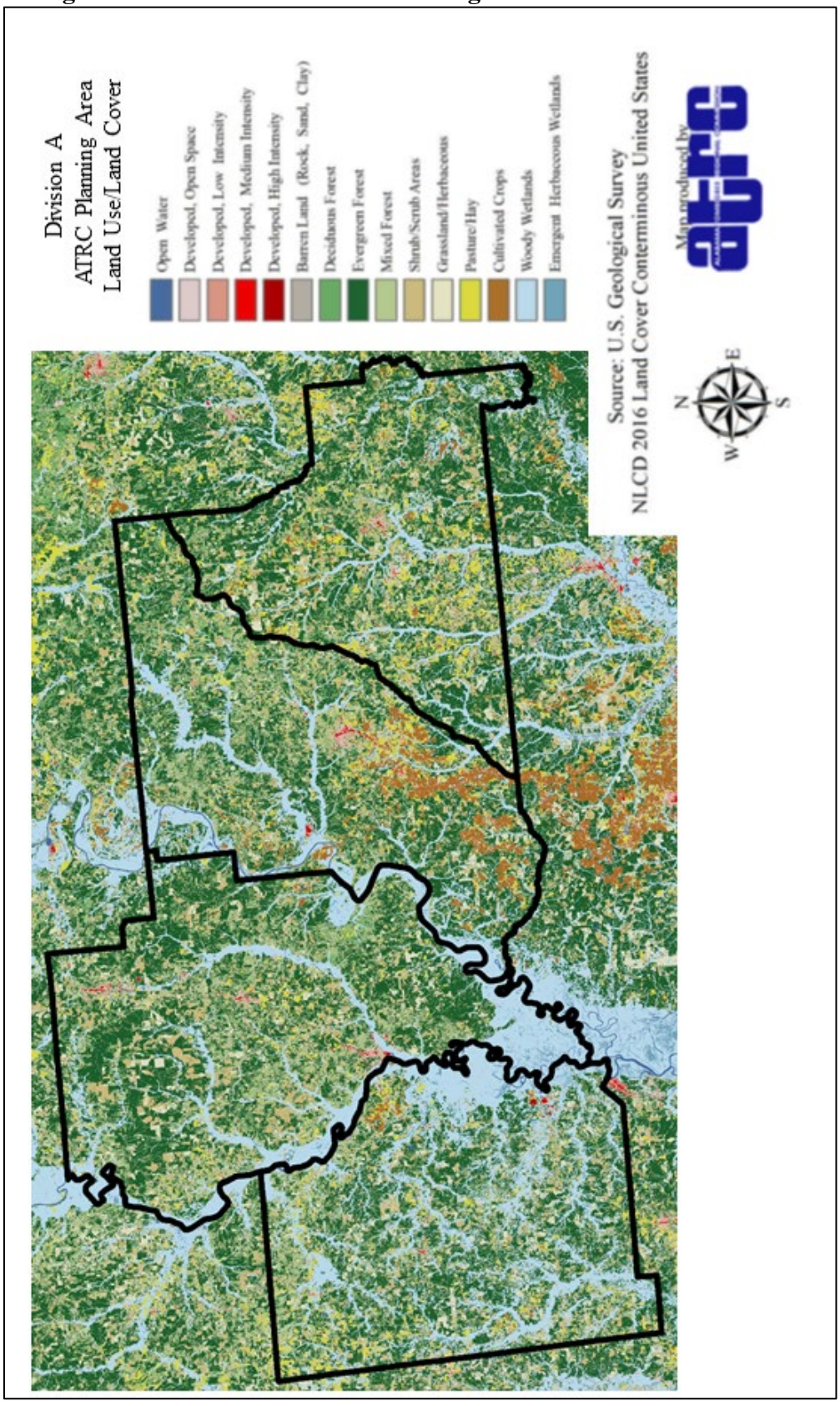
Water and sewer services are provided through municipal and county utility authorities. Most populated areas in the planning region have public water service, where there are only a few instances of areas that have no connection. The majority of the unincorporated areas throughout the region rely on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

Natural Gas is provided by municipal and county authorities as well as the Clarke-Mobile Gas District (Clarke and Washington), and the South Alabama Gas District (Conecuh and Monroe).

1.5 Land Use and Development Trends

The counties served by ATRC in Division A are primarily rural (Figure 1.5). 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.

Figure 1.5 Division A- ATRC Planning Area Land Use/Land Cover



Section 2- ATRC 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

2.1 Multi-Jurisdictional Plan Adoption

Each of the participating jurisdictions will adopt the plan once it is deemed "approvable pending adoption" by the Federal Emergency Management Agency (FEMA). Eligible jurisdictions include regional planning councils, local governing bodies including municipal councils, county commissions and local school districts as well as other public or private entities As applicable within each county, other entities may include health systems, fire associations and institutions of higher education that participated in the planning process and will adopt the Division A plan in order to be included as eligible applicants for FEMA HMA grant assistance.

2.2 Multi-Jurisdictional Planning Participation

All eligible jurisdictions in Clarke and Conecuh 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. Entities in Monroe and Washington Counties provided background information as part of the planning process. As their county plans approach expiration, these entities will be fully integrated within the regional hazard mitigation plan. Table 2.1 provides a list of entities that will adopt the mitigation plan. Entities in regular text will adopt as part of the first phase, italicized entities will adopt the plan in future phases.

Table 2.1 Division A Plan Participants Adopting Plan

Conecuh County	***Monroe County***
Conecuh County Board of Education	*Monroe County Board of Education*
Conecuh County Commission	*Monroe County Commission*
City of Evergreen	*Town of Excel*
Town of Castleberry	*Town of Frisco City*
Town of Repton	*City of Monroeville*
	Town of Vredenburgh
Clarke County	
Clarke County Board of Education	***Washington County***
Clarke County Commission	*Washington County Board of Education*
Thomasville City School System	*Washington County Commission*
Town of Coffeeville	*Town of Chatom*
Town of Fulton	*Town of McIntosh*
Town of Grove Hill	*Town of Millry*
City of Jackson	
City of Thomasville	

2.3 Hazard Mitigation Planning Process

This part of the AEMA Division A Multi-Jurisdictional Hazard Mitigation Plan was developed through interaction between AEMA Division A EMA directors and the Alabama Tombigbee Regional Commission (ATRC). 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.

Members of the Regional Hazard Mitigation Planning Committee developed county-level planning subcommittees. 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 ATRC 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.

Table 2.2 Regional Hazard Mitigation Planning Participants by County

Clarke County (Committee Members in BOLD)				
Jurisdiction	**Primary Contact/Title**	**Attended Meetings**	**Provided Written Comments**	**In-Person or Phone Consultation**
Clarke County Commission	**Jake Bailey, County Engineer**	**X**	**X**	
Clarke County Emergency Management	**Roy Waite, Director**	**X**	**X**	**X**
Town of Coffeeville	**Annie Latham, Town Clerk**		**X**	**X**
Town of Fulton	**Mike Norris, Mayor**		**X**	**X**
Town of Grove Hill	**Cynthia Jackson, Mayor**	**X**	**X**	**X**
City of Jackson	**Paul South, Mayor**		**X**	**X**
City of Thomasville	**Kevin Heartsill, Public Works Director**	**X**	**X**	**X**
Clarke County Board of Education	**Paul Stanley, Transportation Supervisor**	**X**	**X**	
Thomasville City Schools	**Garth Moss, Superintendent**			**X**

Kiki Moore	**Coastal Alabama Community College, Thomasville Campus Director**	**X**		
Clarke Preparatory School	**Doug Bradford, Headmaster**	**X**		
Jackson Academy	**Joe Jones, Headmaster**	**X**		
Clarke County EMA	Brian Wilkerson, EMA Assistant			
Old Line Water Authority	Johnnie Jones, Manager	X		
Jackson Water	Jamey Sullivan, Operator	X		
Salitpa VFD	Mac Henley, Firefighter	X		
Antioch VFD	Keith Harrell, Firefighter	X		
Alabama Tombigbee Regional Commission	Mary Zimmerman, Development Assistant	X		
Alabama Tombigbee Regional Commission	Brandy Wilkerson, Planning Director	X		
Jackson Medical Center	Judith Reeves, Nursing Services	X		
Jackson Medical Center	Teresa Napper, Chief Nursing Officer	X		
Jackson Police Department	Jasaya Thomas, Officer	X		
Clarke-Mobile Gas District	Keith Harrell, Service Technician	X		
Conecuh County (Committee Members in BOLD)				
Conecuh County Commission	**Leonard Millender, Commissioner**		**X**	**X**
Conecuh County Emergency Management	**Johnny Brock, Director**	**X**	**X**	**X**
City of Evergreen	**Jeff Sullivan, City Projects Manager**	**X**	**X**	**X**
Town of Castleberry	**Henry Kirksey, Mayor**	**X**	**X**	**X**
Town of Repton	**Daryl Knowles, Chief of Police**	**X**		
Conecuh County Board of Education	**Zickeyous Byrd, EdD**		**X**	**X**
Alabama Tombigbee Regional Commission	Mary Zimmerman, Development Assistant	X		
Evergreen Police Department	James Simpson, Chief of Police	X		

2.4 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. In Clarke and Conecuh 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. 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.

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, 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 A plan. Neighboring communities were invited to participate in the process. These communities were sent a letter inviting them to planning meetings and notifying them of the availability of the draft document.

Documentation of public participation, though limited, is included in Appendix A. 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 5.3.

The Alabama-Tombigbee Regional Commission 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, mail, or email and invited to participate or provide information. Most of the stakeholders listed attended meetings. 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.

2.5 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 four participating ATRC counties in AEMA Division A 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.

Emergency Operations Plans
Each county in AEMA Division A 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 4.2 were reviewed with jurisdictions during this process to ensure consistency. These plans include (list will be updated in subsequent phases):

- Town of Grove Hill Comprehensive Plan
- City of Evergreen Strategic Plan

Other sources utilized for data incorporation are listed in the Section 3 – Risk Assessment.

Section 3- ATRC Planning Area Risk Assessment

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

Section Contents

3.1 Hazard Overview

ATRC's Division A counties are 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.

ATRC's Division A counties have been included in 20 Federal Disaster Declarations, as shown in Table 3.1. 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 3.1 ATRC Division A Planning Area Federally Declared Disasters

Disaster Number	Declaration Date	Counties Declared	Type of Incident
DR-369	March 27, 1973	Clarke	Tornadoes, Flooding
DR-458	March 13, 1975	Washington	Severe Storms, Flooding
DR-464	April 23, 1975	Conecuh, Monroe	Severe Storms, Flooding
DR-598	September 12, 1979	Clarke, Conecuh, Monroe, Washington	Hurricane Frederic
DR-861	March 21, 1990	Clarke, Conecuh, Monroe, Washington	Flooding, Severe Storms, Tornadoes
DR-1034	July 8, 1994	Conecuh	Tropical Storm Alberto
DR-1070	October 4, 1995	Clarke, Conecuh	Hurricane Opal
DR-1208	March 9, 1998	Conecuh	Severe Storms, Flooding
DR-1250	September 30, 1998	Clarke, Conecuh, Monroe, Washington	Hurricane Georges
DR-1466	May 11, 2003	Clarke, Monroe, Washington	Severe Storms, Tornadoes, and Flooding
DR-1549	September 14, 2004	Clarke, Monroe, Washington	Hurricane Ivan
DR-1593	July 9, 2005	Clarke, Monroe, Washington	Hurricane Dennis
DR-1605	August 28, 2005	Clarke, Washington	Hurricane Katrina
DR-1835	April 27, 2009	Clarke, Washington	Severe Storms, Flooding, Tornadoes and Straight-line Winds
DR-1870	December 31, 2009	Clarke, Conecuh	Tornadoes and Straight-line Winds

Disaster Number	Declaration Date	Counties Declared	Type of Incident
DR-1971	April 27, 2011	Clarke, Monroe, Washington	Severe Storms, Tornadoes, Straight-line Winds and Flooding
DR-4082	September 20, 2012	Monroe	Hurricane Isaac
DR-4176	May 1, 2014	Washington	Tornadoes, Straight-line Winds and Flooding
DR-4251	January 20, 2016	Monroe, Conecuh	Straight-line Winds and flooding
DR-4349	November 16, 2017	Clarke, Washington	Hurricane Nate

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.

3.2 Hazard Profiles

Multiple natural hazards affect the ATRC's Division A counties. 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. Although Monroe and Washington counties are not full participants in this version of the Regional Hazard Mitigation Plan, information from all four participating ATRC counties is included in hazard profiles to provide a comprehensive view of regional impacts.

Due to its geographical location, ATRC's Division A counties are vulnerable to hazards that can disrupt life at any time throughout the year. There are numerous hazard types that are not applicable to these counties. These hazards include avalanche, coastal erosion, tsunami, and volcanoes. No other mention of these hazards will be made. Table 3.2 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 3.2 Potential Hazards and Data Sources

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

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

The National Inventory of Dams (NID) lists 67 dams in the ATRC planning area. Figures 3.1-3.4 provide maps of each county indicating dam location and hazard classification. Of these, one is classified as a high hazard dams and twenty are classified as significant risk. 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 higher.

Participating Boards of Educations do not have properties located in areas with a risk for dam failure.

Figure 3.1 Clarke County Dams by Hazard Classification

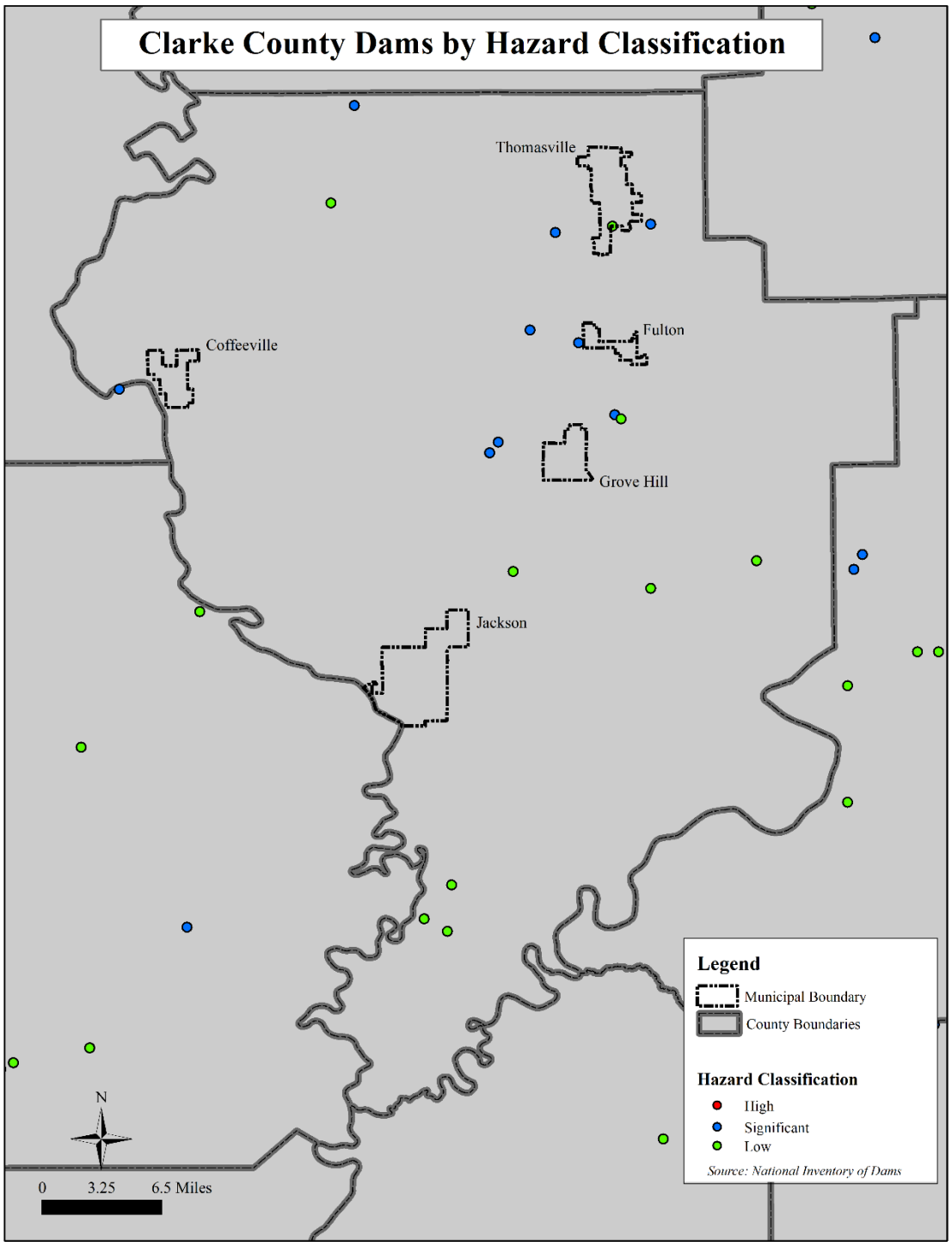


Figure 3.2 Conecuh County Dams by Hazard Classification

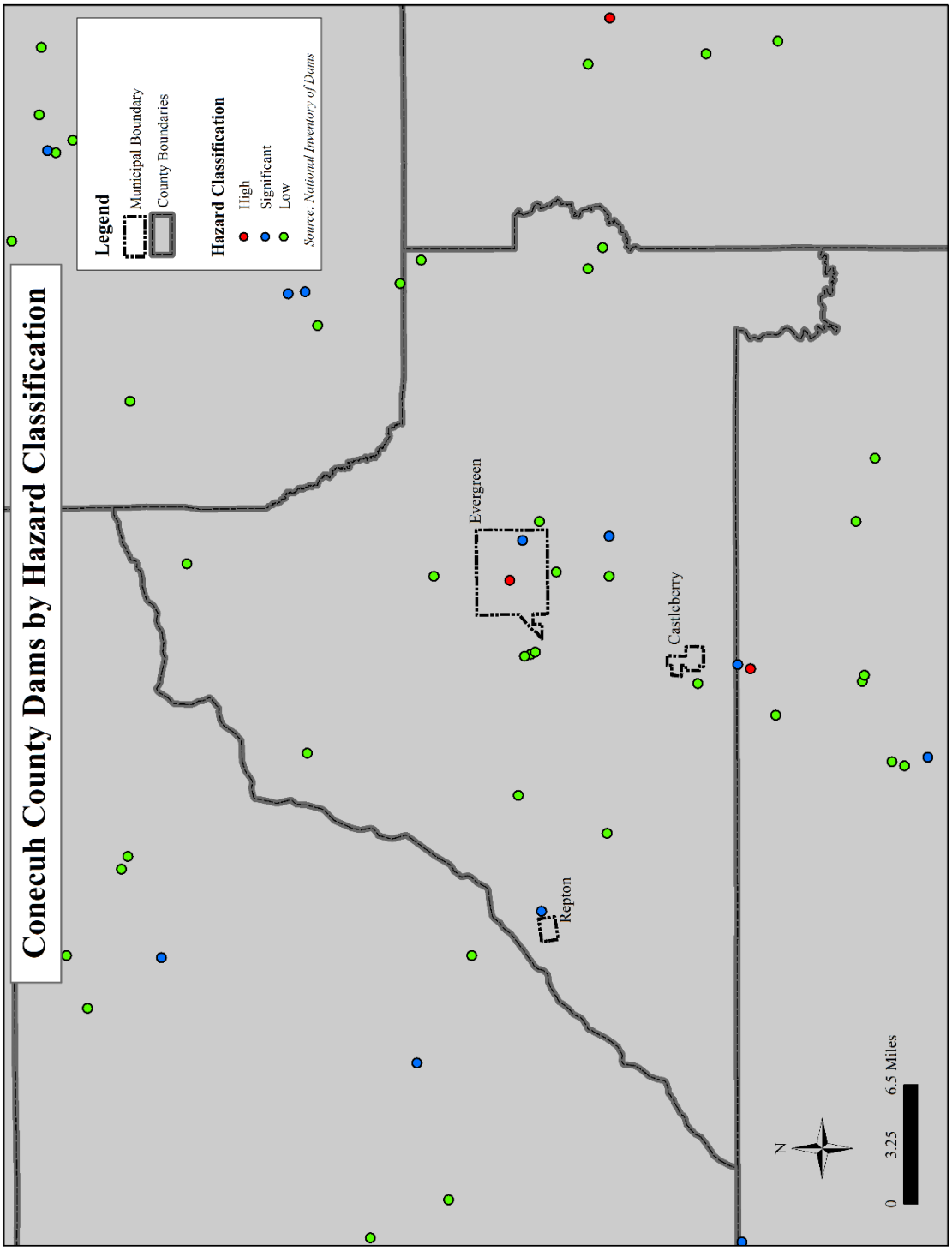


Figure 3.3 Monroe County Dams by Hazard Classification

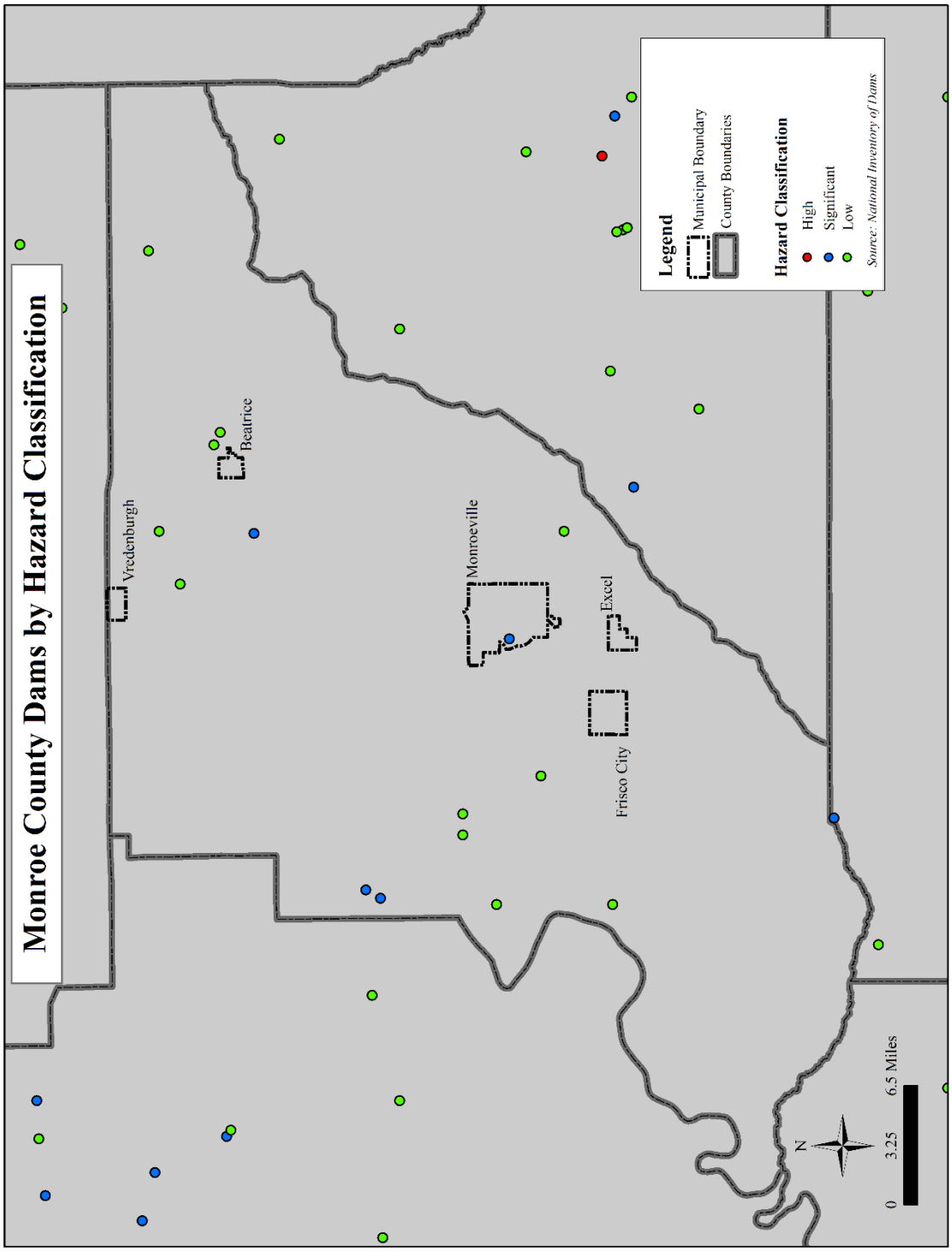
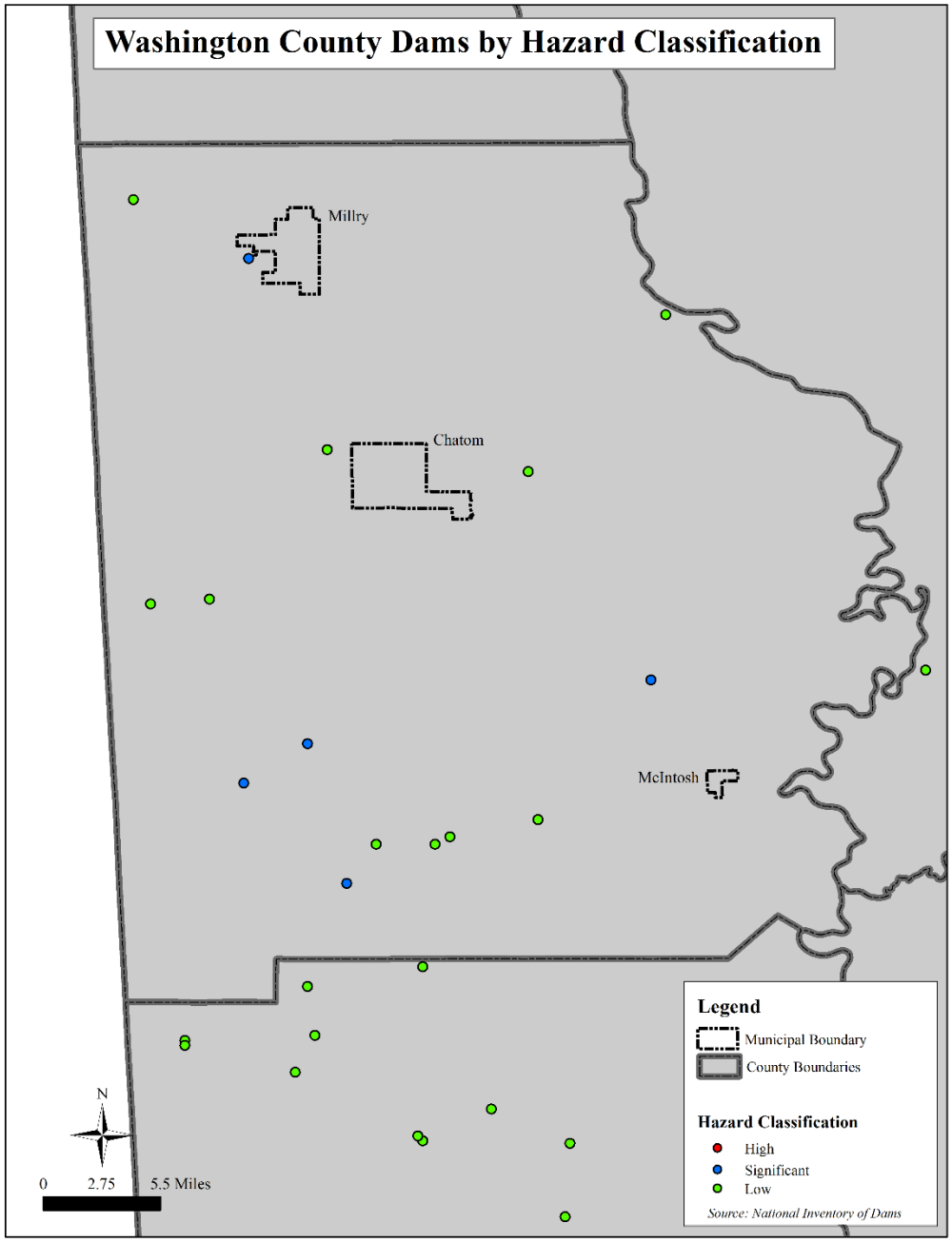


Figure 3.4 Washington County Dams by Hazard Classification



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

- The Corps of Engineers manages the Coffeeville Lock and Dam on the Tombigbee River and the Claiborne Lock and Dam on the Alabama River. 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.

Extent

Federal Guidelines for Dam Safety presents three classifications for "hazard potential." Currently, this classification is the best indicator of the potential extent of dam failure. Table 3.3 provides details of the classification.

Table 3.3 Dam Hazard Classification

Hazard Potential Classification	Loss of Human Life	Economic, Environmental, Lifeline Losses
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 the planning area. There are no documented occurrences of dam failures within the planning region.

Probability of Future Events

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.

Summary

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 3.4 Dam Failure Summary by Jurisdiction

Jurisdiction	High Risk Dams Located in Jurisdiction	Historical Occurrences	Extent	Probability of Dam Failure	Future Loss Estimate
Clarke County (unincorporated)	No	0	*	*	*
Town of Coffeeville	No	0	None	None	None
Town of Fulton	No	0	None	None	None
Town of Grove Hill	No	0	None	None	None
City of Jackson	No	0	None	None	None
City of Thomasville	No	0	*	*	*
Conecuh County (unincorporated)	No	0	*	*	*
Town of Castleberry	No	0	None	None	None
City of Evergreen	Yes	0	None	None	None
Town of Repton	No	0	*	*	*
Monroe County (unincorporated)	No	0	*	*	*
Town of Beatrice	No	0	None	None	None
Town of Excel	No	0	None	None	None
Town of Frisco City	No	0	None	None	None
City of Monroeville	No	0	*	*	*
Town of Vredenburgh	No	0	*	*	*
Washington County (unincorporated)	No	0	*	*	*
Town of Chatom	No	0	0	None	None
Town of McIntosh	No	0	0	None	None
Town of Millry	No	0	0	None	None

** Unable to provide due to lack of data*

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 3.5.

Table 3.5 Drought Classifications

Meteorological Drought	Departure of actual precipitation from an expected average or normal amount based on monthly, seasonal, or annual time scales.
Hydrologic Drought	Effects of precipitation shortfalls on stream flows and reservoir, lake, and groundwater levels.
Agricultural Drought	Soil moisture deficiencies relative to water demands of plant life, usually crops.
Socioeconomic Drought	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. All ATRC Division A counties are prone to unpredictable precipitation patterns including extended periods of below-average rainfall which lead to drought conditions. High, subtropical temperatures are common in south Alabama. 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 3.6 provides a description of each level of intensity.

Table 3.6 U.S. Drought Monitor Classification Scheme

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

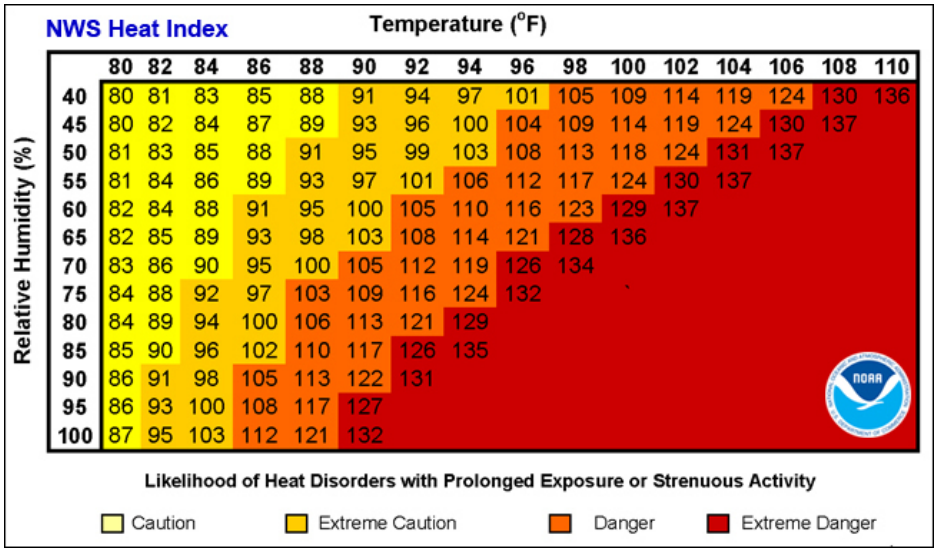
Source: https://droughtmonitor.unl.edu/About/AbouttheData/DroughtClassification.aspx
Last Accessed on 1/13/20

Drought conditions will occur in the planning area 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 ATRC Division A counties, 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 the planning area 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 3.7 provides a guide to how dangerous higher temperatures can be when occurring with high humidity.

Table 3.7 Heat Index



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

Historical Occurrences

ATRC Division A counties have 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 the planning area experienced some degree of drought between 2010 and 2019. Table 3.8 provides a summary of drought conditions in the region since 2010 that were recorded in the NOAA Storm Events Database. Drought events are recorded at the county level. No records for this time period were found for extreme heat.

Table 3.8 Division A- ATRC Planning Area Drought Occurrences 2010-2020

Clarke County				
Location	**Date**	**Magnitude**	**Property Damage**	**Crop Damage**
Clarke	10/1/2016	D2	$0	$0
Clarke	11/1/2016	D3	$0	$0
Clarke	12/1/2016	D3	$0	$0
Conecuh County				
Location	**Date**	**Magnitude**	**Property Damage**	**Crop Damage**
Conecuh	11/1/2016	D2	$0	$0
Conecuh	12/1/2016	D3	$0	$0
Monroe County				
Location	**Date**	**Magnitude**	**Property Damage**	**Crop Damage**
Monroe	11/1/2016	D3	$0	$0
Monroe	12/1/2016	D3	$0	$0
Washington County				
Location	**Date**	**Magnitude**	**Property Damage**	**Crop Damage**
Washington	10/1/2016	D2	$0	$0
Washington	11/1/2016	D3	$0	$0
Washington	12/1/2016	D3	$0	$0
Totals:			**$0**	**$0**

Source: NOAA Storm Events Database

Historical occurrences before 2010, can be accessed through the NOAA Storm Events Database site at https://www.ncdc.noaa.gov/stormevents/.

Probability of Future Events

The probability of drought and extreme heat occurring within the region is relatively high. Most 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).

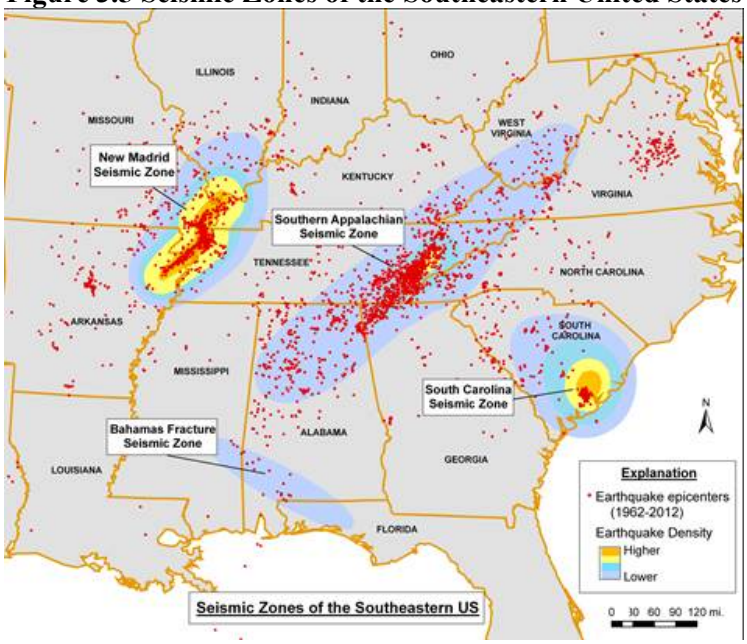
EARTHQUAKES

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 3.5). Portions of Clarke, Conecuh, Monroe, and Washington are within the Bahamas Fracture Seismic Zone.

Figure 3.5 Seismic Zones of the Southeastern United States



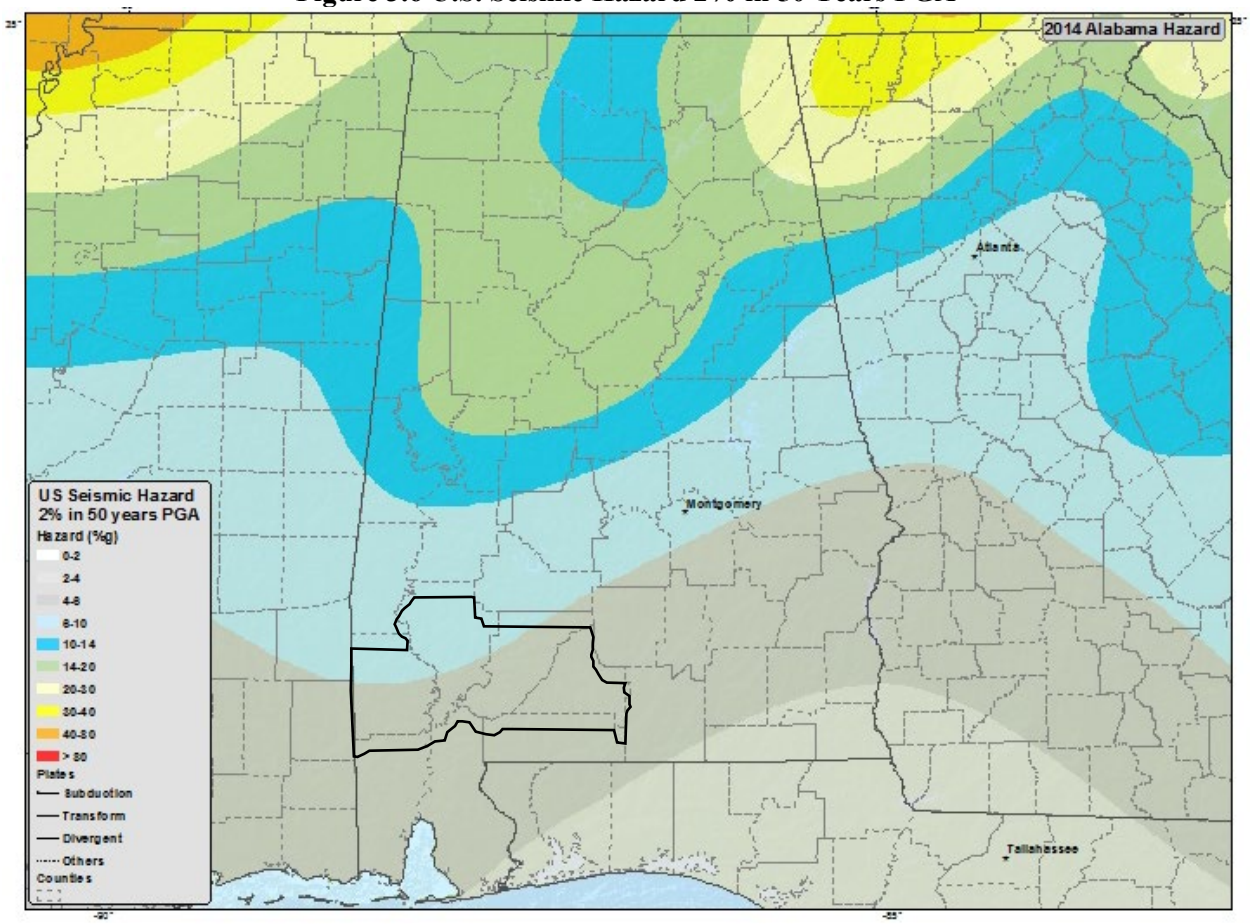
Source: https://www.gsa.state.al.us/gsa/geologic/hazards/earthquakes/alquakes

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 3.6 is the seismic hazard map for Alabama. As you move north in Division A, the seismic risk increases.

Northern Clarke and Washington, and northwest Monroe have the highest risk with a 2% chance of shaking exceeding between 6-10%g in the next 50 years.

Figure 3.6 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 Mw, 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 3.9). 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.

Table 3.9 Modified Mercalli Earthquake Measurement Scale

PGA (%g)	Magnitude (Richter)	Intensity (MMI)	Description (MMI)
<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.

Table 3.9 Modified Mercalli Earthquake Measurement Scale			
PGA (%g)	**Magnitude (Richter)**	**Intensity (MMI)**	**Description (MMI)**
			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.
Source: United States Geological Survey http://earthquake.usgs.gov Last accessed 12/19/2019			

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 the planning area, earthquakes up to 3.3 on the Richter Scale have occurred. An earthquake of this magnitude is not felt and only detected by scientific instruments. The average intensity of earthquakes in the planning area is 2.8, which is a very weak earthquake. These earthquakes are usually identified by the review of seismograms.

Historical Occurrences

There are recorded earthquake occurrences for Clarke, Monroe, and Washington Counties (Table 3.10). The magnitude 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.

Table 3.10 Division A- ATRC Planning Area
Historic Earthquake Incidences

County	Year	Magnitude	Latitude	Longitude
Clarke	1984	3.0	31.6100	-87.8100
Clarke	2000	2.5	32.1210	-87.8600
Clarke	2005	3.3	31.8400	-88.0600
Monroe	2000	2.5	31.5350	-87.3100
Washington	1997	2.7	31.6300	-88.1700

Source: Geological Survey of Alabama

Probability of Future Events

Historically, earthquakes have occurred in Clarke, Monroe, and Washington Counties. Overall, the occurrence of earthquakes in Division A is likely. The probability of a high intensity quake in the division is low.

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 the planning area:

- 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 A 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

Counties in Division A are susceptible to both flash flooding and riverine flooding. Due to the nature of flash floods, the entire planning area 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 floodzones are shown by jurisdiction in Figures 3.7 through 3.26. This information is based on the most recent FEMA National Flood Layer available.

Participating Boards of Educations do not have properties located in designated floodzones.

Figure 3.7 Clarke County Flood Zones

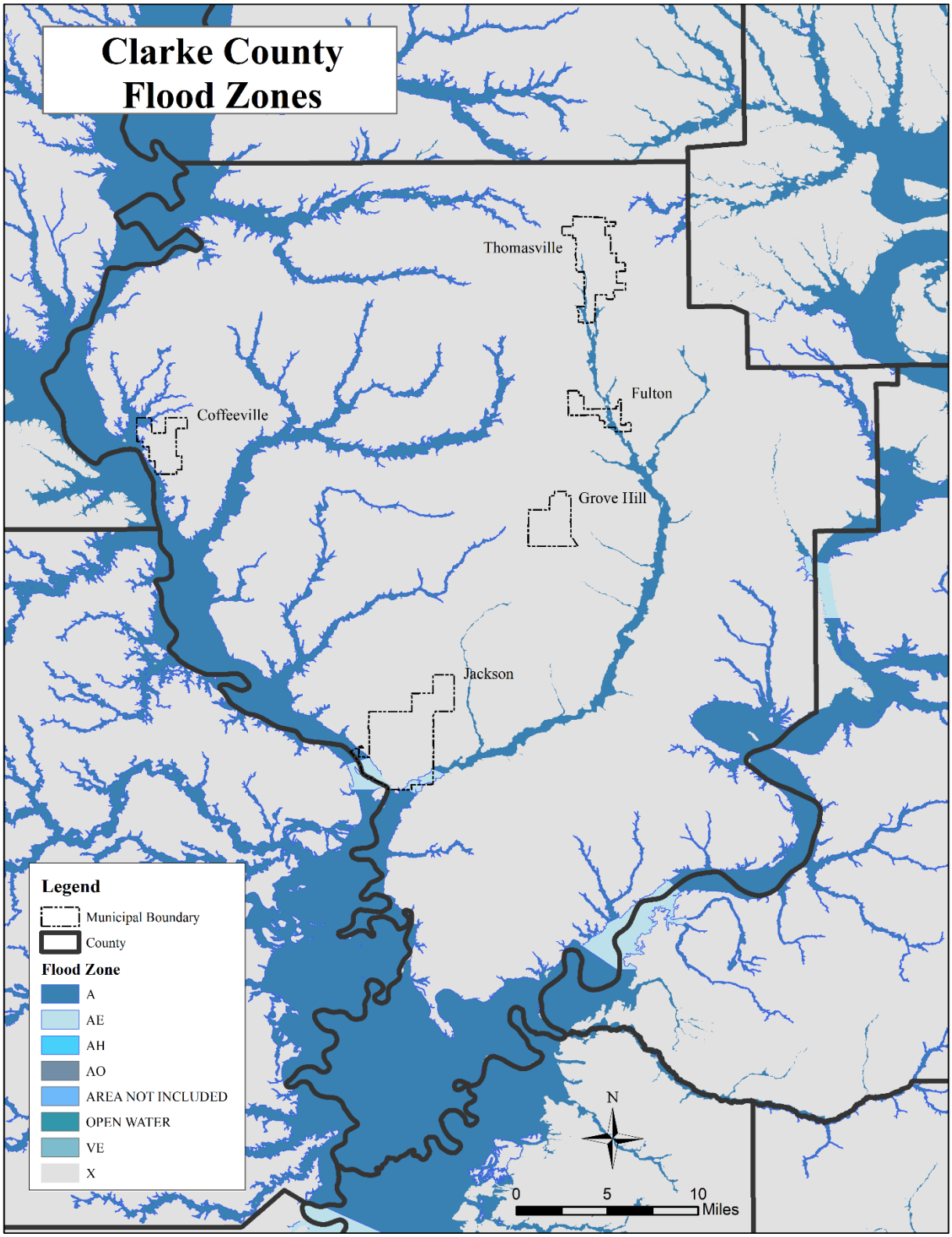


Figure 3.8 Town of Coffeeville Flood Zones

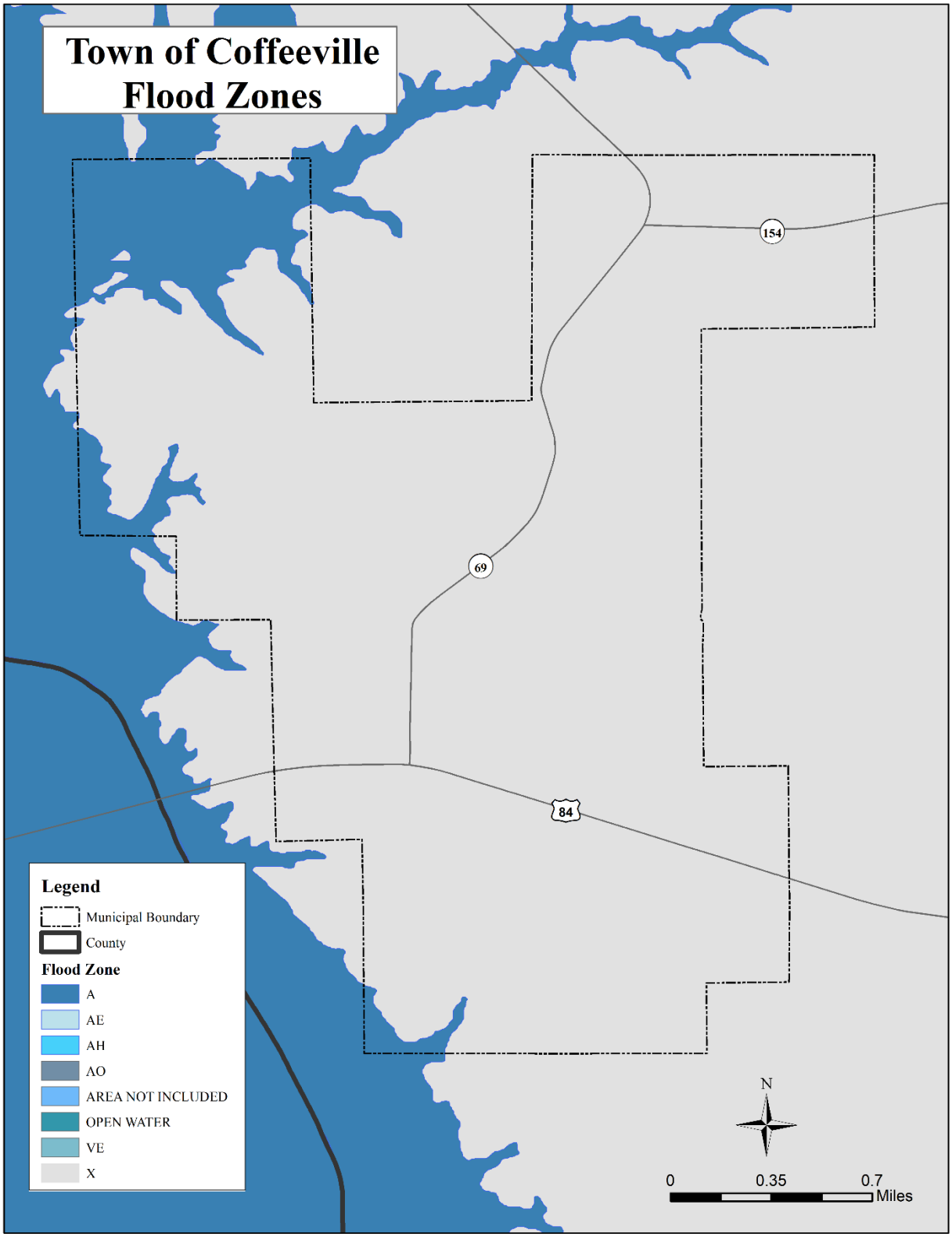


Figure 3.9 Town of Fulton Flood Zones

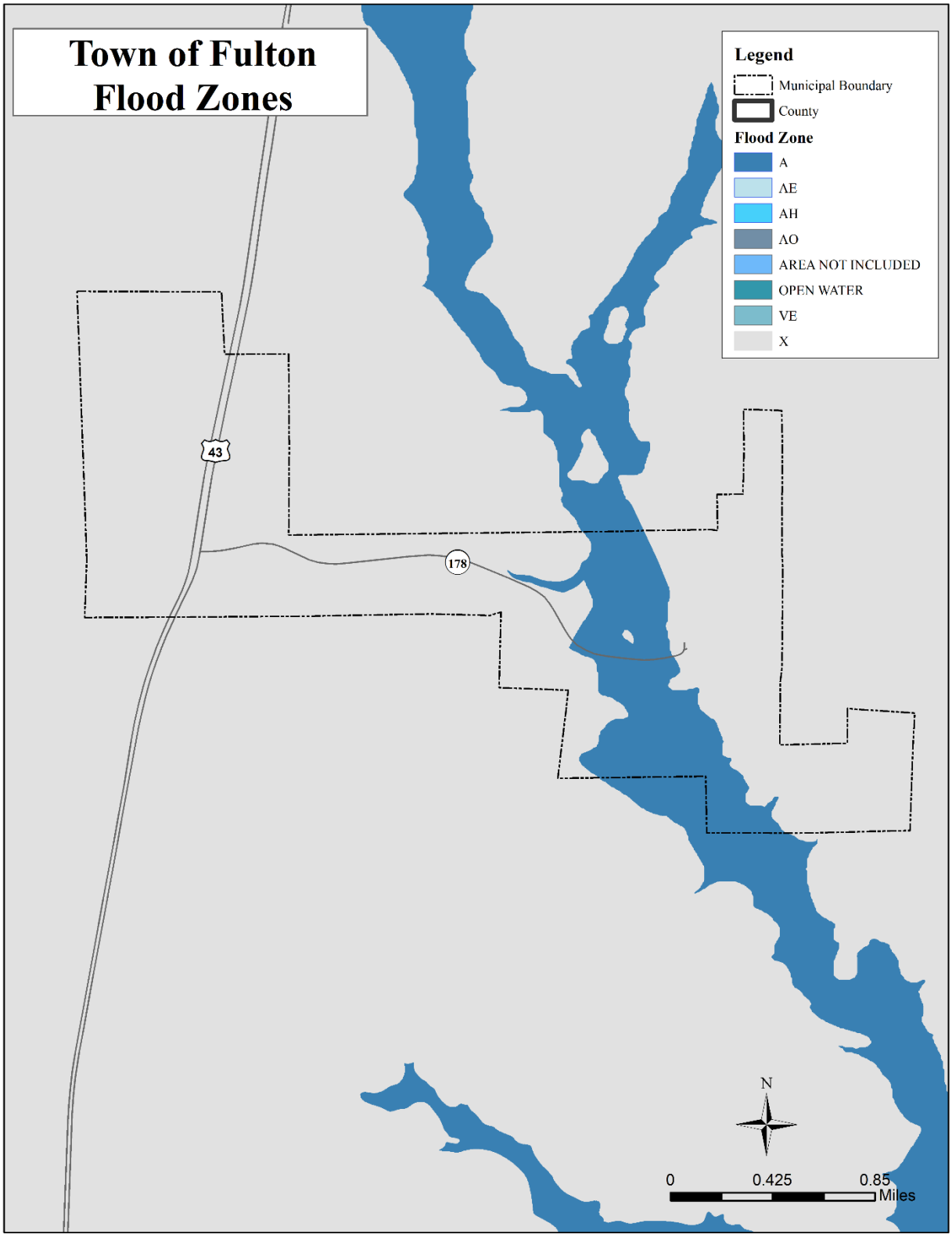


Figure 3.10 Town of Grove Hill Flood Zones

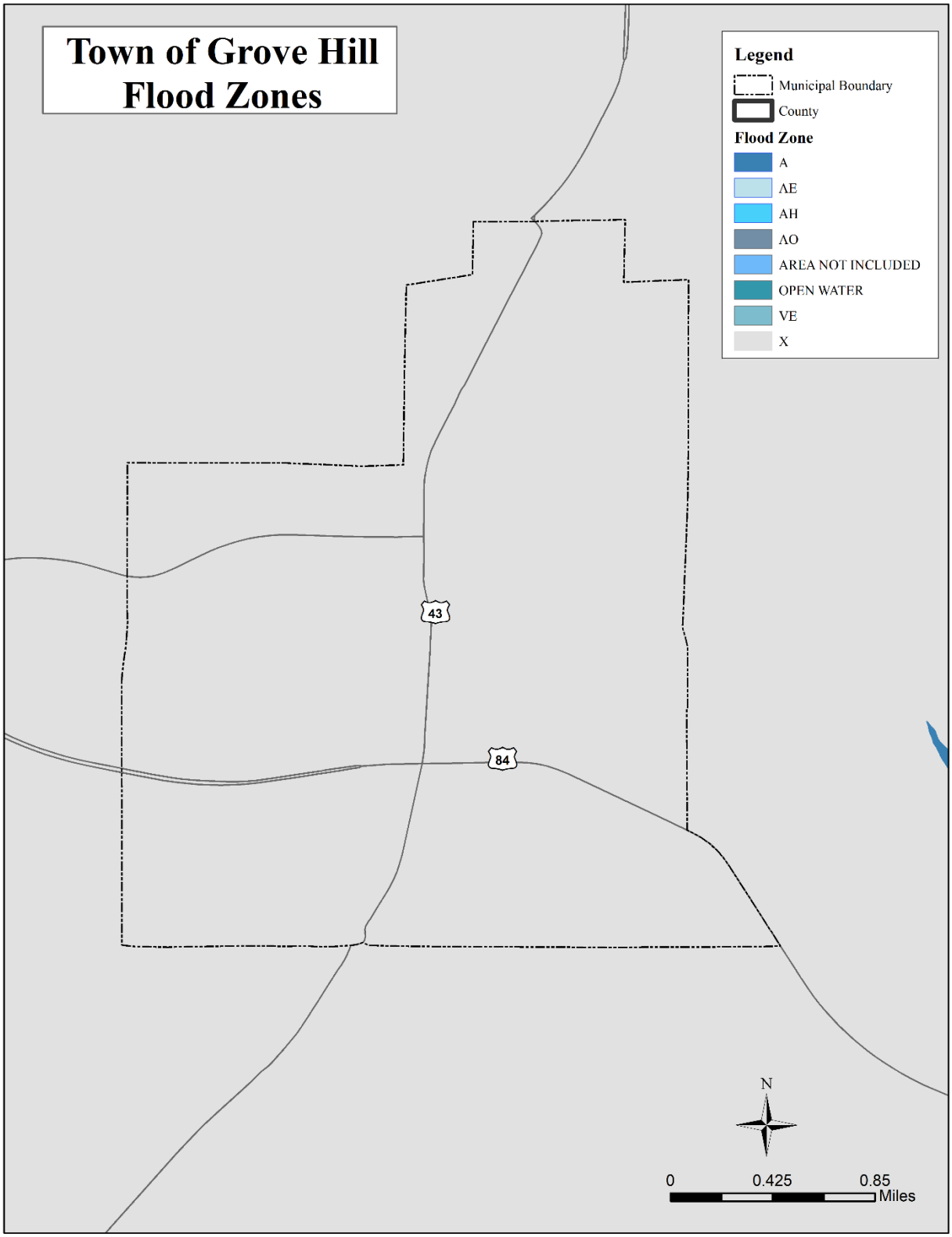


Figure 3.11 City of Jackson Flood Zones

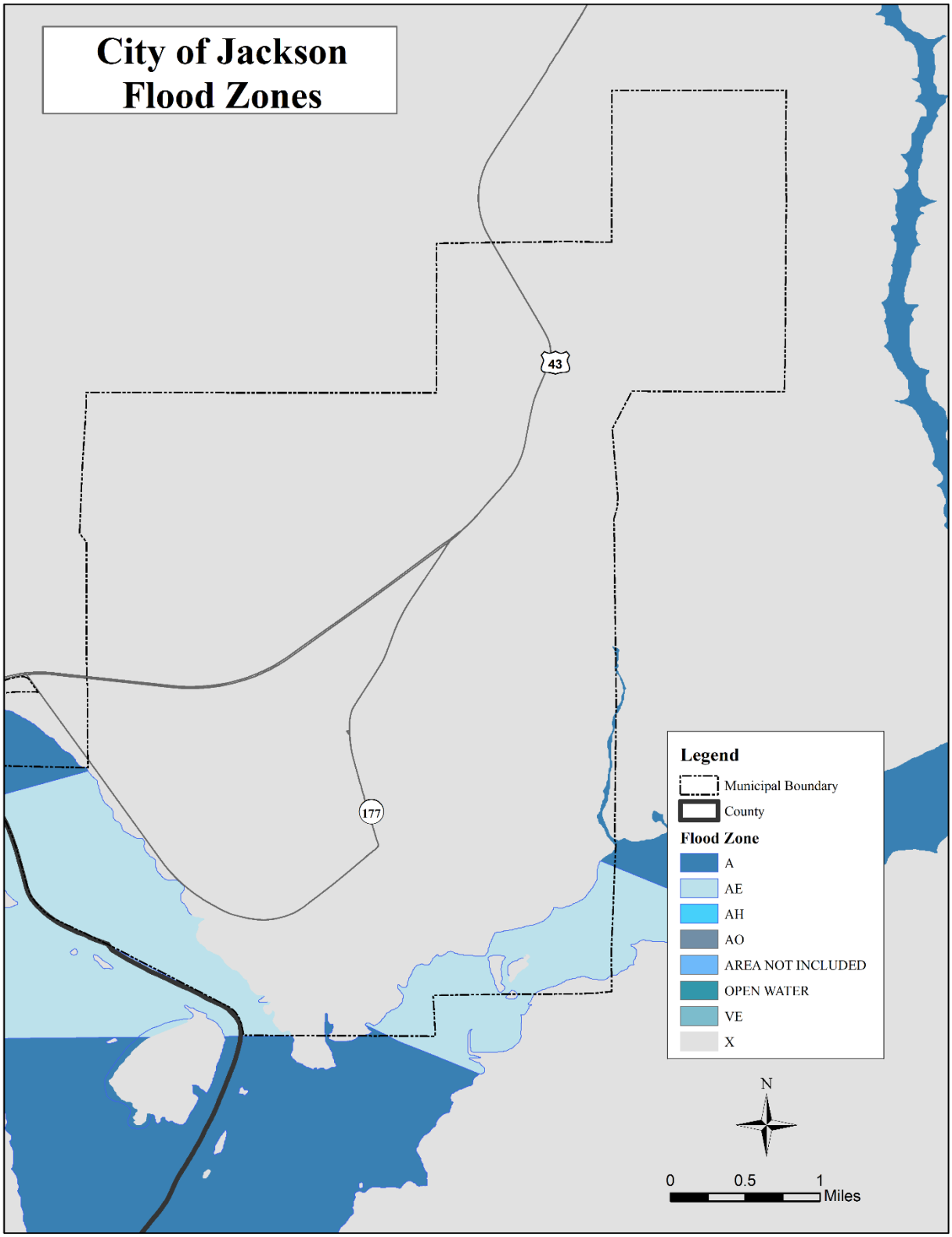


Figure 3.12 City of Thomasville Flood Zones

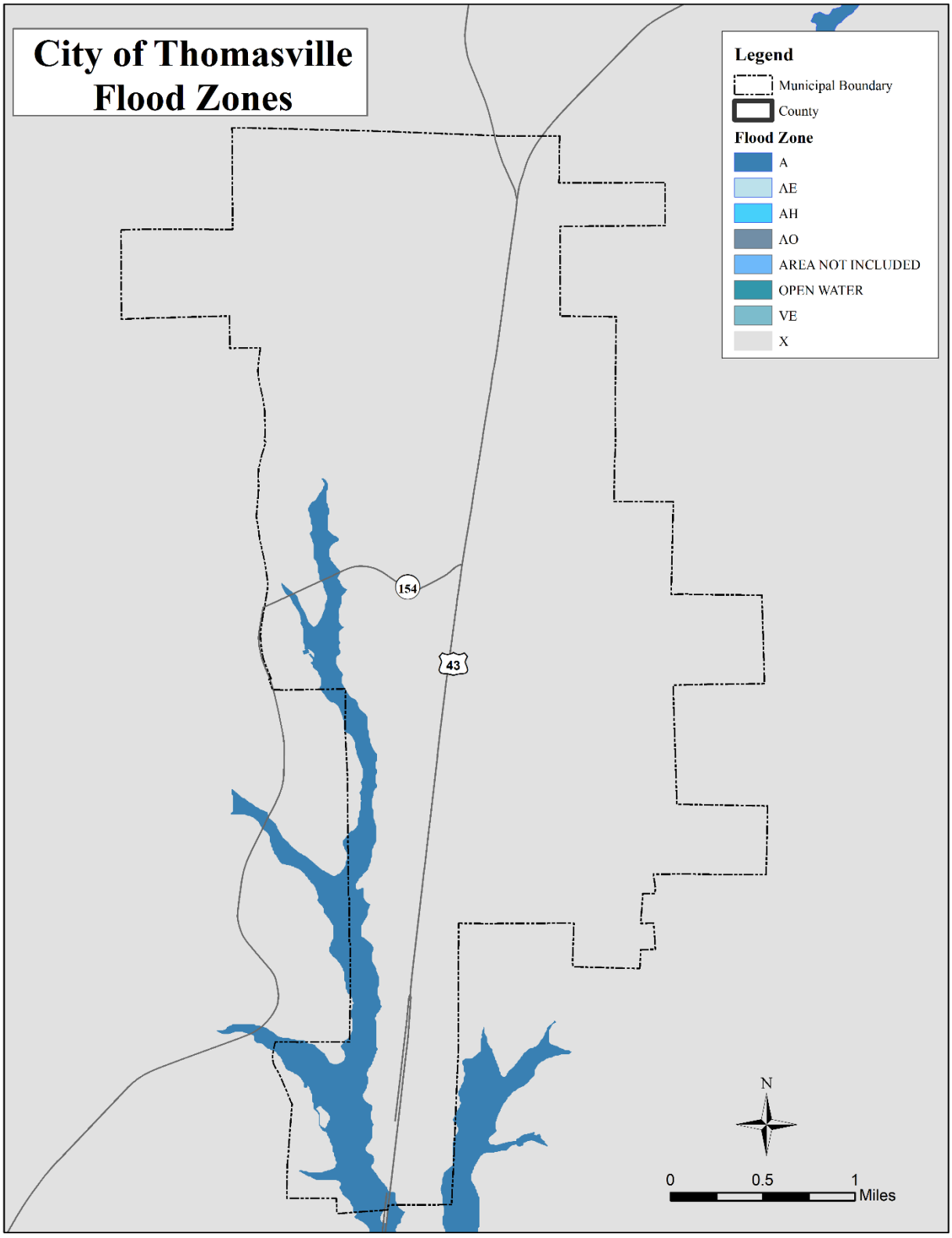


Figure 3.13 Conecuh County Flood Zones

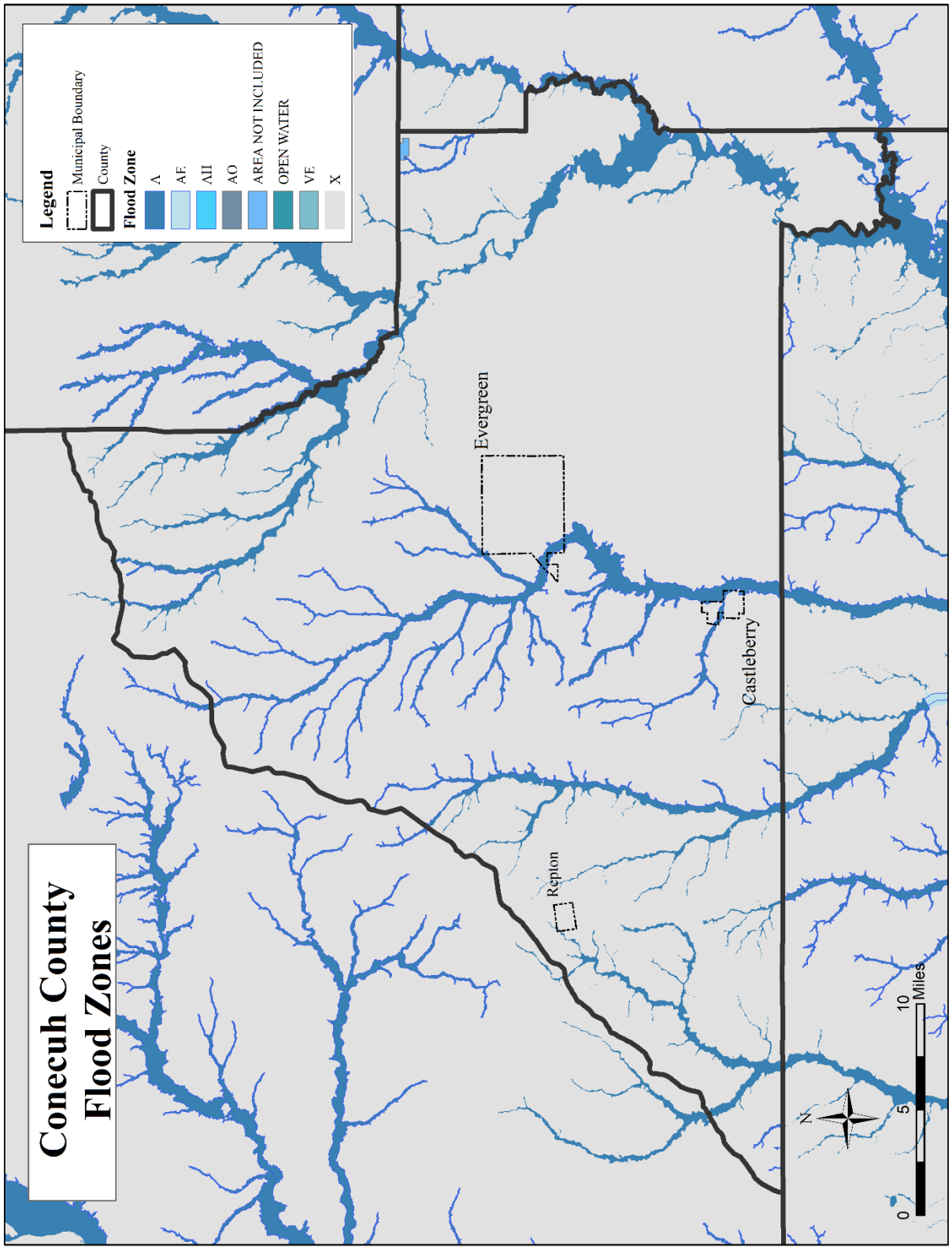


Figure 3.14 Town of Castleberry Flood Zones

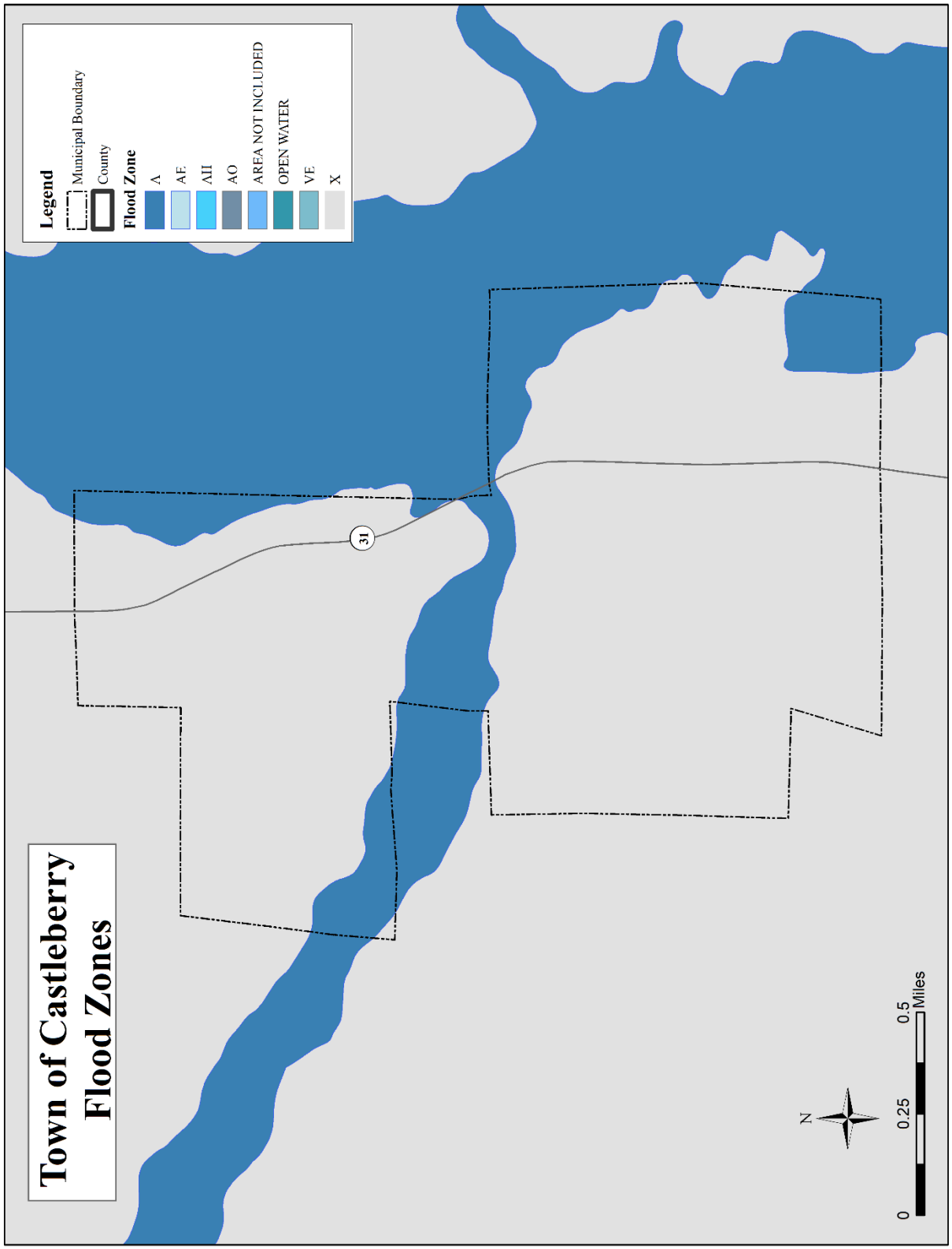


Figure 3.15 City of Evergreen Flood Zones

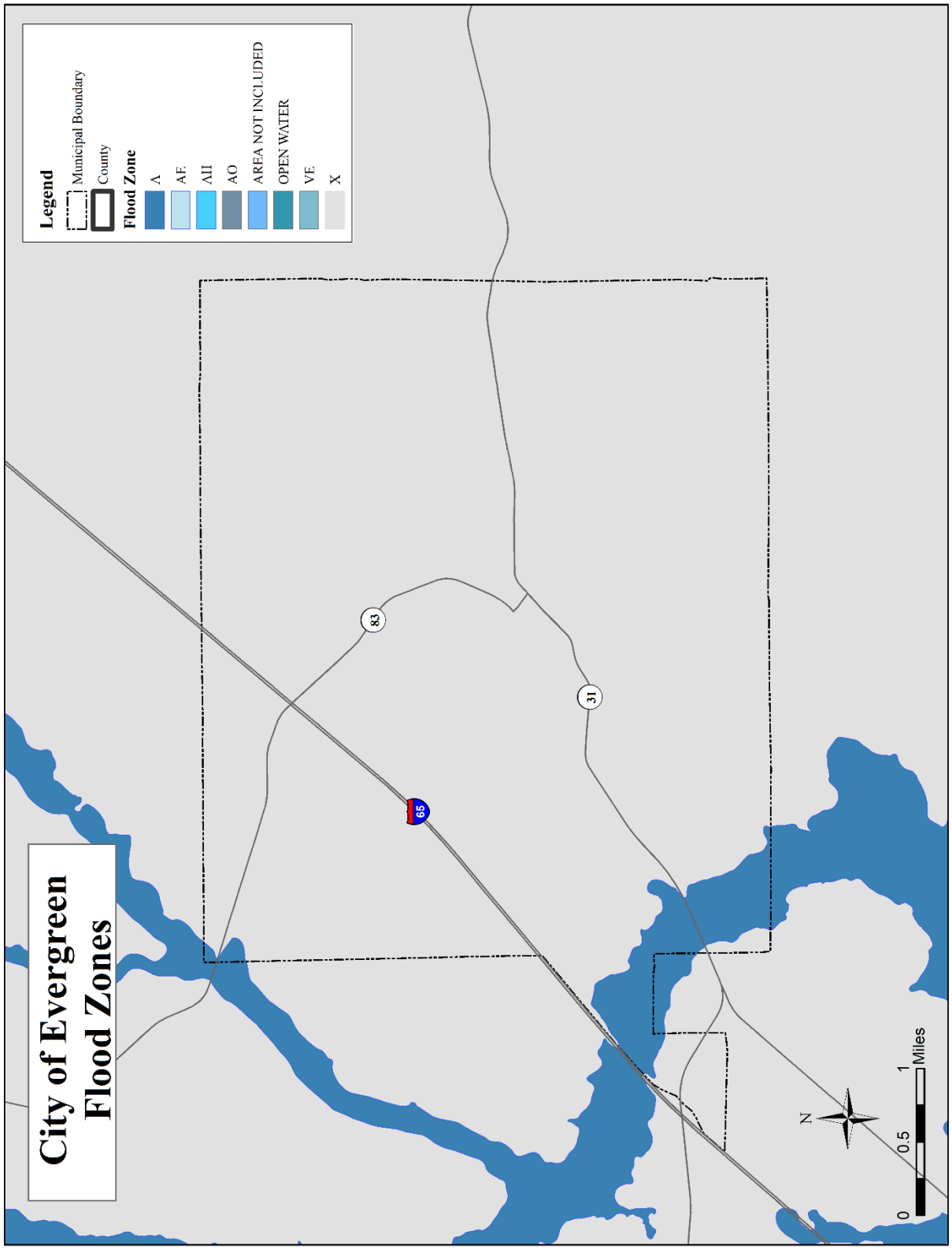


Figure 3.16 Town of Repton Flood Zones

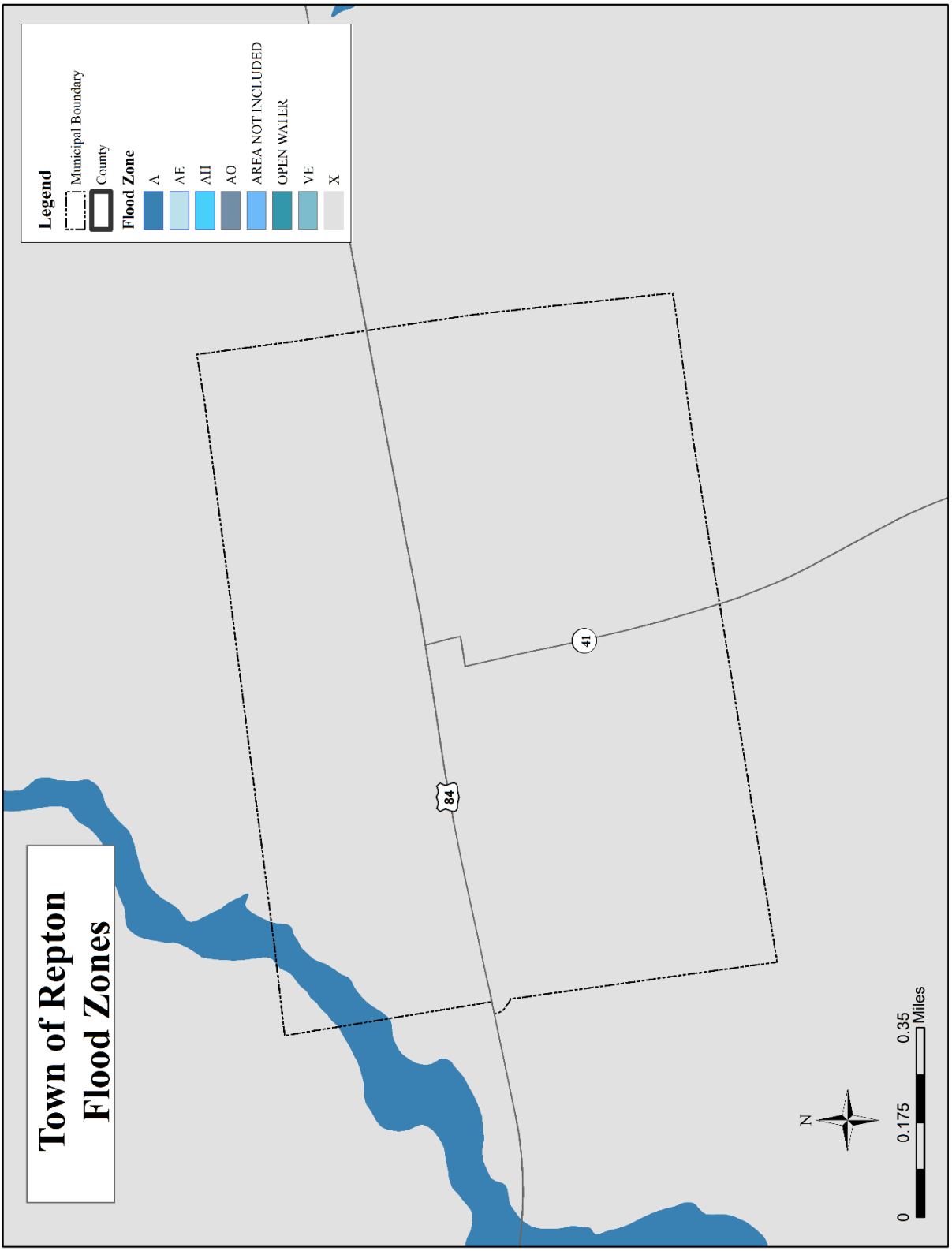


Figure 3.17 Monroe County Flood Zones

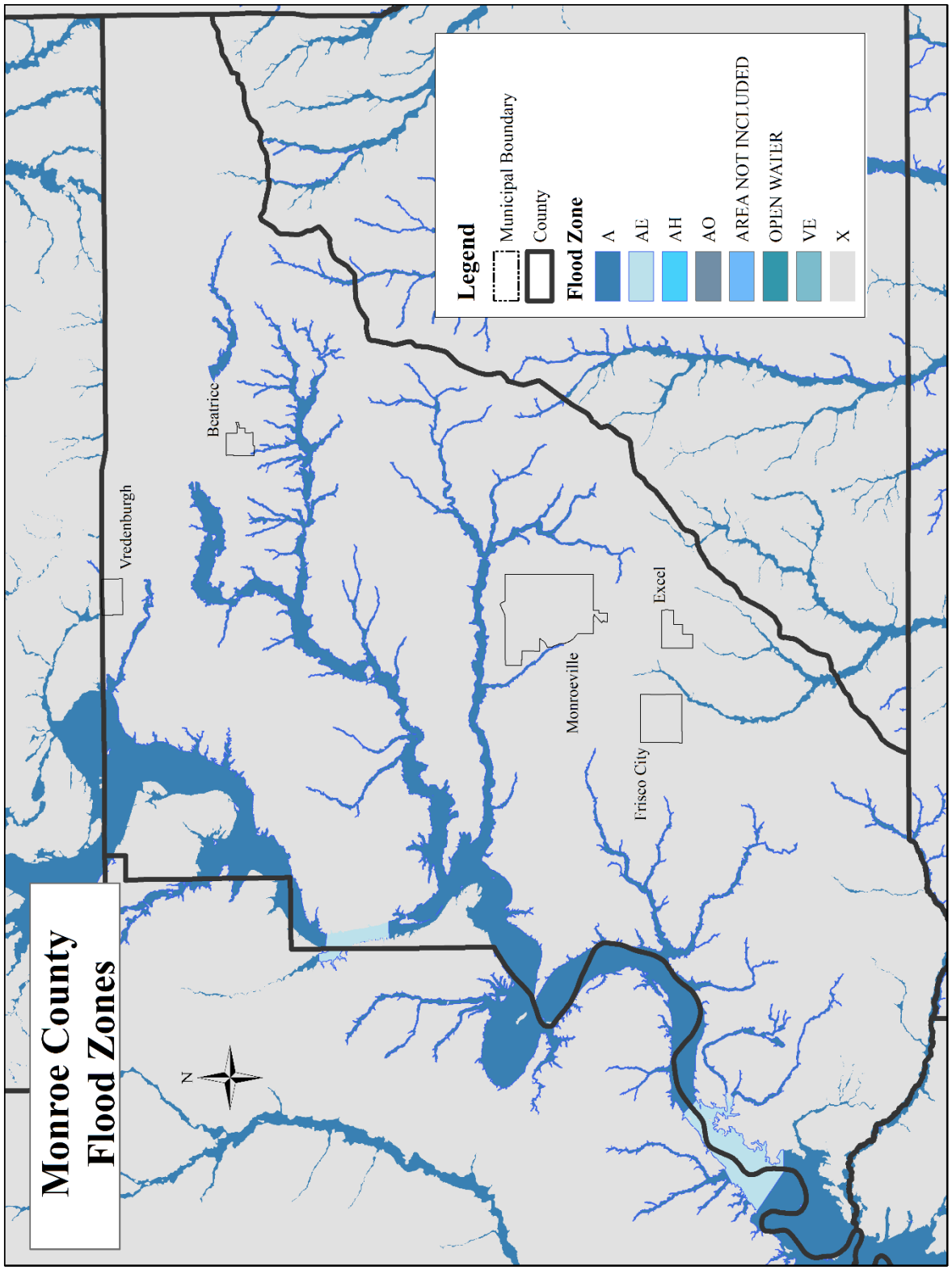


Figure 3.18 Town of Beatrice Flood Zones

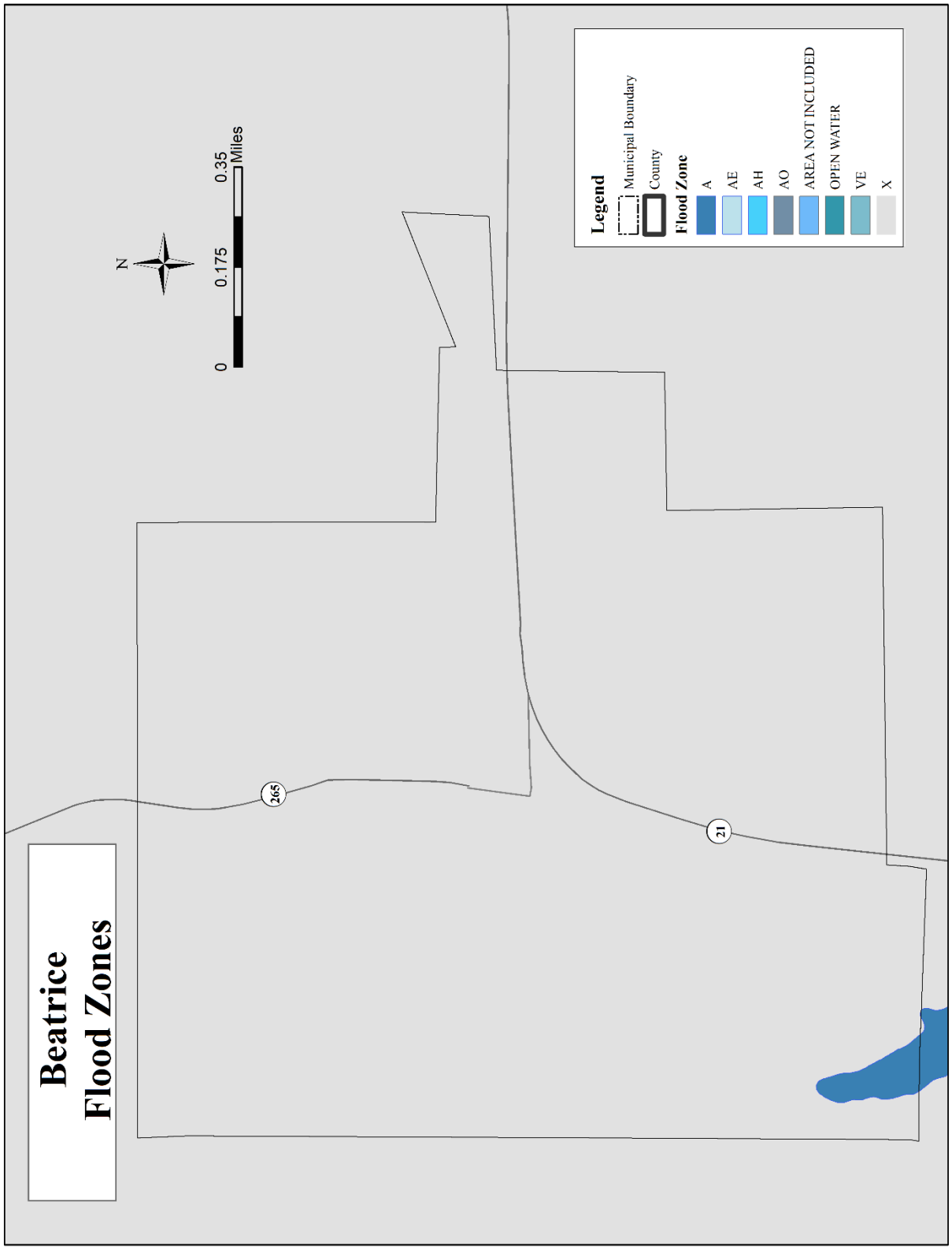


Figure 3.19 Town of Excel Flood Zones

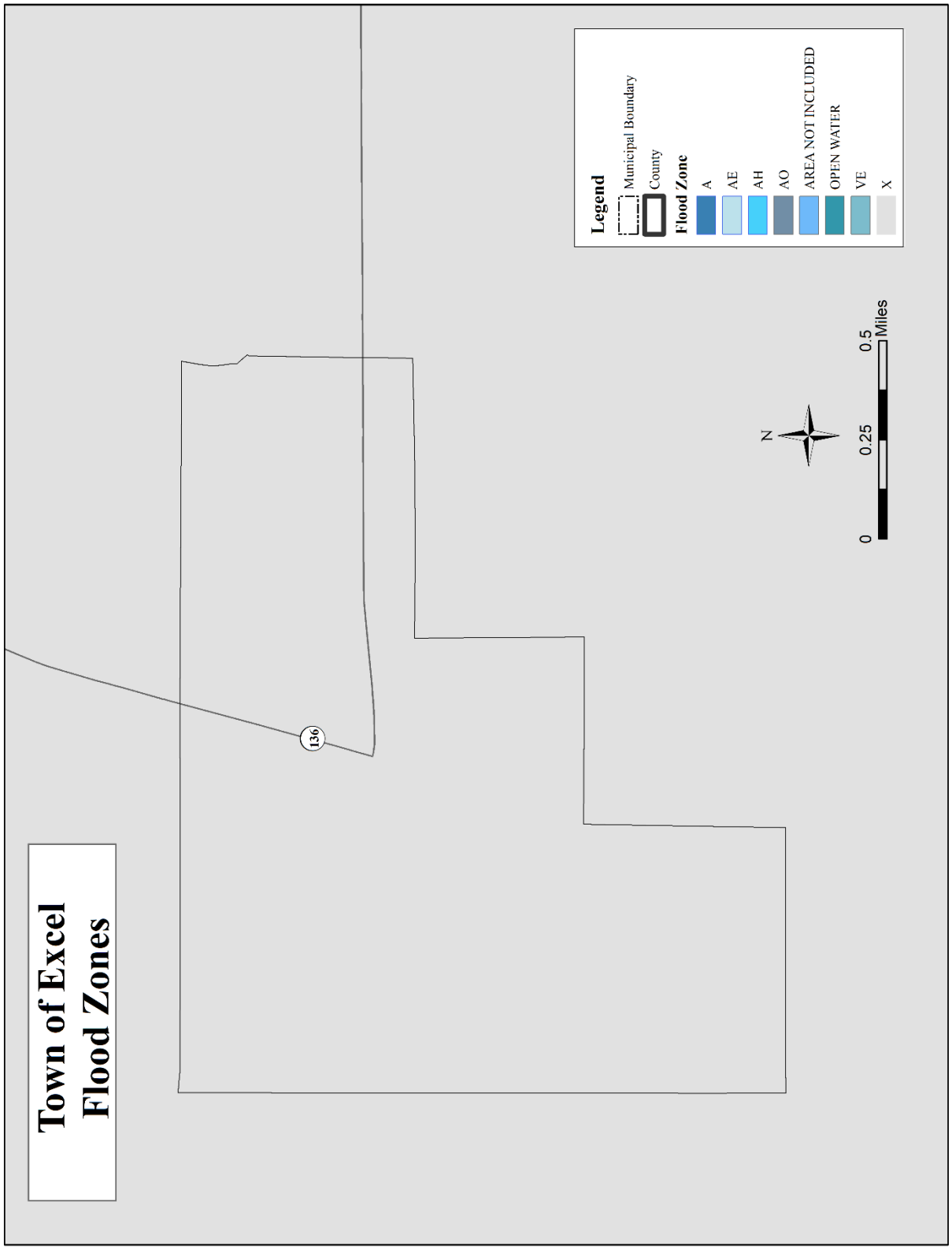


Figure 3.20 Town of Frisco City Flood Zones

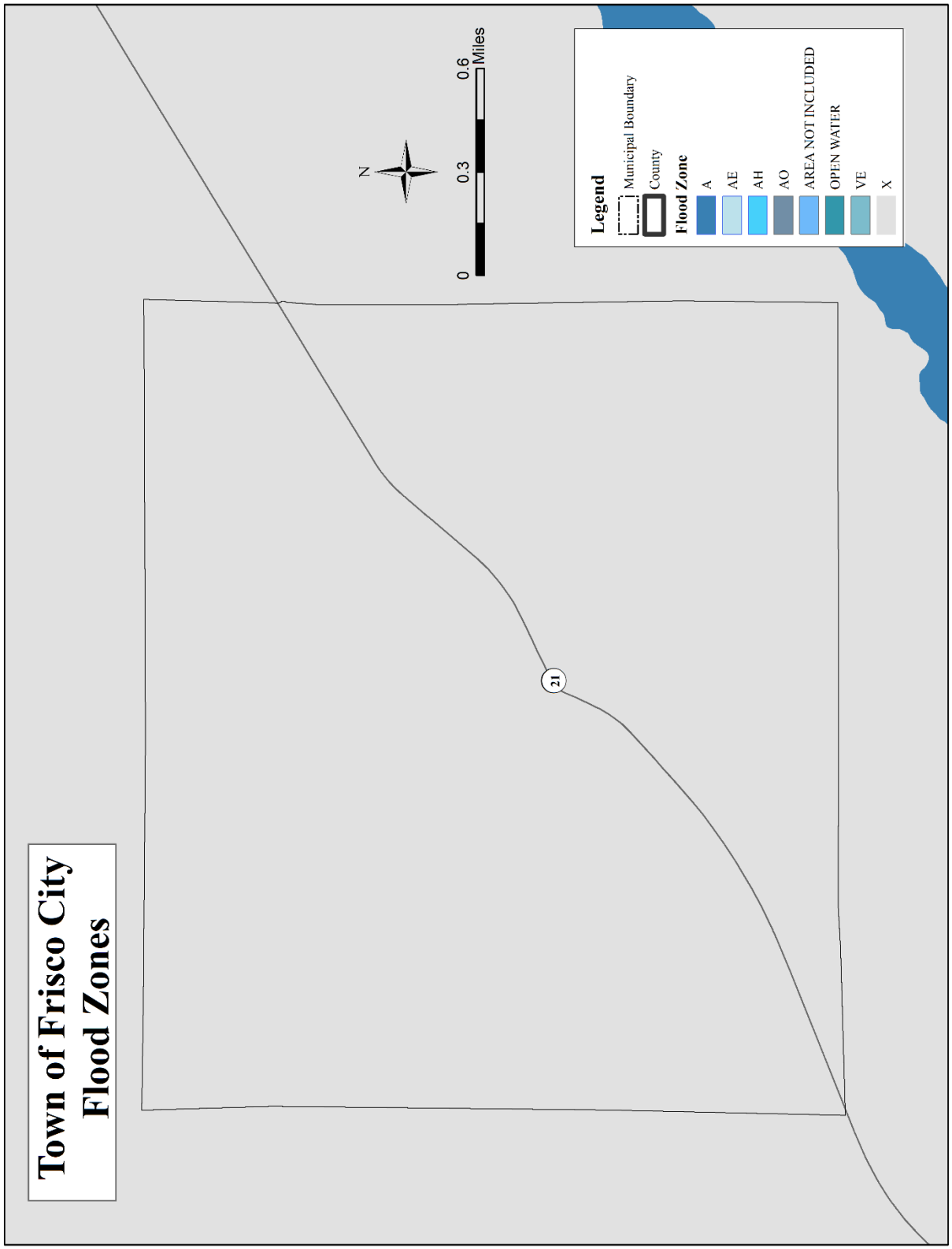


Figure 3.21 City of Monroeville Flood Zones

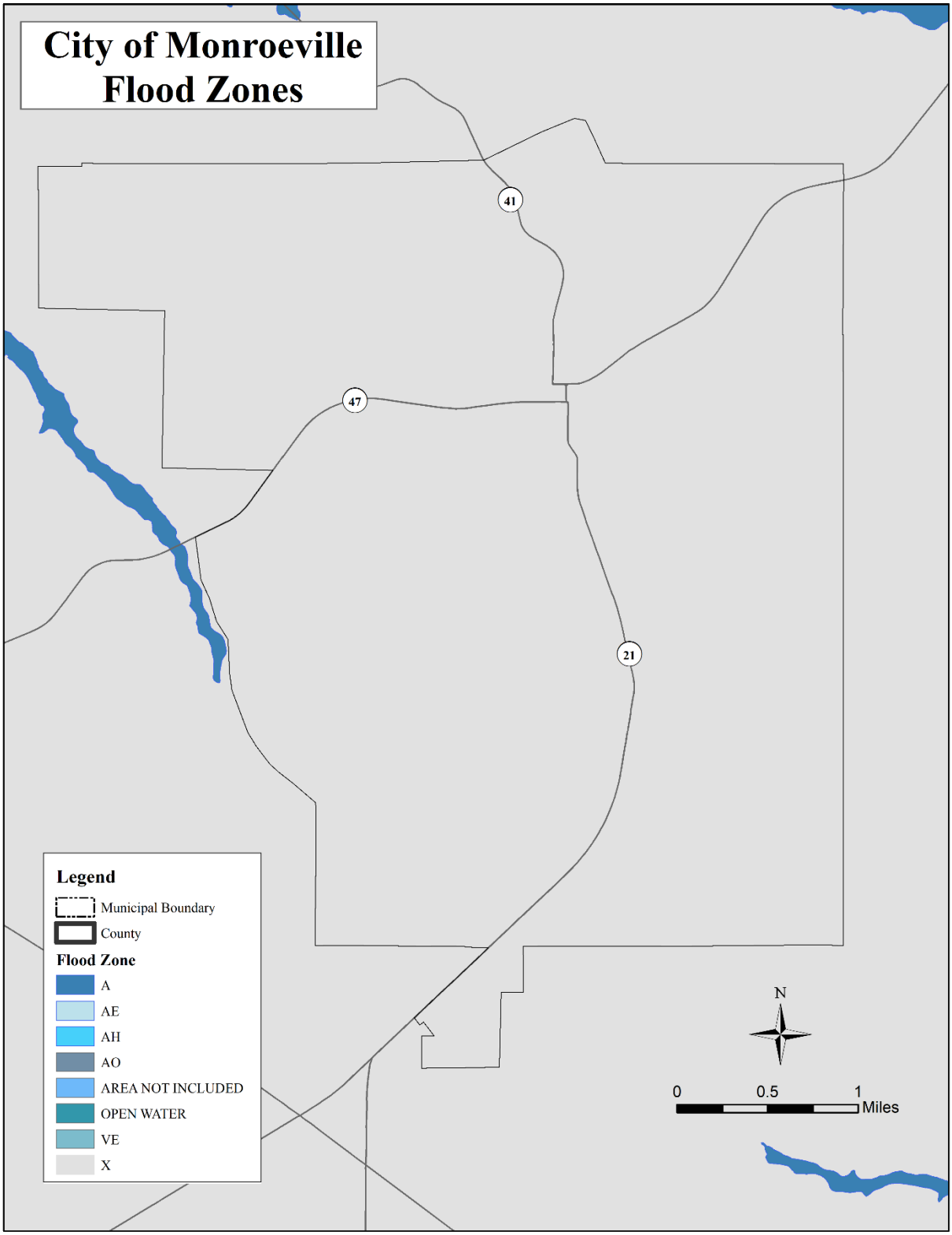


Figure 3.22 Town of Vredenburgh Flood Zones

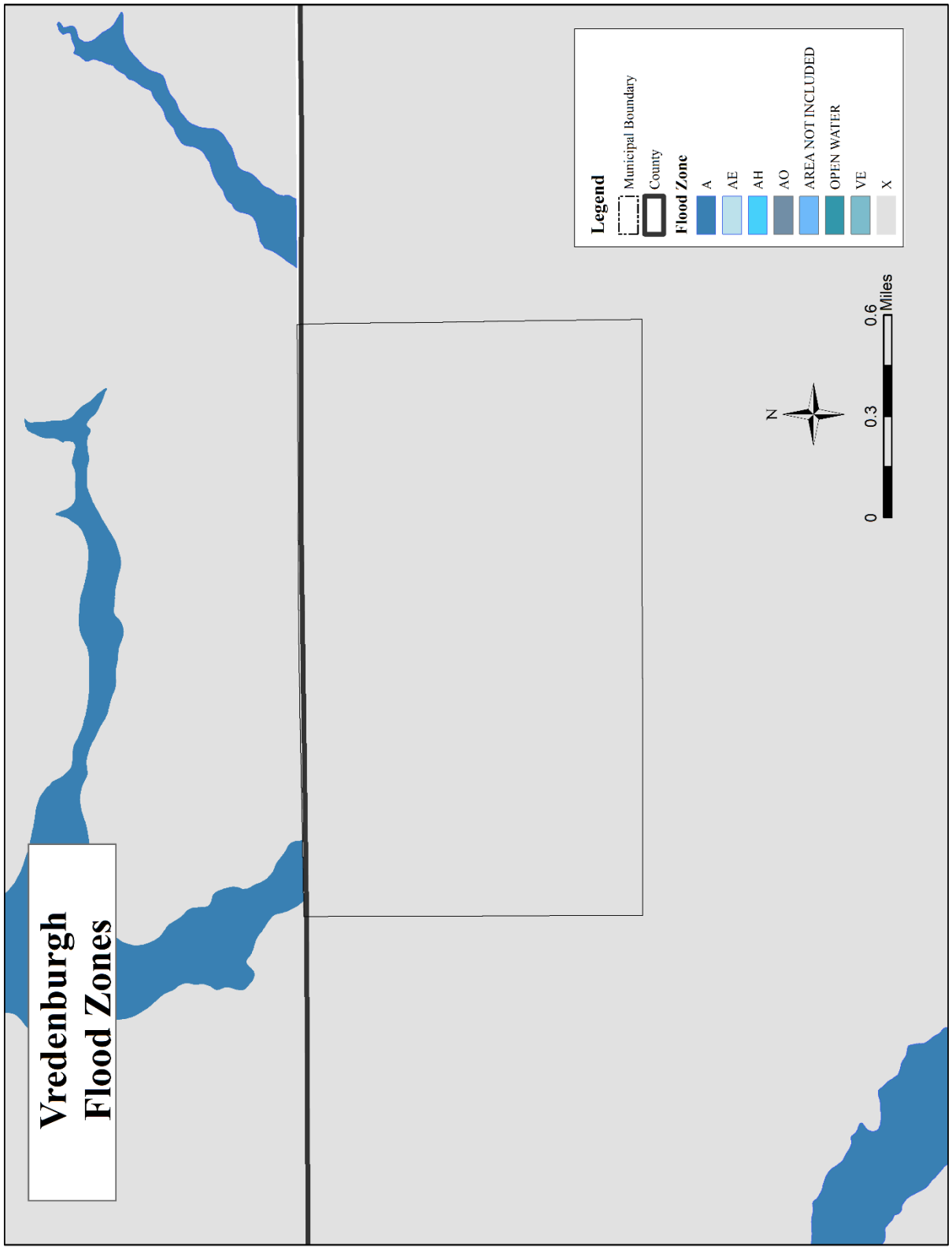


Figure 3.23 Washington County Flood Zones

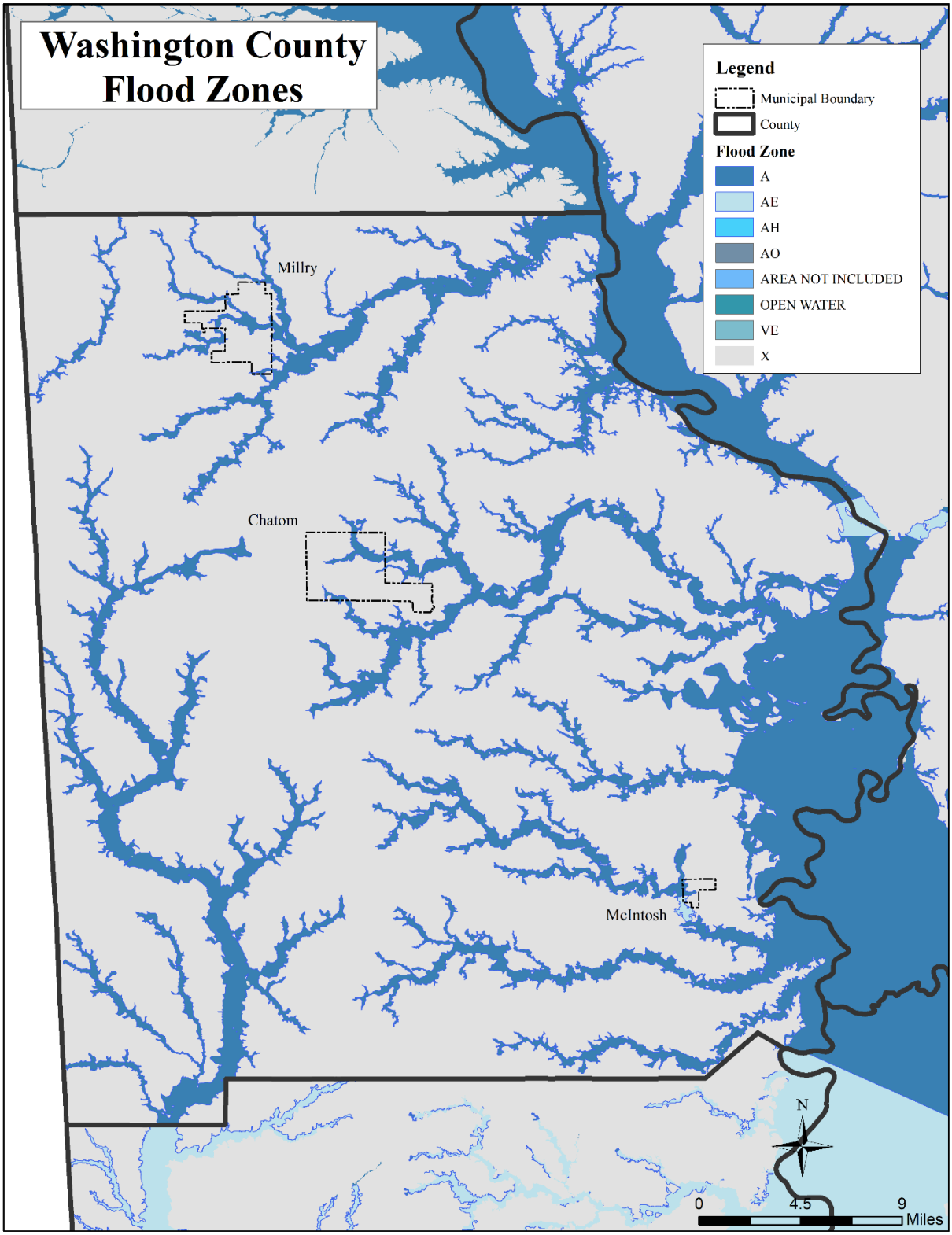


Figure 3.24 Town of Chatom Flood Zones

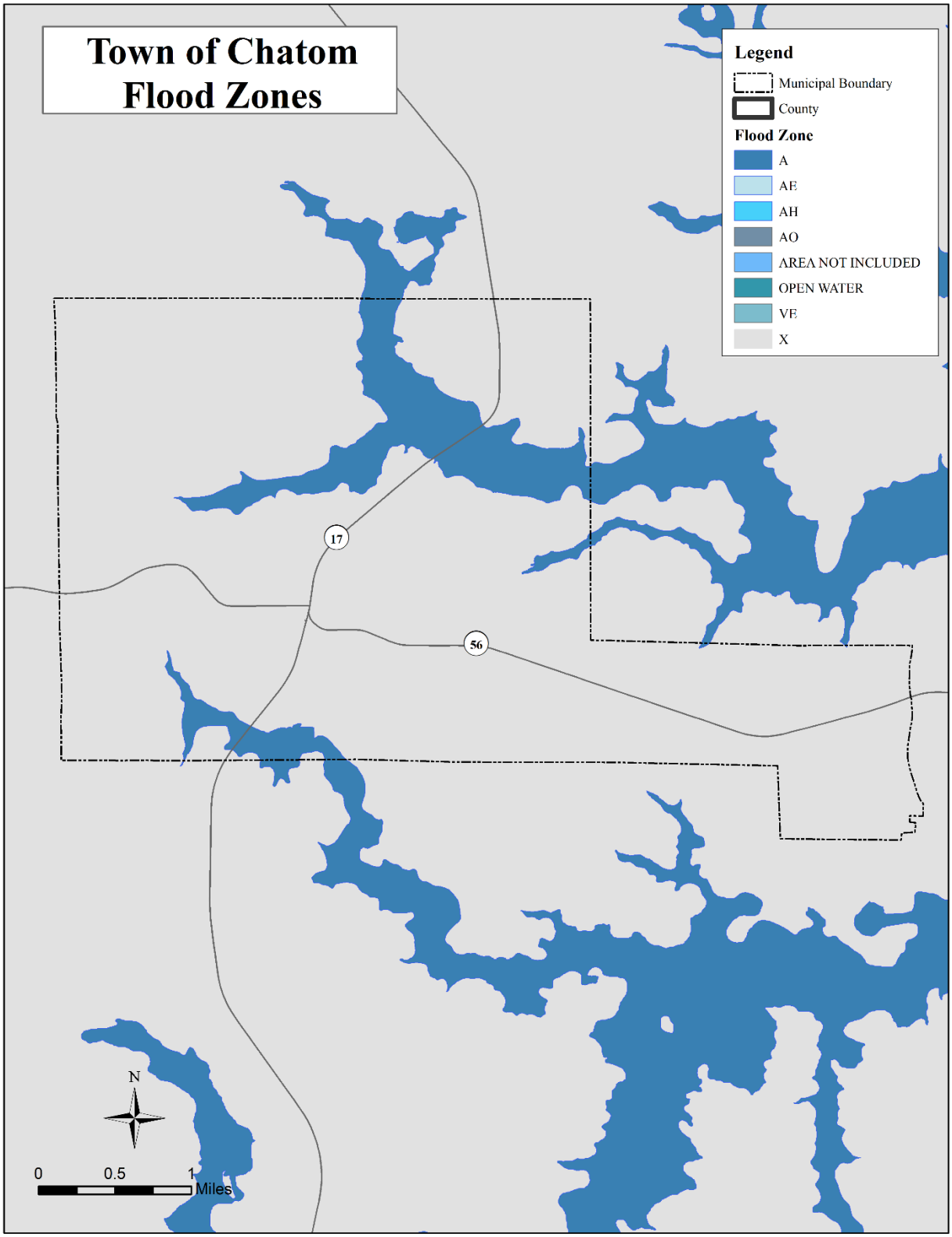


Figure 3.25 Town of McIntosh Flood Zones

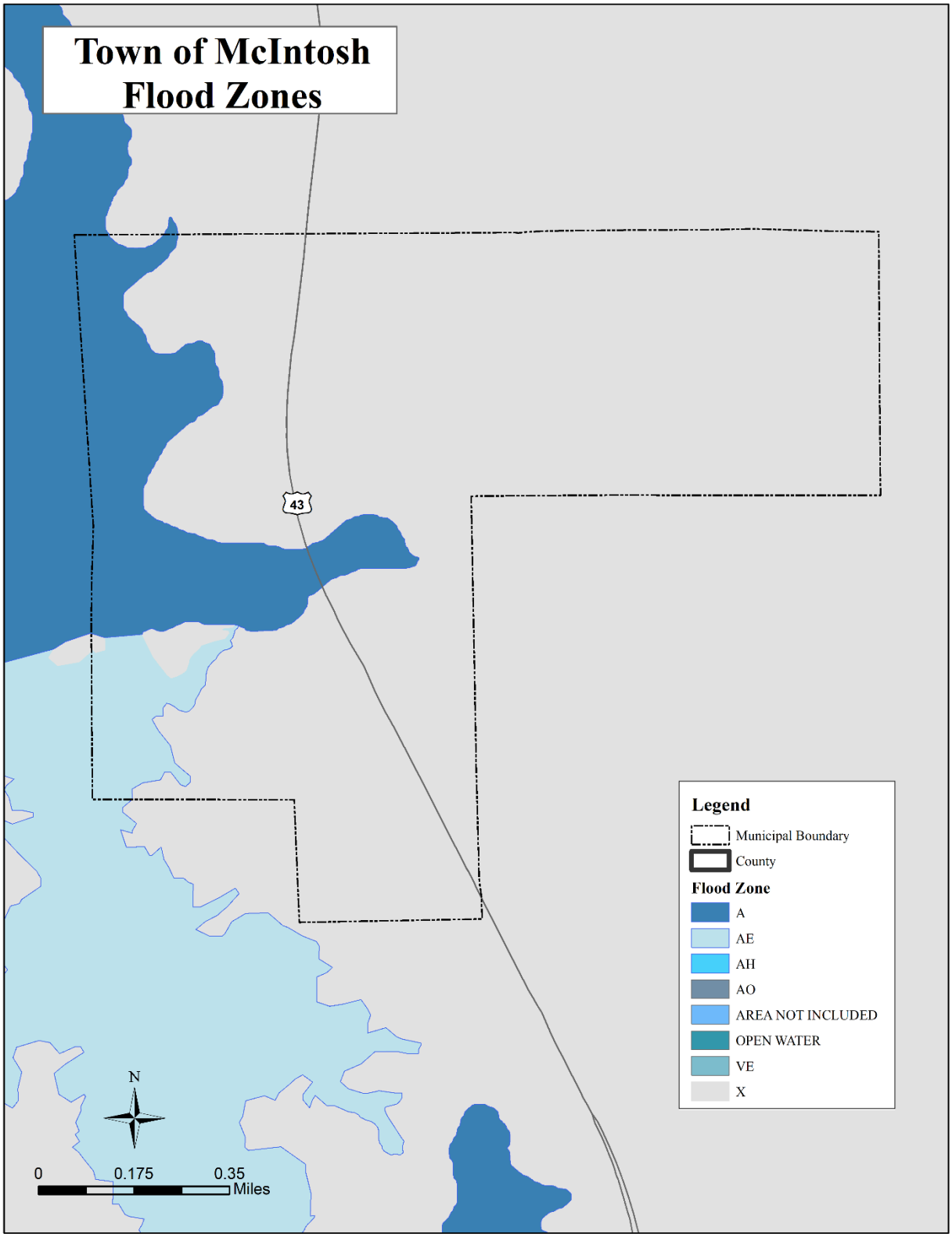
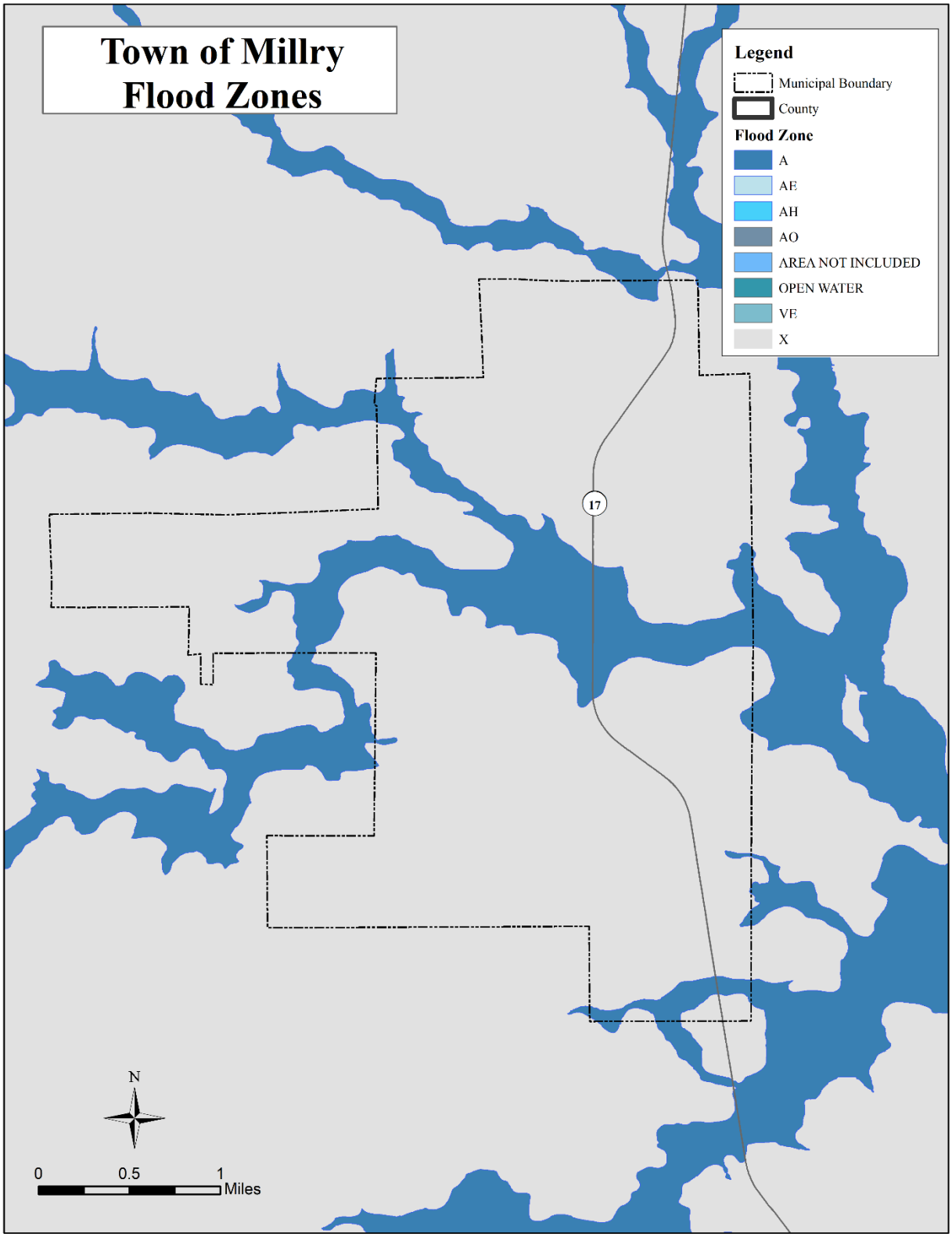


Figure 3.26 Town of Millry Flood Zones



Extent

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 the planning area, 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 up to almost two feet above flood stage as noted by the highest recorded floods described at multiple points in the region. The Tombigbee River near the Coffeeville Lock and Dam recorded a flood crest of 52.5 feet, which is 23.5 feet above flood stage. The Tombigbee River near Leroy recorded a crest of 35.89 feet in 1979, which is 11.89 feet over flood stage. The Alabama River at Claiborne Lock and Dam recorded a crest of 56.6 feet in 1990, which is 14.6 feet over flood stage.

Table 3.11 provides extent by jurisdiction.

Table 3.11 Flood Extent by Jurisdiction

Jurisdiction	Extent
Clarke County (unincorporated)	Flooding depths from 1±25 feet affecting agricultural lands, persons, structures, and infrastructure
Town of Coffeeville	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Fulton	Localized flooding to depths from less than 1 feet; moderate impact on persons, structures, and infrastructure
Town of Grove Hill	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
City of Jackson	Localized flooding to depths from less than 1 feet; moderate impact on persons, structures, and infrastructure

Jurisdiction	Extent
City of Thomasville	Localized flooding to depths from less than 1 feet; moderate impact on persons, structures, and infrastructure
Conecuh County (unincorporated)	Flooding depths from 1±15 feet affecting agricultural lands, persons, structures, and infrastructure
Town of Castleberry	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
City of Evergreen	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Repton	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Monroe County (unincorporated)	Flooding depths from 1±15 feet affecting agricultural lands, persons, structures, and infrastructure
Town of Beatrice	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Excel	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Frisco City	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
City of Monroeville	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Vredenburgh	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Washington County (unincorporated)	Flooding depths from 1±15 feet affecting agricultural lands, persons, structures, and infrastructure
Town of Chatom	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of McIntosh	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Millry	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 flood events since 2000 within the planning area. The total estimated property and crop damage for these events totals over five million dollars. Descriptions of the events with the most damage are provided below:

- March 3, 2001 ($365,000 in damages in Clarke County): Heavy rainfall caused extensive washouts to secondary roads and bridges across the counties. Most of the water had drained by sunset and most of the roads were reopened. However, some of the roads and bridges had to be rebuilt and were closed for several days before they were reopened. Radar estimated four to six inches of rainfall fell across the area.
- May 14, 2014 ($100,000.00 in damages in Conecuh County): Heavy rain caused a bridge to be washed out on Calloway Road. At least 4 other county roads in eastern Conecuh County were closed due to flooding.
- December 24, 2015 ($275,000.00 in damages in Monroe County): Several rounds of heavy rainfall impacted Monroe County during the last 2 weeks of December. Numerous roads were closed due to flooding. Many dirt roads were damaged during the flood event.
- January 2, 2017 ($750,000.00 in damages in Jackson- Clarke County): Significant flash flooding occurred in the Jackson, AL area due to 5 to 7 inches of rain falling over a very short period of time. 5 1/2 inches were measured in just 90 minutes. Numerous homes and roads flooded, with a few water rescues becoming necessary. Numerous homes on Cherry Avenue were flooded. 3 mobile homes were flooded on Warren Street. The Fish House Restaurant was also flooded. Several roads suffered damage.
- January 2, 2017 ($1,200,000 in damages in Washington County): Significant flash flooding occurred near the Leroy area of Washington County. The flash flooding was the result of over 6 inches of rain falling over just a couple of hours of time, with most of the rainfall occurring in just 90 minutes. Roads were washed out near Highway 43, including Lower Ferry Road, Sullivan Lane, Powell Cutoff Road, and Upper Ferry Roadway. The washouts also exposed and damaged a water main and natural gas line. Over a foot of water was reported on Luke River Road.
- June 22, 2017 ($460,000 in damages in Washington County): Flash flooding caused significant damage to County Road 36 and County Road 11 west of Millry.
- April 14, 2018 ($1,200,000 in damages in Clarke County): Five to nine inches of rain fell in a short duration along and east and west of the Highway 43 corridor from Thomasville to southwest of Grove Hill. At the height of the flash flood event, Highway 43 near Bassett Creek was covered in 6 feet of water. Several other roads in this area were also submerged in several feet of water, including Butler Drive in Thomasville. Multiple vehicles were submerged across the area. Approximately 20 water rescues had to be made from houses and residences with rescues reported 5 miles southwest of Grove Hill up toward Fulton. 25 homes experienced significant flooding. The flash flooding also resulted in significant infrastructure damage to roads, water lines, and drainage. The Clarke County Emergency Management Director reported 9.2 inches of rainfall.

Table 3.12 provides historical occurrence data for flooding for the period covering 2000-2020.

Table 3.12 Division A- ATRC Planning Area Flooding Occurrences 2014-2019

Unincorporated Clarke County							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Countywide	Clarke	3/3/2001	Flash Flood	0	0	$365,000.00	$0.00
Barlow Bend	Clarke	7/2/2003	Flash Flood	0	0	$0.00	$0.00
Southwest Portion	Clarke	3/31/2005	Flash Flood	0	0	$0.00	$0.00
Southwest Portion	Clarke	7/6/2005	Flash Flood	0	0	$0.00	$0.00
Countywide	Clarke	7/10/2005	Flash Flood	0	0	$0.00	$0.00
Countywide	Clarke	8/29/2005	Flash Flood	0	0	$0.00	$0.00
West Bend	Clarke	9/23/2009	Flash Flood	0	0	$5,000.00	$0.00
Salitpa	Clarke	12/12/2009	Flash Flood	0	0	$0.00	$0.00
Morvin	Clarke	1/30/2013	Flash Flood	0	0	$15,000.00	$0.00
Scyrene	Clarke	2/11/2013	Flash Flood	0	0	$25,000.00	$0.00
Bashi	Clarke	6/22/2017	Flash Flood	0	0	$0.00	$0.00
West Bend	Clarke	6/23/2017	Flash Flood	0	0	$50,000	$0.00
Tallahatta Springs	Clarke	4/14/2018	Flash Flood	0	1	$1,200,000.00	$0.00
Morvin	Clarke	9/5/2018	Flash Flood	0	0	$25,000	$0.00
Atkinson	Clarke	9/6/2018	Flash Flood	0	0	$0.00	$0.00
Whatley	Clarke	12/27/2018	Flash Flood	0	0	$100,000	$0.00
Atkinson	Clarke	1/23/2019	Flash Flood	0	0	$0.00	$0.00
Tallahatta Springs (unincorporated)	Clarke	1/23/2019	Flash Flood	0	0	$50,000	$0.00
Rural	Clarke	1/23/2019	Flash Flood	0	0	$25,000	$0.00
Woods Bluff	Clarke	2/7/2020	Flood	0	0	$250,000	$0.00
			Totals	**0**	**0**	**$2,110,000.00**	**$0.00**
Town of Coffeeville (Clarke County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Coffeeville	Clarke	4/11/2008	Flash Flood	0	0	$0.00	$0.00
Coffeeville	Clarke	1/23/2019	Flash Flood	0	0	$0.00	$0.00

			Totals	**0**	**0**	**$0.00**	**$0.00**
Town of Fulton (Clarke County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Fulton	Clarke	4/12/2009	Flash Flood	0	0	$50,000.00	$0.00
Fulton	Clarke	6/23/2017	Flash Flood	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$50,000.00**	**$0.00**
Town of Grove Hill (Clarke County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Grove Hill	Clarke	9/5/2018	Flash Flood	0	0	$0.00	$0.00
Grove Hill	Clarke	9/5/2018	Flash Flood	0	0	$10,000.00	$0.00
			Totals	**0**	**0**	**$10,000.00**	**$0.00**
City of Jackson (Clarke County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Jackson	Clarke	4/3/2001	Flash Flood	0	0	$3,000.00	$0.00
Jackson	Clarke	10/22/2007	Flash Flood	0	0	$0.00	$0.00
Jackson	Clarke	12/12/2009	Flash Flood	0	0	$0.00	$0.00
Jackson	Clarke	9/5/2018	Flash Flood	0	0	$25,000.00	$0.00
Jackson	Clarke	9/5/2018	Flash Flood	0	0	$0.00	$0.00
Jackson	Clarke	1/2/2017	Flash Flood	0	0	$750,000.00	$0.00
			Totals	**0**	**0**	**$778,000.00**	**$0.00**
City of Thomasville (Clarke County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Thomasville	Clarke	2/11/2013	Flash Flood	0	0	$10,000.00	$0.00
Thomasville	Clarke	7/23/2013	Flash Flood	0	0	$0.00	$0.00
Thomasville	Clarke	4/17/2015	Flood	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$10,000.00**	**$0.00**
Unincorporated Conecuh County							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Countywide	Conecuh	3/3/2001	Flash Flood	0	0	$0.00	$0.00
Countywide	Conecuh	7/10/2005	Flash Flood	0	0	$0.00	$0.00
Countywide	Conecuh	8/29/2005	Flash Flood	0	0	$0.00	$0.00

Brownville	Conecuh	5/14/2014	Flash Flood	0	0	$0.00	$0.00
Brooks	Conecuh	5/14/2014	Flash Flood	0	0	$100,000.00	$0.00
			Totals	**0**	**0**	**$100,000.00**	**$0.00**
City of Evergreen (Conecuh County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Evergreen	Conecuh	7/20/2002	Flash Flood	0	0	$0.00	$0.00
Evergreen	Conecuh	7/16/2003	Flash Flood	0	0	$0.00	$0.00
Evergreen	Conecuh	4/4/2007	Flash Flood	0	0	$0.00	$0.00
Evergreen	Conecuh	12/14/2009	Flash Flood	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$0.00**	**$0.00**
Unincorporated Monroe County							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Countywide	Monroe	3/3/2001	Flash Flood	0	0	$15,000.00	$0.00
Uriah	Monroe	7/2/2003	Flash Flood	0	0	$0.00	$0.00
Uriah	Monroe	7/3/2003	Flash Flood	0	0	$0.00	$0.00
West Portion	Monroe	7/15/2004	Flash Flood	0	0	$0.00	$0.00
South Portion	Monroe	9/16/2004	Flash Flood	0	0	$0.00	$0.00
South Portion	Monroe	7/6/2005	Flash Flood	0	0	$0.00	$0.00
Countywide	Monroe	8/29/2005	Flash Flood	0	0	$0.00	$0.00
Uriah	Monroe	11/15/2006	Flash Flood	0	0	$0.00	$0.00
Claiborne	Monroe	10/23/2007	Flash Flood	0	0	$0.00	$0.00
Deer	Monroe	12/24/2015	Flood	0	0	$275,000.00	$0.00
Hybart	Monroe	2/9/2020	Flood	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$290,000.00**	**$0.00**
Town of Excel (Monroe County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Excel	Monroe	4/7/2014	Flash Flood	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$0.00**	**$0.00**
Town of Frisco City (Monroe County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Frisco City	Monroe	7/22/2003	Flash Flood	0	0	$0.00	$0.00

Frisco City	Monroe	4/7/2014	Flash Flood	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$0.00**	**$0.00**
City of Monroeville (Monroe County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Monroeville	Monroe	2/11/2013	Flood	0	0	$25,000.00	$0.00
West Monroeville	Monroe	1/2/2017	Flash Flood	0	0	$250,000.00	$0.00
			Totals	**0**	**0**	**$275,000.00**	**$0.00**
Town of Vredenburgh (Monroe County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Vredenburgh	Monroe	8/2/2010	Flash Flood	0	0	$0.00	$0
			Totals	**0**	**0**	**$0.00**	**$0.00**
Unincorporated Washington County							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Countywide	Washington	3/3/2001	Flash Flood	0	0	$30,000.00	$0.00
North Portion	Washington	3/31/2005	Flash Flood	0	0	$0.00	$0.00
Countywide	Washington	7/6/2005	Flash Flood	0	0	$0.00	$0.00
Countywide	Washington	8/29/2005	Flash Flood	0	0	$0.00	$0.00
Yellow Pine	Washington	10/22/2007	Flash Flood	0	0	$0.00	$0.00
Copeland	Washington	4/18/2008	Flash Flood	0	0	$0.00	$0.00
Escatawpa	Washington	9/1/2008	Flash Flood	0	0	$4,000.00	$0.00
Leroy	Washington	1/2/2017	Flash Flood	0	0	$1,200,000.00	$0.00
Copeland	Washington	6/22/2017	Flash Flood	0	0	$460,000	$0.00
Jordan	Washington	6/22/2017	Flash Flood	0	0	$25,000	$0.00
Fruitdale	Washington	4/14/2018	Flash Flood	0	0	$25,000	$0.00
Healing Springs	Washington	12/28/2018	Flash Flood	0	0	$0.00	$0.00
Escatawpa	Washington	1/23/2019	Flash Flood	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$1,744,000.00**	**$0.00**
Town of McIntosh (Washington County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
McIntosh	Washington	3/27/2009	Flash Flood	0	0	$0.00	$0.00

McIntosh	Washington	3/22/2012	Flash Flood	0	0	$0.00	$0.00
McIntosh	Washington	6/22/2017	Flash Flood	0	0	$15,000.00	$0.00
			Totals	**0**	**0**	**$15,000.00**	**$0.00**

Source: NOAA Storm Events Database

Historical occurrences prior to 2000, can be accessed through the NOAA Storm Events Database site at https://www.ncdc.noaa.gov/stormevents/.

Probability of Future Events

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 Figures 3.7 through 3.26. These maps provide the areas susceptible to a one-percent annual chance flood (100-year floodplain).

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 flood events is considered to be High.

HIGH WINDS (HURRICANES, TORNADOES, AND SEVERE THUNDERSTORM: HIGH WINDS/HAIL/LIGHTINING)

The ATRC Division A planning area 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

The planning area 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 3.13 gives a basic description of the scale.

Table 3.13 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. The ATRC planning is vulnerable to the effects of these storms. In general though, these storms have historically weakened to weak hurricanes or tropical storms before affecting the planning 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 the planning area, 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 A felt the effects of Ivan also suffering damage, due predominantly to high winds.
- In August 2005 Division A felt the after effects of Hurricane Katrina as trees and power lines were damaged from strong storms.

Some counties within AEMA Division A have been included in federal disaster declarations for hurricanes Frederick (1979), Opal (1995), Ivan (2004), Dennis (2005), Katrina (2005), Isaac (2012), and Nate (2017).

There are numerous tropical events listed in the NOAA Storm Events Database for the 2000-2019 timeframe (Table 3.14).

Table 3.14 ATRC Planning Area Tropical Weather Occurrences 2000-2019

Clarke County						
County	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Clarke	9/13/2004	Hurricane	0	0	--	--
Clarke	6/10/2005	Tropical Storm	0	0	--	--
Clarke	7/5/2005	Tropical Storm	0	0	--	--
Clarke	7/9/2005	Hurricane	0	0	--	--
Clarke	10/7/2017	Tropical Storm	0	0	--	--
Clarke	9/15/2020	Tropical Storm	0	0	--	--
		Totals	0	0	--	--
Conecuh County						
Conecuh	8/6/2001	Tropical Storm	0	0	--	--
Conecuh	9/13/2004	Hurricane	0	0	--	--
Conecuh	6/10/2005	Tropical Storm	0	0	--	--
Conecuh	7/9/2005	Hurricane	0	0	--	--
Conecuh	9/15/2020	Tropical Storm	0	0	--	--
		Totals	0	0	--	--
Monroe County						
Monroe	8/6/2001	Tropical Storm	0	0	--	--
Monroe	9/13/2004	Hurricane	0	0	--	--
Monroe	6/10/2005	Tropical Storm	0	0	--	--
Monroe	7/9/2005	Hurricane	0	0	--	--
Monroe	10/7/2017	Tropical Storm	0	0	--	--

Monroe	9/15/2020	Tropical Storm	0	0	--	--
		Totals	0	0	--	--
Washington County						
Washington	9/13/2004	Hurricane	0	0	--	--
Washington	6/10/2005	Tropical Storm	0	0	--	--
Washington	7/5/2005	Tropical Storm	0	0	--	--
Washington	8/27/2005	Hurricane	0	0	--	--
Washington	10/7/2017	Tropical Storm	0	0	--	--
		Totals	0	0	--	--

Source: NOAA Storm Events Database

Probability of Future Events

The probability of future hurricane events directly affecting the planning area is Moderate. This applies to all jurisdictions in the planning area. As discussed earlier, Division A is more susceptible to high winds and spin off tornadoes associated with wakening tropical systems as they move inland.

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 3.15 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 Fajita 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 3.15 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 the planning area based on Fujita Scale classifications is provided in Table 3.16.

Table 3.16 Historic Occurrences by Scale Classification*

Tornado Scale Classification	Percentage of Historical Occurrences
F0/EF0	35%
F1/EF1	34%
F2/EF2	27%
F3/EF3	4%
F4/EF4	-%
F5/EF5	-%

Since 1950
Source: National Weather Service

It can be seen that the Division has experienced tornadic events primarily classified as F0, F1, and F2. While stronger EF3, EF4, and EF5 events are a very small percentage of overall occurrences, they have occurred and are possible in the area.

Locations Affected
All the planning area is susceptible to tornadoes. Tornadoes have affected locations throughout the planning area. 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 NOAA and NWS records, 113 tornadoes have occurred in the planning region since 1819. These storms have resulted in 59 fatalities, 255 injuries, and more than $18 million in damages.

Table 3.17 is a summary of the annual tornado activity in the planning area since 1950.

Table 3.17 Annual Tornado Summary- ATRC Planning Area										
Year	**Tornadoes**	**Fatalities**	**Injuries**	**Damages ($)**	**FO/EFO**	**F1/EF1**	**F2/EF2**	**F3/EF3**	**F4/EF4**	**F5/EF5**
1950	0	0	0	$25,000.00						
1951	0	0	0	-						
1952	0	0	0	-						
1953	1	0	1	-				1		
1954	0	0	0	-						
1955	0	0	0	-						
1956	1	0	0	$2,750.00			1			
1957	6	0	6	$782,500.00		3	3			
1958	0	0	0	-						
1959	0	0	0	-						
1960	2	0	0	$25,000.00			2			
1961	0	0	0	-						
1962	0	0	0	-						
1963	1	0	0	$2,500.00			1			
1964	1	0	0	$2,500.00		1				
1965	0	0	0	-						
1966	0	0	0	-						
1967	1	0	0	$250,000.00			1			
1968	0	0	0	-						
1969	0	0	0	$2,500.00						
1970	3	0	0	$25,000.00	1	1	1			
1971	5	0	1	$575,000.00		1	1	2	1	
1972	1	0	0	$2,500.00			1			
1973	1	0	2	$250,000.00		1				
1974	1	0	0	$25,000.00	1					
1975	1	0	0	-	1					
1976	1	0	0	$25,000.00			1			
1977	0	0	0	-						
1978	1	0	30	$2,500,000.00				1		
1979	4	0	2	$277,500.00	1	2	1			
1980	2	0	0	$27,500.00		2				
1981	0	0	0	-						
1982	1	0	0	$25,000.00		1				
1983	3	0	0	$277,500.00	1	1	1			
1984	3	0	0	$500,000.00			2	1		
1985	3	0	4	$502,500.00		1	2			
1986	0	0	0	-						
1987	0	0	0	-						
1988	1	0	0	-			1			

Table 3.17 Annual Tornado Summary- ATRC Planning Area (continued)										
Year	**Tornadoes**	**Fatalities**	**Injuries**	**Damages ($)**	**FO/EFO**	**F1/EF1**	**F2/EF2**	**F3/EF3**	**F4/EF4**	**F5/EF5**
1989	0	0	0	-						
1990	0	0	0	-						
1991	2	0	0	-	1	1				
1992	1	0	0	$25,000.00		1				
1993	0	0	0	-						
1994	0	0	0	-						
1995	1	0	0	$10,000.00	1					
1996	8	0	15	$1,312,000.00	4	3	1			
1997	0	0	0	-						
1998	0		0	-						
1999	1	0	0	$100,000.00	1					
2000	0	0	0	-						
2001	1	0	0	$15,000.00	1					
2002	9	0	0	$81,000.00	9					
2003	1	0	0	$8,000.00	1					
2004	3	0	0	$212,000.00	2	1				
2005	4	0	0	$310,000.00	4					
2006	5	1	0	$1,300,000.00	3	2				
2007	2	0	0	$900,000.00		2				
2008	1	0	0	$25,000.00	1					
2009	1	0	0	$2,500,000.00		1				
2010	2	0	0	-	2					
2011	11	3	4	$4,117,000.00	1	4	5	1		
2012	2	0	0	-		1	1			
2013	3	0	0	$70,000.00		3				
2014	3	0	0	$255,000.00		3				
2015	1	0	0	$10,000.00	1					
2016	1	0	0	$750,000.00			1			
2017	1	0	0	$25,000.00	1					
2018	1	0	0	$10,000.00	1					
2019	3	0	0	$60,000.00		3				

Source: National Weather Service Tornado Database

Table 3.18 provides previous occurrences of tornadoes by jurisdiction since 2000 when the last county-level mitigation plans were compiled.

Table 3.18 Tornado Occurrences Since 2000

Clarke County Unincorporated							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Bashi	Clarke	11/5/2002	F0	0	0	$8,000.00	$0.00
Walker Springs	Clarke	12/24/2002	F0	0	0	$8,000.00	$0.00
Chilton	Clarke	11/24/2004	F1	0	0	$200,000.00	$0.00
Walker Springs	Clarke	7/6/2005	F0	0	0	$15,000.00	$0.00
Tallahatta	Clarke	5/10/2006	F0	0	0	$15,000.00	$0.00
Carlton	Clarke	4/15/2011	EF1	0	0	$102,000.00	$3,000,000.00
Gainestown	Clarke	4/15/2011	EF2	0	0	$145,000.00	$0.00
Tallahatta Springs	Clarke	11/16/2011	EF0	0	0	$5,000.00	$0.00
Winn	Clarke	12/25/2012	EF2	0	0	$0.00	$0.00
Salitpa	Clarke	2/10/2013	EF1	0	0	$30,000.00	$0.00
Winn	Clarke	2/10/2013	EF1	0	0	$10,000.00	$0.00
Allen	Clarke	4/28/2014	EF1	0	0	$5,000.00	$0.00
Salitpa	Clarke	11/17/2014	EF1	0	0	$150,000.00	$0.00
Whatley	Clarke	6/21/2017	EF0	0	0	$25,000.00	$0.00
Rural	Clarke	10/25/2019	EF1	0	0	$0.00	$0.00
West Bend	Clarke	4/12/2020	EF1	0	0	$0.00	$0.00
		Totals		**0**	**0**	**$718,000.00**	##########
Conecuh County Unincorporated							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Lenox	Conecuh	11/5/2002	F0	0	0	$8,000.00	$0.00
Lenox	Conecuh	2/21/2003	F0	0	0	$8,000.00	$0.00
Owassa	Conecuh	10/19/2004	F0	0	0	$10,000.00	$0.00
Belleville	Conecuh	1/13/2006	F1	1	0	$500,000.00	$0.00
Paul	Conecuh	5/15/2008	EF0	0	0	$25,000.00	$0.00
Brooklyn	Conecuh	4/15/2011	EF1	0	0	$615,000.00	$0.00
Brooklyn	Conecuh	2/15/2016	EF2	0	0	$750,000.00	$0.00
		Totals		**1**	**0**	**$1,916,000.00**	**$0.00**
Town of Castleberry (Conecuh County)							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Castleberry	Conecuh	9/15/2004	F0	0	0	$2,000.00	$0.00
Castleberry	Conecuh	4/14/2007	EF1	0	0	$150,000.00	$0.00
		Totals		**2**	**0**	**$152,000.00**	**$0.00**
City of Evergreen (Conecuh County)							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Evergreen	Conecuh	11/24/2001	F0	0	0	$15,000.00	$0.00
Evergreen	Conecuh	2/2/2006	F0	0	0	$10,000.00	$0.00
		Totals		**4**	**0**	**$25,000.00**	**$0.00**

Monroe County Unincorporated							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Perdue Hill	Monroe	12/24/2002	F0	0	0	$8,000.00	$0.00
Monroe County Airprot	Monroe	9/26/2005	F0	0	0	$200,000.00	$0.00
Tunnell Springs	Monroe	2/2/2006	F0	0	0	$25,000.00	$0.00
Tunnell Springs	Monroe	4/15/2011	EF2	0	0	$200,000.00	$0.00
Turnbull	Monroe	4/15/2011	EF2	0	0	$300,000.00	$0.00
Turnbull	Monroe	4/15/2011	EF2	0	0	$400,000.00	$0.00
Turnbull	Monroe	1/3/2015	EF0	0	0	$10,000.00	$0.00
		Totals		**6**	**0**	**$1,143,000.00**	**$0.00**
Town of Beatrice (Monroe County)							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Beatrice	Monroe	4/15/2011	EF1	0	0	$0.00	$0.00
		Totals		**10**	**0**	**$0.00**	**$0.00**
Town of Excel (Monroevile)							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Excel	Monroe	9/25/2005	F0	0	0	$80,000.00	$0.00
			Totals	**0**	**0**	**$80,000.00**	**$0.00**
City of Monroeville (Monroe County)							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Monroeville	Monroe	12/19/2002	F0	0	0	$10,000.00	$0.00
			Totals	0	0	$10,000.00	$0.00
Town of Vredenburgh (Monroe County)							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Vredenburgh	Monroe	4/14/2007	EF1	0	0	$750,000.00	$0.00
			Totals	**0**	**0**	**$750,000.00**	**$0.00**
Washington County Unincorporated							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Malcolm	Washington	12/19/2002	F0	0	0	$8,000.00	$0.00
Fruitdale	Washington	12/23/2002	F0	0	0	$8,000.00	$0.00
Leroy	Washington	12/24/2002	F0	0	0	$15,000.00	$0.00
Leroy	Washington	7/6/2005	F0	0	0	$15,000.00	$0.00
Jordan	Washington	11/15/2006	F1	0	0	$750,000.00	$0.00
McIntosh	Washington	1/10/2009	EF1	0	0	$2,500,000.00	$0.00
Yellow Pine	Washington	3/10/2010	EF0	0	0	$0.00	$0.00
Malcolm	Washington	4/8/2010	EF0	0	0	$0.00	$0.00
Yellow Pine	Washington	4/15/2011	EF1	0	0	$300,000.00	$0.00
Yarbo	Washington	4/15/2011	EF2	0	1	$50,000.00	$0.00
Escatawpa	Washington	4/15/2011	EF3	3	3	$2,000,000.00	$0.00

Deer Park	Washington	12/25/2012	EF1	0	0	$0.00	$0.00
Bigbee	Washington	2/10/2013	EF1	0	0	$30,000.00	$0.00
Yellow Pine	Washington	2/10/2018	EF0	0	0	$10,000.00	$0.00
Tibbie	Washington	3/3/2019	EF1	0	0	$10,000.00	$0.00
Sims Chapel	Washington	3/3/2019	EF1	0	0	$50,000.00	$0.00
			Totals	**0**	**0**	**$5,746,000.00**	**$0.00**
Town of Chatom (Washington County)							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Chatom	Washington	11/17/2014	EF1	0	0	$ 100,000.00	$0.00
			Totals	**0**	**0**	**$100,000.00**	**$0.00**
Town of Millry (Washington County)							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Millry	Washington	12/24/2002	F0	0	0	$ 8,000.00	$0.00
			Totals	**0**	**0**	**$8,000.00**	**$0.00**

Source: NOAA Storm Events Database

Probability of Future Events

Since 1950, AEMA Division A has experienced tornadoes almost every year. Based on historic data, the annual probability for tornadoes is High throughout the division.

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)". 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 1950-2020, the number of reported occurrences of severe thunderstorm events is close to four hundred in the planning area. These severe weather events have occurred in all four counties of the planning area. Tables 3.19-3.21 provide past occurrence data for the 2000-2020 timeframe for severe thunderstorms, hail, and lightning.

Table 3.19 Division A Severe Thunderstorm Occurrences 2000-2020

Clarke County Unincorporated							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Dickinson	4/3/2000	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Choctaw Bluff	4/3/2000	Thunderstorm Wind	60 kts. E	0	0	$5,000.00	$0.00
Scyrene	11/8/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Suggsville	11/24/2001	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Barlow Bend	7/20/2002	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00
Carlton	12/24/2002	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Gainestown	5/3/2003	Thunderstorm Wind	55 kts. EG	0	0	$30,000.00	$0.00
Salipta	4/14/2007	Thunderstorm Wind	50 kts. EG	0	0	$40,000.00	$0.00
Nettleboro	7/23/2007	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Whatley	4/30/2005	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Walker Springs	1/31/2008	Thunderstorm Wind	50 kts. EG	0	0	$12,000.00	$0.00
Chilton	10/9/2009	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Rural	10/9/2009	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Rural	10/9/2009	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Winn	1/24/2010	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Salipta	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Whatley	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Whatley	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Alma	8/22/2011	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
McEntyre	1/30/2013	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Walker Springs	1/30/2013	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Talahatta	7/18/2013	Thunderstorm Wind	50 kts. EG	0	0	$40,000.00	$0.00
Chilton	4/28/2014	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Dickinson	6/10/2014	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
West Bend	6/13/2015	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Choctaw Bluff	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Bashi	3/31/2016	Thunderstorm Wind	61 kts. EG	0	0	$30,000.00	$0.00
Nettleboro	5/20/2016	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Dickinson	6/17/2016	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Alma	1/2/2017	Thunderstorm Wind	61 kts. EG	0	0	$20,000.00	$0.00
Morvin	1/21/2017	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Glendon	1/22/2017	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Morvin	3/1/2017	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Whatley	4/3/2017	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Manila	4/3/2017	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Gainestown	4/3/2017	Thunderstorm Wind	61 kts. EG	0	0	$10,000.00	$0.00
Dickinson	4/5/2017	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Whatley	6/16/2017	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Opine	6/10/2018	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Alma	6/10/2018	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00

Gainestown	3/3/2019	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Tallahatta Springs	10/5/2019	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Opine	10/5/2019	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Winn	11/27/2019	Thunderstorm Wind	61 kts. EG	0	0	$0.00	$0.00
Gosport	11/27/2019	Thunderstorm Wind	87 kts. EG	0	0	$0.00	$0.00
West Bend	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Salipta	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Walker Springs	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Barlow Bend	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Tallahatta Springs	2/6/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Peacock	2/10/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Allen	2/10/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Chilton	3/4/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Chilton	4/23/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Chilton	4/23/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Opine	5/27/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$331,000.00**	**$0.00**
Town of Coffeeville (Clarke County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Coffeeville	1/24/2010	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Coffeeville	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Coffeeville	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Coffeeville	5/6/2012	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Coffeeville	6/11/2012	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Coffeeville	7/3/2012	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Coffeeville	4/28/2014	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Coffeeville	7/9/2015	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Coffeeville	7/21/2015	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Coffeeville	12/28/2015	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Coffeeville	2/23/2016	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Coffeeville	2/23/2016	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Coffeeville	6/17/2016	Thunderstorm Wind	61 kts. EG	0	0	$10,000.00	$0.00
Coffeeville	7/5/2016	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Coffeeville	4/18/2019	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Coffeeville	6/27/2019	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Coffeeville	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Coffeeville	4/23/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Coffeeville	5/17/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$47,000.00**	**$0.00**
Town of Fulton (Clarke County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Fulton	11/9/2000	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Fulton	7/15/2002	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00

Fulton	9/6/2002	Thunderstorm Wind	50 kts. E	0	0	$4,000.00	$0.00
Fulton	2/22/2003	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Fulton	4/12/2009	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Fulton	6/4/2009	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Fulton	1/24/2010	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Fulton	10/24/2010	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Fulton	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$57,000.00**	**$0.00**
Town of Grove Hill (Clarke County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Grove Hill	12/16/2000	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00
Grove Hill	10/20/2002	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Grove Hill	12/23/2002	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Grove Hill	3/18/2003	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Grove Hill	4/7/2004	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Grove Hill	3/4/2008	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Grove Hill	5/3/2009	Thunderstorm Wind	52 kts. EG	0	0	$15,000.00	$0.00
Grove Hill	7/30/2009	Thunderstorm Wind	61 kts. EG	0	0	$25,000.00	$0.00
Grove Hill	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Grove Hill	7/3/2012	Thunderstorm Wind	61 kts. EG	0	0	$8,000.00	$0.00
Grove Hill	7/23/2013	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Grove Hill	7/23/2013	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Grove Hill	7/23/2013	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Grove Hill	9/24/2013	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Grove Hill	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Grove Hill	6/17/2016	Thunderstorm Wind	61 kts. EG	0	0	$10,000.00	$0.00
Grove Hill	6/28/2018	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Grove Hill	2/10/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$138,000.00**	**$0.00**
City of Jackson (Clarke County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Jackson	7/19/2000	Thunderstorm Wind	60 kts. E	0	0	$8,000.00	$0.00
Jackson	7/20/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Jackson	8/19/2001	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Jackson	10/13/2001	Thunderstorm Wind	50 kts. E	0	0	$10,000.00	$0.00
Jackson	10/13/2001	Thunderstorm Wind	60 kts. E	0	0	$15,000.00	$0.00
Jackson	5/3/2003	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Jackson	7/22/2003	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Jackson	6/27/2004	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Jackson	5/27/2009	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Jackson	7/30/2009	Thunderstorm Wind	61 kts. EG	0	0	$25,000.00	$0.00
Jackson	10/24/2010	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Jackson	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00

Jackson	4/15/2011	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Jackson	2/24/2012	Thunderstorm Wind	70 kts. EG	0	0	$20,000.00	$0.00
Jackson	2/24/2012	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Jackson	7/3/2012	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Jackson	7/3/2012	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Jackson	7/23/2013	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Jackson	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Jackson	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Jackson	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Jackson	2/23/2016	Thunderstorm Wind	52 kts. EG	0	0	$25,000.00	$0.00
Jackson	1/2/2017	Thunderstorm Wind	52 kts. EG	0	0	$15,000.00	$0.00
Jackson	1/2/2017	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Jackson	6/10/2018	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
			Totals	**0**	**0**	**$205,000.00**	**$0.00**
City of Thomasville (Clarke County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Thomasville	1/19/2001	Thunderstorm Wind	60 kts. E	0	0	$15,000.00	$0.00
Thomasville	6/14/2001	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Thomasville	6/14/2001	Thunderstorm Wind	60 kts. E	0	0	$15,000.00	$0.00
Thomasville	7/26/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Thomasville	7/27/2000	Thunderstorm Wind	60 kts. E	0	0	$7,000.00	$0.00
Thomasville	7/16/2004	Thunderstorm Wind	50 kts. EG	0	0	$8,000.00	$0.00
Thomasville	4/30/2005	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Thomasville	1/31/2008	Thunderstorm Wind	50 kts. EG	0	0	$75,000.00	$0.00
Thomasville	4/4/2008	Thunderstorm Wind	50 kts. EG	0	0	$12,000.00	$0.00
Thomasville	3/26/2009	Thunderstorm Wind	52 kts. EG	0	0	$15,000.00	$0.00
Thomasville	4/12/2009	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Thomasville	10/9/2009	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	10/24/2010	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Thomasville	5/26/2011	Thunderstorm Wind	60 kts. EG	0	0	$5,000.00	$0.00
Thomasville	8/22/2011	Thunderstorm Wind	52 kts. EG	0	0	$7,000.00	$0.00
Thomasville	5/29/2012	Thunderstorm Wind	61 kts. EG	0	0	$10,000.00	$0.00
Thomasville	6/11/2012	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	2/11/2013	Thunderstorm Wind	61 kts. EG	0	0	$10,000.00	$0.00
Thomasville	7/23/2013	Thunderstorm Wind	52 kts. EG	0	0	$4,000.00	$0.00
Thomasville	5/25/2014	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	6/10/2014	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Thomasville	10/13/2014	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Thomasville	7/4/2015	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Thomasville	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Thomasville	3/31/2016	Thunderstorm Wind	61 kts. EG	0	0	$30,000.00	$0.00
Thomasville	3/31/2016	Thunderstorm Wind	61 kts. EG	0	0	$30,000.00	$0.00
Thomasville	6/17/2016	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00

Thomasville	4/3/2017	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Thomasville	6/28/2018	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Thomasville	12/27/2018	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Thomasville	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	3/4/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	3/4/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	3/31/2020	Thunderstorm Wind	61 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$320,000.00**	**$0.00**
Conecuh County Unincorporated							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Lenox	3/19/2000	Thunderstorm Wind	60 kts. E	0	0	$10,000.00	$0.00
Bermuda	8/10/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Nichburg	2/27/2001	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Belleville	11/24/2001	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Owassa	10/29/2002	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Paul	6/27/2004	Thunderstorm Wind	50 kts. EG	0	0	$8,000.00	$0.00
Belleville	7/16/2004	Thunderstorm Wind	50 kts. EG	0	0	$8,000.00	$0.00
Lenox	1/17/2006	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Range	2/17/2008	Thunderstorm Wind	50 kts. EG	0	0	$12,000.00	$0.00
Lenox	6/11/2011	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Lenox	1/21/2016	Thunderstorm Wind	61 kts. EG	0	0	$30,000.00	$0.00
Lenox	6/26/2016	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
China	1/21/2017	Thunderstorm Wind	61 kts. EG	0	0	$20,000.00	$0.00
Bowles	1/21/2017	Thunderstorm Wind	61 kts. EG	0	0	$8,000.00	$0.00
Lenox	4/3/2017	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Brownville	6/2/2018	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Owassa	2/12/2019	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Bowles	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Deer Range	4/12/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Owassa	4/19/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$165,000.00**	**$0.00**
Town of Castleberry (Conecuh County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Castleberry	1/10/2000	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Castleberry	3/19/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Castleberry	7/11/2000	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Castleberry	3/3/2001	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Castleberry	10/13/2001	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Castleberry	4/29/2002	Thunderstorm Wind	50 kts. E	0	0	$7,000.00	$0.00
Castleberry	6/14/2002	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00
Castleberry	7/23/2002	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00

Castleberry	12/24/2002	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Castleberry	4/14/2007	Thunderstorm Wind	70 kts. EG	0	0	$250,000.00	$0.00
Castleberry	4/7/2014	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Castleberry	3/24/2016	Thunderstorm Wind	78 kts. EG	0	0	$10,000.00	$0.00
			Totals	**0**	**0**	**$323,000.00**	**$0.00**
City of Evergreen (Conecuh County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Evergreen	8/19/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Evergreen	3/12/2001	Thunderstorm Wind	90 kts. E	0	1	$1,300,000.00	$0.00
Evergreen	5/27/2001	Thunderstorm Wind	50 kts. E	0	0	$3,000.00	$0.00
Evergreen	10/13/2001	Thunderstorm Wind	50 kts. E	0	0	$15,000.00	$0.00
Evergreen	7/6/2002	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00
Evergreen	7/20/2002	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00
Evergreen	5/3/2003	Thunderstorm Wind	55 kts. EG	0	0	$25,000.00	$0.00
Evergreen	7/16/2003	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Evergreen	6/12/2007	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Evergreen	1/31/2008	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Evergreen	5/4/2009	Thunderstorm Wind	51 kts. MG	0	0	$0.00	$0.00
Evergreen	6/16/2011	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Evergreen	6/21/2011	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Evergreen	6/14/2012	Thunderstorm Wind	51 kts. MG	0	0	$0.00	$0.00
Evergreen	6/17/2013	Thunderstorm Wind	56 kts. EG	0	0	$5,000.00	$0.00
Evergreen	6/28/2013	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Evergreen	4/7/2014	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Evergreen	7/21/2015	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Evergreen	7/10/2016	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Evergreen	4/3/2017	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Evergreen	4/3/2017	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Evergreen	4/3/2017	Thunderstorm Wind	61 kts. EG	0	0	$15,000.00	$0.00
Evergreen	6/2/2018	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Evergreen	6/28/2018	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Evergreen	7/12/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$1,452,000.00**	**$0.00**
Town of Repton (Conecuh County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Repton	12/16/2000	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Repton	10/13/2001	Thunderstorm Wind	60 kts. E	0	0	$10,000.00	$0.00
Repton	11/24/2001	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Repton	8/25/2002	Thunderstorm Wind	50 kts. E	0	0	$10,000.00	$0.00
Repton	1/21/2016	Thunderstorm Wind	61 kts. EG	0	0	$10,000.00	$0.00
Repton	4/18/2019	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
			Totals	**0**	**0**	**$47,000.00**	**$0.00**
Monroe County Unincorporated							

Location	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
Peterman	2/27/2001	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Uriah	3/12/2001	Thunderstorm Wind	85 kts. E	0	0	$100,000.00	$0.00
Goodway	10/13/2001	Thunderstorm Wind	50 kts. E	0	0	$20,000.00	$0.00
Claiborne	10/13/2001	Thunderstorm Wind	60 kts. E	0	0	$15,000.00	$0.00
Uriah	11/24/2001	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Tunnell Springs	12/24/2002	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Peterman	6/19/2003	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Claiborne	6/28/2004	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Perdue Hill	7/16/2004	Thunderstorm Wind	50 kts. EG	0	0	$8,000.00	$0.00
Tunnell Springs	10/19/2004	Thunderstorm Wind	50 kts. EG	0	0	$7,000.00	$0.00
Uriah	4/22/2005	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Megargel	5/9/2006	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Hybart	1/31/2008	Thunderstorm Wind	50 kts. EG	0	0	$20,000.00	$0.00
Uriah	5/15/2008	Thunderstorm Wind	50 kts. EG	0	0	$40,000.00	$0.00
Burnt Corn	6/23/2009	Thunderstorm Wind	52 kts. EG	0	0	$15,000.00	$0.00
Peterman	1/24/2010	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Ribver Ridge	8/2/2010	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Uriah	6/5/2011	Thunderstorm Wind	61 kts. EG	0	0	$20,000.00	$0.00
Uriah	6/7/2011	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Mexia	6/10/2011	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Uriah	4/7/2014	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Keith	4/28/2014	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Tunnell Springs	1/3/2015	Thunderstorm Wind	61 kts. EG	0	0	$2,000.00	$0.00
Mexboro	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Hybart	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Uriah	3/31/2016	Thunderstorm Wind	60 kts. EG	0	0	$5,000.00	$0.00
Tunnell Springs	1/2/2017	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Nadawah	1/22/2017	Thunderstorm Wind	70 kts. EG	0	0	$45,000.00	$0.00
Uriah	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Eliska	4/12/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Uriah	4/12/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Tunnell Springs	4/12/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Allene	4/19/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$399,000.00**	**$0.00**
Town of Beatrice (Monroe County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Beatrice	6/1/2010	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
			Totals	**0**	**0**	**$10,000.00**	**$0.00**
Town of Excel (Monroe County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Excel	8/3/2003	Thunderstorm Wind	50 kts. EG	0	0	$20,000.00	$0.00
Excel	7/15/2004	Thunderstorm Wind	50 kts. EG	0	0	$8,000.00	$0.00

Excel	5/31/2012	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Excel	7/3/2012	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Excel	4/25/2015	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Excel	6/16/2019	Thunderstorm Wind	61 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$43,000.00**	**$0.00**
Town of Frisco City (Monroe County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Frisco City	10/13/2001	Thunderstorm Wind	60 kts. E	0	0	$15,000.00	$0.00
Frisco City	6/12/2004	Thunderstorm Wind	50 kts. EG	0	0	$20,000.00	$0.00
Frisco City	6/26/2004	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Frisco City	6/28/2004	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Frisco City	2/6/2008	Thunderstorm Wind	50 kts. EG	0	0	$20,000.00	$0.00
Frisco City	5/3/2009	Thunderstorm Wind	52 kts. EG	0	0	$15,000.00	$0.00
Frisco City	6/21/2011	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Frisco City	6/8/2013	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Frisco City	7/23/2013	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Frisco City	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$97,000.00**	**$0.00**
City of Monroeville (Monroe County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Monroeville	1/19/2002	Thunderstorm Wind	60 kts. E	0	0	$25,000.00	$0.00
Monroeville	4/29/2002	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00
Monroeville	8/2/2002	Thunderstorm Wind	55 kts. E	0	0	$50,000.00	$0.00
Monroeville	12/19/2002	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Monroeville	7/22/2003	Thunderstorm Wind	58 kts. MG	0	0	$5,000.00	$0.00
Monroeville	8/27/2003	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Monroeville	4/30/2005	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Monroeville	11/15/2006	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Monroeville	11/15/2006	Thunderstorm Wind	50 kts. EG	0	0	$12,000.00	$0.00
Monroeville	1/7/2007	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Monroeville	4/14/2007	Thunderstorm Wind	87 kts. EG	0	0	$0.00	$1,000,000.00
Monroeville	12/24/2008	Thunderstorm Wind	61 kts. EG	0	0	$200,000.00	$0.00
Monroeville	5/3/2009	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Monroeville	4/15/2011	Thunderstorm Wind	50 kts. EG	0	0	$35,000.00	$0.00
Monroeville	6/10/2011	Thunderstorm Wind	60 kts. EG	0	0	$5,000.00	$0.00
Monroeville	5/29/2012	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Monroeville	6/10/2012	Thunderstorm Wind	52 kts. EG	0	1	$10,000.00	$0.00
Monroeville	7/23/2013	Thunderstorm Wind	52 kts. EG	0	0	$4,000.00	$0.00
Monroeville	4/28/2014	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Monroeville	1/3/2015	Thunderstorm Wind	52 kts. EG	0	0	$1,000.00	$0.00
Monroeville	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Monroeville	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Monroeville	6/28/2018	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00

Monroeville	11/1/2018	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Monroeville	3/31/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**1**	**$435,000.00**	**$1,000,000.00**
Town of Vredenburgh (Monroe County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Vredenburgh	4/23/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$0.00**	**$0.00**
Washington County Unincorporated							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Frankville	1/10/2000	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Fruitdale	3/3/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Dwight	3/3/2000	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Deer Park	4/3/2000	Thunderstorm Wind	60 kts. E	0	0	$8,000.00	$0.00
Fairford	4/3/2000	Thunderstorm Wind	60 kts. E	0	0	$5,000.00	$0.00
Leroy	7/11/2000	Thunderstorm Wind	60 kts. E	0	0	$15,000.00	$0.00
Wagarville	7/26/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Wagarville	7/30/2000	Thunderstorm Wind	60 kts. E	0	0	$5,000.00	$0.00
Wagarville	8/10/2000	Thunderstorm Wind	60 kts. E	0	0	$20,000.00	$0.00
Vinegar Bend	8/27/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Deer Park	6/11/2001	Thunderstorm Wind	55 kts. E	0	0	$8,000.00	$0.00
Tibbie	6/22/2001	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Deer Park	8/20/2001	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Vinegar Bend	10/13/2001	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Wagarville	10/13/2001	Thunderstorm Wind	50 kts. E	0	0	$15,000.00	$0.00
Tibbie	1/19/2002	Thunderstorm Wind	50 kts. E	0	0	$15,000.00	$0.00
Fairford	4/8/2002	Thunderstorm Wind	55 kts. E	0	0	$25,000.00	$0.00
Vinegar Bend	7/30/2002	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00
Sunflower	5/3/2003	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Malcolm	8/6/2003	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Yarbo	4/30/2005	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Yarbo	7/30/2006	Thunderstorm Wind	50 kts. EG	0	0	$8,000.00	$0.00
Yarbo	4/14/2007	Thunderstorm Wind	78 kts. EG	0	0	$500,000.00	$0.00
Vinegar Bend	1/31/2008	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Silas	4/11/2008	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Fruitdale	8/12/2008	Thunderstorm Wind	50 kts. EG	0	0	$12,000.00	$0.00
Topton	2/18/2009	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Frankville	8/3/2010	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Vinegar Bend	8/3/2010	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Fruitdale	6/7/2011	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Vinegar Bend	6/7/2011	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Deer Park	6/7/2011	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Bigbee	3/31/2013	Thunderstorm Wind	61 kts. EG	0	0	$4,000.00	$0.00
St Stephens	7/23/2013	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00

Frankville	7/23/2013	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Wagarville	4/28/2014	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Wagarville	6/21/2014	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Deer Park	4/25/2015	Thunderstorm Wind	52 kts. EG	0	0	$1,000.00	$0.00
Sunflower	7/4/2015	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Frankville	8/8/2015	Thunderstorm Wind	70 kts. EG	0	0	$200,000.00	$0.00
Yellow Pine	2/23/2016	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Frankville	6/16/2017	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Healing Springs	6/22/2018	Thunderstorm Wind	52 kts. EG	0	0	$4,000.00	$0.00
Topton	4/18/2019	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Topton	6/27/2019	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Fairford	6/27/2019	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Fairford	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
St Stephens	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Loper	2/10/2020	Thunderstorm Wind	61 kts. EG	0	0	$0.00	$0.00
Healing Springs	4/12/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Summit	4/12/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Fairford	4/12/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Uniform	4/19/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Bigbee	4/23/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Jordan	5/27/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Yarbo	5/27/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$1,038,000.00**	**$0.00**
Town of Chatom (Washington County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Chatom	1/19/2001	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Chatom	6/14/2001	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Chatom	4/8/2002	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Chatom	12/24/2002	Thunderstorm Wind	60 kts. E	0	0	$80,000.00	$0.00
Chatom	12/20/2007	Thunderstorm Wind	50 kts. EG	0	0	$12,000.00	$0.00
Chatom	1/31/2008	Thunderstorm Wind	50 kts. EG	0	0	$12,000.00	$0.00
Chatom	7/4/2015	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Chatom	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Chatom	7/12/2020	Thunderstorm Wind	60 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$139,000.00**	**$0.00**
Town of McIntosh (Washington County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
McIntosh	1/19/2001	Thunderstorm Wind	55 kts. E	0	0	$8,000.00	$0.00
McIntosh	3/12/2001	Thunderstorm Wind	75 kts. E	0	6	$1,000,000.00	$0.00
McIntosh	7/19/2002	Thunderstorm Wind	50 kts. E	0	0	$10,000.00	$0.00
McIntosh	7/4/2015	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
McIntosh	8/8/2015	Thunderstorm Wind	61 kts. EG	0	0	$10,000.00	$0.00
McIntosh	6/7/2019	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
McIntosh	6/27/2019	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00

				Totals	**0**	**6**	**$1,033,000.00**	**$0.00**
Town of Millry (Washington County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Millry	12/16/2000	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Millry	8/17/2001	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00
Millry	8/15/2006	Thunderstorm Wind	50 kts. EG	0	0	$8,000.00	$0.00
Millry	5/3/2009	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
				Totals	**0**	**0**	**$36,000.00**	**$0.00**

Source: NOAA Storm Events Database

Table 3.20 Division A Hail Occurrences 2000-2020

Clarke County Unincorporated						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Alma	7/19/2000	0.88 in.	0	0	$0.00	$0.00
Opine	3/12/2001	0.88 in.	0	0	$0.00	$0.00
Bashi	6/19/2002	0.88 in.	0	0	$0.00	$0.00
Carlton	5/2/2003	0.75 in.	0	0	$0.00	$0.00
Carlton	5/3/2003	1.00 in.	0	0	$0.00	$0.00
Chance	5/3/2003	0.75 in.	0	0	$0.00	$0.00
Dickinson	5/10/2006	1.75 in.	0	0	$5,000.00	$0.00
West Bend	5/21/2010	1.75 in.	0	0	$0.00	$0.00
Cunningham	3/2/2012	1.00 in.	0	0	$0.00	$0.00
West Bend	5/21/2012	1.00 in.	0	0	$0.00	$0.00
Carlton	12/23/2014	1.00 in.	0	0	$0.00	$0.00
Gainestown	2/15/2016	1.00 in.	0	0	$0.00	$0.00
Tallahatta Springs	7/22/2018	1.00 in.	0	0	$0.00	$0.00
Chilton	7/22/2018	1.50 in.	0	0	$0.00	$0.00
		Totals	0	0	$5,000.00	$0.00
Town of Coffeeville (Clarke County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Coffeeville	3/26/2005	1.00 in.	0	0	$0.00	$0.00
Coffeeville	4/30/2005	1.00 in.	0	0	$0.00	$0.00
Coffeeville	12/24/2005	1.75 in.	0	0	$5,000.00	$0.00
Coffeeville	4/11/2008	0.88 in.	0	0	$0.00	$0.00
Coffeeville	5/27/2009	1.00 in.	0	0	$0.00	$0.00
Coffeeville	4/24/2010	0.88 in.	0	0	$0.00	$0.00
Coffeeville	4/24/2010	1.75 in.	0	0	$0.00	$0.00
Coffeeville	5/21/2010	1.00 in.	0	0	$0.00	$0.00
Coffeeville	2/10/2013	1.75 in.	0	0	$5,000.00	$0.00
		Totals	0	0	$10,000.00	$0.00
Town of Fulton (Clarke County)						

Location	Date	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
Fulton	3/13/2003	0.75 in.	0	0	$0.00	$0.00
Fulton	7/17/2003	0.75 in.	0	0	$0.00	$0.00
Fulton	7/17/2003	1.00 in.	0	0	$0.00	$0.00
Fulton	10/24/2010	0.88 in.	0	0	$0.00	$0.00
Fulton	10/24/2010	1.75 in.	0	0	$0.00	$0.00
Fulton	2/25/2014	0.88 in.	0	0	$0.00	$0.00
Fulton	5/25/2014	1.00 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
Town of Grove Hill (Clarke County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Grove Hill	3/13/2003	0.75 in.	0	0	$0.00	$0.00
Grove Hill	5/2/2003	0.75 in.	0	0	$0.00	$0.00
Grove Hill	4/7/2004	0.88 in.	0	0	$0.00	$0.00
Grove Hill	3/30/2005	1.00 in.	0	0	$0.00	$0.00
Grove Hill	2/3/2006	0.75 in.	0	0	$0.00	$0.00
Grove Hill	5/6/2009	0.88 in.	0	0	$0.00	$0.00
Grove Hill	7/30/2009	1.00 in.	0	0	$0.00	$0.00
Grove Hill	5/26/2011	1.00 in.	0	0	$0.00	$0.00
Grove Hill	5/26/2011	0.75 in.	0	0	$0.00	$0.00
Grove Hill	12/25/2012	1.00 in.	0	0	$0.00	$0.00
Grove Hill	7/22/2018	1.00 in.	0	0	$0.00	$0.00
Grove Hill	3/25/2019	1.00 in.	0	0	$0.00	$0.00
Grove Hill	6/23/2020	1.00 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
City of Jackson (Clarke County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Jackson	8/10/2000	0.75 in.	0	0	$0.00	$0.00
Jackson	5/27/2001	0.88 in.	0	0	$0.00	$0.00
Jackson	4/29/2002	1.75 in.	0	0	$0.00	$0.00
Jackson	3/13/2003	0.75 in.	0	0	$0.00	$0.00
Jackson	5/2/2003	0.75 in.	0	0	$0.00	$0.00
Jackson	3/31/2013	1.00 in.	0	0	$0.00	$0.00
Jackson	5/20/2015	0.88 in.	0	0	$0.00	$0.00
Jackson	2/15/2016	1.00 in.	0	0	$0.00	$0.00
Jackson	6/21/2014	0.88 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
City of Thomasville (Clarke County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**

Thomasville	5/2/2003	0.75 in.	0	0	$0.00	$0.00
Thomasville	12/24/2005	1.00 in.	0	0	$0.00	$0.00
Thomasville	5/10/2006	2.75 in.	0	0	$100,000.00	$0.00
Thomasville	4/11/2007	1.00 in.	0	0	$0.00	$0.00
Thomasville	4/12/2009	0.75 in.	0	0	$0.00	$0.00
Thomasville	10/24/2010	0.88 in.	0	0	$0.00	$0.00
Thomasville	4/4/2011	0.88 in.	0	0	$0.00	$0.00
		Totals	0	0	$100,000.00	$0.00
Conecuh County Unincorporated						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Owassa	3/12/2001	0.75 in.	0	0	$0.00	$0.00
Paul	6/19/2002	0.88 in.	0	0	$0.00	$0.00
Belleville	5/2/2003	0.75 in.	0	0	$0.00	$0.00
Lenox	4/24/2010	1.75 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
Town of Castleberry (Conecuh County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Castleberry	3/14/2003	0.75 in.	0	0	$0.00	$0.00
Castleberry	3/30/2017	1.00 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
City of Evergreen (Conecuh County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Evergreen	4/8/2004	1.00 in.	0	0	$0.00	$0.00
Evergreen	4/21/2005	0.75 in.	0	0	$0.00	$0.00
Evergreen	12/28/2007	0.75 in.	0	0	$0.00	$0.00
Evergreen	1/31/2008	0.88 in.	0	0	$0.00	$0.00
Evergreen	2/15/2016	0.75 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
Monroe County Unincorporated						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Peterman	2/27/2001	0.88 in.	0	0	$0.00	$0.00
Nadawah	5/27/2001	0.75 in.	0	0	$0.00	$0.00
Goodway	3/13/2003	0.75 in.	0	0	$0.00	$0.00
Finchburg	5/2/2003	1.75 in.	0	0	$0.00	$0.00
Uriah	5/2/2003	1.25 in.	0	0	$0.00	$0.00
Uriah	5/2/2003	1.00 in.	0	0	$0.00	$0.00
Hybart	5/3/2003	0.75 in.	0	0	$0.00	$0.00
Mexia	5/1/2004	1.00 in.	0	0	$0.00	$0.00
Uriah	8/30/2006	0.88 in.	0	0	$0.00	$0.00
Megargel	8/23/2007	0.75 in.	0	0	$0.00	$0.00

Peterman	12/20/2007	0.75 in.	0	0	$0.00	$0.00
Peterman	4/19/2009	0.88 in.	0	0	$0.00	$0.00
Buena Vista	4/15/2011	0.75 in.	0	0	$0.00	$0.00
Bun	4/15/2011	0.75 in.	0	0	$0.00	$0.00
Finchberry	4/15/2011	0.75 in.	0	0	$0.00	$0.00
Ura	6/7/2011	1.00 in.	0	0	$0.00	$0.00
Tunnell Springs	3/30/2017	1.00 in.	0	0	$0.00	$0.00
Uriah	8/21/2020	1.00 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
Town of Beatrice (Monroe County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Beatrice	10/19/2004	0.75 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
Town of Excel						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Excel	5/2/2007	1.25 in.	0	0	$0.00	$0.00
Excel	3/25/2019	1.00 in.	0	0	$0.00	$0.00
Excel	4/6/2019	1.00 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
Town of Frisco City (Monroe County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Frisco City	7/15/2004	0.75 in.	0	0	$0.00	$0.00
Frisco City	5/2/2007	0.88 in.	0	0	$0.00	$0.00
Frisco City	5/30/2012	1.00 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
City of Monroeville (Monroe County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Monroeville	7/16/2004	0.75 in.	0	0	$0.00	$0.00
Monroeville	3/26/2005	0.75 in.	0	0	$0.00	$0.00
Monroeville	4/21/2005	0.75 in.	0	0	$0.00	$0.00
Monroeville	6/2/2005	0.88 in.	0	0	$0.00	$0.00
Monroeville	5/10/2006	0.88 in.	0	0	$0.00	$0.00
Monroeville	1/10/2008	0.75 in.	0	0	$0.00	$0.00
Monroeville	2/26/2008	0.75 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
Washington County Unincorporated						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Deer Park	4/13/2000	0.75 in.	0	0	$0.00	$0.00
Wagarville	8/31/2000	0.75 in.	0	0	$0.00	$0.00
Sunflower	9/5/2000	0.75 in.	0	0	$0.00	$0.00

Sunflower	3/3/2001	0.75 in.	0	0	$0.00	$0.00
Vinegar Bend	3/12/2001	2.00 in.	0	0	$0.00	$0.00
Fruitdale	12/19/2002	0.75 in.	0	0	$0.00	$0.00
Fruitdale	3/13/2003	0.75 in.	0	0	$0.00	$0.00
Leroy	3/13/2003	0.75 in.	0	0	$0.00	$0.00
Fruitdale	4/25/2003	1.75 in.	0	0	$10,000.00	$0.00
Tibbie	4/25/2003	1.00 in.	0	0	$0.00	$0.00
Yarbo	5/2/2003	1.75 in.	0	0	$0.00	$0.00
Frankville	5/2/2003	0.75 in.	0	0	$0.00	$0.00
Leroy	5/2/2003	0.75 in.	0	0	$0.00	$0.00
Yellow Pine	5/3/2003	1.00 in.	0	0	$0.00	$0.00
Seaboard	5/3/2003	1.75 in.	0	0	$0.00	$0.00
Fruitdale	3/22/2005	0.75 in.	0	0	$0.00	$0.00
Tibbie	3/22/2005	0.75 in.	0	0	$0.00	$0.00
Malcolm	6/15/2005	0.75 in.	0	0	$0.00	$0.00
Hawthorn	5/8/2006	0.88 in.	0	0	$0.00	$0.00
Lerot	5/9/2006	1.00 in.	0	0	$0.00	$0.00
Topton	2/18/2009	2.00 in.	0	0	$0.00	$0.00
Sunflower	4/15/2011	1.75 in.	0	0	$0.00	$0.00
Topton	6/7/2011	1.00 in.	0	0	$0.00	$0.00
Leroy	3/31/2013	1.75 in.	0	0	$0.00	$0.00
Leroy	3/31/2013	1.75 in.	0	0	$0.00	$0.00
Frankville	3/22/2015	1.00 in.	0	0	$0.00	$0.00
Vinegar Bend	4/17/2015	1.00 in.	0	0	$0.00	$0.00
Yarbo	2/15/2016	1.00 in.	0	0	$0.00	$0.00
Yarbo	2/15/2016	1.00 in.	0	0	$0.00	$0.00
Yarbo	2/15/2016	1.00 in.	0	0	$0.00	$0.00
Yarbo	2/15/2016	1.00 in.	0	0	$0.00	$0.00
Copeland	1/21/2017	1.00 in.	0	0	$0.00	$0.00
Deer Park	3/30/2017	1.00 in.	0	0	$0.00	$0.00
		Totals	0	0	$10,000.00	$0.00
Town of Chatom (Washington County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Chatom	5/28/2001	0.75 in.	0	0	$0.00	$0.00
Chatom	6/19/2002	0.88 in.	0	0	$0.00	$0.00
Chatom	5/2/2003	2.50 in.	0	0	$1,400,000.00	$0.00
Chatom	5/3/2003	0.75 in.	0	0	$0.00	$0.00
Chatom	8/6/2003	0.88 in.	0	0	$0.00	$0.00
		Totals	0	0	$1,400,000.00	$0.00
Town of McIntosh (Washington County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
McIntosh	6/24/2004	0.75 in.	0	0	$0.00	$0.00

			Totals	0	0	$0.00	$0.00
Town of Millry (Washington County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Millry	3/3/2000	1.00 in.	0	0	$0.00	$0.00
Millry	4/4/2001	1.75 in.	0	0	$0.00	$0.00
Millry	7/21/2002	0.75 in.	0	0	$0.00	$0.00
Millry	8/2/2002	1.00 in.	0	0	$0.00	$0.00
Millry	11/27/2004	0.75 in.	0	0	$0.00	$0.00
Millry	5/9/2006	1.00 in.	0	0	$0.00	$0.00
Millry	4/15/2011	1.75 in.	0	0	$0.00	$0.00
			Totals	0	0	$0.00	$0.00

Source: NOAA Storm Events Database

Table 3.21 Division A Lightning Occurrences 2000-2020

Clarke County Unincorporated					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Gosport	8/2/2016	0	0	$5,000.00	$0.00
Whatley	7/7/2018	0	0	$2,000.00	$0.00
	Totals	0	0	$7,000.00	$0.00
Town of Grove Hill (Clarke County)					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Grove Hill	12/16/2000	0	0	$20,000.00	$0.00
Grove Hill	7/30/2007	0	0	$15,000.00	$0.00
Grove Hill	8/22/2011	0	0	$10,000.00	$0.00
Grove Hill	4/28/2014	0	0	$25,000.00	$0.00
Grove Hill	8/8/2014	0	0	$65,000.00	$0.00
Grove Hill	7/1/2020	0	0	$22,000.00	$0.00
	Totals	0	0	$157,000.00	$0.00
City of Jackson (Clarke County)					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Jackson	5/27/2009	0	0	$50,000.00	$0.00
Jackson	7/30/2009	0	0	$20,000.00	$0.00
Jackson	3/8/2011	0	0	$5,000.00	$0.00
Jackson	8/4/2012	0	0	$5,000.00	$0.00
	Totals	0	0	$80,000.00	$0.00
City of Thomasville (Clarke County)					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Thomasville	6/16/2003	0	0	$10,000.00	$0.00
Thomasville	7/26/2016	0	0	$60,000.00	$0.00

Thomasville	4/3/2017	0	0	$30,000.00	$0.00
	Totals	0	0	$100,000.00	$0.00
Conecuh County Unincorporated					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Redtown	6/2/2018	0	0	$2,000.00	$0.00
	Totals	0	0	$2,000.00	$0.00
Monroe County Unincorporated					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Franklin	8/7/2007	1	0	$0.00	$0.00
	Totals	0	0	$0.00	$0.00
Town of Beatrice (Monroe County)					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Beatrice	3/12/2001	0	0	$500,000.00	$0.00
	Totals	0	0	$500,000.00	$0.00
City of Monroeville (Monroe County)					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Monroeville	2/18/2012	0	0	$5,000.00	$0.00
	Totals	0	0	$5,000.00	$0.00
Washington County Unincorporated					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Tibbie	6/22/2001	0	1	$0.00	$0.00
St Stephens	7/15/2002	0	0	$40,000.00	$0.00
	Totals	0	0	$40,000.00	$0.00
Town of Chatom (Washington County)					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Chatom	2/6/2004	0	0	$50,000.00	$0.00
	Totals	0	0	$50,000.00	$0.00
Town of McIntosh (Washington County)					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
McIntosh	7/19/2002	0	0	$8,000.00	$0.00
	Totals	0	0	$8,000.00	$0.00
Town of Millry (Washington County)					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Millry	4/22/2005	0	0	$25,000.00	$0.00
	Totals	0	0	$25,000.00	$0.00

Source: NOAA Storm Events Database

Historical occurrences before 2000, can be accessed through the NOAA Storm Events Database site at https://www.ncdc.noaa.gov/stormevents/.

Probability of Future Events

Every jurisdiction in AEMA Division A 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 A to determine that there is a High probability of severe thunderstorm occurrences.

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

Figures 3.27-3.37 are maps of the planning area illustrating susceptibility to landslides. By examining the maps, one can see that the majority of the area 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 Educations do not have properties located in areas with a high susceptibility for landslides.

Figure 3.27
Clarke County
Landslide Susceptibility and Historical Occurrences

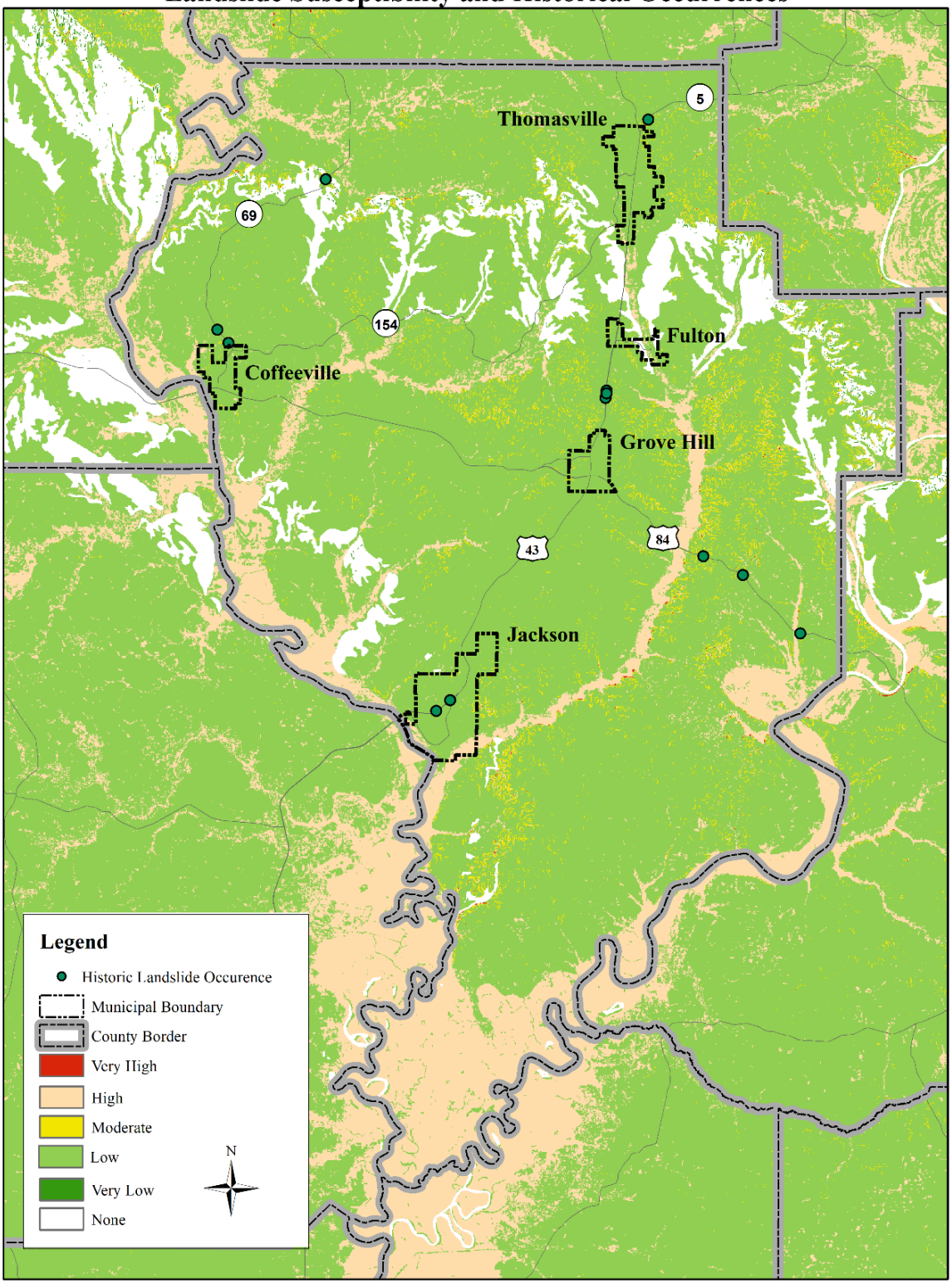


Figure 3.28
Town of Coffeeville & City of Jackson
Landslide Susceptibility and Historical Occurrences

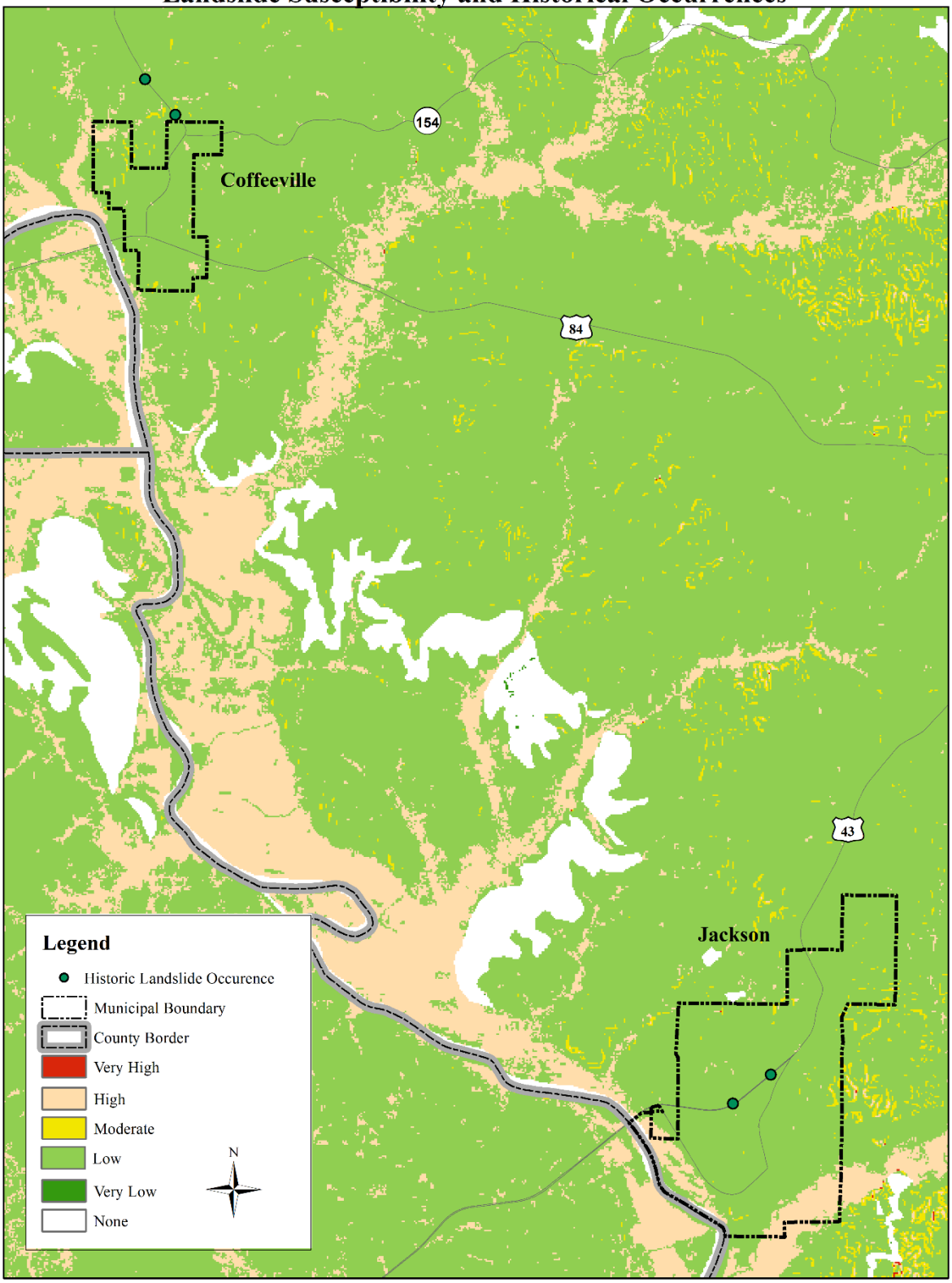


Figure 3.29
Town of Fulton, Town of Grove Hill, & City of Thomasville
Landslide Susceptibility and Historical Occurrences

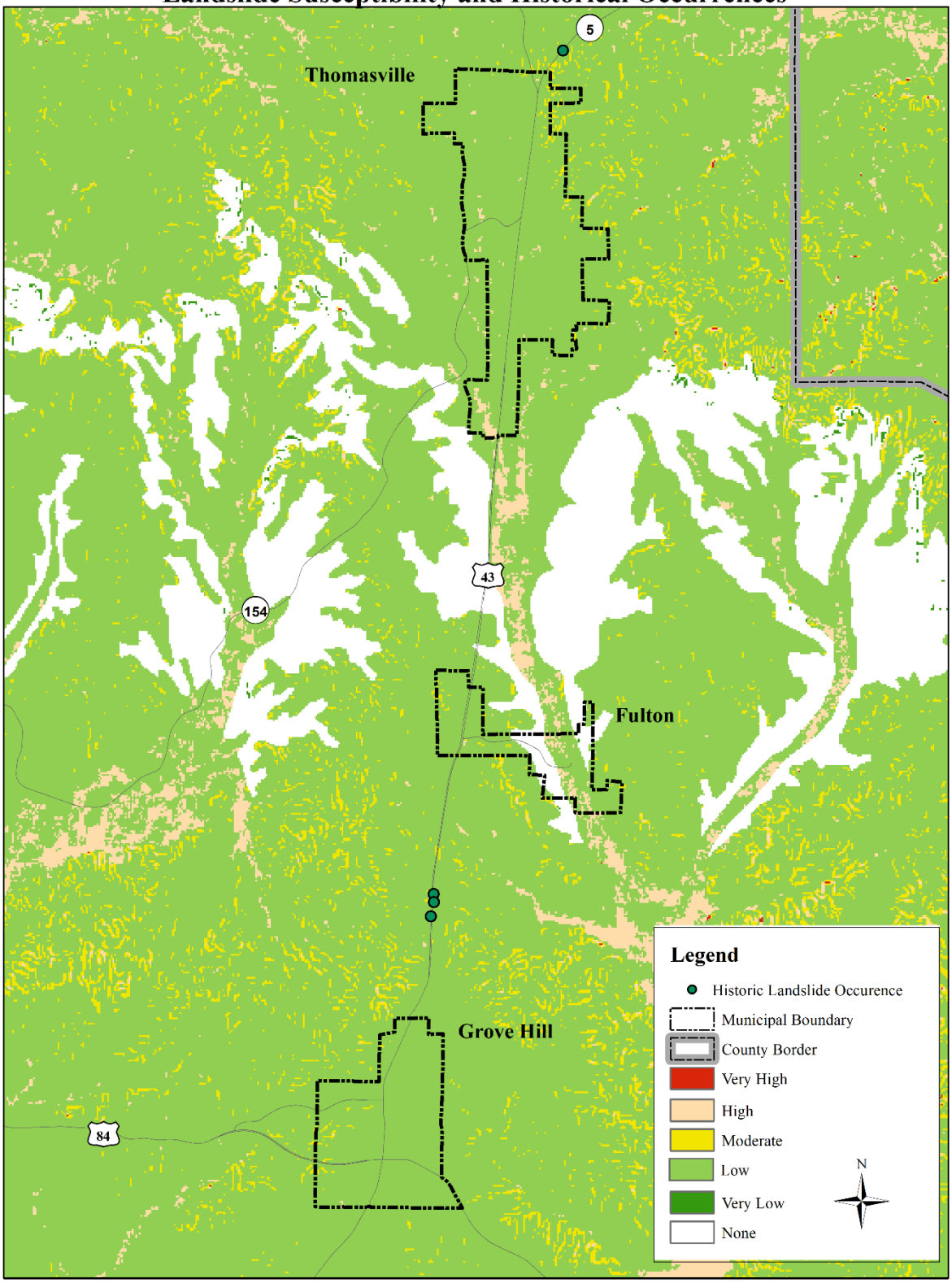


Figure 3.30
Conecuh County
Landslide Susceptibility and Historical Occurrences

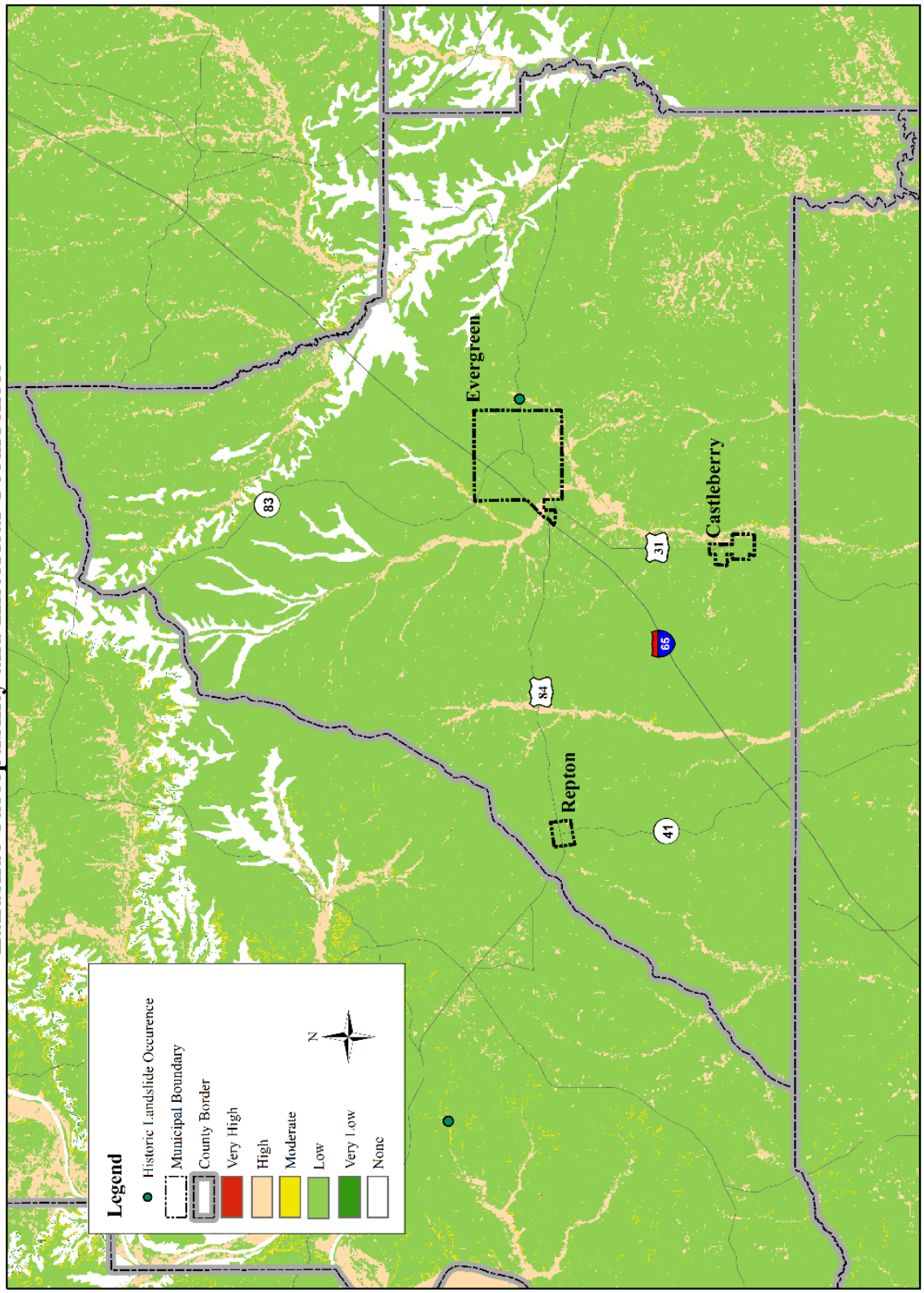


Figure 3.31
Town of Castleberry, City of Evergreen, & Town of Repton
Landslide Susceptibility and Historical Occurrences

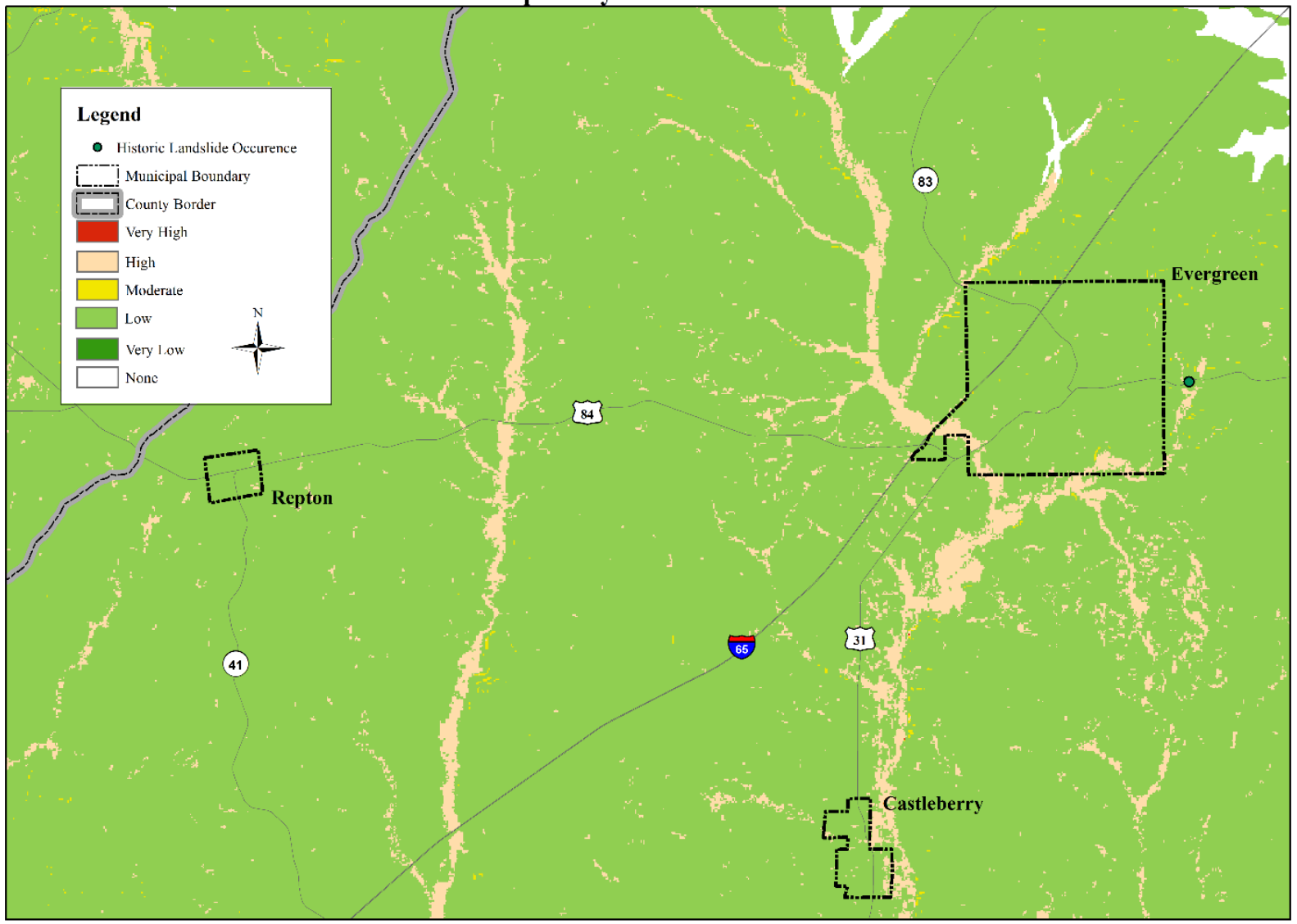


Figure 3.32

Monroe County
Landslide Susceptibility and Historical Occurrences

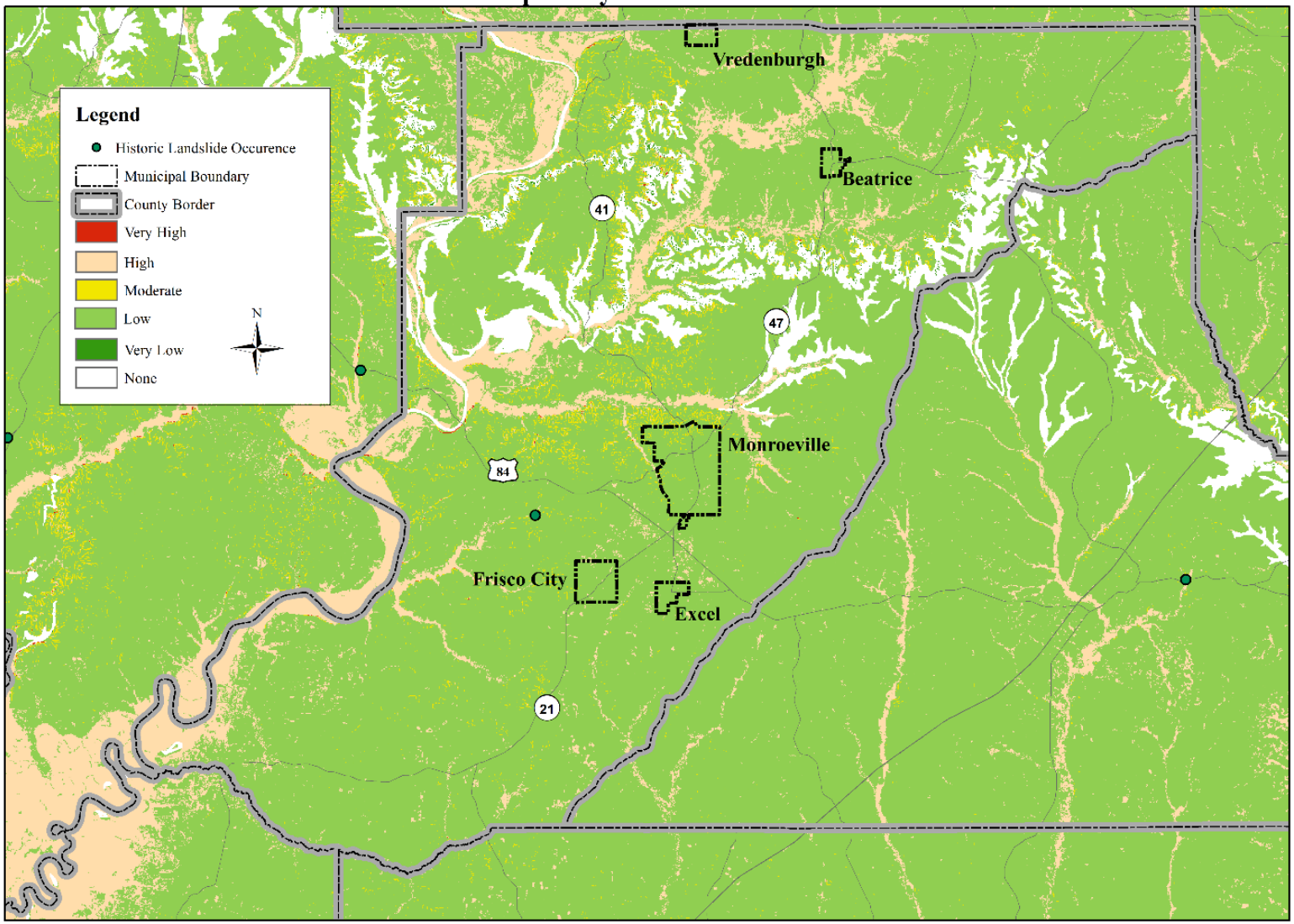


Figure 3.33

Town of Beatrice & Town of Vredenburgh
Landslide Susceptibility and Historical Occurrences

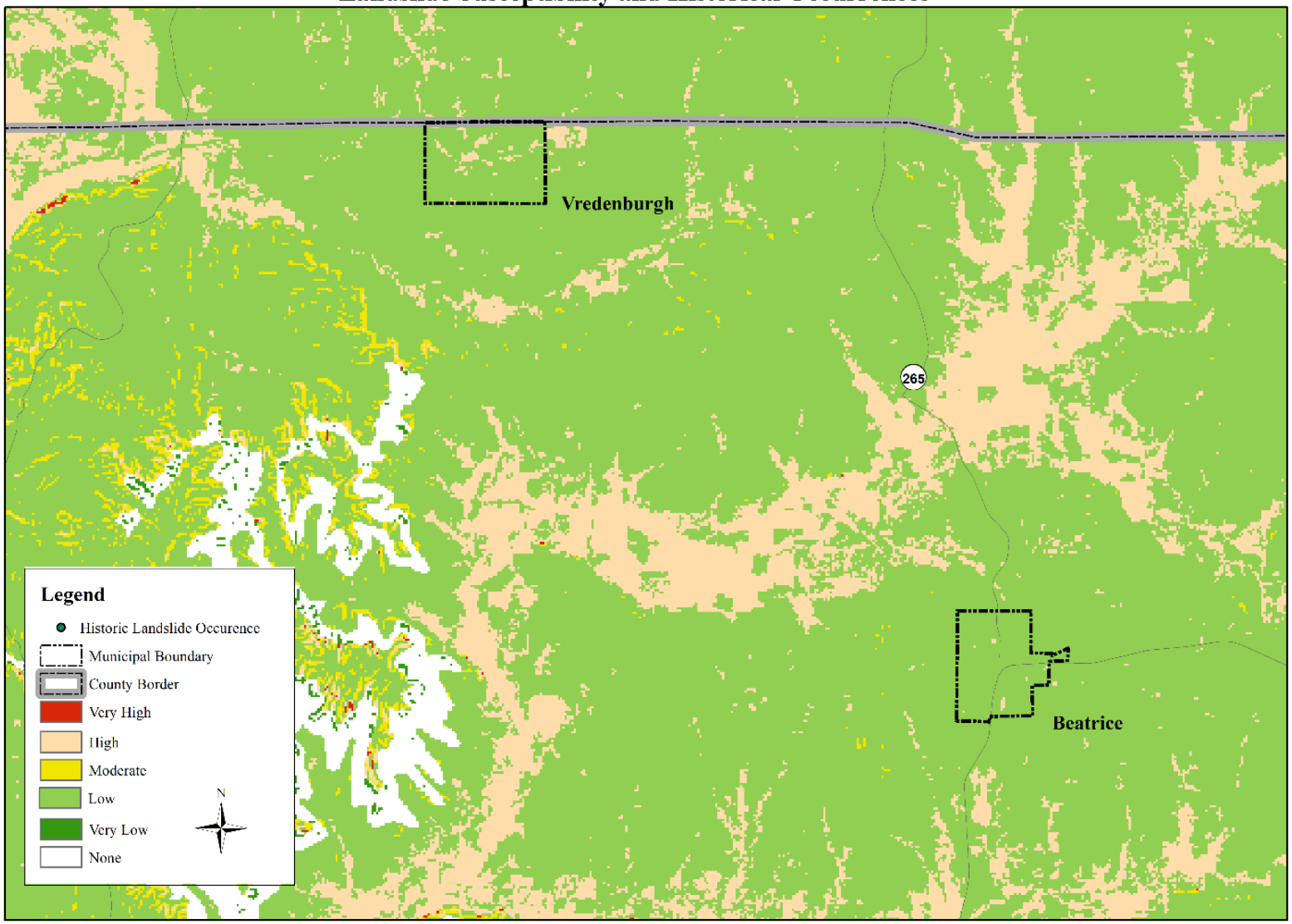


Figure 3.34
Town of Excel, Town of Frisco City, & City of Monroeville
Landslide Susceptibility and Historical Occurrences

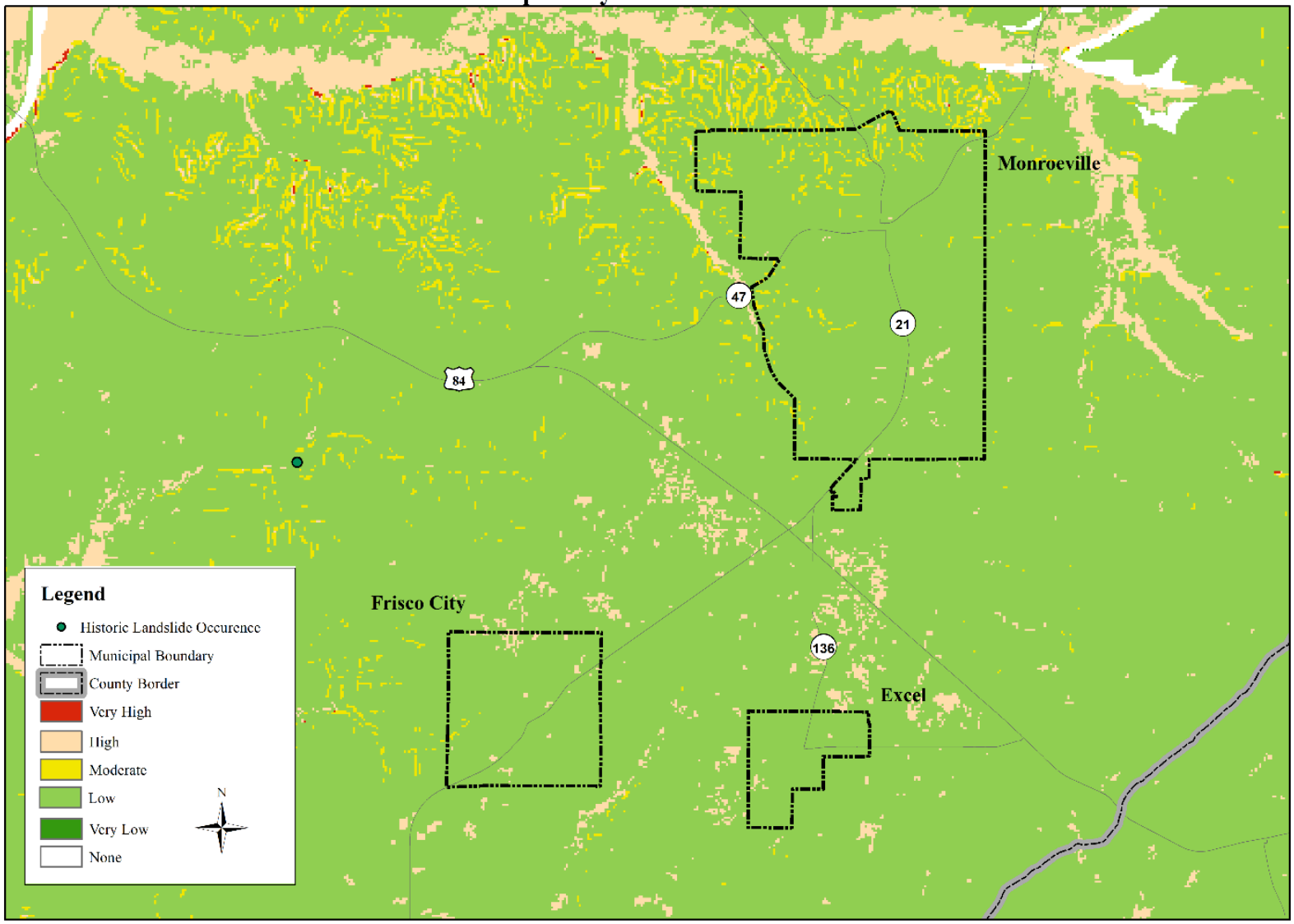


Figure 3.35
Washington County Landslide Susceptibility and Historical Occurrences

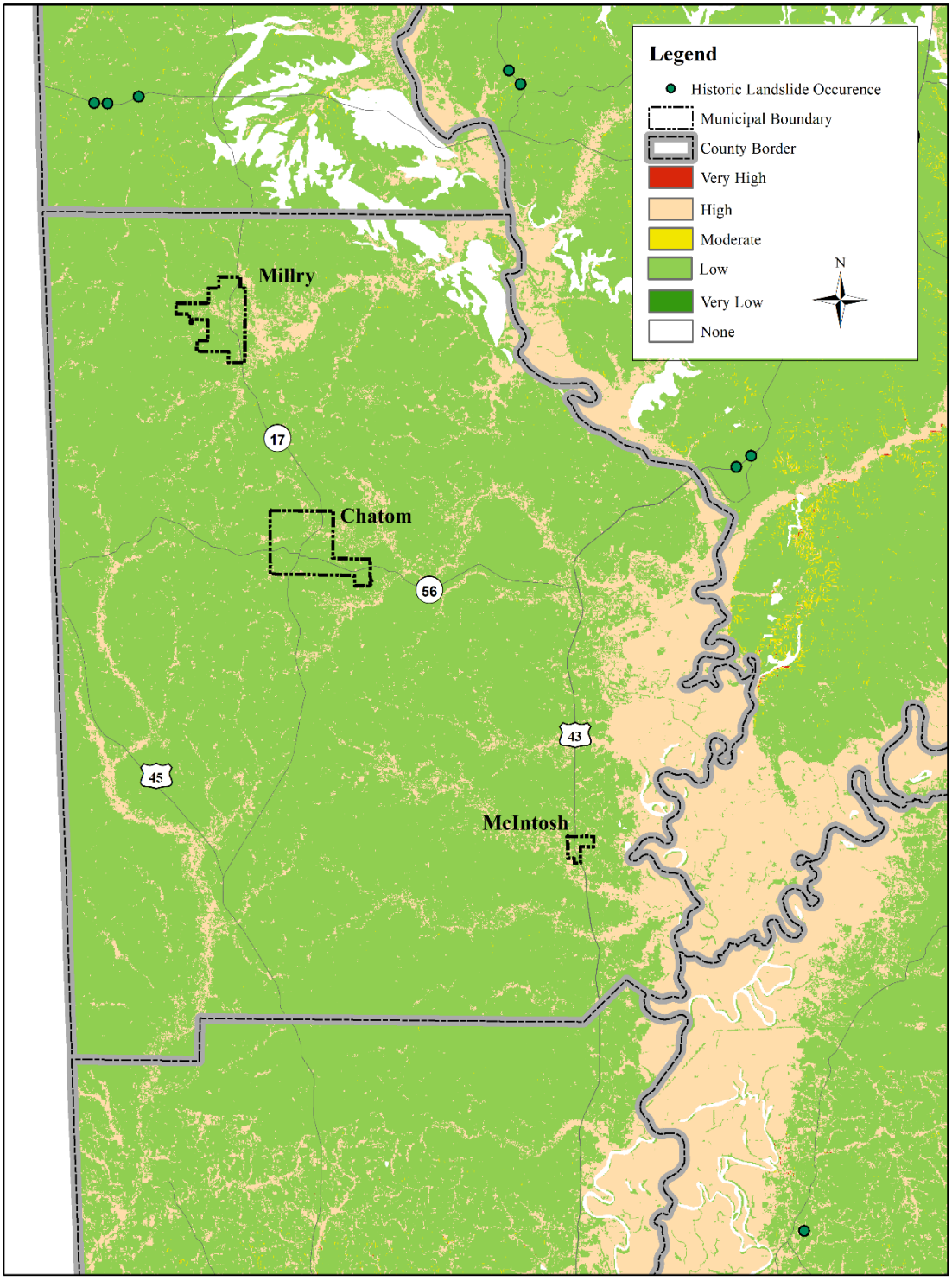


Figure 3.36
Town of McIntosh
Landslide Susceptibility and Historical Occurrences

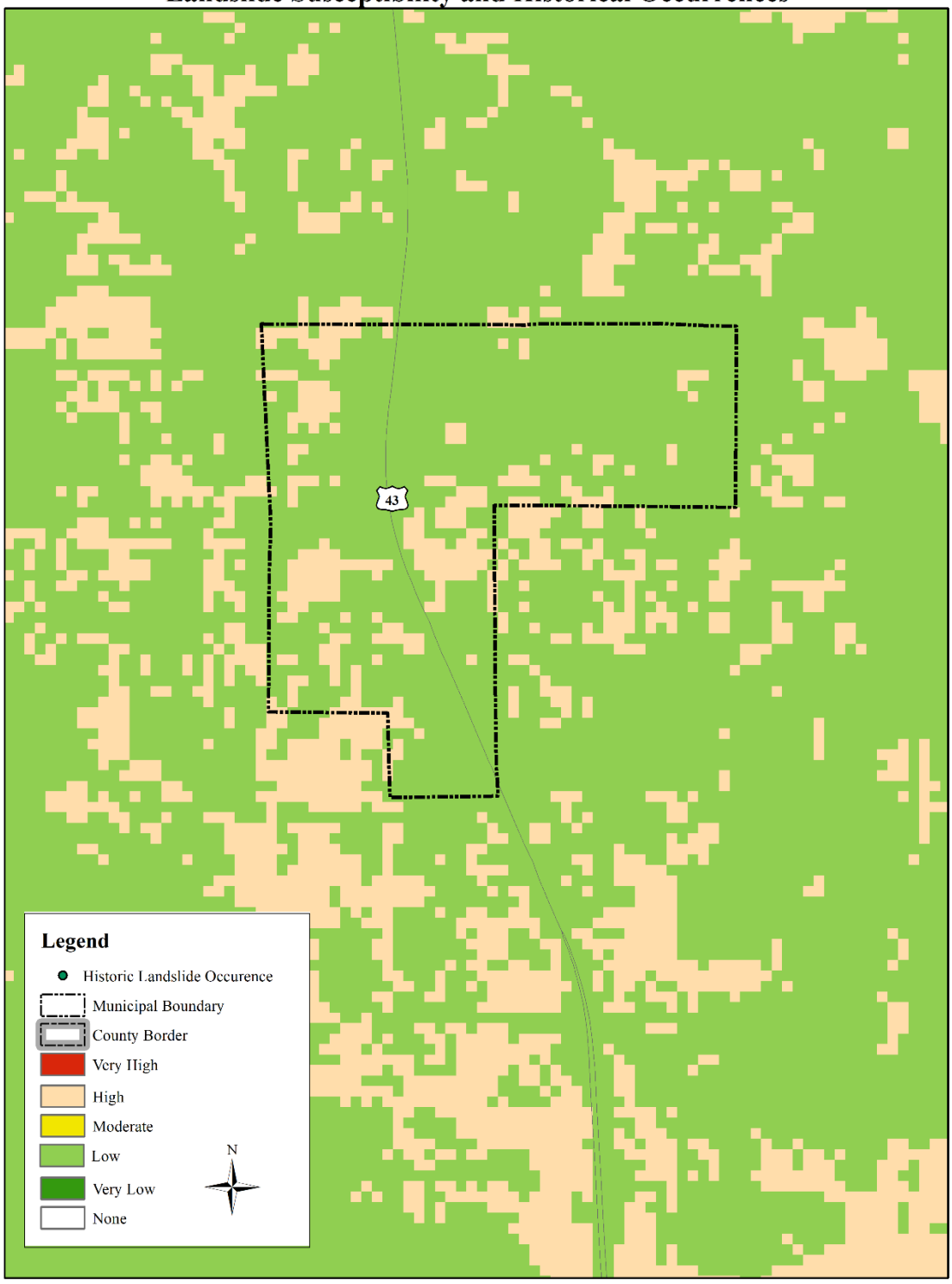
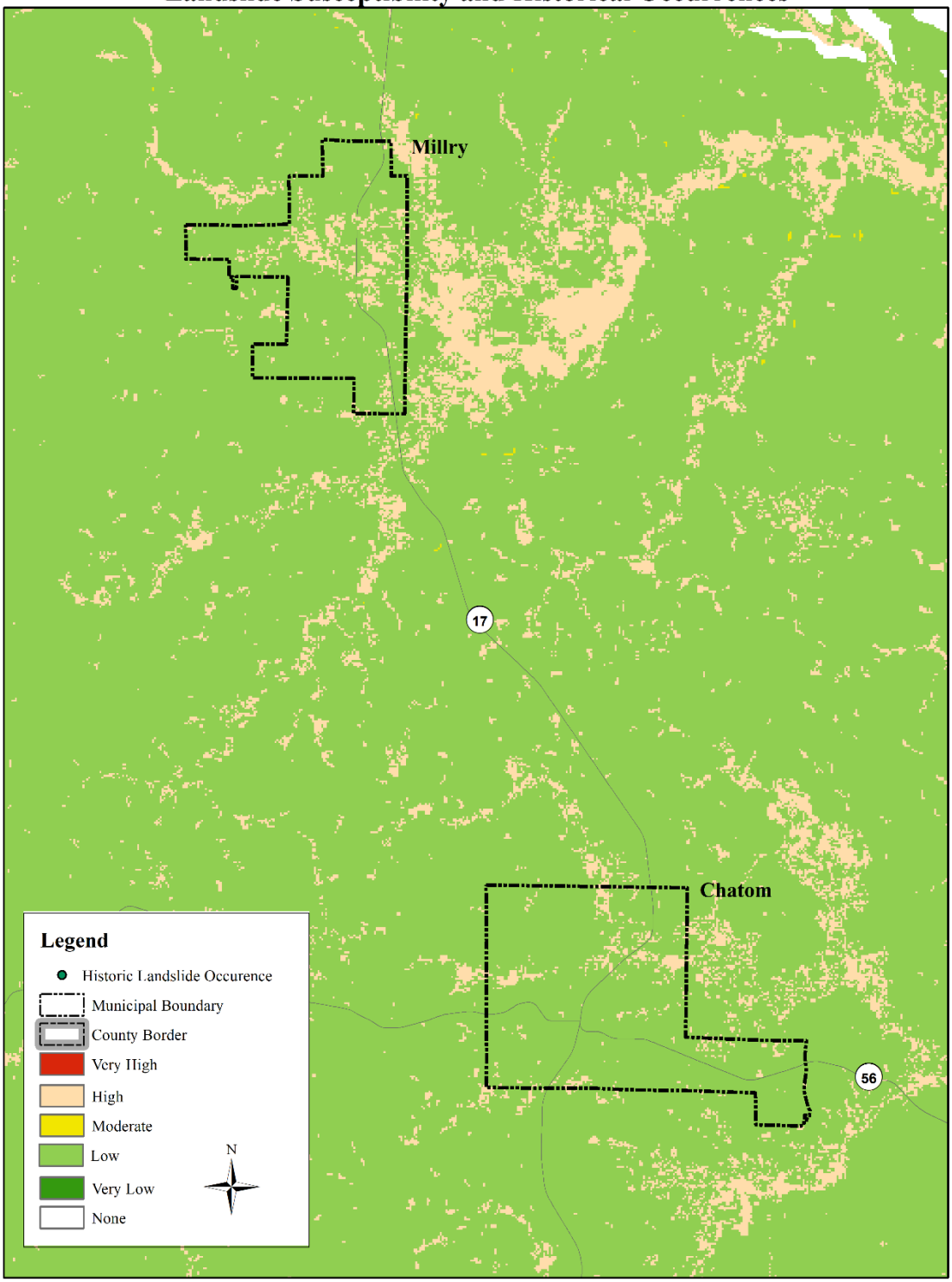


Figure 3.37
Town of Chatom & Town of Millry
Landslide Susceptibility and Historical Occurrences



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. Landslides in the planning area primarily occur along roadways and affect a limited area.

Historical Occurrences
Historic occurrence data from GSA is included in Figures 3.27-3.37. 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. Clarke, Conecuh, and Monroe 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
The entire planning region has low susceptibility to landslide incidences. Based on susceptibility and historical data, the assessed susceptibility to landslide events is low.

Table 3.22 Landslide Summary by Jurisdiction

Jurisdiction	Extent	Probability of Occurrence	Estimated Losses
Clarke County (unincorporated)	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Coffeeville	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Fulton	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Grove Hill	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
City of Jackson	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
City of Thomasville	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Conecuh County (unincorporated)	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Castleberry	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
City of Evergreen	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Repton	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Monroe County (unincorporated)	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Beatrice	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Excel	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*

Town of Frisco City	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
City of Monroeville	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Vredenburgh	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Washington County (unincorporated)	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Chatom	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of McIntosh	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Millry	<2 acres affected per incidence, 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.

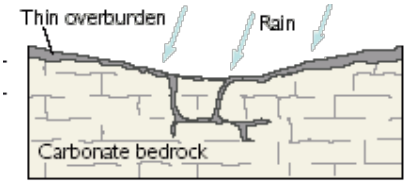
Sinkholes can form from a variety of causes including natural and man-made activities and include ground collapse related to:

- 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.

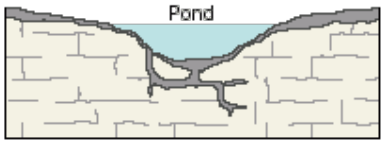
There are three types of sinkholes. A description and illustration (Figure 3.38) of each follow:

Figure 3.38 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.

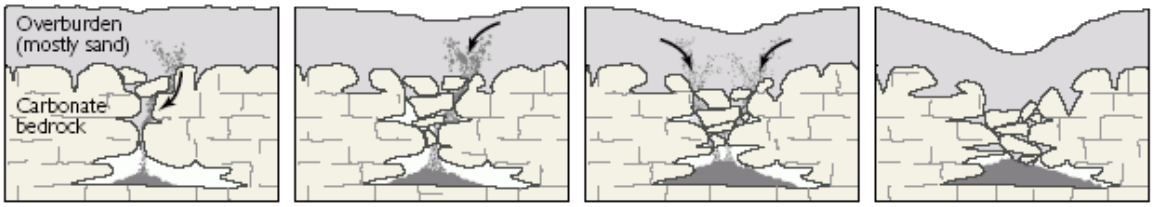
- Cover subsidence:

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

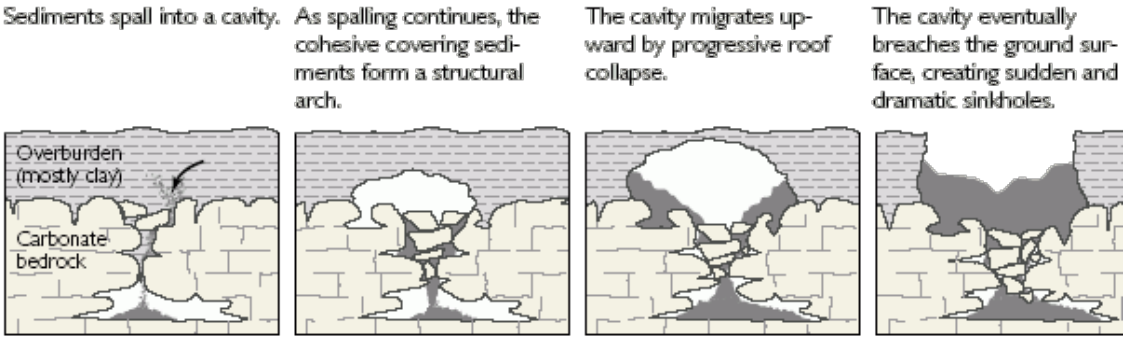
A column of overlying sediments settles into the vacated spaces (a process termed "piping").

Dissolution and infilling continue, forming a noticable 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



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 A. Figures 3.28-3.45 illustrates areas in the division 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.

Participating Boards of Educations do not have properties located in areas with a high risk for land subsidence.

Figure 3.39
Clarke County Areas Underlain By Soluble Rocks
with Potential for Karst or Pseudokarst Development

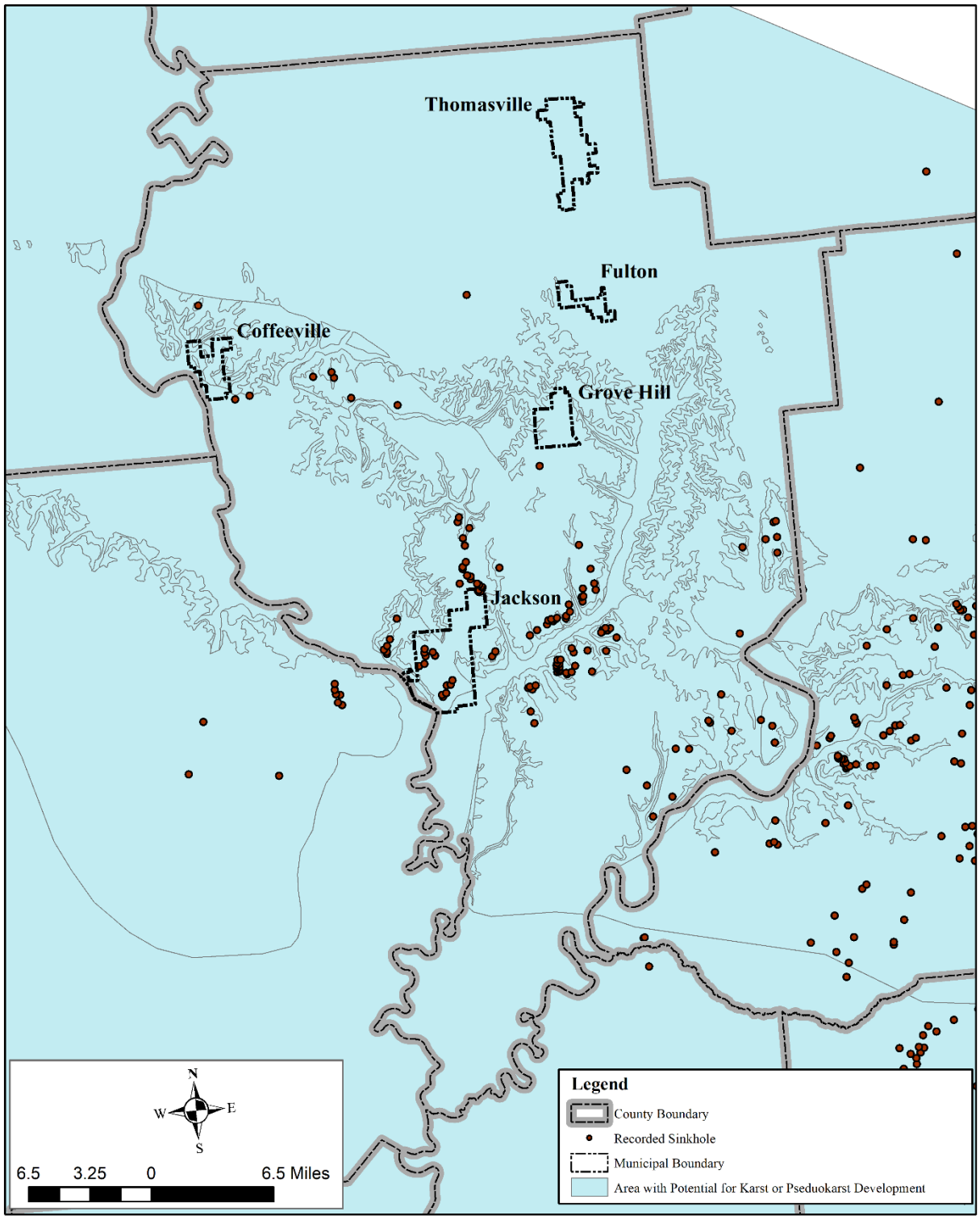


Figure 3.40
Town of Coffeeville Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

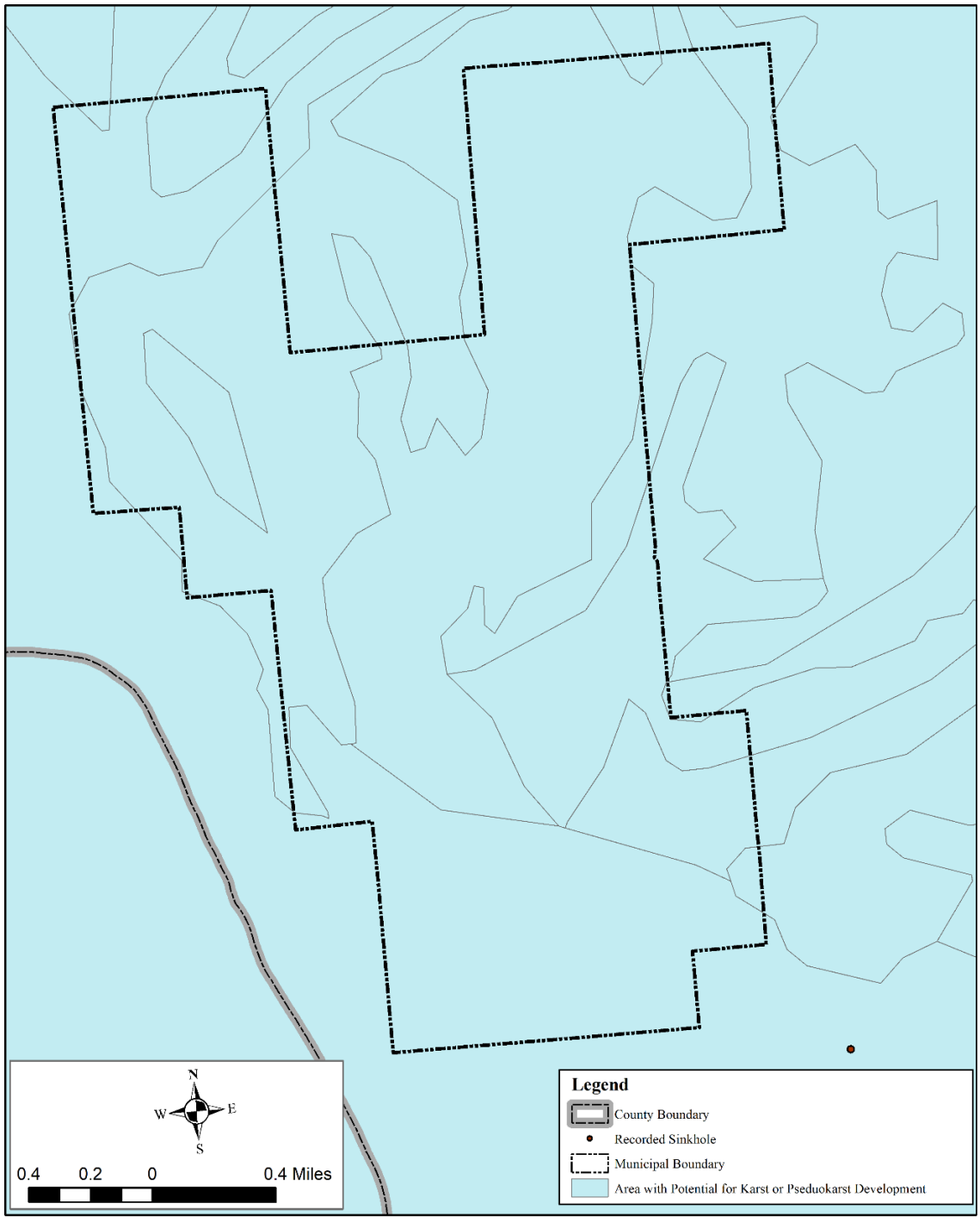


Figure 3.41
Town of Fulton Areas Underlain By Soluble Rocks
with Potential for Karst or Pseudokarst Development

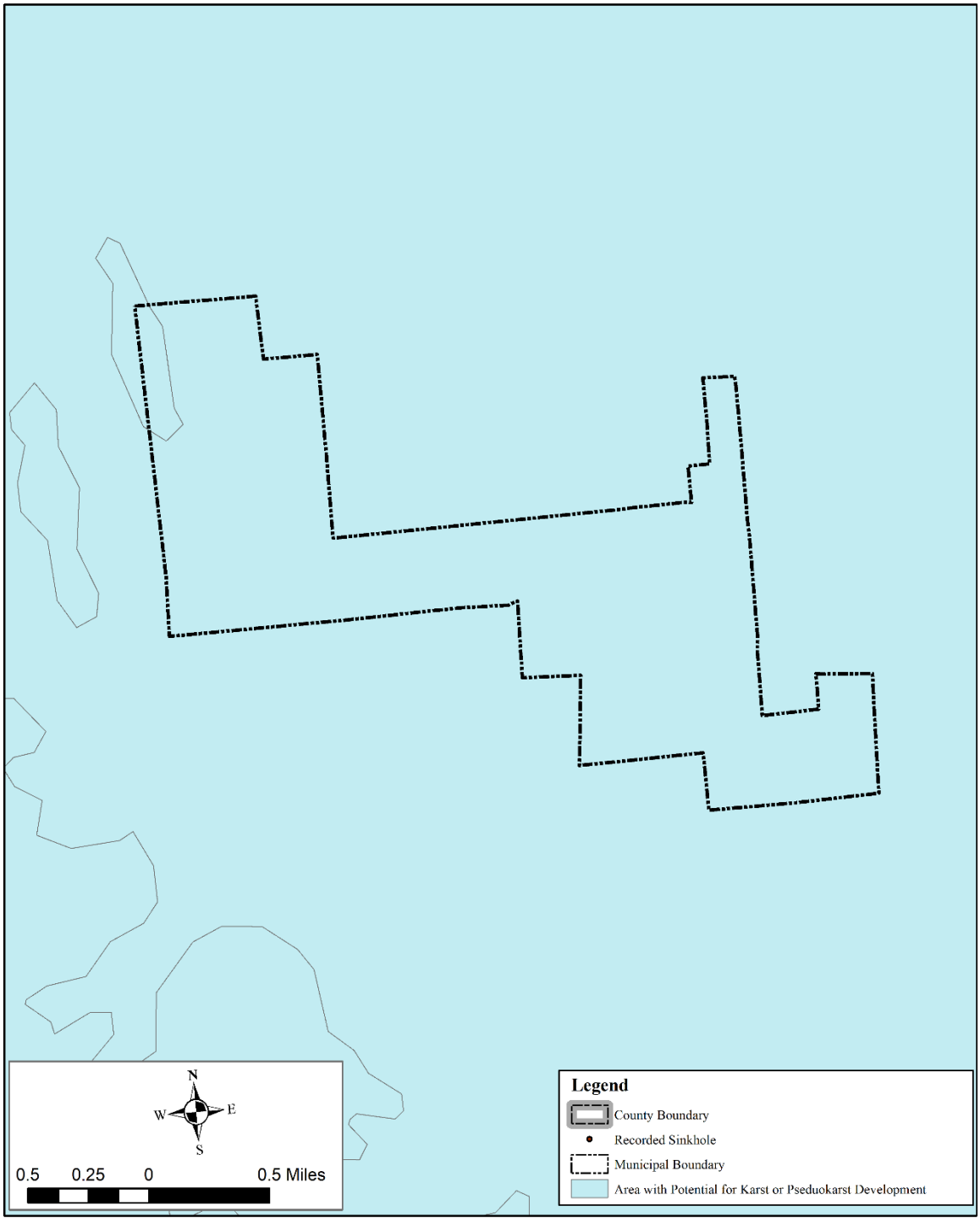


Figure 3.42
Town of Grove Hill Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

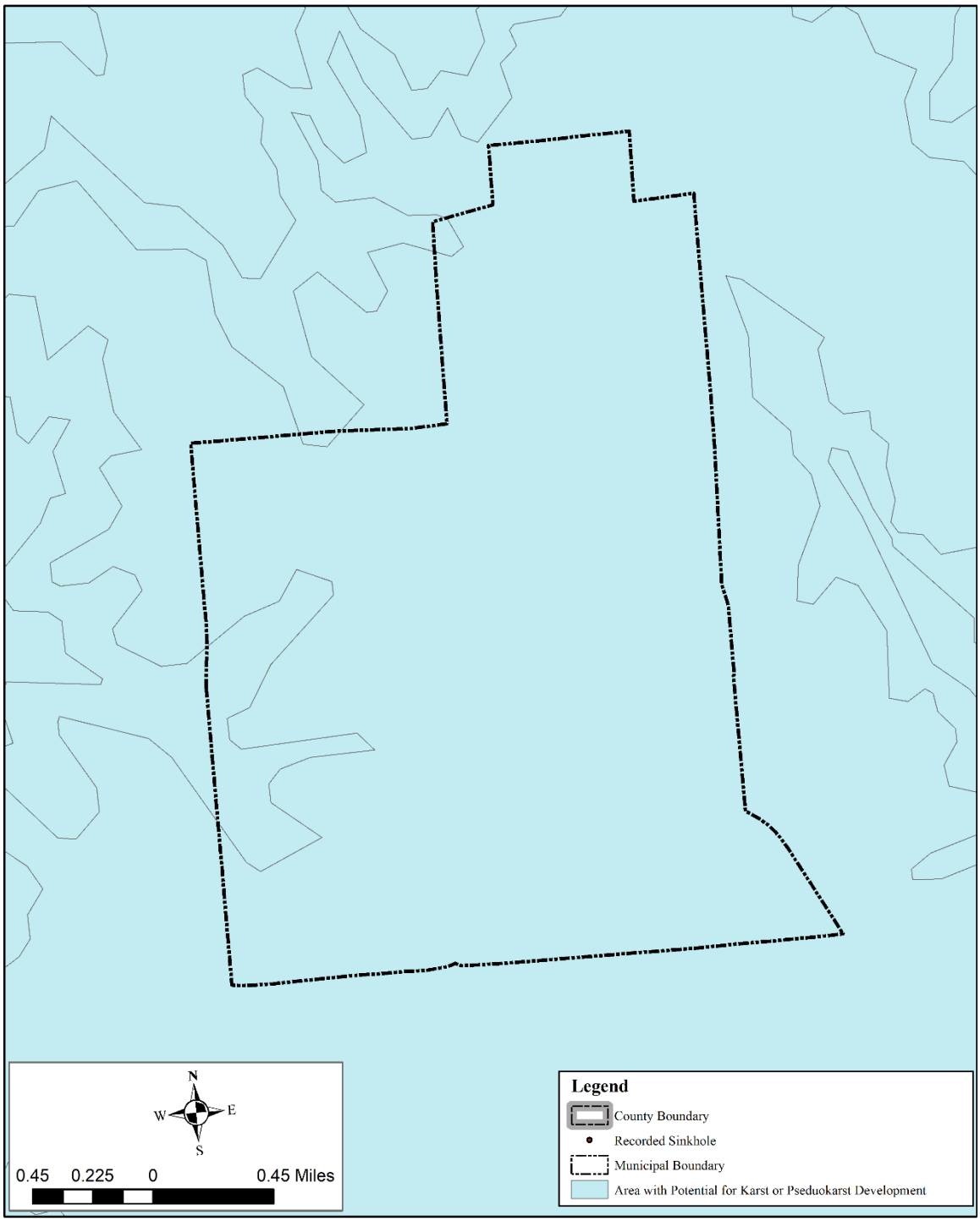


Figure 3.43
City of Jackson Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

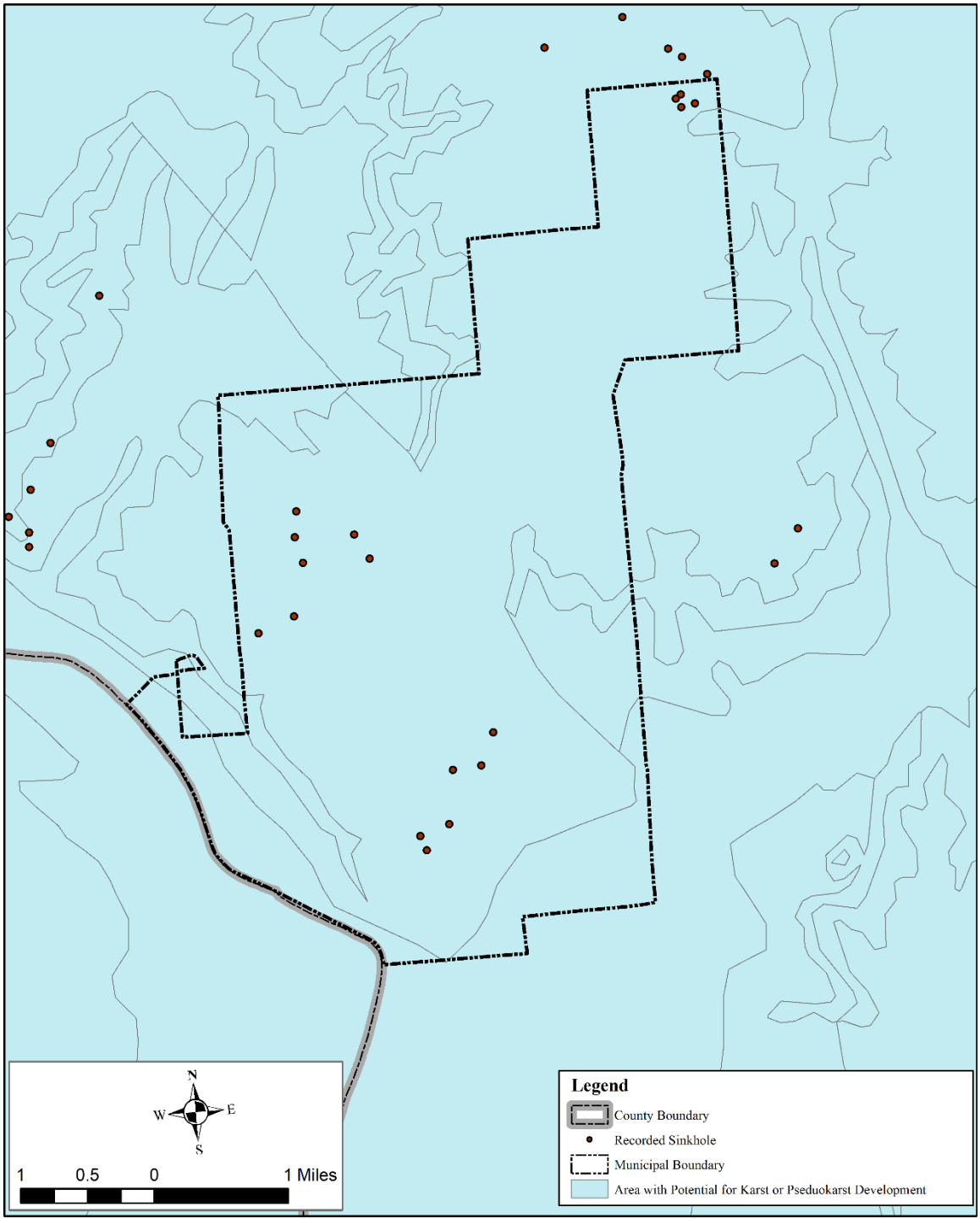


Figure 3.44
City of Thomasville Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

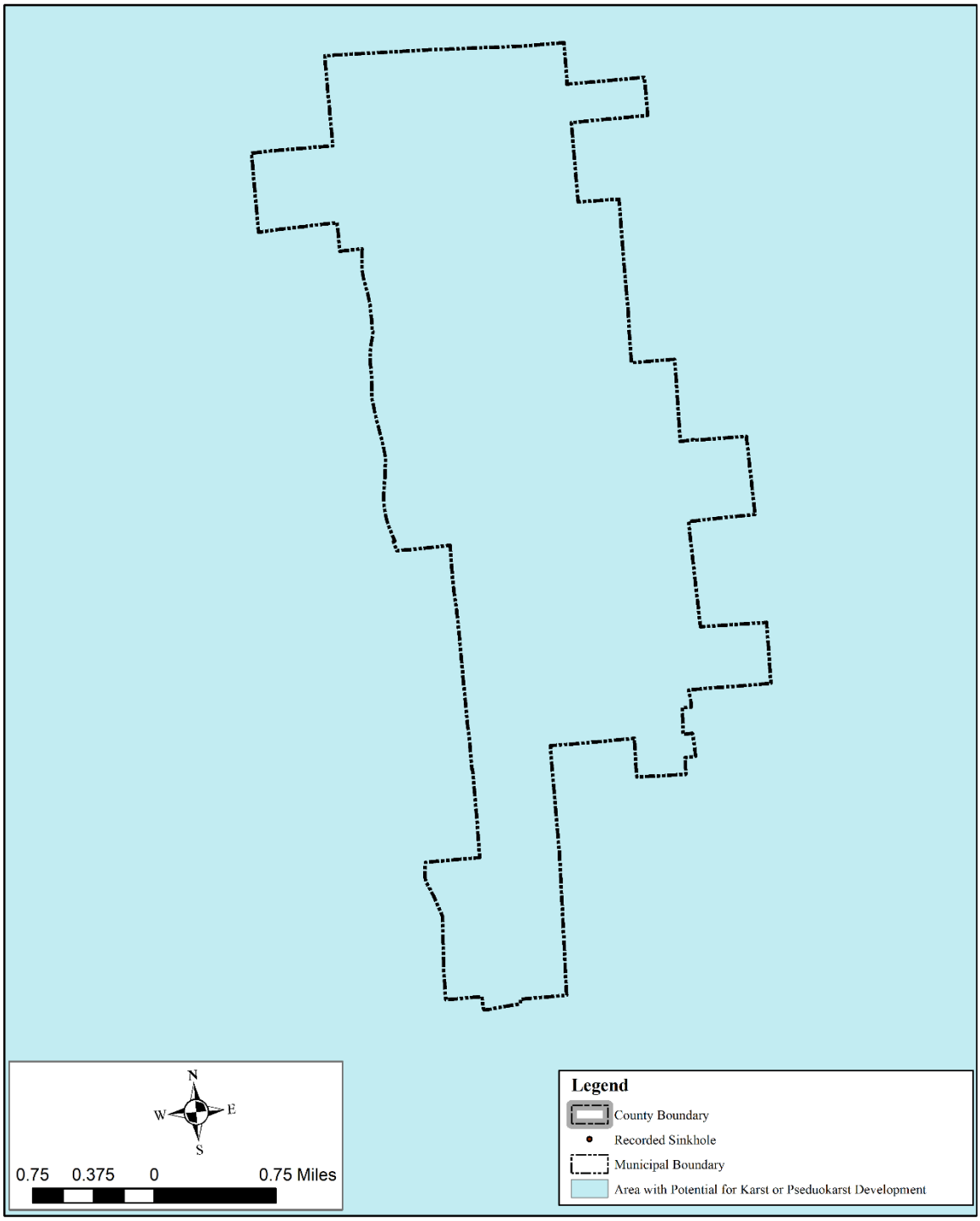


Figure 3.45
Conecuh County Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

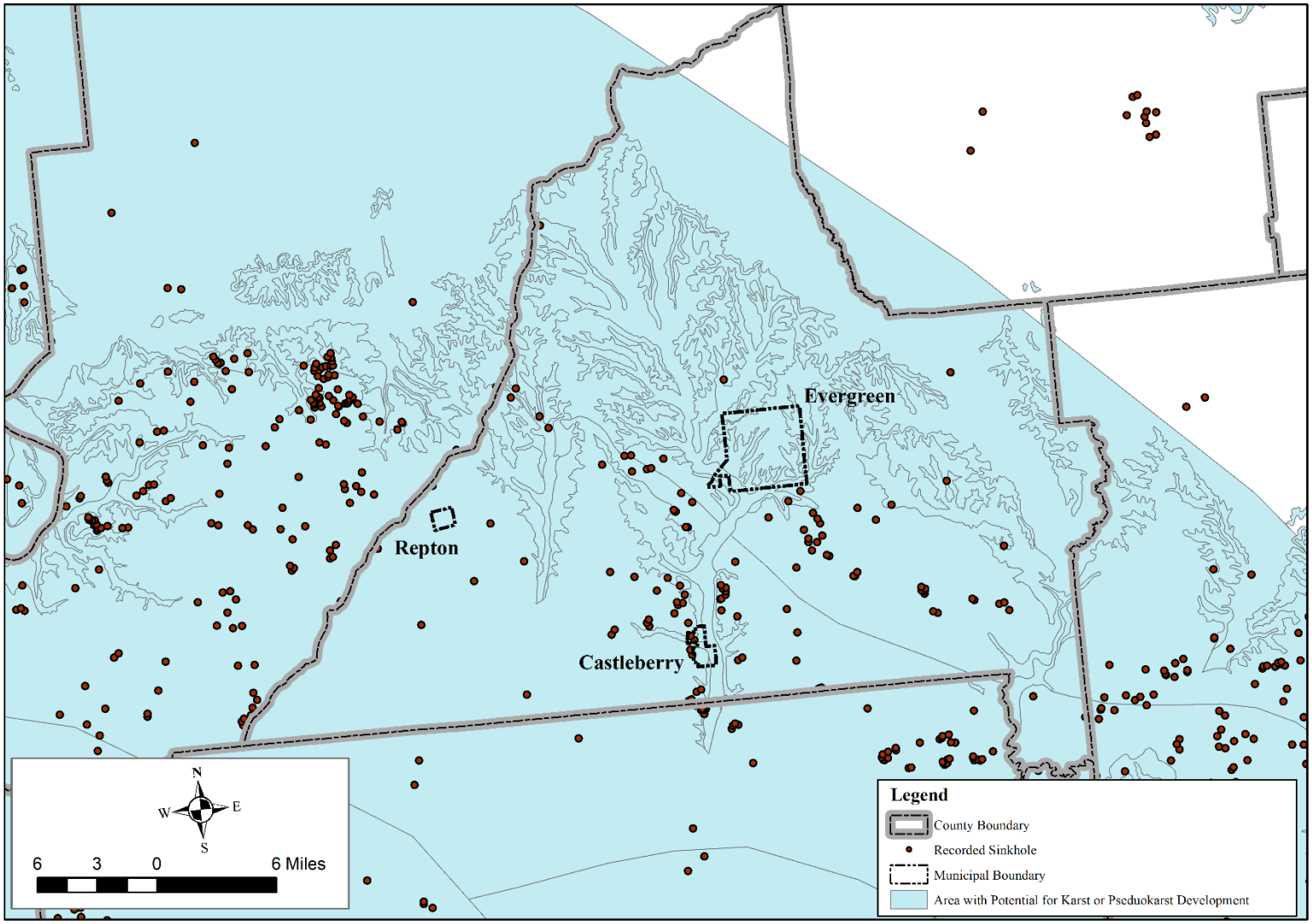


Figure 3.46
Town of Castleberry Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

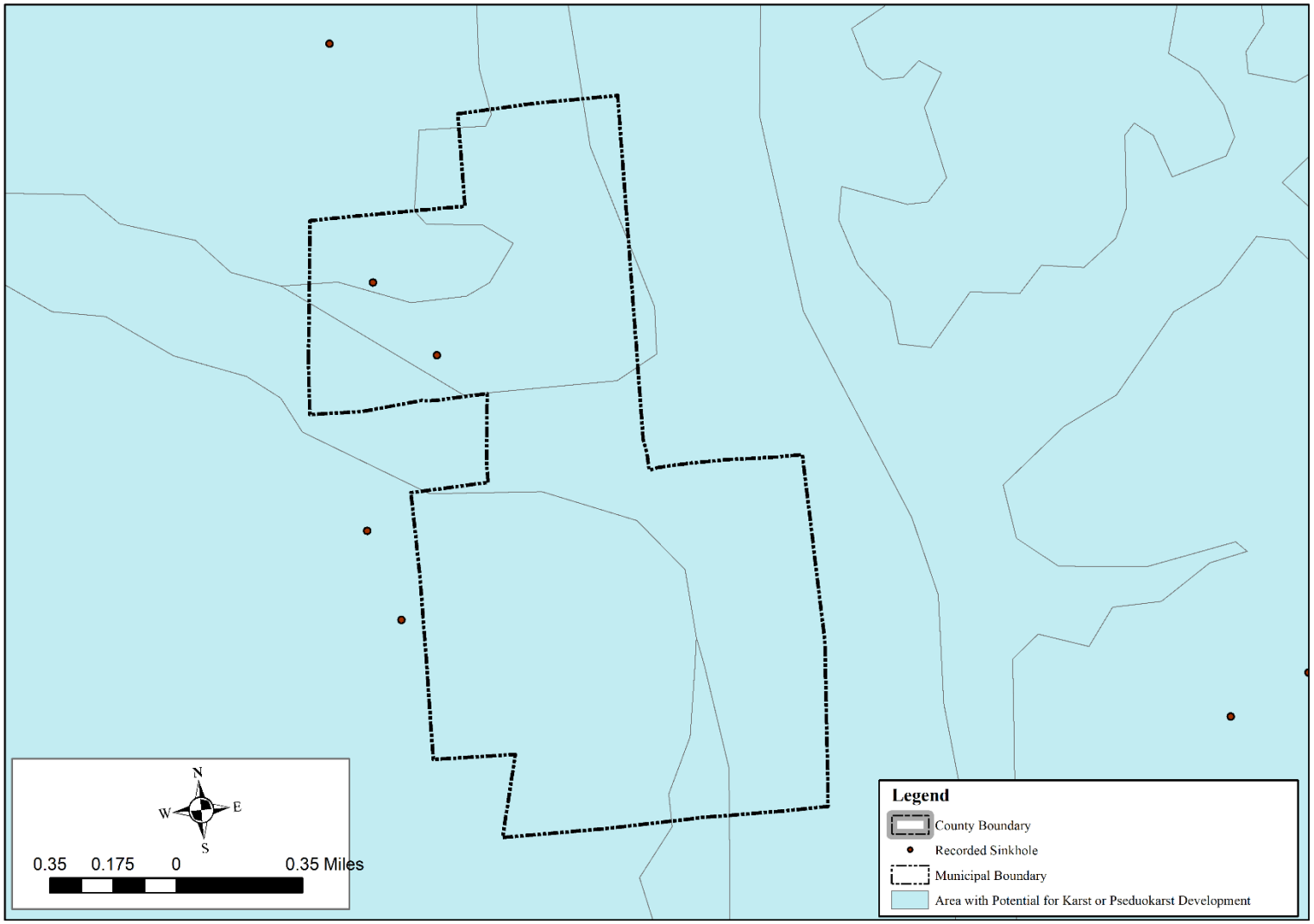


Figure 3.47
City of Evergreen Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

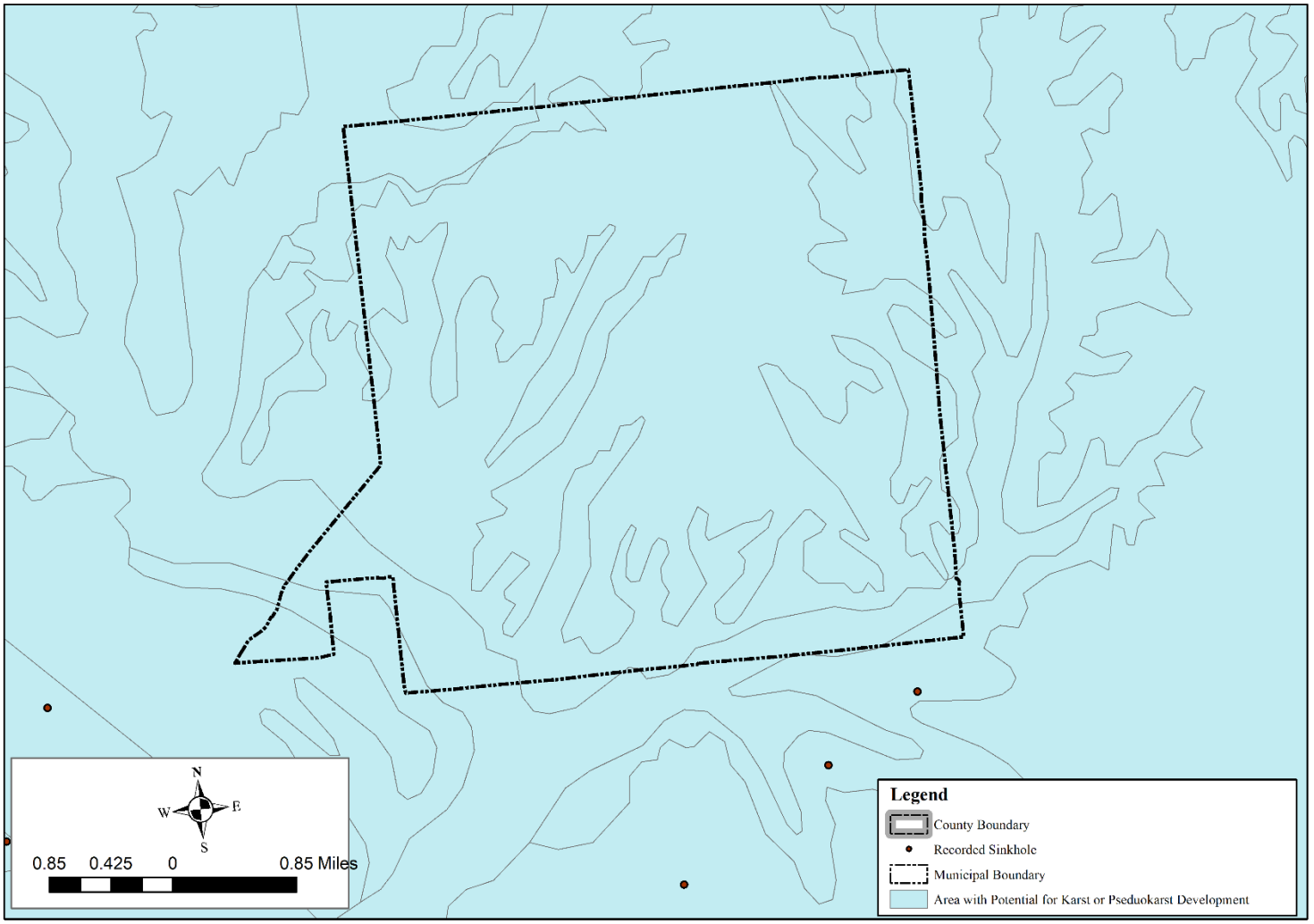


Figure 3.48
Town of Repton Areas Underlain By Soluble Rocks
with Potential for Karst or Pseudokarst Development

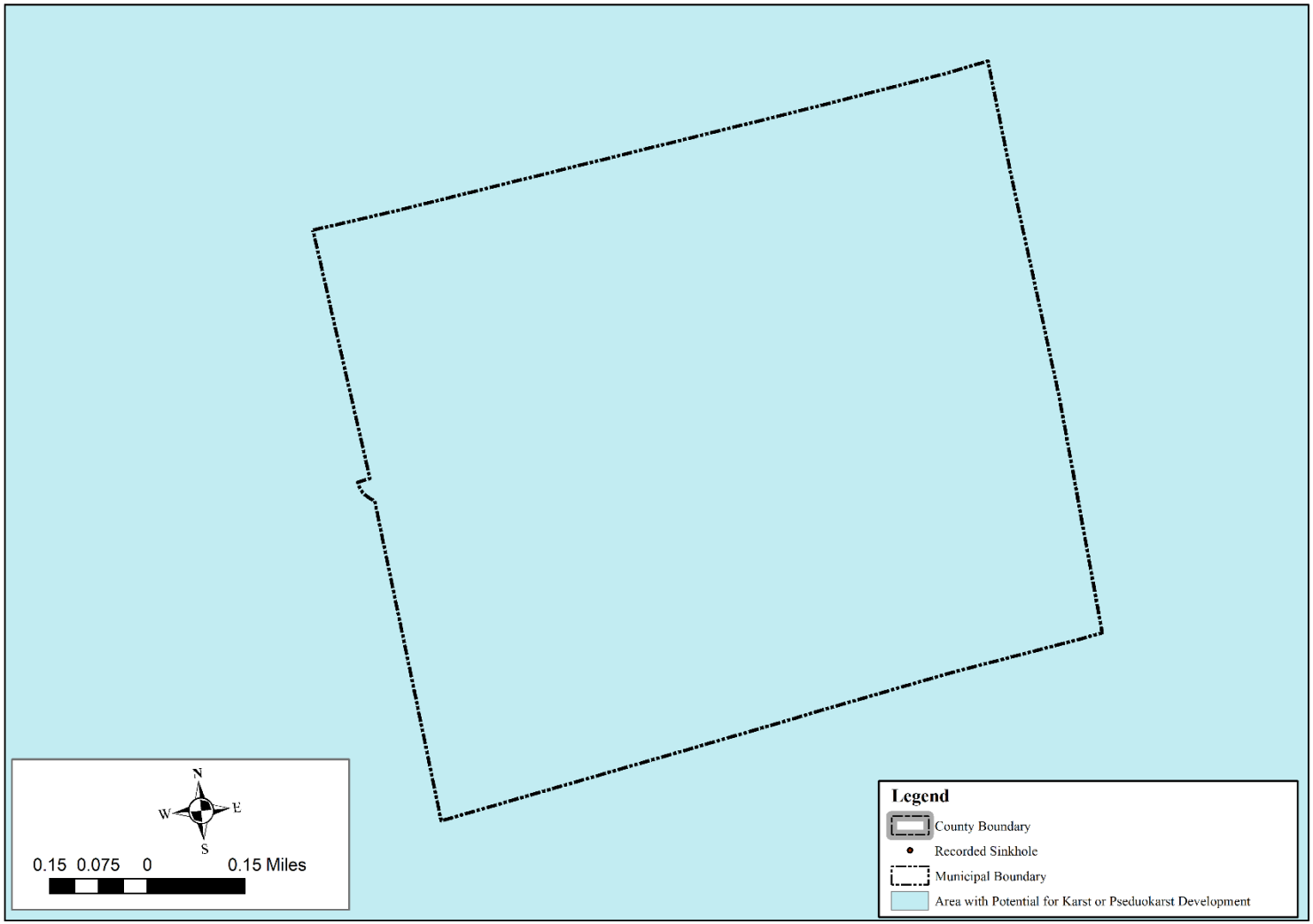


Figure 3.49
Monroe County Areas Underlain By Soluble Rocks
with Potential for Karst or Pseudokarst Development

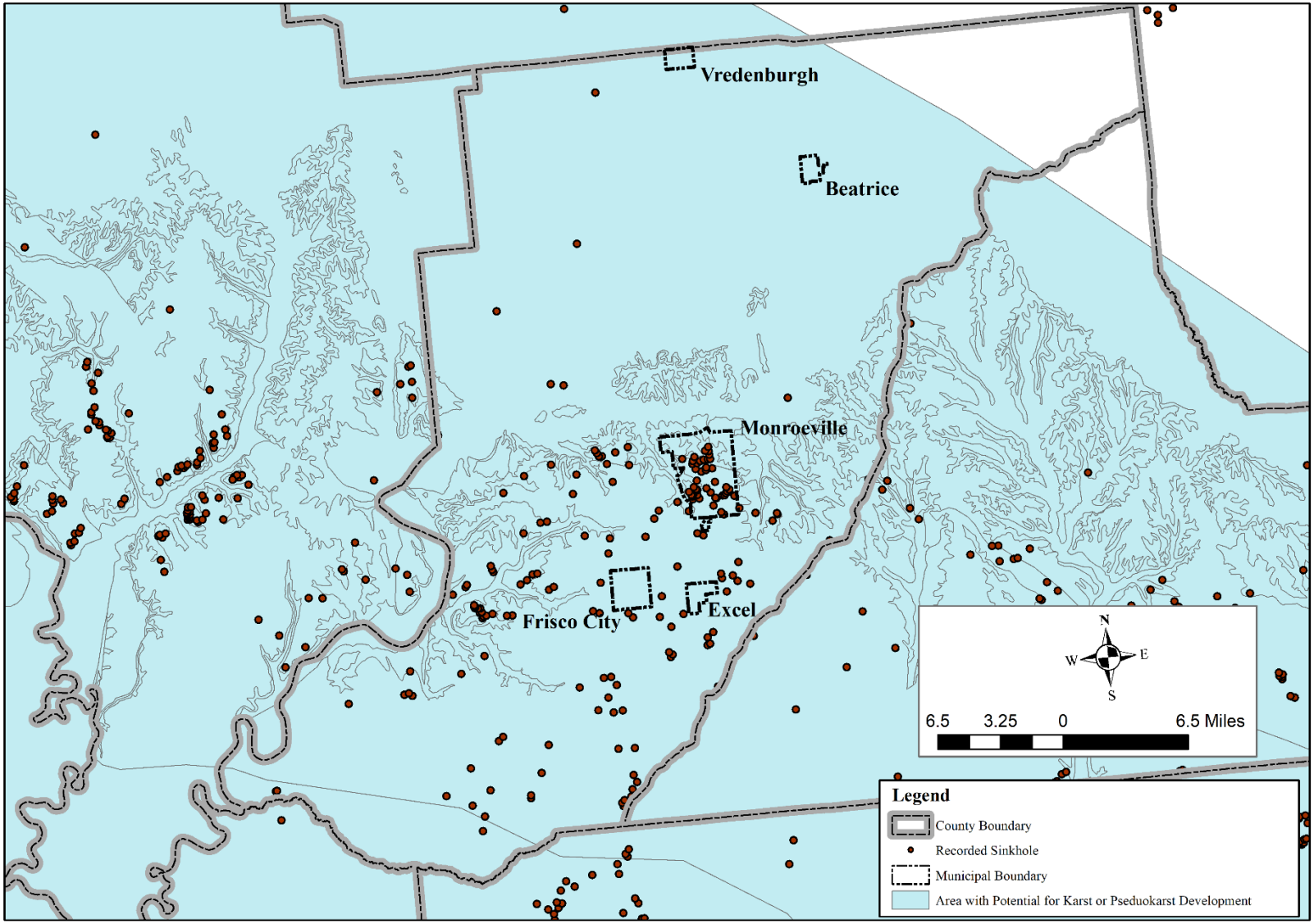


Figure 3.50
Town of Beatrice & Town of Vredenburgh Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

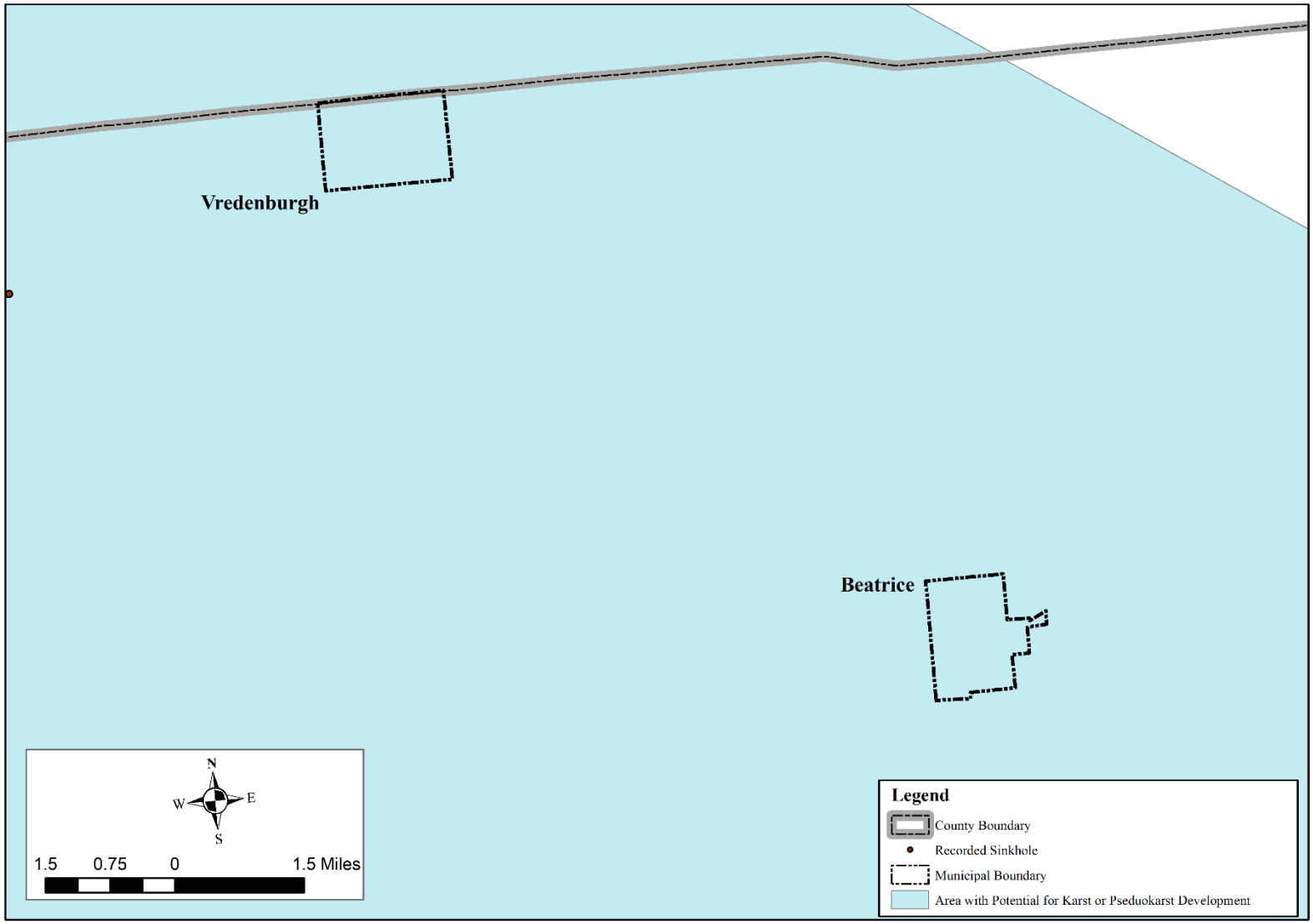


Figure 3.51
Town of Excel & Town of Frisco City Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

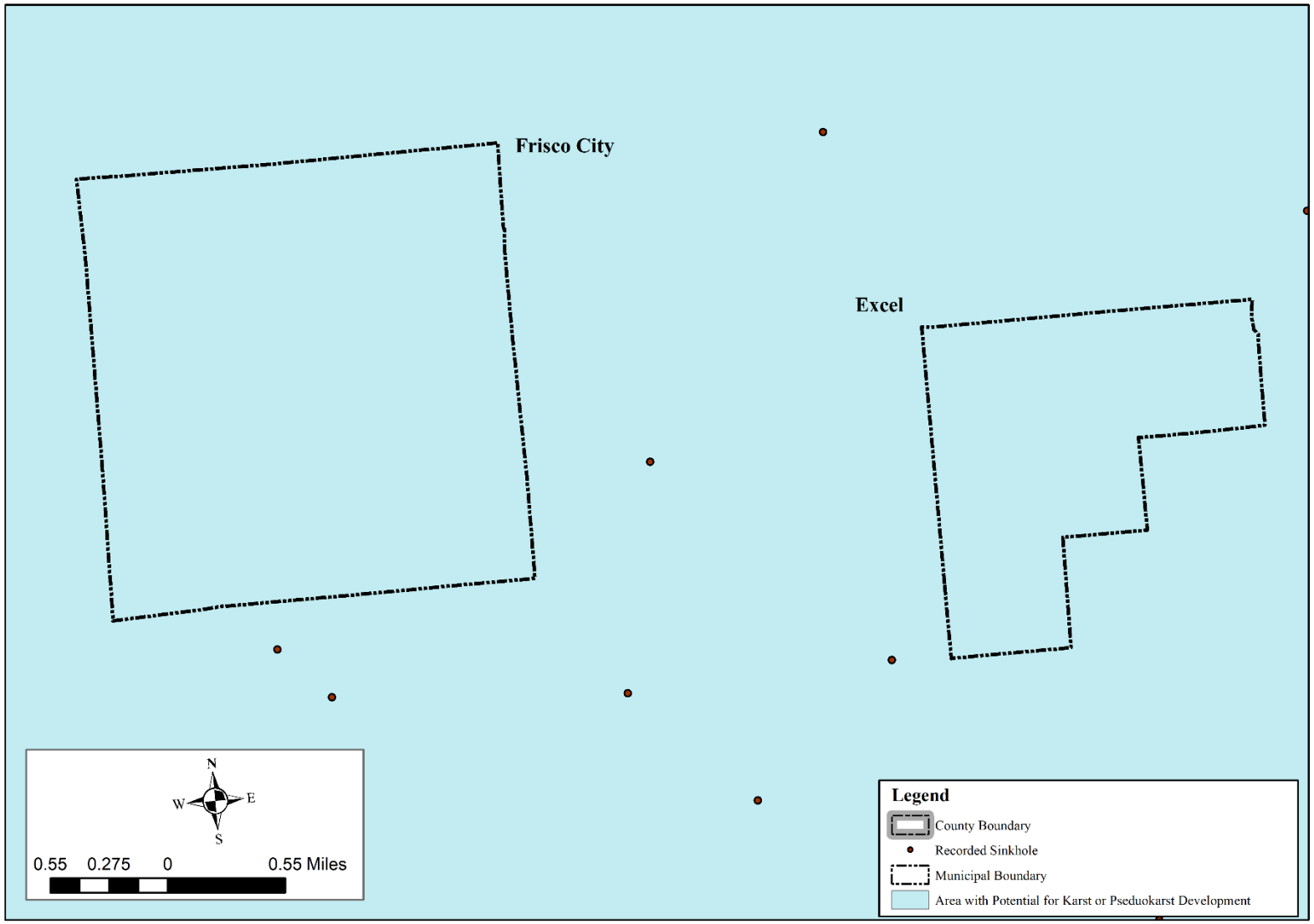


Figure 3.52
City of Monroeville Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

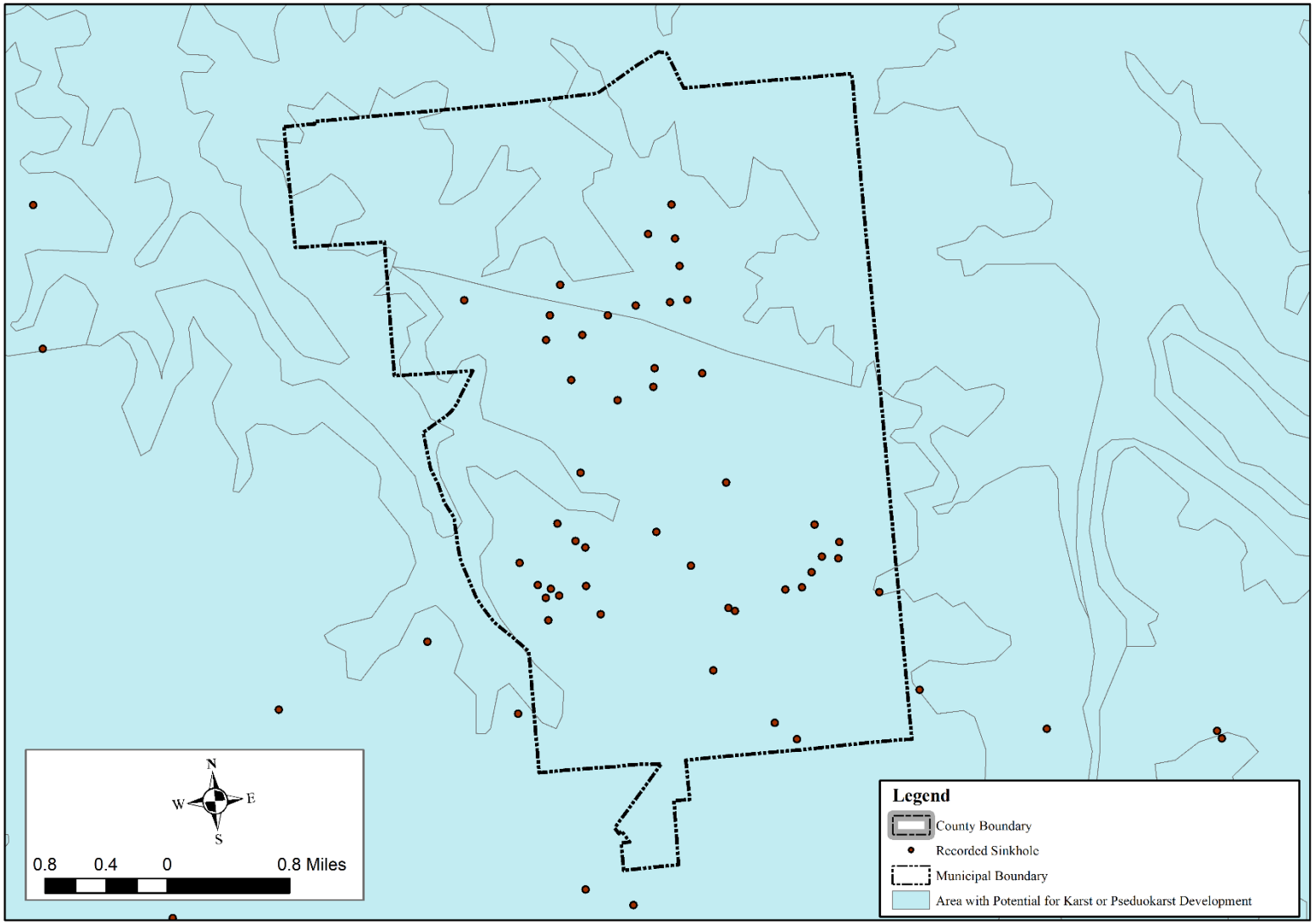


Figure 3.53
Washington County Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

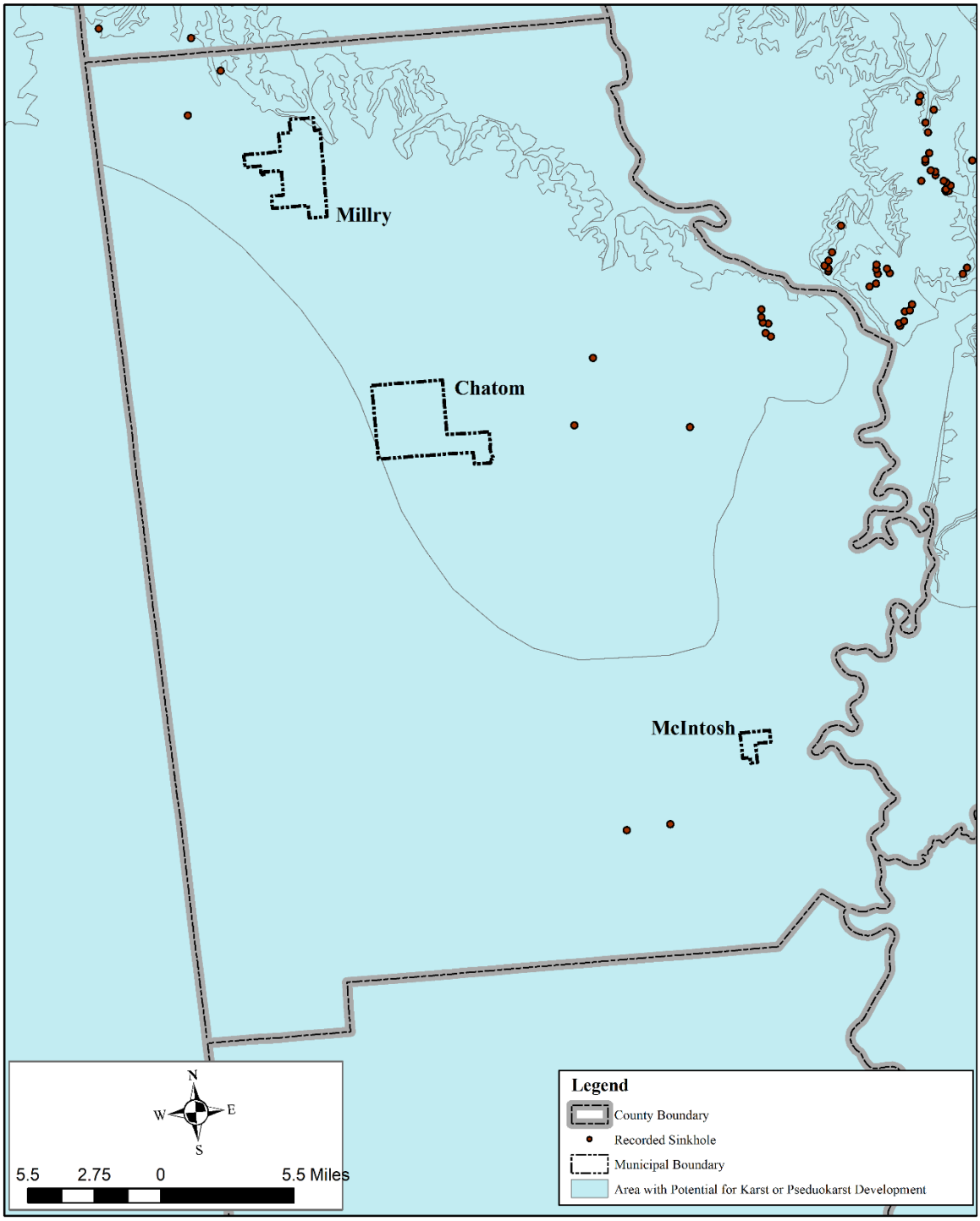


Figure 3.54
Town of Chatom Areas Underlain By Soluble Rocks
with Potential for Karst or Pseudokarst Development

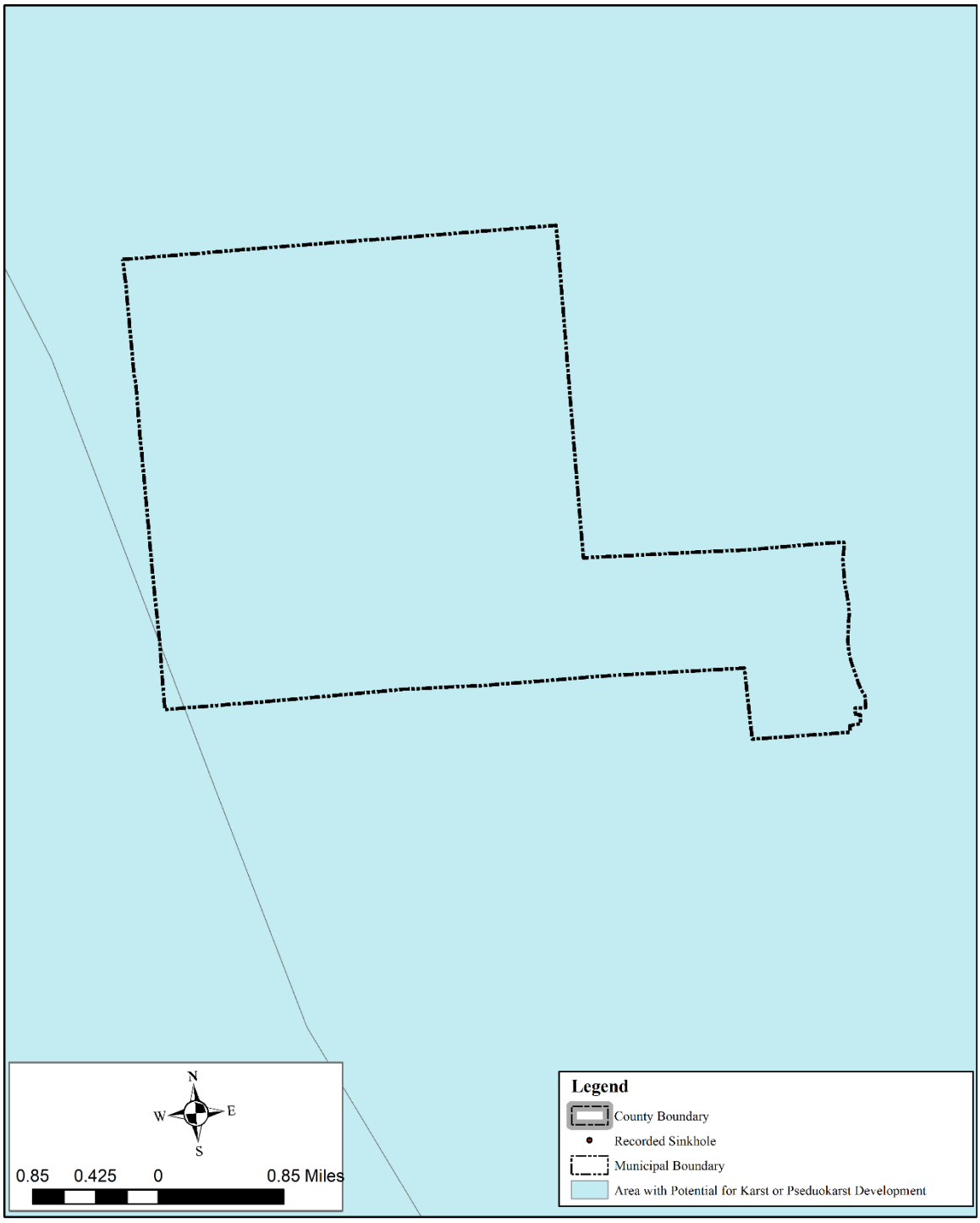


Figure 3.55
Town of McIntosh Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

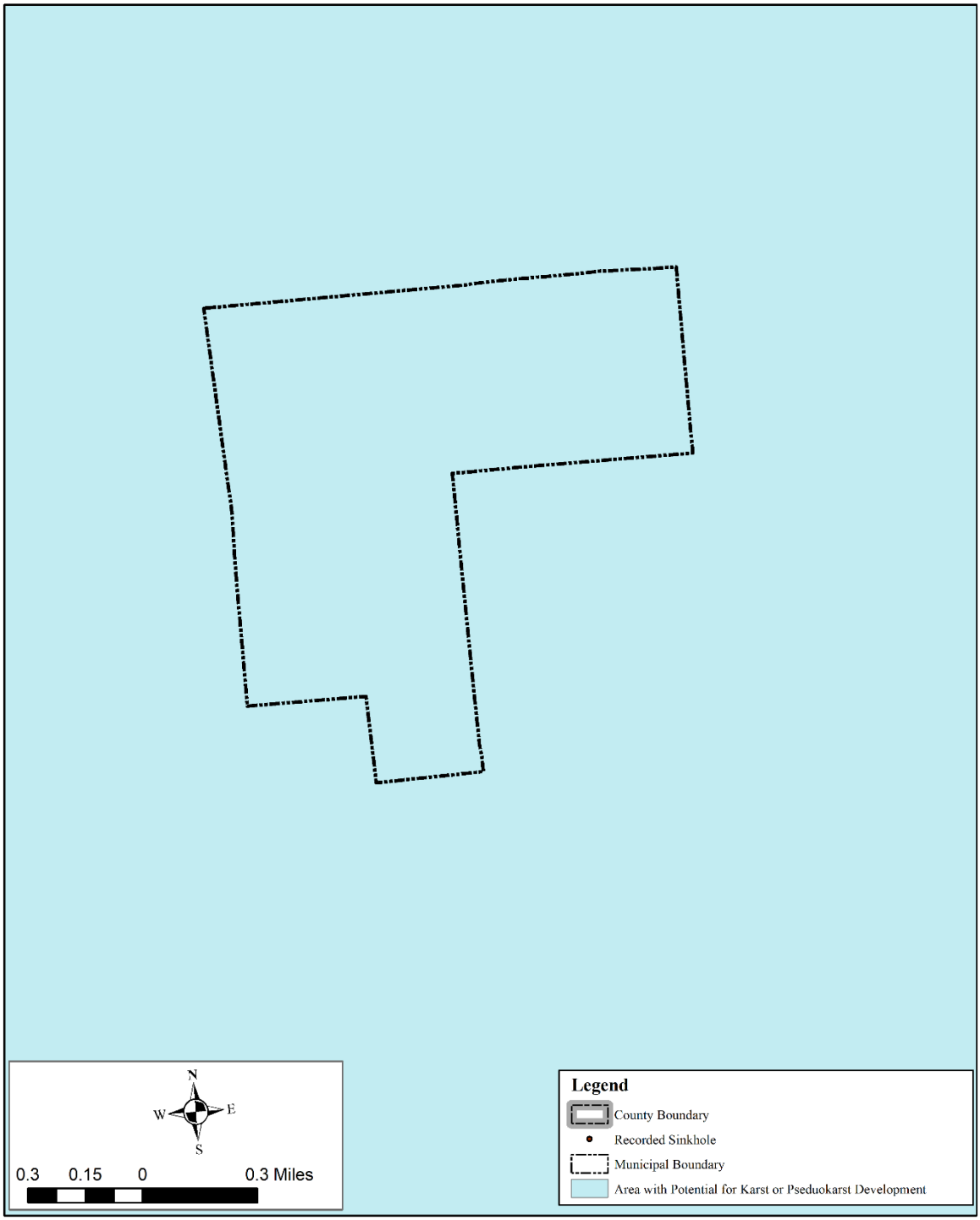
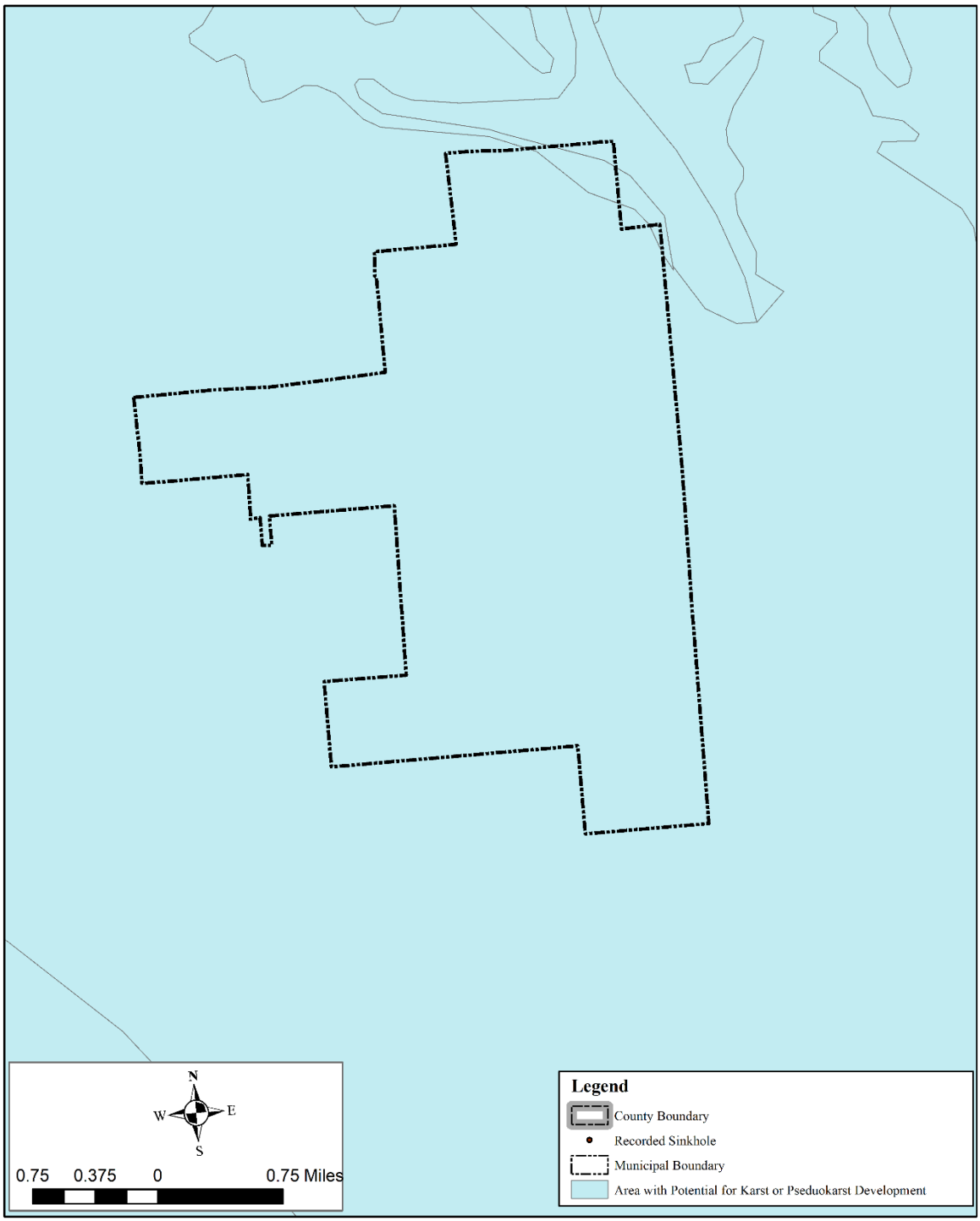


Figure 3.56
Town of Millry Areas Underlain By Soluble Rocks
with Potential for Karst or Pseudokarst Development



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 the planning area, the extent of these incidents in the area are estimated to be primarily isolated damages to structures and infrastructure. These incidences historically affect less than two acres.

Historical Occurrences

There are historical occurrences of subsidence in the planning area. The Geologic Survey of Alabama digitized historical topographic depression features on historical 1:24,000-scale topographic maps. Figure 3.9 includes 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 Events

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.

Table 3.23 provides a summary of extent, probability, and estimated losses by jurisdiction for land subsidence.

Table 3.23 Land Subsidence Summary by Jurisdiction

Jurisdiction	Extent	Probability of Occurrence	Estimated Losses
Clarke County (unincorporated)	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Coffeeville	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Fulton	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Grove Hill	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
City of Jackson	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
City of Thomasville	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Conecuh County (unincorporated)	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*

Town of Castleberry	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
City of Evergreen	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Repton	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Monroe County (unincorporated)	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Beatrice	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Excel	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Frisco City	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
City of Monroeville	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Vredenburgh	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Washington County (unincorporated)	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Chatom	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of McIntosh	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Millry	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
** Unable to provide due to lack of data*			

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 were development occurs near or within the vegetative cover.

Locations Affected

ATRC used the Southern Wildfire Risk Assessment Summary Report for the planning area to analyze the area's susceptibility to wildfires. Figures 3.57-3.60 illustrate 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. This is illustrated in these figures where areas around the most populous cities have the higher WUI. Table 3.24 shows that approximately 158,681 acres of the land area in the county is classified as experiencing moderate or above impacts from WUI fires. This is roughly 23% of the planning area.

Participating Boards of Educations do not have properties located in areas with higher risk for wildfires.

Figure 3.57

Clarke County-Wildland Urban Interface Risk Index

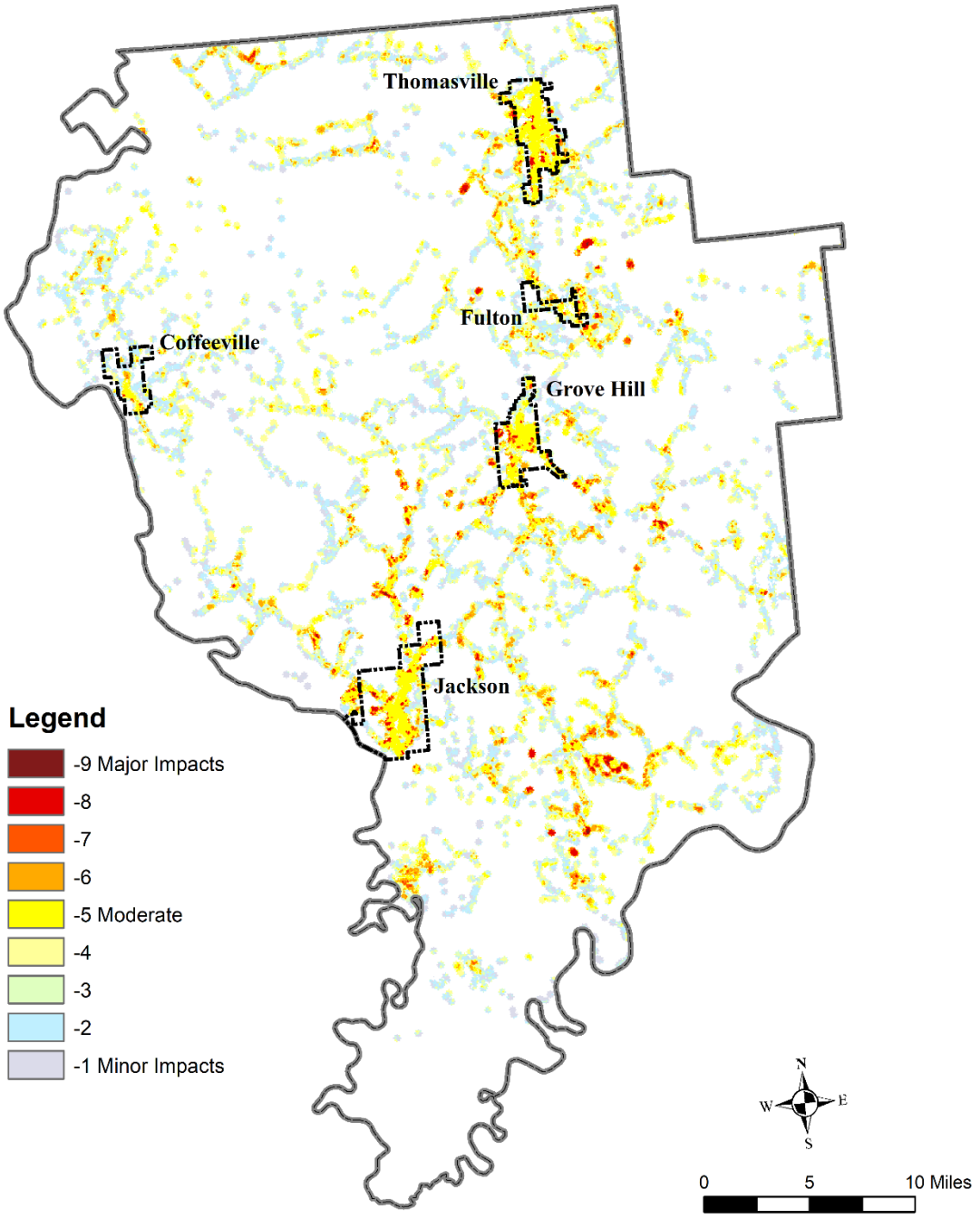


Figure 3.58

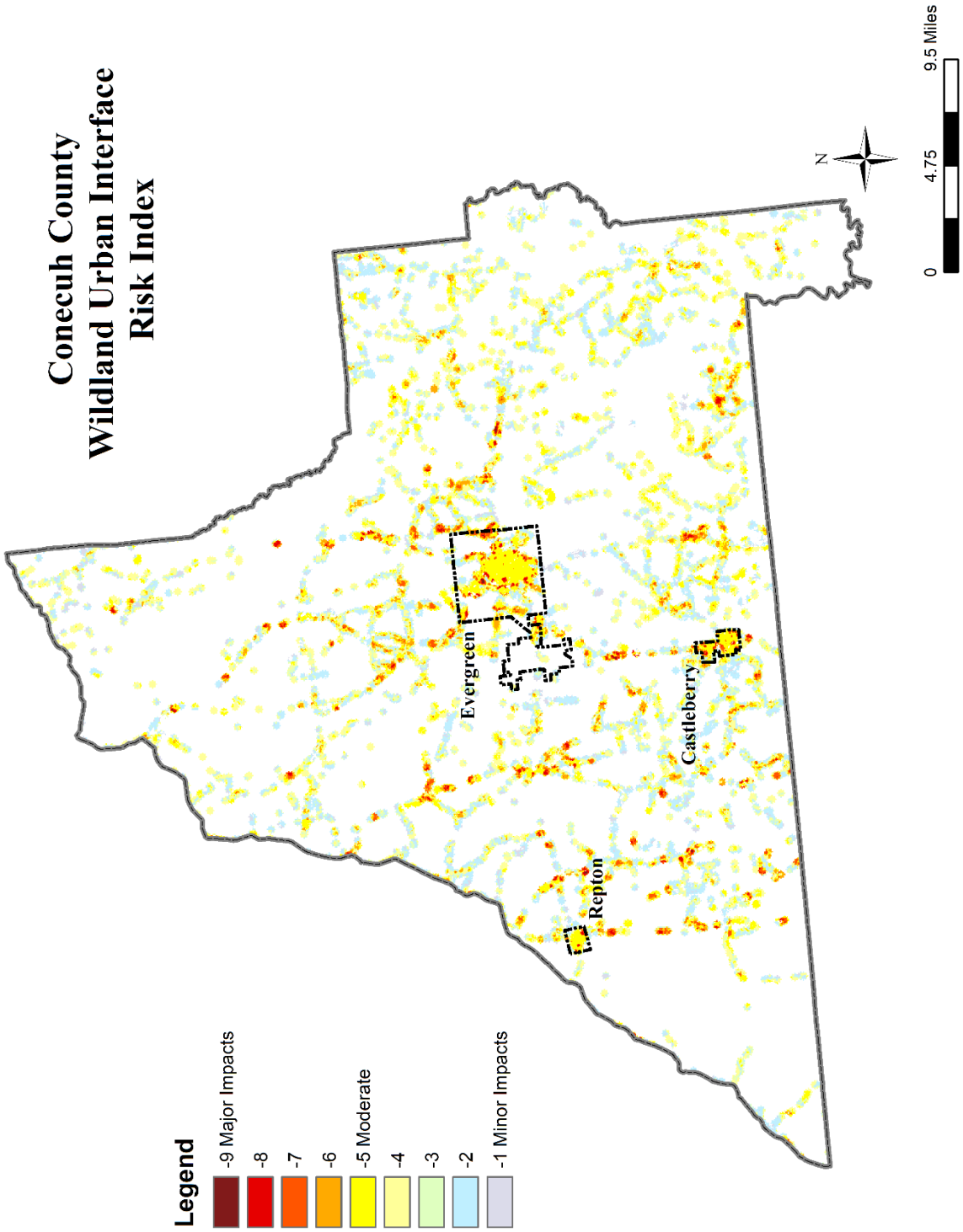

Conecuh County
Wildland Urban Interface
Risk Index
N
0
4.75
9.5 Miles
Evergreen
Castleberry
Repton
Legend
-9 Major Impacts
-8
-7
-6
-5 Moderate
-4
-3
-2
-1 Minor Impacts

Figure 3.59

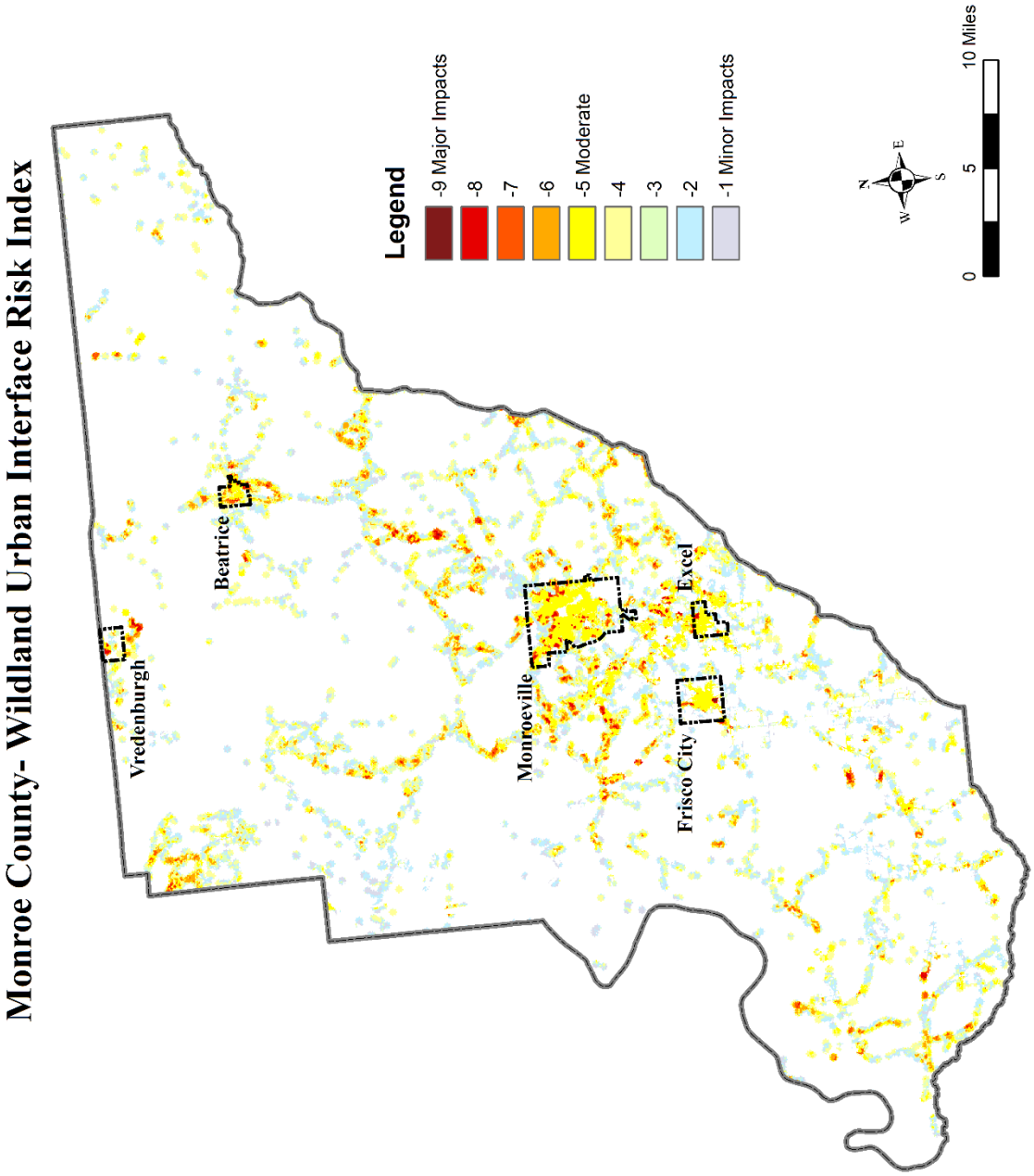

Monroe County- Wildland Urban Interface Risk Index
Legend
-9 Major Impacts
-8
-7
-6
-5 Moderate
-4
-3
-2
-1 Minor Impacts
N
E
S
W
0
5
10 Miles
Vredenburgh
Beatrice
Monroeville
Excel
Frisco City

Figure 3.60

Washington County-Wildland Urban Interface Risk Index

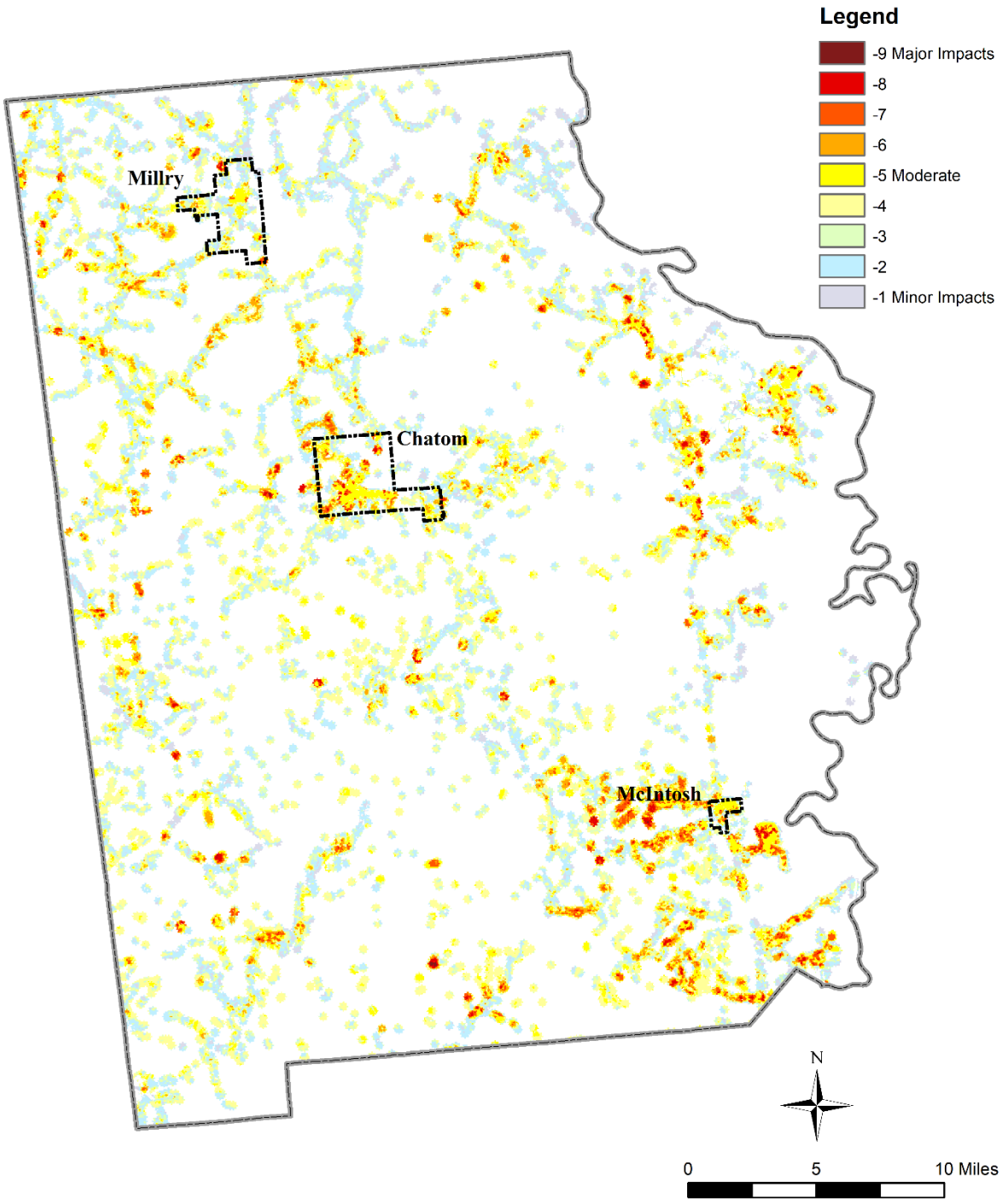


Table 3.24 Wildland Urban Interface Risk Index
For AEMA Division A-ATRC Planning Area

	Class	Acres	Percent
	-9 Major Impacts	229	0.0 %
	-8	5,827	0.9 %
	-7	20,694	3.0 %
	-6	35,018	5.2 %
	-5 Moderate	96,913	14.3 %
	-4	193,729	28.5 %
	-3	104,441	15.4 %
	-2	170,368	25.1 %
	-1 Minor Impacts	51,848	7.6 %
	Total	**679,067**	**100.0 %**

Source: Southern Wildfire Risk Assessment

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 the planning area, there are no land areas classified as having a risk higher than a 6. Figures 3.61-3.64 show the burn probability for the counties in the division. Table 3.25 provides the acreage and percent of the division which falls into each burn probability category.

Figure 3.61

Clarke County-Burn Probability

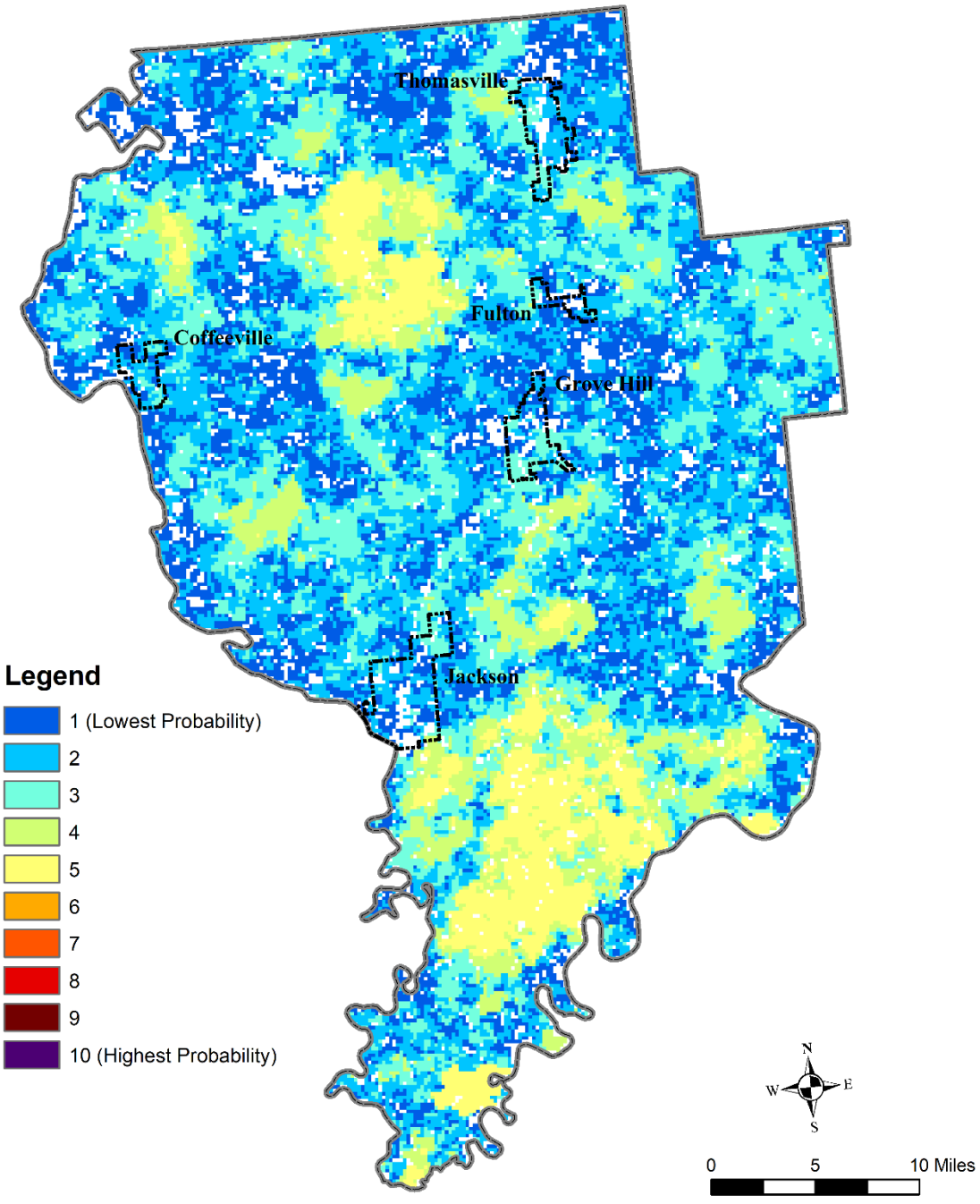


Figure 3.62

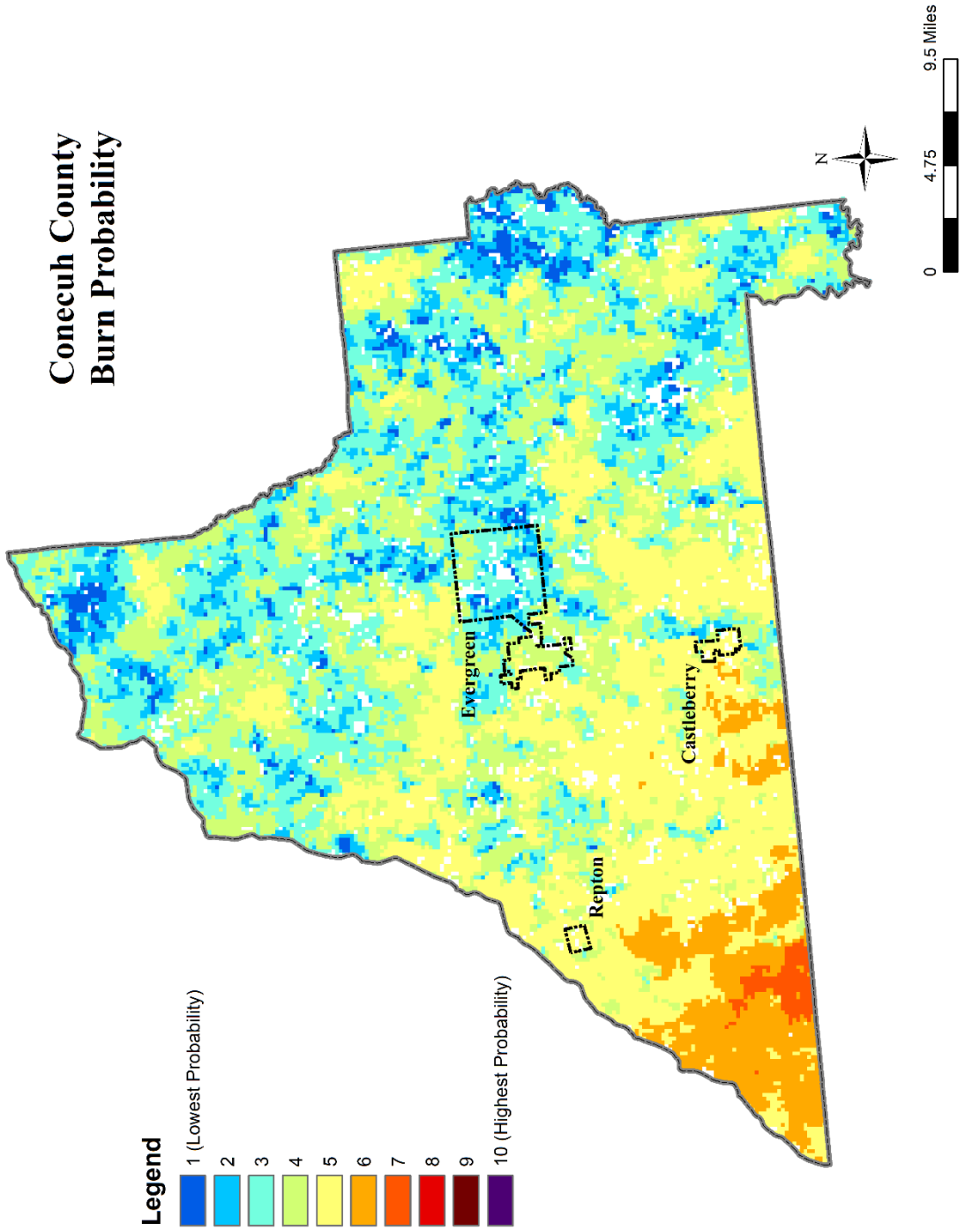

Conecuh County
Burn Probability
N
0
4.75
9.5 Miles
Evergreen
Castleberry
Repton
Legend
1 (Lowest Probability)
2
3
4
5
6
7
8
9
10 (Highest Probability)

Figure 3.63

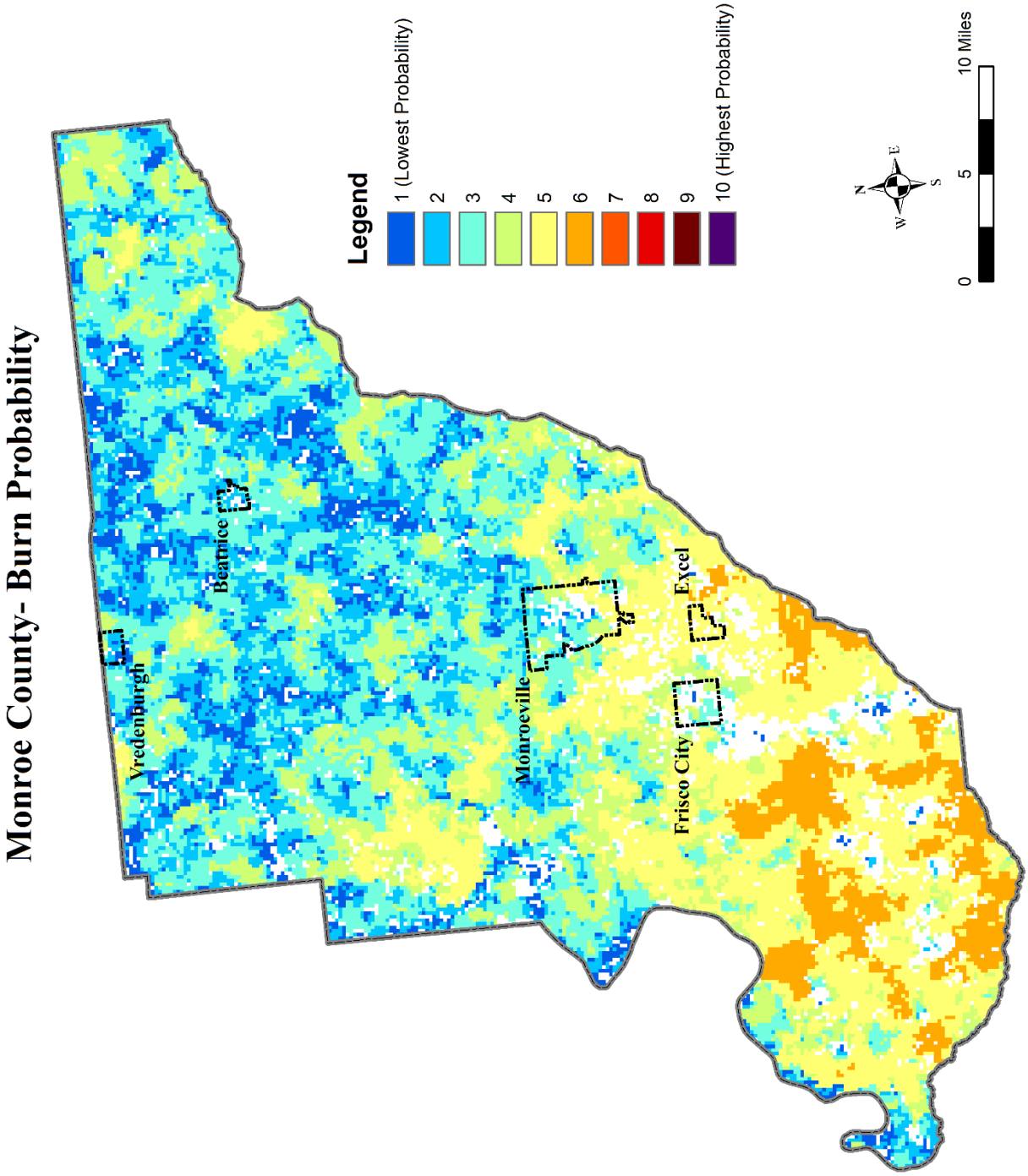

Monroe County- Burn Probability
Legend
1 (Lowest Probability)
2
3
4
5
6
7
8
9
10 (Highest Probability)
N
E
S
W
0
5
10 Miles
Vredenburgh
Beatrice
Monroeville
Frisco City
Excel

Figure 3.64

Washington County-Burn Probability

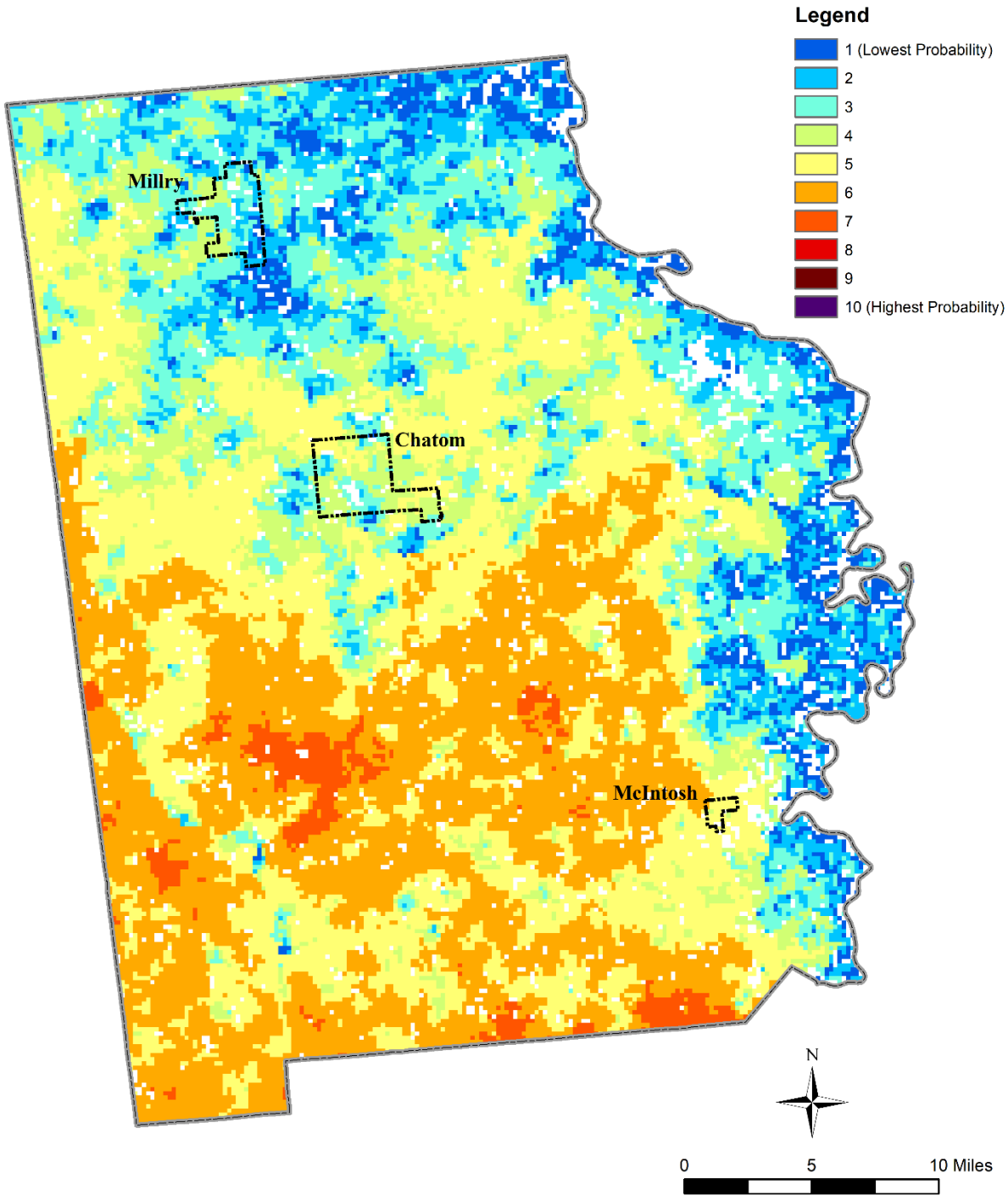


Table 3.25 Burn Probability for AEMA Division A- ATRC Planning Area

	Class	Acres	Percent
	1	762,945	15.4 %
	2	1,390,929	28.0 %
	3	1,513,046	30.4 %
	4	708,579	14.3 %
	5	545,120	11.0 %
	6	49,520	1.0 %
	7	0	0.0 %
	8	0	0.0 %
	9	0	0.0 %
	10	0	0.0 %
	Total	**4,970,139**	**100.0 %**

Source: Southern Wildfire Risk Assessment

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. As population and development increases in high growth areas, such as Thomasville, the wildland urban interface should be closely monitored for potential effects.

The Characteristic Fire Intensity Scale (FIS) can be used to illustrate wildfire extent. The FIS specifically identifies areas where significant fuel hazards and associated dangerous fire behavior potential exist based on a weighted average of four percentile weather categories.

- **Class 1, Very Low:** Very small, discontinuous flames, usually less than 1 foot in length; very low rate of spread; no spotting. Fires are typically easy to suppress by firefighters with basic training and non-specialized equipment.

- **Class 2, Low:** Small flames, usually less than two feet long; small amount of very short range spotting possible. Fires are easy to suppress by trained firefighters with protective equipment and specialized tools.

- **Class 3, Moderate:** Flames up to 8 feet in length; short-range spotting is possible. Trained firefighters will find these fires difficult to suppress without support from aircraft or engines, but dozer and plows are generally effective. Increasing potential for harm or damage to life and property.

- **Class 4, High:** Large Flames, up to 30 feet in length; short-range spotting common; medium range spotting possible. Direct attack by trained firefighters, engines, and dozers is generally ineffective, indirect attack may be effective. Significant potential for harm or damage to life and property.

- **Class 5, Very High:** Very large flames up to 150 feet in length; profuse short-range spotting, frequent long-range spotting; strong fire-induced winds. Indirect attack marginally effective at the head of the fire. Great potential for harm or damage to life and property.

Figures 3.65-3.68 illustrate the FUS for each county and jurisdiction.

Figure 3.65

Clarke County-Fire Intensity

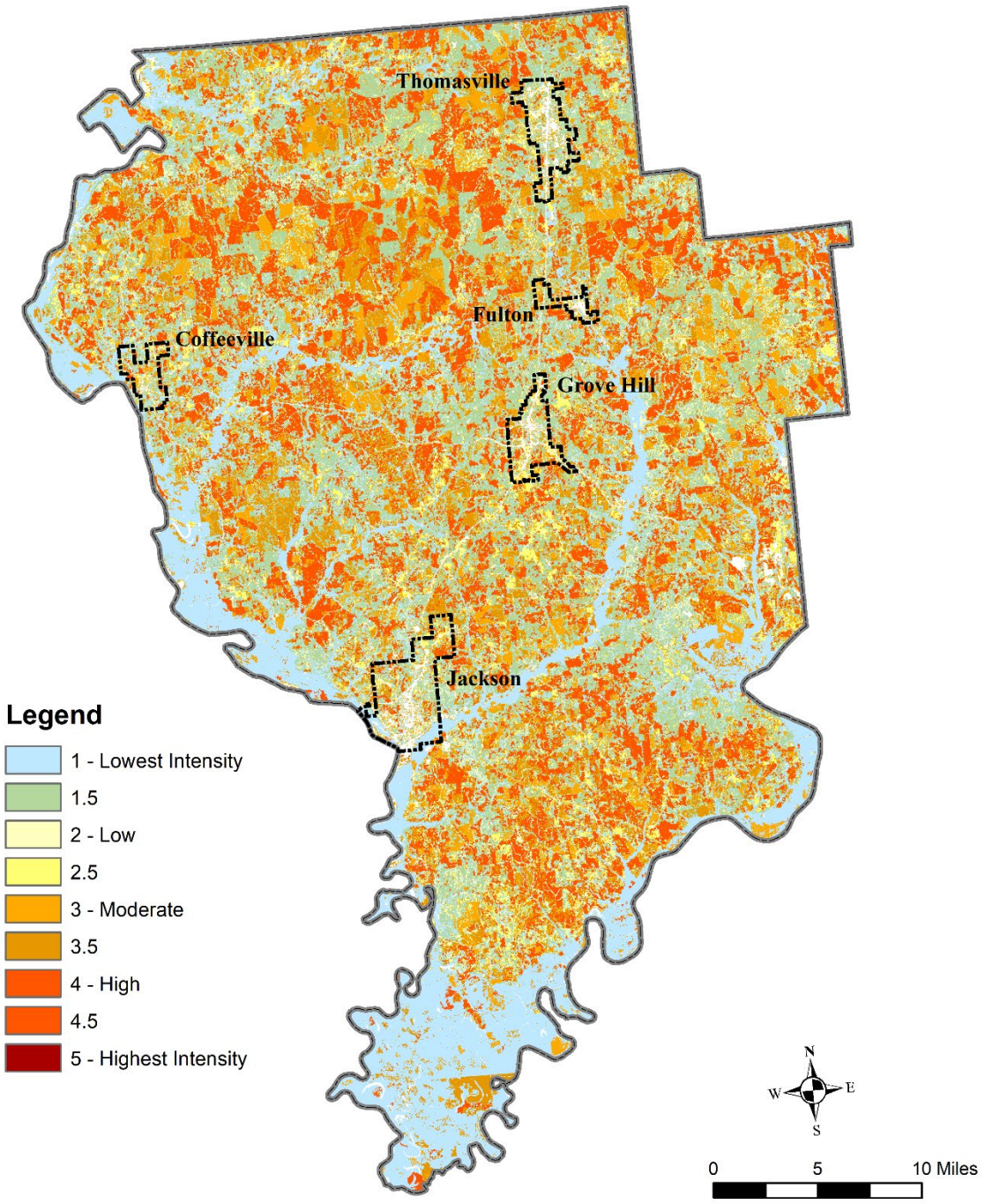


Figure 3.66

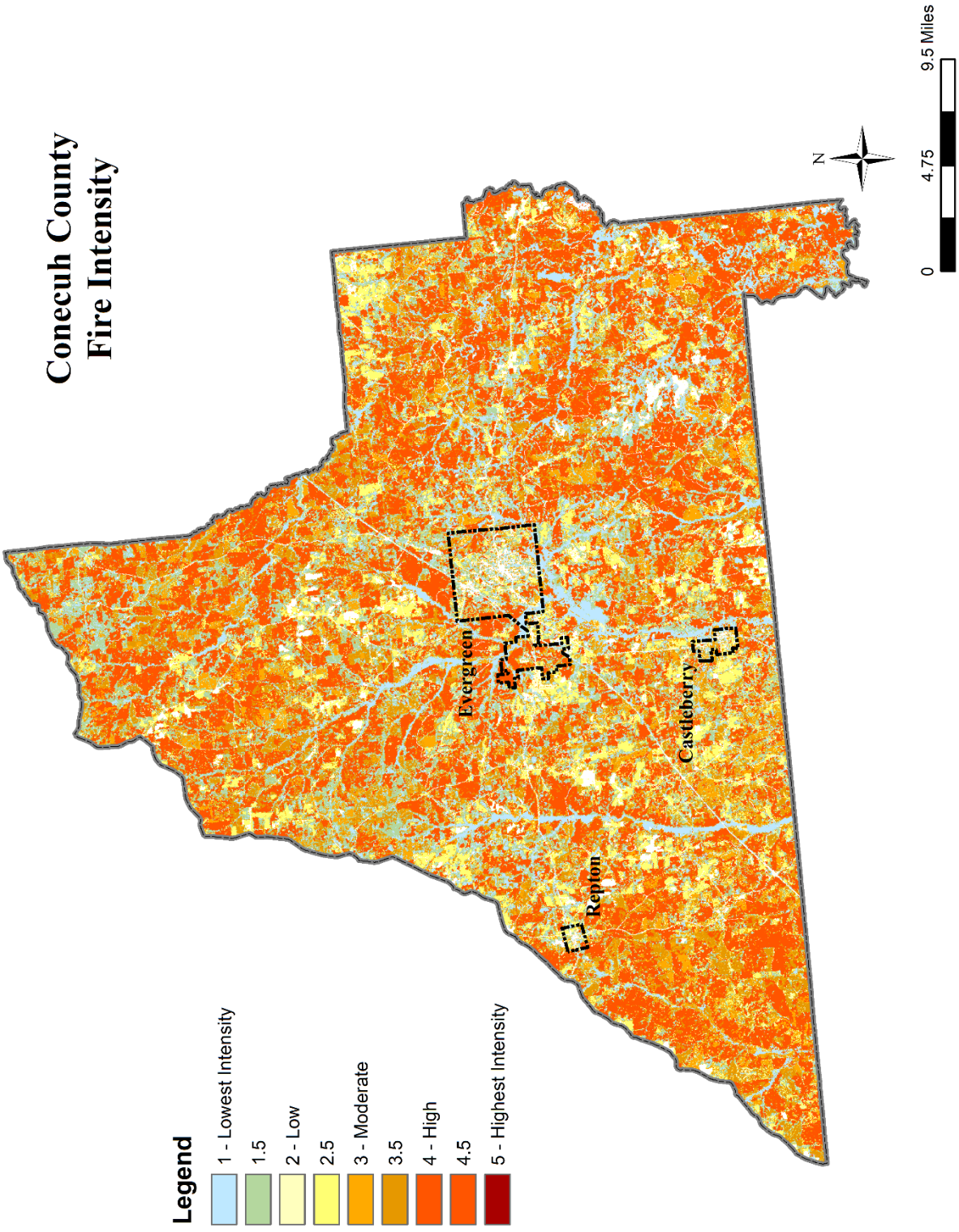

Conecuh County
Fire Intensity
N
0
4.75
9.5 Miles
Evergreen
Castleberry
Repton
Legend
1 - Lowest Intensity
1.5
2 - Low
2.5
3 - Moderate
3.5
4 - High
4.5
5 - Highest Intensity

Figure 3.67

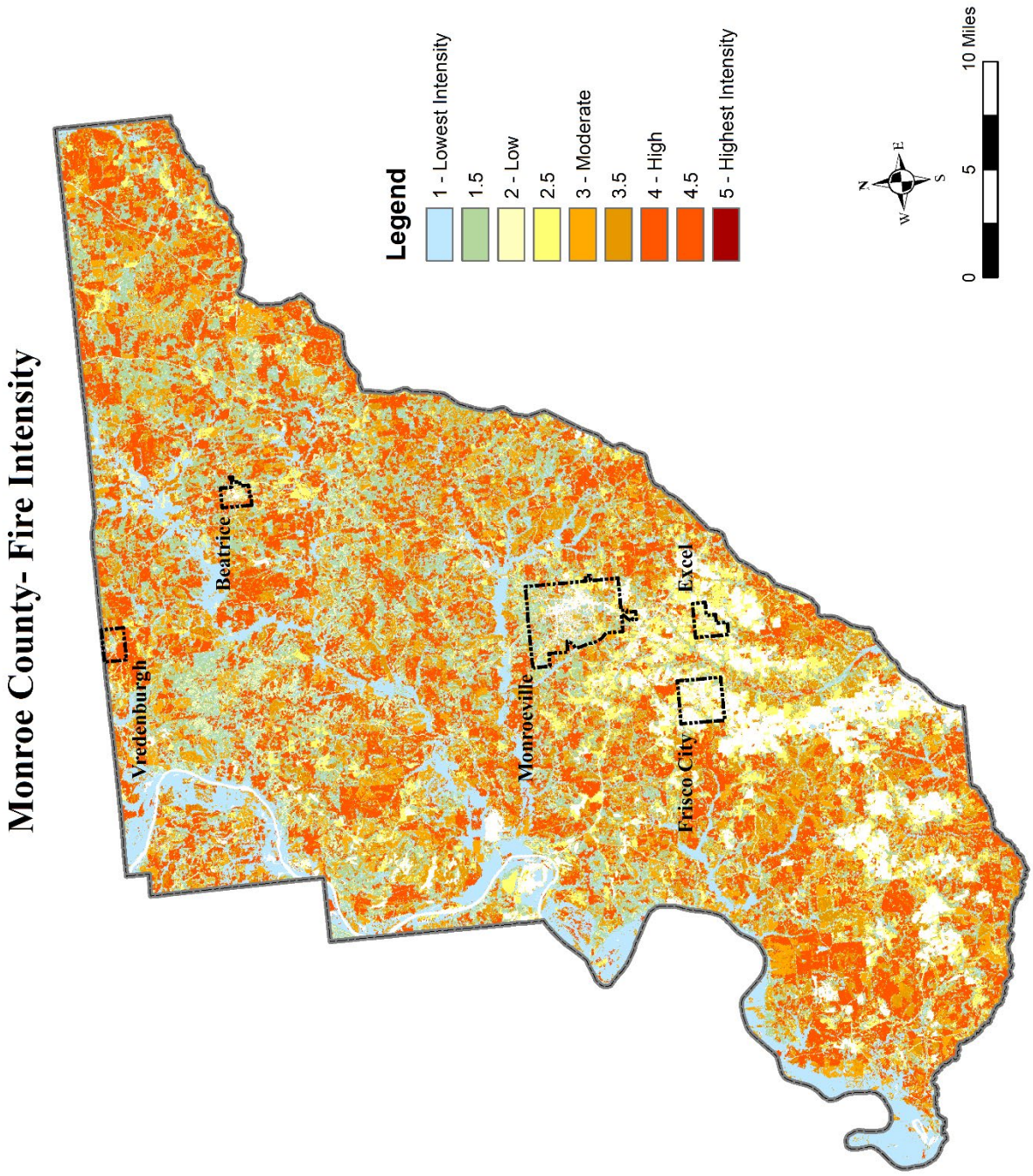
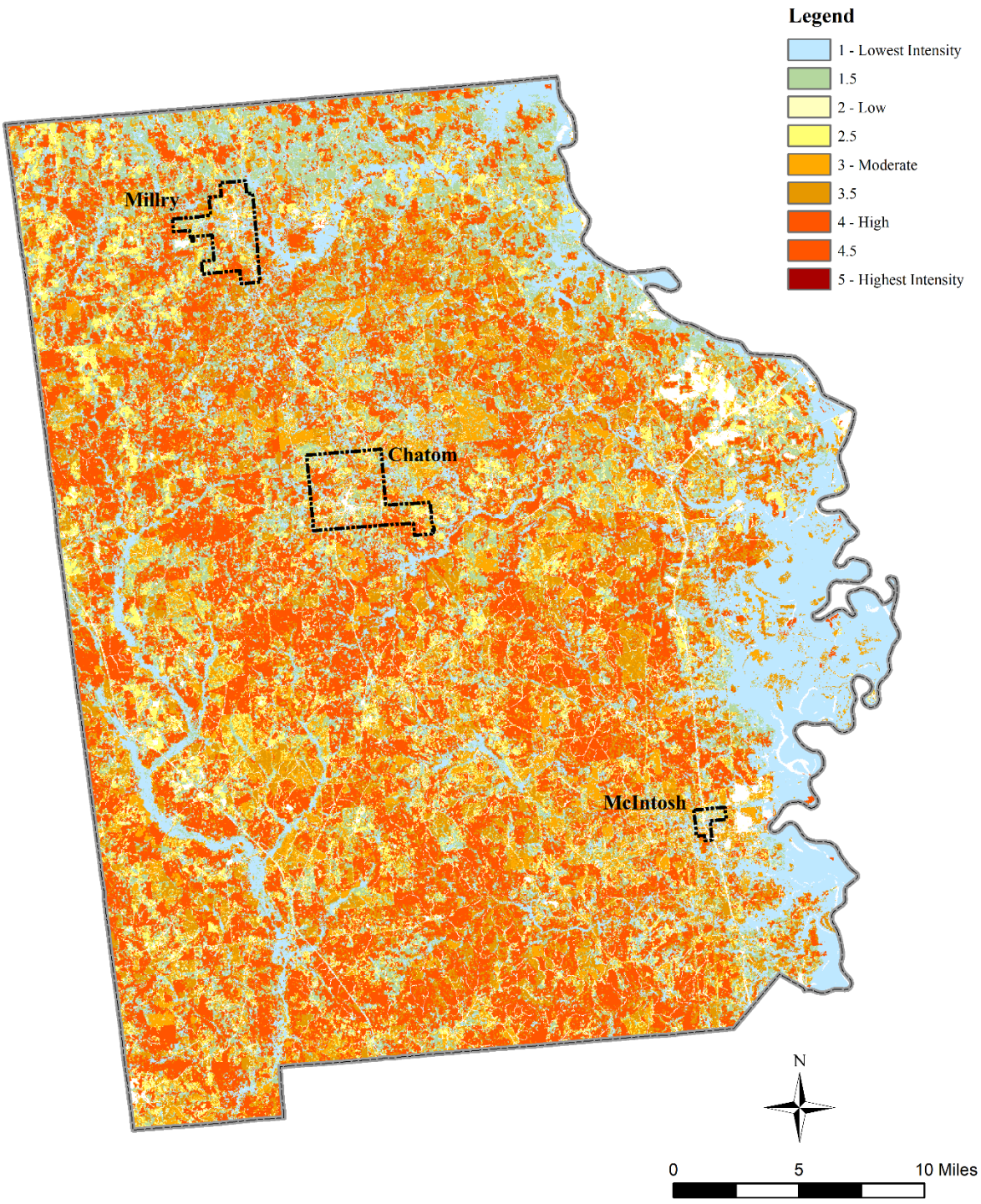

Monroe County- Fire Intensity
Legend
1 - Lowest Intensity
1.5
2 - Low
2.5
3 - Moderate
3.5
4 - High
4.5
5 - Highest Intensity
N
E
S
W
0
5
10 Miles
Vredenburgh
Beatrice
Monroeville
Excel
Frisco City

Figure 3.68

Washington County-Fire Intensity



Historical Occurrences

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. Table 3.26 provides wildfire data for each county from 2010-2019.

Table 3.26 Historic Wildfire Data

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Clarke										
# of fires	37	34	13	14	34	31	38	17	6	20
Total Acres Burned	259	739	102	231	164	268	207.2	119.55	169.9	90.95
Average Acres Burned per Fire	7.0	21.7	7.8	16.5	4.8	8.6	5.5	7.0	28.3	4.5
Conecuh										
# of fires	66	72	25	22	35	42	65	37	25	31
Total Acres Burned	741	1093	275	482	402	732	449.05	1139.85	114.6	279.15
Average Acres Burned per Fire	11.2	15.2	11.0	21.9	11.5	17.4	6.9	30.8	4.6	9.0
Monroe										
# of fires	46	52	22	21	12	27	11	24	10	18
Total Acres Burned	244	587	84	140	157	135	53.25	563.25	17.8	105.6
Average Acres Burned per Fire	5.3	11.3	3.8	6.7	13.1	5.0	4.8	23.5	1.8	5.9
Washington										
# of fires	132	78	36	46	106	72	94	25	19	31
Total Acres Burned	2012	1818	827	1296	1269	1706	1313.95	70	452.3	284.56
Average Acres Burned per Fire	15.2	23.3	23.0	28.2	12.0	23.7	14.0	2.8	23.8	9.2

Probability of Future Events

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. Based on the information in this profile, the entire planning area will be regarded to have a Medium probability for major damage from wildfire events.

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 the planning area, but when they do occur, they have a significant impact. Local governments have improved their response to winter storm events but they are unpredictable events. 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 2001 and 2010. Most recently, in January 2018, a system moved through that brought snow to Clarke and Washington Counties (Table 3.27). In Clarke County, storm total snow amounts of 3.5 inches in Thomasville, 3 inches in Bashi, 2.5 inches in Grove Hill, 2 inches in Jackson, 2 inches in Springfield and 1.5 inches in Chilton were reported. In Washington County, storm total snow amounts of 2.5 inches in McIntosh, 2 inches in Leroy, 1.75 in Vinegar Bend and 1.5 in Frankville. This system caused most normal operations to shut down for two days and caused some property damage due to falling trees and frozen pipes in the region.

Table 3.27 Division A- ATRC Counties Winter Storm Occurrences 2014-2019

County	Date	Deaths	Injuries	Property Damage	Crop Damage
Washington	1/16/2018	0	0	$0.00	$0.00
Clarke	1/16/2018	0	0	$0.00	$0.00
Totals		0	0	$0.00	$0.00

Source: NOAA Storms Events Database

Probability of Future Events

Winter storms in southwest Alabama are infrequent and generally short-term events; therefore, they have a low probability of causing major damage in the planning area.

3.3 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 at total value with a maximum score of 4.0.

Table 3.28 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 3.29 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 3.29 Summary of Regional Hazard Risk Impact

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

Clarke County

- With respect to vulnerable populations both Fulton and Jackson have over twenty-percent of their populations being over the age of 65. 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 jurisdictions have at least 20% of their population living below the poverty line with the exception of Thomasville.
- Around 21% of the housing stock in Fulton is mobile homes. These homes makes individuals more vulnerable to the effects of all hazards.

- In Clarke 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 Clarke County Jail, Crowne Healthcare-Thomasville, Jackson Healthcare, and the Meadows of Jackson.
- A number of factors influence jurisdiction's vulnerability to flooding and flash flooding. There are floodplain areas located throughout the county (refer to Figure 3.3). All jurisdictions participate in the NFIP. No jurisdiction has a certified floodplain manager. Flash flooding vulnerability exist throughout the county and 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 employers are wood products producers: Packaging Corporation of America, Boise-Cascade, Canfor, Scotch Plywood, and Louisiana Pacific.
- 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.
- Many areas in the county have limited cellphone service, many individuals depend on their phones to alert them to severe weather. The limited coverage makes these individuals more vulnerable to severe thunderstorms, flash flooding events, and tornadoes.

Conecuh County

- With respect to vulnerable populations the Town of Castleberry has 29.8% of its populations being over the age of 65. 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. Both Castleberry and Evergreen have over 30% of their population living below the poverty line. In Repton, over 20% of the population lives below the poverty level.
- Approximately 25% of the housing stock in Castleberry and 40% in Repton is mobile homes. These homes makes individuals more vulnerable to the effects of all hazards.
- In Conecuh 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 Conecuh County Jail, Evergreen Retirement Home, and Evergreen Nursing and Rehabilitation Center.
- A number of factors influence jurisdiction's vulnerability to flooding and flash flooding. There are floodplain areas located throughout the county (refer to Figure 3.4). All

jurisdictions participate in the NFIP. No jurisdiction has a certified floodplain manager. Flash flooding vulnerability exist throughout the county and 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.
- Many areas in the county have limited cellphone service, many individuals depend on their phones to alert them to severe weather. The limited coverage makes these individuals more vulnerable to severe thunderstorms, flash flooding events, and tornadoes.

Monroe County

- With respect to vulnerable populations the City of Monroeville and Frisco City have approximately 20% of their population being 65 years or older. 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. Beatrice, Frisco City, and Vredenburgh have over 30% of their population living below the poverty line. In Monroeville, 27% of the population lives below the poverty level.
- Approximately 79% of the housing stock in Vredenburgh and 46% in Beatrice is mobile homes. These homes makes individuals more vulnerable to the effects of all hazards.
- In Monroe 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 Monroe County Jail, Englewood Health Care Center, Monroe Manor Health and Rehabilitation Center, and the Meadows of Monroeville Assisted Living.
- A number of factors influence jurisdiction's vulnerability to flooding and flash flooding. There are floodplain areas located throughout the county (refer to Figure 3.5). Monroe County and the City of Monroeville participate in the NFIP. No jurisdiction has a certified floodplain manager. Flash flooding vulnerability exist throughout the county and 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.
- Many areas in the county have limited cellphone service, many individuals depend on their phones to alert them to severe weather. The limited coverage makes these individuals more vulnerable to severe thunderstorms, flash flooding events, and tornadoes.

Washington County

- With respect to vulnerable populations Chatom and Millry have over 20% of the population being over the age of 65. 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. Both Chatom and Millry have approximately 20% of their population living below the poverty line.
- Approximately 15% of the housing stock in Chatom is mobile homes. These homes makes individuals more vulnerable to the effects of all hazards.
- In Conecuh 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 Washington County Jail and Washington County Nursing Home.
- A number of factors influence jurisdiction's vulnerability to flooding and flash flooding. There are floodplain areas located throughout the county (refer to Figure 3.6). Washington County, Chatom, and Millry participate in the NFIP. No jurisdiction has a certified floodplain manager. Flash flooding vulnerability exist throughout the county and 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.
- Many areas in the county have limited cellphone service, many individuals depend on their phones to alert them to severe weather. The limited coverage makes these individuals more vulnerable to severe thunderstorms, flash flooding events, and tornadoes.

Vulnerability and Changes in Development

Overall, the population in the planning area 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 majority of development in the planning area is occurring in Clarke and Conecuh Counties. The City of Thomasville has seen a substantial amount of development in the last five years. Currently, the Westervelt Company is constructing a large sawmill just south of Thomasville that will employ 125. The Thomasville Regional Medical Center opened in February of 2020. The state of the art facility provides the city with its first hospital since 2009. In Conecuh County, there is substantial development occurring along the I-65 corridor at the Evergreen exits.

The increased development in Clarke and Conecuh 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.

3.4 Probability of Future Occurrences and Damage Estimates

Table 3.30 estimates the hazard event frequency of occurrences cumulatively for the planning area. These estimates were calculated from events recorded at different time periods, based on source data, which is described below. There is no guarantee the recorded level of hazard events will continue into the future at the same rate; however, the figures below provide a possible estimate of potential damages.

The period for each recorded hazard is listed below (when known and/or applicable) in Table 3.30:

Dam Failure: 1990 through March 2020
Drought/Extreme Heat: 1990 through March 2020
Flooding: 1990 through March 2020
High Winds: 1990 through March 2020
Landslides: Unknown
Land Subsidence/Sinkholes: Unknown
Wildfire: 2010-2019
Winter Storms: 1990 through March 2020

3.30 Natural Hazard Probability and Damage Estimates

Hazard	Occurrences	Time (Years)	Damages Recorded	Probability (Annual)	Estimated Future Damage (Annual)
Dam Failure	N/A	30	N/A	N/A	N/A
Drought/Extreme Heat	44	30	N/A	100%	N/A
Flooding	178	30	$460,000	100%	$15,333.00
High Winds	570	30	$25,370,000	100%	$845,667.00
Landslides	N/A	N/A	N/A	N/A	N/A
Land Subsidence/Sinkholes	N/A	N/A	N/A	N/A	N/A
Wildfire	1,549	9	N/A	100%	N/A
Winter Storms	26	30	$30,000	85%	$1,000.00

Sources: National Climatic Data Center (NCDC), Alabama Forestry Commission

Dam Failure: The risk of losses from dam failure cannot be calculated based on historic records due to lack of data. Even though dam failure is a rare occurrence and is mostly unprecedented in the planning area, an occurrence could cause critical damages downstream.

Drought/Extreme Heat: The risk of losses from drought and extreme heat cannot be calculated 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. The probability of drought and extreme heat occurring within the region is relatively high. The probability of an impactful drought or an extreme heat event occurring in the planning area is classified as medium (10-50 years).

Flooding: 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. There have been 178 occurrences of flooding in the past 30 years, with an estimated cost in damages of $460,000 dollars in damages. Flooding is the second highest damaging hazard in the division.

High Winds (Hurricanes, Tornadoes, and Severe Thunderstorms): Since 1950, AEMA Division A has experienced tornadoes almost every year. The planning area has had 570 occurrences of high wind events over the past 30 years. These occurrences have caused over $25 million in damages, making it the highest damaging hazard in the planning area.

Landslides: The 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 Clarke, Conecuh, and Monroe Counties there are no damage estimates attached to those events. Any landslide occurrence in the planning area would most likely be minor in impact due to the localized nature of these events.

Land Subsidence/Sinkholes: 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.

Wildfires: Though wildfires are the most likely hazard to occur in the planning area, the impact of wildfires have been very minor and localized in mostly undeveloped areas. Though historically, wildfires have only affected timber resources in the planning area, future development in wildland urban interface areas should be mindful of this potential hazard.

Winter Storms: There have been 26 winter storms over the past 30 years which has resulted in $30,000.00 in damages. These events normally have a short duration and have minor impacts, though the planning area is not especially prepared for a long duration event, if it would occur.

3.5 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 were 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 3.31 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 3.31 Critical Facilities Summary

Facilities	Clarke	Conecuh	Monroe	Washington
Continuity of Government	11	6		
Hospital/Health Department	4	2		
Public Safety	7	4		
Schools	15	6		

Source: Division A Steering Committee Members
(Table will be populated during subsequent phases)

3.6 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 3.32 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 67 dams listed in the National Inventory of Dams (NID) database for Division A. Of these dams, one is classified as a high hazard dam. 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 the planning region. 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 3.33 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 the planning area 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 the planning area, 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 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 3.34 Risk Impact Assessment for Flooding

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

Figures 3.7-3.26 provide floodplain areas for each jurisdiction in the planning area. 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 the planning area. 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 ATRC's GIS system. Therefore, analysis from the HAZUS-MH flood model will be incorporated in the next plan update. Information pertaining to historical insured flood losses and repetitive flooded properties are included to provide more detailed information of areal losses based from flooding.

Historical Insured Flood Losses

According to FEMA flood insurance policy records as of July 2019, there have been 11 flood losses reported through the NFIP since 1970 in the planning area, totaling $330,264.74 in claims payments. A summary of these figures is provided in Table 3.35. It should be noted that these loss numbers only include structures that were insured through NFIP and that were reported. It is likely that there are many other flood losses not reported, in uninsured structures, or denied payment.

Table 3.35 Historical Summary of Insured Flood Losses

Jurisdiction	Flood Losses	Claims Payments
Clarke County	-	-
Town of Coffeeville	-	-
Town of Fulton	6	$291,831.10
Town of Grove Hill	2	$6,646.15
City of Jackson	-	-
City of Thomasville	-	-
Conecuh County	-	-
Town of Castleberry	-	-
City of Evergreen	1	$0
Town of Repton	-	-
Monroe County	-	-
Town of Beatrice	-	-
Town of Excel	-	-
Town of Frisco City	-	-
City of Monroeville	-	-
Town of Vredenburgh	-	-

Washington County	-	-
Town of Chatom	-	-
Town of McIntosh	2	$31,787.49
Town of Millry	-	-

Community that is not participating in the National Flood Insurance Program.
Source: Federal Emergency Management Agency, National Flood Insurance Program

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). The following is a discussion of repetitive loss properties by county:

- Clarke: One repetitive loss property is listed for the Town of Fulton in Clarke County. It is a single family dwelling. The claims paid on the property total $6,646.
- Conecuh: No repetitive loss properties.
- Monroe: One repetitive loss property is listed for Monroe County. It is a single family dwelling. The claims paid on the property total $3,124.
- Washington: One repetitive loss property is listed for Washington County. It is a nonresidential property. The claims paid on the property total $8,891.

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 3.36 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 the planning area are vulnerable to this hazard and its impacts. The planning area is an inland location and will not receive the brunt of these storms, but the intensity of tropical systems affecting the Gulf Coast can remain high as these storms travel inland into the region.

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 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 damage. Another concern is the large amount of debris that results. Normally there are a few days of warnings before a tropical system impacts the planning area allowing for preparations.

The landscape of the counties within the planning area 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 3.37 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 the planning area 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 3.38 provides a county-by-county description of impact based on historical data.

Table 3.38 Potential Impact of Tornadic Events by County*
Division A

Clarke County	Devastating Damage: Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown, and large missiles generated.
Conecuh County	Considerable Damage: Roofs torn off frame houses; mobile homes demolished; boxcars overturned; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.
Monroe County	Devastating Damage: Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown, and large missiles generated.
Washington County	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.

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 3.39 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 the planning area. Clarke County has an 87 mph wind gust on record. Conecuh has a 78 mph gust on record. Monroe and Washington have 70 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 3.40 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 Figures 3.27-3.37 which provide areas with higher susceptibility. 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 3.41 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 Figures 3.39-3.56 which provide areas with karst topography and topographic depressions which leads to higher susceptibility. 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 3.42 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 the planning area, wildfires are a threat to all four counties. Potential risk by jurisdiction can be seen from examining Figures 3.57 and 3.64. 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.

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.

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 3.43 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 4- 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 A to practice becoming less vulnerable to the identified hazards in the Risk Assessment.

Section Contents

4.1 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.

4.2 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 A 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).

4.3 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 4.4 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 A-ATRC Planning Area is composed of thirteen 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 4.3 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 participate in the National Flood Insurance Program (NFIP) and maintain compliance with the applicable regulations (Table 4.3). 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 commission (ATRC) 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 2.2 of this plan.

Table 4.1 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 4.1 Statutory Authority and Resources

Division A Hazard Mitigation Action Plan: Capabilities Assessment	Authorized for…	Practiced by…	Proposed for…	Incorporated through…
Police power: Ability to regulate activities of individuals in the jurisdiction for purposes of health, safety, and public welfare	Municipalities, Counties	Clarke County: Clarke County Sheriff's Department, Town of Coffeeville, Town of Fulton, Town of Grove Hill, City of Jackson, City of Thomasville Conecuh County: Conecuh County Sheriff's Department, City of Evergreen, Town of Repton Monroe County: Monroe County Sheriff's Office, Town of Excel, Town of Frisco City, City of Monroeville Washington County: Washington County Sheriff's Office, Town of Chatom, Town of McIntosh, Town of Millry	All municipal jurisdictions	Council or Commission action to enact and enforce regulations
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

Table 4.1 Statutory Authority and Resources (continued)				
Division A Hazard Mitigation Action Plan: Capabilities Assessment	**Authorized for…**	**Practiced by…**	**Proposed for…**	**Incorporated through…**
Building code enforcement: Ability to enforce codes related to building materials and construction standards outside of flood hazard areas	Municipalities, Counties	Clarke County: Town of Grove Hill, City of Jackson, City of Thomasville Conecuh County: City of Evergreen Monroe County: City of Monroeville Washington County:		Council action to enact and enforce regulations
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
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 4.1 Statutory Authority and Resources (continued)				
Division A Hazard Mitigation Action Plan: Capabilities Assessment	**Authorized for…**	**Practiced by…**	**Proposed for…**	**Incorporated through…**
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
Zoning authority: Ability to divide political jurisdiction into districts for purposes of regulating buildings and their use (inside and outside of flood hazard areas)	Municipalities	Clarke County: Town of Grove Hill, City of Jackson, City of Thomasville Conecuh County: City of Evergreen Monroe County: City of Monroeville Washington County:		Council action to enact and enforce regulations
Subdivision regulations: A ability to control new developments involving new lot lines and infrastructure (inside and outside of flood hazard areas)	Municipalities, Counties	Clarke County: Town of Grove Hill, City of Jackson, City of Thomasville Conecuh County: City of Evergreen Monroe County: City of Monroeville Washington County:		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	Conecuh County: City of Evergreen		Council action to enact and enforce regulations

Table 4.2 below provides a summary of local plans, ordinances, and programs currently in place, or being developed within jurisdictions in Division A. 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 4.2 Relevant Plans, Ordinances, and Programs

Jurisdiction	Zoning Ordinance	Code Enforcement	Recent Master Plan	Certified Flood Manager	NFIP Participation
Clarke County					X
Town of Coffeeville					X
Town of Fulton					X
Town of Grove Hill	X	X	X		X
City of Jackson	X	X	X		X
City of Thomasville	X	X	X		X
Conecuh County					X
Town of Castleberry					X
City of Evergreen	X	X	X		X
Town of Repton					X
Monroe County					X
Town of Beatrice					
Town of Excel					
Town of Frisco City					
City of Monroeville	X	X			X
Town of Vredenburgh					
Washington County					X
Town of Chatom					X
Town of McIntosh					X
Town of Millry					X

Table 4.3 below summarizes NFIP participation and policy statistics for each jurisdiction in the planning area as of July1, 2020. More site-specific information on at-risk structures and repetitive loss properties is provided in Section 3.6 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 4.3 National Flood Insurance (NFIP) Status

Jurisdiction	Participation Status	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date
Clarke County	Participating	6/09/1978	10/16/2008	7/17/2012
Town of Coffeeville	Participating	-	10/16/2008	7/17/2012
Town of Fulton	Participating	7/18/1975	10/16/2008	7/17/2012
Town of Grove Hill	Participating	4/25/1975	9/4/1985	NSFHA
City of Jackson	Participating	6/27/1975	12/17/87	7/17/2012
City of Thomasville	Participating	8/1/1975	9/18/1985	7/17/2012
Conecuh County	Participating	7/7/1978	11/4/2009	11/4/2009
Town of Castleberry	Participating	4/4/1975	8/1/1987	11/4/2009
City of Evergreen	Participating	8/8/1975	9/4/1985	11/4/2009
Town of Repton	Participating	-	11/4/2009	NSFA
Monroe County	Participating	8/18/1978	6/4/1990	2/4/2009
Town of Beatrice	Sanctioned	-	2/4/2009	2/4/2009
Town of Excel				
Town of Frisco City				
City of Monroeville	Participating	-	2/4/2009	NSFA
Town of Vredenburgh				
Washington County	Participating	12/20/1974	8/1/1987	10/16/2012
Town of Chatom	Participating	10/20/1978	9/29/2006	10/16/2012
Town of McIntosh	Sanctioned	8/1/1987	10/16/2012	8/1/1988
Town of Millry	Participating	11/12/1976	9/29/2006	10/16/2012

Source: NFIP Community Status Book (07/01/2020)

4.5 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.

Jurisdiction Name	
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

Priority/Status	Participants prioritized the available mitigation measures and projects considering the following criteria: •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. •Social considerations including but not limited to environmental justice, neighborhood impact, community support, and impact on social and cultural resources. •Environmental considerations including but not limited to compliance with the National Environmental Policy Act (NEPA), state and local environmental regulations, and environmental conservation goals. •Administrative, legal, and political considerations including but not limited to staffing, maintenance, timing, legal authority, and political support. •Technical considerations including but not limited to technical feasibility. 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 Overall, the participating jurisdictions priorities have not changed since the previous planning cycle. There was an emphasis placed on identifying low cost, effective projects.

Benefit/Cost Score	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. **Low**: 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. **Moderate**: 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. **High**: 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.

4.5.1 ATRC 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	HMGP/Local Funds	High	High
1	ATCR will work to incorporate the counties of Monroe and Washington and their jurisdictions not part of this plan as their plans expire	All	ATRC	HMGP/Local Funds	High	High
1	ATRC will facilitate multi- jurisdiction collaboration by attending AEMA Division A meetings on at least an annual basis	All	ATRC	Local Funds	High	High
1	ATRC will incorporate HAZUS-MH and Risk MAP information in Risk Assessment for future plan updates	Flooding / High Winds	ATRC	HMGP/Local Funds	High	High

4.5.2 Clarke County Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	Clarke County Commission	Local Funds	High/Ongoing	High
2	Continue to clear debris from roads and drainage ways	All	Clarke County Road and Bridge Department	Local Funds	High/Ongoing	High
2,5	Continue to perform maintenance on roads, drainage culverts, creeks, and streams to mitigate the threat of floods	Flooding	Clarke County Road and Bridge Department	Local Funds	High/Ongoing	High
2	Continue to improve and maintain the county road system	All	Clarke County Road and Bridge Department	Local Funds	High/Ongoing	High
6	Provide the public information on actions to take during severe weather through newspaper, publications, social media, and radio announcements	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
4	Promotion of safe rooms/individual shelters in existing residences	Tornado, Severe Storms	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
6	Provide information to municipalities regarding natural hazards and general principles outlining procedures	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Contact utilities in the event of natural hazard so they can inspect their infrastructure for damage	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
2,3,4.5	Encourage jurisdictions to commit matches for grants dealing with mitigation	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
6	Educate local governments and groups on mitigation activities and grant funding	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
6	Provide information to the public through social media	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
6	Provide storm event data to the National Weather Service for events in Clarke County	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
5	Advocate for weather radar located closer to county	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
5	Replace generators at Clarke County EOC	All	Clarke County Commission	HMGP/Local Funds	Medium	Moderate
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	Clarke County Commission	HMGP/Local Funds	High	Moderate
5	Purchase generators for water and sewer systems	All	Clarke County EMA/Water and Sewer Systems	HMGP/Local Funds	Medium	Moderate
5	Purchase at least 2 emergency gas storage tanks	All	Clarke County Commission	Local Funds	Medium	Moderate

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Place fixed site generators at communications towers	All	Clarke County Commission	Local Funds	Medium	Moderate
1	Apply for funding to update mitigation plan as needed	All	Clarke County Commission	PDM/HMGP/Local Funds	High	High
5	Purchase generators for critical facilities and fire stations	All	Clarke County Commission	HMGP/Local Funds	Medium	Moderate
6	Continue to explore ways to use social media to provide information	All	Clarke County EMA Director and Staff	Local Funds	High	High
6	Continue to inform residents of flood hazards and NFIP requirements	Flooding	Clarke County EMA and Staff, Road and Bridge	Local Funds	High	High
4	Drainage projects in areas identified as being prone to flooding	Flooding	Clarke County Commission/ Road and Bridge Department	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects throughout county	Flooding	Clarke County Commission/ Road and Bridge Department	PDM/HMGP/CDBG Local Funds	Medium	Moderate
2	Retrofitting critical facilities	Wind events	Clarke County Commission	PDM/HMGP/CDBG Local Funds	Low	Low
5	Purchase of Tornado Sirens	Tornadoes	Clarke County Commission	HMGP/Local Funds	Low	Low
5	Purchase of NOAA weather radios for community residents	All	Clarke County Commission	HMGP/Local Funds	Medium	Low

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Research procedures for keeping historical storm data with location, magnitude, and loss values for each event	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
1	Begin maintaining an inventory of critical facilities with value and contact information	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
5	Continue to offer shelter to individuals and families affected by natural hazards.	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High

4.5.2a Town of Coffeeville Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	Town of Coffeeville Town Council/Mayor	Local Funds	High/Ongoing	High
1	Continue to enforce flood ordinance	Flooding	Town of Coffeeville Town Council/Mayor	Local Funds	High/Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training	All	Town of Coffeeville Town Council, VFD	Local Funds	High/Ongoing	High
5	Continue to apply for grants to fund training and equipment for the Coffeeville Fire Department	All	Town of Coffeeville Town Council, VFD	Local Funds/Assistance to Firefighters/USDA	High/Ongoing	High
5	Purchase generators for Town Hall (Including PD and VFD)	All	Town of Coffeeville Town Council, VFD	HMGP/Local Funds	Medium	Moderate
3	Repair erosion damage	All	Town of Coffeeville Town Council/Mayor	Local Funds/PDM/HMGP/ NRCS	Low	Low
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	Town of Coffeeville Town Council/Mayor	Local Funds	High/Ongoing	High
6	Provide information to the public through social media	All	Town of Coffeeville Town Council/Mayor	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2,3,4,5	Maintain streets, culverts, and drainage infrastructure in town	Flooding	Town of Coffeeville Maintenance Employees	PDM/HMGP/CDBG Local Funds	High/Ongoing	High
5	Purchase generators for sewer system	All	Town of Coffeeville Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	Town of Coffeeville Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Drainage projects in areas identified as being prone to flooding	Flooding	Town of Coffeeville Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects	Flooding	Town of Coffeeville Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Retrofitting critical facilities	Wind events	Town of Coffeeville Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Low	Low
5	Purchase of Tornado Sirens	Tornadoes	Town of Coffeeville Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
6	Post extreme heat warnings with risks outlined in public areas	Extreme Heat	Town of Coffeeville Town Council/Mayor	Local Funds	High/Ongoing	High
6	Post drought notices in area businesses and Town Hall	Drought	Town of Coffeeville Town Council/Mayor	Local Funds	High/Ongoing	High
5	Purchase of NOAA weather radios for community residents	All	Town of Coffeeville Town Council/Mayor	HMGP/Local Funds	High/Ongoing	High

4.5.2b Town of Fulton Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	Town Council/Mayor	Local Funds	High/Ongoing	High
1	Continue to enforce flood ordinance	Flooding	Town Council	Local Funds	High/Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training	All	Town Council, VFD	Local Funds	High/Ongoing	High
5	Continue to apply for grants to fund training and equipment for the Fulton Fire Department	All	Town Council, VFD	Local Funds/Assistance to Firefighters/USDA	High/Ongoing	High
5	Purchase generators for Town Hall (Including PD and VFD)	All	Town Council, VFD	HMGP/Local Funds	Medium	Moderate
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	Town Council& Mayor	Local Funds	High/Ongoing	High
6	Provide information to the public through social media	All	Town Council& Mayor	Local Funds	High/Ongoing	High
2,3,4,5	Maintain streets, culverts, and drainage infrastructure in town	Flooding	Town Council	PDM/HMGP/ CDBG Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Purchase generators for sewer system	All	Town Council& Mayor	HMGP/Local Funds	Medium	Moderate
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	Town Council& Mayor	HMGP/Local Funds	Medium	Moderate
4	Drainage projects in areas identified as being prone to flooding	Flooding	Town Council& Mayor	PDM/HMGP/ CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects	Flooding	Town Council& Mayor	PDM/HMGP/ CDBG Local Funds	Medium	Moderate
4	Retrofitting critical facilities	Wind events	Town Council& Mayor	PDM/HMGP/ CDBG Local Funds	Low	Low
5	Purchase of Tornado Sirens	Tornadoes	Town Council& Mayor	HMGP/Local Funds	Medium	Moderate
6	Post extreme heat warnings with risks outlined in public areas	Extreme Heat	Town Clerk	Local Funds	High/Ongoing	High
6	Post drought notices in area businesses and Town Hall	Drought	Town Clerk	Local Funds	High/Ongoing	High
5	Purchase of NOAA weather radios for community residents	All	Town Council& Mayor	HMGP/Local Funds	High/Ongoing	High

Projects pursued: During this planning period, the Town of Fulton constructed a new fire station.

4.5.2c Town of Grove Hill Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	Town of Grove Hill Town Council/Mayor	Local Funds	High/Ongoing	High
1	Continue to enforce flood ordinance	Flooding	Town of Grove Hill Town Council/Mayor	Local Funds	High/Ongoing	High
1	Continue enforcing Town of Grove Hill Zoning Ordinance, Subdivision Regulations, & Building Codes	All	Town Building Inspector	Local Funds	High/Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training	All	Town of Grove Hill Town Council, VFD	Local Funds	High/Ongoing	High
5	Continue to apply for grants to fund training and equipment for the Grove Hill Fire Department	All	Town of Grove Hill, VFD	Local Funds/Assistance to Firefighters/USDA	High/Ongoing	High
5	Purchase generators for Town Hall (Including PD and VFD)	All	Town of Grove Hill Town Council, VFD	HMGP/Local Funds	Medium	Moderate
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	Town of Grove Hill Town Council/Mayor	Local Funds	High/Ongoing	High
4	Construct safe room in Grove Hill Senior Center	Tornado, Severe Storms	Town of Grove Hill Town Council/Mayor	HMGP/Local Funds	Medium	Moderate

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Provide information to the public through social media	All	Town of Grove Hill Town Council/Mayor	Local Funds	High/Ongoing	High
2,3,4,5	Maintain streets, culverts, and drainage infrastructure in town	Flooding	Town of Grove Hill Street Department	PDM/HMGP/CDBG Local Funds	High/Ongoing	High
5	Purchase generators for sewer system	All	Town of Grove Hill Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	Town of Grove Hill Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Drainage projects in areas identified as being prone to flooding	Flooding	Town of Grove Hill Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects	Flooding	Town of Grove Hill Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Retrofitting critical facilities	Wind events	Town of Grove Hill Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Low	Low
5	Purchase of Tornado Sirens	Tornadoes	Town of Grove Hill Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
5	Purchase of NOAA weather radios for residents	All	Town of Grove Hill Town Council/Mayor	PDM/HMGP/Local Funds	Low	Moderate
1	Prepare an Emergency Response Plan	All	Town of Grove Hill Town Council/Mayor	Local Funds	Low	Low

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Provide information regarding the emergency response system to the public in the form of a brochure or handout	All	Town of Grove Hill Town Council/Mayor	Local Funds	Low	Low

Projects pursued: During this planning period, the Town of Grove Hill updated their Comprehensive Plan.

4.5.2d City of Jackson Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	City of Jackson City Council/Mayor	Local Funds	High/Ongoing	High
1	Continue to enforce flood ordinance	Flooding	City of Jackson City Council/Mayor	Local Funds	High/Ongoing	High
1	Continue enforcing City of Jackson Zoning Ordinance, Subdivision Regulations, & Building Codes	All	City Building Inspector	Local Funds	High/Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training	All	City of Jackson City Council, VFD	Local Funds	High/Ongoing	High
5	Continue to research funding opportunities and apply for grants to fund training and equipment for the Jackson Fire Department and Police Department	All	City of Jackson City Council, VFD	Local Funds/Assistance to Firefighters/USDA	High/Ongoing	High
1	Continue to sponsor a community fire prevention program.	Wildfire	City of Jackson City Council, VFD	Local Funds	High/Ongoing	High
5	Purchase generators for City Hall (Including PD and VFD)	All	City of Jackson City Council, VFD	HMGP/Local Funds	Medium	Moderate
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	City of Jackson City Council/Mayor	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Construct safe room in Jackson Senior Center	Tornado, Severe Storms	City of Jackson City Council/Mayor	HMGP/Local Funds	Medium	Moderate
6	Provide information to the public through social media	All	City of Jackson City Council/Mayor	Local Funds	High/Ongoing	High
2,3,4,5	Maintain streets, culverts, and drainage infrastructure in City	Flooding	City of Jackson Street Department	PDM/HMGP/CDBG Local Funds	High/Ongoing	High
5	Purchase generators for water and sewer system	All	City of Jackson City Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	City of Jackson City Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Drainage projects in areas identified as being prone to flooding	Flooding	City of Jackson City Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects	Flooding	City of Jackson City Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Retrofitting critical facilities	Wind events	City of Jackson City Council/Mayor	PDM/HMGP/CDBG Local Funds	Low	Low
5	Purchase of Tornado Sirens	Tornadoes	City of Jackson City Council/Mayor	HMGP/Local Funds	Medium	Moderate
5	Purchase of NOAA weather radios for residents	All	City of Jackson City Council/Mayor	PDM/HMGP/Local Funds	Low	Moderate

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Post extreme heat warnings with risks outlined in public areas	Extreme Heat	City of Jackson City Council/Mayor	Local Funds	High/Ongoing	High
4	Construct a Community Shelter at the Municipal Complex	All	City of Jackson City Council/Mayor	HMGP/PDM/Local Funds	Medium	Moderate
2	Raw water intake structure: replace and stabilize riverbank, raise access roads	Flooding	City of Jackson Water Works	State Revolving Loan Fund/HMGP/PDM/Local Funds	High	High
3	Identify areas of soil erosion and techniques that can be used to correct the problem.	Flooding	City of Jackson City Council/Mayor	HMGP/PDM/Local Funds	Medium	Moderate

Projects pursued: During this planning period, the City of Jackson updated their Zoning Ordinance, completed a drainage project in the Miller/McGowin Area, and was awarded funding to undertake a drainage project in the Walnut Street Area.

4.5.2e City of Thomasville Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	City of Thomasville City Council/Mayor	Local Funds	High/Ongoing	High
1	Continue to enforce flood ordinance	Flooding	City of Thomasville City Council/Mayor	Local Funds	High/Ongoing	High
1	Continue enforcing City of Thomasville Zoning Ordinance, Subdivision Regulations, & Building Codes	All	City Building Inspector	Local Funds	High/Ongoing	High
1	Continue to send building inspector to building code related workshops and training	All	City of Thomasville City Council/Mayor	Local Funds	High/Ongoing	High
3	Continue to maintain permanent open space as parks	All	City of Thomasville Public Works	Local Funds	High/Ongoing	High
2	Continue drainage maintenance and cleaning program	All	City of Thomasville Public Works	Local Funds	High/Ongoing	High
1	Continue utility right of way permitting, considering emergency vehicle access	All	City of Thomasville Public Works	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2	Continue the road repair/construction program considering evacuation and natural hazard response (includes repaving of city streets)	All	City of Thomasville Public Works	Local Funds	High/Ongoing	High
4	Downtown revitalization including streets, drainage, and restoring older buildings	All	City of Thomasville Public Works	Local Funds, Private Investment	High/Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training including hazardous materials training	All	City of Thomasville City Council, VFD	Local Funds	High/Ongoing	High
5	Continue to research funding opportunities and apply for grants to fund training and equipment for the Thomasville Fire Department and Police Department	All	City of Thomasville City Council, VFD	Local Funds/Assistance to Firefighters/USDA	High/Ongoing	High
1	Continue to sponsor a community fire prevention program.	Wildfire	City of Thomasville City Council, VFD	Local Funds	High/Ongoing	High
5	Purchase generators for City Hall (Including PD and Fire Stations)	All	City of Thomasville City Council, VFD	HMGP/Local Funds	Medium	Moderate
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	City of Thomasville City Council/Mayor	Local Funds	High/Ongoing	High
4	Promote the use of voluntary standards for single family residences to exceed minimal building code requirements for wind design	Tornado, Severe Storms	City of Thomasville City Council/Mayor	Local Funds	High/Ongoing	High
6	Provide information to the public through social media	All	City of Thomasville City Council/Mayor	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2,3,4,5	Maintain streets, culverts, and drainage infrastructure in City	Flooding	City of Thomasville Street Department	PDM/HMGP/CDBG Local Funds	High/Ongoing	High
5	Purchase generators for critical facilities	All	City of Thomasville City Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	City of Thomasville City Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Drainage projects in areas identified as being prone to flooding	Flooding	City of Thomasville City Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects	Flooding	City of Thomasville City Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Retrofitting critical facilities	Wind events	City of Thomasville City Council/Mayor	PDM/HMGP/CDBG Local Funds	Low	Low
5	Purchase of Tornado Sirens	Tornadoes	City of Thomasville City Council/Mayor	HMGP/Local Funds	Medium	Moderate
5	Purchase of NOAA weather radios for residents	All	City of Thomasville City Council/Mayor	PDM/HMGP/Local Funds	Low	Moderate

Projects pursued: During this planning period, the City of Thomasville completed sidewalks and drainage along Old Highway 5 in Thomasville an Martin Luther King, Jr. Street. This action was listed on page 140 of the previous mitigation plan.

4.5.2f Clarke 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	All	Clarke County School System Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
5	Purchase Generators for critical facilities	All	Clarke County School System Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
4	Retrofitting of schools and critical facilities	Wind Events	Clarke County School System Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
4	Correct storm water management/drainage issues on school grounds	Flood	Clarke County School System Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
6	Train and exercise regarding all hazards	All	Clarke County School System Board/Superintendent	HMGP/PDM/Local Funds	Ongoing/ High	High

The Clarke County School System installed surveillance systems on their campuses during this planning period. The School System is also constructing a storm shelter at its new workforce development facility.

4.5.2g Thomasville City School System Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Provide storm shelters at schools	All	Thomasville City School Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
5	Purchase Generators for critical facilities	All	Thomasville City School Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
4	Retrofitting of schools and critical facilities	Wind Events	Thomasville City School Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
4	Correct storm water management/drainage issues on school grounds	Flood	Thomasville City School Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
6	Train and exercise regarding all hazards	All	Thomasville City School Board/Superintendent	HMGP/PDM/Local Funds	Ongoing/ High	High

The Thomasville City School System installed surveillance systems on their campuses during this planning period.

4.5.3 Conecuh County Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program and enforce flood ordinance	Flooding	Conecuh County Commission	Local Funds	High/Ongoing	High
2	Continue to clear debris from roads and drainage ways	All	Conecuh County Road and Bridge Department	Local Funds	High/Ongoing	High
2,5	Continue to perform maintenance on roads, drainage culverts, creeks, and streams to mitigate the threat of floods	Flooding	Conecuh County Road and Bridge Department	Local Funds	High/Ongoing	High
2	Continue to improve and maintain the county road system	All	Conecuh County Road and Bridge Department	Local Funds	High/Ongoing	High
6	Provide the public information on actions to take during severe weather through newspaper, publications, social media, and radio announcements	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
4	Promotion of safe rooms/individual shelters in existing residences	Tornado, Severe Storms	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
6	Provide information to municipalities regarding natural hazards and general principles outlining procedures	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Contact utilities in the event of natural hazard so they can inspect their infrastructure for damage	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
2,3,4.5	Encourage jurisdictions to commit matches for grants dealing with mitigation	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
6	Educate local governments and groups on mitigation activities and grant funding	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
6	Provide information to the public through social media	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
6	Provide storm event data to the National Weather Service for events in Conecuh County	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	Conecuh County Commission	HMGP/Local Funds	High	Moderate
5	Purchase generators for water and sewer systems	All	Conecuh County EMA/Water and Sewer Systems	HMGP/Local Funds	Medium	Moderate
1	Apply for funding to update mitigation plan as needed	All	Conecuh County Commission	PDM/HMGP/Local Funds	High	High
5	Purchase generators for critical facilities and fire stations	All	Conecuh County Commission	HMGP/Local Funds	Medium	Moderate
6	Continue to explore ways to use social media to provide information	All	Conecuh County EMA Director and Staff	Local Funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Continue to inform residents of flood hazards and NFIP requirements	Flooding	Conecuh County EMA and Staff, Road and Bridge	Local Funds	High	High
4	Drainage projects in areas identified as being prone to flooding	Flooding	Conecuh County Commission/ Road and Bridge Department	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects throughout county	Flooding	Conecuh County Commission/ Road and Bridge Department	PDM/HMGP/CDBG Local Funds	Medium	Moderate
2	Retrofitting critical facilities	Wind events	Conecuh County Commission	PDM/HMGP/CDBG Local Funds	Low	Low
5	Purchase of Tornado Sirens	Tornadoes	Conecuh County Commission	HMGP/Local Funds	Low	Low
5	Purchase of NOAA weather radios for community residents	All	Conecuh County Commission	HMGP/Local Funds	Medium	Low
6	Research procedures for keeping historical storm data with location, magnitude, and loss values for each event	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
1	Begin maintaining an inventory of critical facilities with value and contact information	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
5	Continue to offer shelter to individuals and families affected by natural hazards.	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High

4.5.3a Town of Castleberry Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	Town of Castleberry Town Council/Mayor	Local Funds	High/Ongoing	High
1	Continue to enforce flood ordinance	Flooding	Town of Castleberry Town Council/Mayor	Local Funds	High/Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training	All	Town of Castleberry Town Council, VFD	Local Funds	High/Ongoing	High
5	Continue to apply for grants to fund training and equipment for the Castleberry Fire Department	All	Town of Castleberry Town Council, VFD	Local Funds/Assistance to Firefighters/USDA	High/Ongoing	High
5	Purchase generators for Town Hall (Including PD and VFD)	All	Town of Castleberry Town Council, VFD	HMGP/Local Funds	Medium	Moderate
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	Town of Castleberry Town Council/Mayor	Local Funds	High/Ongoing	High
6	Provide information to the public through social media	All	Town of Castleberry Town Council/Mayor	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2,3,4,5	Maintain streets, culverts, and drainage infrastructure in town	Flooding	Town of Castleberry Maintenance Employees	PDM/HMGP/CDBG Local Funds	High/Ongoing	High
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	Town of Castleberry Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Drainage projects in areas identified as being prone to flooding	Flooding	Town of Castleberry Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects	Flooding	Town of Castleberry Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Retrofitting critical facilities	Wind events	Town of Castleberry Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Low	Low
6	Provide information regarding the Emergency Response System to the public in the form of a handout or brochure	All	Town of Castleberry Town Council/Mayor	Local Funds	Low	High

The Town of Castleberry has purchased generators for its water system, this project was listed in the last Conecuh County Hazard Mitigation Plan on page 123. The Town has also eliminated three actions concerning enforcement of zoning ordinances, building codes, and subdivision regulations, these were eliminated due to the town does not have these items in place at this time. These actions were on page 121 of the previous plan.

4.5.3b City of Evergreen Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	Town of Evergreen City Council/Mayor	Local Funds	High/Ongoing	High
1	Continue to enforce flood ordinance	Flooding	City of Evergreen City Council/Mayor	Local Funds	High/Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training	All	City of Evergreen City Council, VFD	Local Funds	High/Ongoing	High
5	Continue to apply for grants to fund training and equipment for the Evergreen Fire Department	All	City of Evergreen City Council, VFD	Local Funds/Assistance to Firefighters/USDA	High/Ongoing	High
5	Purchase generators for 2 water system pumps	All	City of Evergreen, Evergreen Water Works Board	HMGP/PDM/Local Funds	Medium	Moderate
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	City of Evergreen City Council/Mayor	Local Funds	High/Ongoing	High
6	Provide information to the public through social media	All	City of Evergreen City Council/Mayor	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2,3,4,5	Maintain streets, culverts, and drainage infrastructure in City	Flooding	City of Evergreen Maintenance Employees	PDM/HMGP/CDBG Local Funds	High/Ongoing	High
4	Drainage projects in areas identified as being prone to flooding	Flooding	City of Evergreen City Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects	Flooding	City of Evergreen City Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Retrofitting critical facilities	Wind events	City of Evergreen City Council/Mayor	PDM/HMGP/CDBG Local Funds	Low	Low
6	Post extreme heat warnings with risks outlined in public areas	Extreme Heat	City of Evergreen City Council/Mayor	Local Funds	High/Ongoing	High
6	Post drought notices in area businesses and Town Hall	Drought	City of Evergreen City Council/Mayor	Local Funds	High/Ongoing	High
5	Portable Generators	All	City of Evergreen City Council/Mayor	PDM/HMGP/ Local Funds	Low	Low
5	Purchase generators for City Hall	All	City of Evergreen City Council/Mayor	PDM/HMGP/ Local Funds	High	High
5,6	Purchase of NOAA weather radios	All	City of Evergreen City Council/Mayor	PDM/HMGP/ Local Funds	Low	High
5	Purchase of tornado sirens	Tornadoes	City of Evergreen City Council/Mayor	PDM/HMGP/ Local Funds	Low	Medium

The City of Evergreen has constructed a community storm shelter during this planning period. They have also compiled a priority and secondary road clearing plan for storm events in addition to their disaster debris removal contracts.

4.5.3c Town of Repton Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	Town of Repton Town Council/Mayor	Local Funds	High/Ongoing	High
1	Continue to enforce flood ordinance	Flooding	Town of Repton Town Council/Mayor	Local Funds	High/Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training	All	Town of Repton Town Council, VFD	Local Funds	High/Ongoing	High
5	Continue to apply for grants to fund training and equipment for the Repton Fire Department	All	Town of Repton Town Council, VFD	Local Funds/Assistance to Firefighters/USDA	High/Ongoing	High
5	Purchase generators for Town Hall, PD, VFD, and public utilties	All	Town of Repton Town Council, VFD	HMGP/Local Funds	Medium	Moderate
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	Town of Repton Town Council/Mayor	Local Funds	High/Ongoing	High
6	Provide information to the public through social media	All	Town of Repton Town Council/Mayor	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2,3,4,5	Maintain streets, culverts, and drainage infrastructure in town	Flooding	Town of Repton Maintenance Employees	PDM/HMGP/CDBG Local Funds	High/Ongoing	High
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	Town of Repton Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Drainage projects in areas identified as being prone to flooding	Flooding	Town of Repton Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects	Flooding	Town of Repton Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Retrofitting critical facilities	Wind Events	Town of Repton Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Low	Low
5	Purchase of Tornado Sirens	Tornadoes	Town of Repton Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
6	Post extreme heat warnings with risks outlined in public areas	Extreme Heat	Town of Repton Town Council/Mayor	Local Funds	High/Ongoing	High
5	Purchase of NOAA weather radios for community residents	All	Town of Repton Town Council/Mayor	HMGP/Local Funds	High/Ongoing	High

The Town of Repton has been awarded CDBG funds to complete a drainage/street improvement project.

4.5.3d Conecuh 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	All	Conecuh County School Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
5	Purchase Generators for critical facilities	All	Conecuh County School Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
4	Retrofitting of schools and critical facilities	Wind Events	Conecuh County School Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
4	Correct storm water management/drainage issues on school grounds	Flood	Conecuh County School Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
6	Train and exercise regarding all hazards	All	Conecuh County School Board/Superintendent	HMGP/PDM/Local Funds	Ongoing/ High	High

4.5.4 Monroe County Mitigation Action Plan

To be added in subsequent phase

4.5.5 Washington County Mitigation Action Plan

To be added in subsequent phase

Section 5- Plan Maintenance Process

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

Section Contents

5.1 Hazard Mitigation Plan Monitoring, Evaluation, and Update Process

The Alabama Tombigbee Regional Commission (ATRC) awill 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 will facilitate the annual update process at the regional level. During the fourth quarter of each calendar year, ATRC will convene a meeting of all EMA directors in ATRC's planning area 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 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 A 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 A 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 A 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 A 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 South Alabama Regional Planning and Development Commission (SARPDC), 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 A 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 SARPC). ATRC, SARPC, 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 SARPC 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.

Appendix A: ATRC Participation Items

Clarke County

Public Notice

The Clarke County Hazard Mitigation Planning Committee will meet on January 7, 2020 at 1:00 p.m. at the Clarke County Courthouse located at 114 Court St, Grove Hill AL 36451. The purpose of the meeting will be to discuss local hazard mitigation issues and to provide input for the Division A Hazard Mitigation Plan that includes Clarke County and its municipal jurisdictions. The public is invited to attend and participate. Those persons needing information or requiring assistance to participate should contact Roy Waite, Clarke County EMA Director at (251)275-8775 at least 24 hours in advance of the meeting.

This notice was posted at the following locations as well as being published in the Clarke County Democrat:
Clarke County Courthouse
Coffeeville Town Hall
Fulton Town Hall
Grove Hill Town Hall
Jackson City Hall
Thomasville City Hall

2020 Update to Clarke County Hazard Mitigation Plan

7 January 2020 13:00 hours CST

Location: Clarke County EMA

NAME	AGENCY	PHONE	EMAIL
Brian Wilkerson	Clarke Co. EMA	251-275-8775	bwilkerson@clarkecountyal.com
Johnnie Jones	Old Line Water	251-744-1172	JohnnieEJones@Yahoo.Com
Jamey Sullivan	Jackson Water	251-769-1209 251-246-2900	jameygsullivan@yahoo.com
Mac Henley	Salitpa FD	251 282 0332	SANDRA@SKIPPERINS.COM
Doug Bradford	Clark Prep	334-357-3684	dougbradford@cpsgators.com
Paul Stanley	CCBOE	251-589-2767	pstanley@clarkecountyschools.com
Joe Jones	Jackson Academy	251-246-5552	jjones@jaeagles.com
Kiki Moore	Coastal AL	334-637-3150	kiki.moore@coastalalabama.edu
Keith Harrell	Antioch Fire Dept	251-387-3860	kharrell@cmcgas.com
Mary Zimmerman	ATRC	334-682-0132	mary.zimmerman@atrc.net
Brandy Wilkerson	ATRC	334-682-4234	brandy.wilkerson@atrc.net
Roy Waite	Clarke Co EMA	251 275 8775	~~bwilkers~~ rwaite@clarkecountyal.com
Jake Bailey	Clarke Co. Road + Bridge	251-275-3366	jbailey@clarkecountyal.com
Kevin Heartsill	City of Thomasville	(334) 830-1264	kheartsill@thomasvilleal.com
Cynthia Jackson	Town of Grove Hill	251-589-0564	mayorjackson@grovehilltownhall.com

2020 Update to Clarke County Hazard Mitigation Plan

7 January 2020 13:00 hours CST

Location: Clarke County EMA

NAME	AGENCY	PHONE	EMAIL
Judith G. Reeves	Jackson Med Center	251-246-1145	j.reeves@jmc.org
Teresa Napper	Jackson Medical Center	251-246-1135	t.napper@jmc.org
Jason Thomas	Jackson PD/Fire	251-246-4484	jasonthomas167@yahoo.com
Keith Harrell	Clarke-Mobile Gas	251-246-2468	kbharrell@cmgas.com

T. Taite

Coffeeville Nutrition Center, Coffeeville, AL
March 04, 2020

1. Billy Robinson
2. Charlotte Duncan
3. Roy Dunglin
4. Wayne Bedwell
5. Faye Hudson
6. Elaine Jones
7. [illegible]
8.
9.
10.
11.
12.
13.
14.
15.
16.
17.
18.
19.
20.

Public Meeting

Grove Hill, AL • January 30, 2020 • 10:00AM

SIGN-IN SHEET

NAME	ORGANIZATION	PHONE NUMBER	E-MAIL
Carolyn Jones			
Callie Hutto			
Elois Pickard			
Reba Vann			
E. Mafenie Larsen			
Robert Armstead			
Ruth Barfield Mg.			
Bobby Joe Hicks			
Christine Dickerson			

Jackson, Alabama 11:00am

Public Meeting

Wed Jan 29 2020

(49) 1. Daisy Juanita Dukes
(48) 2. Charles Dubose
(47) 3. Sherry Moseley
(46) 4. Mary F. Davis
(45) 5. Edna Anderson
(44) 6. Mopine Thomas
(43) 7. [illegible]
(42) 8. Marilyn Jordan
(41) 9. Buddy Rack
(40) 10. Sue T
(39) 11. Carolyn Slayton
(38) 12. Johnnie Washington
(37) 13. Anna White
(36) 14. Pam Hoven
(35) 15. Jackie Howell
(34) 16. J. Olsleegen
(33) 17. Nina Bowerman
(32) 18. Minnie Crosby
(31) 19. Joyce Shuffield
(30) 20. Dorothy Howze
(29) 21. Mave Gollinger
(28) 22. Wilma McNeil x
(27) 23. Gertrude Dorsett
(26) 24. Lamar Mott
(25) 25. Angie Mott
(24) 26. Walter Looper
(23) 27. Dorothy Donald
(22) 28. Nelson Litton
(21) 29. Marilyn Smith
(20) 30. Marvin Campbell
(19) 31. Linda B. Chastain
(18) 32. Mel Johnson
(17) 33. Lois
(16) 34. Voneille Marego
(15) 35. Woodrow [illegible]
(14) 36. [illegible]
(13) 37. Lillie M Smith
(12) 38. Ruth Fuzzell
(11) 39. Mary Gilman
(10) 40. Betty Hammond x
(9) 41. Gary Greene
(8) 42. Joan James
(7) 43.
(6) 44.
(5) 45.
(4) 46.
(3) 47.
(2) 48.
(1) 49.
50.
51.
52.

Thomasville 02/06/2025
Evette Moody

21. Marc Smith
22. Diane Smith
23. Grace Oliver
24. Richard Martindale
25. Roseann Martindale
26. James McKinley
27. Mary McKinley
28. Marie Newton
29. Ramon Newton
30. Samuel E. Oliver
31. [illegible]
32. Yvonne Thickston
33. Linda Hunt
34. Jack Hunt
35. Nancy Odom
36. Dot Champion

Thomasville 02/06/21
& Vitta Woods

37. Wilma Odom
38.
39.
40.
41.
42.
43.
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Conecuh County

Public Notice

The Conecuh County Hazard Mitigation Planning Committee will meet on January 13, 2020 at 1:00 p.m. at the Conecuh County EMA Office located at 102 County Shop Road, Evergreen, AL 36401. The purpose of the meeting will be to discuss local hazard mitigation issues and to provide input for the Division A Hazard Mitigation Plan that includes Conecuh County and its municipal jurisdictions. The public is invited to attend and participate. Those persons needing information or requiring assistance to participate should contact Johnny Brock, Conecuh County EMA Director at (251)578-1921 at least 24 hours in advance of the meeting.

This notice was posted at the following locations as well as being published in the Evergreen Courant:
Conecuh County Courthouse
Evergreen Post Office
Evergreen City Hall
Castleberry Town Hall
Repton Town Hall

This week marks a somewhat interesting anniversary for Evergreen and Conecuh County. It's the 114th anniversary of the day that Richmond Pearson Hobson, the "Hero of the Merrimac," delivered a public lecture at the Conecuh County Courthouse in Evergreen.

This lecture, which was delivered on Jan. 1, 1906, came about seven and a half years after Hobson became a naval hero and received the Medal of Honor for intentionally sinking his own ship, the USS Merrimac, on June 3, 1898 during the Spanish-American War.

Many of you will remember from your high school American History classes that this short war between the U.S. and Spain lasted just over three months and resulted in an American victory. Hobson's role in the war began when he arrived in Santiago, a major Cuban port, on June 1, 1898. The Spanish squadron of Admiral Pascual Cervera was at Santiago, and Hobson hatched a plan that many called a suicide mission. He and a crew of six prisoner, and Hobson was eventually released during a prisoner exchange on July 6. Later, he was presented with the Medal of Honor, and his official citation read as follows – "In connection with the sinking of the U.S.S. Merrimac at the entrance to the fortified harbor of Santiago de Cuba, 3 June 1898. Despite persistent fire from the enemy fleet and fortifications on shore, Lt. Hobson distinguished himself by extraordinary courage and carried out this operation at the risk of his own personal safety."

Hobson, who was born in Greensboro in 1870, resigned from the Navy in 1903 and launched a political career. He went on to serve as a member of the U.S. House of Representatives for Alabama's Sixth Congressional District from May 4, 1907 to March 3, 1915.

During this time, he made at least one more trip to Evergreen. According to local newspaper reports, Hobson visited Conecuh County on March 31, 1914 and "spoke before a large crowd" at the Conecuh County Courthouse in Evergreen. Many in this "large crowd" may have been local ladies.

According to one article I

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age 66 on March 16, 1937. He w buried in Arlington Nation Cemetery in Arlington, Va., n far from the nation's capital Washington, D.C.

News Flashback

Compiled by Lee Peacock

13 YEARS AGO
JAN. 4, 2007

Friends and busine acquaintances of Gerald Bc den stopped by South Alaban Gas last Thursday afternoon bid Borden good wishes on h retirement as the general ma ager of the company. Bord will remain with SAG on a co sulting basis for the next ye to help new manager, Ma Burgess, assume his ne duties.

Tears and laughter filled t conference room at Schneid National Trucking Dec. 14 former employees and curre employees said goodbye to ea other as the company official closed the Evergreen termin Among those present for t reception was Walter Pool who started Poole Truck Lir which later became Schneid National.

Total rainfall for the mon of December was 4.33 inch Total rainfall for 2006 was 43. inches.

The City of Evergreen mo than doubled their base sew rates and almost doubled the base water rates Tuesd night. The Evergreen Ci Council voted unanimously raise the base sewer rate in t city from $5 per month to $

Division A Regional Hazard Mitigation Plan Conecuh County Public Meeting #1

Evergreen, AL • January 013, 2020 • 1:00PM

SIGN-IN SHEET

NAME	ORGANIZATION	PHONE NUMBER	E-MAIL
Mary Zimmerman	ATRC	334-682-0132	mary.zimmerman@atrc.net
Johnny Brock	EMA	251-578-1971	jbrock@conecuhcounty.us
Henry Kirksey	TOC	251-966-2141	henrykirksey@yahoo.com
Jeff Sullivan	City of Evergreen	251-369-0394	jsull.van@evergreenal.org
Daryl Knowles	Repton Police Dept	251-593-6270	townofrepton@frontiernet.net, dKauto2002@yahoo.com
J.A-S	Evergreen P.D.	251-578-1111	

Evergreen Evett Woods
2-19-2020

1. Brenda L. Macks
2. Troy Smith
3. Julia Odom
4. Glenda Colvin
5. Phyllis Bowman
6. Charilyn Barnett
7. Shirley Riley
8. Lucille Lynch
9. Dane Junta
10. Troy Smith
11. Eric Finley
12. LARRY WILLIAMS
13. ERNEST WOODS
14. Ella Mae
15. Ellie Mae
16. Chris C Thomas
17. Essie Mae
18.
19.
20.

A.1 Baldwin County Community Action Program

Baldwin County Community Action Program						
#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years	Funding Source	Estimated Cost
1	**<u>Goal for Prevention.</u> Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**<u>Comprehensive Plans and Smart Growth</u>. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	County EMA/ Planning Department / Building Official-Floodplain Manager /County Engineer-Highway Department	High	Mid-Range/Ongoing	Local Funds	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions (Baldwin County Unincorporated with active comprehensive planning programs.	County EMA/ Planning Department	Medium	Mid-Range	Local Funds	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.	County EMA/ Planning Department / Building Official-Floodplain Manager /County Engineer-Highway Department	Medium	Mid-Range	Local Funds	TBD
1.1.4	Prepare a floodplain management plan.	Building Official-Floodplain Manager	High	Short-Range	HMA/Local	TBD
1.2	**<u>Geographic Information Systems (GIS)</u>. Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					

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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.	County EMA/ GIS Staff in the CIS, Planning, & Highway Departments/ Engineering Department	Medium	Mid-Range/Ongoing	HMA/Local	TBD
1.2.2	Integrate FEMA HAZUS-MH applications for hazard loss estimates within local GIS program. Maintain up-to-date within GIS to apply the full loss estimation capabilities of HAZUS.	GIS Staff in the CIS, Planning, & Highway Departments (May also include Baldwin County 9-1-1 GIS Manager	Medium	Mid-Range/Ongoing	Local	TBD
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	Building Official-Floodplain Manager /County Engineer-Highway Department/ County EMA	High	Short-Range	Local	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Building Official-Floodplain Manager / County Engineer-Highway Dept/Planning Department/County EMA	Medium	Mid-Range/Ongoing	HMA	TBD
1.3.2	Identify local culturally or socially significant structures and critical facilities within Baldwin County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Building Official-Floodplain Manager / County Engineer-Highway Dept/Planning Department/County EMA	Medium	Mid-Range	Local Funds	TBD

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1.3.3	Evaluate elevation and culvert sizing of local 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.	County Engineer-Highway Department/Floodplain Manager -Building Official/County EMA	Medium	Mid-Range/Ongoing	Local Funds	TBD
1.3.4	Inventory and map local fire hydrants throughout the county, and identify areas in need of new fire hydrants.	9-1-1 GIS,/County EMA/Planning Department	Medium	Mid-Range/Ongoing	Local Funds	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	Building Official-Floodplain Manager / County Engineer-Highway Dept/Planning Department/County EMA	Medium	Mid-Range/Ongoing	HMA	TBD
1.4	**<u>Zoning</u>. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.1	Consider large lot size restriction on flood prone areas designated on Flood Insurance Rate Maps.	Planning Department/ Building Official-Floodplain Manager	Medium	Mid-Range/Ongoing	Local Funds	TBD
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.	Planning Department/ Building Official-Floodplain Manager	Medium	Mid-Range/Ongoing	Local Funds	TBD
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.	Planning Department/ Building Official-Floodplain Manager	Medium	Mid-Range	Local Funds	TBD
1.4.4	Enact local ordinance that requires community storm shelters within sizeable mobile home parks and subdivisions.	Local Government/County EMA/Planning Department/ Building Official-Floodplain Manager	Medium	Mid-Range	HMA/Local Funds	TBD

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#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline	Funding Source	Estimated Cost
1.5	**<u>Open Space Preservation</u>. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Building Official-Floodplain Manager / County Engineer-Highway Dept/Planning Department/County EMA	Medium	Mid-Range	Local Funds	TBD
1.6	**<u>Flood Plain Management Regulations.</u> Effectively administer and enforce local floodplain management regulations.**					
1.6.1	Train local flood plain managers through programs offered by the State Flood Plain Coordinator or FEMA's training center in Emmitsburg, Maryland.	Local Government	Medium	Mid-Range	Local Funds	TBD
1.6.2	Maintain a library of technical assistance and guidance materials to support the Building Official-Floodplain Manager.	Building Department-Floodplain Manager/County EMA/Planning Department	Medium	Mid-Range	Local Funds	TBD
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.	Building Department-Floodplain Manager/County EMA/Planning Department	Medium	Mid-Range	Local Funds	TBD
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.	Building Department-Floodplain Manager/County EMA/Planning Department	Medium	Mid-Range/Ongoing	Local Funds	TBD
1.6.5	Participate in the "Turn Around, Don't Drown" program by purchasing and installing signs in known flash flood overpass locations.	County EMA/County Engineer-Highway Department	Medium	Mid-Range	Local Funds	TBD

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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.	Floodplain Manager/County EMA	Medium	Short-Range	Local Funds	TBD
1.7	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Official	Medium	Mid-Range	Local Funds	TBD
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."	Building Official	Medium	Mid-Range	Local Funds	TBD
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters	Building Official	Medium	Mid-Range	Local Funds	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Official	Medium	Mid-Range	Local Funds	TBD
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.	Building Official-Floodplain Manager/ Planning Department/County EMA	Medium	Mid-Range	HMA	TBD
1.8	**Landscape Ordinances. Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
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.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					

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1.9.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Building Official-Floodplain Manager/ County Engineer-Highway Dept/Planning Department/Baldwin County EMA	Medium	Ongoing	Local Funds	TBD
1.9.2	Develop, adopt, and implement subdivision regulations that require proper storm water infrastructure design and construction.	Planning Department	Medium	Ongoing	Local Funds	TBD
1.9.3	Establish urban forestry program to help mitigate storm water runoff common in areas with large impervious surfaces.	Planning Department	Medium	Ongoing	Local Funds	TBD
1.11	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.11.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Floodplain Manager/Planning Department	High	Short-Range	Local Funds	TBD
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	County EMA/Building Official-Floodplain Manager/Planning Department	Medium	Long-Range	HMA	TBD
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.	Fire Department(s)/County EMA	Medium	Mid-Range	Local Funds	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					

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2.1.1	Pursue FEMA grant funds to relocate buildings and infrastructure out of hazardous flood areas, with emphasis on pre-FIRM residential buildings, where deemed more cost effective than property acquisition or building elevation.	Building Official-Floodplain Manager/Hazard Mitigation Coordinator/County EMA	Medium	Ongoing	HMA	TBD
2.2	**<u>Acquisition.</u> Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official-Floodplain Manager/Hazard Mitigation Coordinator/County EMA	High	Ongoing	HMA	TBD
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.	Building Official-Floodplain Administrator	High	Ongoing	TBD	TBD
2.3	**<u>Building Elevation</u>. Elevate buildings in hazardous flood areas to safeguard against damage.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official-Floodplain Manager/Hazard Mitigation Coordinator/County EMA	Medium	Ongoing	HMA	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize Local Funds homes for low- to moderate-income families.	Building Official-Floodplain Manager/Hazard Mitigation Coordinator/County EMA	Medium	Ongoing	HMA	TBD
2.4	**<u>Flood Proofing</u>. Encourage flood proofing of building in hazardous flood areas to safeguard against damages.**					

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2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official-Floodplain Manager/Hazard Mitigation Coordinator/County EMA	High	Ongoing	HMA	TBD
2.5	**<u>Flood Control Measures.</u> Construct small flood control measures to reduce/prevent flood damage.**					
2.5.1	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non-structural mitigation techniques.	Building Official	Low	Long-Range	HMA/Local Funds	TBD
2.6	**<u>Building Retrofits</u>. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.6.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official-Floodplain Manager/Hazard Mitigation Coordinator/County EMA	Medium	Ongoing	HMA	TBD
2.6.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Building Official-Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.7	**<u>Hazard Insurance Awareness.</u> Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.7.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Building Official-Floodplain Manager/Hazard Mitigation Coordinator/County EMA	Medium	Ongoing	Local Funds	TBD
2.7.2	Conduct ongoing tree trimming programs along power lines.	Power-Utility Companies	Medium	Ongoing	Local	TBD

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2.8	**<u>Critical Facilities Protection</u>. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.8.1	Install lightning and/or surge protection on existing critical facilities.	Building Official/Building Maintenance	Medium	Mid-Range	Local Funds	TBD
2.8.2	Conduct ongoing tree trimming programs along power lines					
2.9	**<u>Back Up Power.</u>** Ensure uninterrupted power supply to critical facilities during emergency events.					
2.9.1	Pursue grant funding for the installation of back-up power generators for critical facilities.	County EMA	Medium	Mid-Range	HMA	TBD
3	**<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.**					
3.1	**<u>Map Information.</u> Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Planning Department/Building Official-Floodplain Manager/Hazard Mitigation Coordinator/County EMA	Low	Mid-Range	Local Funds	TBD
3.2	**<u>Outreach Projects.</u> Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Planning Department/Building Official-Floodplain Manager/Hazard Mitigation Coordinator/County EMA	High	Short-Range	Local Funds	TBD

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3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Planning Department/Building Official-Floodplain Manager/Hazard Mitigation Coordinator/County EMA	High	Short-Range	Local Funds	TBD
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.	County EMA	High	Short-Range	Local Funds	TBD
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.	Building Official-Floodplain Manager/Hazard Mitigation Coordinator/County EMA	High	Ongoing	Local Funds	TBD
3.3	**Real Estate Disclosure.** Encourage real estate agents to disclose flood plain location for property listings.					
3.3.2	Consider the enactment of a local ordinance or state law to require floodplain disclosure when a property is for sale.	Floodplain Manager	Medium	Complete/Ongoing	Local Funds	TBD
3.4	**Library.** Use local library resources to educate the public on hazard risks and mitigation alternatives.					
3.4.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Floodplain Manager/County EMA	Medium	Long-Range	Local Funds	TBD
3.5	**Education Programs**. Use schools and other community education resources to conduct programs related to hazard risks and mitigation measures.					
3.5.1	Distribute hazard mitigation brochures to students through area schools.	County EMA	High	Short-Range	Local Funds	TBD

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3.5.2	Educate homeowners about structural and non-structural retrofitting of vulnerable homes.	Building Official-Floodplain Manager/ County EMA	Low	Long-Range	Local Funds	TBD
3.6	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.6.1	Distribute the 2020-2021 plan to local officials, stakeholders, and interested individuals through internet download.	County EMA	High	Short-Range	Local Funds	TBD
3.7	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.7.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Local Floodplain Manger	Medium	Short-Range	Local Funds	TBD
3.8	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
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.	Local Government/County EMA	Medium	Ongoing	Local Funds	TBD
3.9	**Weather Radios.** Improve public access to weather alerts.					
3.9.1	Promote the use of weather radios in households and businesses.	Local Government/County EMA	High	Short-Range	Local Funds	TBD
3.9.2	Require the installation of weather radios in all public buildings and places of public assembly.	Local Government	High	Short-Range	Local Funds	TBD
3.9.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Local Government/May be assisted by County EMA (Guidance & Info.)	High	Short-Range	Local Funds	TBD
3.10	**Disaster Warning**. Improve public warning systems.					

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~~3.10.1~~	~~Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.~~ Establish a Mass Notification System with IPAWS capability, and a public outreach program to keep the public information of hazards and notified of emergency situations using real-time data from flood gauges and the National Weather Service.	~~Local Government/County EMA t~~	~~High~~	~~Ongoing~~	~~HMA~~	~~TBD~~
~~3.10.2~~	~~Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.~~	~~Local Government~~	~~High~~	~~Mid-Range~~	~~HMA~~	~~TBD~~
~~3.10.3~~	~~Evaluate the feasibility of a shared tri-county ALERT system covering Baldwin, Escambia, and Mobile counties.~~	~~Local Government~~	~~High~~	~~Mid-Range~~	~~HMA~~	~~TBD~~
3.10.5	Upgrade critical communications infrastructure.	Local Government	High	Long-Range	TBD	TBD
4	**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.**					
4.1	**Open Space Easements and Acquisitions.** Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other floodplain acquisition efforts.	Local Government	Medium	Mid-Range	HMA	TBD
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Planning Department/Building Official-Floodplain Manager	Medium	Mid-Range	Local Funds	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Planning Department/Local Government	Medium	Long-Range	Local Funds	TBD

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4.3	**Urban Forestry Programs.** Maintain a healthy forest that can help mitigate damaging impacts of flooding, erosion, landslides and wildfires within urban areas.					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Local Government	Medium	Mid-Range	Local Funds	TBD
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	Local Government	Medium	Mid-Range	Local Funds	TBD
4.4	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance storm water drainage.	Local Government	Medium	Mid-Range	Local Funds	TBD
4.4.2	Develop a coastal renourishment program	Local Government	Medium	Mid-Range	Local Funds	TBD
4.5	**Water Resources Conservation Programs. Protect water quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance. Develop a coastal renourishment program	Local Government	Medium	Mid-Range	Local Funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Planning Department/Building Official-Floodplain Manager/County Engineer-Highway Department	Medium	Long-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements.** Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.					

Baldwin County Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Planning Department/Building Official-Floodplain Manager/County Engineer-Highway Department t	Medium	Ongoing	HMA	TBD
5.2.2	Improve and retrofit water supply systems to save water during drought events and to eliminate breaks and leaks.	Local Government	Medium	Long-Range	HMA	TBD
5.3	**<u>Community Shelters and Safe Rooms</u>. Provide shelters from natural hazards for the safety of community residents.**					
5.3.1	Ensure the inclusion of storm shelters and/or safe rooms in public buildings such as schools and multi-purpose community centers.	Planning Department/Building Official-Floodplain Manager/Hazard Mitigation Coordinator/County EMA	Medium	Mid-Range	HMA	TBD
5.3.2	Pursue grand funds to establish a program for subsidizing safe room and storm shelter construction in appropriate locations and facilities.	Local Government/County EMA	Medium	Mid-Range	HMA	TBD
5.3.3	Encourage the construction of safe rooms in new and Local Funds homes and buildings.	Planning Department/Building Official-Floodplain Manager/Hazard Mitigation Coordinator/County EMA	Medium	Mid-Range	HMA	TBD
5.4	<u>Miscellaneous Mitigation Actions</u>. **Actions needed to protect lives and preserve property that are specialized and do not fit in another category.**					

Baldwin County Community Action Program						
#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years	Funding Source	Estimated Cost
5.4.1	River Rd Re-Alignment (and similar projects) that identify roadway providing access to residents and public safety which can be improved to mitigate loss of access due to flooding.	Planning, Highway Department, and EMA	Medium	Mid-Range	HMA	TBD
5.4.2	Coroner's Office – Capacity Building Improvement for handling multiple decedents in emergencies/disasters	Coroner, EMA	Medium	Mid-Range	HMA	TBD

A.2 Bay Minette Community Action Program

City of Bay Minette Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**<u>Goal for Prevention.</u> Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**<u>Comprehensive Plans and Smart Growth</u>. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Planning Department	High	Short- Range	Local Funds	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Planning Department	High	Short- Range	Local Funds	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.	Planning Department	High	Short- Range	Local Funds	TBD
1.2	**<u>Geographic Information Systems (GIS)</u>. Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					

City of Bay Minette Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	GIS Department/ Engineering Department/ Baldwin County EMA	Low	Mid-Range	HMA	TBD
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	GIS Department/ Engineering Department/ Baldwin County EMA	Low	Mid-Range	HMA	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Baldwin County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Planning Department	Medium	Mid-Range	Local Funds	TBD
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.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.3.4	Inventory and map existing fire hydrants throughout the community, and identify areas in need of new fire hydrants.	Planning Department, GIS, and Fire Department	Medium	Mid-Range	Local Funds	TBD

City of Bay Minette Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	Planning Department	Medium	Mid-Range/Ongoing	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.1	Consider lot size requirements on flood prone areas designated on Flood Insurance Rate Maps.	Planning Department	Medium	Mid-Range	Local Funds	TBD
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.	Planning Department	Medium	Mid-Range	Local Funds	TBD
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.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.4.4	Enact local ordinance that requires community storm shelters within sizeable mobile home parks and subdivisions.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
1.6.1	Train local flood plain managers through programs offered by the State Flood Plain Coordinator or FEMA's training center in Emmitsburg, Maryland.	Mayor and Council	High	Short-Range	Local Funds	TBD

City of Bay Minette Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Floodplain Manager	High	Short-Range	Local Funds	TBD
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.	Floodplain Manager	High	Short-Range	Local Funds	TBD
1.6.5	Participate in the "Turn Around Don't Drown" program by purchasing and installing signs in known flash flood bridge overpass locations.	Floodplain Manager	Medium	Mid-Range	Local Funds	TBD
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.	Floodplain Manager	Medium	Mid-Range	Local Funds	TBD
1.7	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	City Building Official	High	Ongoing	Local Funds	TBD
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."	City Building Official	High	Ongoing	Local Funds	TBD

City of Bay Minette Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	City Building Official	High	Ongoing	Local Funds	TBD
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	City Fire Department	High	Ongoing	Local Funds	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	City Building Official	High	Ongoing	Local Funds	TBD
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.	City Building Official	High	Ongoing	FEMA HMA Grant	TBD
1.8	**Landscape Ordinances. Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
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.	Planning Department	Medium	Mid-Range	Local Funds	TBD
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.	City Building Official	Medium	Long-Range	Local Funds	TBD
1.8.3	Establish ordinance for the planting of new urban forests or replacement of the 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.	City Building Official	Medium	Long-Range	Local Funds	TBD

City of Bay Minette Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	City Building Official/Planning Department	Medium	Ongoing	Existing	TBD
1.9.2	Develop, adopt and implement subdivision regulations that require proper storm water infrastructure design and construction.	City Building Official	Medium	Ongoing	Existing	TBD
1.9.3	Establish urban forestry program to help mitigate storm water runoff common in areas with large impervious surfaces.	City Building Official	Medium	Ongoing	Existing	TBD
1.11	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.11.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Floodplain Manager	Medium	Long-Range	Local Funds	TBD
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	City Building Official	Medium	Long-Range	FEMA HMA Grant	TBD
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.	Fire Department	Medium	Mid-Range	Local Funds	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					

City of Bay Minette Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to relocate buildings and infrastructure out of hazardous flood areas, with emphasis on pre-FIRM residential buildings, where deemed more cost effective than property acquisition or building elevation.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.2	**Acquisition.** Acquire flood prone buildings and properties and establish permanent open space					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.3	**Building Elevation**. Elevate buildings in hazardous flood areas to safeguard against damages					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					

City of Bay Minette Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.6	**<u>Building Retrofits</u>. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.6.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2.6.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.7	**<u>Hazard Insurance Awareness.</u> Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.7.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.8	**<u>Critical Facilities Protection</u>. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.8.1	Install lightning and/or surge protection on existing critical facilities.	Building Official/Building Maintenance	High	Short-Range	FEMA HMA Grant	TBD
2.8.2	Conduct ongoing tree trimming programs along power lines.	Street Department/Planning Department	Medium	Ongoing	Local Funds	TBD

City of Bay Minette Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.9	**<u>Backup Power.</u> Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.9.1	Pursue grant funding for the installation of backup power generators for critical facilities.	Planning Department	High	Ongoing	Local Funds	TBD
3	**<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.**					
3.1	**<u>Map Information.</u> Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agencies, builders, developers, and homeowners.	Floodplain Manager	High	Ongoing	Local Funds	TBD
3.2	**<u>Outreach Projects.</u> Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Planning Department	Medium	Ongoing	Local Funds	TBD
3.2.2	Distribute materials, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Planning Department	Medium	Mid-Range	Local Funds	TBD
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.	Planning Department	Low	Mid-Range	Local Funds	TBD

City of Bay Minette Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Planning Department	Low	Mid-Range	Local Funds	TBD
3.3	**Real Estate Disclosure. Encourage real estate agents to disclose flood plain location for property listings.**					
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.	Mayor and Council	Medium	Mid-Range	Local Funds	TBD
3.4	**Library.** Use local library resources to educate the public on hazard risks and mitigation alternatives.					
3.4.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Floodplain Manager/Emergency Management Coordinator/Mayor/City Council	Medium	Ongoing	Local Funds	TBD
3.5	**Education Programs**. Use schools and other community education resources to conduct programs related to hazard risks and mitigation measures.					
3.5.1	Distribute hazard mitigation brochures to students through area schools.	Emergency Management Coordinator & Staff	Medium	Ongoing	Local Funds	TBD
3.6	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.6.1	Distribute the 2020-2021 plan to local officials, stakeholders, and interested individuals through internet download.	Emergency Management Coordinator & Staff	Medium	Ongoing	Local Funds	TBD
3.7	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					

City of Bay Minette Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.7.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Floodplain Administrator/Building Official	Medium	Ongoing	Local Funds	TBD
3.8	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
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.	Mayor and Council	Medium	Ongoing	Local Funds	TBD
3.9	**Weather Radios. Improve public access to weather alerts.**					
3.9.1	Promote the use of weather radios in households and businesses.	Mayor and Council	Medium	Mid-Range	Local Funds	TBD
3.9.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Local Government	High	Ongoing	HMA	TBD
3.10	**Disaster Warning**. Improve public warning systems.					
3.10.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Floodplain Administrator/Building Official	Medium	Ongoing	Local Funds	TBD
3.10.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Local Government	High	Long-Range	TBD	TBD
3.10.3	Evaluate the feasibility of a shared tri-county ALERT system covering Baldwin, Escambia, and Mobile Counties.	Local Government	High	Long-Range	TBD	TBD

City of Bay Minette Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.10.5	Upgrade critical communications infrastructure.	Local Government	High	Long-Range	TBD	TBD
4	**<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.**					
4.1	**<u>Open Space Easements and Acquisitions.</u>** Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.					
4.2	**<u>River/Stream Corridor Restoration and Protection.</u> Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Floodplain Administrator/Building Official	Medium	Ongoing	Local Funds	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	City Building Official	Medium	Long-Range	Local Funds	TBD
4.3	**<u>Urban Forestry Programs.</u> Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Local Government	Low	Long-Range	TBD	TBD
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	Floodplain Administrator/Building Official/Planning Department	Medium	Ongoing	TBD	TBD

City of Bay Minette Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4.3.3	Develop an urban forestry management plan to ensure a progressive urban forestry program aimed at increasing forestry canopy, increased safety and planting hurricane resistant tree species.	Floodplain Administrator/Building Official/Planning Department	Medium	Ongoing	Local Funds	TBD
4.4	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance stormwater drainage.	Planning Department	Medium	Long-Range	Local Funds	TBD
4.5	**Water Resources Conservation Programs. Protect water quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Local Government	Medium	Long-Range	TBD	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Planning Department	Medium	Long-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements.** Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Floodplain Administrator, Street Department, Local Government	Medium	Long-Range	TBD	TBD

City of Bay Minette Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
5.3	**<u>Community Shelters and Safe Rooms</u>. Provide shelters from natural hazards for the safety of community residents.**					
5.3.1	Ensure the inclusion of storm shelters and/or safe rooms in public buildings such as schools and multi-purpose community centers.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD
5.3.2	Pursue grand funds to establish a program for subsidizing safe room and storm shelter construction in appropriate locations and facilities.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD

A.3 Daphne Community Action Program

City of Daphne Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**<u>Goal for Prevention.</u> Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**<u>Comprehensive Plans and Smart Growth</u>. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Community Development Department	High	Short- Range	Local Funds	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Community Development Department	Medium	Mid-Range	Local Funds	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.	Mayor and Council	Medium	Mid-Range	Local Funds	TBD
1.2	**<u>Geographic Information Systems (GIS)</u>. Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					

City of Daphne Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Community Development Department	Medium	Mid-Range	Local Funds	TBD
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	Community Development Department	Medium	Mid-Range	Local Funds	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Community Development Department	Medium	Mid-Range	Local Funds	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Baldwin County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Community Development Department	Medium	Mid-Range	Local Funds	TBD
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.	Community Development Department	Medium	Mid-Range	Local Funds	TBD
1.3.4	Inventory and map existing fire hydrants throughout the jurisdiction, and identify areas in need of new fire hydrants.	Community Development Department	Medium	Mid-Range	Local Funds	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	Community Development Department	Medium	Mid-Range/Ongoing	FEMA HMA Grant	TBD

City of Daphne Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.1	Consider large lot size restrictions on flood prone areas designated on Flood Insurance Rate Maps.	Community Development Department	Medium	Mid-Range	Local Funds	TBD
1.4.2	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, among others.	Community Development Department	Medium	Mid-Range	Local Funds	TBD
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.	Community Development Department	Medium	Mid-Range	Local Funds	TBD
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Community Development Department	Medium	Long-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
1.6.1	Train local flood plain managers through programs offered by the State Flood Plain Coordinator or FEMA's training center in Emmitsburg, Maryland.	Mayor and Council	High	Short-Range	Local Funds	TBD
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Floodplain Manager	High	Short-Range	Local Funds	TBD

City of Daphne Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	High	Short-Range	Local Funds	TBD
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.	Floodplain Manager	High	Short-Range	Local Funds	TBD
1.6.5	Participate in the "Turn Around Don't Drown" program by purchasing and installing signs in known flash flood bridge overpass locations.	Floodplain Manager	High	Short-Range	Local Funds	TBD
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.	Floodplain Manager	Low	Long-Range	Local Funds	TBD
1.7	**<u>Building and Technical Codes.</u> Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Inspection Department	High	Ongoing	Local Funds	TBD
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."	Building Inspection Department	High	Ongoing	Local Funds	TBD

City of Daphne Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Community Development Department	High	Ongoing	Local Funds	TBD
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	Building Inspection Department	High	Ongoing	Local Funds	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Inspection Department	High	Ongoing	Local Funds	TBD
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.	Community Development Department	Medium	Long-Range	Local Funds	TBD
1.8	**<u>Landscape Ordinances.</u> Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
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.	Community Development Department	Medium	Long-Range	Local Funds	TBD
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.	Community Development Department	Medium	Long-Range	Local Funds	TBD

City of Daphne Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Community Development Department	Medium	Long-Range	Local Funds	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Community Development Department	Medium	Ongoing	Existing	TBD
1.9.2	Develop, adopt and implement subdivision regulations that require proper storm water infrastructure design and construction.	Community Development Department	Medium	Ongoing	Existing	TBD
1.9.3	Establish urban forestry program to help mitigate storm water runoff common in areas with large impervious surfaces.	Community Development Department	Medium	Ongoing	Existing	TBD
1.10	**Dam Safety Management. Establish a comprehensive dam safety program.**					
1.10.1	Support legislation to establish a State dam safety program.	Community Development Department	Medium	Long-Range	Local Funds	TBD
1.11	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.11.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Floodplain Manager	Medium	Long-Range	Local Funds	TBD

City of Daphne Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.12	**<u>Critical Facilities Assessments.</u> Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Community Development Department	Medium	Long-Range	FEMA HMA Grant	TBD
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.	Community Development Department	Medium	Long-Range	FEMA HMA Grant	TBD
2	**<u>Goal for Property Protection.</u> Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**<u>Building Relocation.</u> Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to relocate buildings and infrastructure out of hazardous flood areas, with emphasis on pre-FIRM residential buildings, where deemed more cost effective than property acquisition or building elevation.	Building Inspection Department	High	Short-Range	FEMA HMA Grant	TBD
2.2	**<u>Acquisition.</u> Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Inspection Department	High	Short-Range	FEMA HMA Grant	TBD

City of Daphne Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.2.2	Utilize the 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.	Building Inspection Department	High	Short-Range	FEMA HMA Grant	TBD
2.3	**<u>Building Elevation.</u> Elevate buildings in hazardous flood areas to safeguard against damages.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Inspection Department	High	Short-Range	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Inspection Department	High	Short-Range	FEMA HMA Grant	TBD
2.4	**<u>Flood Proofing.</u> Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Inspection Department	High	Short-Range	FEMA HMA Grant	TBD
2.5	**<u>Flood Control Measures.</u> Construct small flood control measures to reduce/prevent flood damage.**					
2.5.1	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non-structural mitigation techniques.	Community Development Department	Medium	Long-Range	FEMA HMA Grant	TBD

City of Daphne Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.5.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Building Department	High	Ongoing	TBD	TBD
2.6	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.6.1	Retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Floodplain Manager	Medium	Ongoing	FEMA HMA Grant	TBD
2.6.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.7	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.7.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.8	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.8.1	Install lighting and/or surge protection on existing critical facilities.	Building Inspection Department	High	Ongoing	Local Funds	TBD
2.8.2	Conduct ongoing tree trimming programs along power lines.	Public Works	Medium	Ongoing	Local Funds	TBD
2.9	**Back Up Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					

City of Daphne Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.9.1	Pursue grant funding for the installation of back-up power generators for critical facilities.	Community Development Department	Medium	Ongoing	FEMA HMA Grant	TBD
3	**<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.**					
3.1	**<u>Map Information.</u> Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Community Development Department	Medium	Ongoing	Local Funds	TBD
3.2	**<u>Outreach Projects.</u> Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Community Development Department	Medium	Ongoing	Local Funds	TBD
3.2.2	Distribute materials, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Community Development Department	Medium	Mid-Range	Local Funds	TBD
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.	Community Development Department	Medium	Mid-Range	Local Funds	TBD

City of Daphne Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Local Floodplain Manger	Medium	Ongoing	Local Funds	TBD
3.3	**<u>Real Estate Disclosure.</u> Encourage real estate agents to disclose flood plain location for property listings.**					
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.	Local Floodplain Manger	Medium	Long-Range	Local Funds	TBD
3.4	**<u>Library.</u> Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.4.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Baldwin County EMA	High	Short-Range	Existing	TBD
3.5	**<u>Education Programs</u>. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					
3.5.1	Distribute hazard mitigation brochures to students through area schools.	Baldwin County EMA	High	Short-Range	Existing	TBD
3.5.2	Educate homeowners about structural and non-structural retrofitting of vulnerable homes.	Baldwin County EMA	High	Short-Range	Existing	TBD
3.6	**<u>Community Hazard Mitigation Plan Distribution</u>. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.6.1	Distribute the 2015 plan to local officials, stakeholders, and interested individuals through internet download.	Baldwin County EMA	High	Short-Range	Existing	TBD

City of Daphne Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.6.2	Distribute the 2015 plan summary to the public through local jurisdictions, via the internet and other media.	Baldwin County EMA	High	Short-Range	Existing	TBD
3.7	**<u>Technical Assistance</u>. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.7.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Local Floodplain Manger	High	Ongoing	Local Funds	TBD
3.8	**<u>Mass Media Relations</u>. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
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.	Mayor and Council	Medium	Ongoing	Local Funds	TBD
3.9	**<u>Weather Radios</u>. Improve public access to weather alerts.**					
3.9.1	Promote the use of weather radios in households and businesses.	Mayor and Council	High	Long-Range	Existing	TBD
3.9.2	Require the installation of weather radios in all public buildings and places of public assembly.	Mayor and Council	Medium	Mid-Range	Existing	TBD
3.9.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Mayor and Council	High	Short-Range	FEMA HMA Grant	TBD
3.10	**<u>Disaster Warning.</u> Improve public warning systems.**					
3.10.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Community Development Department	Medium	Mid-Range	FEMA HMA Grant	TBD

City of Daphne Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.10.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Community Development Department	Medium	Mid-Range	FEMA HMA Grant	TBD
3.10.3	Evaluate the feasibility of a shared tri-county ALERT system covering Baldwin, Escambia, and Mobile counties.	Community Development Department	Medium	Mid-Range	Local Funds	TBD
3.10.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Community Development Department	Medium	Mid-Range	FEMA HMA Grant	TBD
3.10.5	Upgrade critical communications infrastructure.	Community Development Department	Medium	Mid-Range	FEMA HMA Grant	TBD
4	**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.**					
4.1	**Open Space Easements and Acquisitions. Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.**					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	Community Development Department	Medium	Mid-Range	FEMA HMA Grant	TBD
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Community Development Department	Medium	Mid-Range	Local Funds	TBD

City of Daphne Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Community Development Department	Medium	Long-Range	Local Funds	TBD
4.3	**<u>Urban Forestry Programs.</u> Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Community Development Department	Medium	Long-Range	Local Funds	TBD
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	Community Development Department	Medium	Long-Range	Local Funds	TBD
4.3.3	Develop an urban forestry management plan to ensure a progressive urban forestry program aimed at increasing forestry canopy, increased safety and planting hurricane resistant tree species.	Community Development Department	Medium	Long-Range	Local Funds	TBD
4.4	**<u>Beach and Dune Protection/Renourishment.</u> Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance stormwater drainage.	Community Development Department	Medium	Long-Range	Local Funds	TBD
4.4.2	Develop a coastal renourishment program.	Community Development Department	Medium	Long-Range	Local Funds	TBD

City of Daphne Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4.5	**Water Resources Conservation Programs. Protect water quantity and quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Community Development Department	High	Short-Range	Local Funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Building Inspection Department	Medium	Long-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements.** Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Community Development Department	High	Short-Range	FEMA HMA Grant	TBD
5.2.2	Improve and retrofit water supply systems to save water during drought events and to eliminate breaks and leaks.	Community Development Department	High	Short-Range	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
5.3.1	Ensure the inclusion of storm shelters and/or safe rooms in public buildings such as schools and multi-purpose community centers.	Community Development Department	High	Short-Range	FEMA HMA Grant	TBD
5.3.2	Pursue grant funds to establish a program for subsidizing safe room and storm shelter construction in appropriate locations and facilities.	Community Development Department	High	Short-Range	FEMA HMA Grant	TBD

City of Daphne Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	Community Development Department	High	Short-Range	FEMA HMA Grant	TBD

A.4 Elberta Community Action Program

Town of **Elberta Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Planning Department	Medium	Mid-Range	FEMA HMA Grant	TBD
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Planning Department	Medium	Long-Range	Local Funds	TBD

Town of **Elberta Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.6	**<u>Flood Plain Management Regulations.</u> Effectively administer and enforce local floodplain management regulations.**					
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.	Floodplain Manager	High	Short-Range	Local Funds	TBD
1.6.5	Participate in the "Turn Around, Don't Drown" program by purchasing and installing signs in known flash flood overpass locations.	Floodplain Manager/Emergency Management Coordinator	High	Short-Range	Local Funds	TBD
1.7	**<u>Building and Technical Codes.</u> Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
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.	Planning Department	High	Ongoing	Local Funds	TBD
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.	Planning Department	High	Ongoing	FEMA HMA Grant	TBD
1.8	**<u>Landscape Ordinances.</u> Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
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.	Planning Department	Medium	Long-Range	Local Funds	TBD

Town of **Elberta Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	Medium	Long-Range	Local Funds	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.3	Establish urban forestry program to help mitigate storm water runoff common in areas with large impervious surfaces.	Planning Department	Medium	Ongoing	Existing	TBD
1.10	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Medium	Ongoing	Local	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD

Town of **Elberta Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Floodplain Manager	Medium	Ongoing	FEMA HMA Funds	TBD
2.5	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.5.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD

Town of **Elberta Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.5.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.6	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.6.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.7	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.7.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	High	Ongoing	Local Funds	TBD
2.7.2	Conduct ongoing tree trimming programs along power lines.					
2.8	**Back Up Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.8.1	Pursue grant funding for the installation of back-up power generators for critical facilities.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
3.1.1	Publicize the availability of FIRM information to real estate agencies, builders, developers, and homeowners.	Floodplain Administrator	Medium	On-going	TBD	TBD

Town of **Elberta Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.1.2	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.	Planning Department	Medium	Ongoing	Local Funds	TBD
3.2	**<u>Community Hazard Mitigation Plan Distribution</u>. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Local Government	Medium	Ongoing	Local Funds	TBD
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.	Local Government	Medium	Ongoing	Local Funds	TBD
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.3	**<u>Technical Assistance</u>. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.3.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Local Floodplain Manger	High	Ongoing	Local Funds	TBD

Town of **Elberta Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.3.2	Consider the enactment of a local ordinance or state law to require floodplain disclosure when a property is for sale.	Local Government	Medium	Ongoing	Local Funds	TBD
3.4	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
3.4.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Mayor and Council	Medium	Ongoing	Local Funds	TBD
3.5	**Weather Radios. Improve public access to weather alerts.**					
3.5.1	Distribute hazard mitigation brochures to students through area schools	Local Government	Medium	Ongoing	Local Funds	TBD
3.5.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Mayor and Council	High	Short-Range	Existing	TBD
3.6	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.6.1	Distribute the 2020 plan to local officials, stakeholders, and interested individuals through internet download.	Baldwin County EMA	High	Short-Range	Existing	TBD
37	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
37.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Building Department	Medium	Ongoing	Local Funds	TBD
3.8	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					

Town of **Elberta Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.9	**Weather Radios.** Improve public access to weather alerts.					
3.9.1	Promote the use of weather radios in households and businesses.	Local Government	High	Short-Range	Existing	TBD
3.9.2	Require the installation of weather radios in all public buildings and places of public assembly.	Local Government	High	Short-Range	Existing	TBD
3.9.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Local Government	High	Short-Range	Existing	TBD
3.10	**Disaster Warning**. Improve public warning systems.					
3.10.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.5	Upgrade critical communications infrastructure.	Local Government	High	Long-Range	TBD	TBD
4	**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.**					

Town of **Elberta Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4	**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.**					
4.1	**Open Space Easements and Acquisitions.** Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.					
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Floodplain Administrator/Building Official	Medium	Ongoing	Local Funds	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	City Building Official	Medium	Long-Range	Local Funds	TBD
4.3	**Urban Forestry Programs. Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Local Government	Low	Long-Range	TBD	TBD
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	Floodplain Administrator/Building Official/Planning Department	Medium	Ongoing	TBD	TBD
4.3.3	Develop an urban forestry management plan to ensure a progressive urban forestry program aimed at increasing forestry canopy, increased safety and planting hurricane resistant tree species.	Floodplain Administrator/Building Official/Planning Department	Medium	Ongoing	Local Funds	TBD

Town of **Elberta Community Action Program**						
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4.4	**<u>Beach and Dune Protection/Renourishment.</u> Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance stormwater drainage.	Planning Department	Medium	Long-Range	Local Funds	TBD
4.5	**<u>Water Resources Conservation Programs.</u> Protect water quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Local Government	Medium	Long-Range	TBD	TBD
5	**<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.**					
5.1	**<u>Drainage System Maintenance.</u> Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Planning Department	Medium	Long-Range	Local Funds	TBD
5.2	**<u>Reservoirs and Drainage System Improvements</u>.** Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Floodplain Administrator, Street Department, Local Government	Medium	Long-Range	TBD	TBD
5.3	**<u>Community Shelters and Safe Rooms</u>. Provide shelters from natural hazards for the safety of community residents.**					
5.3.1	Ensure the inclusion of storm shelters and/or safe rooms in public buildings such as schools and multi-purpose community centers.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD

Town of **Elberta Community Action Program**						
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5.3.2	Pursue grand funds to establish a program for subsidizing safe room and storm shelter construction in appropriate locations and facilities.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD

A.5 Fairhope Community Action Program

City of Fairhope Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**<u>Goal for Prevention.</u> Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**<u>Comprehensive Plans and Smart Growth</u>. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Planning Department	High	Mid-range	RESTORE /Local Funds	$650k
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Planning Department	High	Part of Comp Plan	RESTORE /Local Funds	Included in item above
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.	Planning Department	High	Ongoing	Local Funds	TBD
1.2	**<u>Geographic Information Systems (GIS)</u>. Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					

City of Fairhope Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	City Engineer/Baldwin County EMA	High	Short-Range	FEMA HMA Grant	$35,000
1.2.2	Integrate FEMA HAZUS-MH applications for hazard loss estimates within local GIS program. Maintain up-to-date within GIS to apply the full loss estimation capabilities of HAZUS.	City GIS Department/Planning Department	High	Ongoing	FEMA HMA Grant	TBD
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	City GIS Department/Planning Department	Moderate	Ongoing	Local Funds	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	City GIS Department/Planning Department/ City Engineer/ Floodplain Manager	High	Ongoing	Local Funds/ FEMA HMA Grant	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Baldwin County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Planning Department	Low	Long-Range	TBD	TBD

City of Fairhope Community Action Program						
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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.	City GIS Department/Planning Department/ City Engineer	Medium	Long-Range	FEMA HMA Grant	TBD
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Fire Department/Water Dept/GIS	Medium	Ongoing	Local Funds	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	Public Works Department	High	Ongoing	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.4	Enact local ordinance that require community storm shelters within sizeable mobile home parks and subdivisions.	Planning Department/ Floodplain Manager	Low	Long-Range	Local Funds	TBD
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
1.6.5	Participate in the “Turn Around Don’t Drown” program by purchasing and installing signs in known flash flood bridge overpass locations.	Floodplain Manager	Medium	Mid-Range	TBD	TBD
1.7	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					

City of Fairhope Community Action Program						
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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.	Building Official/ Planning Department/ Baldwin County EMA	Medium	Long-Range	FEMA HMA Grant	TBD
1.8	**Landscape Ordinances. Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
1.8.2	Review and revise as necessary, landscaping standards for parking lots that reduce the size of impervious surfaces and encourage natural infiltration of rainwater.	Planning Department	High	Approved/Ongoing Evaluations	TBD	TBD
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.	City Council	Low	Long-Range	TBD	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.3	Establish urban forestry program to help mitigate storm water runoff common in areas with large impervious surfaces.	Planning Department	Low	Long-Range	Local Funds	TBD
1.11	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.11.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					

City of Fairhope Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official/ Planning Department/ City Engineer	High	Long-Range	FEMA HMA Grant	TBD
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.	Building Official/ Planning Department/ City Engineer	high	Long-range	Local Funds	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to 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.	Building Official/ Floodplain Manager	High	Ongoing	FEMA HMA Grant	TBD
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official/ Floodplain Manager	High	Ongoing	FEMA HMA Grant	TBD
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.	Building Official/ Floodplain Manager	High	Ongoing	FEMA HMA Grant	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					

City of Fairhope Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official/ Floodplain Manager	High	Ongoing	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Official	Medium	Long-Range	FEMA HMA Grant	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official/ Floodplain Manager	Medium	Long-Range	FEMA HMA Grant	TBD
2.5	**Flood Control Measures. Small flood control measures built to reduce/prevent flood damage.**					
2.5.1	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non-structural mitigation techniques.	Building Official/ Floodplain Manager	Medium	Long-Range	FEMA HMA Grant	TBD
2.6	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.6.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official/ City Engineer	High	Ongoing	FEMA HMA Grant	TBD
2.6.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Building Official/ Floodplain Manager	Medium	Ongoing	Local Funds	TBD

City of Fairhope Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.7	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.7.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Building Official/ Floodplain Manager	High	Ongoing	Local Funds	TBD
2.8	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.8.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	Low	Long-Range	TBD	TBD
2.8.2	Conduct ongoing tree trimming programs along power lines	Streets/Public Works	Medium	Ongoing	TBD	TBD
2.9	**Back Up Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.9.1	Pursue grant funding for the installation of backup power generators for critical facilities.	Grants Manager	High	Mid-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Floodplain Administrator / Baldwin County EMA	High	Ongoing	Local Funds	TBD
3.2	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					

City of Fairhope Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	City Staff/EM Coordinator, and Baldwin County EMA	High	Ongoing	Local Funds	TBD
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	City Staff/EM Coordinator, Baldwin County EMA	High	Ongoing	Local Funds	TBD
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.	City Staff/EM Coordinator, Baldwin County EMA	High	Ongoing	Local Funds	TBD
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.	City Staff/EM Coordinator, Baldwin County EMA	High	Ongoing	Local Funds	TBD
3.3	**Real Estate Disclosure.** Encourage real estate agents to disclose flood plain location for property listings.					
3.3.2	Consider the enactment of a local ordinance or state law to require floodplain disclosure when a property is for sale.	Floodplain Administrator, Mayor, and State of Alabama	High	Ongoing	State Funds	TBD
3.4	**Library. Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.4.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	City Staff/EM Coordinator, Baldwin County EMA	Low	Long-Range	Local Funds	TBD

City of Fairhope Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.5	**<u>Education Programs</u>. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					
3.5.1	Distribute hazard mitigation brochures to students through area schools.	City Staff/EM Coordinator, Baldwin County EMA	High	Ongoing	Local Funds	TBD
3.5.2	Educate homeowners about structural and non-structural retrofitting of vulnerable homes.	City Staff/EM Coordinator, Baldwin County EMA	High	Ongoing	Local Funds	TBD
3.6	**<u>Community Hazard Mitigation Plan Distribution</u>. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.6.1	Distribute the 2020 plan to local officials, stakeholders, and interested individuals through internet download.	City Staff/EM Coordinator, Baldwin County EMA	High	Ongoing	Local Funds	TBD
3.6.2	Distribute the 2015 plan summary to the public through local jurisdictions, via the internet and other media.	City Staff/EM Coordinator, Baldwin County EMA	High	Ongoing	Local Funds	TBD
3.7	**<u>Technical Assistance</u>. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.7.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Floodplain Manager/ Building Official	High	Ongoing	Local Funds	TBD
3.8	**<u>Mass Media Relations</u>. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					

City of Fairhope Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	City Staff/EM Coordinator, Baldwin County EMA	High	Ongoing	Local Funds	TBD
3.9	**<u>Weather Radios</u>. Improve public access to weather alerts.**					
3.9.1	Promote the use of weather radios in households and businesses.	City Staff/EM Coordinator, Baldwin County EMA	Medium	Mid-Range	Local Funds	TBD
3.9.2	Require the installation of weather radios in all public buildings and places of public assembly.	Public Works Dept/ Facility Maintenance	High	Ongoing	FEMA HMA Grant	TBD
3.9.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	City Staff/EM Coordinator, Baldwin County EMA	Medium	Mid-Range	Local Funds	$150,000
3.10	**<u>Disaster Warning.</u> Improve public warning systems.**					
3.10.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	City Staff/EM Coordinator, Baldwin County EMA	High	Mid-Range	FEMA HMA Grant	TBD
3.10.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	City Staff/EM Coordinator, Baldwin County EMA	High	Mid-Range	FEMA HMA Grant	TBD

City of Fairhope Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.10.3	Evaluate the feasibility of a shared tri-county ALERT system covering Baldwin, Escambia, and Mobile counties.	Baldwin County EMA	High	Mid-Range	FEMA HMA Grant	TBD
3.10.5	Upgrade critical communications infrastructure.	City Staff/EM Coordinator, Baldwin County EMA	High	Mid-Range	FEMA HMA Grant	TBD
4	**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.**					
4.1	**Open Space Easements and Acquisitions. Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.**					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	Floodplain Manager/ Planning Department	Medium	Ongoing	FEMA HMA Grant	TBD
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Floodplain Manager/ Planning Department	High	Ongoing	Other	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Building Official	High	Ongoing	Local Funds	TBD
4.3	**Urban Forestry Programs. Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Planning Department	Medium	Ongoing	Local Funds	TBD

City of Fairhope Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	Planning Department	Medium	Ongoing	TBD	TBD
4.3.3	Develop an urban forestry management plan to ensure a progressive urban forestry program aimed at increasing forestry canopy, increased safety and planting hurricane resistant species.	Planning Department	Medium	Ongoing	TBD	TBD
4.4	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.5	**Water Resources Conservation Programs. Protect water quantity and quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Fairhope Water and Sewer Dept	High	Ongoing	Local Funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					
5.2.2	Improve and retrofit water supply systems to save water during drought events and to eliminate breaks and leaks.	City Engineer/Public Works	High	Ongoing	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					

City of Fairhope Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
5.3.1	Ensure the inclusion of storm shelters and/or safe rooms in public buildings such as schools and multi-purpose community centers.	Building Official/ Baldwin County EMA	Medium	Long-Range	Local Funds	TBD
5.3.2	Pursue grant funds to establish a program for subsidizing safe room and storm shelter construction in appropriate locations and facilities.	Planning Department/ Baldwin County EMA	Medium	Long-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	Building Official/ City Council	Medium	Long-Range	FEMA HMA Grant	TBD

A.6 Foley Community Action Program

City of Foley Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**<u>Goal for Prevention.</u> Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**<u>Comprehensive Plans and Smart Growth</u>. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Community Development Department	High	Short- Range	Local Funds	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Community Development Department	High	Short-Range	Local Funds	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.	Finance Department	High	Short-Range	Local Funds	TBD
1.2	**<u>Geographic Information Systems (GIS)</u>. Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					

City of Foley Community Action Program						
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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.	IT/GIS Department	High	Short-Range	HMA	TBD
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.	Community Development Department	High	Short-Range	Local Funds	TBD
1.2.4	Create GIS systems for inventorying and assessing urban forest for in order to identify current and potential hazards and develop a comprehensive plan for managing urban forests.	Fire, Horticulture & Environmental Department	Medium	Mid-Range	Local Funds	TBD
1.3	**<u>Planning Studies</u>. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Engineering Department	Medium	Mid-Range	FEMA HMA Grant	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within the jurisdiction that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Engineering Department	Medium	Mid-Range	Local Funds	TBD
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.	Engineering Department	High	Short-Range	Local Funds	TBD

City of Foley Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Fire Department Riviera Utilities	High	Short-Range	Local Funds	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	Engineering Department	High	Short-Range	FEMA HMA Grant	TBD
1.4	**<u>Zoning</u>. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.1	Consider large lot size restrictions on flood prone areas designated on Flood Insurance Rate Maps.	Community Development Department	High	Short-Range	Local Funds	TBD
1.4.2	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, among others.	Community Development, Engineering & Environmental Department	High	Short-Range	Local Funds	TBD
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.	Community Development, Environmental & Engineering Department	High	Short-Range	Local Funds	TBD

City of Foley Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.4.4	Enact local ordinance that requires community storm shelters within sizeable mobile home parks and subdivisions.	Building Official	High	Long-Range	TBD	TBD
1.5	**<u>Open Space Preservation</u>. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Community Development, Engineering & Environmental Department	High	Short-Range	Existing	TBD
1.6	**<u>Flood Plain Management Regulations.</u> Effectively administer and enforce local floodplain management regulations.**					
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.	Community Development Department	Medium	Mid-Range	Local Funds	TBD
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Community Development Department	High	Short-Term	Local Funds	TBD
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.	Floodplain Administrator	High	On-going	Local Funds	TBD

City of Foley Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Community Development, Engineering & Public Works Department	High	Short-Range	Local Funds	TBD
1.6.5	Participate in the "Turn Around Don't Drown" program by purchasing and installing signs in known flash flood bridge overpass locations.	Engineering Department & Public Works	High	Mid-Range	Local Funds	TBD
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.	Community Development, Engineering & Public Works Department	High	Ongoing	Local Funds	TBD
1.7	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Community Development Department	High	Short-Range	Local Funds	TBD
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."	Community Development Department	High	Short-Range	Local Funds	TBD

City of Foley Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Engineering Department	Medium	Mid-Range	Local Funds	TBD
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	Fire Department	High	Short-Range	Local Funds	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Community Development & Environmental Department	High	Short-Range	Local Funds	TBD
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.	Building Official	High	Ongoing	Local Funds	TBD
1.8	**Landscape Ordinances. Establish minimum standards for planting areas for trees and vegetation to reduce stormwater runoff and improve urban aesthetics.**					
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.	Engineering & Environmental Department	High	Short-Range	Local Funds	TBD
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.	Environmental & Horticulture Department	Medium	Short-Range	Local Funds	TBD

City of Foley Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Horticulture Department	High	Short-Range	Local Funds	TBD
1.9	**<u>Storm Water Management.</u> Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Engineering & Environmental Department	High	Ongoing	Local Funds	TBD
1.9.2	Develop, adopt and implement subdivision regulations that require proper storm water infrastructure design and construction.	~~City Council~~ Engineering & Environmental Department	High	Ongoing	Local Funds	TBD
1.9.3	Establish urban forestry program to help mitigate storm water runoff common in areas with large impervious surfaces.	Environmental, Engineering & Horticulture Department	High	Short-Range	Local Funds	TBD
1.10	**<u>Dam Safety Management.</u> Establish a comprehensive dam safety program.**					
1.10.1	Support legislation to establish a State dam safety program.	Mayor and Council	Medium	Mid-Range	Local Funds	TBD
1.11	**<u>Community Rating System Program (CRS).</u> Increase participation of NFIP member communities in the CRS Program.**					
1.11.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Community Development Department	Medium	Long-Range	Local Funds	TBD

City of Foley Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.12	**<u>Critical Facilities Assessments.</u> Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Community Development & Fire Department	Medium	Long-Range	FEMA HMA Grant	TBD
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.	Fire Department/ Environmental Services	High	Short-Range	FEMA HMA Grant	TBD
2	**<u>Goal for Property Protection.</u> Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**<u>Building Relocation.</u> Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to 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.	Community Development Department	Medium	Long-Range	FEMA HMA Funds	TBD
2.2	**<u>Acquisition.</u> Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Community Development Department	Medium	Long-Range	FEMA HMA Funds	TBD
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.	Community Development Department	Medium	Long-Range	FEMA HMA Funds	TBD

City of Foley Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Community Development Department	Medium	Long-Range	FEMA HMA Funds	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Community Development Department	Medium	Long-Range	FEMA HMA Funds	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Community Development Department	Medium	Long-Range	FEMA HMA Funds	TBD
2.5	**Flood Control Measures. Small flood control measures built to reduce/prevent flood damage**					
2.5.1	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non-structural mitigation techniques.	Community Development & Engineering Department	Medium	Long-Range	FEMA HMA Funds	TBD
2.6	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.6.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Community Development Department	High	Short-Range	FEMA HMA Funds	TBD
2.6.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Community Development Department	High	Short-Range	Local Funds	TBD

City of Foley Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.7	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.7.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Community Development & Marketing Department	High	Short-Range	Local Funds	TBD
2.7.2	Promote the purchase of crop insurance to cover potential losses due to drought.	Community Development & Marketing Department	High	Long-Range	Local Funds	TBD
2.8	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.8.1	Install lightning and/or surge protection on existing critical facilities.	Maintenance Department	High	Short-Range	Local Funds	TBD
2.8.2	Conduct ongoing tree trimming programs along power lines					
2.9	**Back Up Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.9.1	Pursue grant funding for the installation of back-up power generators for critical facilities.	City Council	High	Short-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					

City of Foley Community Action Program						
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3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Community Development & Marketing Department	High	Ongoing	Local Funds	TBD
3.2	**<u>Outreach Projects.</u> Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Community Development Department	High	Short-Range	Local Funds	TBD
3.2.2	Distribute materials, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Fire Department	High	Short-Range	Local Funds	TBD
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.	Chamber of Commerce	Low	Long-Range	Existing	TBD
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.	Community Development Department	High	Short-Range	Local Funds	TBD
3.3	**<u>Real Estate Disclosure</u>.** Encourage real estate agents to disclose flood plain location for property listings.					
3.3.2	Consider the enactment of a local ordinance or state law to require floodplain disclosure when a property is for sale.	Floodplain Administrator, Mayor, Local Government, State Government	High	Long-Range	Local Funds	TBD

City of Foley Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.4	**<u>Library.</u> Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.4.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	City Library	High	Short-Range	Local Funds	TBD
3.5	**<u>Education Programs</u>. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					
3.6	**<u>Community Hazard Mitigation Plan Distribution</u>. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.6.1	Distribute the 2020 plan to local officials, stakeholders, and interested individuals through internet download.	Baldwin County EMA	High	Short-Range	Existing	TBD
3.6.2	Distribute the 2020 plan summary to the public through local jurisdictions, via the internet and other media.	Baldwin County EMA	High	Short-Range	Existing	TBD
3.7	**<u>Technical Assistance</u>. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.7.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Community Development Department	High	Short-Range	Local Funds	TBD
3.8	**<u>Mass Media Relations</u>. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
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.	Marketing Department	High	Short-Range	TBD	TBD

City of Foley Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.9	**<u>Weather Radios</u>. Improve public access to weather alerts.**					
3.9.1	Promote the use of weather radios in households and businesses.	Public Safety	High	Short-Range	Local Funds	TBD
3.9.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	City Council	Medium	Mid-Range	Existing	TBD
3.10	**<u>Disaster Warning.</u> Improve public warning systems.**					
3.10.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Public Safety	Medium	Mid-Range	FEMA HMA Grant	TBD
3.10.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Public Safety	Medium	Mid-Range	FEMA HMA Grant	TBD
3.10.3	Evaluate the feasibility of a shared tri-county ALERT system covering Baldwin, Escambia, and Mobile counties.	Public Safety	Medium	Mid-Range	FEMA HMA Grant	TBD
3.10.5	Upgrade critical communications infrastructure.	Public Safety	High	Short-Range	FEMA HMA Grant	TBD
4	**<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.**					
4.1	**<u>Open Space Easements and Acquisitions.</u> Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.**					

City of Foley Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	City Council	Medium	Mid-Range	FEMA HMA Grant	TBD
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Environmental Department	High	Ongoing	Local Funds	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Environmental Department	High	Ongoing	Local Funds	TBD
4.3	**Urban Forestry Programs. Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Environmental Department	High	Short-Range	Local Funds	TBD
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	Horticulture Department	High	Short-Range	Local Funds	TBD
4.3.3	Develop and urban forestry management plans to ensure a progressive urban forestry program aimed at increasing forestry canopy, increased safety and planting hurricane resistant tree species.	Horticulture Department	High	Short-Range	Local Funds	TBD
4.4	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance storm water drainage.	Environmental Department	Medium	Mid-Range	TBD	TBD

City of Foley Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4.5	**Water Resources Conservation Programs. Protect water quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Local Government	Medium	Ongoing	Local	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Engineering & Public Works Department	Medium	Long-Range	Existing	TBD
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Engineering Department	High	Short-Range	FEMA HMA Grant	TBD
5.2.2	Improve and retrofit water supply systems to save water during drought events and to eliminate breaks and leaks.	Riviera Utilities	Medium	Long-Range	Local Funds	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
5.3.2	Pursue grant funds to establish a program for subsidizing safe room and storm shelter construction in appropriate locations and facilities.	City Council	High	Short-Range	FEMA HMA Grant	TBD

City of Foley Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	Community Development Department	High	Short-Range	FEMA HMA Grant	TBD

A.7 Gulf Shores Community Action Program

City of Gulf Shores Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Planning and Zoning Department	High	Ongoing	Local Funds	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Planning and Zoning Department	Medium	Mid-Range	Local Funds	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.	Mayor and Council	Medium	Ongoing	Local Funds	TBD
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					

City of Gulf Shores Community Action Program						
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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.	Engineering Department	Medium	Mid-Range	Local Funds	TBD
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	Engineering Department	High	Ongoing	Local Funds	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Planning and Zoning Department	Medium	Mid-Range	FEMA HMA Grant	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Baldwin County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Planning and Zoning Department	Medium	Mid-Range	Local Funds	TBD
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.	Engineering Department	High	Ongoing	Local Funds	TBD
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Fire Department	High	Ongoing	Local Fund	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	Engineering Department	Medium	Mid-Range/Ongoing	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					

City of Gulf Shores Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.4.1	Consider lot size requirements on flood prone areas designated on Flood Insurance Rate Maps.	Planning and Zoning Department	Medium	Mid-Range	Local Funds	TBD
1.4.2	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, among others.	Planning and Zoning Department	Medium	Mid-Range	Local Funds	TBD
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.	Planning and Zoning Department	Medium	Mid-Range	Local Funds	TBD
1.4.4	Enact local ordinance that requires community storm shelters within sizeable mobile home parks and subdivisions.	Planning and Zoning Department	Medium	Mid-Range	Local Funds	TBD
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Planning and Zoning Department	Medium	Long-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
1.6.1	Train local flood plain managers through programs offered by the State Flood Plain Coordinator or FEMA's training center in Emmitsburg, Maryland.	Mayor and Council	High	Short-Range	Local Funds	TBD
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Building Department	High	Ongoing	Local Funds	TBD

City of Gulf Shores Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Building Department	High	Ongoing	Local Funds	TBD
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.	Building Department	High	Ongoing	Local Funds	TBD
1.6.5	Participate in the "Turn Around, Don't Drown" program by purchasing and installing signs in known flash flood overpass locations.	Public Works Department	High	Short-Range	Local Funds	TBD
1.7	**<u>Building and Technical Codes.</u> Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Department	High	Ongoing	Local Funds	TBD
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."	Building Department	High	Ongoing	Local Funds	TBD

City of Gulf Shores Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Engineering Department	High	Ongoing	Local Funds	TBD
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	Building Department	High	Ongoing	Local Funds	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Department	High	Ongoing	Local Funds	TBD
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.	Planning and Zoning Department	High	Ongoing	FEMA HMA Grant	TBD
1.8	**Landscape Ordinances. Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
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.	Planning and Zoning Department	Medium	Long-Range	Local Funds	TBD
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.	Fire Department	Medium	Long-Range	Local Funds	TBD

City of Gulf Shores Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Planning and Zoning Department	Medium	Long-Range	Local Funds	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Engineering Department	High	Ongoing	Local Funds	TBD
1.9.2	Develop, adopt and implement subdivision regulations that require proper storm water infrastructure design and construction.	Engineering Department	Medium	Ongoing	Local Funds	TBD
1.9.3	Establish urban forestry program to help mitigate storm water runoff common in areas with large impervious surfaces.	Planning and Zoning Department	Medium	Ongoing	Local Funds	TBD
1.10	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.10.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Building Department	High	Long-Range	Local Funds	TBD
1.11	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.11.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Engineering Department	High	Ongoing	FEMA HMA Grant	TBD

City of Gulf Shores Community Action Program						
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1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Engineering Department	High	Ongoing	FEMA HMA Grant	TBD
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.	Fire Department	Medium	Long-Range	Local Funds	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to relocate buildings and infrastructure out of hazardous flood areas, with emphasis on pre-FIRM residential buildings, where deemed more cost effective than property acquisition or building elevation.	Floodplain Manager	High	Ongoing	FEMA HMA Grant	TBD
2.2	**Acquisition.** Acquire flood prone buildings and properties and establish permanent open space.					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Floodplain Manager	High	Ongoing	Local Funds	TBD

City of Gulf Shores Community Action Program						
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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.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.3	**Building Elevation**. Elevate buildings in hazardous flood areas to safeguard against damages.					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Floodplain Manager	High	Ongoing	FEMA HMA Funds	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Floodplain Manager	Medium	Ongoing	FEMA Funds	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Floodplain Manager	Medium	Ongoing	FEMA HMA Funds	TBD
2.5	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.5.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Floodplain Manager	Medium	Ongoing	FEMA HMA Grant	TBD

City of Gulf Shores Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.5.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Building Department	High	Ongoing	Local Funds	TBD
2.6	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.6.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Floodplain Manager	High	Ongoing	Local Funds	TBD
2.7	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.7.1	Install lightning and/or surge protection on existing critical facilities.	Building Department	High	Ongoing	Local Funds	TBD
2.7.2	Conduct ongoing tree trimming programs along power lines.	Engineering Department	High	Ongoing	Local Funds	TBD
2.8	**Back Up Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.8.1	Pursue grant funding for the installation of backup power generators for critical facilities.	Engineering Department	High	Ongoing	FEMA HMA Funds	TBD
3	**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.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Floodplain Manager	High	Ongoing	Local Funds	TBD

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3.2	**<u>Outreach Projects.</u> Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Building Department	High	Ongoing	Local Funds	TBD
3.2.2	Distribute materials, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Building Department	High	Ongoing	Local Funds	TBD
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.	Building Department	Medium	Ongoing	Local Funds	TBD
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.	Building Department	High	Ongoing	Local Funds	TBD
3.3	**<u>Real Estate Disclosure.</u> Encourage real estate agents to disclose flood plain location for property listings.**					
3.4	**<u>Library.</u> Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.4.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	City Library	High	Ongoing	Local Funds	TBD
3.5	**<u>Education Programs</u>. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					

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3.5.1	Distribute hazard mitigation brochures to students through area schools.	Fire Department	High	Ongoing	Local Funds	TBD
3.6	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.6.1	Distribute the 2020 plan to local officials, stakeholders, and interested individuals through internet download.	Baldwin County EMA	High	Short-Range	Existing	TBD
3.7	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.7.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Floodplain Manager	High	Ongoing	Local Funds	TBD
3.8	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
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.	Mayor and Council	Medium	Ongoing	Local Funds	TBD
3.9	**Weather Radios. Improve public access to weather alerts**					
3.9.1	Promote the use of weather radios in households and businesses.	Mayor and Council	High	Short-Range	Existing	TBD
3.9.2	Require the installation of weather radios in all public buildings and places of public assembly.	Mayor and Council	High	Short-Range	Existing	TBD
3.9.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Mayor and Council	High	Short-Range	FEMA HMA Funds	TBD

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3.10	**Disaster Warning**. Improve public warning systems.					
3.10.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.5	Upgrade critical communications infrastructure.	Local Government	High	Ongoing	TBD	TBD
4	**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.**					
4.1	**Open Space Easements and Acquisitions. Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.**					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	Planning and Zoning Department	Medium	Mid-Range	FEMA HMA Grant	TBD
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Building Department	Medium	Ongoing	Local Funds	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Planning and Zoning Department	High	Ongoing	Local Funds	TBD
4.3	**Urban Forestry Programs. Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					

City of Gulf Shores Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Planning Department	Medium	Ongoing	Local Funds	TBD
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	Planning Department	Medium	Ongoing	TBD	TBD
4.3.3	Develop an urban forestry management plan to ensure a progressive urban forestry program aimed at increasing forestry canopy, increased safety and planting hurricane resistant species.	Planning Department	Medium	Ongoing	TBD	TBD
4.4	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance storm water drainage.	Engineering Department	High	Ongoing	Local Funds	TBD
4.4.2	Develop a coastal renourishment program.	Engineering Department	High	Ongoing	Local Funds	TBD
4.5	**Water Resources Conservation Programs. Protect water quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Mayor/City Council	Medium	Long Range	Local Funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Engineering Department	High	Ongoing	Local Funds	TBD

City of Gulf Shores Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Engineering Department	High	Ongoing	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
5.3.1	Ensure the inclusion of storm shelters and/or safe rooms in public buildings such as schools and multi-purpose community centers.	Planning and Zoning Department	High	Short-Range	FEMA HMA Grant	TBD
5.3.2	Pursue grand funds to establish a program for subsidizing safe room and storm shelter construction in appropriate locations and facilities.	Engineering Department	High	Short-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD

A.8 Loxley Community Action Program

Town of **Loxley Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures, smart growth opportunities and methodologies, and increase /maintain hazards database, socioeconomic data, infrastructure, and critical facilities inventories.**					
1.1.1	Identify existing culturally or socially significant structures and critical facilities within Baldwin County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Planning and Zoning Department	Medium	Mid-Range	Local Funds	TBD
1.1.2	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.	Planning and Zoning Department	Medium	Mid-Range	Local Funds	TBD
1.1.3	Inventory and map existing fire hydrants throughout the community, and identify areas in need of new fire hydrants.	Fire Department, Baldwin County 9-1-1	Medium	Mid-Range	Local Funds	TBD
1.1.4	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	Public Works Department	Medium	Mid-Range/Ongoing	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					

Town of **Loxley Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**<u>Goal for Prevention.</u> Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**<u>Comprehensive Plans and Smart Growth</u>. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.2	**<u>Geographic Information Systems (GIS)</u>. Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.3	**<u>Planning Studies</u>. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Planning Department	Medium	Mid-Range	FEMA HMA Grant	TBD
1.5	**<u>Open Space Preservation</u>. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Planning Department	Medium	Long-Range	Local Funds	TBD
1.6	**<u>Flood Plain Management Regulations.</u> Effectively administer and enforce local floodplain management regulations.**					

Town of **Loxley Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	High	Short-Range	Local Funds	TBD
1.6.5	Participate in the "Turn Around, Don't Drown" program by purchasing and installing signs in known flash flood overpass locations.	Floodplain Manager/Emergency Management Coordinator	High	Short-Range	Local Funds	TBD
1.7	**<u>Building and Technical Codes.</u> Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
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.	Planning Department	High	Ongoing	Local Funds	TBD
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.	Planning Department	High	Ongoing	FEMA HMA Grant	TBD
1.8	**<u>Landscape Ordinances.</u> Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
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.	Planning Department	Medium	Long-Range	Local Funds	TBD

Town of **Loxley Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	Medium	Long-Range	Local Funds	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.3	Establish urban forestry program to help mitigate storm water runoff common in areas with large impervious surfaces.	Planning Department	Medium	Ongoing	Existing	TBD
1.10	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Medium	Ongoing	Local	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD

Town of **Loxley Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Floodplain Manager	Medium	Ongoing	FEMA HMA Funds	TBD
2.5	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.5.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD

Town of **Loxley Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.5.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.6	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.6.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.7	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.7.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	High	Ongoing	Local Funds	TBD
2.7.2	Conduct ongoing tree trimming programs along power lines.	Utilities/Public Works	Medium	Ongoing	Local Funds	TBD
2.8	**Back Up Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.8.1	Pursue grant funding for the installation of back-up power generators for critical facilities.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
3.1.1	Publicize the availability of FIRM information to real estate agencies, builders, developers, and homeowners.	Floodplain Administrator	Medium	On-going	TBD	TBD

Town of **Loxley Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.1.2	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.	Planning Department	Medium	Ongoing	Local Funds	TBD
3.2	**<u>Community Hazard Mitigation Plan Distribution</u>. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Local Government	Medium	Ongoing	Local Funds	TBD
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.	Local Government	Medium	Ongoing	Local Funds	TBD
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.3	**<u>Technical Assistance</u>. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.3.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Local Floodplain Manger	High	Ongoing	Local Funds	TBD

Town of **Loxley Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.3.2	Consider the enactment of a local ordinance or state law to require floodplain disclosure when a property is for sale.	Local Government	Medium	Ongoing	Local Funds	TBD
3.4	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
3.4.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Mayor and Council	Medium	Ongoing	Local Funds	TBD
3.5	**Weather Radios. Improve public access to weather alerts.**					
3.5.1	Distribute hazard mitigation brochures to students through area schools	Local Government	Medium	Ongoing	Local Funds	TBD
3.5.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Mayor and Council	High	Short-Range	Existing	TBD
3.6	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.6.1	Distribute the 2020 plan to local officials, stakeholders, and interested individuals through internet download.	Baldwin County EMA	High	Short-Range	Existing	TBD
37	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
37.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Building Department	Medium	Ongoing	Local Funds	TBD
3.8	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					

Town of **Loxley Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.9	**Weather Radios.** Improve public access to weather alerts.					
3.9.1	Promote the use of weather radios in households and businesses.	Local Government	High	Short-Range	Existing	TBD
3.9.2	Require the installation of weather radios in all public buildings and places of public assembly.	Local Government	High	Short-Range	Existing	TBD
3.9.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Local Government	High	Short-Range	Existing	TBD
3.10	**Disaster Warning**. Improve public warning systems.					
3.10.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.5	Upgrade critical communications infrastructure.	Local Government	High	Long-Range	TBD	TBD
4	**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.**					

Town of **Loxley Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4	**<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.**					
4.1	**<u>Open Space Easements and Acquisitions.</u>** Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.					
4.2	**<u>River/Stream Corridor Restoration and Protection.</u> Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Floodplain Administrator/Building Official	Medium	Ongoing	Local Funds	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	City Building Official	Medium	Long-Range	Local Funds	TBD
4.3	**<u>Urban Forestry Programs.</u> Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Local Government	Low	Long-Range	TBD	TBD
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	Floodplain Administrator/Building Official/Planning Department	Medium	Ongoing	TBD	TBD
4.3.3	Develop an urban forestry management plan to ensure a progressive urban forestry program aimed at increasing forestry canopy, increased safety and planting hurricane resistant tree species.	Floodplain Administrator/Building Official/Planning Department	Medium	Ongoing	Local Funds	TBD

Town of **Loxley Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4.4	**<u>Beach and Dune Protection/Renourishment.</u> Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance stormwater drainage.	Planning Department	Medium	Long-Range	Local Funds	TBD
4.5	**<u>Water Resources Conservation Programs.</u> Protect water quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Local Government	Medium	Long-Range	TBD	TBD
5	**<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.**					
5.1	**<u>Drainage System Maintenance.</u> Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Planning Department	Medium	Long-Range	Local Funds	TBD
5.2	**<u>Reservoirs and Drainage System Improvements</u>.** Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Floodplain Administrator, Street Department, Local Government	Medium	Long-Range	TBD	TBD
5.3	**<u>Community Shelters and Safe Rooms</u>. Provide shelters from natural hazards for the safety of community residents.**					
5.3.1	Ensure the inclusion of storm shelters and/or safe rooms in public buildings such as schools and multi-purpose community centers.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD

Town of **Loxley Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
5.3.2	Pursue grand funds to establish a program for subsidizing safe room and storm shelter construction in appropriate locations and facilities.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD

A.9 Magnolia Springs Community Action Program

Magnolia Springs Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Planning Department	Medium	Mid-Range	FEMA HMA Grant	TBD
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Planning Department	Medium	Long-Range	Local Funds	TBD

Magnolia Springs Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.6	**<u>Flood Plain Management Regulations.</u> Effectively administer and enforce local floodplain management regulations.**					
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.	Floodplain Manager	High	Short-Range	Local Funds	TBD
1.6.5	Participate in the “Turn Around, Don’t Drown” program by purchasing and installing signs in known flash flood overpass locations.	Floodplain Manager/Emergency Management Coordinator	High	Short-Range	Local Funds	TBD
1.7	**<u>Building and Technical Codes.</u> Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
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.	Planning Department	High	Ongoing	Local Funds	TBD
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.	Planning Department	High	Ongoing	FEMA HMA Grant	TBD
1.8	**<u>Landscape Ordinances.</u> Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
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.	Planning Department	Medium	Long-Range	Local Funds	TBD

Magnolia Springs Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	Medium	Long-Range	Local Funds	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.3	Establish urban forestry program to help mitigate storm water runoff common in areas with large impervious surfaces.	Planning Department	Medium	Ongoing	Existing	TBD
1.10	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Medium	Ongoing	Local	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD

Magnolia Springs Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Floodplain Manager	Medium	Ongoing	FEMA HMA Funds	TBD
2.5	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.5.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD

Magnolia Springs Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.5.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.6	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.6.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.7	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.7.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	High	Ongoing	Local Funds	TBD
2.7.2	Conduct ongoing tree trimming programs along power lines.	Utilities, Public Works	Medium	Ongoing	Local Funds	TBD
2.8	**Back Up Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.8.1	Pursue grant funding for the installation of back-up power generators for critical facilities.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
3.1.1	Publicize the availability of FIRM information to real estate agencies, builders, developers, and homeowners.	Floodplain Administrator	Medium	On-going	TBD	TBD

Magnolia Springs Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.1.2	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.	Planning Department	Medium	Ongoing	Local Funds	TBD
3.2	**<u>Community Hazard Mitigation Plan Distribution</u>. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Local Government	Medium	Ongoing	Local Funds	TBD
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.	Local Government	Medium	Ongoing	Local Funds	TBD
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.3	**<u>Technical Assistance</u>. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.3.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Local Floodplain Manger	High	Ongoing	Local Funds	TBD

Magnolia Springs Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.3.2	Consider the enactment of a local ordinance or state law to require floodplain disclosure when a property is for sale.	Local Government	Medium	Ongoing	Local Funds	TBD
3.4	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
3.4.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Mayor and Council	Medium	Ongoing	Local Funds	TBD
3.5	**Weather Radios. Improve public access to weather alerts.**					
3.5.1	Distribute hazard mitigation brochures to students through area schools	Local Government	Medium	Ongoing	Local Funds	TBD
3.5.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Mayor and Council	High	Short-Range	Existing	TBD
3.6	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.6.1	Distribute the 2020 plan to local officials, stakeholders, and interested individuals through internet download.	Baldwin County EMA	High	Short-Range	Existing	TBD
37	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
37.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Building Department	Medium	Ongoing	Local Funds	TBD
3.8	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					

Magnolia Springs Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.9	**Weather Radios.** Improve public access to weather alerts.					
3.9.1	Promote the use of weather radios in households and businesses.	Local Government	High	Short-Range	Existing	TBD
3.9.2	Require the installation of weather radios in all public buildings and places of public assembly.	Local Government	High	Short-Range	Existing	TBD
3.9.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Local Government	High	Short-Range	Existing	TBD
3.10	**Disaster Warning**. Improve public warning systems.					
3.10.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.5	Upgrade critical communications infrastructure.	Local Government	High	Long-Range	TBD	TBD
4	**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.**					

Magnolia Springs Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4	**<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.**					
4.1	**<u>Open Space Easements and Acquisitions.</u>** Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.					
4.2	**<u>River/Stream Corridor Restoration and Protection.</u> Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Floodplain Administrator/Building Official	Medium	Ongoing	Local Funds	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	City Building Official	Medium	Long-Range	Local Funds	TBD
4.3	**<u>Urban Forestry Programs.</u> Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Local Government	Low	Long-Range	TBD	TBD
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	Floodplain Administrator/Building Official/Planning Department	Medium	Ongoing	TBD	TBD
4.3.3	Develop an urban forestry management plan to ensure a progressive urban forestry program aimed at increasing forestry canopy, increased safety and planting hurricane resistant tree species.	Floodplain Administrator/Building Official/Planning Department	Medium	Ongoing	Local Funds	TBD

Magnolia Springs Community Action Program						
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4.4	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance stormwater drainage.	Planning Department	Medium	Long-Range	Local Funds	TBD
4.5	**Water Resources Conservation Programs. Protect water quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Local Government	Medium	Long-Range	TBD	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Planning Department	Medium	Long-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements.** Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Floodplain Administrator, Street Department, Local Government	Medium	Long-Range	TBD	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
5.3.1	Ensure the inclusion of storm shelters and/or safe rooms in public buildings such as schools and multi-purpose community centers.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD

Magnolia Springs Community Action Program						
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5.3.2	Pursue grand funds to establish a program for subsidizing safe room and storm shelter construction in appropriate locations and facilities.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD

A.10 Orange Beach Community Action Program

City of Orange Beach Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**<u>Goal for Prevention.</u> Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**<u>Comprehensive Plans and Smart Growth</u>. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Planning Department	Medium	Mid-Range	Existing	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Planning Department	Medium	Mid-Range	Existing	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.	Planning Department	Low	Mid-Range	Existing	TBD
1.2	**<u>Geographic Information Systems (GIS)</u>. Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					

City of Orange Beach Community Action Program						
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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.	Baldwin County EMA	Low	Mid-Range	HMA	TBD
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.	City GIS Department	Low	Long-Range	FEMA HMA Grant	TBD
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	City GIS Department	Medium	Mid-Range	Existing	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Building Official	Low	Long-Range	FEMA HMA Grant	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Baldwin County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Building Official	Low	Long-Range	TBD	TBD
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.	Building Official	Low	Long-Range	TBD	TBD

City of Orange Beach Community Action Program						
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1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	City Engineer	Medium	Ongoing	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.4	Enact local ordinance that requires community storm shelters within sizeable mobile home parks and subdivisions.	Building Official	Medium	Long-Range	TBD	TBD
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Planning Department	Medium	Ongoing	Existing	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
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.	Floodplain Manager	High	Ongoing	Existing	TBD
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Floodplain Manager	Medium	Ongoing	Existing	TBD
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.	Floodplain Manager	High	Ongoing	Existing	TBD

City of Orange Beach Community Action Program						
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1.6.5	Participate in the "Turn Around Don't Drown" program by purchasing and installing signs in known flash flood bridge overpass locations.	Floodplain Manager	Medium	Short-Range	Existing	TBD
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.	Floodplain Manager	Medium	Long-Range	FEMA HMA Grant	TBD
1.7	**<u>Building and Technical Codes.</u> Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Official	High	Ongoing	Existing	TBD
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.	City Engineer	Medium	Ongoing	TBD	TBD
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	Fire Chief	Medium	Ongoing	Existing	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Code Enforcement	Medium	Ongoing	Existing	TBD
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.	Building Official	High	Ongoing	TBD	TBD

City of Orange Beach Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.7.7	Require wind load design by a registered engineer for all new residential construction.	Building Official	High	Ongoing	Existing	TBD
1.8	**Landscape Ordinances. Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
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.	Planning Department	Low	Mid-Range	TBD	TBD
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.	City Forester	Low	Low	TBD	TBD
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.	City Forester	Low	Low	TBD	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.10	**Dam Safety Management. Establish a comprehensive dam safety program.**					
1.10.1	Support legislation to establish a State dam safety program.	Mayor and Council	Medium	Mid-Range	Local Funds	TBD
1.11	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.11.1	Maintain membership in the CRS Program; continue to upgrade rating.	Floodplain Manager	High	Ongoing	Existing	TBD

City of Orange Beach Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Medium	Ongoing	FEMA HMA Grant	TBD
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.	Building Official	Medium	Ongoing	TBD	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to 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.	Floodplain Manager	Medium	Long-Range	FEMA HMA Grant	TBD
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Floodplain Manager	Medium	Long-Range	FEMA HMA Grant	TBD
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.	Floodplain Manager	Medium	Ongoing	FEMA HMA Grant	TBD

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#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.3	**<u>Building Elevation.</u> Elevate buildings in hazardous flood areas to safeguard against damages.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Floodplain Manager	Medium	Ongoing	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Floodplain Manager	Medium	Ongoing	FEMA HMA Grant	TBD
2.4	**<u>Flood Proofing.</u> Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Floodplain Manager	Medium	Ongoing	FEMA HMA Grant	TBD
2.5	**<u>Flood Control Measures.</u> Small flood control measures built to reduce/prevent flood damage**					
2.5.1	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non-structural mitigation techniques.	Floodplain Manager	Medium	Ongoing	FEMA HMA Grant	TBD
2.6	**<u>Building Retrofits</u>. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.6.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Floodplain Manager	Medium	Ongoing	FEMA HMA Grant	TBD

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#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.6.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Floodplain Manager	Medium	Short-Range	Existing	TBD
2.6.3	Promote and assist homeowners to apply for funding for building retrofits through the Alabama Department of Insurance "Strengthen Alabama Homes Grant Program."	Building Official	Medium	Short-Range	Existing	None
2.7	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.7.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Floodplain Manager	Medium	Ongoing	Existing	TBD
2.7.3	Participate in education efforts to encourage citizens to research rates and carriers for wind coverage.	Building Official	Medium	Ongoing	Existing	None
2.8	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.8.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	Low	Long-Range	TBD	TBD
2.8.2	Conduct ongoing tree trimming programs along power lines					
2.9	**Back Up Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.9.1	Pursue grant funding for the installation of backup power generators for critical facilities.	Public Works	Low	Long-Range	FEMA HMA Grant	TBD

City of Orange Beach Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3	**<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.**					
3.1	**<u>Map Information.</u> Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Floodplain Manager	Medium	Ongoing	Existing	TBD
3.2	**<u>Outreach Projects.</u> Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Floodplain Manager	Medium	Ongoing	Existing	TBD
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Floodplain Manager	Medium	Ongoing	Existing	TBD
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.	Floodplain Manager	Medium	Ongoing	Existing	TBD
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.	Floodplain Manager	Medium	Ongoing	Existing	TBD
3.3	**<u>Real Estate Disclosure.</u> Encourage real estate agents to disclose flood plain location for property listings.**					

City of Orange Beach Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.3.1	Arrange with the Multiple Listing Service (MLS) to require floodplain location disclosure as a condition for each real estate listing.	Floodplain Manager	Medium	Ongoing	TBD	TBD
3.3.2	Consider the enactment of a local ordinance or state law to require floodplain disclosure when a property is for sale.	Floodplain Manager	Medium	Ongoing	TBD	TBD
3.4	**Library. Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.4.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Floodplain Manager	Medium	Ongoing	Existing	TBD
3.5	**Education Programs. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					
3.5.1	Distribute hazard mitigation brochures to students through area schools.	Floodplain Manager	Medium	Ongoing	Existing	TBD
3.6	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.7	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.7.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Floodplain Manager	High	Ongoing	Existing	TBD
3.8	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					

City of Orange Beach Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Baldwin County EMA	High	Short-Term	Existing	TBD
3.9	**Weather Radios. Improve public access to weather alerts.**					
3.9.1	Promote the use of weather radios in households and businesses.	Baldwin County EMA	High	Short-Range	Existing	TBD
3.9.2	Require the installation of weather radios in all public buildings and places of public assembly.	Baldwin County EMA	Medium	Long-Range	Existing	TBD
3.9.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Baldwin County EMA	Medium	Long-Range	Existing	TBD
3.10	**Disaster Warning. Improve public warning systems.**					
3.10.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Baldwin County EMA	Low	Long-Range	FEMA HMA Grant	TBD
3.10.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Baldwin County EMA	Low	Long-Range	FEMA HMA Grant	TBD
3.10.3	Evaluate the feasibility of a shared tri-county ALERT system covering Baldwin, Escambia, and Mobile counties.	Baldwin County EMA	Low	Long-Range	FEMA HMA Grant	TBD
3.10.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Baldwin County EMA	Low	Long-Range	FEMA HMA Grant	TBD

City of Orange Beach Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.10.5	Upgrade critical communications infrastructure.	Baldwin County EMA	Low	Long-Range	FEMA HMA Grant	TBD
4	**<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.**					
4.1	**<u>Open Space Easements and Acquisitions.</u> Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.**					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	Local Government	Medium	Ongoing	FEMA HMA Grant	TBD
4.2	**<u>River/Stream Corridor Restoration and Protection.</u> Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Building Official	High	Ongoing	Other	TBD
4.3	**<u>Urban Forestry Programs.</u> Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	City Forester	Medium	Ongoing	Existing	TBD
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	City Forester	Low	Ongoing	TBD	TBD
4.3.3	Develop an urban forestry management plan to ensure a progressive urban forestry program aimed at increasing forestry canopy, increased safety and planting hurricane resistant species.	City Forester	Low	Ongoing	TBD	TBD

City of Orange Beach Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4.4	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance storm water drainage.	City Engineer	Medium	Ongoing	TBD	TBD
4.4.2	Develop a coastal renourishment program.	Coastal Resource Manager	High	Short-Range	Other	TBD
4.5	**Water Resources Conservation Programs. Protect water quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	City Engineer	Medium	Ongoing	TBD	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	City Engineer	High	Short-Range	Existing	TBD
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	City Engineer	High	Ongoing	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
5.3.1	Ensure the inclusion of storm shelters and/or safe rooms in public buildings such as schools and multi-purpose community centers.	Building Official	High	Ongoing	TBD	TBD

City of Orange Beach Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
5.3.2	Pursue grant funds to establish a program for subsidizing safe room and storm shelter construction in appropriate locations and facilities.	Baldwin County EMA	Medium	Mid-Range	FEMA HMA Grant	TBD

A.8 Perdido Beach Community Action Program

Town of **Perdido Beach Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures, smart growth opportunities and methodologies, and increase /maintain hazards database, socioeconomic data, infrastructure, and critical facilities inventories.**					
1.1.1	Identify existing culturally or socially significant structures and critical facilities within Baldwin County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Planning and Zoning Department	Medium	Mid-Range	Local Funds	TBD
1.1.2	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.	Planning and Zoning Department	Medium	Mid-Range	Local Funds	TBD
1.1.3	Inventory and map existing fire hydrants throughout the community, and identify areas in need of new fire hydrants.	Fire Department, Planning & Zoning Department	Medium	Mid-Range	TBD	TBD
1.1.4	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	Public Works Department	Medium	Mid-Range/Ongoing	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					

Town of **Perdido Beach Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Planning Department	Medium	Mid-Range	FEMA HMA Grant	TBD
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Planning Department	Medium	Long-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					

Town of **Perdido Beach Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	High	Short-Range	Local Funds	TBD
1.6.5	Participate in the "Turn Around, Don't Drown" program by purchasing and installing signs in known flash flood overpass locations.	Floodplain Manager/Emergency Management Coordinator	High	Short-Range	Local Funds	TBD
1.7	**<u>Building and Technical Codes.</u> Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
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.	Planning Department	High	Ongoing	Local Funds	TBD
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.	Planning Department	High	Ongoing	FEMA HMA Grant	TBD
1.8	**<u>Landscape Ordinances.</u> Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
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.	Planning Department	Medium	Long-Range	Local Funds	TBD

Town of **Perdido Beach Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	Medium	Long-Range	Local Funds	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.3	Establish urban forestry program to help mitigate storm water runoff common in areas with large impervious surfaces.	Planning Department	Medium	Ongoing	Existing	TBD
1.10	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Medium	Ongoing	Local	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD

Town of **Perdido Beach Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.3	**<u>Building Elevation</u>. Elevate buildings in hazardous flood areas to safeguard against damages.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.4	**<u>Flood Proofing.</u> Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Floodplain Manager	Medium	Ongoing	FEMA HMA Funds	TBD
2.5	**<u>Building Retrofits</u>. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.5.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD

Town of **Perdido Beach Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.5.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.6	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.6.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.7	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.7.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	High	Ongoing	Local Funds	TBD
2.7.2	Conduct ongoing tree trimming programs along power lines.	Utilities, Public Works	High	Ongoing	Local Funds	TBD
2.8	**Back Up Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.8.1	Pursue grant funding for the installation of back-up power generators for critical facilities.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
3.1.1	Publicize the availability of FIRM information to real estate agencies, builders, developers, and homeowners.	Floodplain Administrator	Medium	On-going	TBD	TBD

Town of **Perdido Beach Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.1.2	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.	Planning Department	Medium	Ongoing	Local Funds	TBD
3.2	**<u>Community Hazard Mitigation Plan Distribution</u>. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Local Government	Medium	Ongoing	Local Funds	TBD
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.	Local Government	Medium	Ongoing	Local Funds	TBD
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.3	**<u>Technical Assistance</u>. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.3.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Local Floodplain Manger	High	Ongoing	Local Funds	TBD

Town of **Perdido Beach Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.3.2	Consider the enactment of a local ordinance or state law to require floodplain disclosure when a property is for sale.	Local Government	Medium	Ongoing	Local Funds	TBD
3.4	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
3.4.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Mayor and Council	Medium	Ongoing	Local Funds	TBD
3.5	**Weather Radios. Improve public access to weather alerts.**					
3.5.1	Distribute hazard mitigation brochures to students through area schools	Local Government	Medium	Ongoing	Local Funds	TBD
3.5.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Mayor and Council	High	Short-Range	Existing	TBD
3.6	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.6.1	Distribute the 2020 plan to local officials, stakeholders, and interested individuals through internet download.	Baldwin County EMA	High	Short-Range	Existing	TBD
37	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
37.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Building Department	Medium	Ongoing	Local Funds	TBD
3.8	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					

Town of **Perdido Beach Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.9	**Weather Radios.** Improve public access to weather alerts.					
3.9.1	Promote the use of weather radios in households and businesses.	Local Government	High	Short-Range	Existing	TBD
3.9.2	Require the installation of weather radios in all public buildings and places of public assembly.	Local Government	High	Short-Range	Existing	TBD
3.9.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Local Government	High	Short-Range	Existing	TBD
3.10	**Disaster Warning**. Improve public warning systems.					
3.10.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.5	Upgrade critical communications infrastructure.	Local Government	High	Long-Range	TBD	TBD
4	**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.**					

Town of **Perdido Beach Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4	**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.**					
4.1	**Open Space Easements and Acquisitions.** Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.					
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Floodplain Administrator/Building Official	Medium	Ongoing	Local Funds	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	City Building Official	Medium	Long-Range	Local Funds	TBD
4.3	**Urban Forestry Programs. Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Local Government	Low	Long-Range	TBD	TBD
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	Floodplain Administrator/Building Official/Planning Department	Medium	Ongoing	TBD	TBD
4.3.3	Develop an urban forestry management plan to ensure a progressive urban forestry program aimed at increasing forestry canopy, increased safety and planting hurricane resistant tree species.	Floodplain Administrator/Building Official/Planning Department	Medium	Ongoing	Local Funds	TBD

Town of **Perdido Beach Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4.4	**<u>Beach and Dune Protection/Renourishment.</u> Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance stormwater drainage.	Planning Department	Medium	Long-Range	Local Funds	TBD
4.5	**<u>Water Resources Conservation Programs.</u> Protect water quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Local Government	Medium	Long-Range	TBD	TBD
5	**<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.**					
5.1	**<u>Drainage System Maintenance.</u> Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Planning Department	Medium	Long-Range	Local Funds	TBD
5.2	**<u>Reservoirs and Drainage System Improvements</u>.** Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Floodplain Administrator, Street Department, Local Government	Medium	Long-Range	TBD	TBD
5.3	**<u>Community Shelters and Safe Rooms</u>. Provide shelters from natural hazards for the safety of community residents.**					
5.3.1	Ensure the inclusion of storm shelters and/or safe rooms in public buildings such as schools and multi-purpose community centers.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD

Town of **Perdido Beach Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
5.3.2	Pursue grand funds to establish a program for subsidizing safe room and storm shelter construction in appropriate locations and facilities.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD

A.12 Robertsdale Community Action Program

City of Robertsdale Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**<u>Goal for Prevention.</u> Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**<u>Comprehensive Plans and Smart Growth</u>. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Municipal Planning Commission	Medium	Short- Range	Local Funds	$36,000
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Municipal Planning Commission	Medium	Mid-Range	Local Funds	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.	Municipal Planning Commission	Medium	Mid-Range	Local Funds	TBD
1.2	**<u>Geographic Information Systems (GIS)</u>. Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					

City of Robertsdale Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	County GIS Department	High	Mid-Range	FEMA HMA Grant	TBD
1.2.2	Integrate FEMA HAZUS-MH applications for hazard loss estimates within local GIS program. Maintain up-to-date within GIS to apply the full loss estimation capabilities of HAZUS.	City Engineer	Medium	Long-Range	$10,000	TBD
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	City Engineer	Medium	Long-Range	TBD	TBD
1.3	**<u>Planning Studies</u>. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	City Engineer	Medium	Mid-Range	$50,000	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Baldwin County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	City Engineer	Medium	Long-Range	TBD	TBD
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.	City Engineer	Medium	Mid-Range	$20,000	TBD
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Fire Department	Medium	Mid-Range	Local Funds	TBD

City of Robertsdale Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	Public Works	Medium	Mid-Range/Ongoing	$120,000	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.1	Consider large lot size restriction on flood prone areas designated on Flood Insurance Rate Maps.	Municipal Planning Commission	Low	Long-Range	Local Funds	TBD
1.4.2	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, among others.	Municipal Planning Commission	Low	Long-Range	Local Funds	TBD
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.	City Engineer	Medium	Mid-Range	Local Funds	TBD
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
1.6.1	Train local flood plain managers through programs offered by the State Flood Plain Coordinator or FEMA's training center in Emmitsburg, Maryland.	City Engineer	Medium	Short-Range	Local Funds	$1,500
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	City Engineer	Medium	Short-Range	Local Funds	TBD

City of Robertsdale Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	City Engineer/Floodplain Administrator	Medium	Long-Range	TBD	TBD
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.	Municipal Planning Commission	Low	Long-Range	Local Funds	TBD
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.	Building Official	Medium	Ongoing	Local Funds	TBD
1.7	**<u>Building and Technical Codes.</u> Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Official	Medium	Mid-Range	Local Funds	TBD
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."	Building Official	High	Mid-Range	Local Funds	TBD
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.	Municipal Planning Commission	Low	Long-Range	Local Funds	TBD
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters	Building Official/Fire Department	High	Ongoing	TBD	TBD

City of Robertsdale Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Official	Medium	Short-Range	Local Funds	TBD
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.	Building Official	Medium	Short-Range	Local Funds	TBD
1.8	**Landscape Ordinances. Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
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.	Municipal Planning Commission	Medium	Long-Range	Local Funds	TBD
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.	Municipal Planning Commission/Local Government	Medium	Long-Range	Local Funds	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.2	Develop, adopt and implement subdivision regulations that require proper storm water infrastructure design and construction.	Municipal Planning Commission	Medium	Ongoing	Existing	TBD
1.10	**Dam Safety Management. Establish a comprehensive dam safety program.**					
1.10.1	Support legislation to establish a State dam safety program.	Municipal Planning Commission	Medium	Ongoing	Existing	TBD
1.11	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
2	**Goal for Property Protection: Protect structures and their occupants and contents from the damaging effects of natural hazards.**					

City of Robertsdale Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to relocate buildings and infrastructure out of hazardous flood areas, with emphasis on pre-FIRM residential buildings, where deemed more cost effective than property acquisition or building elevation.	Building Official	Medium	Ongoing	FEMA HMA Grant	TBD
2.2	**Acquisition.** Acquire flood prone buildings and properties and establish permanent open space.					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
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	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damage.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2.4	**Flood Proofing. Encourage flood proofing of building in hazardous flood areas to safeguard against damages.**					

City of Robertsdale Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.5	**Flood Control Measures. Small flood control measures built to reduce/prevent flood damage.**					
2.5.1	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non-structural mitigation techniques.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2.6	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.6.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2.6.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	City Engineer	Medium	Mid-Range	Local Funds	TBD
2.7	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.7.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Building Official	Medium	Mid-Range	Local Funds	TBD
2.7.2	Promote the purchase of crop insurance to cover potential losses due to drought.	Building Official	Medium	Mid-Range	Local Funds	TBD
2.8	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					

City of Robertsdale Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.8.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	Medium	Mid-Range	Local Funds	TBD
2.8.2	Conduct ongoing tree trimming programs along power lines.	Public Works/Utilities	Medium	Ongoing	Local Funds	TBD
2.9	**Back Up Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.9.1	Pursue grant funding for the installation of back-up power generators for critical facilities.	Baldwin County EMA	Medium	Mid-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Building Official	Medium	Ongoing	Existing	TBD
3.2	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Building Official	Medium	Ongoing	Existing	TBD
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Building Official	Medium	Ongoing	Existing	TBD

City of Robertsdale Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Emergency Management Coordinator	Medium	Ongoing	Local	TBD
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.	Building Official	Medium	Ongoing	Existing	TBD
3.3	**Real Estate Disclosure. Encourage real estate agents to disclose flood plain location for property listings.**					
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.	Building Official	Medium	Mid-Range	Existing	TBD
3.4	**Library. Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.4.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	City Engineer	Low	Long-Range	Existing	TBD
3.5	**Education Programs. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					
3.5.1	Distribute hazard mitigation brochures to students through area schools.	Building Official	Medium	Mid-Range	Existing	TBD
3.5.2	Educate homeowners about structural and non-structural retrofitting of vulnerable homes.	Building Official	Medium	Mid-Range	Existing	TBD
3.6	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.6.1	Distribute the 2020 plan to local officials, stakeholders, and interested individuals through internet download.	Baldwin County EMA	High	Short-Range	Existing	TBD

City of Robertsdale Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.6.2	Distribute the 2020 plan summary to the public through local jurisdictions, via the internet and other media.	Baldwin County EMA	High	Short-Range	Existing	TBD
3.7	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.7.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Local Floodplain Manger	Medium	Short-Range	Local Funds	TBD
3.8	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
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.	Public Works Director	High	Mid-Range	Local Funds	TBD
3.9	**Weather Radios. Improve public access to weather alerts.**					
3.9.1	Promote the use of weather radios in households and businesses.	Public Works Director	High	Mid-Range	Local Funds	TBD
3.9.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Public Works Director	High	Mid-Range	HMA	TBD
3.10	**Disaster Warning. Improve public warning systems.**					
3.10.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Municipal Planning Commission	Medium	Long-Range	Local Funds	TBD
3.10.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Municipal Planning Commission	Medium	Long-Range	Local Funds	TBD

City of Robertsdale Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.10.5	Upgrade critical communications infrastructure.	Public Works Director	Medium	Short-Range	FEMA HMA Grant	TBD
4	**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.**					
4.1	**Open Space Easements and Acquisitions. Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.**					
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	City Engineer	Low	Mid-Range	Local Funds	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	City Engineer	Medium	Mid-Range	Local Funds	TBD
4.3	**Urban Forestry Programs.** Maintain a healthy forest that can help mitigate damaging impacts of flooding, erosion, landslides and wildfires within urban areas.					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	City Engineer	Medium	Mid-Range	Local Funds	TBD
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	Public Works Director	Low	Mid-Range	Local Funds	TBD
4.4	**Beach and Dune Protection/Renourishment**. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.					
4.4.1	Restore and protect wetlands to enhance storm water drainage.	Public Works Director	High	Mid-Range	FEMA HMA Grant	TBD
4.5	**Water Resources Conservation Programs. Protect water quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					

City of Robertsdale Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4.5.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.Develop a coastal renourishment program	City Engineer	Medium	Mid-Range	Local Funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	City Engineer	High	Long-Range	Local Funds	$10,000
5.2	**Reservoirs and Drainage System Improvements.** Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Public Works Director	High	Mid-Range	FEMA HMA Grant	$500,000
5.2.2	Improve and retrofit water supply systems to save water during drought events and to eliminate breaks and leaks.	Public Works Director	High	Mid-Range	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
5.3.1	Ensure the inclusion of storm shelters and/or safe rooms in public buildings such as schools and multi-purpose community centers.	Public Works Director	High	Mid-Range	FEMA HMA Grant	$1,500,000
5.3.2	Pursue grant funds to establish a program for subsidizing safe room and storm shelter construction in appropriate locations and facilities.	Public Works Director	High	Mid-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings	Public Works Director	High	Mid-Range	FEMA HMA Grant	TBC

A.13 Silverhill Community Action Program

Town of **Silverhill Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures, smart growth opportunities and methodologies, and increase /maintain hazards database, socioeconomic data, infrastructure, and critical facilities inventories.**					
1.1.1	Identify existing culturally or socially significant structures and critical facilities within Baldwin County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Planning and Zoning Department	Medium	Mid-Range	Local Funds	TBD
1.1.2	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.	Planning and Zoning Department	Medium	Mid-Range	Local Funds	TBD
1.1.3	Inventory and map existing fire hydrants throughout the community, and identify areas in need of new fire hydrants.	Fire Department, Planning & Zoning Department	Medium	Mid-Range	TBD	TBD
1.1.4	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	Public Works Department	Medium	Mid-Range/Ongoing	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					

Town of **Silverhill Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Planning Department	Medium	Mid-Range	FEMA HMA Grant	TBD
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Planning Department	Medium	Long-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					

Town of **Silverhill Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	High	Short-Range	Local Funds	TBD
1.6.5	Participate in the "Turn Around, Don't Drown" program by purchasing and installing signs in known flash flood overpass locations.	Floodplain Manager/Emergency Management Coordinator	High	Short-Range	Local Funds	TBD
1.7	**<u>Building and Technical Codes.</u> Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
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.	Planning Department	High	Ongoing	Local Funds	TBD
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.	Planning Department	High	Ongoing	FEMA HMA Grant	TBD
1.8	**<u>Landscape Ordinances.</u> Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
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.	Planning Department	Medium	Long-Range	Local Funds	TBD

Town of **Silverhill Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	Medium	Long-Range	Local Funds	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.3	Establish urban forestry program to help mitigate storm water runoff common in areas with large impervious surfaces.	Planning Department	Medium	Ongoing	Existing	TBD
1.10	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Medium	Ongoing	Local	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD

Town of **Silverhill Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Floodplain Manager	Medium	Ongoing	FEMA HMA Funds	TBD
2.5	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.5.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD

Town of **Silverhill Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.5.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.6	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.6.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.7	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.7.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	High	Ongoing	Local Funds	TBD
2.7.2	Conduct ongoing tree trimming programs along power lines.	Utilities, Public Works	Medium	Ongoing	Local Funds	TBD
2.8	**Back Up Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.8.1	Pursue grant funding for the installation of back-up power generators for critical facilities.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
3.1.1	Publicize the availability of FIRM information to real estate agencies, builders, developers, and homeowners.	Floodplain Administrator	Medium	On-going	TBD	TBD

Town of **Silverhill Community Action Program**						
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3.1.2	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.	Planning Department	Medium	Ongoing	Local Funds	TBD
3.2	**<u>Community Hazard Mitigation Plan Distribution</u>. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Local Government	Medium	Ongoing	Local Funds	TBD
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.	Local Government	Medium	Ongoing	Local Funds	TBD
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.3	**<u>Technical Assistance</u>. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.3.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Local Floodplain Manger	High	Ongoing	Local Funds	TBD

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#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.3.2	Consider the enactment of a local ordinance or state law to require floodplain disclosure when a property is for sale.	Local Government	Medium	Ongoing	Local Funds	TBD
3.4	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
3.4.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Mayor and Council	Medium	Ongoing	Local Funds	TBD
3.5	**Weather Radios. Improve public access to weather alerts.**					
3.5.1	Distribute hazard mitigation brochures to students through area schools	Local Government	Medium	Ongoing	Local Funds	TBD
3.5.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Mayor and Council	High	Short-Range	Existing	TBD
3.6	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.6.1	Distribute the 2020 plan to local officials, stakeholders, and interested individuals through internet download.	Baldwin County EMA	High	Short-Range	Existing	TBD
37	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
37.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Building Department	Medium	Ongoing	Local Funds	TBD
3.8	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					

Town of **Silverhill Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.9	**Weather Radios.** Improve public access to weather alerts.					
3.9.1	Promote the use of weather radios in households and businesses.	Local Government	High	Short-Range	Existing	TBD
3.9.2	Require the installation of weather radios in all public buildings and places of public assembly.	Local Government	High	Short-Range	Existing	TBD
3.9.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Local Government	High	Short-Range	Existing	TBD
3.10	**Disaster Warning**. Improve public warning systems.					
3.10.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.5	Upgrade critical communications infrastructure.	Local Government	High	Long-Range	TBD	TBD
4	**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.**					

Town of **Silverhill Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4	**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.**					
4.1	**Open Space Easements and Acquisitions.** Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.					
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Floodplain Administrator/Building Official	Medium	Ongoing	Local Funds	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	City Building Official	Medium	Long-Range	Local Funds	TBD
4.3	**Urban Forestry Programs. Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Local Government	Low	Long-Range	TBD	TBD
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	Floodplain Administrator/Building Official/Planning Department	Medium	Ongoing	TBD	TBD
4.3.3	Develop an urban forestry management plan to ensure a progressive urban forestry program aimed at increasing forestry canopy, increased safety and planting hurricane resistant tree species.	Floodplain Administrator/Building Official/Planning Department	Medium	Ongoing	Local Funds	TBD

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4.4	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance stormwater drainage.	Planning Department	Medium	Long-Range	Local Funds	TBD
4.5	**Water Resources Conservation Programs. Protect water quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Local Government	Medium	Long-Range	TBD	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Planning Department	Medium	Long-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements.** Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Floodplain Administrator, Street Department, Local Government	Medium	Long-Range	TBD	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
5.3.1	Ensure the inclusion of storm shelters and/or safe rooms in public buildings such as schools and multi-purpose community centers.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD

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5.3.2	Pursue grand funds to establish a program for subsidizing safe room and storm shelter construction in appropriate locations and facilities.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD

A.14 Spanish Fort Community Action Program

City of Spanish Fort Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Planning Department	High	Short- Range	Local Funds	$60,000
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Planning Department	Medium	Mid-Range	Local Funds	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.	City Council	Medium	Mid-Range	Local Funds	TBD
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					

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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.	Baldwin County EMA	High	Short-Range	HMA	TBD
1.2.2	Integrate FEMA HAZUS-MH applications for hazard loss estimates within local GIS program. Maintain up-to-date within GIS to apply the full loss estimation capabilities of HAZUS.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Baldwin County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Planning Department	Medium	Mid-Range	Local Funds	TBD
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.	Planning Department	Medium	Mid-Range	Local Funds	TBD

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#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Fire Department	High	Short-Range	Local Fund	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	Public Works Department	Medium	Mid-Range/Ongoing	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.1	Consider large lot size restriction on flood prone areas designated on Flood Insurance Rate Maps.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.4.2	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, among others.	Planning Department	Medium	Mid-Range	Local Funds	TBD
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.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.4.4	Enact local ordinance that requires community storm shelters within sizeable mobile home parks and subdivisions.	City Council	Low	Long-Range	Local Funds	TBD
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Planning Department	Medium	Long-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					

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1.6.1	Train local flood plain managers through programs offered by the State Flood Plain Coordinator or FEMA's training center in Emmitsburg, Maryland.	City Council	High	Short-Range	Local Funds	TBD
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Floodplain Manager	High	Short-Range	Local Funds	TBD
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.	Floodplain Manager	High	Short-Range	FEMA HMA Grant	TBD
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.	Floodplain Manager	High	Short-Range	Local Funds	TBD
1.6.5	Participate in the "Turn Around, Don't Drown" program by purchasing and installing signs in known flash flood overpass locations.	Floodplain Manager	Medium	Mid-Range	Local Funds	TBD
1.7	**<u>Building and Technical Codes.</u> Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Official	High	Ongoing	Local Funds	TBD

City of Spanish Fort Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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."	Building Official	High	Ongoing	Local Funds	TBD
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.	Planning Department	High	Ongoing	Local Funds	TBD
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	Building Official	High	Ongoing	Local Funds	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Official	High	Ongoing	Local Funds	TBD
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.	Planning Department	High	Ongoing	FEMA HMA Grant	TBD
1.8	**Landscape Ordinances. Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
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.	Planning Department	Medium	Long-Range	Local Funds	TBD
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 tooclose to homes.	City Council	Low	Long-Range	Local Funds	TBD

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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.	City Council	Low	Long-Range	Local Funds	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Planning Department	Medium	Ongoing	Existing	TBD
1.9.2	Develop, adopt and implement subdivision regulations that require proper storm water infrastructure design and construction.	Planning Department	Medium	Ongoing	Existing	TBD
1.9.3	Establish urban forestry program to help mitigate storm water runoff common in areas with large impervious surfaces.	City Council	Low	Long-Range	Local Funds	TBD
1.11	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.11.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Floodplain Manager	Medium	Long-Range	Local Funds	TBD
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Planning Department	Medium	Long-Range	FEMA HMA Grant	TBD

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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.	Building Official	Medium	Long-Range	Local Funds	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to relocate buildings and infrastructure out of hazardous flood areas, with emphasis on pre-FIRM residential buildings, where deemed more cost effective than property acquisition or building elevation.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2.2.2	Utilize the 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.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages**					

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2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2.5	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.5.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Floodplain Manager	Medium	Ongoing	FEMA HMA Grant	TBD
2.5.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.6	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.6.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD

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#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.7	**<u>Critical Facilities Protection</u>. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.7.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	High	Ongoing	Local Funds	TBD
2.8	**<u>Back Up Power.</u> Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.8.1	Pursue grant funding for the installation of back-up power generators for critical facilities.	Building Official	High	Ongoing	FEMA HMA Grant	TBD
3	**<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	**<u>Outreach Projects.</u> Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Planning Department	Medium	Ongoing	Local Funds	TBD
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Planning Department	Medium	Mid-Range	Local Funds	TBD
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.	Building Official	Medium	Long-Range	Local Funds	TBD

City of Spanish Fort Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Local Floodplain Manger	Medium	Ongoing	Local Funds	TBD
3.3	**Real Estate Disclosure. Encourage real estate agents to disclose flood plain location for property listings.**					
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.	Local Floodplain Manger	Medium	Long-Range	Local Funds	TBD
3.4	**Library.** Use local library resources to educate the public on hazard risks and mitigation alternatives.					
3.4.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Local Floodplain Manger	Medium	Long-Range	Local Funds	TBD
3.5	**Education Programs**. Use schools and other community education resources to conduct programs related to hazard risks and mitigation measures.					
3.5.1	Distribute hazard mitigation brochures to students through area schools.	Local Floodplain Manger	Medium	Long-Range	Local Funds	TBD
3.6	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.6.1	Distribute the 2020 plan to local officials, stakeholders, and interested individuals through internet download.	Baldwin County EMA	High	Short-Range	Existing	TBD
3.7	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.7.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Local Floodplain Manger	High	Ongoing	Local Funds	TBD

City of Spanish Fort Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.8	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.9	**Weather Radios. Improve public access to weather alerts.**					
3.9.1	Promote the use of weather radios in households and businesses.	Planning Department	Medium	Mid-Range	Local Funds	TBD
3.9.2	Promote the use of weather radios in households and businesses.	Planning Department	Medium	Mid-Range	Local Funds	TBD
3.9.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Local Government	High	Short-Range	Existing	TBD
3.10	**Disaster Warning**. Improve public warning systems.					
3.10.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Local Floodplain Manger	Medium	Long-Range	Local Funds	TBD
3.10.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Local Floodplain Manger	Medium	Long-Range	Local Funds	TBD
3.10.3	Evaluate the feasibility of a shared tri-county ALERT system covering Baldwin, Escambia, and Mobile counties.	Local Floodplain Manger	Medium	Long-Range	Local Funds	TBD

City of Spanish Fort Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.10.5	Upgrade critical communications infrastructure.	Local Floodplain Manger	Medium	Long-Range	Local Funds	TBD
4	**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.**					
4.1	**Open Space Easements and Acquisitions.** Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	City Council	Low	Long-Range	Local Funds	TBD
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Planning Department	Medium	Mid-Range	Local Funds	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Planning Department	Medium	Long-Range	Local Funds	TBD
4.3	**Urban Forestry Programs.** Maintain a healthy forest that can help mitigate damaging impacts of flooding, erosion, landslides and wildfires within urban areas.					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Local Floodplain Manger	Medium	Ongoing	Local Funds	TBD
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	City Council	Low	Long-Range	Local Funds	TBD

City of Spanish Fort Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4.3.3	Develop an urban forestry management plan to ensure a progressive urban forestry program aimed at increasing forestry canopy, increased safety and planting hurricane resistant tree species.	City Council	Low	Long-Range	Local Funds	TBD
4.4	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance storm water drainage.	Local Floodplain Manger	Medium	Ongoing	Local Funds	TBD
4.4.2	Develop a coastal renourishment program	Local Floodplain Manger	Medium	Long-Range	Local Funds	TBD
4.5	**Water Resources Conservation Programs. Protect water quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	City Council	Low	Ongoing	Local Funds	TBD
4.5.2	Prepare and implement standard operating procedures and guidelines for drainage system maintenance. Develop a coastal renourishment program	Local Floodplain Manger	Medium	Long-Range	Local Funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Building Official	Medium	Long-Range	Local Funds	TBD

City of Spanish Fort Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Public Works Department	Medium	Mid-Range	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
5.3.1	Ensure the inclusion of storm shelters and/or safe rooms in public buildings such as schools and multi-purpose community centers.	Planning Department	High	Short-Range	FEMA HMA Grant	TBD
5.3.2	Encourage the construction of safe rooms in new and existing homes and buildings.	Planning Department	High	Short-Range	Local Funds	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD

A.15 Summerdale Community Action Program

Town of **Summerdale Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures, smart growth opportunities and methodologies, and increase /maintain hazards database, socioeconomic data, infrastructure, and critical facilities inventories.**					
1.1.1	Identify existing culturally or socially significant structures and critical facilities within Baldwin County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Planning and Zoning Department	Medium	Mid-Range	Local Funds	TBD
1.1.2	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.	Planning and Zoning Department	Medium	Mid-Range	Local Funds	TBD
1.1.3	Inventory and map existing fire hydrants throughout the community, and identify areas in need of new fire hydrants.	Fire Department, Planning & Zoning Department	Medium	Mid-Range	TBD	TBD
1.1.4	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	Public Works Department	Medium	Mid-Range/Ongoing	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					

Town of **Summerdale Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Planning Department	Medium	Mid-Range	FEMA HMA Grant	TBD
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Planning Department	Medium	Long-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					

Town of **Summerdale Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	High	Short-Range	Local Funds	TBD
1.6.5	Participate in the "Turn Around, Don't Drown" program by purchasing and installing signs in known flash flood overpass locations.	Floodplain Manager/Emergency Management Coordinator	High	Short-Range	Local Funds	TBD
1.7	**<u>Building and Technical Codes.</u> Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
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.	Planning Department	High	Ongoing	Local Funds	TBD
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.	Planning Department	High	Ongoing	FEMA HMA Grant	TBD
1.8	**<u>Landscape Ordinances.</u> Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
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.	Planning Department	Medium	Long-Range	Local Funds	TBD

Town of **Summerdale Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	Medium	Long-Range	Local Funds	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.3	Establish urban forestry program to help mitigate storm water runoff common in areas with large impervious surfaces.	Planning Department	Medium	Ongoing	Existing	TBD
1.10	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Medium	Ongoing	Local	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD

Town of **Summerdale Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Floodplain Manager	Medium	Ongoing	FEMA HMA Funds	TBD
2.5	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.5.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD

Town of **Summerdale Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
2.5.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.6	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.6.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.7	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.7.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	High	Ongoing	Local Funds	TBD
2.7.2	Conduct ongoing tree trimming programs along power lines.					
2.8	**Back Up Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.8.1	Pursue grant funding for the installation of back-up power generators for critical facilities.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
3.1.1	Publicize the availability of FIRM information to real estate agencies, builders, developers, and homeowners.	Floodplain Administrator	Medium	On-going	TBD	TBD

Town of **Summerdale Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.1.2	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.	Planning Department	Medium	Ongoing	Local Funds	TBD
3.2	**<u>Community Hazard Mitigation Plan Distribution</u>. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Local Government	Medium	Ongoing	Local Funds	TBD
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.	Local Government	Medium	Ongoing	Local Funds	TBD
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.3	**<u>Technical Assistance</u>. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.3.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Local Floodplain Manger	High	Ongoing	Local Funds	TBD

Town of **Summerdale Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
3.3.2	Consider the enactment of a local ordinance or state law to require floodplain disclosure when a property is for sale.	Local Government	Medium	Ongoing	Local Funds	TBD
3.4	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
3.4.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Mayor and Council	Medium	Ongoing	Local Funds	TBD
3.5	**Weather Radios. Improve public access to weather alerts.**					
3.5.1	Distribute hazard mitigation brochures to students through area schools	Local Government	Medium	Ongoing	Local Funds	TBD
3.5.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Mayor and Council	High	Short-Range	Existing	TBD
3.6	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.6.1	Distribute the 2020 plan to local officials, stakeholders, and interested individuals through internet download.	Baldwin County EMA	High	Short-Range	Existing	TBD
37	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
37.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Building Department	Medium	Ongoing	Local Funds	TBD
3.8	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					

Town of **Summerdale Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.9	**Weather Radios.** Improve public access to weather alerts.					
3.9.1	Promote the use of weather radios in households and businesses.	Local Government	High	Short-Range	Existing	TBD
3.9.2	Require the installation of weather radios in all public buildings and places of public assembly.	Local Government	High	Short-Range	Existing	TBD
3.9.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Local Government	High	Short-Range	Existing	TBD
3.10	**Disaster Warning**. Improve public warning systems.					
3.10.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.5	Upgrade critical communications infrastructure.	Local Government	High	Long-Range	TBD	TBD
4	**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.**					

Town of **Summerdale Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4	**<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.**					
4.1	**<u>Open Space Easements and Acquisitions.</u>** Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.					
4.2	**<u>River/Stream Corridor Restoration and Protection.</u> Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Floodplain Administrator/Building Official	Medium	Ongoing	Local Funds	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	City Building Official	Medium	Long-Range	Local Funds	TBD
4.3	**<u>Urban Forestry Programs.</u> Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Local Government	Low	Long-Range	TBD	TBD
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	Floodplain Administrator/Building Official/Planning Department	Medium	Ongoing	TBD	TBD
4.3.3	Develop an urban forestry management plan to ensure a progressive urban forestry program aimed at increasing forestry canopy, increased safety and planting hurricane resistant tree species.	Floodplain Administrator/Building Official/Planning Department	Medium	Ongoing	Local Funds	TBD

Town of **Summerdale Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
4.4	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance stormwater drainage.	Planning Department	Medium	Long-Range	Local Funds	TBD
4.5	**Water Resources Conservation Programs. Protect water quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Local Government	Medium	Long-Range	TBD	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Planning Department	Medium	Long-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements.** Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Floodplain Administrator, Street Department, Local Government	Medium	Long-Range	TBD	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
5.3.1	Ensure the inclusion of storm shelters and/or safe rooms in public buildings such as schools and multi-purpose community centers.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD

Town of **Summerdale Community Action Program**						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
5.3.2	Pursue grand funds to establish a program for subsidizing safe room and storm shelter construction in appropriate locations and facilities.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	City Building Official	High	Short-Range	FEMA HMA Grant	TBD

A.16 Baldwin County Board of Education Community Action Program

Baldwin County Board of Education Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Baldwin County EMA/ Planning Department / Floodplain Administrator/County Engineer-Highway Department	High	Mid-Range/Ongoing	Local Funds	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions (Baldwin County Unincorporated with active comprehensive planning programs.	Baldwin County EMA/ Planning Department	Medium	Mid-Range	Local Funds	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.	Baldwin County EMA/ Planning Department / Floodplain Administrator/County Engineer-Highway Department	Medium	Mid-Range	Local Funds	TBD

Baldwin County Board of Education Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.1.4	Prepare a floodplain management plan.	Floodplain Administrator	High	Short-Range	HMA/Local	TBD
1.2	**<u>Geographic Information Systems (GIS)</u>. Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					
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.	Baldwin County EMA/ GIS Staff in the CIS, Planning, & Highway Departments/ Engineering Department	Medium	Mid-Range/Ongoing	HMA/Local	TBD
1.2.2	Integrate FEMA HAZUS-MH applications for hazard loss estimates within local GIS program. Maintain up-to-date within GIS to apply the full loss estimation capabilities of HAZUS.	GIS Staff in the CIS, Planning, & Highway Departments (May also include Baldwin County 9-1-1 GIS Manager	Medium	Mid-Range/Ongoing	Local	TBD
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	Floodplain Administrator/County Engineer-Highway Department/ Baldwin County EMA	High	Short-Range	Local	TBD
1.3	**<u>Planning Studies</u>. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					

Baldwin County Board of Education Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Floodplain Administrator / County Engineer-Highway Dept/Planning Department/Baldwin County EMA	Medium	Mid-Range/Ongoing	HMA	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Baldwin County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Planning Department/ Building Department	Medium	Mid-Range	Local Funds	TBD
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.	Planning Department/ Building Department	Medium	Mid-Range	Local Funds	TBD
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Planning Department/ Building Department	Medium	Mid-Range	Local Funds	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	Planning Department/ Building Department	Medium	Mid-Range/Ongoing	HMA	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.1	Consider large lot size restriction on flood prone areas designated on Flood Insurance Rate Maps.	Planning Department/ Building Department	Medium	Mid-Range	Local Funds	TBD

Baldwin County Board of Education Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
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.	Planning Department/ Building Department	Medium	Mid-Range	Local Funds	TBD
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.	Planning Department/ Building Department	Medium	Mid-Range	Local Funds	TBD
1.4.4	Enact local ordinance that requires community storm shelters within sizeable mobile home parks and subdivisions.					
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Planning Department/ Building Department/ Engineering Department	Medium	Mid-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
1.6.1	Train local flood plain managers through programs offered by the State Flood Plain Coordinator or FEMA's training center in Emmitsburg, Maryland.	County Commission	Medium	Mid-Range	Local Funds	TBD
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Floodplain Manager	Medium	Mid-Range	Local Funds	TBD

Baldwin County Board of Education Community Action Program						
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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.	Floodplain Manager	Medium	Mid-Range	FEMA HMA Grant	TBD
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.	Floodplain Manager	Medium	Mid-Range	Local Funds	TBD
1.6.5	Participate in the "Turn Around, Don't Drown" program by purchasing and installing signs in known flash flood overpass locations.	Floodplain Manager	Medium	Mid-Range	Local Funds	TBD
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.	Floodplain Manager	Medium	Short-Range	TBD	TBD
1.7	**<u>Building and Technical Codes.</u> Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Official	Medium	Mid-Range	Local Funds	TBD
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."	Building Official	Medium	Mid-Range	Local Funds	TBD

Baldwin County Board of Education Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters	Building Official	Medium	Mid-Range	Local Funds	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Official	Medium	Mid-Range	Local Funds	TBD
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.	Planning Department/ Building Department	Medium	Mid-Range	FEMA HMA Grant	TBD
1.8	**Landscape Ordinances. Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
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.	Planning Department	Medium	Mid-Range	Local Funds	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Planning Department	Medium	Ongoing	Existing	TBD
1.9.2	Develop, adopt and implement subdivision regulations that require proper storm water infrastructure design and construction.	Planning Department	Medium	Ongoing	Existing	TBD
1.9.3	Establish urban forestry program to help mitigate storm water runoff common in areas with large impervious surfaces.	Planning Department	Medium	Ongoing	Existing	TBD
1.11	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.11.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Floodplain Manager	High	Short-Range	Local Funds	TBD

Baldwin County Board of Education Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline Short-Range=less than two years Mid-Range=2-5 years Long-Range-more than five years**	**Funding Source**	**Estimated Cost**
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Planning Department	Medium	Long-Range	FEMA HMA Grant	TBD
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.	Fire Department	Medium	Mid-Range	Local Funds	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to relocate buildings and infrastructure out of hazardous flood areas, with emphasis on pre-FIRM residential buildings, where deemed more cost effective than property acquisition or building elevation.	Building Official	Medium	Ongoing	FEMA HMA Grant	TBD
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
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.	Building Official	High	Short-Range	TBD	TBD

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2.3	**<u>Building Elevation</u>. Elevate buildings in hazardous flood areas to safeguard against damage.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2.4	**<u>Flood Proofing</u>. Encourage flood proofing of building in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.5	**<u>Flood Control Measures.</u> Construct small flood control measures to reduce/prevent flood damage.**					
2.5.1	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non-structural mitigation techniques.	Building Official	Low	Long-Range	FEMA HMA Grant	TBD
2.6	**<u>Building Retrofits</u>. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					

Baldwin County Board of Education Community Action Program						
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2.6.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2.6.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Floodplain Manager	Medium	Mid-Range	Local Funds	TBD
2.7	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.7.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
2.7.2	Conduct ongoing tree trimming programs along power lines.					
2.8	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.8.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	Medium	Mid-Range	Local Funds	TBD
2.8.2	Conduct ongoing tree trimming programs along power lines					
2.9	**Back Up Power.** Ensure uninterrupted power supply to critical facilities during emergency events.					
2.9.1	Pursue grant funding for the installation of back-up power generators for critical facilities.	Baldwin County EMA	Medium	Mid-Range	FEMA HMA Grant	TBD

Baldwin County Board of Education Community Action Program						
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3	**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.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Planning Department	Low	Mid-Range	Existing	TBD
3.2	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Planning Department	High	Short-Range	Local Funds	TBD
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Planning Department	High	Short-Range	Local Funds	TBD
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.	Baldwin County EMA	High	Short-Range	Local Funds	TBD
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.	Local Floodplain Manger	High	Short-Range	Local Funds	TBD
3.3	**Real Estate Disclosure.** Encourage real estate agents to disclose flood plain location for property listings.					

Baldwin County Board of Education Community Action Program						
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3.3.2	Consider the enactment of a local ordinance or state law to require floodplain disclosure when a property is for sale.	Floodplain Manager	Medium	Mid-Range	Local Funds	TBD
3.4	**Library.** Use local library resources to educate the public on hazard risks and mitigation alternatives.					
3.4.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Local Floodplain Manger	Medium	Long-Range	Local Funds	TBD
3.5	**Education Programs**. Use schools and other community education resources to conduct programs related to hazard risks and mitigation measures.					
3.5.1	Distribute hazard mitigation brochures to students through area schools.	Baldwin County EMA	High	Short-Range	Local Funds	TBD
3.5.2	Educate homeowners about structural and non-structural retrofitting of vulnerable homes.	Baldwin County EMA	Low	Long-Range	Local Funds	TBD
3.6	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.6.1	Distribute the 2020 plan to local officials, stakeholders, and interested individuals through internet download.	Baldwin County EMA	High	Short-Range	Existing	TBD
3.7	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.7.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Local Floodplain Manger	Medium	Short-Range	Local Funds	TBD
3.8	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					

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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.	Local Government	Medium	Ongoing	Local Funds	TBD
3.9	**Weather Radios.** Improve public access to weather alerts.					
3.9.1	Promote the use of weather radios in households and businesses.	Local Government	High	Short-Range	Existing	TBD
3.9.2	Require the installation of weather radios in all public buildings and places of public assembly.	Local Government	High	Short-Range	Existing	TBD
3.9.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Local Government	High	Short-Range	Existing	TBD
3.10	**Disaster Warning**. Improve public warning systems.					
3.10.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.3	Evaluate the feasibility of a shared tri-county ALERT system covering Baldwin, Escambia, and Mobile counties.	Local Government	High	Mid-Range	FEMA HMA Grant	TBD
3.10.5	Upgrade critical communications infrastructure.	Local Government	High	Long-Range	TBD	TBD
4	**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.**					

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4.1	**Open Space Easements and Acquisitions.** Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	County Commission	Medium	Mid-Range	FEMA HMA Grant	TBD
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Planning Department	Medium	Mid-Range	Local Funds	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Planning Department	Medium	Long-Range	Local Funds	TBD
4.3	**Urban Forestry Programs.** Maintain a healthy forest that can help mitigate damaging impacts of flooding, erosion, landslides and wildfires within urban areas.					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	County Commission	Medium	Mid-Range	Local Funds	TBD
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	County Commission	Medium	Mid-Range	Local Funds	TBD
4.4	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance storm water drainage.	County Commission	Medium	Mid-Range	Local Funds	TBD
4.4.2	Develop a coastal renourishment program	County Commission	Medium	Mid-Range	Local Funds	TBD
4.5	**Water Resources Conservation Programs. Protect water quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					

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4.5.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.Develop a coastal renourishment program	County Commission	Medium	Mid-Range	Local Funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Building Official	Medium	Long-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements.** Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Planning Department	Medium	Mid-Range	FEMA HMA Grant	TBD
5.2.2	Improve and retrofit water supply systems to save water during drought events and to eliminate breaks and leaks.	Planning Department	Low	Long-Range	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
5.3.1	Ensure the inclusion of storm shelters and/or safe rooms in public buildings such as schools and multi-purpose community centers.	Planning Department	Medium	Mid-Range	FEMA HMA Grant	TBD
5.3.2	Pursue grand funds to establish a program for subsidizing safe room and storm shelter construction in appropriate locations and facilities.	Planning Department	Medium	Mid-Range	FEMA HMA Grant	TBD

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5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD

B.1 Escambia County Community Action Plan	
Mitigation Action	Train local flood plain managers through programs offered through the State Flood Plain Manager.
Type	Prevention
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact for this Action	Flood Plain Manager
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County continues training local flood plain manager.
Mitigation Action	Make application and/or commit/continue to participate in the NFIP.
Type	Prevention
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County continues participating in the National Flood Insurance Program.
Mitigation Action	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding
Type	Property Protection
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	New and Existing
Point of Contact for this Action	EMA
Estimated Time Frame for Completion	2024
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County continues promoting flood

Mitigation Action	Prepare and implement standard operating procedures for drainage system maintenance.
Type	Property Protection
Goal	Reduce Escambia County's risk from natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact for this Action	County Engineer/Road Department
Estimated Time Frame for Completion	2024
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County continues drainage system maintenance.
Mitigation Action	Distribute FEMA Publication 320-Taking Shelter From the Storm: Building a Safe Room in Your House – to local homebuilders
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	Thunderstorms, Tornadoes, High Winds, Strong Winds, Hurricanes/Tropical Storms/Tropical Depressions
Applies to new/existing asset(s)	New and Existing
Point of Contact for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County continues distributing FEMA publications.
Mitigation Action	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact for this Action	Flood Plain Manager, EMA
Estimated Time Frame for Completion	2023

Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	Low
Benchmark	Escambia County continues publicizing the availability of FIRM information.
Mitigation Action	Promote mitigation and severe weather awareness through an annual severe weather awareness event.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	Existing
Point of Contact for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County continues promoting mitigation and severe weather awareness through an annual severe weather awareness event.
Mitigation Action	Obtain free publications from FEMA, NWS, USGS, and other federal and state agencies and deposit these materials with local libraries.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	Existing
Point of Contact for this Action	EMA
Estimated Time Frame for Completion	2023
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	Medium
Benchmark	Escambia County continues obtaining and depositing materials with local libraries.
Mitigation Action	Distribute hazard mitigation brochures to area schools for distribution to students.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	Existing

Point of Contact for this Action	EMA
Estimated Time Frame for Completion	2022
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County continues distributing hazard mitigation brochures.
Mitigation Action	Promote the use of weather radios in households and businesses.
Type	Public Education & Awareness
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	New and Existing
Point of Contact for this Action	EMA
Estimated Time Frame for Completion	2024
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County continues promoting the use of weather radios.
Mitigation Action	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.
Type	Natural Resources Protection
Goal	Reduce Escambia County's risk from natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact for this Action	Flood Plain Manager
Estimated Time Frame for Completion	2023
Estimated Cost	TBD
Funding Sources	HMGP, ACES, AFC
Priority	Low
Benchmark	Escambia County continues seeking technical assistance.
Mitigation Action	Purchase, install, and test emergency warning sirens, as needed. Upgrade existing equipment as needed.
Type	Emergency Services Protection
Goal	Establish a comprehensive countywide hazard mitigation system

Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	New and Existing
Point of Contact for this Action	EMA
Estimated Time Frame for Completion	2024
Estimated Cost	$35,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Escambia County will purchase, install and test warning sirens as funds become available.
Mitigation Action	Purchase/update emergency generators for post-disaster mitigation and conduct routine tests on backup generators for all critical facilities. This includes a generator for the Alabama Technology Network Building on the Brewton Campus of Jefferson Davis Community College (JDCC); two permanently mounted generators for two water facilities of the Freemanville Water System; generator for the Little Escambia Church, 91 Pecan Leaf Lane that serves as a Red Cross Emergency Shelter; a 100 kilowatt generator at the High School that serves as a shelter in times of severe weather; generators to power the central communications cores at each Jefferson Davis Community College in Escambia County (Atmore and Brewton); replace the existing emergency generator and retrofit the switch gear at the Atmore Community Hospital; an emergency generator for the Physician Office Complex #1 at the DW McMillan Medical Center (150 KW) including installation ($250,000); an emergency generator for the Physician Office Complex #2 at the Flomaton Medical Center (50 KW) including installation ($50,000) and emergency generators for all fire tower sites.
Type	Emergency Services Protection
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	Existing
Point of Contact for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	$1,500 - $35,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Escambia County will purchase and update generators as funds become available.

Mitigation Action	Support the Alabama Skywarn Foundation's efforts to distribute weather radios to low- income households, especially in rural areas outside of siren coverage
Type	Emergency Services Protection
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	
Point of Contact for this Action	EMA
Estimated Time Frame for Completion	TBD
Estimated Cost	$35 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Escambia County continues supporting efforts to distribute weather radios.
Mitigation Action	Seek funding sources, such as FEMA HMGP, FEMA PDM, and HUD Community Development Block Grant funds, to assist building retrofits to protect against flood
Type	Structural Projects
Goal	Reduce Escambia County's risk from natural hazards
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	Existing
Point of Contact for this Action	EMA, Flood Plain Manager
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	Local Government, HUD CDBG, HMGP, PDM
Priority	MEDIUM
Benchmark	Escambia County continues seeking funding sources.
Mitigation Action	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.
Type	Structural Projects
Goal	Reduce vulnerability of new and future development
Hazard(s) Addressed	Thunderstorms, Tornadoes, Hurricanes, Tropical Storms, Tropical Depressions, High Winds, Strong Winds
Applies to new/existing asset(s)	New and Existing
Point of Contact for this Action	Local Government, EMA

Estimated Time Frame for Completion	2022
Estimated Cost	$125,000 and up each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Escambia County continues encouraging the construction of safe rooms.
Mitigation Action	Provide adequate safe rooms and community shelters to provide a safe haven for citizens from severe storms. Encourage the construction of safe rooms in existing construction, to include retrofitting public schools with community shelters. This includes a community shelter for the Atmore Utility Board.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Tornadoes, Hurricanes, Tropical Storms, Tropical Depressions, High Winds, Strong Winds
Applies to new/existing asset(s)	New and Existing
Point of Contact for this Action	School Boards
Estimated Time Frame for Completion	2025
Estimated Cost	$125,000 and up each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Escambia County will provide adequate safe rooms and community shelters as funds become available.
Mitigation Action	Repair, upgrade and install drainage structures countywide to remove storm water and mitigate flooding problems on county rights-of-way and county properties, as well as surrounding properties.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact for this Action	County Engineer
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County will continue to repair, upgrade, and install drainage structures as funds become available.

Mitigation Action	Upgrade bridges and box culverts and cross drains on county roads.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact for this Action	County Engineer
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP, Local, DOT
Priority	High
Benchmark	Escambia County will upgrade bridges and box culverts and cross drains as funds become available.

B.1 Atmore Community Action Program

City of Atmore Mitigation Actions	
Mitigation Action - DELETED	Train local flood plain managers through programs offered through the State Flood Plain Manager.
Type	Prevention
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager
Estimated Time Frame for Completion	2029
Estimated Cost	TBD
Fundin2 Sources	Local, HMGP
Priority	High
Benchmark	COMPLETED
Mitigation Action	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.
Type	Property Protection
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2023
Estimated Cost	TBD
Funding Sources	Local Government
Priority	High
Benchmark	Continue to promote awareness
Mitigation Action	Maintain a library of technical assistance and guidance materials to support the local flood plain manager.
Type	Prevention
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	New and Existing
Point of Contact for this Action	Local Flood Plain Manager
Estimated Time Frame for Completion	2023
Estimated Cost	TBD
Funding Sources	HMGP; Local
Priority	Low

Benchmark	The city organized a three ring binder containing multiple areas of guidance relating to Floodplain Management. The binder is located in a readily accessible location and contains handouts for public use.
Mitigation Action	Promote good construction practices and proper code enforcement to eliminate most structural problems during natural hazard events.
Type	Public Education and Awareness
Goal	Reduce vulnerability of new and future development
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	Building Inspector
Estimated Time Frame for Completion	2024
Estimated Cost	TBD
Fundin2 Sources	HMGP; Local
Priority	Low
Benchmark	Atmore continues promoting good construction practices and proper code enforcements.
Mitigation Action	Distribute FEMA Publication 320 - Taking Shelter From the Storm: Building a Safe Room in Your House - to local homebuilders.
Type	Public Education and Awareness
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Tornadoes , High Winds, Strong Winds, Hail
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	County EMA
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP; Local
Priority	Low
Benchmark	Atmore continues distributing FEMA Publication 320. The planning committee reviewed this action and
Mitigation Action	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	Floods , Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager, EMA
Estimated Time Frame for Completion	2025

Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	Low
Benchmark	Atmore continues publicizing the availability of FIRM information.
Mitigation Action	Promote mitigation and severe weather awareness, through an annual severe weather awareness event.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All
Aoolies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Fundin2 Sources	HMGP/ Local Government
Priority	High
Benchmark	The Escambia County EMA and the City of Atmore promote mitigation and severe weather awareness though an annual severe weather awareness event.
Mitigation Action	Promote the use of weather radios in households and businesses.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All
Applies to new/existin2 asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	$30 each
Fundine Sources	HMGP, Local Government
Priority	High
Benchmark	The City of Atmore continues promoting the use of weather radios in households and businesses.
Mitigation Action	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.
Type	Natural Resources Protection
Goal	Reduce Escambia County's risk from natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	FPM

Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP, AL Cooperative Extension Service, AL Forestry Commission
Priority	Low
Benchmark	The city continues to work with the Escambia County Soil and Water Conservation District to maintain Best Management Practices for channel and drainage system maintenance.
Mitigation Action	Install solar panels or generators for the 16 traffic lights.
Type	Emergency Services Protection
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Thunderstorms, Tornados, Strong Winds, High Winds
Applies to new/existin2asset(s)	Existing
Point of Contact Person for this Action	Local Government
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP, DOT
Priority	High
Benchmark	.No action has been taken due to lack of funds.
Mitigation Action	Purchase, install, and test emergency warning sirens, as needed. Upgrade existing equipment as needed.
Type	Emergency Services Protection
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	All
Applies to new/existin2 asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2024
Estimated Cost	TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Purchase/update emergency generators for post-disaster mitigation and conduct routine tests on backup generators for all critical facilities. This includes a 150 kilowatt generator mounted on a trailer for the Atmore Utility Board; a 100 kilowatt generator at the High School that serves as a shelter in times of severe weather; a 60 kilowatt generator at Fire Station #2; a 60 kilowatt generator for the Public Works Dept.; generators to power the central communications cores at each Jefferson Davis Community College in Escambia County (Atmore and Brewton); replace the existing

	emergency generator and retrofit the switch gear at the Atmore Community Hospital; and two permanently mounted generators for two water facilities of the Freemanville Water System. Purchase 8 portable generators with extending pole lights.
Type	Emergency Services Protection
Goal	Reduce Atmore's vulnerability to natural hazards
Hazard(s) Addressed	All
Applies to new/existin2 asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2026
Estimated Cost	$1,500 - $50,000 each
Funding Sources	HMGP,ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Support the Alabama Skywarn Foundation' s efforts to distribute weather radios to low-income households, especially in rural areas outside of siren coverage areas.
Type	Emergency Services Protection
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All
Applies to new/existin2 asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2024
Estimated Cost	$30 each
Funding Sources	HMGP
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.
Type	Structural Projects
Goal	Reduce Atmore's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Hail, Tornados, High Winds, Strong Winds
Applies to new/existine: asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2026
Estimated Cost	$125,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds.

Mitigation Action	Encourage the construction of safe rooms in existing construction, to include retrofitting public schools with community shelters. Provide adequate safe rooms and community shelters to provide a safe haven for citizens from severe storms. This includes an employee shelter for the Atmore Utilitv Board.
Tvpe	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard{s) Addressed	Thunderstorms, Tornados, Strong Winds, High Winds
Annlies to new/existin!! asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2026
Estimated Cost	TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Improve/Install storm drains. Improve drainage for various streets downtown so that adequate drainage from storm water and heavy rainfall will occur; install an additional drain under the railroad track near Highland Ave.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA, County Road Dept.
Estimated Time Frame for Completion	2025
Estimated Cost	2018
Fundin2 Sources	HMGP, DOT
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Install storm shutters on the Community Center, Library, and City Hall to prevent flying debris from breaking the windows and causing damage to interior of buildings.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Tornados, Strong Winds, High Winds
Aoolies to new/existin2asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	TBD

Fundin2 Sources	HMGP
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Retrofit all Atmore Community Hospital's windows; a portion of the Atmore Community Hospital's roof; and Wind-retrofit the City Hall Complex and other city owned buildings.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Tornados, Strong Winds, High Winds
Applies to new/existin2 asset(s)	Existing
Point of Contact Person for this Action	Local Government
Estimated Time Frame for Completion	2026
Estimated Cost	TBD
Fundin2 Sources	HMGP
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Install a line stopper for water and high-pressure gas at the Atmore Utility Board.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Tornados, Strong Winds, High Winds
Applies to new/existin2 asset(s)	Existing
Point of Contact Person for this Action	Local Government
Estimated Time Frame for Completion	2024
Estimated Cost	TBD
Funding Sources	HMGP
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Maintain a library of technical assistance and guidance materials to support the local flood plain manager.
Type	Public Education & Awareness
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods/Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA/FPM
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Medium

Benchmark	The city organized a three ring binder containing multiple areas of guidance relating to Floodplain Management. The binder is located in a readily accessible location and contains handouts for public use.
Mitigation Action	Construct a new drainage channel from 10th Street Channel to Pine Barren Watershed Channel
Type	Structural Projects
Goal	Reduce Escambia County' s vulnerability to natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existin2 asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Fundin2 Sources	HMGP, ADECA
Priority	High
Benchmark	Ongoing
Mitigation Action	Reduce risk of flooding at critical facility by performing work to improve drainage at Atmore Nursing Center in accordance with engineering recommendations.
Type	Structural Projects
Goal	Property Protection
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existin2 asset(s)	Existing
Point of Contact Person for this Action	FPM
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	New Action
Mitigation Action	Reroute storm drain along W. Ridgeway St., N. Trammell St., and N. Carney St. from private property to public right of way.
Type	Structural Projects
Goal	Property Protection
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existin2 asset(s)	Existing
Point of Contact Person for this Action	FPM
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	New Action

Mitigation Action	Replace culverts affecting the S. Presley St. area in order to improve drainage.
Type	Structural Projects
Goal	Property Protection
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existin2 asset(s)	Existing
Point of Contact Person for this Action	FPM
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	New Action

B.3 City of Brewton's Mitigation Actions

Mitigation Action	Train local flood plain managers through programs offered through the State Flood Plain Manager.
Type	Prevention
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager
Estimated Time Frame for Completion	2017
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	The city continues education as necessary.
Mitigation Action	Make application and/or commit/continue to participate in the NFIP.
Type	Prevention
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager
Estimated Time Frame for Completion	2017
Estimated Cost	TBD
Funding Sources	HMGP
Priority	High
Benchmark	The city will continue participating in the NFIP.
Mitigation Action - DELETED	Replace the natural gas line from its exposed hazardous location along the railroad to a secure condition along Highway 31 from Keego to Brewton.
Type	Prevention
Goal	Reduce Escambia County's risk from natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager
Estimated Time Frame for Completion	2019

Estimated Cost	TBD
Funding Sources	HMGP
Priority	High
Benchmark	COMPLETED
Mitigation Action	Relocate a high pressure gas transmission main that is now installed on an easement adjacent to CSX Railroad from Georgia Pacific Mill
Type	Prevention
Goal	Reduce Escambia County's risk from natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager
Estimated Time Frame for Completion	2019
Estimated Cost	TBD
Funding Sources	HMGP
Priority	High
Benchmark	This project is in the discussion stage and will be initiated if funding is available.
Mitigation Action	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.
Type	Property Protection
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing and New
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2020
Estimated Cost	TBD
Funding Sources	Local Government
Priority	High
Benchmark	The city recommends flood insurance when necessary.
Mitigation Action	Prepare and implement standard operating procedures for drainage system maintenance.
Type	Property Protection

Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2020
Estimated Cost	TBD
Funding Sources	Local Government
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Install storm protected windows on 130 windows in the patient care areas only of the hospital in Brewton.
Type	Property Protection
Goal	Reduce Brewton's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Tornados, Hail, High Winds, Strong Winds
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA and the Hospital's Director of Purchasing
Estimated Time Frame for Completion	2020
Estimated Cost	$150,000
Funding Sources	HMGP, D. W. McMillan Memorial Hospital
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Replace roof of the hospital in Brewton.
Type	Property Protection
Goal	Reduce Brewton's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Tornados, Hail, High Winds, Strong Winds
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA and the Hospital's Director of Purchasing
Estimated Time Frame for Completion	2020
Estimated Cost	$550,000
Funding Sources	HMGP, D. W. McMillan Memorial Hospital
Priority	High
Benchmark	No action has been taken due to lack of funds.

Mitigation Action	Control rainwater run-off at the hospital in Brewton.
Type	Property Protection
Goal	Reduce Brewton's vulnerability to natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA and the Hospital's Director of Purchasing
Estimated Time Frame for Completion	2020
Estimated Cost	$1.5 million
Funding Sources	HMGP, D. W. McMillan Memorial Hospital
Priority	Low
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Control rainwater run-off at the Physician Office Complex #1 at the DW McMillan Medical Center.
Type	Property Protection
Goal	Reduce Brewton's vulnerability to natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA and the Hospital's Director of Purchasing
Estimated Time Frame for Completion	2020
Estimated Cost	$550,000
Funding Sources	HMGP, D. W. McMillan Memorial Hospital
Priority	Low
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Control rainwater run-off at the Physician Office Complex #2 at the Flomaton Medical Center.
Type	Property Protection
Goal	Reduce Brewton's vulnerability to natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA and the Hospital's Director of Purchasing
Estimated Time Frame for Completion	2020
Estimated Cost	$150,000
Funding Sources	HMGP, D. W. McMillan Memorial Hospital
Priority	Low
Benchmark	No action has been taken due to lack of funds.

Mitigation Action	Maintain a library of technical assistance and guidance materials to support the local flood plain manager.
Type	Public Education and Awareness
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA, Flood Plain Manager
Estimated Time Frame for Completion	2018
Estimated Cost	TBD
Funding Sources	Local, HMGP
Priority	Low
Benchmark	The city continues maintaining assistance and materials supporting the local flood plain manager as needed.
Mitigation Action	Promote good construction practices and proper code enforcement to eliminate most structural problems during natural hazard events.
Type	Public Education and Awareness
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	All
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA, County Engineer
Estimated Time Frame for Completion	2019
Estimated Cost	TBD
Funding Sources	Local, HMGP
Priority	Low
Benchmark	The city continues promoting construction practices and code enforcements supporting the county engineer as needed.
Mitigation Action	Distribute FEMA Publication 320 – Taking Shelter From the Storm: Building a safe room in your house – to local homebuilders.
Type	Public Education and Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	Thunderstorms, Tornados, High Winds, Strong Winds

Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2020
Estimated Cost	$4,500 each
Funding Sources	HMGP, Local Residents
Priority	High
Benchmark	The city continues distributing and making available FEMA publications.
Mitigation Action	Publicize the availability of FIRM information to real estate agents, builders, developers and homeowners through local trade publications and newspaper announcements.
Type	Public Education and Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2020
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	Low
Benchmark	The city continues publicizing the availability of FIRM information.
Mitigation Action	Promote mitigation and severe weather awareness, through an annual severe weather awareness event.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2020
Estimated Cost	TBD
Funding Sources	HMGP/ Local Government
Priority	High

Benchmark	The Escambia County EMA and the City of Brewton promotes mitigation and severe weather awareness through an annual severe weather awareness event.
Mitigation Action	Promote the use of weather radios in households and businesses.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2020
Estimated Cost	$30 each
Funding Sources	HMGP, Local Government
Priority	High
Benchmark	The City of Brewton continues promoting the use of weather radios in households and businesses.
Mitigation Action	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.
Type	Natural Resources Protection
Goal	Reduce Escambia County's risk from natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	FPM
Estimated Time Frame for Completion	2020
Estimated Cost	TBD
Funding Sources	HMGP, AL Cooperative Extension Service, AL Forestry Commission
Priority	Low
Benchmark	The city continues to work with the Escambia County Soil and Water Conservation District to maintain Best Management Practices for channel and drainage system maintenance.
Mitigation Action	Purchase, install, and test emergency warning sirens, as needed. Upgrade existing equipment as needed.

Type	Emergency Services Protection
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	All
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2019
Estimated Cost	TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Purchase/update emergency generators for post-disaster mitigation and conduct routine tests on backup generators for all critical facilities. This includes four generators for the sewer pump stations; two generators for sewer lift stations and a generator for the Alabama Technology Network Building on the Brewton Campus of Jefferson Davis Community College (JDCC); two 60 kilowatt portable generators to power the wastewater life stations (Presley Street; Martin Luther King; Briar Lake; Liberty; and Medical Park); a 60 kilowatt generator for the Public Works Dept.; generators to power the central communications cores at each Jefferson Davis Community College in Escambia County (Atmore and Brewton); an emergency backup generator for the Brewton Public Library on Belleville Ave.; an emergency generator for the hospital in Brewton (1.6 MHz) including installation ($1.2 million); and an emergency generator for the Physician Office Complex #2 at the Flomaton Medical Center (50KW) including installation ($50,000). Purchase 8 portable generators with extending pole lights.
Type	Emergency Services Protection
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	All
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2020

Estimated Cost	$1,500 - $50,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Complete an emergency alert system that has been currently designed at the JDCC.
Type	Emergency Services Protection
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	All
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA, JDCC
Estimated Time Frame for Completion	2019
Estimated Cost	TBD
Funding Sources	HMGP, JDCC
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Install a radio antenna tower at the hospital in Brewton
Type	Emergency Services Protection
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	All
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA, Brewton Hospital
Estimated Time Frame for Completion	2020
Estimated Cost	$75,000
Funding Sources	HMGP, Hospital
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Support the Alabama Skywarn Foundation's efforts to distribute weather radios to low-income households, especially in rural areas outside of siren coverage areas.
Type	Emergency Services Protection
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All

Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2019
Estimated Cost	$30 each
Funding Sources	HMGP
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Seek funding sources, such as FEMA HMGP, FEMA PDM and HUD Community Development Block Grant funds to assist building retrofits to protect against flood damage.
Type	Structural Projects
Goal	Reduce Escambia County's risk from natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA, Flood Plain Manager
Estimated Time Frame for Completion	2018
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	Low
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.
Type	Structural Projects
Goal	Reduce Atmore's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Hail, Tornados, High Winds, Strong Winds
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2020
Estimated Cost	$125,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds.

Mitigation Action	Encourage the construction of safe rooms in existing construction, to include retrofitting public schools with community shelters. Provide adequate safe rooms and community shelters to provide a safe haven for citizens from severe storms.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Tornados, Strong Winds, High Winds
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2020
Estimated Cost	TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Construct a levee in the downtown area to protect against the hazard of repeated flooding. The feasibility study has been performed by the Corps of Engineers.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Local Government
Estimated Time Frame for Completion	2018
Estimated Cost	TBD
Funding Sources	HMGP, Corps of Engineers
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action - DELETED	Install a storm drain across the T.R. Miller Mill Company from Highway 31 to Murder Creek.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Local Government

Estimated Time Frame for Completion	2018
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	COMPLETED
Mitigation Action	Survey and improve the sewer lagoon dikes (High Street) for additional height to mitigate content overflow and the subsequent environmental and health hazard the sewage would create. Raise the height of the dikes to avert a flood event and rip rap dikes for erosion protection.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Local Government
Estimated Time Frame for Completion	2018
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Improve drainage structure at the foot on Belleville Ave. so that adequate drainage from storm water and heavy rainfall will occur; improve drainage structure running parallel to College Drive by Jefferson Davis Community College's golf course and connecting to Union Cemetery on one end and Pea Ridge Road on the other end so that adequate drainage from storm water and heavy rainfall will occur.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Local Government
Estimated Time Frame for Completion	2018
Estimated Cost	TBD

Funding Sources	HMGP, Local
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Construct/Install community safe rooms
Type	Structural Projects
Goal	Reduce Brewton's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Hail, Tornados, High Winds, Strong Winds
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2020
Estimated Cost	$125,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds.

B.3 East Brewton Community Action Program

Mitigation Action	Train local flood plain managers through programs offered through the State Flood Plain Manager.
Type	Prevention
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager
Estimated Time Frame for Completion	2024
Estimated Cost	TBD
Funding Sources	HMGP
Priority	High
Benchmark	East Brewton continues training local flood plain manager.
Mitigation Action	Make application and/or commit/continue to participate in the NFIP.
Type	Prevention
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	FPM
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP
Priority	High
Benchmark	East Brewton continues participating in the National Flood Insurance Program.
Mitigation Action	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.
Type	Property Protection
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing

Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2023
Estimated Cost	TBD
Funding Sources	Local Government
Priority	High
Benchmark	East Brewton continues promoting flood insurance.
Mitigation Action	Prepare and implement standard operating procedures for drainage system maintenance.
Type	Property Protection
Goal	Reduce Escambia County's risk from natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager
Estimated Time Frame for Completion	2024
Estimated Cost	TBD
Funding Sources	HMGP/ Local Government
Priority	Low
Benchmark	East Brewton continues drainage system maintenance.
Mitigation Action	Maintain a library of technical assistance and guidance materials to support the local flood plain manager.
Type	Public Education & Awareness
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA, Flood Plain Manager
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP/ Local Government
Priority	Medium
Benchmark	East Brewton continues supporting the local flood plain manager.
Mitigation Action	Promote good construction practices and proper code enforcement to eliminate most structural problems during natural hazard events.
Type	Public Education & Awareness

Goal	Reduce vulnerability of new and future development
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA/Co. Engineer
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP/ Local Government
Priority	Low
Benchmark	East Brewton continues promoting construction practices and proper code enforcements.
Mitigation Action	Distribute FEMA Publication 320 – Taking Shelter From the Storm: Building a Safe Room in Your House – to local homebuilders.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	Thunderstorms, Hail, Tornados, High Winds, Strong Winds
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP/Local Government
Priority	High
Benchmark	Escambia County continues distributing FEMA publications.
Mitigation Action	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	Flood Plain Manager, EMA

Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP/Local Government
Priority	Low
Benchmark	East Brewton continues publicizing the availability of FIRM information.
Mitigation Action	Promote mitigation and severe weather awareness, through an annual severe weather awareness event.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP/Local Government
Priority	High
Benchmark	East Brewton continues promoting mitigation and severe weather awareness through participation with the county's annual severe weather awareness event.
Mitigation Action	Obtain free publications from FEMA, NWS, USGS, and other federal and state agencies and deposit these materials with local libraries.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP/Local Government
Priority	Low
Benchmark	East Brewton continues obtaining and depositing materials with local libraries.

Mitigation Action	Distribute natural hazard mitigation brochures to area schools for distribution to students.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP/Local Government
Priority	High
Benchmark	East Brewton continues distributing hazard mitigation brochures.
Mitigation Action	Promote the use of weather radios in households and businesses.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	$30 each
Funding Sources	HMGP/Local Government
Priority	High
Benchmark	East Brewton continues promoting the use of weather radios.
Mitigation Action	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.
Type	Natural Resources Protection
Goal	Reduce Escambia County's risk from natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing and New
Point of Contact Person for this Action	Flood Plain Manager

Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP/AL Cooperative Extension Service/AL Forestry Commission
Priority	Low
Benchmark	East Brewton continues seeking technical assistance.
Mitigation Action	Purchase, install, and test emergency warning sirens, as needed. Upgrade existing equipment as needed.
Type	Emergency Services Protection
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	All
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2024
Estimated Cost	TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Purchase/update emergency generators for post-disaster mitigation and conduct routine tests on backup generators for all critical facilities. This includes four generators for the sewer pump stations; two permanently mounted generators for the sewer lift stations; two generators for sewer stations; a permanently mounted generator for the city hall and one for the police/fire departments; one permanently mounted generator for the waste water treatment plant.
Type	Emergency Services Protection
Goal	Reduce Atmore's vulnerability to natural hazards
Hazard(s) Addressed	All
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	$1,500 - $50,000 each
Funding Sources	HMGP, ADECA
Priority	High

Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Support the Alabama Skywarn Foundation's efforts to distribute weather radios to low-income households, especially in rural areas outside of siren coverage areas.
Type	Emergency Services Protection
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	$30 each
Funding Sources	HMGP
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Seek funding sources, such as FEMA HMGP, FEMA PDM and HUD Community Development Block Grant funds, to assist building retrofits to protect against flood damage.
Type	Structural Projects
Goal	Reduce Escambia County's risk from natural hazards.
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP, PDM, HUD, Local
Priority	Medium
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards

Hazard(s) Addressed	Thunderstorms, Hail, Tornados, High Winds, Strong Winds
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	$125,000 and up - TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No additional action has been taken due to lack of funds.
Mitigation Action	Encourage the construction of safe rooms in existing construction, to include retrofitting public schools with community shelters. Provide adequate safe rooms and community shelters to provide a safe haven for citizens from severe storms.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Tornados, Strong Winds, High Winds
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	$125,000 and up – TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds.

B.4 Flomaton Community Action Program

Mitigation Action	Train local flood plain managers through programs offered through the State Flood Plain Manager.
Type	Prevention
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	FPM
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Continues training as needed.
Mitigation Action	Make application and/or commit/continue to participate in the NFIP.
Type	Prevention
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Flomaton participates in the NFIP and will continue.
Mitigation Action	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.
Type	Property Protection
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA

Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	Local Government
Priority	High
Benchmark	Promotes flood insurance where needed.
Mitigation Action	Prepare and implement standard operating procedures for drainage system maintenance
Type	Property Protection
Goal	Reduce Escambia County's risk from natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Local Government/ FPM
Estimated Time Frame for Completion	2023
Estimated Cost	TBD
Funding Sources	HMGP/ Local Government
Priority	Low
Benchmark	This action was discussed by the planning committee and the town wishes to keep this action in the plan.
Mitigation Action	Maintain a library of technical assistance and guidance materials to support the local flood plain manager.
Type	Public Education & Awareness
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA, Flood Plain Manager
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Medium
Benchmark	This action was discussed by the planning committee and the town wishes to keep this action in the plan.
Mitigation Action	Distribute FEMA Publication 320 – Taking Shelter From the Storm: Building a Safe Room in Your House – to local homebuilders.
Type	Public Education and Awareness

Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Tornadoes, High Winds, Strong Winds, Hail
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	County EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP; Local
Priority	Low
Benchmark	Flomaton continues distributing FEMA Publication 320.
Mitigation Action	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager, EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	Low
Benchmark	Flomaton continues publicizing the availability of FIRM information.
Mitigation Action	Promote mitigation and severe weather awareness, through an annual severe weather awareness event.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP/ Local Government

Priority	High
Benchmark	The Escambia County EMA and the Town of Flomaton promotes mitigation and severe weather awareness through an annual severe weather awareness event.
Mitigation Action	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.
Type	Natural Resources Protection
Goal	Reduce Escambia County's risk from natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	FPM
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, AL Cooperative Extension Service, AL Forestry Commission
Priority	Low
Benchmark	The town continues to work with the Escambia County Soil and Water Conservation District to maintain Best Management Practices for channel and drainage system maintenance.
Mitigation Action	Purchase, install, and test emergency warning sirens, as needed. Upgrade existing equipment as needed.
Type	Emergency Services Protection
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	All
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2024
Estimated Cost	TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds.

Mitigation Action	Purchase/update emergency generators for post-disaster mitigation and conduct routine tests on backup generators for all critical facilities. This includes a generator for the Little Escambia Church, 91 Pecan Leaf Lane that serves as a Red Cross Emergency Shelter; generators for Water Well #2 at 4684 Highway 31 and Water Well #3 at 22680 Old Atmore Road to continue to provide potable water during power outages; and an emergency generator for the Physician Office Complex #2 at the Flomaton Medical Center (50 KW) including installation ($50,000).
Type	Emergency Services Protection
Goal	Reduce Flomaton's vulnerability to natural hazards
Hazard(s) Addressed	All
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	$1,500 - $50,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Install a 20' tower section on Water Tank #2 to protect the Police Department's repeater antenna.
Type	Structural Projects
Goal	Reduce Flomaton's vulnerability to natural hazards
Hazard(s) Addressed	All
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA, Police Chief
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Support the Alabama Skywarn Foundation's efforts to distribute weather radios to low-income households, especially in rural areas outside of siren coverage areas.
Type	Emergency Services Protection

Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	$30 each
Funding Sources	HMGP
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.
Type	Structural Projects
Goal	Reduce Flomaton's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Hail, Tornados, High Winds, Strong Winds
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	$125,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Encourage the construction of safe rooms in existing construction, to include retrofitting public schools with community shelters. Provide adequate safe rooms and community shelters to provide a safe haven for citizens from severe storms. This includes an employee shelter for the Atmore Utility Board.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Tornados, Strong Winds, High Winds
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025

Estimated Cost	TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds.
Mitigation Action	Construct/Install community safe rooms
Type	Structural Projects
Goal	Reduce Flomaton's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Hail, Tornados, High Winds, Strong Winds
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	$125,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds.

B.5 Pollard Community Action Program

Mitigation Action	Make application and/or commit/continue to participate in the NFIP.
Type	Prevention
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	The town is a NFIP participant and will continue participating.
Mitigation Action	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.
Type	Property Protection
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	Local Government
Priority	High
Benchmark	The town promotes flood insurance where needed.
Mitigation Action	Prepare and implement standard operating procedures for drainage system maintenance.
Type	Property Protection
Goal	Reduce Pollard's risk from natural hazards
Hazard(s) Addressed	Thunderstorms, Tornados, Winter Weather, Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Local Government/Flood Plain Manager

Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Low
Benchmark	Pollard continues drainage system maintenance.
Mitigation Action	Maintain a library of technical assistance and guidance materials to support the local flood plain manager.
Type	Public Education & Awareness
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA/Flood Plain Manager
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Medium
Benchmark	Pollard continues distributing FEMA publications.
Mitigation Action	Distribute FEMA Publication 320 – Taking Shelter From the Storm: Building a Safe Room in Your House – to local homebuilders.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	Thunderstorms, Tornados, High Winds, Strong Winds
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	High
Benchmark	Pollard continues distributing FEMA publications.
Mitigation Action	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.

Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA/Flood Plain Manager
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Low
Benchmark	Pollard continues publicizing the availability of FIRM information.
Mitigation Action	Promote mitigation and severe weather awareness, through an annual severe weather awareness event.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	High
Benchmark	Pollard continues promoting mitigation and severe weather awareness through an annual severe weather awareness event.
Mitigation Action	Obtain free publications from FEMA, NWS, USGS, and other federal and state agencies and deposit these materials with local libraries.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing

Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Low
Benchmark	Pollard continues obtaining and depositing materials with local libraries.
Mitigation Action	Distribute natural hazard mitigation brochures to area schools for distribution to students.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	High
Benchmark	Pollard continues distributing hazard mitigation brochures.
Mitigation Action	Promote the use of weather radios in households and businesses.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	$30 each
Funding Sources	HMGP, Local Government
Priority	High
Benchmark	Pollard continues distributing hazard mitigation brochures and promoting the use of weather radios.
Mitigation Action	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.
Type	Natural Resources Protection

Goal	Reduce Escambia County's risk from natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, AL Cooperative Extension Service, AL Forestry Commission
Priority	Low
Benchmark	Pollard continues seeking technical assistance.
Mitigation Action	Purchase, install, and test emergency warning sirens, as needed. Upgrade existing equipment as needed. Looking into a public warning system having no such maintenance costs!
Type	Emergency Services
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2024
Estimated Cost	$35,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Pollard will purchase, install and test emergency warning sirens as funds become available; however, they are also looking into a public warning system.
Mitigation Action	Purchase/update emergency generators for post-disaster mitigation and conduct routine tests on backup generators for all critical facilities.
Type	Emergency Services Protection
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025

Estimated Cost	$1,500 - $30,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Items not specific to the Town of Pollard were removed from this section. Pollard will purchase emergency generators as funds become available.
Mitigation Action	Support the Alabama Skywarn Foundation's efforts to distribute weather radios to low-income households, especially in rural areas outside of siren coverage areas.
Type	Emergency Services Protection
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2024
Estimated Cost	$30 each
Funding Sources	HMGP
Priority	High
Benchmark	Pollard continues supporting efforts to distribute weather radios.
Mitigation Action	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.
Type	Structural Projects
Goal	Reduce vulnerability of new and future development
Hazard(s) Addressed	Thunderstorms, Tornados, Hail, High Winds, Strong Winds
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Pollard continues encouraging safe room construction.

Mitigation Action	Encourage the construction of safe rooms in existing construction, to include retrofitting public schools with community shelters.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Tornados, Hail, High Winds, Strong Winds
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Pollard continues encouraging safe room construction.
Mitigation Action	Construct/Install community safe rooms
Type	Structural Projects
Goal	Reduce Pollard's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Hail, Tornados, High Winds, Strong Winds
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2026
Estimated Cost	$125,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Pollard continues encouraging safe room construction.
Mitigation Action	Improve/Install storm drains.
Type	Structural Projects
Goal	Reduce Pollard's vulnerability to natural hazards
Hazard(s) Addressed	Floods, Flash
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2026
Estimated Cost	TBD
Funding Sources	HMGP, Local

Priority	High
Benchmark	Ongoing

B.6 Riverview Community Action Program

Mitigation Action	Train local flood plain managers through programs offered through the State Flood Plain Manager.
Type	Prevention
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County continues training local flood plain manager.
Mitigation Action	Seek a countywide update of all FIRMS in digital format, with an emphasis on detailed studies of developed and developing areas with elevations provided and floodways delineated.
Type	Prevention
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP (FEMA Map Modernization Program)
Priority	Low
Benchmark	Escambia County continues seeking update of all FIRMS.
Mitigation Action	Make application and/or commit/continue to participate in the NFIP.
Type	Prevention
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods

Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Riverview continues participating in the National Flood Insurance Program.
Mitigation Action	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.
Type	Property Protection
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	Local Government
Priority	High
Benchmark	Riverview continues promoting flood insurance.
Mitigation Action	Prepare and implement standard operating procedures for drainage system maintenance.
Type	Property Protection
Goal	Reduce Escambia County's risk from natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Local Government, Flood Plain Manager
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Low
Benchmark	Riverview continues drainage system maintenance.
Mitigation Action	Maintain a library of technical assistance and guidance materials to support the local flood plain manager.
Type	Public Education & Awareness

Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA, Flood Plain Manager
Estimated Time Frame for Completion	2023
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Medium
Benchmark	Riverview continues supporting the local flood plain manager.
Mitigation Action	Distribute FEMA Publication 320 – Taking Shelter From the Storm: Building a Safe Room in Your House – to local homebuilders.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	Thunderstorms, Tornadoes, Strong Winds, High Winds
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	High
Benchmark	Riverview continues distributing FEMA publications.
Mitigation Action	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager, EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD

Funding Sources	HMGP, Local Government
Priority	Low
Benchmark	Riverview continues publicizing the availability of FIRM information.
Mitigation Action	Promote mitigation and severe weather awareness, through an annual severe weather awareness event.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	High
Benchmark	Riverview continues promoting mitigation and severe weather awareness by participating with the county on their annual severe weather awareness event.
Mitigation Action	Obtain free publications from FEMA, NWS, USGS, and other federal and state agencies and deposit these materials with local libraries.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Low
Benchmark	Riverview continues obtaining and depositing materials with local libraries.
Mitigation Action	Distribute natural hazard mitigation brochures to area schools for distribution to students.
Type	Public Education & Awareness

Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	High
Benchmark	Riverview continues distributing hazard mitigation brochures.
Mitigation Action	Promote the use of weather radios in households and businesses.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	$30 each
Funding Sources	HMGP, Local Government
Priority	High
Benchmark	Riverview continues promoting the use of weather radios.
Mitigation Action	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.
Type	Natural Resources Protection
Goal	Reduce Escambia County's risk from natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Flood Plain Manager
Estimated Time Frame for Completion	2023
Estimated Cost	TBD
Funding Sources	HMGP, AL Cooperative Extension Service, AL Forestry Commission

Priority	Low
Benchmark	Riverview continues seeking technical assistance.
Mitigation Action	Purchase, install, and test emergency warning sirens, as needed. Upgrade existing equipment as needed.
Type	Emergency Services Protection
Goal	Establish a comprehensive countywide hazard mitigation system
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2024
Estimated Cost	$35,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Riverview will purchase, install and test warning sirens as funds become available.
Mitigation Action	Purchase/update emergency generators for post-disaster mitigation and conduct routine tests on backup generators for all critical facilities.
Type	Emergency Services Protection
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2026
Estimated Cost	$1,500 - $35,000
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Riverview will purchase and update emergency generators as funds become available.
Mitigation Action	Support the Alabama Skywarn Foundation's efforts to distribute weather radios to low-income households, especially in rural areas outside of siren coverage areas.
Type	Emergency Services Protection
Goal	Foster public support and acceptance of hazard mitigation

Hazard(s) Addressed	All Hazards
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	Ongoing
Estimated Cost	$30 each
Funding Sources	HMGP
Priority	High
Benchmark	Riverview continues supporting efforts to distribute weather radios.
Mitigation Action	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.
Type	Structural Projects
Goal	Reduce vulnerability of new and future development
Hazard(s) Addressed	Thunderstorms, Tornados, Strong Winds, High Winds
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	$125,000 each and up - TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Riverview continues encouraging the construction of safe rooms.
Mitigation Action	Encourage the construction of safe rooms in existing construction, to include retrofitting public schools with community shelters.
Type	Structural Projects
Goal	Reduce Escambia County's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Tornados, Strong Winds, High Winds
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2026
Estimated Cost	$125,000 each and up - TBD
Funding Sources	HMGP, ADECA
Priority	High

Benchmark	Riverview continues encouraging the construction of safe rooms.
Mitigation Action	Construct/Install community safe rooms
Type	Structural Projects
Goal	Reduce Riverview's vulnerability to natural hazards
Hazard(s) Addressed	Thunderstorms, Hail, Tornados, High Winds, Strong Winds
Applies to new/existing asset(s)	New and Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	$125,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Riverview continues encouraging the construction of safe rooms.
Mitigation Action	Upgrade and/or install drainage structures in town
Type	Structural Projects
Goal	Reduce Riverview's vulnerability to natural hazards
Hazard(s) Addressed	Floods, Flash Floods
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2025
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Riverview will upgrade/install drainage structures as funds become available.

B.8 Poarch Creek Community Action

Action Plan #	Action Description	Hazard Addressed	Objective Addressed	Priority	Timeline	Responsible Office	Funding Source	Cost	Action
L-1	Draft a policy for managing tribally sponsored outside activities to reduce exposure to lightning during these events	Lightning	Tribal policy for lightning protection during outside activities	High	Complete	Emergency Services Program	Departmental	Staff Time	Using the WeatherCall Service to detect lightning & provide warning
L-2	Draft a policy for tribal employees who work outside to provide guidelines for reducing the threat from lightning	Lightning	Provide education opportunities for lightening hazard reduction	High	Complete	Emergency Services Program and Human Resources Department	Departmental	Staff Time	In conjunction with the system in L1
L-3	Education materials on lightning safety will be made available to tribal members during public education venues such as the health department and tribal gatherings	Lightning	Provide education opportunities for lightning hazard reduction	High	On-going	Emergency Services Program	TBD	TBD	On-going education and warning during events through warnings if dangerous conditions occur
L-4	Partner with the	Lightning	Provide	High	Near	Emergency	None	Staff	Tribal Staff

L-4 New for 2018	National Weather Service(NWS) to make the community a Lightning Safe Community		education opportunities for lightning hazard reduction		Term	Services Program and Recreation Department	required	Time	Members to meet with NWS to institute a Lightning Safe Community Program
T-1	Develop a network of volunteers of trained storm spotters.	Tornado	Develop a system to increase information flow to the tribal emergency management program to allow for rapid decision making, based upon accurate storm information to maximize warning times for tornadoes	High	Near Term	Emergency Services Program	Departmental	Staff Time/ NMS	
T-2	Enhanced storm warning system	Tornado	Expand and enhance the existing storm warning system to provide better coverage	High	Near Completion	Emergency Services	Departmental	By Tribe	Installation of speaker arrays throughout the community to allow plain language

									warnings; more phones in the community now host the WeatherCall Service
T-3	Installation of storm shelters for their members	Tornado Hurricane	Provide storm shelters for tribal members	High	On-going	Emergency Services Program	Grants/ Tribal Funds	Unk.	Tornado/Storm Shelters have been installed at locations throughout the community and this process is planned to continue. The policy for the shelters was being approved by the Legal Department. The Community Center that opened in 2018 has safe room with capacity of 300 people, Police Station now has hardened dispatch area,

									Fire Department Staff have identified to Tribal Staff the safest areas of refuge in all tribal buildings
HW-1	Develop a tribal policy for future construction of tribal buildings requiring them to be built to a standard that is resistant to high winds	All high wind events	Develop enhanced tribal building standards for future construction of tribal facilities.	High	On-Going	Tribal Council/ Legal Department	Staff Time	By Tribe	New buildings have been built with hardened areas for refuge from severe weather. The Fire Department is involved in the planning of future buildings to look at safer design options.
HW-2	Retrofit buildings to bring them up to a safe design standard. Upgrading roofing materials and installing high impact glass on Tribal Rental	All High Wind events	Retro fit existing building to make them more resistant to high winds.	High	On-going	Facilities Department	Departmental	By Tribe	The Housing Department is changing roofing materials from shingles to metal roofs. Doors for Fire Stations #1 and

	Houses.								#2 upgraded to high wind capacity doors. Utilities Department has changed from using trash cans to dumpsters for Tribal Housing.
HU-1	Develop enhanced tribal building standards for future construction of tribal facilities. Retro fit existing building to make them more resistant to hurricanes and tropical storms.	Hurricanes	Develop enhanced tribal building standards for future construction of tribal facilities. Retro fit existing building to make them more resistant to hurricanes and tropical storms.	High	On-going	Facilities Department	Departmental	Unk	See actions completed for high winds.

HU-2	Develop shelter operations for tribal members for refuge during hurricanes and tropical storms and their aftermath. Provide adequate back-up power to critical facilities.	Hurricanes	Take measures to enhance the safety and comfort of tribal members during hurricanes and tropical storms.	High	On-going	Family Services Department, Facilities Department	Departmental	By Tribe	Generators have been installed for critical facilities including sewer lift stations. Tribal Facilities Department manages all generators and has a contract for maintenance and repairs.
HU-3 New 2018	Planning for operations during hurricanes	Hurricanes	Take measures to enhance the safety and comfort of tribal members during hurricanes and tropical storms.	High	On-going	Emergency Services	Departmental	By Tribe	Tribal Staff conducted meetings on hurricane preparedness; Tribe will participate in tabletop exercise on May 30, 2018; Tribe has been invited to participate in the FEMA Administrator's Hurricane

									Tabletop. The Tribe work closely with the NWS Office on all severe weather events.
ET-1	The tribal health department will identify people at risk during high heat events.	Extreme temperatures	Develop a tribal policy to address community needs in extreme temperature situations	High	On-Going	Tribal Health Department	Departmental	Staff Time	The Fire Department and the Wellness Center have partnered to advise individuals on what they need to do prior to outdoor activities such as ball tournaments and other sports events.
ET-2	The tribe will designate what facilities will be used as cooling stations, properly equip those stations for use, and train staff in	Extreme temperatures	Tribal designation and preparation of facilities and staff to be used for and at cooling	High	On-Going	Tribal Health Department, Housing, Elder Program, Emergency Services Fire	Departmental	Staff Time	The Fire Department provides EMS standby for extreme heat conditions at large tribal gatherings and

	appropriate skills. EMS will check on high-risk people and move them to designated cooling stations if necessary.		stations for vulnerable populations during high heat conditions.			Department			off-reservation activities.
WF-1	Work with Alabama Department of Forestry on housing standards including types of shingles, clearing brush, etc.	Wildfires	Educate homeowners about safe building materials and landscape practices	Med	On-Going	Fire Department, Housing	Staff Time	By Tribe	The Tribe has a full time Land Management Department that manages seasonal burning and other related subjects.
WF-2	Perform periodic aerial surveys of wooded land to locate new homes and other structures and identify their location with GPS coordinates and maps.	Wildfires	Enhance situational awareness for firefighters relating to location of buildings, firefighters and enhanced communicatio	High	On-Going	Housing Authority/ Fire Department	Departmental	By Tribe	Mobile data terminals are being purchased for Fire Personnel so they can access local maps in real time.

			ns.						
WF-3	Purchase of portable holding tanks and bladders for water to fight wild fires.	Wildfires	Procure adequate fire-fighting equipment and supplies for wild fire operations.	Med	On-Going	Fire Department	Departmental and Grants	Unkl	
Fl-1	Complete a new comprehensive drainage study done for all tribal properties to identify potential flooding problems and to recommend mitigations for those areas.	Flooding	Educate the community on the hazards of flooding	High	On-Going	Facilities/ Housing Authority	Departmental And Grants	Unk	Drainage study is being completed in 2018.
Fl-2	Provide education to the public through community organizations.	Flooding	Prepare and Equip the tribal emergency services program for flooding and	Med	On-Going	Fire Department	Departmental And Grants	Unk	

			swift water rescue						
Fl-3	Obtain training and equipment for the tribal emergency services program to make them ready for flooding and swift water rescue.	Flooding	Prepare and equip the tribal emergency services program for flooding and swift water rescue.	High	On-Going	Fire Department	Departmental And Grants	TBD	
FL-4	Purchase Tiger Dam System for flood prone areas to mitigate damage from flooding.	Flooding	Determine solutions for alleviating flooding in those areas prone to flooding	Med	Near Term			TBD	Purchase and deploy Tiger Dam System in flood prone areas.
D-1	The tribal utility program will develop policies, informational and educational materials for	Drought	Develop water conservation procedures	Med	On-Going	Cultural Authority	Departmental And Grants	Unk	

	tribal utility users to educate them on water conservation practices.								
D-2	Develop wells or other sources of water that can be used to supplement the existing water source	Drought	Develop back up sources of water that are less subject to drought impact. The Utilities department would like to develop a water interconnect system between the Poarch Creek Indians Utilities and other system agencies to provide adequate supplies of water to the community the prison	High	On-Going	Utilities Department	Departmental and Grants	Unk	

			system, and schools in the area during and after a natural or man-made disaster						
D-3	See Actions under Wild Fires for reducing wildfire risks	Drought	Develop procedures to reduce risk from wild fires related to drough.t	Med	On-Going	Utilities Department and Fire Department	Departmental and Grants	Unk	
C-1	Protect cultural resources along the Tallapoosa River	Cultural	Develop a river-bank stabilization project to stabilize the bank on the Tallapoosa River to protect vulnerable cultural resources in the area.	High	On-Going	Cultural Authority	Departmental and Grants	Unk	
C-2	Protect resources in the tribal museum from	Cultural	Replace the existing fire suppression system with	High	On-Going	Cultural Authority	Departmental and Grants	Unk	

	water damage.		one that is suitable for a museum setting. Provide back up power for museum protection systems.						
AS-1	Perform security assessments of Tribal facilities	Active Shooter/ Violent Intruder	Provide a safer environment in Tribal Facilities as it relates to the threat of an Active Shooter	High	Near Term	Emergency Services	Tribal	TBD	Security assessments to be performed by qualified entity
AS-2	Upgrade Security at Tribal facilities to provide increased protection from the threats	Active Shooter/ Violent Intruder	Provide a safer environment in Tribal Facilities as it relates to the threat of an Active	High	Near Term	Emergency Services	Tribal	TBD	Upgrade security procedures and equipment

			Shooter						
AS-3	Provide educational opportunities to Tribal Staff and Tribal Members for recognition of threats and how to respond to an Active Shooter/Violent Intruder	Active Shooter/ Violent Intruder	Increase the knowledge of Tribal Employees and Tribal Members on the threats of Active Shooter/Violent Intruder situations, possible means to prevent situations and how to react when in a situation	High	Near Term	Emergency Services	Tribal	TBD	Provide training by qualified entity
EQ-1	Develop enhanced tribal building standards for future construction of tribal facilities.	Earthquakes	Protect people from injury and property from damage caused by earthquakes	Medium	On-Going	Facilities Department	Departmental	Ukn.	The Tribe continues to look at new building codes and standards and adopts new standards as they are developed.
WS - 1	Open tribal	Winter	Reduce the	Low	Upon	Emergency	Tribal	Ukn.	The Tribe will

	warming shelters during periods of power outages.	Storms	impact of winter storms on people.		Demand	Services			utilize existing tribal facilities with back-up power as shelters during periods of power outages during winter storms.
WS - 2	Utilize ice melting materials on sidewalks at tribal facilities.	Winter Storms	Reduce the impact of winter storms on people.	Low	Upon Demand	Facilities Department	Departmental	Ukn.	Facilities Management will use de-icing agents to clear sidewalks and other areas for pedestrian use.
HA- 1	Utilization of warning systems and storm shelters	Hail	Protect people from injury caused by hail	Low	Upon Demand	Emergency Services	Tribal	Unk.	Emergency Services will issue warnings to the community and manage shelters
HA - 2	Utilization of building codes	Hail	Protect property from hail damage	Low	On-Going	Facilities Department	Departmental	Unk.	Facilities will continue to adopt and enforce building codes.

C.1 Mobile County Community Action Program

Mobile County Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
1.1.1	Prepare a five-year capital improvements plan (CIP) to include capital projects that implement 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.	Building Official	Medium	Mid-Range	Local Funds	TBD
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socioeconomic data, infrastructure, and critical facilities inventories.**					
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 drainage structures, dams/levees, hurricane surge areas, tornado tracks, disaster events and their extents, and a comprehensive inventory of critical facilities within all jurisdictions.	City of Mobile GIS Dept.	Low	Mid-Range	HMA	TBD
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.	City of Mobile GIS Dept.	Low	Mid-Range	FEMA HMA Grant	TBD

Mobile County Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	City of Mobile GIS Dept.	High	Long-Range/Ongoing	Local Funds	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Local Floodplain Manager	Medium	Long-Range	FEMA HMA Grant	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Mobile County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Building Official	Low	Long-Range	TBD	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	City Engineer	Medium	Long-Range	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.1	Consider large lot size restrictions on flood prone areas designated on Flood Insurance Rate Maps.	County Commission	Medium	Short-Range	Local Funds	TBD
1.4.2	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, among others.	County Commission	Medium	Short-Range	Local Funds	TBD

Mobile County Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
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.	County Commission	Medium	Mid-Range	Local Funds	TBD
1.4.4	Enact local ordinance that require community storm shelters within sizeable mobile home parks and subdivisions.	County Commission	Medium	Mid-Range	Local Funds	TBD
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	County Commission	Medium	Mid-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
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.	Local Floodplain Manager	High	Long-Range/Ongoing	Local Funds	TBD
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Local Floodplain Manager	Medium	Ongoing	Local Funds	TBD
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.	Local Floodplain Manager	High	Mid-Range	FEMA HMA Grant	TBD

Mobile County Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.6.4	Maintain membership for locally designated flood plain managers in the Association of State Flood Plain Managers and the Alabama Association of Flood Plain Managers and encourage active participation.	Local Floodplain Manager	High	Short-Range	Local Funds	TBD
1.6.5	Participate in the "Turn Around Don't Drown" program by purchasing and installing signs in known flash flood bridge overpass locations.	Local Floodplain Manager	Medium	Short-Range	Other	TBD
1.6.6	Improve flood risk assessment by documenting high water marks post event, verifying FEMA's repetitive loss inventory, and revising/updating regulatory floodplain maps.	Local Floodplain Manager	Medium	Short-Range	TBD	TBD
1.7	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Official	High	Ongoing	Local Funds	TBD
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."	Building Official	High	Short-Range	Local Funds	TBD

Mobile County Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
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.	County Commission	High	Long-Range	TBD	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Official	High	Short-Range	Local Funds	TBD
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.		High	Ongoing	FEMA HMA Grant	TBD
1.8	**Landscape Ordinances. Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
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.	County Commission	Low	Mid-Range	Local Funds	TBD
1.10	**Dam Safety Management. Establish a comprehensive dam safety program.**					
1.10.1	Support legislation to establish a State dam safety program.	County Commission	Low	Mid-Range	Local Funds	TBD
1.11	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.11.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Local Floodplain Manager	High	Short-Range	Local Funds	TBD

Mobile County Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Low	Long-Range	Local Funds	TBD
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.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2	**Goal for Property Protection: Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to 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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official	High	Short-Range	FEMA HMA Grant	TBD

Mobile County Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.5	**Flood Control Measures. Construct small flood control measures to reduce/prevent flood damage.**					
2.5.1	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non-structural mitigation techniques.	Building Official	Low	Long-Range	FEMA HMA Grant	TBD
2.6	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					

Mobile County Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.6.1	Retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Short-Range	Local Funds	TBD
2.6.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Building Official	Medium	Short-Range	Local Funds	TBD
2.7	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.7.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Local Floodplain Manager	High	Ongoing	Local Funds	TBD
2.8	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.8.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	Low	Long-Range	TBD	TBD
2.9	**Backup Power. Ensure uninterrupted power supply for critical facilities during emergency events.**					
2.9.1	Pursue grant funding for the installation of backup power generators for critical facilities.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
3	**Goal for Public Education and Outreach. Educate and inform the public about the risks of hazards and the measures available to reduce threats to life and property.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					

Mobile County Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Building Official	Low	Mid-Range	Local Funds	TBD
3.2	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Mobile County EMA	High	Ongoing	Local Funds	TBD
3.2.2	Distribute materials, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Mobile County EMA	High	Ongoing	Local Funds	TBD
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.	County Commission	Low	Long-Range	Local Funds	TBD
3.3	**Library. Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.3.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.3.2	Consider the enactment of a local ordinance or state law to require floodplain disclosure when a property is for sale.	Local Floodplain Manager	Medium	Mid-Range	Local Funds	TBD

Mobile County Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
3.4	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.4.1	Distribute the 2015 plan to local officials, stakeholders, and interested individuals through internet download.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.5	**Weather Radios. Improve public access to weather alerts.**					
3.5.1	Promote the use of weather radios in households and businesses.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.6	**Disaster Warning. Improve public warning systems.**					
3.6.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.6.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.6.3	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.6.4	Upgrade critical communications infrastructure.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD

Mobile County Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
3.7	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.7.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Floodplain Manger	Medium	Short-Range	Local Funds	TBD
3.8	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
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.	County Commission	Medium	Ongoing	Local Funds	TBD
3.9	**Weather Radios.** Improve public access to weather alerts.					
3.9.1	Promote the use of weather radios in households and businesses.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.10	**Disaster Warning**. Improve public warning systems.					
3.10.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Mobile County EMA	High	Mid-Range	FEMA HMA Grant	TBD
3.10.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Mobile County EMA	High	Mid-Range	FEMA HMA Grant	TBD

Mobile County Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
3.10.3	Evaluate the feasibility of a shared tri-county ALERT system covering Baldwin, Escambia, and Mobile counties.	County Commission	Low	Long-Range	FEMA HMA Grant	TBD
3.10.5	Upgrade critical communications infrastructure.	County Commission	High	Long-Range	TBD	TBD
4	**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.**					
4.1	**Open Space Easements and Acquisitions. Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.**					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	County Commission	High	Short-Range	FEMA HMA Grant	TBD
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	County Commission	High	Ongoing	Other	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	County Commission	High	Ongoing	Local Funds	TBD
4.3	**Urban Forestry Programs. Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					

Mobile County Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	County Commission	Medium	Mid-Range	Local Funds	TBD
4.3.2	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	County Commission	Medium	Mid-Range	Local Funds	TBD
4.4	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance stormwater drainage.	County Commission	Medium	Mid-Range	Local Funds	TBD
4.4.2	Develop a coastal renourishment program.	County Commission	Low	Long-Range	Other	TBD
4.5	**Water Resources Conservation Programs. Protect water quantity and quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	County Commission	Medium	Long-Range	Local Funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Building Official/Mobile County EMA	Medium	Short-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					

Mobile County Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Building Official/County Commission	High	Mid-Range	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
5.3.1	Construct at least one multi-jurisdictional First Responder Shelter. .	County Commission	High	Long-Range	FEMA HMA Grant	TBD
5.3.2	Evaluate community shelter needs and establish a program for community storm shelter room construction in appropriate locations.	County Commission	High	Long-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	County Commission	High	Long-Range	FEMA HMA Grant	TBD

C.2 Bayou La Batre Community Action Program

City of Bayou La Batre Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-range=less than 2 years Mid-term=2-5 years Long-range=more than 5 years	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Building Official	Low	Long-Range/Ongoing	Local funds	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Building Official	Low	Long-Range/Ongoing	Local funds	TBD
1.1.3	Prepare a five-year capital improvements plan (CIP) to include capital projects that implement 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.	Mayor and Council	Medium	Mid-Range	Local funds	TBD

City of Bayou La Batre Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-range=less than 2 years Mid-term=2-5 years Long-range=more than 5 years	Funding Source	Estimated Cost
1.2	**<u>Geographic Information Systems (GIS)</u>. Maintain a comprehensive database of hazards locations, socioeconomic data, infrastructure, and critical facilities inventories.**					
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 drainage structures, dams/levees, hurricane surge areas, tornado tracks, disaster events and their extents, and a comprehensive inventory of critical facilities within all jurisdictions.	Mobile County EMA	Low	Mid-Range	HMA	TBD
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.	Mobile County EMA	Low	Mid-Range	FEMA HMA Grant	TBD
1.3	**<u>Planning Studies</u>. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Local Floodplain Manager/	Medium	Long-Range	FEMA HMA Grant	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Mobile County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Building Official	Low	Long-Range	TBD	TBD

City of Bayou La Batre Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-range=less than 2 years Mid-term=2-5 years Long-range=more than 5 years	Funding Source	Estimated Cost
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.	Building Official	Low	Long-Range	TBD	TBD
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Building Official	Low	Long-Range	TBD	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	City Engineer	Medium	Long-Range	FEMA HMA Grant	TBD
1.4	**<u>Zoning</u>. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.1	Consider large lot size restrictions on flood prone areas designated on Flood Insurance Rate Maps.	Mayor and Council	Medium	Short-Range	Local funds	TBD
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.	Mayor and Council	Medium	Short-Range	Local funds	TBD
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.	Mayor and Council	Medium	Short-Range	Local funds	TBD
1.4.4	Enact local ordinance that require community storm shelters within sizeable mobile home parks and subdivisions.	Mayor and Council	High	Short-Range	Local funds	TBD

City of Bayou La Batre Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-range=less than 2 years Mid-term=2-5 years Long-range=more than 5 years	Funding Source	Estimated Cost
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Mayor and Council	Medium	Mid-Range	Local funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
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.	Local Floodplain Manager	High	Long-Range/Ongoing	Local funds	TBD
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Local Floodplain Manager	Medium	Ongoing	Local funds	TBD
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.	Local Floodplain Manager	High	Mid-Range	FEMA HMA Grant	TBD
1.6.4	Maintain membership for locally designated flood plain managers in the Association of State Flood Plain Managers and the Alabama Association of Flood Plain Managers and encourage active participation.	Local Floodplain Manager	High	Short-Range	Local funds	TBD

City of Bayou La Batre Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-range=less than 2 years Mid-term=2-5 years Long-range=more than 5 years	**Funding Source**	**Estimated Cost**
1.6.5	Participate in the "Turn Around Don't Drown" program by purchasing and installing signs in known flash flood bridge overpass locations.	Local Floodplain Manager	Medium	Short-Range	Other	TBD
1.6.6	Improve flood risk assessment by documenting high water marks post event, verifying FEMA's repetitive loss inventory, and revising and updating regulatory floodplain maps.	Local Floodplain Manager	Medium	Short-Range	TBD	TBD
1.7	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Official	High	Ongoing	Local funds	TBD
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."	Building Official	High	Short-Range	Local funds	TBD
1.7.4	Ensure that fire safety ordinances properly regulate open burning, the use of liquid fuel, and electric space heaters.	Building Official	Low	Mid-Range	Local funds	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Official	High	Short-Range	Local funds	TBD
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.	Mayor and Council	High	Ongoing	FEMA HMA Grant	TBD

City of Bayou La Batre Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-range=less than 2 years Mid-term=2-5 years Long-range=more than 5 years	**Funding Source**	**Estimated Cost**
1.8	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.8.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Local Floodplain Manager	High	Ongoing	Local funds	TBD
1.89.2	Develop, adopt and implement subdivision regulations that require proper stormwater infrastructure design and construction.	Mayor and Council	High	Ongoing	Local funds	TBD
1.9	**Dam Safety Management. Establish a comprehensive dam safety program.**					
1.9.1	Support legislation to establish a State dam safety program.	Mayor and Council	Low	Mid-Range	Local funds	TBD
1.10	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.10.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Local Floodplain Manager	High	Short-Range	Local funds	TBD
1.11	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.11.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD

City of Bayou La Batre Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-range=less than 2 years Mid-term=2-5 years Long-range=more than 5 years	**Funding Source**	**Estimated Cost**
1.11.2	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.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to 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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					

City of Bayou La Batre Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-range=less than 2 years Mid-term=2-5 years Long-range=more than 5 years	Funding Source	Estimated Cost
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.5	**Flood Control Measures. Construct small flood control measures to reduce/prevent flood damage.**					
2.5.1	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non-structural mitigation techniques.	Building Official	Low	Long-Range	FEMA HMA Grant	TBD
2.6	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.6.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD

City of Bayou La Batre Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-range=less than 2 years Mid-term=2-5 years Long-range=more than 5 years	Funding Source	Estimated Cost
2.6.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Building Official	Medium	Short-Range	Local funds	TBD
2.7	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.7.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Local Floodplain Manager	High	Ongoing	Local funds	TBD
2.8	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.8.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	Low	Long-Range	TBD	TBD
2.9	**Backup Power: Ensure uninterrupted power suppl during emergency events.**					
2.9.1	Pursue grant funding for the installation of backup power generators for critical facilities.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					

City of Bayou La Batre Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-range=less than 2 years Mid-term=2-5 years Long-range=more than 5 years	**Funding Source**	**Estimated Cost**
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Building Official	Low	Mid-Range	Local funds	TBD
3.2	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Mobile County EMA	High	Ongoing	Local funds	TBD
3.2.2	Distribute materials, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Mobile County EMA	High	Ongoing	Local funds	TBD
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.	Mayor and Council	Low	Long-Range	Local funds	TBD
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.	Mayor and Council	High	Short-Range	Local funds	TBD
3.3	**Library. Use local library resources to educate the public on hazard risks and mitigation alternatives.**					

City of Bayou La Batre Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-range=less than 2 years Mid-term=2-5 years Long-range=more than 5 years	**Funding Source**	**Estimated Cost**
3.3.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Mobile County EMA	Medium	Mid-Range	Local funds	TBD
3.4	**Education Programs. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					
3.4.1	Distribute hazard mitigation brochures to students through area schools.	Mobile County EMA	Medium	Mid-Range	Local funds	TBD
3.5	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.5.1	Distribute the 2015 plan to local officials, stakeholders, and interested individuals through internet download.	Mobile County EMA	High	Short-Range	Local funds	TBD
3.6	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.6.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Building Official	High	Short-Range	Local funds	TBD
3.7	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
3.7.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Mobile County EMA	Medium	Mid-Range	Local funds	TBD
3.8	**Weather Radios. Improve public access to weather alerts.**					

City of Bayou La Batre Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-range=less than 2 years Mid-term=2-5 years Long-range=more than 5 years	Funding Source	Estimated Cost
3.8.1	Promote the use of weather radios in households and businesses.	Mayor and Council	High	Short-Range	Local funds	TBD
3.8.2	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Mayor and Council	High	Short-Range	Local funds	TBD
3.9	**Disaster Warning. Improve public warning systems.**					
3.9.1	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.9.2	Upgrade critical communications infrastructure.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
4	**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.**					
4.1	**Open Space Easements and Acquisitions. Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.**					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	Mayor and Council	High	Short-Range	FEMA HMA Grant	TBD
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Mayor and Council	High	Ongoing	Other	TBD

City of Bayou La Batre Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-range=less than 2 years Mid-term=2-5 years Long-range=more than 5 years	Funding Source	Estimated Cost
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Mayor and Council	High	Ongoing	Local funds	TBD
4.3	**Urban Forestry Programs. Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Mayor and Council	Medium	Mid-Range	Local funds	TBD
4.4	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs**					
4.4.1	Restore and protect wetlands to enhance stormwater drainage.	Mayor and Council	Medium	Mid-Range	Local funds	TBD
4.4.2	Develop a coastal renourishment program.	Mayor and Council	Low	Long-Range	Other	TBD
4.5	**Water Resources Conservation Programs. Protect water quantity and quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Mayor and Council	Medium	Long-Range	Local funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					

City of Bayou La Batre Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-range=less than 2 years Mid-term=2-5 years Long-range=more than 5 years	Funding Source	Estimated Cost
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Building Official	Medium	Short-Range	Local funds	TBD
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Building Official	High	Mid-Range	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
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.	Mayor and Council	High	Long-Range	FEMA HMA Grant	TBD
5.3.2	Establish a program for subsidizing individual and community safe room construction in appropriate locations and facilities.	Mayor and Council	High	Long-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	Mayor and Council	High	Long-Range	FEMA HMA Grant	TBD

C.3 Chickasaw Community Action Program

City of Chickasaw Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Building Official	Low	Long-Range/Ongoing	Local Funds	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Building Official	Low	Long-Range/Ongoing	Local Funds	TBD
1.1.3	Prepare a five-year capital improvements plan (CIP) to include capital projects that implement 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.	Building Official/City Council and Mayor	Low	Long-Range	Local Funds	TBD

City of Chickasaw Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socioeconomic data, infrastructure, and critical facilities inventories.**					
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 drainage structures, dams/levees, hurricane surge areas, tornado tracks, disaster events and their extents, and a comprehensive inventory of critical facilities within all jurisdictions.	City of Mobile GIS Dept./Mobile County EMA	Low	Mid-Range	HMA	TBD
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.	Mobile County EMA	Low	Mid-Range	FEMA HMA Grant	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Local Floodplain Manager	Medium	Long-Range	FEMA HMA Grant	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Mobile County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Building Official	Low	Long-Range	TBD	TBD

City of Chickasaw Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
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.	Building Official	Low	Long-Range	TBD	TBD
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Building Official	Low	Long-Range	TBD	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	City Engineer	Medium	Long-Range	FEMA HMA Grant	TBD
1.4	**<u>Zoning</u>. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.1	Consider large lot size restrictions on flood prone areas designated on Flood Insurance Rate Maps.	City Council and Mayor	Medium	Short-Range	Local Funds	TBD
1.4.2	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, among others.	City Council and Mayor	Medium	Short-Range	Local Funds	TBD
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.	City Council and Mayor	Medium	Short-Range	Local Funds	TBD
1.4.4	Enact local ordinance that require community storm shelters within sizeable mobile home parks and subdivisions.	City Council and Mayor	High	Short-Range	Local Funds	TBD

City of Chickasaw Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	City Council and Mayor	Medium	Mid-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
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.	Local Floodplain Manager	High	Long-Range/Ongoing	Local Funds	TBD
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Local Floodplain Manager	Medium	Ongoing	Local Funds	TBD
1.6.4	Maintain membership for locally designated flood plain managers in the Association of State Flood Plain Managers and the Alabama Association of Flood Plain Managers and encourage active participation.	Local Floodplain Manager	High	Short-Range	Local Funds	TBD
1.6.5	Participate in the “Turn Around Don’t Drown” program by purchasing and installing signs in known flash flood bridge overpass locations.	Mobile County EMA	Medium	Short-Range	Other	TBD
1.6.6	Improve flood risk assessment by documenting high water marks post event, verifying FEMA’s repetitive loss inventory and revising and updating regulatory floodplain maps.	Mobile County EMA	Medium	Short-Range	Other	TBD

City of Chickasaw Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.7	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Official	High	Ongoing	Local Funds	TBD
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."	Building Official	High	Short-Range	Local Funds	TBD
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	Building Official	Low	Mid-Range	Local Funds	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Official	High	Short-Range	Local Funds	TBD
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.	City Council and Mayor	High	Ongoing	FEMA HMA Grant	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Local Floodplain Manager	High	Ongoing	Local Funds	TBD
1.9.2	Develop, adopt, and implement subdivision regulations that require proper stormwater infrastructure design and construction.	City Council and Mayor	High	Ongoing	Local Funds	TBD

City of Chickasaw Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.10	**Dam Safety Management. Establish a comprehensive dam safety program.**					
1.10.1	Support legislation to establish a State dam safety program.	City Council and Mayor	Low	Mid-Range	Local Funds	TBD
1.11	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.11.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Local Floodplain Manager	High	Short-Range	Local Funds	TBD
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
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.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					

City of Chickasaw Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.1.1	Pursue FEMA grant funds to 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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					

City of Chickasaw Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.5	**Flood Control Measures. Construct small flood control measures to reduce/prevent flood damage.**					
2.5.1	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non-structural mitigation techniques.	Building Official	Low	Long-Range	FEMA HMA Grant	TBD
2.6	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.6.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.6.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Building Official	Medium	Short-Range	Local Funds	TBD
2.7	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.7.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Local Floodplain Manager	High	Ongoing	Local Funds	TBD
2.8	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					

City of Chickasaw Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.8.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	Low	Long-Range	TBD	TBD
2.9	**Backup Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.9.1	Pursue grant funding for the installation of backup power generators for critical facilities.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Building Official	Low	Mid-Range	Local Funds	TBD
3.2	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Mobile County EMA	High	Ongoing	Local Funds	TBD
3.2.2	Distribute materials, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Mobile County EMA	High	Ongoing	Local Funds	TBD

City of Chickasaw Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
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.	City Council and Mayor	Low	Long-Range	Local Funds	TBD
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.	City Council and Mayor	High	Short-Range	Local Funds	TBD
3.3	**Library. Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.3.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.4	**Education Programs. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					
3.4.1	Distribute hazard mitigation brochures to students through area schools.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.5	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.5.1	Distribute the 2015 plan to local officials, stakeholders, and interested individuals through internet download.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.6	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					

City of Chickasaw Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
3.6.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Building Official	High	Short-Range	Local Funds	TBD
3.7	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
3.7.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.8	**Weather Radios. Improve public access to weather alerts.**					
3.8.1	Promote the use of weather radios in households and businesses.	City Council and Mayor	High	Short-Range	Local Funds	TBD
3.8.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	City Council and Mayor	High	Short-Range	Local Funds	TBD
3.9	**Disaster Warning. Improve public warning systems.**					
3.9.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.9.5	Upgrade critical communications infrastructure.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
4	**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.**					

City of Chickasaw Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
4.1	**Open Space Easements and Acquisitions. Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.**					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	City Council and Mayor	High	Short-Range	FEMA HMA Grant	TBD
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	City Council and Mayor	High	Ongoing	Other	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	City Council and Mayor	High	Ongoing	Local Funds	TBD
4.3	**Urban Forestry Programs. Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	City Council and Mayor	Medium	Mid-Range	Local Funds	TBD
4.5	**Water Resources Conservation Programs. Protect water quantity and quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	City Council and Mayor	Medium	Long-Range	Local Funds	TBD

City of Chickasaw Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Building Official/Mobile County EMA	Medium	Short-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Building Official/City Council and Mayor	High	Mid-Range	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
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.	City Council and Mayor	High	Long-Range	FEMA HMA Grant	TBD
5.3.2	Establish a program for subsidizing individual and community safe room construction in appropriate locations and facilities.	City Council and Mayor	High	Long-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	City Council and Mayor	High	Long-Range	FEMA HMA Grant	TBD

C.4 Citronelle Community Action Program

City of Citronelle Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Building Official	Low	Long-Range/Ongoing	Local Funds	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Building Official	Low	Long-Range/Ongoing	Local Funds	TBD
1.1.3	Prepare a five-year capital improvements plan (CIP) to include capital projects that implement 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.	Building Official/City Council and Mayor	Medium	Mid-Range	Local Funds	TBD

City of Citronelle Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					
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 drainage structures, dams/levees, hurricane surge areas, tornado tracks, disaster events and their extents, and a comprehensive inventory of critical facilities within all jurisdictions.	Mobile County EMA	Low	Mid-Range	HMA	TBD
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.	Mobile County EMA	Low	Mid-Range	FEMA HMA Grant	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Local Floodplain Manager	Medium	Long-Range	FEMA HMA Grant	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Mobile County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Building Official	Low	Long-Range	TBD	TBD

City of Citronelle Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
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.	Building Official	Low	Long-Range	TBD	TBD
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Building Official	Low	Long-Range	TBD	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	City Engineer	Medium	Long-Range	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.1	Consider large lot size restrictions on flood prone areas designated on Flood Insurance Rate Maps.	City Council and Mayor	Medium	Short-Range	Local Funds	TBD
1.4.2	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, among others.	City Council and Mayor	Medium	Short-Range	Local Funds	TBD
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.	City Council and Mayor	Medium	Short-Range	Local Funds	TBD
1.4.4	Enact local ordinance that require community storm shelters within sizeable mobile home parks and subdivisions.	City Council and Mayor	High	Short-Range	Local Funds	TBD

City of Citronelle Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	City Council and Mayor	Medium	Mid-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
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.	Local Floodplain Manager	High	Long-Range/Ongoing	Local Funds	TBD
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Local Floodplain Manager	Medium	Ongoing	Local Funds	TBD
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.	Local Floodplain Manager	High	Completed May 2020	FEMA HMA Grant	TBD
1.6.4	Maintain membership for locally designated flood plain managers in the Association of State Flood Plain Managers and the Alabama Association of Flood Plain Managers and encourage active participation.	Local Floodplain Manager/	High	Short-Range	Local Funds	TBD

City of Citronelle Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.6.5	Participate in the "Turn Around Don't Drown" program by purchasing and installing signs in known flash flood bridge overpass locations.	Local Floodplain Manager	Medium	Short-Range	Other	TBD
1.6.6	Improve flood risk assessment by documenting high water marks post event, verifying FEMA's repetitive loss inventory and revising and updating regulatory floodplain maps.	Local Floodplain Manager	Medium	Long-Range	Other	TBD
1.7	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Official	High	Ongoing	Local Funds	TBD
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."	Building Official	High	Ongoing	Local Funds	TBD
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	Building Official	Low	Mid-Range	Local Funds	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Official	High	Short-Range	Local Funds	TBD
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.	City Council and Mayor	High	Ongoing	FEMA HMA Grant	TBD

City of Citronelle Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Local Floodplain Manager	High	Ongoing	Local Funds	TBD
1.9.2	Develop, adopt and implement subdivision regulations that require proper stormwater infrastructure design and construction.	City Council and Mayor	High	Ongoing	Local Funds	TBD
1.10	**Dam Safety Management. Establish a comprehensive dam safety program.**					
1.10.1	Support legislation to establish a State dam safety program.	City Council and Mayor	Low	Mid-Range	Local Funds	TBD
1.11	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.11.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Local Floodplain Manager	High	Short-Range	Local Funds	TBD
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD

City of Citronelle Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
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.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to 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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					

City of Citronelle Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.5	**Flood Control Measures. Construct small flood control measures to reduce/prevent flood damage.**					
2.5.1	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non-structural mitigation techniques.	Building Official	Medium	Long-Range	FEMA HMA Grant	TBD
2.5	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.5.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD

City of Citronelle Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.5.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Building Official	Medium	Short-Range	Local Funds	TBD
2.6	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.6.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Mobile County EMA	High	Ongoing	Local Funds	TBD
2.7	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.7.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	Low	Long-Range	TBD	TBD
2.8	**Backup Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.8.1	Pursue grant funding for the installation of backup power generators for critical facilities.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					

City of Citronelle Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Building Official	Low	Mid-Range	Local Funds	TBD
3.2	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Mobile County EMA	High	Ongoing	Local Funds	TBD
3.2.2	Distribute materials, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Mobile County EMA	High	Ongoing	Local Funds	TBD
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.	City Council and Mayor	High	Short-Range	Local Funds	TBD
3.3	**Library. Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.3.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.4	**Education Programs. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					

City of Citronelle Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
3.4.1	Distribute hazard mitigation brochures to students through area schools.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.5	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.5.1	Distribute the 2015 plan to local officials, stakeholders, and interested individuals through internet download.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.6	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.6.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Building Official	High	Short-Range	Local Funds	TBD
3.7	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
3.7.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.8	**Weather Radios. Improve public access to weather alerts.**					
3.8.1	Promote the use of weather radios in households and businesses.	City Council and Mayor	High	Short-Range	Local Funds	TBD
3.8.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	City Council and Mayor	High	Short-Range	Local Funds	TBD
3.9	**Disaster Warning. Improve public warning systems.**					

City of Citronelle Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
3.9.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.9.5	Upgrade critical communications infrastructure.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
4	**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.**					
4.1	**Open Space Easements and Acquisitions. Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.**					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	City Council and Mayor	High	Short-Range	FEMA HMA Grant	TBD
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	City Council and Mayor	High	Ongoing	Other	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	City Council and Mayor	High	Ongoing	Local Funds	TBD
4.3	**Urban Forestry Programs. Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					

City of Citronelle Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	City Council and Mayor	Medium	Mid-Range	Local Funds	TBD
4.4	**Water Resources Conservation Programs. Protect water quantity and quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.4.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	City Council and Mayor	Medium	Long-Range	Local Funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Building Official/Mobile County EMA	Medium	Short-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Building Official/City Council and Mayor	High	Mid-Range	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					

City of Citronelle Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
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.	City Council and Mayor	High	Long-Range	FEMA HMA Grant	TBD
5.3.2	Establish a program for subsidizing individual and community safe room construction in appropriate locations and facilities.	City Council and Mayor	High	Short-Range In progress – Estimated Completion Sept. 2021	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	City Council and Mayor	High	Long-Range	FEMA HMA Grant	TBD

C.1 City of Mobile Community Action Program

City of Mobile Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Build Mobile	High	Short-Range	Local Funds	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Build Mobile	High	Short-Range	Local Funds	TBD
1.1.3	Prepare a five-year capital improvements plan (CIP) to include capital projects that implement 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.	Mayor/City Council	Medium	Mid-Range	Local Funds	TBD

City of Mobile Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					
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 drainage structures, dams/levees, hurricane surge areas, tornado tracks, disaster events and their extents, and a comprehensive inventory of critical facilities within all jurisdictions.	City of Mobile GIS Dept	Medium	Mid-Range	FEMA HMA Grant	TBD
1.2.2	Integrate FEMA ORION applications for hazard loss estimations within local GIS programs. Maintain up-to-date data within GIS to apply the full loss estimation capabilities of ORION.	City of Mobile GIS Dept.	Medium	Ongoing	FEMA HMA Grant	TBD
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	City of Mobile GIS Dept.	High	Short-Range	Local Funds	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	City Engineer	Medium	Mid-Range	FEMA HMA Grant	TBD
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.	City Engineer	Low	Long-Range	TBD	TBD

City of Mobile Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	City of Mobile GIS Department	High	Short-Range	TBD	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	City Engineer	Medium	Ongoing	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
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.	Build Mobile	Low	Long-Range	Local Funds	TBD
1.4.4	Enact local ordinance that require community storm shelters within sizeable mobile home parks and subdivisions.	Mayor/City Council	Medium	Mid-Range	Local Funds	TBD
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Mayor/City Council	Medium	Mid-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
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.	Build Mobile	High	Short-Range	Local Funds	TBD

City of Mobile Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Floodplain Manager	Medium	Ongoing	Local Funds	TBD
1.6.4	Maintain membership for locally designated flood plain managers in the Association of State Flood Plain Managers and the Alabama Association of Flood Plain Managers and encourage active participation.	Floodplain Manager	High	Ongoing	Local Funds	TBD
1.6.5	Participate in the "Turn Around Don't Drown" program by purchasing and installing signs in known flash flood bridge overpass locations.	National Weather Service	High	Short-Range	Other	TBD
1.6.6	Improve flood risk assessment by documenting high water marks post event, verifying FEMA's repetitive loss inventory and revising and updating regulatory floodplain maps.	Floodplain Manager	Medium	Short-Range	FEMA HMA Grant	TBD
1.7	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Build Mobile	High	Ongoing	Local Funds	TBD
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."	Build Mobile	High	Short-Range	Local Funds	TBD

City of Mobile Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
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.	Mayor/City Council	Medium	Mid-Range	TBD	TBD
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	Building Official	High	Short-Range	Local Funds	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Official	High	Short-Range	Local Funds	TBD
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.	Mayor/City Council	High	Ongoing	FEMA HMA Grant	TBD
1.8	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.8.2	Develop, adopt and implement subdivision regulations that require proper stormwater infrastructure design and construction.	Build Mobile	Medium	Ongoing	Local Funds	TBD
1.9	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.10	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					

City of Mobile Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.10.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Real Estate Management	High	Short-Range	FEMA HMA Grant	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to 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.	Build Mobile	High	Short-Range	FEMA HMA Grant	TBD
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Build Mobile	High	Short-Range	FEMA HMA Grant	TBD
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.	Build Mobile	Medium	Mid-Range	FEMA HMA Grant	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					

City of Mobile Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Build Mobile	Medium	Short-Range	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Build Mobile	Medium	Short-Range	FEMA HMA Grant	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Build Mobile	Medium	Short-Range	FEMA HMA Grant	TBD
2.5	**Flood Control Measures. Construct small flood control measures to reduce/prevent flood damage.**					
2.5.1	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non-structural mitigation techniques.	City Engineer	Medium	Long-Range	FEMA HMA Grant	TBD
2.6	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.6.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Build Mobile	High	Long-Range	FEMA HMA Grant	TBD

City of Mobile Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
2.7	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.7.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Floodplain Manager	High	Ongoing	Local Funds	TBD
2.8	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.8.1	Install lightning and/or surge protection on existing critical facilities.	Real Estate Management	Low	Long-Range	TBD	TBD
2.9	**Backup Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.9.1	Pursue grant funding for the installation of backup power generators for critical facilities.	Real Estate Management	High	Ongoing	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Build Mobile	Medium	Ongoing	Local Funds	TBD
3.2	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					

City of Mobile Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
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.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Mobile County EMA	High	Short-Range	Local Funds	TBD
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.	Mayor/City Council	High	Ongoing	Local Funds	TBD
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.	Mayor/City Council	Medium	Ongoing	Local Funds	TBD
3.2.6	Host hazard mitigation roundtables at the beginning of the fiscal year and the beginning of hurricane season to review and coordinate individual jurisdiction mitigation activities.	Mobile County EMA	Low	Long-Range	TBD	TBD
3.3	**Library. Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.3.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD

City of Mobile Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
3.4	**Education Programs. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					
3.4.1	Distribute hazard mitigation brochures to students through area schools.	Mayor/City Council	High	Short-Range	FEMA HMA Grant	TBD
3.5	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.5.1	Distribute the 2015 plan to local officials, stakeholders, and interested individuals through internet download.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.6	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
3.6.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.8	**Weather Radios. Improve public access to weather alerts.**					
3.8.1	Promote the use of weather radios in households and businesses.	Mayor/City Council	High	Short-Range	Local Funds	TBD
3.8.2	Require the installation of weather radios in all public buildings and places of public assembly.	Mayor/City Council	High	Short-Range	Local Funds	TBD
3.8.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Mayor/City Council	High	Short-Range	Local Funds	TBD

City of Mobile Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
3.9	**Disaster Warning. Improve public warning systems.**					
3.9.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.9.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.9.3	Evaluate the feasibility of a shared tri-county ALERT system covering Baldwin, Escambia, and Mobile counties.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.9.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.9.5	Upgrade critical communications infrastructure.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
4	**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.**					
4.1	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.1.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Build Mobile	High	Ongoing	Other	TBD

City of Mobile Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
4.1.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Mayor/City Council	High	Ongoing	Local Funds	TBD
4.2	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.2.1	Restore and protect wetlands to enhance stormwater drainage.	Mayor/City Council	Medium	Mid-Range	Local Funds	TBD
4.2.2	Develop a coastal renourishment program.	Mayor/City Council	Low	Long-Range	Other	TBD
4.3	**Water Resources Conservation Programs. Protect water quantity and quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.3.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Mayor/City Council	Medium	Long-Range	Local Funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Public Works	Medium	Short-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					

City of Mobile Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	City Engineer	High	Ongoing	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
5.3.2	Encourage the construction of safe rooms in new and existing homes and buildings.	Build Mobile	High	Short-Range	FEMA HMA Grant	TBD

C.5 Creola Community Action Program

City of Creola Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Building Official	Low	Long-Range/Ongoing	Local Funds	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Building Official	Low	Long-Range/Ongoing	Local Funds	TBD
1.1.3	Prepare a five-year capital improvements plan (CIP) to include capital projects that implement 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..	Building Official/Local Government	Medium	Mid-Range	Local Funds	TBD

City of Creola Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					
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 drainage structures, dams/levees, hurricane surge areas, tornado tracks, disaster events and their extents, and a comprehensive inventory of critical facilities within all jurisdictions.	Mobile County EMA	Low	Mid-Range	HMA	TBD
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.	Mobile County EMA	Low	Mid-Range	FEMA HMA Grant	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Local Floodplain Manager	Medium	Long-Range	FEMA HMA Grant	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Mobile County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Building Official	Low	Long-Range	TBD	TBD

City of Creola Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
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.	Building Official	Low	Long-Range	TBD	TBD
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Building Official	Low	Long-Range	TBD	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	City Engineer	Medium	Long-Range	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.1	Consider large lot size restrictions on flood prone areas designated on Flood Insurance Rate Maps.	Local Government	Medium	Short-Range	Local Funds	TBD
1.4.2	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, among others.	Local Government	Medium	Short-Range	Local Funds	TBD
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.	Local Government	Medium	Short-Range	Local Funds	TBD
1.4.4	Enact local ordinance that require community storm shelters within sizeable mobile home parks and subdivisions.	Local Government	High	Short-Range	Local Funds	TBD

City of Creola Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Local Government	Medium	Mid-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
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.	Local Floodplain Manager	High	Long-Range/Ongoing	Local Funds	TBD
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Mobile County EMA	Medium	Ongoing	Local Funds	TBD
1.6.4	Maintain membership for locally designated flood plain managers in the Association of State Flood Plain Managers and the Alabama Association of Flood Plain Managers and encourage active participation.	Local Floodplain Manager	High	Short-Range	Local Funds	TBD
1.6.5	Participate in the "Turn Around Don't Drown" program by purchasing and installing signs in known flash flood bridge overpass locations.	Local Floodplain Manager	Medium	Short-Range	Other	TBD
1.6.6	Improve flood risk assessment by documenting high water marks post event, verifying FEMA's repetitive loss inventory and revising and updating regulatory floodplain maps.	Local Floodplain Manager	Low	Long-Range	FEMA HMA Funding	TBD

City of Creola Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.7	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Official	High	Ongoing	Local Funds	TBD
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."	Building Official	High	Short-Range	Local Funds	TBD
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	Building Official	Low	Mid-Range	Local Funds	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Official	High	Short-Range	Local Funds	TBD
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.	Local Government	High	Ongoing	FEMA HMA Grant	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Local Floodplain Manager	High	Ongoing	Local Funds	TBD
1.9.2	Develop, adopt and implement subdivision regulations that require proper stormwater infrastructure design and construction.	Local Government	High	Ongoing	Local Funds	TBD

City of Creola Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.10	**Dam Safety Management. Establish a comprehensive dam safety program.**					
1.10.1	Support legislation to establish a State dam safety program.	Local Government	Low	Mid-Range	Local Funds	TBD
1.11	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.11.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Local Floodplain Manager	High	Short-Range	Local Funds	TBD
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
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.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					

City of Creola Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
2.1.1	Pursue FEMA grant funds to 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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.2.2	Utilize the 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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					

City of Creola Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.5	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.5.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.5.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Building Official	Medium	Short-Range	Local Funds	TBD
2.6	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.6.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Local Floodplain Manager	High	Ongoing	Local Funds	TBD
2.7	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.7.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	Low	Long-Range	TBD	TBD
2.8	**Back Up Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					

City of Creola Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
2.8.1	Pursue grant funding for the installation of back up power generators for critical facilities.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Building Official	Low	Mid-Range	Local Funds	TBD
3.2	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Mobile County EMA	High	Ongoing	Local Funds	TBD
3.2.2	Distribute materials, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Mobile County EMA	High	Ongoing	Local Funds	TBD
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.	Local Government	Low	Long-Range	Local Funds	TBD

City of Creola Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
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.	Local Government	High	Short-Range	Local Funds	TBD
3.3	**Library. Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.3.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.4	**Education Programs. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					
3.4.1	Distribute hazard mitigation brochures to students through area schools.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.5	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.5.1	Distribute the 2015 plan to local officials, stakeholders, and interested individuals through internet download.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.6	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.6.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Building Official	High	Short-Range	Local Funds	TBD
3.7	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					

City of Creola Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
3.7.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.8	**Weather Radios. Improve public access to weather alerts.**					
3.8.1	Promote the use of weather radios in households and businesses.	Local Government	High	Short-Range	Local Funds	TBD
3.8.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Local Government	High	Short-Range	Local Funds	TBD
3.9	**Disaster Warning. Improve public warning systems.**					
3.9.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.9.5	Upgrade critical communications infrastructure.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
4	**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.**					
4.1	**Open Space Easements and Acquisitions. Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.**					

City of Creola Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	Local Government	High	Short-Range	FEMA HMA Grant	TBD
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Local Government	High	Ongoing	Other	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Local Government	High	Ongoing	Local Funds	TBD
4.3	**Urban Forestry Programs. Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Local Government	Medium	Mid-Range	Local Funds	TBD
4.4	**Water Resources Conservation Programs. Protect water quantity and quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.4.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Local Government	Medium	Long-Range	Local Funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					

City of Creola Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Building Official/Mobile County EMA	Medium	Short-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Building Official/Local Government	High	Mid-Range	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
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.	Local Government	High	Long-Range	FEMA HMA Grant	TBD
5.3.2	Establish a program for subsidizing individual and community safe room construction in appropriate locations and facilities.	Local Government	High	Long-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	Local Government	High	Long-Range	FEMA HMA Grant	TBD

C.6 Dauphin Island Community Action Program

Town of Dauphin Island Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Building Official	Low	Long-Range/Ongoing	Local Funds	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Building Official	Low	Long-Range/Ongoing	Local Funds	TBD
1.1.3	Prepare a five-year capital improvements plan (CIP) to include capital projects that implement 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.	Building Official	Low	Long-Range	Local Funds	TBD

Town of Dauphin Island Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					
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 drainage structures, dams/levees, hurricane surge areas, tornado tracks, disaster events and their extents, and a comprehensive inventory of critical facilities within all jurisdictions.	Mobile County EMA	Low	Mid-Range	HMA	TBD
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.	Mobile County EMA	Low	Mid-Range	FEMA HMA Grant	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Local Floodplain Manager	Medium	Long-Range	FEMA HMA Grant	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Mobile County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Building Official	Low	Long-Range	TBD	TBD

Town of Dauphin Island Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
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.	Building Official	Low	Long-Range	TBD	TBD
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Building Official	Low	Long-Range	TBD	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	City Engineer	Medium	Long-Range	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.1	Consider large lot size restrictions on flood prone areas designated on Flood Insurance Rate Maps.	Mayor and Council	Medium	Short-Range	Local Funds	TBD
1.4.2	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, among others.	Mayor and Council	Medium	Short-Range	Local Funds	TBD
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.	Mayor and Council	Medium	Short-Range	Local Funds	TBD
1.4.4	Enact local ordinance that require community storm shelters within sizeable mobile home parks and subdivisions.	Mayor and Council	High	Short-Range	Local Funds	TBD

Town of Dauphin Island Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Mayor and Council	Medium	Mid-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
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.	Local Floodplain Manager	High	Long-Range/Ongoing	Local Funds	TBD
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Local Floodplain Manager	Medium	Ongoing	Local Funds	TBD
1.6.4	Maintain membership for locally designated flood plain managers in the Association of State Flood Plain Managers and the Alabama Association of Flood Plain Managers and encourage active participation.	Local Floodplain Manager	High	Short-Range	Local Funds	TBD
1.6.5	Participate in the “Turn Around Don’t Drown” program by purchasing and installing signs in known flash flood bridge overpass locations.	Local Floodplain Manager	Medium	Short-Range	Other	TBD
1.6.6	Improve flood risk assessment by documenting high water marks post event, verifying FEMA’s repetitive loss inventory and revising and updating regulatory floodplain maps.	Local Floodplain Manager	Medium	Long-Range	Other	TBD

Town of Dauphin Island Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.7	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Official	High	Ongoing	Local Funds	TBD
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."	Building Official	High	Short-Range	Local Funds	TBD
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	Building Official	Low	Mid-Range	Local Funds	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Official	High	Short-Range	Local Funds	TBD
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.	Mayor and Council	High	Ongoing	FEMA HMA Grant	TBD
1.8	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.8.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Local Floodplain Manager	High	Ongoing	Local Funds	TBD
1.8.2	Develop, adopt and implement subdivision regulations that require proper stormwater infrastructure design and construction.	Mayor and Council	High	Ongoing	Local Funds	TBD

Town of Dauphin Island Community Action Program						
#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.9	**Dam Safety Management. Establish a comprehensive dam safety program.**					
1.9.1	Support legislation to establish a State dam safety program.	Mayor and Council	Low	Mid-Range	Local Funds	TBD
1.10	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.10.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Local Floodplain Manager	High	Short-Range	Local Funds	TBD
1.11	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.11.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
1.11.2	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.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					

Town of Dauphin Island Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.1.1	Pursue FEMA grant funds to 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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					

Town of Dauphin Island Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.5	**Flood Control Measures. Construct small flood control measures to reduce/prevent flood damage.**					
2.5.1	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non-structural mitigation techniques.	Building Official	Low	Long-Range	FEMA HMA Grant	TBD
2.6	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.6.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.6.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Building Official	Medium	Short-Range	Local Funds	TBD
2.7	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.7.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Mobile County EMA	High	Ongoing	Local Funds	TBD
2.8	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					

Town of Dauphin Island Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.8.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	Low	Long-Range	TBD	TBD
2.9	**Backup Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.9.1	Pursue grant funding for the installation of backup power generators for critical facilities.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Building Official	Low	Mid-Range	Local Funds	TBD
3.2	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Mobile County EMA	High	Ongoing	Local Funds	TBD
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Mobile County EMA	High	Ongoing	Local Funds	TBD

Town of Dauphin Island Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
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.	Mayor and Council	Low	Long-Range	Local Funds	TBD
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.	Mayor and Council	High	Short-Range	Local Funds	TBD
3.3	**Library. Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.3.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.4	**Education Programs. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					
3.4.1	Distribute hazard mitigation brochures to students through area schools.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.5	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.5.1	Distribute the 2015 plan to local officials, stakeholders, and interested individuals through internet download.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.6	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					

Town of Dauphin Island Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
3.6.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Building Official	High	Short-Range	Local Funds	TBD
3.7	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
3.7.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.8	**Weather Radios. Improve public access to weather alerts.**					
3.8.1	Promote the use of weather radios in households and businesses.	Mayor and Council	High	Short-Range	Local Funds	TBD
3.8.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Mayor and Council	High	Short-Range	Local Funds	TBD
3.9	**Disaster Warning. Improve public warning systems.**					
3.9.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.9.5	Upgrade critical communications infrastructure.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
4	**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.**					

Town of Dauphin Island Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
4.1	**Open Space Easements and Acquisitions. Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.**					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	Mayor and Council	High	Short-Range	FEMA HMA Grant	TBD
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Mayor and Council	High	Ongoing	Other	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Mayor and Council	High	Ongoing	Local Funds	TBD
4.3	**Urban Forestry Programs. Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Mayor and Council	Medium	Mid-Range	Local Funds	TBD
4.4	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance stormwater drainage.	Mayor and Council	Medium	Mid-Range	Local Funds	TBD
4.4.2	Develop a coastal renourishment program.	Mayor and Council	Low	Long-Range	Other	TBD

Town of Dauphin Island Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
4.5	**Water Resources Conservation Programs. Protect water quantity and quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Mayor and Council	Medium	Long-Range	Local Funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Building Official/Mobile County EMA	Medium	Short-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Building Official/Mayor and Council	High	Mid-Range	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
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.	Mayor and Council	High	Long-Range	FEMA HMA Grant	TBD

Town of Dauphin Island Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
5.3.2	Establish a program for subsidizing individual and community safe room construction in appropriate locations and facilities.	Mayor and Council	High	Long-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	Mayor and Council	High	Long-Range	FEMA HMA Grant	TBD

C.8 Mount Vernon Community Action Program

Town of Mount Vernon Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Building Official	Low	Long-Range/Ongoing	Local Funds	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Building Official	Low	Long-Range/Ongoing	Local Funds	TBD
1.1.3	Prepare a five-year capital improvements plan (CIP) to include capital projects that implement 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.	Building Official	Low	Long-Range	Local Funds	TBD

Town of Mount Vernon Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					
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 drainage structures, dams/levees, hurricane surge areas, tornado tracks, disaster events and their extents, and a comprehensive inventory of critical facilities within all jurisdictions.	Mobile County EMA	Low	Mid-Range	HMA	TBD
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.	Mobile County EMA	Low	Mid-Range	FEMA HMA Grant	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Mobile County EMA	Medium	Long-Range	FEMA HMA Grant	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Mobile County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Building Official	Low	Long-Range	TBD	TBD

Town of Mount Vernon Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
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.	Building Official	Low	Long-Range	TBD	TBD
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Building Official	Low	Long-Range	TBD	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	City Engineer	Medium	Long-Range	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.1	Consider large lot size restrictions on flood prone areas designated on Flood Insurance Rate Maps.	Mayor and Council	Medium	Short-Range	Local Funds	TBD
1.4.2	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, among others.	Mayor and Council	Medium	Short-Range	Local Funds	TBD
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.	Mayor and Council	Medium	Short-Range	Local Funds	TBD
1.4.4	Enact local ordinance that require community storm shelters within sizeable mobile home parks and subdivisions.	Mayor and Council	High	Short-Range	Local Funds	TBD

Town of Mount Vernon Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Mayor and Council	Medium	Mid-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
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.	Local Floodplain Manager	High	Long-Range/Ongoing	Local Funds	TBD
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Local Floodplain Manager	Medium	Ongoing	Local Funds	TBD
1.6.4	Maintain membership for locally designated flood plain managers in the Association of State Flood Plain Managers and the Alabama Association of Flood Plain Managers and encourage active participation.	Local Floodplain Manager	High	Short-Range	Local Funds	TBD
1.6.5	Participate in the “Turn Around Don’t Drown” program by purchasing and installing signs in known flash flood bridge overpass locations.	Local Floodplain Manager	Medium	Short-Range	Other	TBD
1.7	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					

Town of Mount Vernon Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Official	High	Ongoing	Local Funds	TBD
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."	Building Official	High	Short-Range	Local Funds	TBD
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	Building Official	Low	Mid-Range	Local Funds	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Official	High	Short-Range	Local Funds	TBD
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.	Mayor and Council	High	Ongoing	FEMA HMA Grant	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Mobile County EMA	High	Ongoing	Local Funds	TBD
1.9.2	Develop, adopt and implement subdivision regulations that require proper stormwater infrastructure design and construction.	Mayor and Council	High	Ongoing	Local Funds	TBD
1.10	**Dam Safety Management. Establish a comprehensive dam safety program.**					

Town of Mount Vernon Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.10.1	Support legislation to establish a State dam safety program.	Mayor and Council	Low	Mid-Range	Local Funds	TBD
1.11	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.11.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Local Floodplain Manager	High	Short-Range	Local Funds	TBD
1.12	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.12.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
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.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					

Town of Mount Vernon Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.1.1	Pursue FEMA grant funds to 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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					

Town of Mount Vernon Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.5	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.5.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.5.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Building Official	Medium	Short-Range	Local Funds	TBD
2.6	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.6.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Mobile County EMA	High	Ongoing	Local Funds	TBD
2.7	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.7.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	Low	Long-Range	TBD	TBD
2.8	**Backup Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					

Town of Mount Vernon Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
2.8.1	Pursue grant funding for the installation of backup power generators for critical facilities.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Building Official	Low	Mid-Range	Local Funds	TBD
3.2	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Mobile County EMA	High	Ongoing	Local Funds	TBD
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Mobile County EMA	High	Ongoing	Local Funds	TBD
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.	Mayor and Council	Low	Long-Range	Local Funds	TBD

Town of Mount Vernon Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
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.	Mayor and Council	High	Short-Range	Local Funds	TBD
3.3	**Library. Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.3.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.4	**Education Programs. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					
3.4.1	Distribute hazard mitigation brochures to students through area schools.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.5	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.5.1	Distribute the 2015 plan to local officials, stakeholders, and interested individuals through internet download.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.6	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.6.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Building Official	High	Short-Range	Local Funds	TBD
3.7	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					

Town of Mount Vernon Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
3.7.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.8	**Weather Radios. Improve public access to weather alerts.**					
3.8.1	Promote the use of weather radios in households and businesses.	Mayor and Council	High	Short-Range	Local Funds	TBD
3.8.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Mayor and Council	High	Short-Range	Local Funds	TBD
3.9	**Disaster Warning. Improve public warning systems.**					
3.9.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.9.5	Upgrade critical communications infrastructure.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
4	**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.**					
4.1	**Open Space Easements and Acquisitions. Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.**					

Town of Mount Vernon Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	Mayor and Council	High	Short-Range	FEMA HMA Grant	TBD
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Mayor and Council	High	Ongoing	Other	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Mayor and Council	High	Ongoing	Local Funds	TBD
4.3	**Urban Forestry Programs. Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Mayor and Council	Medium	Mid-Range	Local Funds	TBD
4.4	**Water Resources Conservation Programs. Protect water quantity and quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.4.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Mayor and Council	Medium	Long-Range	Local Funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					

Town of Mount Vernon Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Building Official/Mobile County EMA	Medium	Short-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Building Official/Mayor and Council	High	Mid-Range	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
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.	Mayor and Council	High	Long-Range	FEMA HMA Grant	TBD
5.3.2	Establish a program for subsidizing individual and community safe room construction in appropriate locations and facilities.	Mayor and Council	High	Long-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	Mayor and Council	High	Long-Range	FEMA HMA Grant	TBD

C.9 Prichard Community Action Program 2021

City of Prichard Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.2	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
1.2.3	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.	Building Official	Low	Long-Range	TBD	TBD
1.2.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	City Engineer	Low	Long-Range	TBD	TBD
1.2.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	City Engineer	Medium	Long-Range	FEMA HMA Grant	TBD
1.3	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.3.1	Consider large lot size restrictions on flood prone areas designated on Flood Insurance Rate Maps.	Mayor and City Council	Medium	Short-Range	Local Funds	TBD
1.3.4	Enact local ordinance that require community storm shelters within sizeable mobile home parks and subdivisions.	Mayor and City Council	High	Short-Range	Local Funds	TBD

City of Prichard Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.4	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
1.4.4	Maintain membership for locally designated flood plain managers in the Association of State Flood Plain Managers and the Alabama Association of Flood Plain Managers and encourage active participation.	Local Floodplain Manager/Mobile County EMA	High	Short-Range	Local Funds	TBD
1.4.5	Participate in the "Turn Around Don't Drown" program by purchasing and installing signs in known flash flood bridge overpass locations.	Local Floodplain Manager/Mobile County EMA	Medium	Short-Range	Other	TBD
1.5	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.5.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Official	High	Ongoing	Local Funds	TBD
1.5.2	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."	Building Official	High	Short-Range	Local Funds	TBD
1.5.3	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.	Building Official	High	Short-Range	Local Funds	TBD

City of Prichard Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.5.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	Building Official	Low	Mid-Range	Local Funds	TBD
1.5.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Official	High	Short-Range	Local Funds	TBD
1.5.6	Require the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	Mayor and City Council	High	Ongoing	FEMA HMA Grant	TBD
1.6	**Landscape Ordinances. Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					
1.6.1	Review and revise as necessary, landscaping standards for parking lots that reduce the size of impervious surfaces and encourage natural infiltration of rainwater.	Building Official	Low	Mid-Range	Local Funds	TBD
1.7	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.7.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Local Floodplain Manager	High	Ongoing	Local Funds	TBD
1.7.2	Develop, adopt and implement subdivision regulations that require proper stormwater infrastructure design and construction.	Mayor and City Council	High	Ongoing	Local Funds	TBD
1.8	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.8.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Local Floodplain Manager	High	Short-Range	Local Funds	TBD

City of Prichard Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.9	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.9.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to 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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					

City of Prichard Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.5	**Building Retrofits. 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.	Building Official	Medium	Short-Range	Local Funds	TBD
2.6	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.6.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Local Floodplain Manager	High	Ongoing	Local Funds	TBD

City of Prichard Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.7	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.7.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	Low	Long-Range	TBD	TBD
2.7.2	Conduct ongoing tree trimming programs along power lines.	Building Official	Low	Long-Range	TBD	TBD
2.8	**Backup Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.8.1	Pursue grant funding for the installation of backup power generators for critical facilities.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Building Official	Low	Mid-Range	Local Funds	TBD
3.2	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Mobile County EMA	High	Ongoing	Local Funds	TBD

City of Prichard Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
3.2.2	Distribute outreach materials to citizens, builders and business owners inquiring about a flood problem, a building permit or other natural hazard related questions.	Mayor and City Council	High	Short-Range	Local Funds	TBD
3.2.3	Hold at least 3 public meetings within 60 days of any presidentially declared disaster to solicit public input on event damages or plan revisions.	Mayor and City Council	High	Short-Range	Local Funds	TBD
3.3	**Library. Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.3.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.4	**Education Programs. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					
3.4.1	Distribute hazard mitigation brochures to students through area schools.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.5	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.5.1	Distribute the 2015 plan to local officials, stakeholders, and interested individuals through internet download.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.6	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					

City of Prichard Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
3.6.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Building Official	High	Short-Range	Local Funds	TBD
3.7	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
3.7.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.8	**Weather Radios. Improve public access to weather alerts.**					
3.8.1	Promote the use of weather radios in households and businesses.	Mayor and City Council	High	Short-Range	Local Funds	TBD
3.8.2	Require the installation of weather radios in all public buildings and places of public assembly.	Mayor and City Council	High	Short-Range	Local Funds	TBD
3.8.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Mayor and City Council	High	Short-Range	Local Funds	TBD
4	**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.**					
4.1	**Open Space Easements and Acquisitions. Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.**					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	Mayor and City Council	High	Short-Range	FEMA HMA Grant	TBD

City of Prichard Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Mayor and City Council	High	Ongoing	Local Funds	TBD
4.4	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.4.1	Restore and protect wetlands to enhance stormwater drainage.	Mayor and City Council	Low	Long-Range	Other	TBD
4.5	**Water Resources Conservation Programs. Protect water quantity and quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.5.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Mayor and City Council	Medium	Long-Range	Local Funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Building Official	Medium	Short-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					

City of Prichard Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Mayor and City Council	High	Mid-Range	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
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.	Mayor and City Council	High	Long-Range	FEMA HMA Grant	TBD
5.3.2	Establish a program for subsidizing individual and community safe room construction in appropriate locations and facilities.	Mayor and City Council	High	Long-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	Mayor and City Council	High	Long-Range	FEMA HMA Grant	TBD

C.10 Saraland Community Action Program

City of Saraland Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Building Official	High	Short-Range	Local Funds	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Building Official	High	Short-Range	Local Funds	TBD
1.1.3	Prepare a five-year capital improvements plan (CIP) to include capital projects that implement 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.	Mayor and Council	Medium	Mid-Range	Local Funds	TBD

City of Saraland Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					
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 drainage structures, dams/levees, hurricane surge areas, tornado tracks, disaster events and their extents, and a comprehensive inventory of critical facilities within all jurisdictions.	Mobile County EMA	Medium	Mid-Range	FEMA HMA Grant	TBD
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.	Mobile County EMA	Medium	Mid-Range	FEMA HMA Grant	TBD
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	Mobile County EMA	High	Short-Range	Local Funds	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	City Engineer	Medium	Mid-Range	FEMA HMA Grant	TBD
1.3.2	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.	Building Official	Low	Long-Range	TBD	TBD

City of Saraland Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.3.3	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Fire Department	High	On Going	Fire Dept	None
1.3.4	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	City Engineer	Medium	Long-Range	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.1	Require delineation of flood plain fringe, floodways, and wetlands on all plans submitted with a permit for development within a flood plain.	Mayor and Council	Low	Long-Range	Local Funds	TBD
1.4.2	Enact local ordinance that require community storm shelters within sizeable mobile home parks and subdivisions.	Mayor and Council	Medium	Mid-Range	Local Funds	TBD
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Mayor and Council	Medium	Mid-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
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.	Building Official	High	Short-Range	Local Funds	TBD

City of Saraland Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Local Floodplain Manager	Medium	Short-Range	Local Funds	TBD
1.6.3	Maintain membership for locally designated flood plain managers in the Association of State Flood Plain Managers and the Alabama Association of Flood Plain Managers and encourage active participation.	Local Floodplain Manager	Medium	Short-Range	Local Funds	TBD
1.6.4	Participate in the "Turn Around Don't Drown" program by purchasing and installing signs in known flash flood bridge overpass locations.	National Weather Service	High	Short-Range	Other	TBD
1.7	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Official	High	Ongoing	Local Funds	TBD
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."	Building Official	High	Short-Range	Local Funds	TBD
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.	Mayor and Council	Medium	Mid-Range	TBD	TBD

City of Saraland Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	Fire Department	High	Short-Range	Local Funds	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Official	High	Short-Range	Local Funds	TBD
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.	Mayor and Council	High	Ongoing	FEMA HMA Grant	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.1	Develop, adopt and implement subdivision regulations that require proper stormwater infrastructure design and construction.	Mayor and Council	Medium	Mid-Range	Local Funds	TBD
1.10	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.10.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Local Floodplain Manager	Medium	Mid-Range	Local Funds	TBD
1.11	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.11.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	High	Short-Range	FEMA HMA Grant	TBD

City of Saraland Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2	**Goal for Property Protection: Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to 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.	Building Official	High	On Going	FEMA HMA Grant	TBD
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official	High	On-Going	FEMA HMA Grant	TBD
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.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD

City of Saraland Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.5	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.5.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	High	Long-Range	FEMA HMA Grant	TBD
2.6	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.6.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Local Floodplain Manager	High	Ongoing	Local Funds	TBD
2.7	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.7.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	Low	Long-Range	TBD	TBD

City of Saraland Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.8	**Backup Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.8.1	Pursue grant funding for the installation of backup power generators for critical facilities.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Building Official	Medium	Mid-Range	Local Funds	TBD
3.2	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					
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.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Mobile County EMA	High	Short-Range	Local Funds	TBD

City of Saraland Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
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.	Mayor and Council	High	Short-Range	Local Funds	TBD
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.	Mayor and Council	Medium	Mid-Range	Local Funds	TBD
3.2.5	Host hazard mitigation roundtables at the beginning of the fiscal year and the beginning of hurricane season to review and coordinate individual jurisdiction mitigation activities.	Mobile County EMA	Low	Long-Range	TBD	TBD
3.3	**Library. Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.3.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.4	**Education Programs. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					
3.4.1	Distribute hazard mitigation brochures to students through area schools.	Mayor and Council	High	Short-Range	FEMA HMA Grant	TBD
3.5	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					

City of Saraland Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
3.5.1	Distribute the 2020 plan to local officials, stakeholders, and interested individuals through internet download.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.6	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
3.6.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.7	**Weather Radios. Improve public access to weather alerts.**					
3.7.1	Promote the use of weather radios in households and businesses.	Mayor and Council	High	Short-Range	Local Funds	TBD
3.79.2	Require the installation of weather radios in all public buildings and places of public assembly.	Mayor and Council	High	Short-Range	Local Funds	TBD
3.7.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Mayor and Council	High	Short-Range	FEMA HMA Grant	TBD
3.8	**Disaster Warning. Improve public warning systems.**					
3.9.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.9.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD

City of Saraland Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
3.9.3	Evaluate the feasibility of a shared tri-county ALERT system covering Baldwin, Escambia, and Mobile counties.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.9.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.9.5	Upgrade critical communications infrastructure.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
4	**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.**					
4.1	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.1.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Building Official	High	Ongoing	Other	TBD
4.1.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Mayor and Council	High	Ongoing	Local Funds	TBD
4.2	**Water Resources Conservation Programs. Protect water quantity and quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.2.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Mayor and Council	Medium	Long-Range	Local Funds	TBD

City of Saraland Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Building Official	Medium	Short-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Mayor and Council	High	Mid-Range	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					
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.	Building Official	High	Long-Range	FEMA HMA Grant	TBD
5.3.2	Encourage the construction of safe rooms in new and existing homes and buildings.	Building Official	High	Short-Range	FEMA HMA Grant	TBD

C.11 Satsuma Community Action Program

City of Satsuma Community Action Plan						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Building Official	Low	Long-Range/Ongoing	Local Funds	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Building Official	Low	Long-Range/Ongoing	Local Funds	TBD
1.1.3	Prepare a five-year capital improvements plan (CIP) to include capital projects that implement 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.	Building Official	Medium	Mid-Range	Local Funds	TBD

City of Satsuma Community Action Plan						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					
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 drainage structures, dams/levees, hurricane surge areas, tornado tracks, disaster events and their extents, and a comprehensive inventory of critical facilities within all jurisdictions.	Mobile County EMA	Low	Mid-Range	HMA	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Local Floodplain Manager	Medium	Long-Range	FEMA HMA Grant	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Mobile County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Building Official	Low	Long-Range	TBD	TBD

City of Satsuma Community Action Plan						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
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.	Building Official	Low	Long-Range	TBD	TBD
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Building Official	Low	Long-Range	TBD	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	City Engineer	Medium	Long-Range	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.2	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, among others.	Mayor and Council	Medium	Short-Range	Local Funds	TBD
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.	Mayor and Council	Medium	On-Going	Local Funds	TBD

City of Satsuma Community Action Plan

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Mayor and Council	Medium	Mid-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
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.	Local Floodplain Manager	High	Long-Range/Ongoing	Local Funds	TBD
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Local Floodplain Manager	Medium	Ongoing	Local Funds	TBD
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.	Local Floodplain Manager	High	Mid-Range	FEMA HMA Grant	TBD
1.6.4	Maintain membership for locally designated flood plain managers in the Association of State Flood Plain Managers and the Alabama Association of Flood Plain Managers and encourage active participation.	Local Floodplain Manager/	High	Short-Range	Local Funds	TBD

City of Satsuma Community Action Plan						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.6.5	Participate in the "Turn Around Don't Drown" program by purchasing and installing signs in known flash flood bridge overpass locations.	Local Floodplain Manager	Medium	Short-Range	Other	TBD
1.7	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Official	High	Ongoing	Local Funds	TBD
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."	Building Official	High	Short-Range	Local Funds	TBD
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	Building Official	Low	Mid-Range	Local Funds	TBD
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Official	High	Short-Range	Local Funds	TBD
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.	Mayor and Council	High	Ongoing	FEMA HMA Grant	TBD
1.8	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					

City of Satsuma Community Action Plan						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.8.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Local Floodplain Manager	High	Ongoing	Local Funds	TBD
1.8.2	Develop, adopt and implement subdivision regulations that require proper stormwater infrastructure design and construction.	Mayor and Council	High	Ongoing	Local Funds	TBD
1.9	**Dam Safety Management. Establish a comprehensive dam safety program.**					
1.9.1	Support legislation to establish a State dam safety program.	Mayor and Council	Low	Mid-Range	Local Funds	TBD
1.10	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.10.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Local Floodplain Manager	High	Short-Range	Local Funds	TBD
1.11	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.11.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
1.11.2	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.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD

City of Satsuma Community Action Plan

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to 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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD

City of Satsuma Community Action Plan						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.5	**Flood Control Measures. Small flood control measures built to reduce/prevent flood damage.**					
2.5.1	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non-structural mitigation techniques.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2.6	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.6.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.6.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Building Official	Medium	Short-Range	Local Funds	TBD

City of Satsuma Community Action Plan						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
2.7	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.7.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Local Floodplain Manager	High	Ongoing	Local Funds	TBD
2.8	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.8.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	Low	Long-Range	TBD	TBD
2.9	**Backup Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.9.1	Pursue grant funding for the installation of backup power generators for critical facilities.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	Building Official	Low	Mid-Range	Local Funds	TBD
3.2	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					

City of Satsuma Community Action Plan						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
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.	Mobile County EMA	High	Ongoing	Local Funds	TBD
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Mobile County EMA	High	Ongoing	Local Funds	TBD
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.	Mayor and Council	Low	Long-Range	Local Funds	TBD
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.	Mayor and Council	High	Short-Range	Local Funds	TBD
3.3	**Library. Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.3.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.4	**Education Programs. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					

City of Satsuma Community Action Plan						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
3.4.1	Distribute hazard mitigation brochures to students through area schools.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.5	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.5.1	Distribute the 2015 plan to local officials, stakeholders, and interested individuals through internet download.	Mobile County EMA	High	Short-Range	Local Funds	TBD
3.6	**Technical Assistance. Make qualified local government staff available to advise property owners on various hazard risks and mitigation alternatives.**					
3.6.1	Provide technical assistance to homeowners, builders, and developers on flood protection alternatives.	Building Official	High	Short-Range	Local Funds	TBD
3.7	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
3.7.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.8	**Weather Radios. Improve public access to weather alerts.**					
3.8.1	Promote the use of weather radios in households and businesses.	Mayor and Council	High	Short-Range	Local Funds	TBD
3.8.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	Mayor and Council	High	Short-Range	Local Funds	TBD
3.9	**Disaster Warning. Improve public warning systems.**					

City of Satsuma Community Action Plan						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
3.9.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.9.5	Upgrade critical communications infrastructure.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
4	**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.**					
4.1	**Open Space Easements and Acquisitions. Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.**					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	Mayor and Council	High	Short-Range	FEMA HMA Grant	TBD
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Mayor and Council	High	Ongoing	Other	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Mayor and Council	High	Ongoing	Local Funds	TBD
4.3	**Urban Forestry Programs. Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					

City of Satsuma Community Action Plan						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
4.3.1	Utilize technical assistance available from the Alabama Cooperative Extension System with Best Management Practices (BMP).	Mayor and Council	Medium	Mid-Range	Local Funds	TBD
4.4	**Water Resources Conservation Programs. Protect water quantity and quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.4.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	Mayor and Council	Medium	Long-Range	Local Funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Building Official/Mobile County EMA	Medium	Short-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Building Official/Mayor and Council	High	Mid-Range	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					

City of Satsuma Community Action Plan						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
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.	Mayor and Council	High	Long-Range	FEMA HMA Grant	TBD
5.3.2	Establish a program for subsidizing individual and community safe room construction in appropriate locations and facilities.	Mayor and Council	High	Long-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	Mayor and Council	High	Long-Range	FEMA HMA Grant	TBD

C.12 Semmes Community Action Program

City of Semmes Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Building Official	Low	Long-Range/Ongoing	Local Funds	TBD
1.1.3	Prepare a five-year capital improvements plan (CIP) to include capital projects that implement 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.	Building Official	Medium	Mid-Range	Local Funds	TBD
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	City of Mobile GIS Dept.	Medium	Long-Range/Ongoing	Local Funds	TBD

City of Semmes Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	Local Floodplain Manager	Medium	Long-Range	FEMA HMA Grant	TBD
1.3.2	Identify existing culturally or socially significant structures and critical facilities within Mobile County that have the most potential for losses from natural hazard events and identify needed structural upgrades.	Building Official	Low	Long-Range	TBD	TBD
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.	Building Official	Low	Long-Range	TBD	TBD
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	Building Official	Low	Long-Range	TBD	TBD
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	City Engineer	Medium	Long-Range	FEMA HMA Grant	TBD
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
1.4.1	Consider large lot size restrictions on flood prone areas designated on Flood Insurance Rate Maps.	Mayor and City Council	Medium	Short-Range	Local Funds	TBD

City of Semmes Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.4.2	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, among others.	Mayor and City Council	Medium	Short-Range	Local Funds	TBD
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.	Mayor and City Council	Medium	Mid-Range	Local Funds	TBD
1.4.4	Enact local ordinance that require community storm shelters within sizeable mobile home parks and subdivisions.	Mayor and City Council	Medium	Mid-Range	Local Funds	TBD
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Mayor and City Council	Medium	Mid-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
1.6.1	Participate in the “Turn Around Don’t Drown” program by purchasing and installing signs in known flash flood bridge overpass locations.	Local Floodplain Manager	Medium	Short-Range	Other	TBD
1.6.2	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.	Local Floodplain Manager	Medium	Short-Range	TBD	TBD

City of Semmes Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.7	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Building Official	High	Ongoing	Local Funds	TBD
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."	Building Official	High	Ongoing	Local Funds	TBD
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.	Mayor and City Council	High	Mid-Range	TBD	TBD
1.7.4	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Building Official	High	Short-Range	Local Funds	TBD
1.7.5	Require the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	Mayor and City Council	High	Ongoing	FEMA HMA Grant	TBD
1.8	**Landscape Ordinances. Establish minimum standards for planting areas for trees and vegetation to reduce storm water runoff and improve urban aesthetics.**					

City of Semmes Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
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.	Mayor and City Council	Low	Mid-Range	Local Funds	TBD
1.9	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.9.1	Promote the adoption/enforcement of storm water management regulations that maintain pre-development runoff rates.	Mayor and City Council	Low	Mid-Range	Local Funds	TBD
1.9.2	Develop, adopt and implement subdivision regulations that require proper stormwater infrastructure design and construction.	Mayor and City Council	Low	Mid-Range	Local Funds	TBD
1.10	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.10.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	Local Floodplain Manager	High	Short-Range	Local Funds	TBD
1.11	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					
1.11.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Building Official	Low	Long-Range	Local Funds	TBD

City of Semmes Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
1.11.2	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.	Building Official	Medium	Mid-Range	FEMA HMA Grant	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to 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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
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.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					

City of Semmes Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Building Official	Medium	Short-Range	FEMA HMA Grant	TBD
2.5	**Flood Control Measures. Small flood control measures built to reduce/prevent flood damage.**					
2.5.1	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non-structural mitigation techniques.	Building Official	Low	Long-Range	FEMA HMA Grant	TBD
2.6	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.6.1	Retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Building Official	Medium	Short-Range	Local Funds	TBD

City of Semmes Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
2.6.2	Provide technical advisory assistance to building owners on available building retrofits to protect against natural hazards damages.	Building Official	Medium	Short-Range	Local Funds	TBD
2.7	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.7.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	Local Floodplain Manager	High	Ongoing	Local Funds	TBD
2.8	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.8.1	Install lightning and/or surge protection on existing critical facilities.	Building Official	Medium	Short-Range	TBD	TBD
2.9	**Backup Power: Assure uninterrupted power supplies during emergency events.**					
2.9.1	Pursue grant funding for the installation of backup power generators for critical facilities.	Building Official	High	Short-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					

City of Semmes Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
3.1.1	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.	Mobile County EMA	High	Ongoing	Local Funds	TBD
3.1.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	Mobile County EMA	High	Ongoing	Local Funds	TBD
3.1.3	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.	Mayor and City Council	Medium	Long-Range	Local Funds	TBD
3.1.4	Distribute outreach materials to citizens, builders and business owners inquiring about a flood problem, a building permit or other natural hazard related questions.	Mayor and City Council	Low	Long-Range	Local Funds	TBD
3.2	**Library. Use local library resources to educate the public on hazard risks and mitigation alternatives.**					
3.2.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	Mobile County EMA	Medium	Mid-Range	Local Funds	TBD
3.3	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.3.1	Distribute the 2015 plan to local officials, stakeholders, and interested individuals through internet download.	Mobile County EMA	High	Short-Range	Local Funds	TBD

City of Semmes Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
3.4	**Weather Radios. Improve public access to weather alerts.**					
3.4.1	Promote the use of weather radios in households and businesses.	Mayor and City Council	High	Short-Range	Local Funds	TBD
3.4.2	Require the installation of weather radios in all public buildings and places of public assembly.	Mayor and City Council	Low	Long-Range	Local Funds	TBD
3.4.3	Distribute weather radios and emergency response instructions to municipal residents.	Mayor and City Council	Low	Long-Range	Local Funds	TBD
3.5	**Disaster Warning. Improve public warning systems.**					
3.5.1	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
3.5.2	Upgrade critical communications infrastructure.	Mobile County EMA	High	Short-Range	FEMA HMA Grant	TBD
4	**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.**					
4.1	**Open Space Easements and Acquisitions. Acquire easements and fee-simple ownership of environmentally beneficial lands, such as hillsides, flood plains, and wetlands to assure permanent protection of these natural resources.**					
4.1.1	Increase open space acquisitions through the FEMA HMA Grant Programs and other flood plain acquisition efforts.	Mayor and City Council	High	Short-Range	FEMA HMA Grant	TBD

City of Semmes Community Action Program

#	Goal, Objectives and Mitigation Measures	Lead Responsibility for Carrying Out Measure	Priority	Timeline Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	Funding Source	Estimated Cost
4.2	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.2.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	Mayor and City Council	High	Ongoing	Other	TBD
4.2.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	Mayor and City Council	High	Ongoing	Local Funds	TBD
4.3	**Urban Forestry Programs. Maintain a healthy forest that can help mitigate the damaging impacts of flooding, erosion, landslides, and wild fires within urban areas.**					
4.3.1	Increase overall green spaces in cities by planting hurricane resistant trees with site and location taken into consideration.	Mayor and City Council	Medium	Mid-Range	Local Funds	TBD
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Building Official/Mobile County EMA	Medium	Short-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	Building Official/Mayor and City Council	High	Mid-Range	FEMA HMA Grant	TBD
5.3	**Community Shelters and Safe Rooms. Provide shelters from natural hazards for the safety of community residents.**					

City of Semmes Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
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.	Mayor and City Council	High	Long-Range	FEMA HMA Grant	TBD
5.3.2	Establish a program for subsidizing individual and community safe room construction in appropriate locations and facilities.	Mayor and City Council	High	Long-Range	FEMA HMA Grant	TBD
5.3.3	Encourage the construction of safe rooms in new and existing homes and buildings.	Mayor and City Council	High	Long-Range	FEMA HMA Grant	TBD

C.13 Mobile County School Board Community Action Program

Mobile County School Board Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1	**Goal for Prevention. Manage the development of land and buildings to minimize risks of loss due to natural hazards.**					
1.1	**Comprehensive Plans and Smart Growth. Establish an active comprehensive planning program that is consistent with Smart Growth principles of sustainable community development.**					
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.	Executive Manager of Facilities	High	On-Going	Local Funds	TBD
1.1.2	Integrate the findings and recommendations of this plan into comprehensive plan amendments for jurisdictions with active comprehensive planning programs.	Executive Manager of Facilities and Risk Management	High	Mid-Range	Local Funds	TBD
1.1.3	Prepare a five-year capital improvements plan (CIP) to include capital projects that implement 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.	Executive Manager of Facilities	High	Long-Range	Local Funds	TBD

Mobile County School Board Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.2	**Geographic Information Systems (GIS). Maintain a comprehensive database of hazards locations, socio economic data, infrastructure, and critical facilities inventories.**					
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 drainage structures, dams/levees, hurricane surge areas, tornado tracks, disaster events and their extents, and a comprehensive inventory of critical facilities within all jurisdictions.	Executive Manager of Facilities and Risk Management	Medium	Mid-Range	FEMA HMA Grant	TBD
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.	Risk Management.	Medium	Mid-Range	FEMA HMA Grant	TBD
1.2.3	Mark depths of flooding and storm surge immediately after each event. Enter and maintain these historical records in GIS.	Executive Manager of Facilities	High	Short-Range	Local Funds	TBD
1.3	**Planning Studies. Conduct special studies, as needed, to identify hazard risks and mitigation measures.**					
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.	N/A	N/A	N/A	N/A	N/A
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.	N/A	N/A	N/A	N/A	N/A

Mobile County School Board Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.3.4	Inventory and map existing fire hydrants throughout the county, and identify areas in need of new fire hydrants.	N/A	N/A	N/A	N/A	N/A
1.3.5	Identify problem drainage areas, conduct engineering studies, evaluate feasibility, and construct drainage improvements to reduce or eliminate localized flooding.	N/A	N/A	N/A	NA	N/A
1.4	**Zoning. Establish effective zoning controls, where applicable, to vulnerable land areas to discourage environmentally incompatible land use and development.**					
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.	Executive Manager of Facilities	Low	Long-Range	Local Funds	TBD
1.4.4	Enact local ordinance that require community storm shelters within sizeable mobile home parks and subdivisions.	N/A	N/A	N/A	N/A	N/A
1.5	**Open Space Preservation. Minimize disturbances of natural land features and increased storm water runoff through regulations that maintain critical natural features such as open space for parks, conservation areas, landscaping, and drainage.**					
1.5.1	Examine regulatory options and feasibility of requiring open space areas for recreation, landscaping, and drainage control.	Executive Manager of Facilities	Medium	Long-Range	Local Funds	TBD
1.6	**Flood Plain Management Regulations. Effectively administer and enforce local floodplain management regulations.**					
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.	N/A	N/A	N/A	N/A	N/A

Mobile County School Board Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.6.2	Maintain a library of technical assistance and guidance materials to support the local floodplain manager.	Executive Manager of Facilities and Risk Management	Medium	Long-Range	Local Funds	TBD
1.6.4	Maintain membership for locally designated flood plain managers in the Association of State Flood Plain Managers and the Alabama Association of Flood Plain Managers and encourage active participation.	N/A	N/A	N/A	N/A	N/A
1.6.5	Participate in the "Turn Around Don't Drown" program by purchasing and installing signs in known flash flood bridge overpass locations.	N/A	N/A	N/A	N/A	N/A
1.6.6	Improve flood risk assessment by documenting high water marks post event, verifying FEMA's repetitive loss inventory and revising and updating regulatory floodplain maps.	Executive Manager of Facilities	Low	Long-Range	Local Funds	TBD
1.7	**Building and Technical Codes. Review local codes for effectiveness of standards to protect buildings and infrastructure from natural hazard damages.**					
1.7.1	Promote good construction practices and proper code enforcement to mitigate structural failures during natural hazard events.	Executive Manager of Facilities	High	Ongoing	Local Funds	TBD
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."	Executive Manager of Facilities	High	Short-Range	Local Funds	TBD

Mobile County School Board Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
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.	Executive Manager of Facilities	Medium	Long-Range	TBD	TBD
1.7.4	Ensure fire safety ordinances properly regulate open burning, the use of liquid fuel and electric space heaters.	N/A	N/A	N/A	N/A	N/A
1.7.5	Establish and enforce minimum property maintenance standards that reduce or eliminate unsafe structures.	Executive Manager of Facilities	Medium	Long-Range	Local Funds	TBD
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.	Executive Manager of Facilities	High	Ongoing	FEMA HMA Grant	TBD
1.8	**Storm Water Management. Manage the impacts of land development on storm water runoff rates and to natural drainage systems.**					
1.8.2	Develop, adopt and implement subdivision regulations that require proper stormwater infrastructure design and construction.	N/A	N/A	N/A	N/A	N/A
1.9	**Community Rating System Program (CRS). Increase participation of NFIP member communities in the CRS Program.**					
1.9.1	Apply for/maintain membership in the CRS Program; continue to upgrade rating.	N/A	N/A	N/A	N/A	N/A
1.10	**Critical Facilities Assessments. Perform assessments of critical facilities (hospitals, schools, fire and police stations, emergency operation centers, special needs housing, and others) to address building and site vulnerabilities to hazards, identify damage control and retrofit measures to reduce vulnerability to damage and disruption of operations during severe weather and disaster events.**					

Mobile County School Board Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
1.10.1	Perform vulnerability assessments of critical facilities to identify retrofit projects to improve the safety of occupants and mitigate damages from hazards.	Executive Manager of Facilities	High	Mid-Range	FEMA HMA Grant	TBD
2	**Goal for Property Protection. Protect structures and their occupants and contents from the damaging effects of natural hazards.**					
2.1	**Building Relocation. Relocate buildings out of hazardous flood areas to safeguard against damages and establish permanent open space.**					
2.1.1	Pursue FEMA grant funds to 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.	N/A	N/A	N/A	N/A	N/A
2.2	**Acquisition. Acquire flood prone buildings and properties and establish permanent open space.**					
2.2.1	Pursue grant funds to acquire and demolish flood prone or substantially damaged structures and replace with permanent open space.	N/A	N/A	N/A	N/A	N/A
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.	Risk Management	Medium	Mid-Range	FEMA HMA Grant	TBD
2.3	**Building Elevation. Elevate buildings in hazardous flood areas to safeguard against damages.**					

Mobile County School Board Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
2.3.1	Pursue grant funds to subsidize the elevation of 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.	Executive Manager of Facilities and Risk Management	Low	Long-Range	FEMA HMA Grant	TBD
2.3.2	Pursue grant funds to repair, elevate and weatherize existing homes for low- to moderate-income families.	N/A	N/A	N/A	N/A	N/A
2.4	**Flood Proofing. Encourage flood proofing of buildings in hazardous flood areas to safeguard against damages.**					
2.4.1	Pursue FEMA grant funds for flood proofing pre-FIRM non-residential buildings, where feasible.	Executive Manager of Facilities and Risk Management	Medium	Long-Range	FEMA HMA Grant	TBD
2.5	**Flood Control Measures. Construct small flood control measures to reduce/prevent flood damage.**					
2.5.1	Examine use of minor structural projects (small berm or floodwalls) in areas that cannot be mitigated through non-structural mitigation techniques.	N/A	N/A	N/A	N/A	N/A
2.6	**Building Retrofits. Retrofit vulnerable buildings to protect against natural hazards damages, including flooding, high winds, tornadoes, hurricanes, severe storms, and earthquakes.**					
2.6.1	Pursue FEMA grant funds to retrofit existing buildings, critical facilities, and infrastructure against potential damages from natural and manmade hazards.	Risk Management	High	Long-Range	FEMA HMA Grant	TBD

Mobile County School Board Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
2.7	**Hazard Insurance Awareness. Increase public awareness of flood insurance and special riders that may be required for earthquake, landslide, sinkhole, and other damages typically not covered by standard property protection policies.**					
2.7.1	Promote the purchase of insurance coverage by property owners and renters for flood damages in high-risk areas.	N/A	N/A	N/A	N/A	N/A
2.8	**Critical Facilities Protection. Protect critical facilities from potential damages and occupants from harm in the event of hazards through retrofits or relocations of existing facilities located in high-risk zones or construction of new facilities for maximum protection from all hazards.**					
2.8.1	Install lightning and/or surge protection on existing critical facilities.	Executive Manager of Facilities	Low	Long-Range	Local Funds	TBD
2.9	**Backup Power. Ensure uninterrupted power supply to critical facilities during emergency events.**					
2.9.1	Pursue grant funding for the installation of backup power generators for critical facilities.	Executive Manager of Facilities	High	Short-Range	FEMA HMA Grant	TBD
3	**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.**					
3.1	**Map Information. Increase public access to Flood Insurance Rate Map (FIRM) information.**					
3.1.1	Publicize the availability of FIRM information to real estate agents, builders, developers, and homeowners through local trade publications and newspaper announcements.	N/A	N/A	N/A	N/A	N/A
3.2	**Outreach Projects. Conduct regular public events to inform the public of hazards and mitigation measures.**					

Mobile County School Board Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
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.	N/A	N/A	N/A	N/A	N/A
3.2.2	Conduct materials distribution, via the internet and other media, and other outreach activities and workshops to encourage families and individuals to implement hazard mitigation measures in their homes.	N/A	N/A	N/A	N/A	N/A
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.	N/A	N/A	N/A	N/A	N/A
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.	N/A	N/A	N/A	N/A	N/A
3.2.6	Host hazard mitigation roundtables at the beginning of the fiscal year and the beginning of hurricane season to review and coordinate individual jurisdiction mitigation activities.	N/A	N/A	N/A	N/A	N/A
3.3	**Library. Use local library resources to educate the public on hazard risks and mitigation alternative**					
3.3.1	Through local libraries, maintain and distribute free and current publications from FEMA, NWS, USGS, and other federal and state agencies.	N/A	N/A	N/A	N/A	N/A

Mobile County School Board Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
3.4	**Education Programs. Use schools and other community education resources to conduct programs on topics related to hazard risks and mitigation measures.**					
3.4.1	Distribute hazard mitigation brochures to students through area schools.	N/A	N/A	N/A	N/A	N/A
3.5	**Community Hazard Mitigation Plan Distribution. Distribute the hazard mitigation plan to elected officials, interested agencies and organizations, businesses, and residents, using all available means of publication and distribution.**					
3.5.1	Distribute the 2015 plan to local officials, stakeholders, and interested individuals through internet download.	N/A	N/A	N/A	N/A	N/A
3.6	**Mass Media Relations. Utilize all available mass media, such as, newspapers, radio, TV, cable access, internet blogs, podcasts, video sharing, and on-line social networking to increase public awareness and distribute public information on hazard mitigation topics.**					
3.6.1	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	N/A	N/A	N/A	NA	N/A
3.8	**Weather Radios. Improve public access to weather alerts.**					
3.8.1	Promote the use of weather radios in households and businesses.	N/A	N/A	N/A	N/A	N/A
3.8.2	Require the installation of weather radios in all public buildings and places of public assembly.	N/A	N/A	N/A	N/A	N/A
3.8.3	Pursue grant funding to distribute weather radios and emergency response instructions to municipal residents.	N/A	N/A	N/A	N/A	N/A

Mobile County School Board Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
3.9	**Disaster Warning. Improve public warning systems.**					
3.9.1	Establish an ALERT flood warning system at strategic locations in the county, including at a minimum, sensors that provide real-time access to stream flow, stream stage, and precipitation data.	N/A	N/A	N/A	N/A	N/A
3.9.2	Ensure that the ALERT warning system links data into GIS with the ability to use measured and forecasted rainfall to predict potential flood levels and create real-time maps of flooded areas.	N/A	N/A	N/A	N/A	N/A
3.9.3	Evaluate the feasibility of a shared tri-county ALERT system covering Baldwin, Escambia, and Mobile counties.	N/A	N/A	N/A	N/A	N/A
3.9.4	Upgrade siren-warning systems to provide complete coverage to all jurisdictions.	N/A	N/A	N/A	N/A	N/A
3.9.5	Upgrade critical communications infrastructure.	N/A	N/A	N/A	N/A	N/A
4	**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.**					
4.1	**River/Stream Corridor Restoration and Protection. Restore and protect river and stream corridors within areas.**					
4.1.1	Keep builders and developers informed of Federal wetlands permitting requirements of the Corps of Engineers.	N/A	N/A	N/A	N/A	N/A

Mobile County School Board Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
4.1.2	Adopt and/or enforce regulations prohibiting dumping and littering within river and stream corridors.	N/A	N/A	N/A	N/A	N/A
4.2	**Beach and Dune Protection/Renourishment. Protect beaches and dunes from coastal and man-made erosion and implement renourishment programs.**					
4.2.1	Restore and protect wetlands to enhance stormwater drainage.	N/A	N/A	N/A	N/A	N/A
4.2.2	Develop a coastal renourishment program.	N/A	N/A	N/A	N/A	N/A
4.3	**Water Resources Conservation Programs. Protect water quantity and quality through water conservation programs to mitigate the effects of droughts and assure uninterrupted potable water supplies.**					
4.3.1	Enforce water use restrictions during periods of drought to conserve existing water supplies.	N/A	N/A	N/A	N/A	N/A
5	**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.**					
5.1	**Drainage System Maintenance. Improve maintenance programs for streams and drainage ways.**					
5.1.1	Prepare and implement standard operating procedures and guidelines for drainage system maintenance.	Executive Manager of Facilities	Medium	Long-Range	Local Funds	TBD
5.2	**Reservoirs and Drainage System Improvements. Control flooding through reservoirs and other structural improvements, where deemed cost effective and feasible, such as levees/floodwalls, diversions, channel modifications, dredging, drainage modifications, and storm sewers.**					

Mobile County School Board Community Action Program						
#	**Goal, Objectives and Mitigation Measures**	**Lead Responsibility for Carrying Out Measure**	**Priority**	**Timeline** Short-Range=less than 2 years Mid-Range=2-5 years Long-Range=more than 5 years	**Funding Source**	**Estimated Cost**
5.2.1	Construct drainage improvements to reduce or eliminate localized flooding in identified problem drainage areas.	N/A	N/A	N/A	N/A	N/A
5.3	**<u>Community Shelters and Safe Rooms</u>. Provide shelters from natural hazards for the safety of community residents.**					
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.	Executive Manager of Facilities	High	Long-Range	FEMA HMA Grant	TBD
5.3.2	Encourage the construction of safe rooms in new and existing homes and buildings.	Executive Manager of Facilities	High	Long-Range	FEMA HMA Grant	TBD

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BALDWIN COUNTY
HAZARD MITIGATION PLANNING COMMITTEE
MINUTES
JULY 6, 2017
BALDWIN COUNTY EMERGENCY OPERATIONS CENTER
ROBERTSDALE, ALABAMA

ATTENDANCE

Members present were: Jennifer Forsman, Baldwin County EMA; Landon (Lannie) K. Smith, City of Orange Beach; Mike Howell, Baldwin County Building Official; Erik Cortinas, City of Fairhope; John Saraceno, City of Fairhope; Brandan Franklin, City of Gulf Shores; Reggie Chitwood, Baldwin County EMA.

Lannie Smith called the meeting to order at 10:22 am.

OPENING COMMENTS

Lannie Smith Gave opening remarks.

OLD BUSINESS

Lannie Smith presented the minutes to the Committee, asked for any corrections or revision to be identified, and requested a motion for approval of the 07/20/2016 meeting minutes.

Motion by Mike Howell, seconded by Erik Cortinas to approve the July 20, 2016, Hazard Mitigation Planning Committee Meeting Minutes at 2:20pm.

Ayes: 5

No: 0

Abstain: 0

MOTION PASSED

NEW BUSINESS

Introduction of Jennifer Forsman, Baldwin County EMA's new Planning & Grants Coordinator.

Lannie Smith gave updates about the Strengthen Alabama Homes Program, which has been well received by Mobile and Baldwin County homeowners. So far, almost 6,000 applications have been received, 3,500 of those applications were approved. Lannie further stated that if roof has already been fortified to Bronze level, homeowners can then apply for the grant for windows to reach Silver level certification. However, there has been a backlog with receiving the certificates. Next year, the program will go statewide, which will drain the funds, and there is no guarantee that there will be renewed funding each year.
Lannie suggested that we reach out to someone with Strengthen Alabama or the Department of Insurance to speak at the next meeting

ADJOURNMENT

Meeting adjourned at 10:40 am.

Minutes for this meeting approved during the _____ meeting of the Baldwin County Hazard Mitigation Planning Committee.

Landon K. Smith 02-27-2018

Chairperson Landon K. Smith Date

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BALDWIN COUNTY
HAZARD MITIGATION PLANNING COMMITTEE
MINUTES
JULY 13, 2016
BALDWIN COUNTY EMERGENCY OPERATIONS CENTER
ROBERTSDALE, ALABAMA

ATTENDANCE

Members present were: Danon Hoagland, Baldwin County EMA; Landon (Lannie) K. Smith, City of Orange Beach; Joseph (Joe) A. Bouzan, City of Foley; Rachel Keith, City of Foley; Mike Howell, Baldwin County Building Official; Erik Cortinas, City of Fairhope; Ashley Campbell. City of Daphne; Scott Gilbert, City of Robertsdale; Brad Kendrick, City of Robertsdale; and James Davis, Town of Summerdale

Guests present: None.

Lannie Smith called the meeting to order at 9:06am.

OPENING COMMENTS

Lannie Smith Gave opening remarks.

OLD BUSINESS

Lannie Smith presented the minutes to the Committee, ask for any corrections or revision to be identified, and requested a motion for approval of the 12/11/2015 meeting minutes.

Motion by Erik Cortinas, seconded by Mike Howell to approve the December 11, 2015, Hazard Mitigation Planning Committee Meeting Minutes at 9:07am.

Ayes: 10

No: 0

Abstain: 0

MOTION PASSED

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BALDWIN COUNTY
HAZARD MITIGATION PLANNING COMMITTEE
MINUTES
FEBRUARY 27, 2018
BALDWIN COUNTY EMERGENCY OPERATIONS CENTER
ROBERTSDALE, ALABAMA

ATTENDANCE

Members present were: Sheri Swartz, City of Fairhope; Mayor Jim Hamby, Town of Elberta; Mike Howell, Baldwin County Building Official; Landon K. Smith, City of Orange Beach; Ryan Frolik, East Central Baldwin Water Authority; Eddie Culpepper, EnCompass360; Chandra Middleton, BRATS; Jenni Guerry, LEPC/BCEMA; Brandan Franklin, City of Gulf Shores; Mikel Corporael, City of Daphne

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Landon K. Smith called the meeting to order at 2:15 p.m.

OPENING COMMENTS

Landon K. Smith gave opening remarks.

OLD BUSINESS

Landon K. Smith presented the minutes to the Committee, asked for any corrections or revision to be identified, and requested a motion for approval of the 01/24/2018 meeting minutes.

Motion by Mike Howell, seconded by Jennifer Forsman to approve the January 24, 2018 Hazard Mitigation Planning Committee Meeting Minutes at 2:16 p.m.

Ayes: 10

No: 0

Abstain: 0

MOTION PASSED

Lannie Smith advised the Committee of the complete approval of the 2015 Baldwin County Multi-Hazard Mitigation Plan, the complete execution of all resolutions from all jurisdictions; and that now the plan is in the maintenance phase.

Lannie Smith turned the meeting over to Danon Hoagland for a discussion of the current status of the DR-4176 Hazard Mitigation Grant Program status for Baldwin County and its jurisdictions. Erik Cortinas briefed the Committee on the status and approval of an acquisition and demolition project on Cedar Avenue in the City of Fairhope. Mike Howell advised his department has no new updates on any elevation projects, due to the increased difficulty and length of time for the application process. Ashley Campbell advised the Committee of the approval of an acquisition and demolition project on Gordon Circle in the City of Daphne; and also advised that in their process of HMGP applications a consultant is used. Ashely Campbell also advised the Committee on the status of issues and requests for assistance regarding flooding issues in the City of Daphne. Erik Cortinas, Lannie Smith, and Ashley Campbell discussed the grant management and reimbursement process for HMGP. Danon Hoagland advised the Committee of the status of a pending generator application for the BRATS facility in Robertsdale, and advised the Committee that the generator project technical review has also increased in the level of difficulty in the technical review phase of the application project. Joe Bouzan, Danon Hoagland, and Lannie Smith discussed projects that were not submitted due to issues that prevented the application form being completed and submitted. Danon Hoagland and Ashley Campbell discussed outreach and PSA videos the EMA is currently doing and disseminating via social media; and the possibility of including some mitigation information in those PSAs. Ashley Campbell, Danon Hoagland, Lannie Smith, and Joe Bouzan discussed the status of the safe room applications in the City of Daphne and the City of Spanish Fort. Danon Hoagland advised she has not received a letter or notice of approval for those applications.

NEW BUSINESS

Danon Hoagland briefed the Committee of a new Notice of Funding Availability (NOFA) for DR-4251 Hazard Mitigation funds resulting from a disaster declaration for severe storms, tornadoes, straight-line winds, and flooding during December 23-December 31, 2015. Danon Hoagland advised the Committee as Baldwin County's status as a "non-designated county" and what that means compared to a county being a "designated county" under this NOFA. Danon Hoagland advised the Committee the City of Robertsdale has submitted a Letter of Intent (LOI) for a generator project for their public works facility. Ashely Campbell and Danon Hoagland discussed the possibility of a future mitigation project that would involve dredging a lake I the City of Daphne. Danon Hoagland advised she would reach out to the Committee to verify the interest from any other jurisdiction prior to sending the Master LOI in to AEMA. Danon Hoagland advised the Committee the deadline to submit the LOI to AEMA is Friday, 07/22/2016, and that she needs all LOIs by Wednesday, 07/20/2016, in order to prepare the master LOI.

Danon Hoagland turned the meeting back over to Lannie Smith.

Lannie Smith and Danon Hoagland discussed the options for the Committee to entertain a motion that would include the inclusion of an LOI to be submitted to AEMA on behalf of the City of Robertsdale and any other jurisdiction within Baldwin County prior to the aforementioned deadlines. Lannie Smith elaborated on the CRS program, activities and points, and different activities that earn a community points. The creation of a PPI or multiple PPI Committees in Baldwin County were also discussed by Committee Members, as well as the pros and cons of both individual and multi-jurisdictional PPIs.

Motion by Ashley Campbell, seconded by Joe Bouzan to submit and LOI to FEMA to include Robertsdale's project and any other LOI submitted to Danon Hoagland before the deadline to submit the LOI at 9:43am.

Ayes: 10

No: 0

Abstain: 0

MOTION PASSED

Danon Hoagland and Mike Howell briefed the Committee on the County's plan to create and implement a Floodplain Management Plan covering the unincorporated areas of Baldwin County. Danon Hoagland advised an application was submitted to AEMA for the Flood Mitigation Assistance Grant Program for FY 2015 and the status of the application is still pending. Mike Howell advised the Committee of the advantages of the plan and how it factors in to the Community Rating System and the points and rating structure.

ADJOURNMENT

Meeting adjourned at 09:53am.

Minutes for this meeting approved during the 07/13/16 meeting of the Baldwin County Hazard Mitigation Planning Committee.

Landon K. Smith 07/20/2016

Chairperson Landon K. Smith Date

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BALDWIN COUNTY
HAZARD MITIGATION PLANNING COMMITTEE
MINUTES
JULY 20, 2016
BALDWIN COUNTY EMERGENCY OPERATIONS CENTER
ROBERTSDALE, ALABAMA

ATTENDANCE

Members present were: Danon Hoagland, Baldwin County EMA; Landon (Lannie) K. Smith, City of Orange Beach; Mike Howell, Baldwin County Building Official; Erik Cortinas, City of Fairhope; and Scott Gilbert, City of Robertsdale.

Guests present: Greg Smith, City of Robertsdale; Jenni Guerry, Baldwin County EMA; John Frank, Baldwin County EMA; and Wayne Redditt, Baldwin County EMA

Lannie Smith called the meeting to order at 2:15pm.

OPENING COMMENTS

Lannie Smith Gave opening remarks.

OLD BUSINESS

Lannie Smith presented the minutes to the Committee, ask for any corrections or revision to be identified, and requested a motion for approval of the 07/13/2016 meeting minutes.

Motion by Mike Howell, seconded by Reggie Chitwood to approve the July 13, 2016, Hazard Mitigation Planning Committee Meeting Minutes at 2:20pm.

Ayes: 5

No: 0

Abstain: 0

MOTION PASSED

The Committee – based on the motion to approve the submission of an LOI to include the City of Robertsdale's generator and any subsequently submitted LOIs – began discussing the ranking of the two LOIs received by EMA Planning and Grants Coordinator, Danon Hoagland. The Committee chose to rank the acquisition and demolition project for the City of Daphne number one and the generator project for the City of Robertsdale number two. Danon Hoagland was asked to submit the master LOI to reflect this by the deadline she specified earlier in this meeting and in the July 13, 2016, meeting.

NEW BUSINESS

No new business.

ADJOURNMENT

Meeting adjourned at 2:29pm.

Minutes for this meeting approved during the _____ meeting of the Baldwin County Hazard Mitigation Planning Committee.

Landon K. Smith 02-27-2018

Chairperson Landon K. Smith Date

NEW BUSINESS

Landon K. Smith gave an overview of the Notice of Funds Availability (NOFA) that was received from the State of Alabama Emergency Management Agency (AEMA). Mr. Smith answered questions regarding the process of presentation, and who will be allowed to vote for the projects.

Landon K. Smith presented the project for Orange Beach. The City of Orange Beach would like to buy out and demolish a repetitive loss single-family residence that has been subject to repeated flooding. The property lies at the lowest elevation in a very old and established neighborhood, with no drainage outfall. The structure is slab on grade with the FFE below the elevation of the adjacent roadway. Total amount of project $290,000.

Richard Merchant presented the project for Daphne. The City of Daphne would like to buy out and demolish a repetitive loss single-family residence that has been subject to repeated flooding. The property will be deed restricted as open space. Total amount of project $149,000.

Sherri Swartz with the City of Fairhope presented two projects. The first project was to mitigate the beach erosion on Magnolia Beach. The erosion of this beach has been an ongoing concern for quite some time. Fairhope intends to install an offshore segmented breakwater system in conjunction with a major beach nourishment project, in order to more permanently stabilize the beach. The second project in the City of Fairhope is installation of a fortified facility which would be used to house first responders and essential personnel during high wind events. Total amount of project a) $385,000 and project b) $500,000.

Ryan Frolik with the East Central Baldwin County Water, Sewer, and Fire Protection Authority presented a project for their treatment facility located on County Road 87. The treatment facility provides treated water and service to the majority of the eastern portion of Baldwin County. This facility has a large number of power outages, which then interrupts the service to the 5,000 citizens who have East Central Baldwin water service. The need for this has been emphasized since yesterday (2/26) because there was a car accident that cut the service and phone lines for the whole day. Total amount of project $104,000.

Chandra Middleton presented the Baldwin Regional Area Transit System's project. The BRATS facility in Robertsdale has been deemed a critical facility by the Baldwin County EMA. The facility houses the gas pumps for the County, and the drivers help Baldwin County citizens evacuate from low lying areas of Baldwin County to shelters. During power outages, the communication from the BRATS dispatch with the drivers is cut off, creating a dangerous situation for the drivers. Total amount of project $69,000.

Frank Lundy presented the project for the Baldwin County Highway Department. The Baldwin County Highway Department has submitted a proposal to relocate an unpaved portion of River Road that is currently located within the flood way of Styx River in east-central Baldwin County. Even during a relatively small storm event, the current River Road floods and

completely cuts off citizen's access to emergency services and/or their residences. During a moderate to major flood event, residents are completely trapped for multiple days until Styx River recedes. There are currently 18 homes with approximately 65 people that are impacted. In addition to the access impacts, there are major environmental hazards, waterline utility service impacts, and financial loss impacts as well. Each flood results in tons of red clay sediment and silt being washed from the roadway and deposited into the waters and adjacent wetlands of Styx River, as well as damages to public utility water service. In just the past 7 years, in excess of $183,000 in costs have been incurred repairing and restoring the roadway infrastructure after the flood waters receded. The Highway Department has suggested the answer to this problem is relocating a portion of the roadway and utilities to higher ground to maintain access. In order to do this, the County must purchase vacant land from adjacent owners and will use a combination of County and contract resources, including labor and equipment, to design and construct the project. Total amount of project $675,000.

Mayor Jim Hamby presented the proposal for the Town of Elberta. Elberta and the adjacent eastern Baldwin County communities of Perdido Beach, Lillian, Elsanor, and Josephine do not have a high wind rated facility to house first responders and essential personnel during a high wind or hurricane event. The Town of Elberta would like to build a safe room to house these people. The proposed project will be an estimate 1,000 square foot, FEMA 361 rated concrete building, with 2 ADA Compliant restrooms, backup power source, and essential life support capabilities. The building should hold approximately 50 personnel, including fire, police, Baldwin County Deputies, Alabama State Troopers, and other essential personnel. Total amount of project $400,000.

Presentations concluded at 2:39 p.m.

Mr. Smith passed out the ballots for the voting, directed Committee members to place the presentations in order of importance to the County, and not their respective municipalities. After the vote, ballots were taken up and tallied by Jennifer Forsman and Landon K. Smith. The vote results are as follows:

1) BRATS Generator
2) East Central Baldwin Water, Sewer, and Fire Authority
3) Highway Dept River Road project
4) Town of Elberta Safe Room
5) TIE: City of Daphne Buyout and City of Fairhope Safe Room
6) City of Orange Beach Buyout
7) City of Fairhope Beach Erosion project

ADJOURNMENT

Meeting adjourned at 3:30 p.m.

Minutes for this meeting approved during the _____ meeting of the Baldwin County Hazard Mitigation Planning Committee.

Landon K. Smith 06-20-2019

Chairperson Landon K. Smith Date

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BALDWIN COUNTY
HAZARD MITIGATION PLANNING COMMITTEE
MINUTES
JANUARY 23, 2020
BALDWIN COUNTY EMERGENCY OPERATIONS CENTER
ROBERTSDALE, ALABAMA

ATTENDANCE

Members present were: Danon Smith, Baldwin County EMA; Brandan Franklin, City of Gulf Shores Building Official; Rachel Keith, City of Foley EM Coordinator; Zach Hood, Baldwin County EMA Director; Eddie Harper, Baldwin County Building Official; Jessica Wade, Alabama Department of Public Health; Erik Cortinas, City of Fairhope Building Official; and Landon (Lannie) Smith, City of Orange Beach Building Official.

Guests present: Leslie Johnston, South Alabama Regional Planning Commission.

Brandan Franklin called the meeting to order at 10:06 am.

OPENING COMMENTS

Brandan Franklin gave opening remarks. Included in the opening remarks, Brandan Franklin requested everyone continue to reach out and encourage fellow Hazard Mitigation Planning Committee Members to attend meetings.

OLD BUSINESS

Brandan Franklin asked Danon Smith to brief the Committee on the legal correspondence received from Lehe Planning, LLC' (Jim Lehe) regarding the 2015 Baldwin County Hazard Mitigation Planning Committee (HMPC) as "intellectual property" of Jim Lehe and Lehe Planning. Danon Smith read the correspondence to the Committee, which stated neither Baldwin County nor the South Alabama Regional Planning Commission (SARPC) could use or reproduce portions of the 2015 plan, which are "intellectual property" of Lehe Planning. Danon Smith pointed out to the Committee an excerpt (found on page 3 of the agreement between he Baldwin County Commission and Lehe Planning, LLC) from the terms of Baldwin County's agreement for consulting services to work on the 2015 Hazard Mitigation planning Committee that indicates Baldwin County has a right to reproduce, use, and share the plan and its content as part of continued mitigation activities and planning; and this indicates there should not be an issue with sharing materials with SARPC. Danon Smith advised she has

forwarded the agreement, correspondence, and information to the Baldwin County Attorney for review and consideration. Danon Smith introduced Lesley Johnston with the SARPC to the Baldwin County Hazard Mitigation Planning Committee, who was present as a guest to provide information on the regional mitigation planning process.

Brandan Franklin proposed taking nominations via email (sent to Danon Smith to fill two (2) vacant positions on the Executive Committee of the Baldwin County Hazard Mitigation Planning Committee. Brandan Franklin proposed filing the vacancies via vote at the February 20, 2020 Full Body HMPC Meeting.

Motion by Erik Cortinas seconded by Lannie Smith to approve the proposed process to take nominations and fill the Executive Committee vacancies (2) at 10:49 a.m.

Ayes: 8

No: 0

Abstain: 0

MOTION PASSED

NEW BUSINESS

Danon Smith introduced Lesley Johnston with the SARPC to the Baldwin County Hazard Mitigation Planning Committee. Lesley advised SARPC is still working out the details on the plan update process for the SARPC planning Region, and the Alabama Tombigbee Planning Commission areas, and how the collaborative process will work. SARPC is planning to attend HMPC meetings in Baldwin County.

Danon Smith discussed the Hazard Mitigation Plan review and approval process with Alabama EMA and FEMA, to include requests for information, approvals and adoptions. HMPC members present concluded that to meet the revision deadline and avoid the current plan's expiration, the 2020 Plan revision will need to be completed by January of 2021. This will give time for both AEMA and FEMA's review and approval, and the adoption process for the jurisdictions in Baldwin County.

Motion by Lannie Smith, seconded by Erik Cortinas to approve the results of the election and vote for new Officers and Executive Committee Members.

Ayes: 8

No: 0

Abstain: 0

MOTION PASSED

ADJOURNMENT

Meeting adjourned at 10:52 a.m.

Minutes for this meeting approved during the February 20, 2020 meeting of the Baldwin County Hazard Mitigation Planning Committee.

Chairperson Brandan Franklin — Date 2.20.19

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BALDWIN COUNTY
HAZARD MITIGATION PLANNING COMMITTEE
MINUTES
MAY 9, 2019
BALDWIN COUNTY EMERGENCY OPERATIONS CENTER
ROBERTSDALE, ALABAMA

ATTENDANCE

Members present were: Danon Smith, Baldwin County EMA; Rachel Keith, City of Foley; Richard Rider II, City of Foley; Mikel Corporaal, City of Daphne; Teresa Porter, Alabama Department of Public Health; Angela Byrnes, Riviera Utilities; Chandra Middleton, BRATS; Landon Smith, City of Orange beach; Mike Howell, Baldwin County Building Official; Zach Hood, Baldwin County EMA Director

Guests present: Greg Smith, City of Robertsdale; Jenni Guerry, Baldwin County EMA; John Frank, Baldwin County EMA; and Wayne Redditt, Baldwin County EMA

Landon Smith called the meeting to order at 09:04.

OPENING COMMENTS

Landon Smith gave opening remarks.

OLD BUSINESS

Landon Smith presented the minutes to the Committee, ask for any corrections or revision to be identified, and requested a motion for approval of the February 27, 2018 meeting minutes.

Motion by Mike Howell, seconded by Danon Smith to approve the February 27, 2018, Hazard Mitigation Planning Committee (the Committee) Meeting Minutes at 09:08.

Ayes: 10

No: 0

Abstain: 0

MOTION PASSED

NEW BUSINESS

Landon Smith introduced the new EMA Director, Zach Hood, and returning Planning and Grants Coordinator, Danon Smith, to the Committee.

Danon Smith presented to the Committee the current Mitigation Plan project update for the City of Daphne which has been submitted to FEMA via the Alabama Emergency Management Agency (AEMA).

Danon Smith requested Committee members to update contact information for members and for members to reach out to others they may have contact with to remind member organizations to update their contact information. Danon Smith briefed the Committee on the need to nominate new Officers (Chairperson, Vice Chairperson, and Secretary) and Executive Committee (4 additional positions) members, explained the nomination form, and discussed the schedule of nominations and terms of service for officers with the Committee.

Committee members present discussed accepting nominations and voting on new officer and executive committee members during the next meeting. Landon Smith stated he would be willing to serve as Vice Chair to assist the new Chairperson. Mike Howell stated he would be willing to serve on the Executive Committee. Danon Smith advised she would be willing to serve as Secretary. Rachel Keith advised she would be willing to consider serving on the Executive Committee. Danon Smith will send an email to members to obtain nominations in preparation for the next meeting.

Landon Smith discussed establishing a work schedule and plan, and potential funding opportunities for the next mitigation plan update with the Committee.

The Committee discussed a date for the next meeting and determined Thursday, June 20, 2019, at 09:00would be the meeting time and date for the next HMPC meeting.

ADJOURNMENT

Motion by Mike Howell, seconded by Teresa Porter to adjourn the May 9, 2019, Hazard Mitigation Planning Committee Meeting.

Meeting adjourned at 09:44.

Minutes for this meeting approved during the June 20, 2019 meeting of the Baldwin County Hazard Mitigation Planning Committee.

Landon K. Smith 06-20-2019

Chairperson Landon K. Smith Date

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BALDWIN COUNTY
HAZARD MITIGATION PLANNING COMMITTEE
MINUTES
JUNE 20, 2019
BALDWIN COUNTY EMERGENCY OPERATIONS CENTER
ROBERTSDALE, ALABAMA

ATTENDANCE

Members present were: Danon Smith, Baldwin County EMA; Brandan Franklin, City of Gulf Shores Building Official; Michael Minchew; City of Bay Minette Fire Chief/EM Coordinator; Robert Davis, Town of Loxley Utilities; Stephen Sullivan, Riviera Utilities; Rachel Keith, City of Foley EM Coordinator; Zach Hood, Baldwin County EMA Director; Greg Smith, City or Robertsdale, City Engineer; Mike Howell, Baldwin County Building Official; Jessica Wade, Alabama Department of Public Health; Teresa Porter, Alabama Department of Public Health; and Landon Smith, City of Orange Beach Building Official.

Lannie Smith called the meeting to order at 09:06 am.

OPENING COMMENTS

Lannie Smith gave opening remarks.

OLD BUSINESS

Landon Smith presented the minutes to the Committee, ask for any corrections or revision to be identified, and requested a motion for approval of the May 9, 2019 meeting minutes.

Motion by Teresa Porter, seconded by Mike Howell to approve the May 9, 2019 Hazard Mitigation Planning Committee Meeting Minutes at 09:07am.

Ayes: 15

No: 0

Abstain: 0

MOTION PASSED

Landon Smith reminded everyone present that the Hazard Mitigation Planning Committee (HMPC) contact information needs to be updated and that everyone need to reach out to fellow Committee members so we can get the contact information updated and encourage membership participation in the meetings.

Landon Smith advised it is time to vote on new HMPC Officers and Executive Committee Members; to include One (1) Chairperson, One (1) Vice Chairperson, One (1) Secretary, and Four (4) Executive Committee Members at Large. Lannie Smith advised the term of service is Five (5) years and that all nominees listed on the ballot have agreed to serve. Ballots were distributed and members were given approximately 5-10 minutes to vote and for the vote to be tallied by EMA Director, Zach Hood. The results of the vote were: Brandan Franklin as Chairperson, Rachel Keith as Vice-Chairperson, Danon Smith as Secretary; and Zach Hood, Teresa Porter, Mike Howell, and Erik Cortinas as Executive Committee Members At-Large. Lannie Smith presented the results to the Committee for a vote.

Motion by Teresa Porter, seconded by Mike Howell to approve the results of the election and vote for new Officers and Executive Committee Members.

Ayes: 15

No: 0

Abstain: 0

MOTION PASSED

NEW BUSINESS

Danon Smith advised the Hazard Mitigation Planning Committee of the effort by FEMA and the Alabama Emergency Management Agency (AEMA) to begin promoting Regional Mitigation Plans. Danon advised the Committee that AEMA emailed Baldwin County EMA information regarding Hazard Mitigation Grant funding for Mitigation Plans, and that AEMA has set the funding priority for Regional plans. Danon Smith advised Division A Counties are served by both the South Alabama Regional Planning Commission (SARPC) and the Alabama-Tombigbee Regional Planning Commission and that she has spoken with representatives from (SARPC) regarding the proposed Regional Mitigation Plans. Danon Smith was advised by SARPC and AEMA that details are still being worked out concerning Regional Mitigation Plans, but the process should not impact individual counties' Mitigation Action Items in a Regional Plan. Danon Smith advised once implemented, and with all information known to this point, that Regional Plans are not a bad idea, and can streamline efforts and make the usage of resources efficient, providing mitigation planning goals, action items, and preferred outcomes are

discussed between and among counties, SARPC/Alabama-Tombigbee, and the Alabama Emergency Management Agency

ADJOURNMENT

Meeting adjourned at 9:48 a.m.

Minutes for this meeting approved during the January 23, 2020 meeting of the Baldwin County Hazard Mitigation Planning Committee.

Brandan Franklin 1-23-20

Chairperson Brandan Franklin Date

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BALDWIN COUNTY
HAZARD MITIGATION PLANNING COMMITTEE
MINUTES
FEBRUARY 20, 2020
BALDWIN COUNTY EMERGENCY OPERATIONS CENTER
ROBERTSDALE, ALABAMA

ATTENDANCE

Members present were: Danon Smith (BCEMA), Jessica Wade (ADPH), Vince Jackson (BCC Planning & Zoning), DJ Hart (BCC Planning & Zoning), Brandan Franklin (SARPC), Ricky Rider (City of Foley), Rachel Keith (City of Foley), Lannie Smith (City of Orange Beach), Jenni Guerry (BCEMA), Erik Cortinas (City of Fairhope), and Zach Hood (BCEMA)

Guests present: Leslie Johnston and Dianne Burnett (South Alabama Regional Planning Commission)

Brandan Franklin called the meeting to order at 10:04 am.

OPENING COMMENTS

Brandan Franklin gave opening remarks.

OLD BUSINESS

Approval of Minutes from the last Meeting on January 23, 2020.

Motion by Danon Smith, seconded by Rachel Keith to approve the minutes from January 23, 2020, at 10:10am.

Ayes: 10

No: 0

Abstain: 0

MOTION PASSED

Approval of Proposed Hazard Mitigation Planning Committee and Executive Committee Meeting Schedule for the 2020-2021 Baldwin County Hazard Mitigation Plan Update Cycle.

Motion by Rachel Keith, seconded by Lannie Smith to approve the minutes from January 23, 2020, at 10:12am.

Ayes: 10

No: 0

Abstain: 0

MOTION PASSED

Approval of replacement members for the Executive Committee, replacing retired members Mike Howell and Teresa Porter with Lannie Smith and Eddie Harper for the 2020-2021 Baldwin County Hazard Mitigation Plan Update Cycle.

Motion by Rachel Keith, seconded by Danon Smith to approve the election results for replacement members from January 23, 2020, at 10:18am.

Ayes: 10

No: 0

Abstain: 0

MOTION PASSED

Danon Smith updated Committee members on the use of a shared drive (Google Drive) as a repository of information available to the Committee. The link for this drive is: https://bit.ly/BaldwinHMPC and will include an example Regional Plan from the Southeast Regional Mitigation Plan.

Leslie Johnston gave an update on the status of the Regional Plan update progress and advised the following: The Alabama Tombigbee Regional Planning Commission in working on a plan for their area and is referencing the Southeast Regional Planning Commission's plan, which has been approved by the Alabama Emergency Management Agency (AEMA) and FEMA. Diane Burnette explained that the conditional and background elements of the plan will include images, tables, maps, or any combination of these types of climatological, topographical, geographical, and/or demographic information. Each jurisdiction's respective mitigation action items and planning elements, just as in the past with traditional multi-jurisdiction plans.

Committee members discussed ways to partner with the Office of Water Resources, SARPC, and jurisdictions within the County to harvest and compile information and resources to be used in the formation of the plan's modeling, mapping, and reference information to lend

justification and foundation to the mitigation action items included in the plan by jurisdictions, as multiple jurisdictions share similar or like mitigation areas of concern and improvement potential.

Committee discussion resulted in an April 23, 2020, deadline for Mitigation Plan Jurisdiction Surveys to coincide with the next scheduled Hazard Mitigation Planning Committee Full Body Meeting.

Brandan Franklin asked Danon Smith to give an update on the progress made on updating the Hazard Mitigation Planning Committee Contact List. Rachel Keith and Lannie Smith also gave updates on contacts made and information verified for the Contact List.

Brandan Franklin and Danon Smith updated the Committee on the correspondence between Stone Crosby (Baldwin County Commission Attorney) and the attorney of Lehe Planning, LLC (Cleveland and Cleveland, LLC).

NEW BUSINESS

Brandan Franklin stated the next Hazard Mitigation Planning Committee Executive Committee Meeting should be on March 5, 2020. This will follow the previously discussed and approved meeting schedule parameters.

Danon Smith discussed adding Baldwin County Planning and Zoning as members of the Baldwin County Hazard Mitigation Planning Committee and revising the Baldwin County Hazard Mitigation Planning Committee Bylaws to reflect the same.

ADJOURNMENT

Meeting adjourned at 10:58 a.m.

Minutes for this meeting approved during the July 9, 2020 meeting of the Baldwin County Hazard Mitigation Planning Committee.

7-9-2020

Chairperson Brandan Franklin — Date

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BALDWIN COUNTY
HAZARD MITIGATION PLANNING COMMITTEE
MINUTES
AUGUST 13, 2020
BALDWIN COUNTY EMERGENCY OPERATIONS CENTER
ROBERTSDALE, ALABAMA

ATTENDANCE

Members present were: Danon Smith (BCEMA), DJ Hart (BCC Planning & Zoning), Rachel Keith (City of Foley), Mayor Jared Lyles (Town of Silverhill), Mikel Corporaal (City of Daphne), and Tiffany Lynn (Town of Summerdale)

Guest present were Leslie Johnston was (South Alabama Regional Planning Commission)

Danon Smith called the meeting to order at 10:06 am.

OPENING COMMENTS

Danon Smith gave opening remarks.

OLD BUSINESS

Danon Smith gave opening remarks and informed HMPC members that approximately fifty percent of the Hazard Mitigation Plan Implementation Surveys have been submitted back to her and that she will be following up with those who have not submitted to check their status and offer technical assistance, if needed.

Leslie Johnston gave an update on the Mitigation Plan revision process for 2020/2021 and advised that the Alabama Tombigbee Regional Planning Commission has completed their portion of the plan (Clarke and Choctaw Counties), which completes phase one of the Regional Plan process.

NEW BUSINESS

Danon Smith gave an update on pre-disaster mitigation funding announcements form FEMA. Currently Alabama EMA (AEMA) is applying for the Building Resilient Infrastructure in Communities (BRIC) and Flood Mitigation Assistance (FMA) grants on behalf of Alabama. Once the state allocation information is determined by FEMA and AEMA notifies Danon Smith, she will notify Baldwin County HMPC members and municipalities of the funding opportunity and local government application process and guidance.

Danon Smith also informed HMPC members present she was able to speak with Congressman Bradley Byrne and his staff concerning the BRIC program, specifically what FEMA is expecting the public/private partnerships and collaboration on innovative mitigation project should look like.

Recent Community Rating System (CRS) cycle visits and NFIP Compliance visits were also discussed among Committee members present, with some members following up after the meeting with additional information.

Motion by Rachel Keith, seconded by DJ Hart to approve the minutes from the July 16, 2020 Hazard Mitigation Planning Committee Meeting at 10:29.

Ayes: 6

No: 0

Abstain: 0

MOTION PASSED

The next meeting date was set for Thursday, September 17, 2020, at 09:00. HMPC members present discussed meeting in-person with a hybrid option offered for those who wish to join remotely via WebEx to be offered as well for the meeting.

ADJOURNMENT

Meeting adjourned at 10:36 a.m.

Minutes for this meeting approved during the October 1, 2020 meeting of the Baldwin County Hazard Mitigation Planning Committee.

Chairperson Brandan Franklin

10-1-2020
Date

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BALDWIN COUNTY
HAZARD MITIGATION PLANNING COMMITTEE
MINUTES
OCTOBER 1, 2020
BALDWIN COUNTY EMERGENCY OPERATIONS CENTER
ROBERTSDALE, ALABAMA

ATTENDANCE

Members present were: Danon Smith (BCEMA), Lannie Smith (City of Orange Beach), Brandan Franklin (City of Gulf Shores), Eddie harper (Baldwin County Commission – Building Official), Janie Joiner (Baldwin County Commission), Ricky Rider (City of Foley), Rachel Keith (City of Foley), Brandan Franklin (City of Gulf Shores), Zach Hood (BCEMA), David Wojciechowski (Town of Loxley

Guest present were Leslie Johnston was (South Alabama Regional Planning Commission)

Brandan Franklin called the meeting to order at 09:06.

OPENING COMMENTS

Brandan Franklin gave opening remarks.

OLD BUSINESS

Danon Smith gave opening remarks and informed HMPC members that one hundred (100) percent of the Hazard Mitigation Plan Implementation Surveys have been submitted back to SARPC.

Leslie Johnston gave an update on the Mitigation Plan revision process for 2020/2021 and advised that the next steps will be the Community Action Plan review/revisions for the Baldwin County mitigation planning jurisdictions. Leslie will send those to Danon once they have been prepared and Danon will send to HMPC members for their jurisdictions to complete and submit back to Danon for recording and forwarding back to Leslie with SARPC.

NEW BUSINESS

Danon Smith gave an update on pre-disaster mitigation funding announcements from Alabama EMA and advised the Building Resilient Infrastructure in Communities (BRIC) and Flood Mitigation Assistance (FMA) grant applications must be completed in FEMAGO (FEMA's new mitigation grant web-based application) no later than 10/15/2020; which is an extension of the original 09/20/20 deadline.

The HMPC members present discussed creating a Community Rating System Sub-Committee of the HMPC to aid communities in increasing CRS ratings to improve resilience and decrease flood insurance costs for residents.

Additional information was shared by HMPC members on their experiences with Recovery from Hurricane Sally and how observations from Hurricane Sally response and recovery may be incorporated into mitigation planning and applications for future mitigation funding.

Motion by Rachel Keith, seconded by Danon Smith to approve the minutes from the August 13, 2020 Hazard Mitigation Planning Committee Meeting at 09:29.

Ayes: 6

No: 0

Abstain: 0

MOTION PASSED

The next meeting date was set for Thursday, November 19, at 09:00. HMPC members present discussed meeting in-person with a hybrid option offered for those who wish to join remotely via WebEx to be offered as well for the meeting.

ADJOURNMENT

Meeting adjourned at 09:51 a.m.

Minutes for this meeting approved during the January 21, 2021 meeting of the Baldwin County Hazard Mitigation Planning Committee.

Chairperson Brandan Franklin 1-21-21
Date

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BALDWIN COUNTY
HAZARD MITIGATION PLANNING COMMITTEE
MINUTES
NOVEMBER 19, 2020
BALDWIN COUNTY EMERGENCY OPERATIONS CENTER
ROBERTSDALE, ALABAMA
And/or WebEx Virtual Platform

ATTENDANCE

Members present were: Danon Smith (BCEMA), Lannie Smith (City of Orange Beach), Brandan Franklin (City of Gulf Shores), Eddie harper (Baldwin County Commission – Building Official), Janie Joiner (Baldwin County Commission), Rachel Keith (City of Foley)

Guest present were Leslie Johnston was (South Alabama Regional Planning Commission)

Brandan Franklin called the meeting to order at 09:10am

OPENING COMMENTS

Brandan Franklin gave opening remarks.

OLD BUSINESS

Leslie Johnson advised she received all the Plan Implementation Surveys from Baldwin County, and is awaiting the final surveys form Mobile and Escambia Counties. Community Action Plan format and timeline for completion were discussed by Leslie Johnston, Danon Smith, and HMPC Members present. Leslie will format as a survey, send to Danon, and Danon will send them out to Baldwin County jurisdictions for completion by January 2, 2021. Once Danon receives the completed surveys, she will remit to Leslie for the Mitigation Plan Draft.

Leslie Johnston gave an update on the Mitigation Plan revision process for 2020/2021 and advised that the draft will need to be finalized and sent to the Alabama EMA for preliminary review by March 1, 2021.

Danon Smith gave a reminder of the upcoming FMA/BRIC deadline for application submission to AEMA through the FEMAGO mitigation grant web-based program/supplication.

NEW BUSINESS

Motion by _____, seconded by _____to approve the minutes from the November 19, 2020 Hazard Mitigation Planning Committee Meeting at _____.

Ayes: ____

No: ____

Abstain: ____

MOTION PASSED

The next meeting date is scheduled for Thursday, February 18, 2021, at 09:00. HMPC members will be invited to join remotely via WebEx until further, due to the current COVID-19 pandemic situation.

ADJOURNMENT

Meeting adjourned at 10:36 a.m.

Minutes for this meeting approved during the January 21, 2021 meeting of the Baldwin County Hazard Mitigation Planning Committee.

Chairperson Brandan Franklin 1-21-21 Date

BALDWIN COUNTY
HAZARD MITIGATION PLANNING COMMITTEE
MINUTES

JANUARY 21, 2021

BALDWIN COUNTY EMERGENCY OPERATIONS CENTER
ROBERTSDALE, ALABAMA
WebEx Virtual Platform

ATTENDANCE

Members present (Via WebEx) were: Danon Smith (BCEM), Lannie Smith (City of Orange Beach), Brandan Franklin (City of Gulf Shores), DJ Hart (BCC Planning & Zoning), Casey Fulford (Alabama ACD), Erik Cortinas (City of Fairhope), Shari Woody (Town of Magnolia Springs), Jacob Franklin (Sawgrass)

Brandan Franklin called the meeting to order at 09:02am

OPENING COMMENTS

Brandan Franklin gave opening remarks.

OLD BUSINESS

Brandan Franklin advised that the following Meeting Minutes had not been approved.

Motion by Erik Cortinas, seconded by Lannie Smith to approve the minutes from February 2, 2020 Hazard Mitigation Planning
Committee Meeting.
Ayes: 8
No: 0
Abstain: 0
Motion Passed

Motion by Lannie Smith and seconded by Danon Smith to approve the minutes from August 13, 2020 Hazard Mitigation Planning Committee Meeting.
Ayes: 7
No: 0
Abstain: 1
Motion Passed

Motion by Lannie Smith and seconded by Danon Smith to approve the minutes from October 1, 2020 Hazard Mitigation Planning Committee Meeting.
Ayes: 8
No: 0
Abstain: 0
Motion Passed

Motion by DJ Hart, seconded by Lannie Smith to approve the minutes from November 19, 2020 Hazard Mitigation Planning
Committee Meeting.
Ayes: 8
No: 0
Abstain: 0
Motion Passed

Danon Smith advised that she had received Community Action Plans from several cities and towns throughout Baldwin County, but there were many that she had not received and stated that she had emailed all representatives today (1-21-2021) a reminder to check the status of turning these in if they had not already done so.
She advised also, with the committee's understanding, the importance of having these turned in by early February in
order to have them turned in by February 17, 2021 to SARPC.

Danon Smith reported on the Regional Plan Process Update and discussed ways to digitally display the Draft for the public.
Danon will follow up with Leslie Johnston with questions concerning the Draft and upcoming deadline and report back to committee with any updated information.

Danon updated the committee on the FEMAGO application and the problems that have arose from using it to file Grant submission applications with FEMA. Danon reported on FMA and BRIC applications that have been submitted having recently had some response from FEMA at the state level and communication beginning with applicants on their submissions.

Danon reported that the HMGP Grant program should potentially open in February following discussion about the discouragement reported by committee members of potential applicants at the time frame that FEMA is taking to
open this Grant and response time of FEMA. Danon responded that the problem is more than likely multiple disasters in surrounding states that is responsible for the slow response.

NEW BUSINESS

Danon Smith reported on the updated EMA Mitigation Website link and discussed how this will help individuals and community officials in the Hazard Mitigation process. Danon asked the committee for feedback on design and navigation of the site. The

committee responded that they thought the website update was very useful and helpful.
Lannie Smith responded on the basic discouragement of potential FEMA applicants in his community due to the long -term process. Danon reported that the EMA would be getting a consultant that would be an advocate for individual citizens in the application process and hopefully ensure that the process is easier to navigate. Danon mentioned being in contact with Michael Johnson at Alabama EMA to advise navigating an expedited process with FEMA applications as well.

The next meeting date was set for February 18, 2021. HMPC members present will meet remotely via WebEx.

ADJOURNMENT

Meeting adjourned at 09:42am.

Minutes for this meeting approved during the February 18, 2021 meeting of the Baldwin County hazard Mitigation Planning Committee.

2-18-21

Chairperson: Brandan Franklin
Date

BALDWIN COUNTY
HAZARD MITIGATION PLANNING COMMITTEE
MINUTES
FEBRUARY 18, 2021
BALDWIN COUNTY EMERGENCY OPERATIONS CENTER
ROBERTSDALE, ALABAMA
WebEx Virtual Platform

ATTENDANCE

Members present (Via WebEx) were: Danon Smith (BCEMA), Lannie Smith (City of Orange Beach), Brandan Franklin (City of Gulf Shores), DJ Hart (BCC Planning & Zoning), Erik Cortinas (City of Fairhope), Chester Patterson (City of Spanish Fort), Eddie Harper (BCC Building Inspections), Eric Butler (City of Daphne), Rachel Keith (City of Foley), Ryan Frolik (East Central Baldwin Water Authority), Tonya Shannon (Haggarty), Jason Reisler (Haggarty), Zach Hood (BCEMA), Jenni Guerry (BCEMA), Michelle Pennington (BCEMA), Mike Purner (BCEMA), Scott Wallace (BCEMA), Amanda Thweatt (BCEMA), Leslie Johnston (SARPC)

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Brandan Franklin called the meeting to order at 09:01am

OPENING COMMENTS

Brandan Franklin gave opening remarks.

OLD BUSINESS

Brandan Franklin advised that the minutes from the January meeting be approved.
Motion by Lannie Smith, seconded by Erik Cortinas.
Ayes: 19
No: 0
Abstain: 0
Motion Passed

Danon Smith gave report on the progress of obtaining Community Action Plans from all communities. Nearly all have been turned in, but the two remaining are Elberta and

Magnolia Springs. Danon stated that she will reach out to both the Mayor of Magnolia Springs, Kim Koniar, and a representative from Elberta to help them complete their Action Plans so that they can be submitted next week to Leslie Johnston with SARPC.

Danon Smith reported that BRIC and FMA Grants have moved from the State to FEMA and are awaiting decisions. Tonya Shannon with Haggarty interjected that they are putting together a committee to begin reviewing the projects with FEMA.

Danon Smith reported that an email had been sent out to all Committee members for 3 sessions on HMGP Applicant Briefing to take place February 23, 24 and 25 via webcast through the AEMA. The purpose of these virtual sessions is to assist potential applicants in the Grant funding process with FEMA for HMGP (DR-4563). All committee members expressed that they would be attending one of the briefings. All agree that these would be very helpful during the process for individuals as well as government claims. Danon reported that BCEMA currently has approximately 16 applicants, mostly flood related claims, at this point. There was further discussion of previous online meetings that resulted in previous Grant awards.

Leslie Johnston reported that the Regional Plan Process is 95% complete and has some last- minute areas to fill and the Community Action Plans would be added at the end and reported that it is a little behind schedule but should be ready within the next few days and should be fine as a target date. Leslie suggested posting and asking for comments on the public release of Plan Draft from other Planning Commissions. Danon suggested to the committee to turn to the Hazard Mitigation Guide for guidance on how to present the Final Draft Presentation that would be appropriate during the Pandemic. Suggestions were made such as reaching out to individual committees by forms on the EMA's web page. Brandan Franklin suggested meeting next week to make a final decision on how to release the Final Regional Plan Draft publicly. All committee members agreed to meet virtually on Thursday, February 25th at 9:00 am to finalize these plans. Leslie Johnston agreed to attend this virtual meeting.

Danon Smith gave report on the updated EMA Mitigation Website with the latest Mitigation Interest Survey and Guidance/Introductory Information Document. Danon asked the committee for feedback and suggestions on the "Preparing to apply for Mitigation" link on the website. Committee members expressed that the improvements made to the website were very informational and helpful to individuals as well as government applicants.

NEW BUSINESS

Brandan Franklin expressed excitement about the HMGP Applicant Briefings next week and was appreciative of everyone on the Committee participating.

Lannie Smith asked if the project for Mitigation Grant would be prioritized at the March meeting and expressed that the meeting should be held in person with Social Distancing Guidelines. Brandan Franklin agreed with this suggestion, as well as other members of the committee. Danon offered the upstairs training room at the EMA as a place to hold the meeting. All agreed. Danon reminded the committee to go to the link in the EMA website to the Local Mitigation Handbook to assist with the meeting to take place next week to discuss the Plan Draft Presentation on February 25th.

It was agreed that the next HMPC meeting was set for March 18, 2021 in the Upstairs Training Room at the BCEMA.

ADJOURNMENT

Meeting adjourned at 09:36am.

Minutes for this meeting approved during the March 18, 2021 meeting of the Baldwin County Hazard Mitigation Planning Committee.

03/18/2021

Chairperson: Brandan Franklin Date

BALDWIN COUNTY
HAZARD MITIGATION PLANNING COMMITTEE MEETING
MINUTES
MARCH 18, 2021
BALDWIN COUNTY EMERGENCY OPERATIONS CENTER UPSTAIRS TRAINING ROOM
ROBERTSDALE, ALABAMA
(Hybrid Meeting with Physical and Telepresence Options)

ATTENDANCE

Members/Guests present on site were: Danon Smith (BCEMA), Amanda Thweatt (BCEMA), Lannie Smith (City of Orange Beach), Brandan Franklin (City of Gulf Shores), Richard Rider (City of Foley), Erik Cortinas (City of Fairhope), Eddie Harper (BCC Building Inspections), Rachel Keith (City of Foley), Tonya Shannon (Hagerty Consulting), Bailey-Anne Kaytar (Hagerty Consulting), Joby Smith (Baldwin Co. E-911), Ryan Frolik (East Central Baldwin County Water Authority), Jessica Walker (City of Fairhope), Rachel Keith (City of Foley), Michael Thompson (City of Foley), Ralph Hellmich (Mayor - City of Foley), Joey Darby (Foley Fire Department), Thurston Bullock (Foley Police Department), Kevin Carnley (Foley Police Department), Troy Strunk (City of Daphne)
Members/Guests present virtually: Jenni Guerry (BCEMA), Michelle Pennington (BCEMA), Anthony Sampson (BCBOE), Jason Riggs (City of Spanish Fort), Marinda Turner (City of Daphne Utilities),Anthony Sampson, Baldwin County Board of Education

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Brandan Franklin called the meeting to order at 09:00am

OPENING COMMENTS

Brandan Franklin called the meeting to order and gave opening remarks.

OLD BUSINESS

Brandan Franklin advised that the minutes from the February meeting be approved.
Motion by Lannie Smith, seconded by Erik Cortinas.
Ayes: 19
No: 0

Abstain: 0

Motion Passed

Brandan Franklin reported that the (as is) Plan Draft had been presented to his Jurisdiction during their Council meeting and questioned progress on the completed Plan Draft and meeting the May 3rd deadline for Baldwin County.

Danon Smith reported that she had been in communication with Leslie Johnston (SARPC), and they are waiting on two counties (Baldwin not among these) to complete the Plan Draft.

Leslie Johnston advised she is confident that this will not interfere with Baldwin County meeting the May 3rd deadline. Danon also stated that Lisa (FEMA) will review the Baldwin County plan independently if the other two counties do not submit in time to meet our deadline, and she would continue to coordinate with Leslie all documentation to see the process through.

Danon encouraged all members to utilize the Important Mitigation Resource – EMA Mitigation Website – that is being updated weekly https://www.baldwincountyal.gov/departments/EMA/ema-hazard-mitigation.

Danon encouraged all municipalities to send their Plan Draft Review and Public Dissemination/comment information, documentation, and feedback directly to her and she would coordinate with Leslie Johnston to get these in for AEMA Review. Several Municipalities reported that they had upcoming Council meetings to present or had recently presented to their Municipalities.

NEW BUSINESS

Danon Smith discussed the Hazard Mitigation Grant Program Letter of Intent. Danon discussed the ranking of projects, and that Ranking Sheets are due by 5:00 P.M. on Friday, March 19th and gave a walk-through demonstration of Ranking Forms found on the EMA – Hazard Mitigation Website. Danon stated that these must be entered by each Jurisdiction and once entered, she will input the projects and submit the Baldwin County Master LOI (Due to AEMA 3/26/2021). Each eligible sub-applicant will follow up in the AEMA Grants portal with their respective applications and individual letters of intent.

Each Municipality that submitted an LOI Form was given the opportunity to present their projects for discussion during the meeting and they were prioritized by the HMPC Committee.

The following are to be included on DR-4563 (Hurricane Sally):

- **City of Foley**: Safe Room for First Responders to accommodate up to 200 people.
- **Baldwin County E-911**: Replace Current Communication Shelters that house Public Safety Radio Equipment with hardened structures.

- **Baldwin County Board of Education**: Inclusion of Mandatory Safe Rooms for all new school construction projects due to new requirements.
- **Baldwin County Coroner's Office**: Mobile Morgue System to be used for decedents who exceed storage capacity in current facility.
- **Baldwin County Commission**: Residential Safe Room Construction for individuals due to threat of storms/tornadoes/tropical weather.
- **Baldwin County Commission**: River Road Project – Realign portions of River Road out of Floodway.
- **City of Gulf Shores:** Residential Structure Elevations, Gulf Shores Police Department Generator, Traffic Signal Upgrades, Traffic Signal Renovation, Gulf Shores Annex Wind Retrofit, Gulf Shores 4th Street Flood Reduction.
- **Bayshore Christian School**: Safe Room for the new construction of school.
- **City of Daphne**: Underground power lines in Old Towne Daphne (in partnership with Riviera Utilities).
- **Daphne Search & Rescue:** Property acquisition and relocation due to current facility being damaged beyond repair.
- **Daphne Utilities:** Vac Truck, 5 mobile bypass pumps and 5 fixed bypass pumps, installation of generators in 4 locations.
- **East Central Baldwin Sewer & Fire:** Replace Generator
- **Elsanor Fire Department**: Replace Generator
- **Fairhope Airport Authority**: Fortified Safe House for First Responders & Critical Aircraft for Search & Rescue,
- **City of Fairhope**: Lift Station Generator, Magnolia Beach Restoration Project, Fortified Safe Room for First Responders.
- **City of Foley:** Safe Room for First Responders to accommodate up to 200 people.
- **Habitat for Humanity Baldwin County**: Wind Retrofit for damaged housing units.
- **City of Orange Beach:** Safe Room to accommodate 150 First Responders, Elevation of Jubilee Point Road, Five Individual Residential Structure Elevations.
- **Perdido Beach Fire Department:** Replacement of Generator.
- **Town of Silverhill:** Town Hall Generator.
- **City of Spanish Fort**: Patrician Drive Bluff Erosion Project.

It was reiterated that the Rankings are due by 5:00 p.m. Friday, March 19th so that Danon has time to get signatures and disseminate information. Those submitting projects are responsible for uploading projects to the AEMA site/portal. Discussion was held to encourage all to apply for projects regardless of allocation.

It was agreed by all to hold a special meeting on Thursday, March 25th via WebEx with the Executive Committee to include Leslie Johnston prior to the Master LOI being submitted. The next HMPC Full Body meeting was agreed by all to be held at the Baldwin County EMA/EOC Upstairs Training Room on April 15th, 2021 at 9:00 a.m. in a Hybrid format.

ADJOURNMENT

Meeting adjourned at 10:45am.

Minutes for this meeting approved during the April 15, 2021 meeting of the Baldwin County Hazard Mitigation Planning Committee.

Brandan Franklin, Chairperson Baldwin County HMPC

4-15-21

Date

BALDWIN COUNTY
HAZARD MITIGATION PLANNING COMMITTEE MEETING
MINUTES
MARCH 18, 2021
BALDWIN COUNTY EMERGENCY OPERATIONS CENTER – VIRTUAL, Via WebEx

ATTENDANCE

Members/Guests present (virtually): Brandan Franklin, (City of Gulf Shores / HMPC Chair), Rachel Keith (City of Foley / HMPC Vice Chair) Danon Smith (BCEMA/HMPC Secretary), Amanda Thweatt (BCEMA), Lannie Smith (City of Orange Beach), (BCEMA), Anthony Sampson (BCBOE), Erik Cortinas (City of Fairhope), Eddie Harper (BCC Building Inspections), Tonya Shannon (Hagerty Consulting), Bailey-Anne Kaytar (Hagerty Consulting), Jessica Walker (City of Fairhope), Jenni Kilpatrick (ADPH), Ryan Frolik (East Central Baldwin Water), Eric Butler, Nicole Woerner (City of Orange Beach)

Guests present virtually: Leslie Johnston (SARPC)

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Brandan Franklin called the meeting to order at 09:04am

OPENING COMMENTS

Brandan Franklin called the meeting to order and gave opening remarks.

OLD BUSINESS

Brandan Franklin asked that the minutes from the February meeting be approved.
Motion by Erik Cortinas, seconded by Rachel Keith.
Ayes: 14
No: 0
Abstain:0

Motion Passed

Brandan Franklin introduced Leslie Johnston with the South Alabama Regional Planning Commission (SARPC) for an update from Leslie, and Danon Smith, on the Mitigation Plan review status with Alabama EMA and FEMA. Leslie advised she has spoken with the Alabama EMA Mitigation Plan Reviewer, Lisa Castaldo, and that the plan is currently in review with FEMA.

Danon Smith advised the 45-day period for FEMA to review the mitigation plan would be up around May 11, 2021, but that this is only an approximation based on guidance from FEMA and AEMA.

Danon Smith gave an update on the DR-4563 Hazard Mitigation Grant Program Letter of Intent (LOI). Danon advised that the Baldwin County Master LOI has been submitted to AEMA, and their Mitigation Division is currently reviewing the LOIs from across the state. Danon reminded everyone to enter their respective LOI information into the AEMA grants portal and advised for anyone who has any questions about this process, the AEMA grants portal, to let her know.

Brandan Franklin remined the HMPC members that Danon verified the DR-4563 applications will be accepted under the current plan, and that the new plan should be in place well before the date of awards from the DR-4563 HMGP applications.

Danon Smith reminded HMPC members of the email she sent to HMPC members on March 26, 2021 which has information on the HMGP application process and mitigation plan review process for HMPC members to retain as reference/reminder material, and to please let her know if anyone has questions.

Danon encouraged all members to continue to utilize the Important Mitigation Resource – EMA Mitigation Website – that is being updated weekly; and to let her know if there are any requests for adjustment to the content. The link to the EMA Mitigation web page, which is part of the Baldwin County EMA page of the Baldwin County Commission Website, is: https://www.baldwincountyal.gov/departments/EMA/ema-hazard-mitigation.

Danon encouraged all municipalities to send their Plan Draft Review and Public Dissemination/comment information, documentation, and feedback directly to her and she would coordinate with Leslie Johnston to get these in for AEMA Review. Several Municipalities reported that they had upcoming Council meetings to present or had recently presented to their Municipalities; and that they will submit the required public comment period documentation to Danon Smith, as requested.

NEW BUSINESS

Brandan Franklin discussed the importance of maintaining a current and updated HMPC contact list to ensure adequate representation among eligible members/mitigation grant applicants in Baldwin County; and to ensure adequate participation in HMPC activities, initiatives, and projects.

Danon Smith reminded the Committee Members that the responsibility for these contact updates falls on both the HMPC and the member organizations.

Lannie Smith announced his resignation from the City of Orange Beach and subsequently his resignation from the HMPC Executive Committee. Committee Members present thanked Lannie for his years of service, dedication to mitigation efforts, and leadership. Lannie will be greatly missed by the HMPC members and those who worked with him over the years and expressed their heartfelt gratitude to him and best wishes in his future endeavors.

ADJOURNMENT

Motion: Anthony Sampson
Second: Erik Cortinas
Ayes: 14
No: 0
Abstain:0

Motion Passed

Meeting Adjourned at 9:56 am.

Minutes for this meeting approved during the May 20, 2021 meeting of the Baldwin County Hazard Mitigation Planning Committee.

_____ _____

Brandan Franklin, Chairperson Baldwin County HMPC Date

BALDWIN COUNTY
HAZARD MITIGATION PLANNING COMMITTEE MEETING
MINUTES
MAY 20, 2021
BALDWIN COUNTY EMERGENCY OPERATIONS CENTER – UPSTAIRS TRAINING ROOM AND VIRTUAL, Via WebEx

ATTENDANCE

Members/Guests present): Brandan Franklin (City of Gulf Shores / HMPC Chair), Danon Smith (BCEMA/HMPC Secretary), Anthony Sampson (BCBOE), Adam Roberson and Nicole Woerner (City of Orange Beach), Sam Williams and James Wallace (Riviera Utilities).

Virtual – WebEx: Karen Giordano (BCEMA), Michelle Pennington (BCEMA), Erik Cortinas (City of Fairhope), Mark Bohlin (Perdido Bay Water), Jenni Kilpatrick (ADPH), Logan Eberly (City of Foley), DJ Hart (BCC Planning & Zoning), Janie Joiner (BCC Building Dept.).

- - - - - - - - - - - - - - - - - -

Brandan Franklin called the meeting to order at 09:08am

OPENING COMMENTS

Brandan Franklin called the meeting to order and gave opening remarks.

OLD BUSINESS

Brandan Franklin asked that the minutes from the April 15th meeting be approved. It was noted that these minutes had corrections made prior to approval.
Motion by Anthony Sampson, seconded by Sam Williams.
Ayes: 15
No: 0
Abstain:0

Motion Passed

Brandan Franklin asked Danon Smith to give an update on the progress of the 2021 Hazard Mitigation Plan. Danon reported that she had spoken with Lisa Costaldo (AEMA). Lisa reported that FEMA had advised her that they were almost finished with the initial review of the Plan Draft,

which is the lengthiest part of the plan review and approval process. After approval, the process is as follows:

- Once the initial review is completed, FEMA will issue an Approved Pending Adoption (APA) letter. Danon will let all Jurisdictions know and municipalities will present the APA letter to town/city councils for approval and execution of a resolution adopting the plan. The date of the first executed resolution shall be the effective date of the plan.
- Danon will simultaneously prepare an agenda item for the Baldwin County Commission to adopt the plan via resolution, while simultaneously receiving completed municipal resolutions and submitting them to FEMA; and will also send the Commission's resolution once completed.
- Upon submittal of all resolutions, FEMA will issue a Final Approval letter. Danon will share this letter once it is received, as well as place the final approval letter and final approval plan on the mitigation webpage.

Danon stated that she would also email a copy of this summary of the approval process to each committee member so that everyone will have a better understanding of the process.

Brandan asked for an update of progress of the DR-4563 HMPG Grants and asked if everyone had gotten their LOI's submitted. Danon stated that each jurisdiction/municipality had submitted their LOI's. Danon advised that everyone should have received emails that their respective applications had been received, and if not, she advised to let her know and she would reach out to the AEMA to seek status.

Mark Bohlin, with Perdido Bay Water, asked about the status of his application and Danon answered his questions concerning his application.

Danon advised members that the State deadline for HMGP Grant application is July 20th and the local deadline is June 20th in order to have everything turned in to the State by the July 20th deadline.

Danon, as well as Brandon, encouraged all present to reach out and seek help with their claims if they need assistance, and to go to the Hazard Mitigation Link for information, as well as reaching out to Danon and other administrative officials for assistance with claims, especially those seeking elevation of homes and/or property.

The link to the EMA Mitigation web page, which is part of the Baldwin County EMA page of the Baldwin County Commission Website, is: https://www.baldwincountyal.gov/departments/EMA/ema-hazard-mitigation.

Danon also reported that she had recently included a "Mitigation Overview Video" on the Website to assist people in the process of Mitigation, which includes much information for individuals and government officials seeking Hazard Mitigation Grant Funding. Danon asked if anyone had suggestions of content to add to the video to let her know.

NEW BUSINESS

As an Addendum to the May Agenda, discussion was held about the replacement of HMPC Executive Committee Member Landon K. Smith. It was decided that members will email HMPC Secretary Danon Smith by 5/31/2021 nominations for a replacement of his vacated seat. Danon

will compile a nominations list and place on the EMA Mitigation Website for HMPC members to view and consider. Voting will take place at the June HMPC meeting.

Further discussion was held on the importance of accurate and updated contact information of all HMPC Members. It was agreed that this was a constant process and needed to be given consideration and attention by all members as well as the jurisdictions/municipalities they represent.

Danon advised that the 2022 HMPC meeting schedule will remain on the 3rd Thursday of every month. Danon will continue to email notifications of upcoming meetings.

It was agreed that the next HMPC meeting will take place on June 10th due to the Hurricane Conference taking place on the regular scheduled meeting date and most HMPC members being in attendance of this conference. The meeting will take place at 9am at the Baldwin County EMA in the Upstairs Training Room and be offered virtually via WebEx as well.

ADJOURNMENT

Motion: Sam Williams
Second: Anthony Sampson
Ayes: 14
No: 0
Abstain: 0

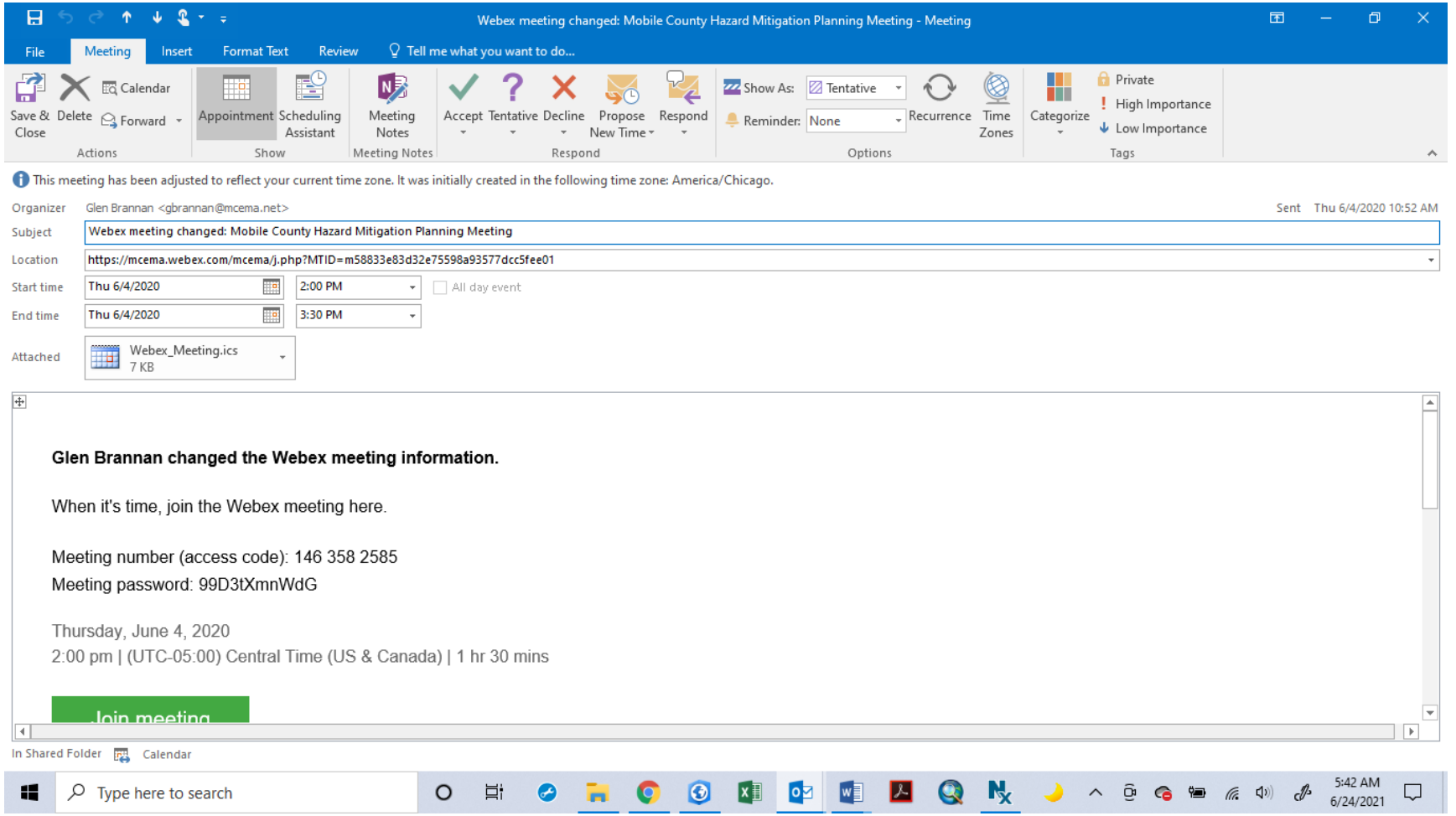
Motion Passed.

Meeting Adjourned at 9:37 am.

Minutes for this meeting approved during the June 10th meeting of the Baldwin County Hazard Mitigation Planning Committee.

_____ _____

Brandan Franklin, Chairperson Baldwin County HMPC Date


Webex meeting changed: Mobile County Hazard Mitigation Planning Meeting - Meeting
File
Meeting
Insert
Format Text
Review
Tell me what you want to do...
Save & Close
Delete
Calendar
Forward
Actions
Appointment
Scheduling Assistant
Show
Meeting Notes
Meeting Notes
Accept
Tentative
Decline
Propose New Time
Respond
Respond
Show As:
Tentative
Reminder:
None
Recurrence
Time Zones
Options
Categorize
Private
High Importance
Low Importance
Tags
This meeting has been adjusted to reflect your current time zone. It was initially created in the following time zone: America/Chicago.
Organizer
Glen Brannan <gbrannan@mcema.net>
Sent
Thu 6/4/2020 10:52 AM
Subject
Webex meeting changed: Mobile County Hazard Mitigation Planning Meeting
Location
https://mcema.webex.com/mcema/j.php?MTID=m58833e83d32e75598a93577dcc5fee01
Start time
Thu 6/4/2020
2:00 PM
All day event
End time
Thu 6/4/2020
3:30 PM
Attached
Webex_Meeting.ics
7 KB
Glen Brannan changed the Webex meeting information.
When it's time, join the Webex meeting here.
Meeting number (access code): 146 358 2585
Meeting password: 99D3tXmnWdG
Thursday, June 4, 2020
2:00 pm | (UTC-05:00) Central Time (US & Canada) | 1 hr 30 mins
Join meeting
In Shared Folder
Calendar
Type here to search
5:42 AM
6/24/2021

Hazard Mitigation Plan Introduction

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 A. This division includes the following counties and the municipalities and jurisdictions within them: Baldwin, Choctaw, Clarke, Conecuh, Escambia, Mobile, Monroe, and Washington.
This plan will be the first regional mitigation plan for the area. Currently, each county is covered by a multi-jurisdictional county plan. 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.

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.

Funding

Funding for the AEMA Division A Regional Multi-Jurisdictional Hazard Mitigation Plan was provided through the Hazard Mitigation Grant Program (HMGP), under Disaster Recovery Declaration 4349, (DR-4349).

Purpose

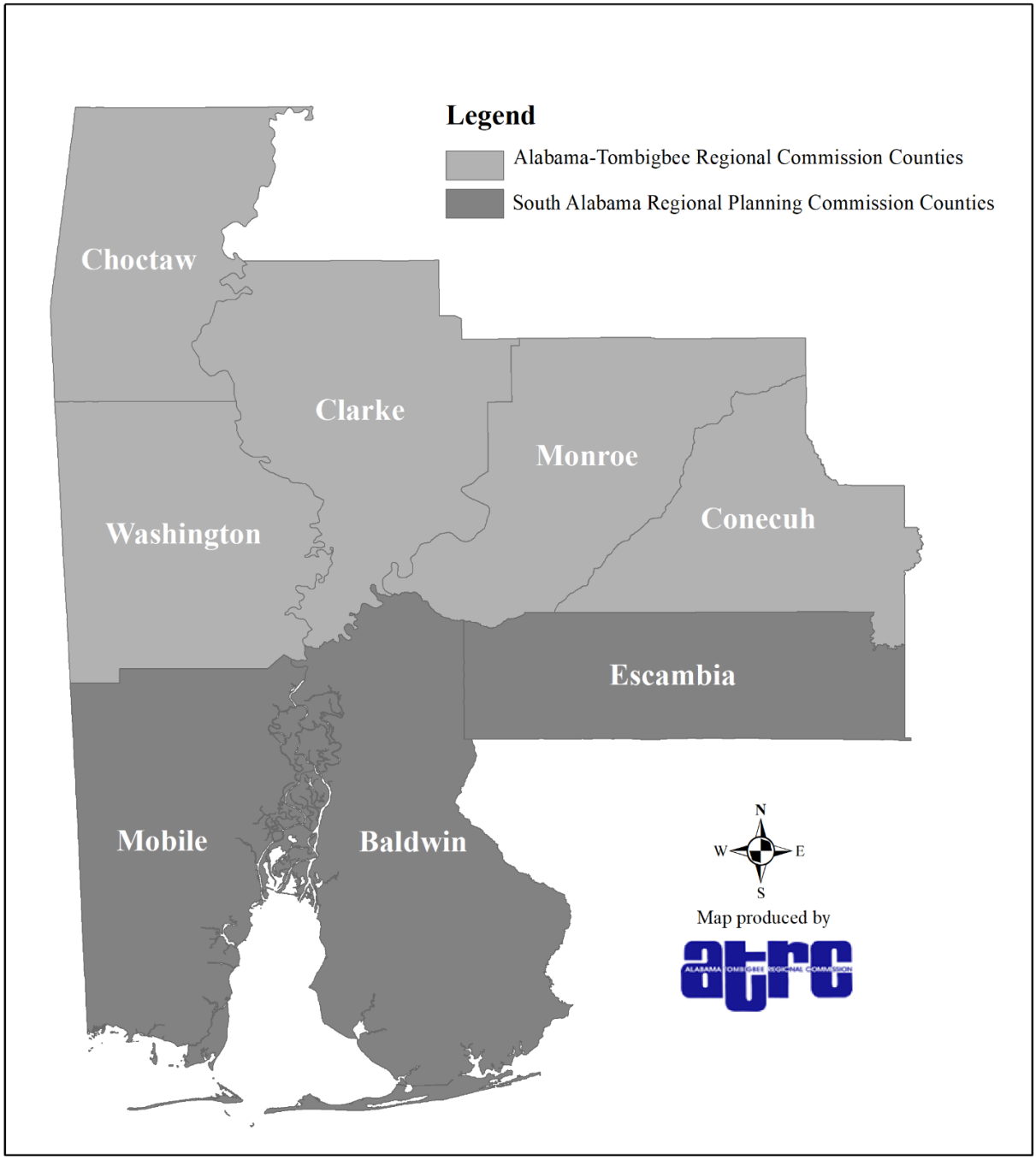
The purpose of the Division A Multi-Jurisdictional Hazard Mitigation Plan is to evaluate and identify all prioritized hazards which may affect the region. Mitigation strategies that address each of the identified hazards are presented. This plan is only one of many steps Division A jurisdictions will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

Planning Document Format

The *Division A Multi-Jurisdictional Hazard Mitigation Plan 2020* will be a multi-phase planning process. Clarke and Conecuh Counties will be included in Phase I. The remaining counties in the division will be incorporated as their current county plans expire. Choctaw County will not be part of the regional plan at this time and will continue to have a county mitigation plan.

Division A is served by two regional planning commissions, the Alabama-Tombigbee Regional Commission (ATRC) and the South Alabama Regional Planning Commission (SARPC) (Figure 1.1). ATRC serves Choctaw, Clarke, Conecuh, Monroe, and Washington Counties. SARPC serves Baldwin, Escambia, and Mobile Counties. There are considerable differences between the counties served by ATRC and those served by SARPC. Due to these differences and the phased planning process, the Division A plan will be divided into two parts: Division A-ATRC Region and Division A- SARPC Region.

Alabama Emergency Management Division A



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A.3 City of Daphne
A.4 Town of Elberta
A.5 City of Fairhope
A.6 City of Foley
A.7 City of Gulf Shores
A.8 Town of Loxley
A.9 Town of Magnolia Springs
A.10 City of Orange Beach
A.11 Town of Perdido Beach
A.12 City of Robertsdale
A.13 Town of Silverhill
A.14 City of Spanish Fort
A.15 Town of Summerdale
A.16 Baldwin County Board of Education

Appendix B: Escambia County Community Action Plans

B.1 Escambia County
B.2 City of Atmore
B.3 City of Brewton
B.4 City of East Brewton
B.5 Town of Flomaton
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B.7 Town of Riverview
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Appendix C: Mobile County Community Action Plans

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C.3 City of Chickasaw
C.4 City of Citronelle
C.5 City of Creola
C.6 Town of Dauphin Island
C.7 City of Mobile
C.8 Town of Mount Vernon
C.9 City of Prichard
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C.11 City of Satsuma
C.12 City of Semmes
C.13 Mobile County Public School System

Appendix D: Public Meeting Documentation

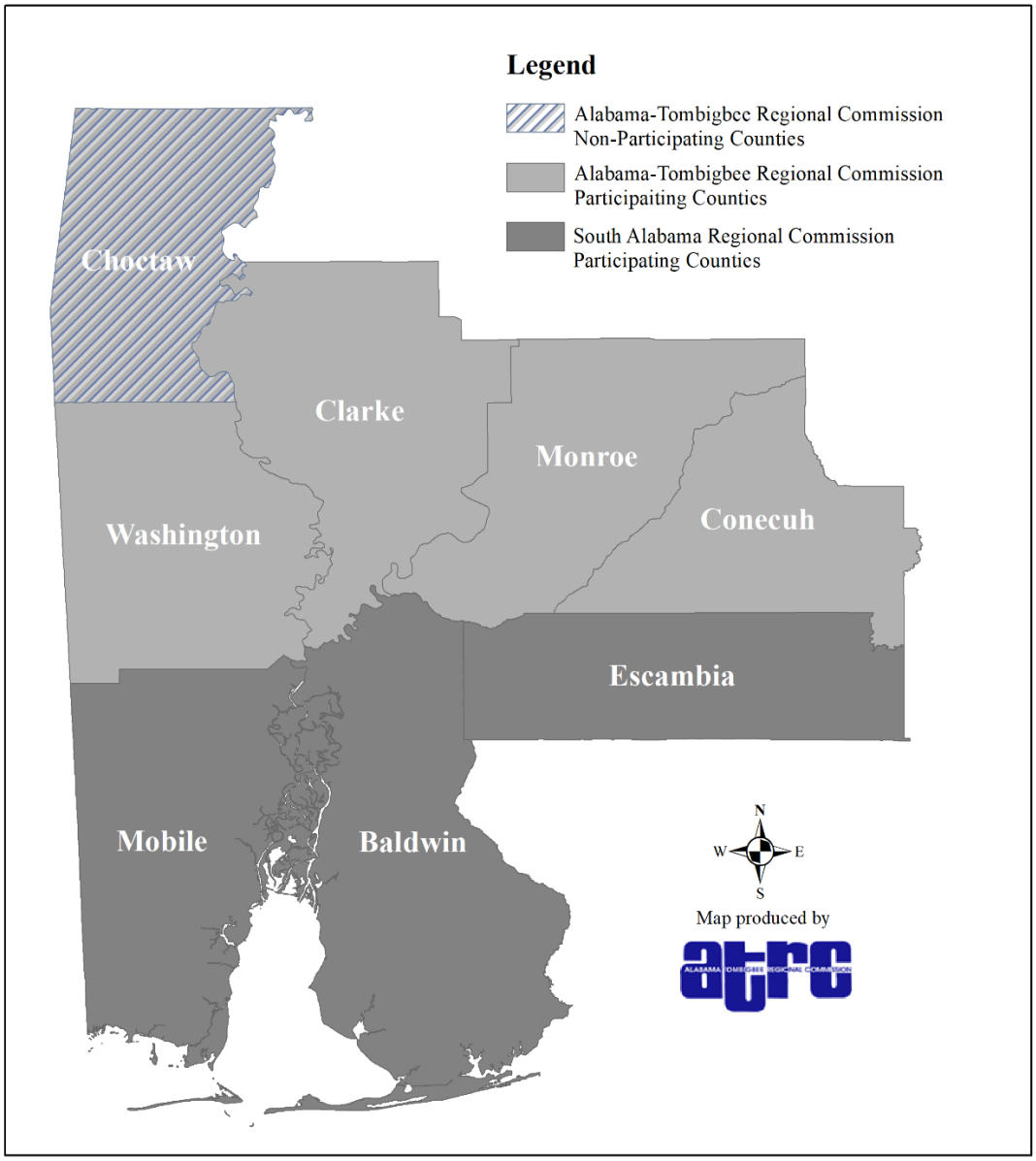
Section 1. SARPC Planning Area Profile

Section Contents

1.1 Background

The planning area for this part of the plan, Phase II, is the Alabama Emergency Management Agency (AEMA) Division A counties served by the South Alabama Regional Planning Commission. Counties included in the planning area are Baldwin, Escambia, and Mobile. Within these three counties there are 29 municipalities. The other counties in AEMA's Division A include Clarke, Conecuh, Monroe, and Washington, who are served by the Alabama Tombigbee Regional Commission. Phase I of this multi-jurisdictional hazard mitigation plan includes Clarke and Conecuh Counties only. A subsequent update will include the remaining counties of Monroe and Washington, as they are currently covered by individual county mitigation plans.

Figure 1.1 Alabama Emergency Management Division A Counties



The largest county in the planning area is Baldwin County which is 1,590 square miles in size, making it the largest county in the state by land area. Mobile County is the fourth largest county in the state. The total land area of this three county area is 3,764.3 square miles, which is approximately 7.4% of the state's total land area. Table 1.1 provides the total area and population density of each county located within the planning area.

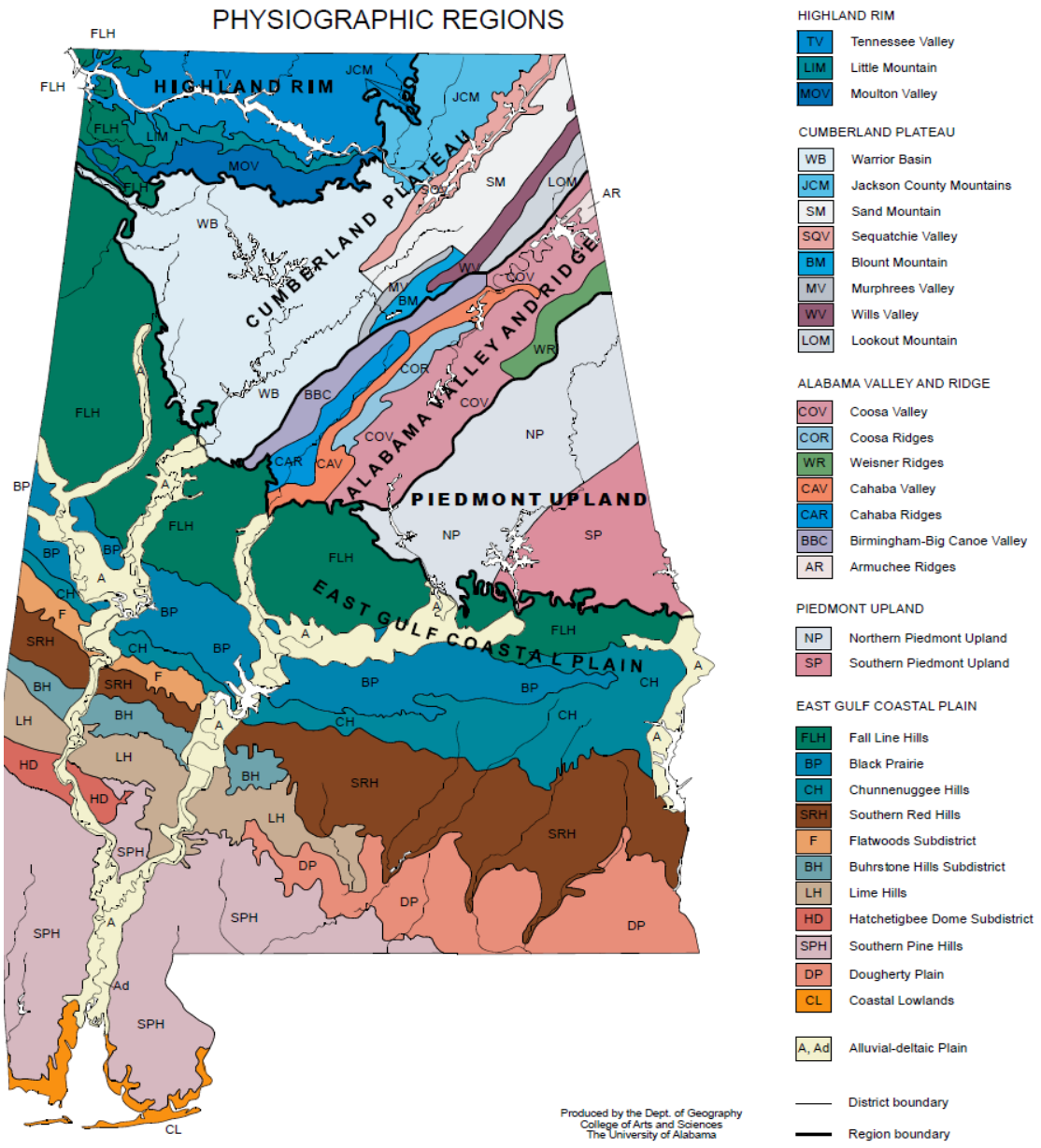
Table 1.1: Total Area by County

County	Total Area	Population per Square Mile
Baldwin	1,589.78	114.6
Escambia	945.08	40.5
Mobile	1,229.44	339.5

Source: U.S. Census Bureau

The entire expanse of the planning area lays within the East Gulf Coastal Plain physiographic region (Figure 1.2). 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, Escatawpa, Tombigbee, and Sepulga river systems.

Figure 1.2 Physiographic Regions of the State of Alabama



Source : http://alabamamaps.ua.edu/contemporarymaps/alabama/physical/al_physio.pdf
Last accessed 1/12/2020

A number of rivers flow through the planning area (Figure 1.3). The Escatawpa River, a tributary of the Pascagoula River, flows in a southerly direction in the western part of Mobile County, before crossing the border into Mississippi. The Alabama and Tombigbee Rivers combine to form the Mobile River approximately 50 miles north of Mobile. The Tensaw River, a tributary of the Mobile River, flows almost parallel to the east, through Baldwin County. Both rivers empty into the Mobile-Tensaw River Delta, which flows in to Mobile Bay. The Conecuh River originates in the east central part of the state and flows generally southwest, through

Escambia County, before joining the Escambia River in Escambia County Florida, south of Alabama.

Figure 1.3 Map of Major Rivers in Alabama

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

1.2 Demographics

According to July 1, 2019 population estimate from the U.S. Census, the total population of the planning area is 633,576 people. This population spans over a total area of 3,764.3 square miles. The populations of the counties in the planning area varies. Table 1.2 provides population counts for all jurisdictions in the SARPC planning area for AEMA Division A from the 2010 Census and the 2018 American Community Survey.

Table 1.2 Division A- SARPC Planning Area Population Change

	2010 CENSUS	2019 ACS	% Change
Baldwin County	182,265	208,107	14.18%
Bay Minette	8,044	9,089	12.99%
Daphne	21,570	25,361	17.58%
Elberta	1,498	1,741	16.22%
Fairhope	15,326	20,327	32.63%
Foley	14,618	17,818	21.89%
Gulf Shores	9,741	12,033	23.53%
Loxley	1,632	2,077	27.27%
Magnolia Springs	723	815	12.72%
Orange Beach	5,441	5,927	8.93%
Perdido Beach	581	550	-5.34%
Robertsdale	5,276	6,521	23.60%
Silverhill	706	633	-10.34%
Spanish Fort	6,798	8,324	22.45%
Summerdale	862	1,026	19.03%
Escambia County	38,319	37,328	-2.59%
Atmore	10,194	9,746	-4.39%
Brewton	5,408	5,263	-2.68%
East Brewton	2,478	2,963	19.57%
Flomaton	1,440	1,695	17.71%
Pollard	137	198	44.53%
Riverview	184	85	-53.80%
Mobile County	412,992	414,659	0.40%
Bayou La Batre	2,558	2,527	-1.21%
Chickasaw	6,106	5,837	-4.41%
Citronelle	3,905	3,911	0.15%
Creola	1,926	1,887	-2.02%
Dauphin Island	1,238	1,229	-0.73%
Mobile	195,111	191,485	-1.86%
Mount Vernon	1,574	1,243	-21.03%
Prichard	22,659	21,927	-3.23%
Saraland	13,405	14,268	6.44%
Satsuma	6,168	6,151	-0.28%
Semmes*	NA	4,869	NA

Source: U.S. Census Bureau (2010 and 2019)

**The City of Semmes was not incorporated until 2011*

Racial and ethnic characteristics from the 2019 U.S. Census estimates are provided by county in Table 1.3. The median age for the planning area is 43.25 years.

Table 1.3 Racial and Ethnic Demographics by County

	White	Black	Other	Hispanic
Baldwin	86.2%	9.3%	2.0%	4.6%
Escambia	62.2%	32.1%	4.7%	2.3%
Mobile	58.6%	35.8%	3.8%	2.9%

Source: U.S. Census Bureau (2019 Estimates)
****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 1.4.

Table 1.4 Housing Demographics by County

County	Occupied Housing Units	% Mobile Homes	% Over 35 years old
Baldwin	80,930	11.1%	21.6%
Escambia	13,089	18.4%	34.7%
Mobile	156,251	53.1%	53.1%

Source: US Census Bureau American Community Survey 2019 5 Year Estimates

Unemployment rates for counties in the planning area vary. For 2019, average unemployment rates vary from a low of 2.7% in Baldwin County to a high of 3.7% in Mobile County. Table 1.5 provides unemployment rates by county.

Table 1.5 Average Unemployment Rates by County

County	Average Unemployment Rate 2019
Baldwin	2.7%
Escambia	3.5%
Mobile	3.7%

Source: Alabama Department of Labor (2019)

1.3 Business and Industry

Division A has a wide variety of both commercial and industrial stakeholders. The SARPC planning region is located two major interstates, I-10 and I-65. The region includes a number of navigable inland waterways, local airports, and railroad lines. Within the planning region the economic base relies heavily on agriculture, manufacturing, retail, healthcare and tourism.

Table 1.6 Largest Employers in AEMA Division A-SARPC Planning Area
Source: Alabama Department of Labor

BALDWIN CO March 2020 (700-4500 emps)	**BALDWIN CO June 2020 (700-4500 emps)**
BALDWIN COUNTY BOARD OF EDUCATION	BALDWIN COUNTY BOARD OF EDUCATION
GULF HEALTH HOSPITALS INC	GULF HEALTH HOSPITALS INC
ROHR INDUSTRIES INC	PUBLIX ALABAMA LLC
SOUTH BALDWIN REGIONAL MEDICAL CENTER	ROHR INDUSTRIES INC
WAL MART ASSOCIATES INC	WAL MART ASSOCIATES INC
ESCAMBIA CO March 2020 (300-800 emps)	**ESCAMBIA CO June 2020 (400-800 emps)**
CREEK CASINO	CREEK CASINO
ESCAMBIA COUNTY BOARD OF EDUCATION	ESCAMBIA COUNTY BOARD OF EDUCATION
GEORGIA PACIFIC BREWTON LLC	GEORGIA PACIFIC BREWTON LLC
POARCH BAND OF CREEK INDIANS	POARCH BAND OF CREEK INDIANS
WAL MART ASSOCIATES INC	WAL MART ASSOCIATES INC
MOBILE CO March 2020 (2200-7800 emps)	**MOBILE CO June 2020 (2200-7800 emps)**
AUSTAL USA LLC	AUSTAL USA LLC
CITY OF MOBILE	CITY OF MOBILE
MOBILE EDUCATION BOARD	MOBILE EDUCATION BOARD
UNIVERSITY OF SOUTH ALABAMA	UNIVERSITY OF SOUTH ALABAMA
WAL MART ASSOCIATES INC	WAL MART ASSOCIATES INC

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.

1.4 Infrastructure

Transportation

The SARPC portion of Division A has two interstates and many major federal and state highways, which serve as major trucking and evacuation routes for the region, linking it to the rest of the country. In addition to federal and state routes, there are numerous county and local routes that connect the communities in the region. The federal and state highways are listed below and the counties in which they are located.

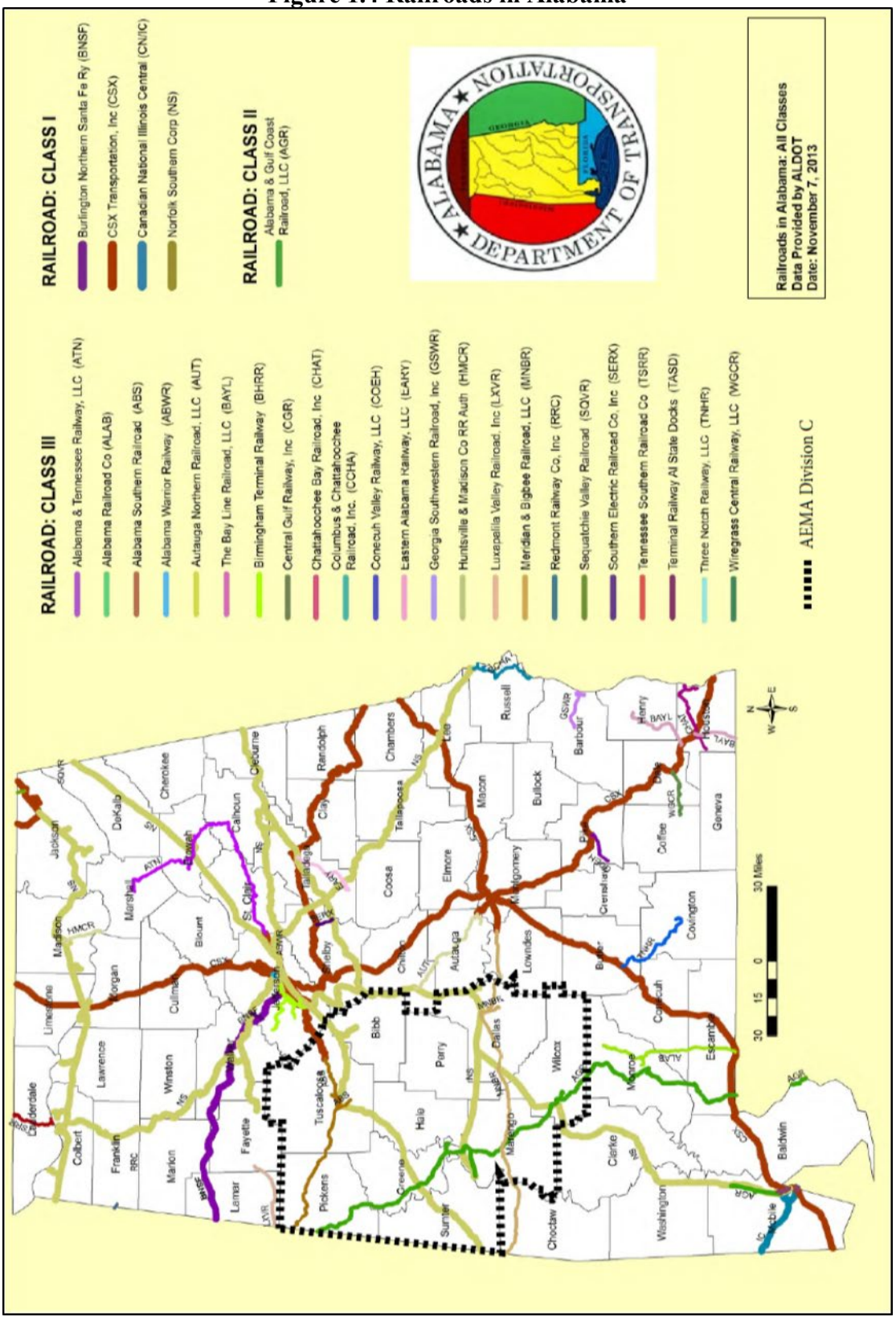
Interstate 10 – Baldwin and Mobile
Interstate 65 – Escambia, Baldwin and Mobile
Interstate 165 – Mobile
US 29 - Escambia
US 31 – Baldwin and Escambia
US 43 – Mobile

US 45 – Mobile
US 90 – Baldwin and Mobile
US 98 – Baldwin and Mobile
AL 21 – Escambia
AL 41 – Escambia
AL 59 – Escambia and Baldwin
AL 113 – Escambia
AL 158 – Mobile
AL 181 – Baldwin
AL 287 - Baldwin

SARPC Division A counties house several airports. Mobile Regional Airport is located in the western part of Mobile County, and Brookley Field is located in southern Mobile County. There are four municipal airports in Baldwin County, located in Bay Minette, Fairhope, Foley and Gulf Shores. Escambia County has municipal airports in Brewton and Atmore.

There are four railroads within the SARPC Division A planning area (Figure1.4). 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 is two Class I railroad in the planning area. One is operated by CSX and runs through Baldwin, Escambia, and Mobile Counties. The second is operated by Canadian National/Illinois Central and runs through Mobile County. A Class II railroad is mid-sized in terms of operating revenue, and 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 two Class II railroad lines in the region. One is located in Mobile County, and the other one runs through Escambia County. 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 is one Class III railroad in the planning area, operated by the Alabama Railroad Company and is located in Escambia County.

Figure 1.4 Railroads in Alabama



Source: ALDOT Rail Directory 2014

Utilities

Alabama Power provides electricity to the region either directly or through one of several power distributors, such as Baldwin Electric Cooperative, Riviera Utilities, and Southern Pine Electric Cooperative.

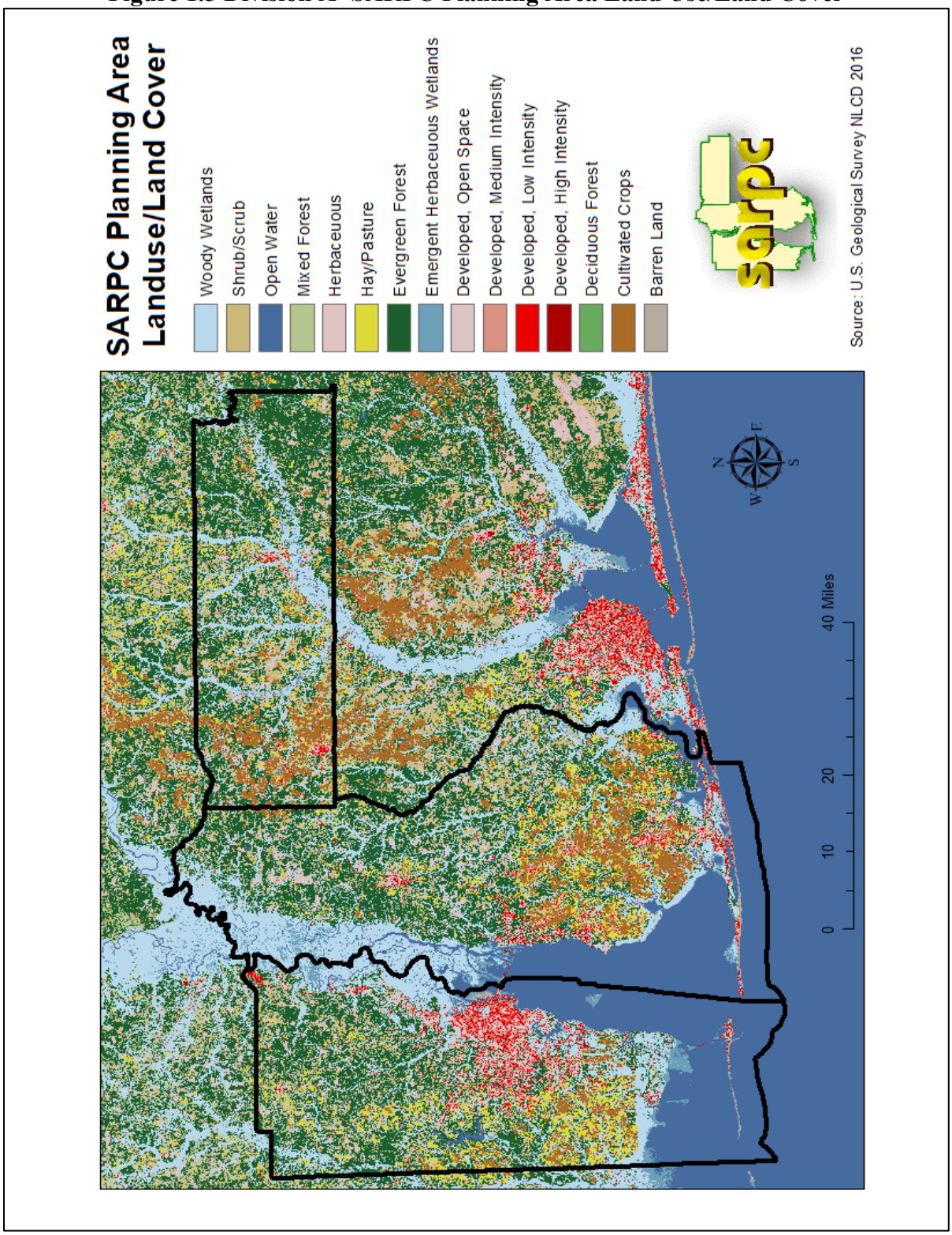
Water and sewer services are provided through municipal and county utility authorities. Most populated areas in the planning region have public water service, where there are only a few instances of areas that have no connection. The majority of the unincorporated areas throughout the region rely on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

Natural Gas is provided by municipal and county authorities as well as the Clarke-Mobile Gas District (Baldwin, Escambia and Mobile), South Alabama Utilities (Mobile), Riviera Utilities (Baldwin) and the South Alabama Gas District (Escambia).

1.5 Land Use and Development Trends

The counties served by SARPC in Division A are cover a wide variety of land uses (Figure 1.5). Other than the City of Mobile, in Mobile County, the area consists of numerous small towns, forests, wetlands, and agricultural land. The University of Alabama's Center for Business and Economic Research publishes projection estimates for the state. In the past few decades, Baldwin County has been one of the fastest growing counties in Alabama, and is projected to grow steadily over the next twenty years. The population of Escambia County is projected to slightly decline over the same time period, and the population of Mobile County is projected to increase, but at a lesser rate than Baldwin County. Projections for metropolitan areas show Mobile and Daphne/Fairhop/Foley both increasing over the next 20 years. Historically, other areas in SARPC's region A have not seen much growth and are not projected to grow much.

Figure 1.5 Division A- SARPC Planning Area Land Use/Land Cover



Section 2- ATRC 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

2.1 Multi-Jurisdictional Plan Adoption

Each of the participating jurisdictions will adopt the plan once it is deemed "approvable pending adoption" by the Federal Emergency Management Agency (FEMA). Eligible jurisdictions include regional planning councils, local governing bodies including municipal councils, county commissions and local school districts as well as other public or private entities As applicable within each county, other entities may include health systems, fire associations and institutions of higher education that participated in the planning process and will adopt the Division A plan in order to be included as eligible applicants for FEMA HMA grant assistance.

2.2 Multi-Jurisdictional Planning Participation

All eligible jurisdictions in Baldwin, Escambia, and Mobile 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. Table 2.1 provides a list of entities that will adopt the mitigation plan.

Table 2.1 Division A Plan Participants Adopting Plan

Baldwin County
Baldwin County
City of Bay Minette
City of Daphne
Town of Elberta
City of Fairhope
City of Foley
City of Gulf Shores
Town of Loxley
Town of Magnolia Springs
City of Orange Beach
Town of Perdido Beach
City of Robertsdale
Town of Silverhill
City of Spanish Fort
Town of Summerdale
Baldwin County Board of Education
Escambia County
Escambia County
City of Atmore
City of Brewton
City of East Brewton
Town of Flomaton
Town of Pollard
Town of Riverview
Mobile County
Mobile County
Mobile County Public School System
City of Bayou La Batre
City of Chickasaw
City of Citronelle
City of Creola
Town of Dauphin Island
City of Mobile
Town of Mount Vernon
City of Prichard
City of Saraland
City of Satsuma
City of Semmes

2.3 Hazard Mitigation Planning Process

This part of the AEMA Division A Multi-Jurisdictional Hazard Mitigation Plan was developed through interaction between AEMA, Division A EMA directors and the South Alabama Regional Planning Commission (SARPC). These entities comprised the Regional Hazard Mitigation Planning Committee. However, due to COVID-19 restrictions and shutdowns starting in March of 2020, the committee was forced to undertake the process in a different than usual manner, following National Center for Disease Control (CDC) and State of Alabama Emergency Health Guidelines. The SARPC staff worked with representatives from each of the three counties, Baldwin, Escambia, and Mobile to develop this regional hazard mitigation plan. This process involved the following:

- Review of previous local hazard mitigation plans
- Virtual meetings, and in-person when allowed, to discuss the plan, process and progress
- Coordination by County EMA's with local municipalities for input
- Completion of surveys by each jurisdiction as to completed and ongoing activities
- Completion of action plan by each jurisdiction
- Review of the draft plan

In development of the plan, 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 SARPC 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 and adoption by each jurisdiction.

Table 2.2 Jurisdiction Representatives

Jurisdiction	Primary Contact/Title	Attended Meetings	Provided Written Comments	Phone, email or other means of contact
Baldwin County Commission	Danon Smith, EMA Planning & Grants Division Manager	X		
Baldwin County Commission	Zach Hood, EMA Director	X		
Baldwin County Commission	Eddie Harper, Baldwin County Building Official & Floodplain Manager	X		
Baldwin County Commission	DJ Hart, CRS Coordinator (Planning & Zoning)	X		
Baldwin County Board of Education	Anthony Sampson, Director of Prevention & Support Services	X		
City of Bay Minette	Michael Minchew, Fire Chief/Emergency Management Coordinator	X		
City of Daphne	Eric Butler, Building Official	X		
Town of Elberta	Jim Hamby, Mayor	X		
Town of Elberta	Caryn Woerner, Town Clerk	X		
City of Fairhope	Erik Cortinas, Building Official	X		
City of Foley	Rachel Keith, Project & Risk Manager/EMA Director	X		
City of Gulf Shores	Brandan Franklin, Building Official/Floodplain Administrator	X		
Town of Loxley	Robert Davis, Superintendent of Utilities	X		

Town of Magnolia Springs	Kim Koniar, Mayor			X
Town of Magnolia Springs	Hannah Driskell, Town Clerk			X
City of Orange Beach	Landon K. Smith, Building Official (left City in May 2021)	X		
City of Orange Beach	Nicole Woerner, Grants Manager/Coastal Resources	X		
City of Robertsdale	Greg Smith, City Engineer	X		
City of Robertsdale	Scott Gilbert	X		
Town of Silverhill	Jared Lyles, Mayor	X		
Town of Spanish Fort	Chester Patterson, Building Official	X		
Town of Summerdale	Tiffany Lynn, Town Clerk	X		
Town of Summerdale	Kevin Brock, Police Chief			X
Escambia County Commission	David Adams, EMA Director	X		
City of Atmore	Chris Black, Code Enforcement	X		
City of Brewton	Brooke Hartin, City Clerk	X		
City of East Brewton	Kristy Edwards, City Clerk	X		
Town of Flomaton	Shaun Moye, Superintendent	X		
Town of Pollard	Valeria Osby, Mayor			X
Town of Riverview	Lisa Marie McCall			X
Mobile County Commission	Tina Sanchez, Director of Environmental Services Eddie Kerr, Deputy Administrator	X		
City of Bayou La Batre	Terry Downey, Mayor	X		
City of Chickasaw	Jessica Veals, City Clerk	X		
City of Citronelle	Jason Stringer, Mayor Lori Bryan, City Clerk	X		
City of Creola	John White	X		
Town of Dauphin Island	Wanda Sandagger, City Clerk	X		
City of Mobile	Janic Terry, Engineering Department	X		
Town of Mount Vernon	Tina Dillard, City Clerk	X		
City of Prichard	Davis Hale, Chief, Prichard Fire Department	X		
City of Saraland	Shane Lovitte, Chief, Saraland Fire/Rescue	X		
City of Satsuma	J Elmore, Public Works Supervisor Tom Briand, Building Inspector	X		
City of Semmes	Leticia Fultz, EMA Coordinator	X		

Mobile County Public School System	Chuck Harben, Supervisor of Accounts Payable and Risk Management	X		
Mobile County Health Department	Erin Coker, Emergency Preparedness Director Brittany Edmondson, Emergency Preparedness	X		
Mobile County Communication District	Charlie McNichol, Deputy Director	X		
VOAD	Mike Dillibar	X		
MAWSS	Charles Hyland, Director	X		

2.4 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. Most of these meetings were held virtually, due to the COVID-19 pandemic, but were advertised and open to the public. The draft plan was made available for review, with a minimum of 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. Each county EMA, and jurisdiction posted the draft on their websites (where possible), and copies were available in public facilities. No comments were received during or after posting the plan.

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. 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 A plan.

Documentation of stakeholder involvements, though limited, is included in Appendix D. Baldwin County EMA coordinated the hazard mitigation committee and held both in-person and virtual meetings which were open to the public and advertised on their website. In order to adhere to mandated health and safety protocals, Mobile and Escambia County EMA's, held zoom/conference calls and used individual outreach to jurisdictions and stakeholders, who in turn collected input and feedback from the public. In all three counties, public input was received since the prior plan was adopted and during this planning process was utilized by the jurisdictions when drafting their action plans. Future updates will work to incorporate additional public involvement, as described in Section 5.3.

The South Alabama Regional Planning Commission 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, mail, or email and invited to participate or provide information. SARPC also maintained direct contact with EMA directors, who then helped with gathering information, requesting input, and distributing

information from and to the local jurisdictions. Many state and federal agencies were consulted via phone, email, or through websites, to provide data and information for this plan. Sources consulted are documented throughout the plan.

Again, due to the COVID-19 pandemic and the shutdowns and restriction imposed starting in March 2020, the typical planning process was altered. Baldwin County EMA submitted a letter, explaining their efforts for public awareness and to solicit public input.

Baldwin County Emergency Management Agency
23100 McAuliffe Drive, Robertsdale, Alabama 36567
(251) 972-6807 Fax # (251) 580-1616
Danon Smith, Planning & Grants Coordinator

February 25, 2021

Leslie Johnston, Planner
South Alabama Regional Planning Commission
110 Beauregard St. Suite 207
P.O. Box 1665
Mobile, AL 36633

Dear Ms. Johnston:

I am writing this letter to recap the results of discussion during the February 25, 2021 Hazard Mitigation Planning Committee's Executive Committee Meeting of the best way to safely provide opportunity for public comment on the draft 2020-2021 Baldwin County Multi-Jurisdiction Hazard Mitigation Plan. We, the Executive Committee, recommend the mitigation plan outreach strategies recommended in FEMA's Local Mitigation Planning Guidance be congruous to the current "Safer at Home" order in place for the State of Alabama. This order is in place under the direction of Governor Kay Ivey with the advisement of State Health Officer Dr. Harris.

This modification will entail presenting the draft plan digitally, via the EMA Mitigation website, and the agendas of all City/Town Council "Council of the Whole" or Work Session Meetings, which are public and include corresponding public notices and agendas.

My number is (251) 972-8510, and my email address is danon.smith@baldwincountyal.gov .

Highest Regards,

Danon Smith

Danon Smith

Planning & Grants Manager with the Baldwin County Emergency Management Agency and Secretary of the Baldwin County Hazard Mitigation Planning Committee

CC: Zachary M. Hood, EMA Director
The Full Body of the Baldwin Hazard Mitigation Planning Committee, *and the leadership and public of their respective jurisdictions*

Encl: Safer at Home Order, as most recently amended.
Meeting Minutes for the 02/25/2021 MPC Executive Committee Meeting

2.5 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 three participating SARPC counties in AEMA Division A 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.

South Alabama Regional Planning Commission Comprehensive Economic Development Strategy (CEDS) (2017 With Annual Updates): The SARPC CEDS 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 A 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 were reviewed with jurisdictions during this process to ensure consistency.

Other sources utilized for data incorporation are listed in the Section 3 – Risk Assessment.

Section 3- SARPC Planning Area Risk Assessment

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

Section Contents

3.1 Hazard Overview

SARPC's Division A counties are 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 includes only one human-caused hazard, the COVID-19 pandemic.

SARPC's Division A counties have been included in 32 Federal Disaster Declarations, and 12 Emergencies, as shown in Table 3.1. 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 3.1 SARPC Division A Planning Area Federally Declared Disasters

Disaster Number	Declaration Date	Counties Declared	Type of Incident
280	11/7/69	Mobile, Baldwin	Hurricane Camille
369	3/27/73	Mobile, Baldwin, Escambia	Tornadoes, Flooding
3045*	7/20/77	Mobile, Baldwin, Escambia	Drought
563	8/9/78	Baldwin	Severe Storms, Flooding
3074*	3/17/79	Baldwin	Flooding
598	9/13/79	Mobile, Baldwin, Escambia	Hurricane Frederic
619	4/20/80	Mobile	Severe Storms, Tornadoes, Flooding
639	5/14/81	Mobile	Severe Storms, Flooding
742	9/17/85	Mobile, Baldwin	Hurricane Elena
861	3/21/90	Mobile, Baldwin, Escambia	Severe Storms, Tornadoes, Flooding
3096*	3/15/93	Mobile, Baldwin, Escambia	Severe Snowfall, Winter Storm
1070	10/4/95	Mobile, Baldwin, Escambia	Hurricane Opal
1185	7/25/97	Mobile, Baldwin	Hurricane Danny
1208	3/9/98	Escambia	Severe Storms, Flooding
3133*	9/28/98	Mobile, Baldwin, Escambia	Hurricane Georges
1250	9/30/98	Mobile, Baldwin, Escambia	Hurricane Georges

1438	10/9/02	Mobile, Baldwin	Tropical Storm Isidore
1466	5/12/03	Mobile, Baldwin, Escambia	Severe Storms, Tornadoes, Flooding
1549	9/15/04	Mobile, Baldwin, Escambia	Hurricane Ivan
1593	7/10/05	Mobile, Baldwin, Escambia	Hurricane Dennis
3214*	8/28/05	Mobile, Baldwin	Hurricane Katrina
1605	8/29/05	Mobile, Baldwin	Hurricane Katrina
3237*	9/10/05	Mobile, Baldwin, Escambia	Hurricane Katrina Evacuation
3292*	8/30/08	Baldwin, Escambia	Hurricane Gustav
1789	9/10/08	Baldwin, Escambia	Hurricane Gustav
1797	9/26/08	Mobile, Baldwin	Hurricane Ike
1835	4/28/09	Baldwin	Severe Storms, Flooding, Tornadoes, Straight-Line Winds
1866	12/22/09	Mobile, Baldwin	Tropical Storm Ida
1870	12/31/09	Escambia	Severe Storms, Flooding
3319*	4/27/11	Mobile, Baldwin, Escambia	Severe Storms, Flooding
1270	12/31/09	Escambia	Severe Storms, Flooding
1971	4/28/11	Mobile, Baldwin, Escambia	Severe Storms, Tornadoes, Straight-Line Winds, Flooding
4082	9/21/12	Mobile, Baldwin	Hurricane Isaac
4176	5/2/14	Mobile, Baldwin	Severe Storms, Tornadoes, Straight-Line Winds, Flooding
4251	1/21/16	Escambia	Severe Storms, Tornadoes, Straight-Line Winds, Flooding
3389*	9/11/17	Mobile, Baldwin, Escambia	Severe Storms, Tornadoes, Straight-Line Winds, Flooding
3394*	10/8/17	Mobile, Baldwin, Escambia	Severe Storms, Tornadoes, Straight-Line Winds, Flooding
4349	11/16/17	Mobile, Baldwin	Hurricane Nate
3407*	10/12/18	Mobile, Baldwin, Escambia	Hurricane Michael
4406	11/5/18	Mobile	Hurricane Michael
3472*	3/13/20	Mobile, Baldwin, Escambia	COVID-19 Pandemic

4503	3/29/20	Mobile, Baldwin, Escambia	COVID-19 Pandemic
4563	9/20/20	Mobile, Baldwin, Escambia	Hurricane Sally
4573	12/10/20	Mobile	Hurricane Zeta

*Denotes an emergency, rather than a disaster
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.

3.2 Hazard Profiles

Multiple natural hazards affect the SARPC's Division A counties. 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.

Due to its geographical location, SARPC's Division A counties are vulnerable to hazards that can disrupt life at any time throughout the year. There are numerous hazard types that are not applicable to these counties. These hazards include avalanche, and volcanoes. No other mention of these hazards will be made. Table 3.2 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 3.2 Potential Hazards and Data Sources

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

Land Subsidence/ Sinkholes	Yes	Geological Survey of Alabama, Sinkholes in Alabama (http://gsa.state.al.us/gsa/geologichazards/Sinkholes_AL.htm)	Susceptible areas to land subsidence / sinkholes
Tsunami	No	FEMA, Tsunami (http://m.fema.gov/tsunamis)	Minimal risk/no identified historic incidents
Volcano	No	FEMA, Volcanoes (http://m.fema.gov/volcanoes)	No risk: AEMA Division A is not near an active volcanic area
Wildfire	Yes	Southern Wildfire Risk Assessment (www.southernwildfirerisk.com)	Historic incidents with damage / identified susceptible areas
Winter / Ice Storms	Yes	NOAA National Climatic Data Center (http://www.ncdc.noaa.gov/stormevents/)	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 Events:** 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. These qualitative descriptions are from historical occurrences and other risk factors. 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

The National Inventory of Dams (NID) lists 73 dams in the SARPC planning area. Baldwin County has 23, Escambia County has 17, and Mobile County has 33. None of these dams are regulated by a State or Federal Agency. However, 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. Table 3.3 shows the 11 dams in the region with significant or high hazard potential. Figures 3.1 – 3.3 show the dam locations in each county, with proximity to each jurisdiction.

Table 3.3 Dam Hazard Classification

Damn Name	County	Hazard Potential	Emergency Action Plan
JP Bertolli	Baldwin	Significant	No
Big Creek Lake	Mobile	High	No
Dawes Lake	Mobile	High	No
Bermuda Run	Mobile	Significant	No
Brooks Pond	Mobile	Significant	No

Municipal Park Lake 1	Mobile	Significant	No
WJ Ellis/Bill's Lake	Escambia	High	No
Marshall Patterson	Escambia	Significant	No
Randolph Jernigan #2	Escambia	Significant	No
Odie Sherrer	Escambia	Significant	No
WJ Ellis	Escambia	Significant	No

Figure 3.1 Dam Hazard Classification – Baldwin County

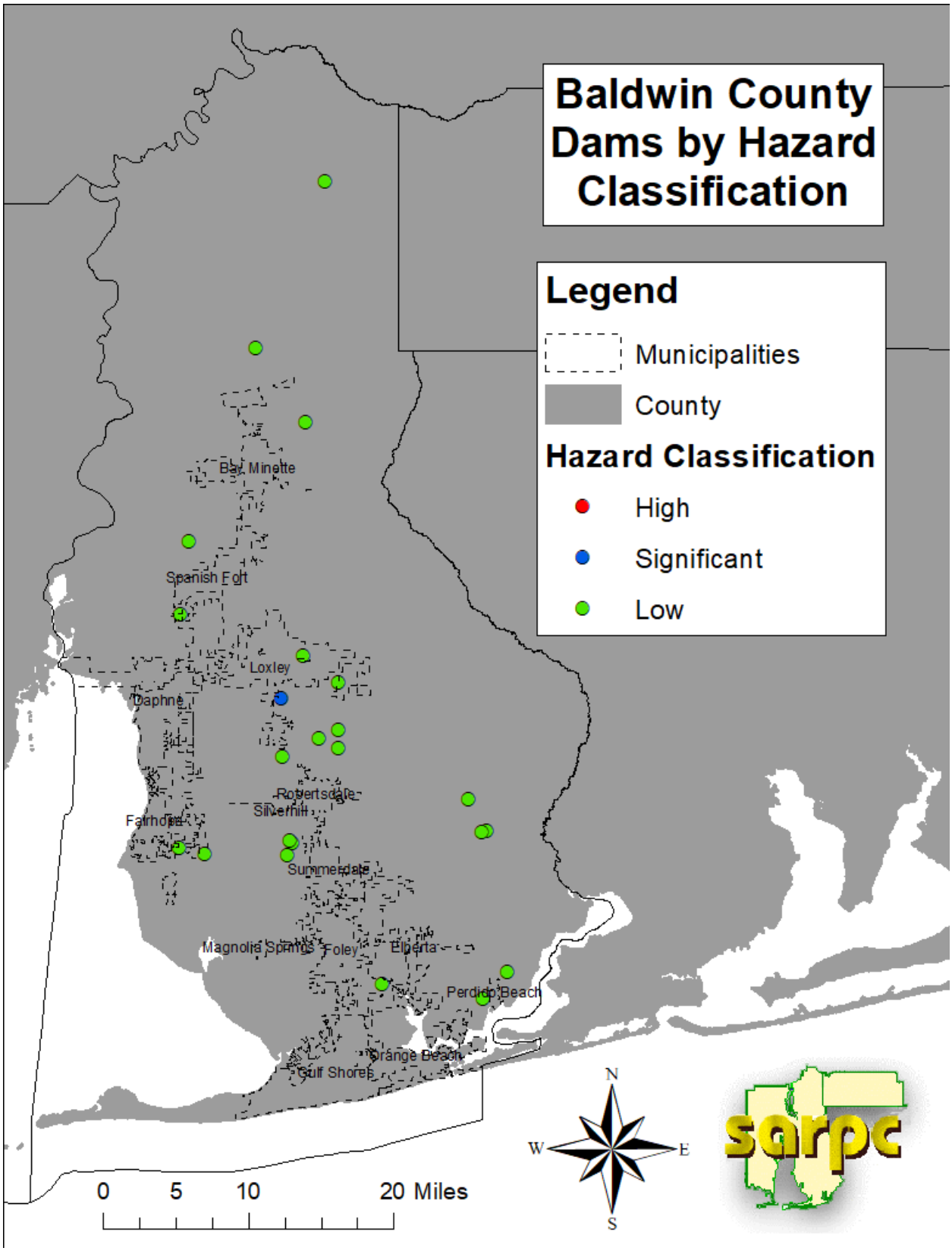


Figure 3.2 Dam Hazard Classification – Escambia County

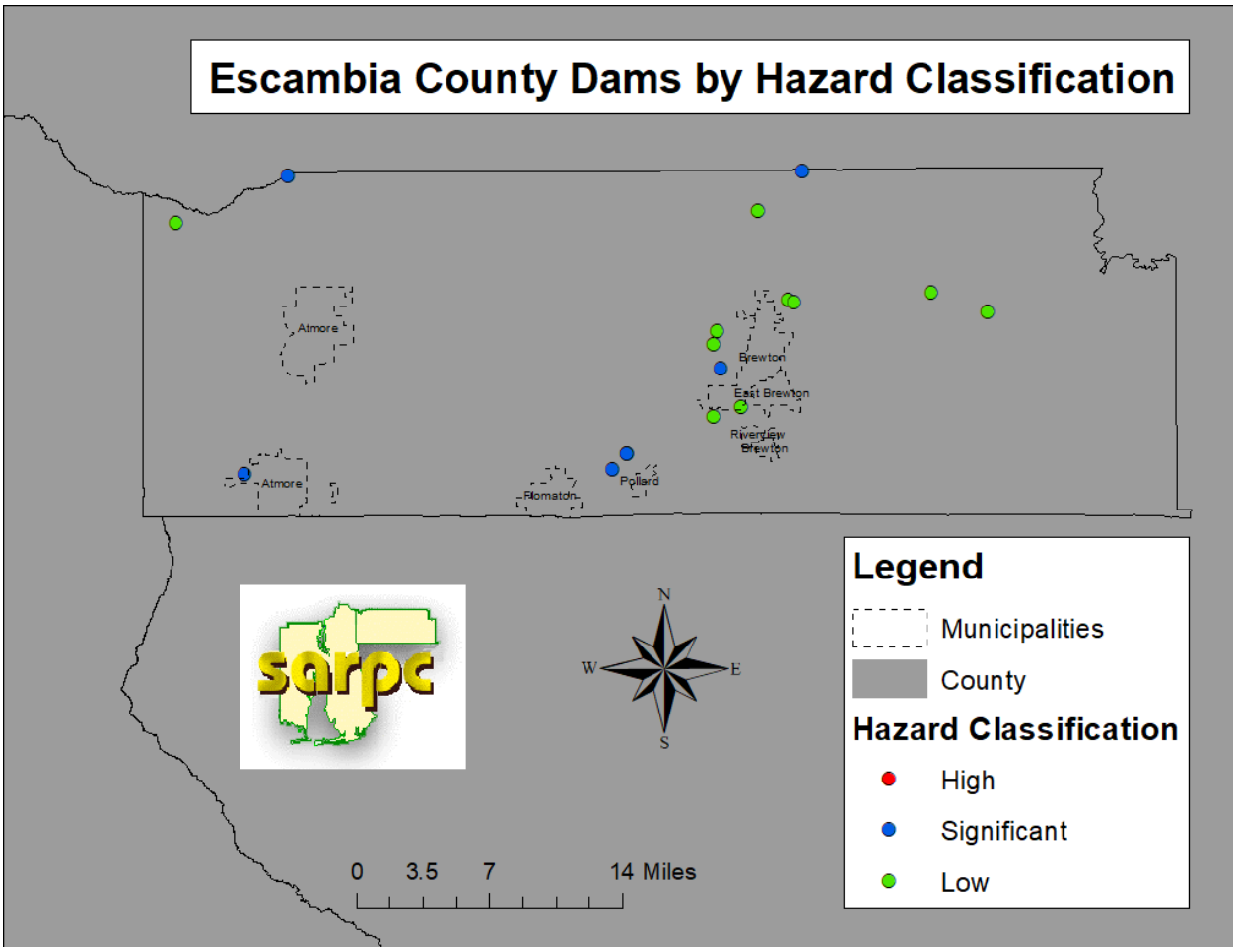
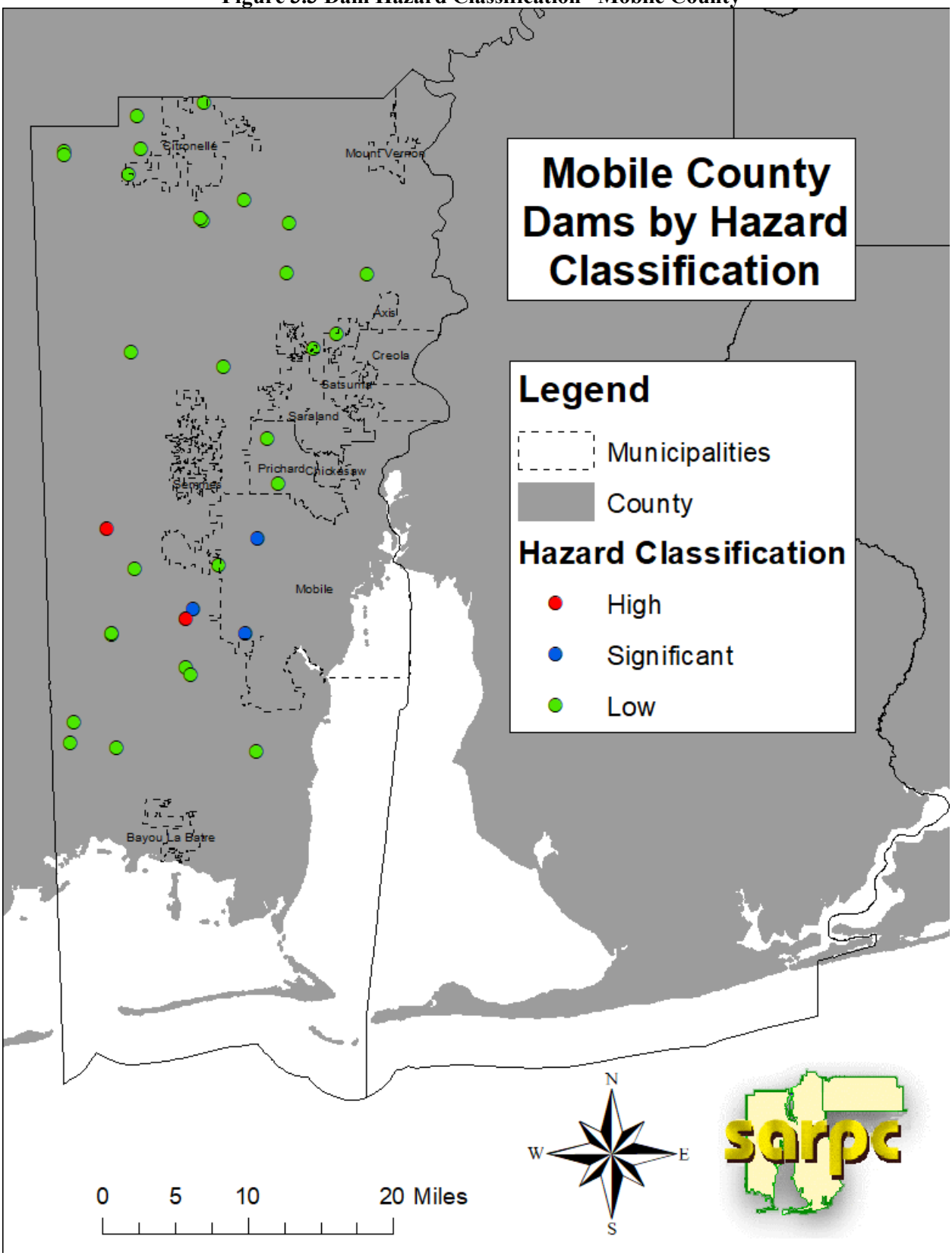


Figure 3.3 Dam Hazard Classification –Mobile County



Extent

Federal Guidelines for Dam Safety presents three classifications for "hazard potential." Currently, this classification is the best indicator of the potential extent of dam failure. Table 3.4 provides details of the classification.

Table 3.4 Dam Hazard Classification

Hazard Potential Classification	Loss of Human Life	Economic, Environmental, Lifeline Losses
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)

For most of the dams in the 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.

Historical Occurrences

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

Probability of Future Events

There are no documented occurrences of dam failures within the planning area. There is a deficit in predicting probability of failure extending from outdated and incomplete dam information.

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 3.5.

Table 3.5 Drought Classifications

Meteorological Drought	Departure of actual precipitation from an expected average or normal amount based on monthly, seasonal, or annual time scales.
Hydrologic Drought	Effects of precipitation shortfalls on stream flows and reservoir, lake, and groundwater levels.
Agricultural Drought	Soil moisture deficiencies relative to water demands of plant life, usually crops.
Socioeconomic Drought	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. All SARPC Division A counties are prone to unpredictable precipitation patterns including extended periods of below-average rainfall which lead to drought conditions. High, subtropical temperatures are common in south Alabama. 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 3.6 provides a description of each level of intensity.

Table 3.6 U.S. Drought Monitor Classification Scheme

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

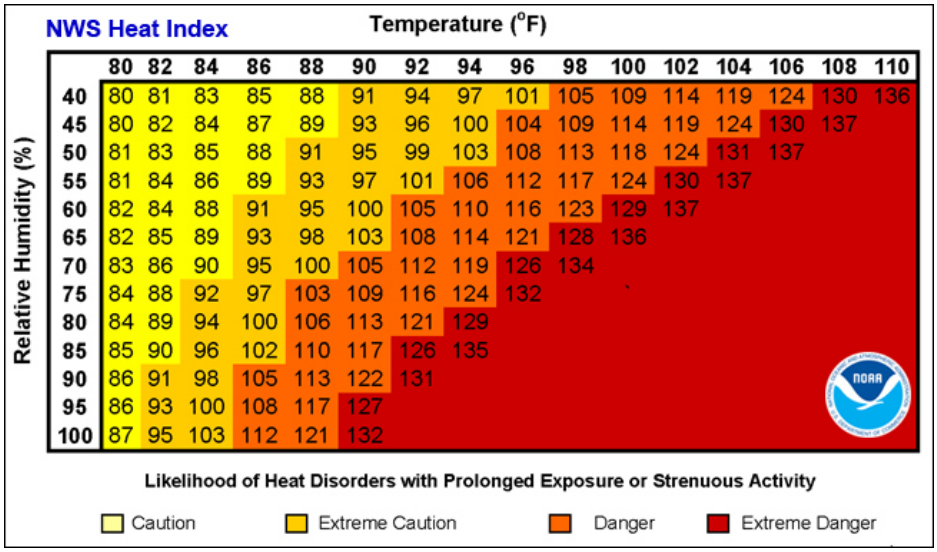
Source: https://droughtmonitor.unl.edu/About/AbouttheData/DroughtClassification.aspx
Last Accessed on 1/13/20

Drought conditions will occur in the planning area 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 SARPC Division A counties, 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 the planning area 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 3.7 provides a guide to how dangerous higher temperatures can be when occurring with high humidity.

Table 3.7 Heat Index



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

Historical Occurrences

Only Escambia County in the SARPC Division A region 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 only Escambia County in SARPC's Division A region experienced some degree of drought between 2000 and 2020. Table 3.8 provides a summary of drought conditions in the region since 2000 that were recorded in the NOAA Storm Events Database. No records for this time period were found for extreme heat.

Table 3.8 Division A- SARPC Planning Area Drought Occurrences 2000-2020

Location	Date	Magnitude	Property Damage	Crop Damage
Escambia	11/1/16	D3	0	0
Escambia	12/1/16	D2-D3	0	0
Totals:			**$0**	**$0**

Source: NOAA Storm Events Database

Probability of Future Events

The probability of drought and extreme heat occurring within the region is relatively high. Most jurisdictions in the region can manage milder cases of drought and heat waves that occur occasionally, which render minor impacts. However, the probability of an impactful drought or an extreme heat event occurring in the planning area is classified as low (probably major damage in a 100 year period).

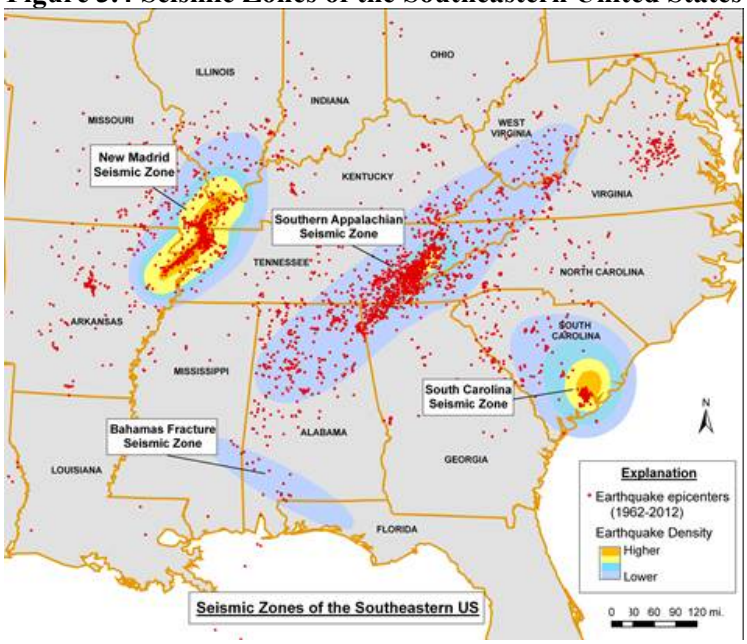
EARTHQUAKES

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 3.4). Escambia County and portions of Baldwin County are within the Bahamas Fracture Seismic Zone.

Figure 3.4 Seismic Zones of the Southeastern United States



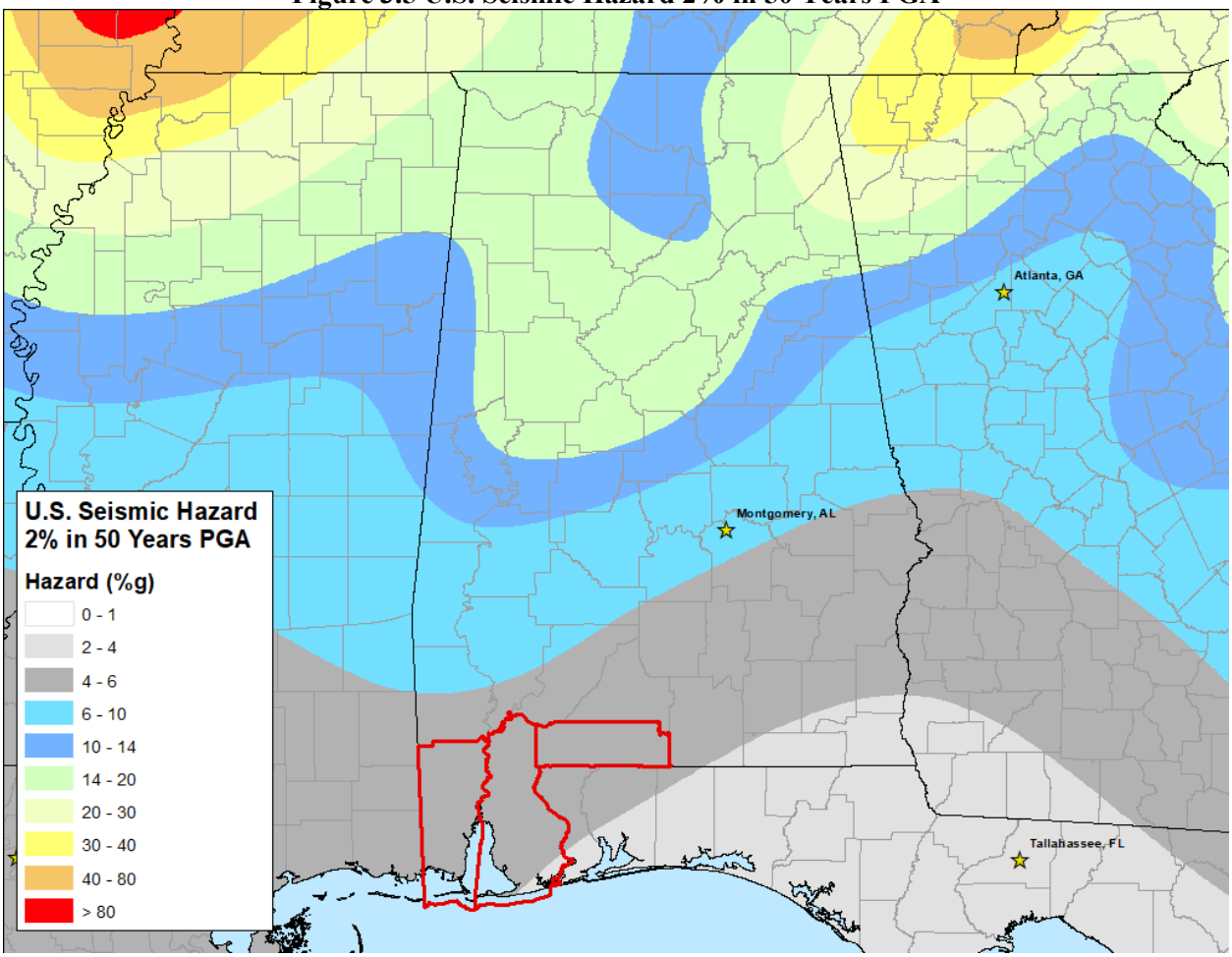
Source: https://www.gsa.state.al.us/gsa/geologic/hazards/earthquakes/alquakes

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 3.5 is the seismic hazard map for Alabama. As you move north in Division A, the seismic risk increases.

Northern Clarke and Washington, and northwest Monroe have the highest risk with a 2% chance of shaking exceeding between 6-10%g in the next 50 years.

Figure 3.5 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 Mw, 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 3.9). 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.

Table 3.9 Modified Mercalli Earthquake Measurement Scale

PGA (%g)	Magnitude (Richter)	Intensity (MMI)	Description (MMI)
<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.

Table 3.9 Modified Mercalli Earthquake Measurement Scale			
PGA (%g)	**Magnitude (Richter)**	**Intensity (MMI)**	**Description (MMI)**
>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. 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.
Source: United States Geological Survey http://earthquake.usgs.gov Last accessed 12/19/2019			

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 the planning area, earthquakes up to 4.9 on the Richter Scale have occurred. An earthquake of this magnitude will be felt by most people and will cause some minor damage. However, the average intensity of earthquakes in the planning area is 2.7, which is a very weak earthquake and would be felt by few people. These earthquakes are usually identified by the review of seismograms.

Historical Occurrences

There are 21 recorded earthquake occurrences for Clarke, Monroe, and Washington Counties (Table 3.10). The magnitude 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.

Table 3.10 Division A- SARPC Planning Area
Historic Earthquake Incidences
Source: Geological Survey of Alabama

Date	County	Location	Magnitude	Latitude	Longitude
12/10/74	Escambia	Huxford	0.2	31.3460	-87.4670
5/4/97	Escambia	Atmore	3.1	31.0000	-87.4000
10/24/97	Escambia	LittleRock	4.9	31.1180	-87.3390
10/26/97	Escambia	LittleRock	3.7	31.1000	-87.3000
10/28/97	Escambia	LittleRock	3.0	31.1000	-87.3000
1/26/80	Escambia	LittleRock	2.8	31.1800	-87.6100
9/25/03	Escambia	Atmore	2.9	31.1510	-87.5170
9/29/03	Escambia	Atmore	3.0	31.0310	-87.4620

9/30/03	Escambia	EscambiaCo	3.3	31.1100	-87.5200
3/11/19	Escambia	Flomaton	3.1	31.0410	-87.2690
3/13/19	Escambia	Flomaton	2.3	31.0110	-87.2270
3/13/19	Escambia	Pollard	2.2	31.0120	-87.1780
3/27/19	Escambia	Pollard_a	2.1	30.9990	-87.1600
3/27/19	Escambia	Pollard_b	1.6	30.9990	-87.1610
4/11/19	Escambia	Pollard_a	2.3	31.0650	-87.1950
4/11/19	Escambia	Pollard_b	2.8	31.0640	-87.1940
4/11/19	Escambia	Pollard_c	3.2	31.0640	-87.1940
4/12/19	Escambia	Pollard	2.2	31.0580	-87.1770
4/13/19	Escambia	Pollard	2.2	31.0630	-87.1910
6/13/19	Mobile	Mobile	3.2	30.7000	-88.0000
11/10/20	Mobile	Dauphin Island	2.7	30.1110	-88.0730

Probability of Future Events

Historically, earthquakes have occurred in Escambia and Mobile Counties. Overall, the occurrence of earthquakes in Division A is likely, but the probability of a high intensity quake in the division is low.

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 the planning area:

- 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 A 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.

- Coastal flooding: Coastal flooding is occurs when water in coastal areas rises above the normal water level. This type of flooding is caused by strong, persistent onshore wind, high astronomical tides, and/or low atmospheric pressure, resulting in damage, erosion, flooding, fatalities, or injuries.

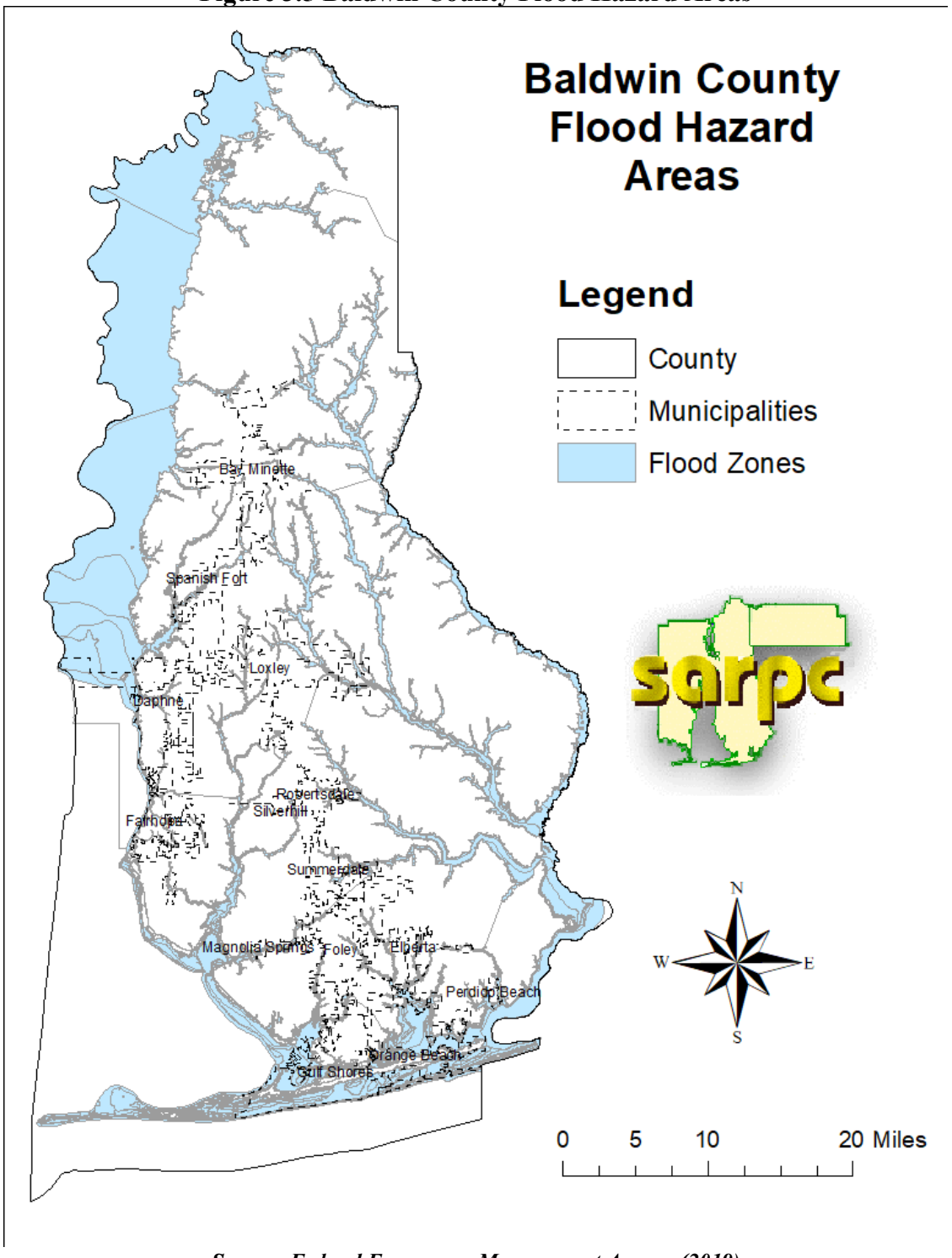
Locations Affected

Counties in Division A are susceptible to both flash flooding and riverine flooding. Due to the nature of flash floods, the entire planning area 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. Coastal flooding is a hazard that affects the coastal areas. Special Flood Hazard Areas are shown by county and

jurisdiction in Figures 3.5 through 3.34. This information is based on the most recent FEMA National Flood Layer available.

Figures 3.45 and 3.46 show the location of Baldwin County Public Schools and Mobile County Public Schools in relation to floodplains. Only three schools in the two counties appear to be located within the floodplain. Swift Elementary, near Bon Secour in unincorporated Baldwin County is in zone AE. In Mobile County, Dauphin Island Elementary is located partially in zones AE and X, and Alba Middle School, in Bayou La Batre, is located within zone AE.

Figure 3.5 Baldwin County Flood Hazard Areas



Source: Federal Emergency Management Agency (2019)
Map Produced by South Alabama Regional Planning Commission (2021)

Figure 3.6 Bay Minette Flood Hazard Areas

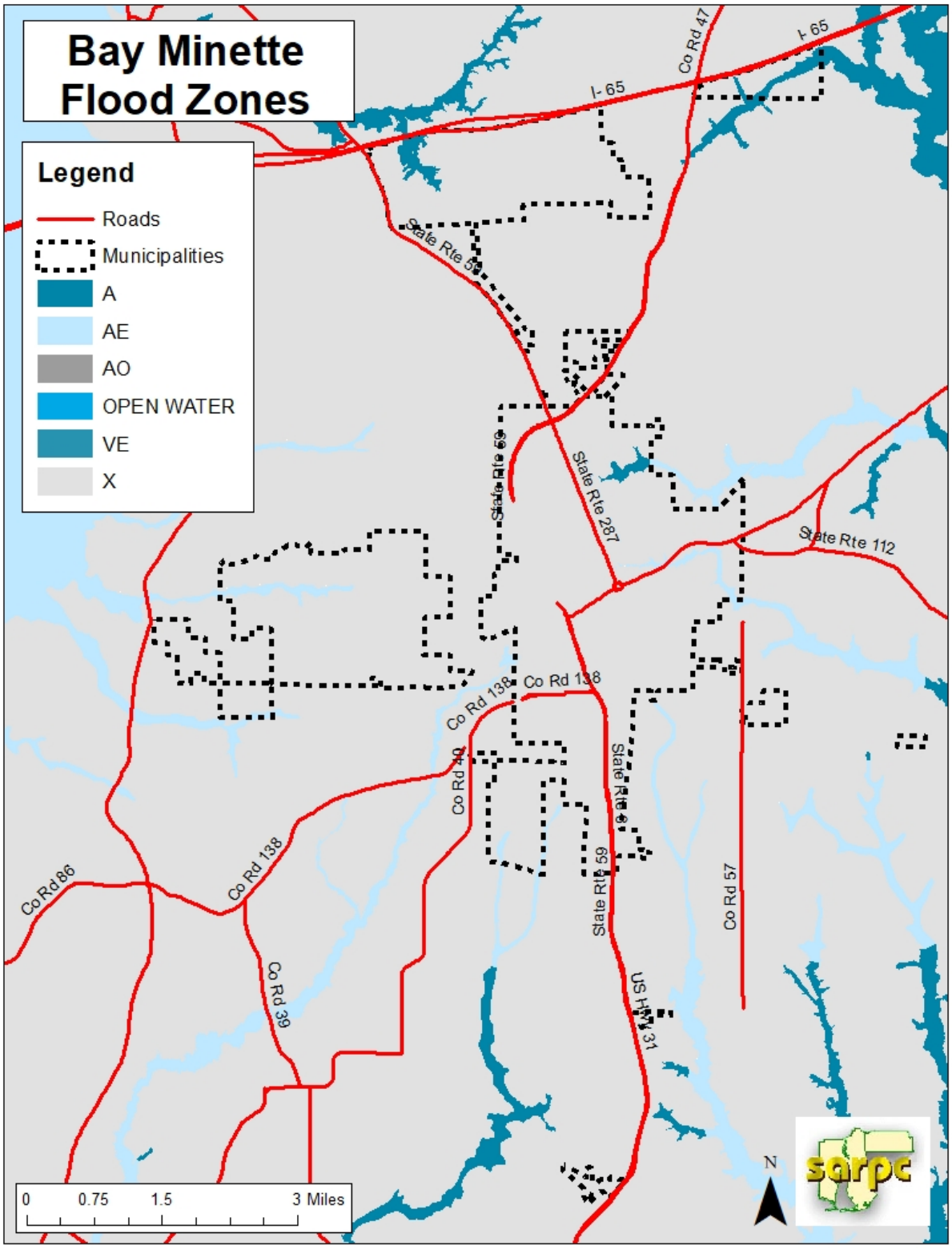


Figure 3.7 Elberta Flood Hazard

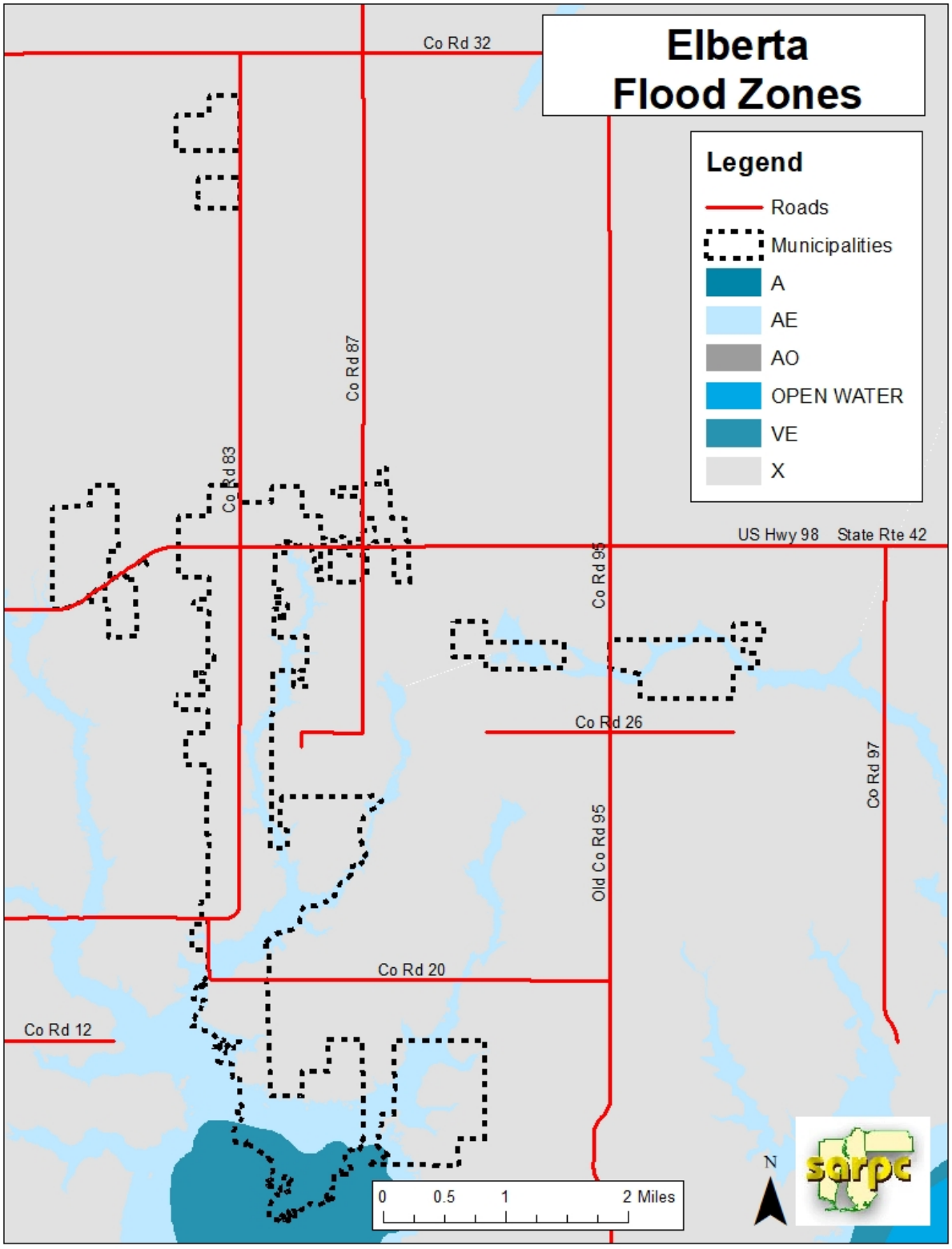


Figure 3.8 Fairhope Flood Hazard Areas

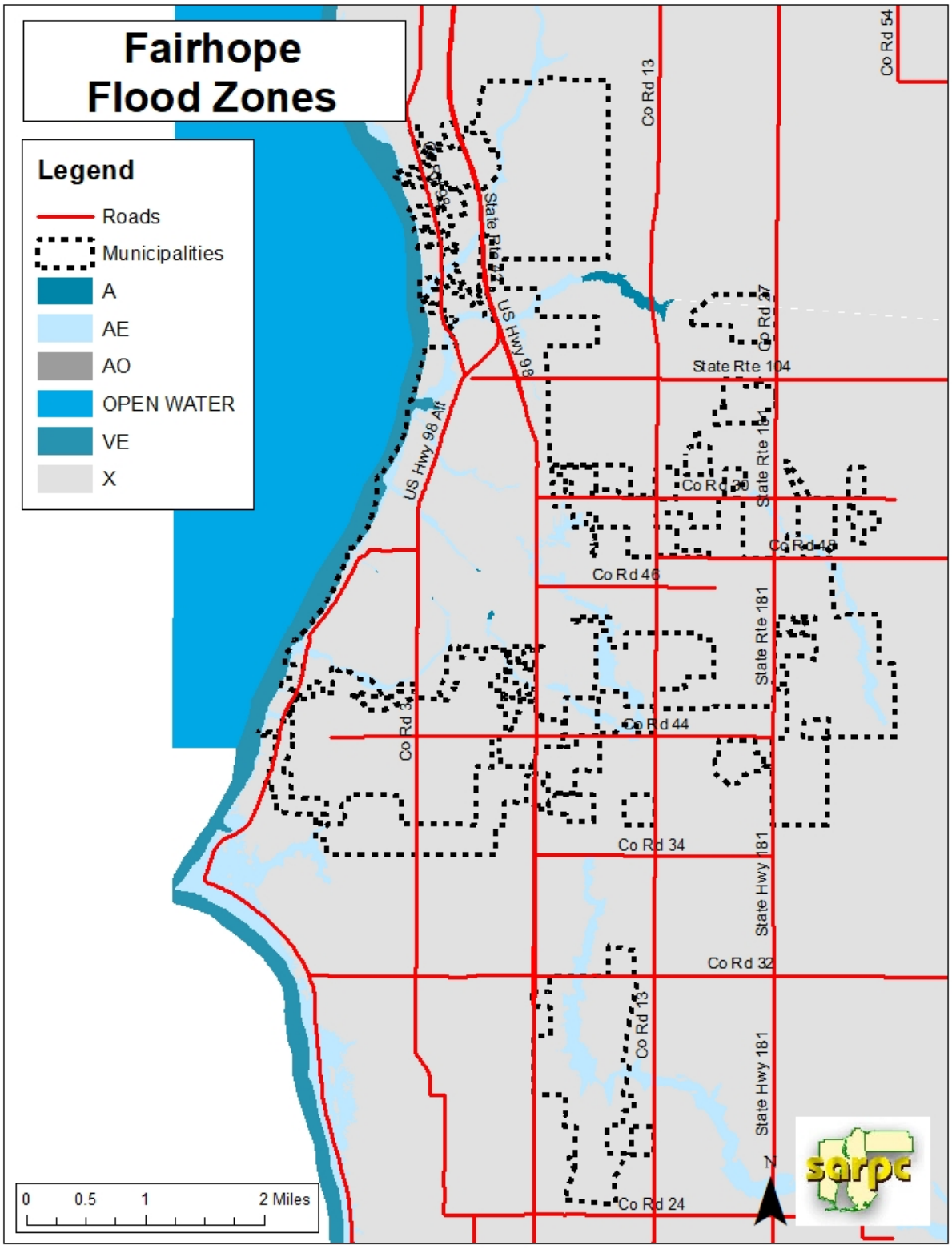


Figure 3.9 Gulf Shores Flood Hazard Areas

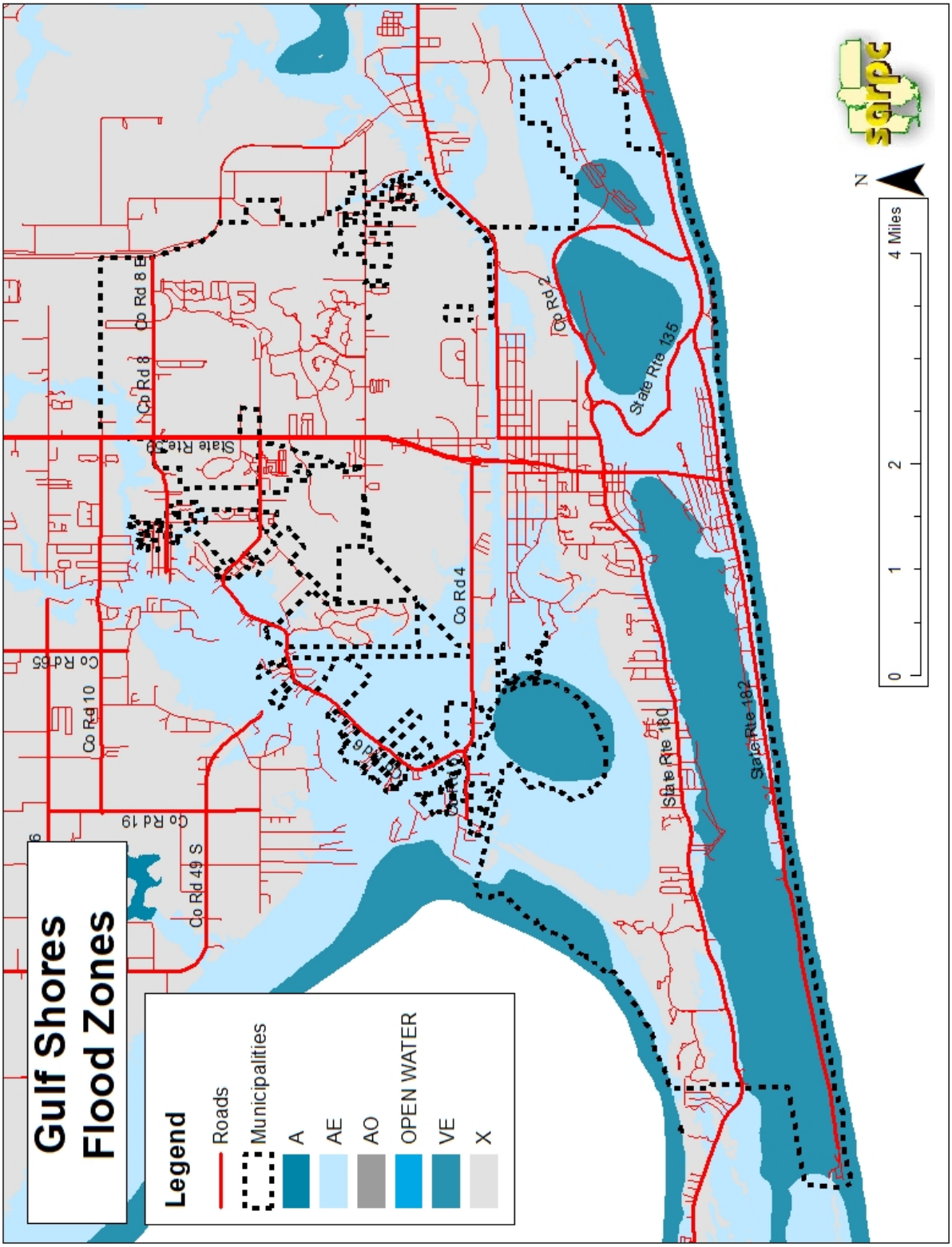


Figure 3.10 Loxley Flood Hazard Areas

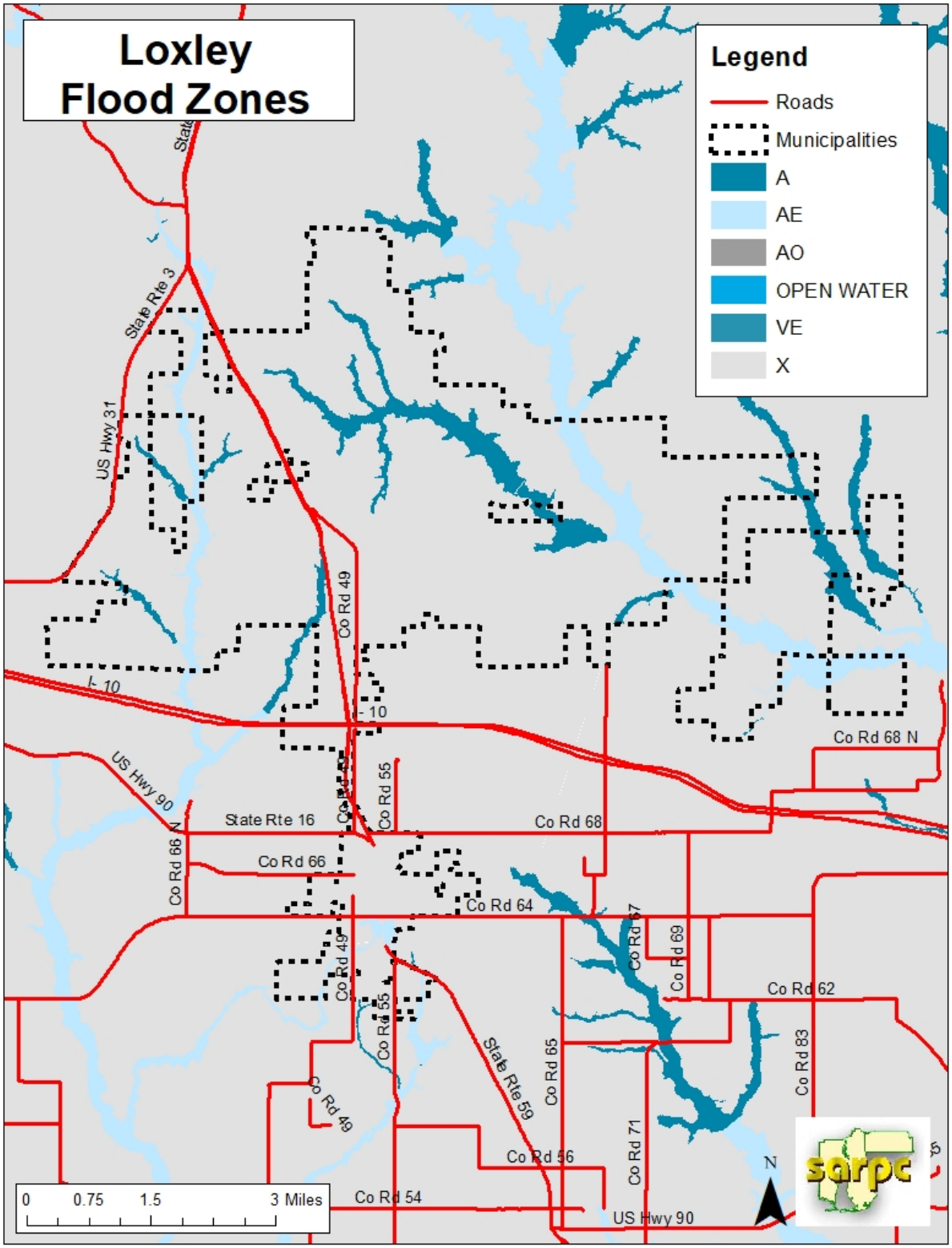


Figure 3.11 Orange Beach Flood Hazard Areas

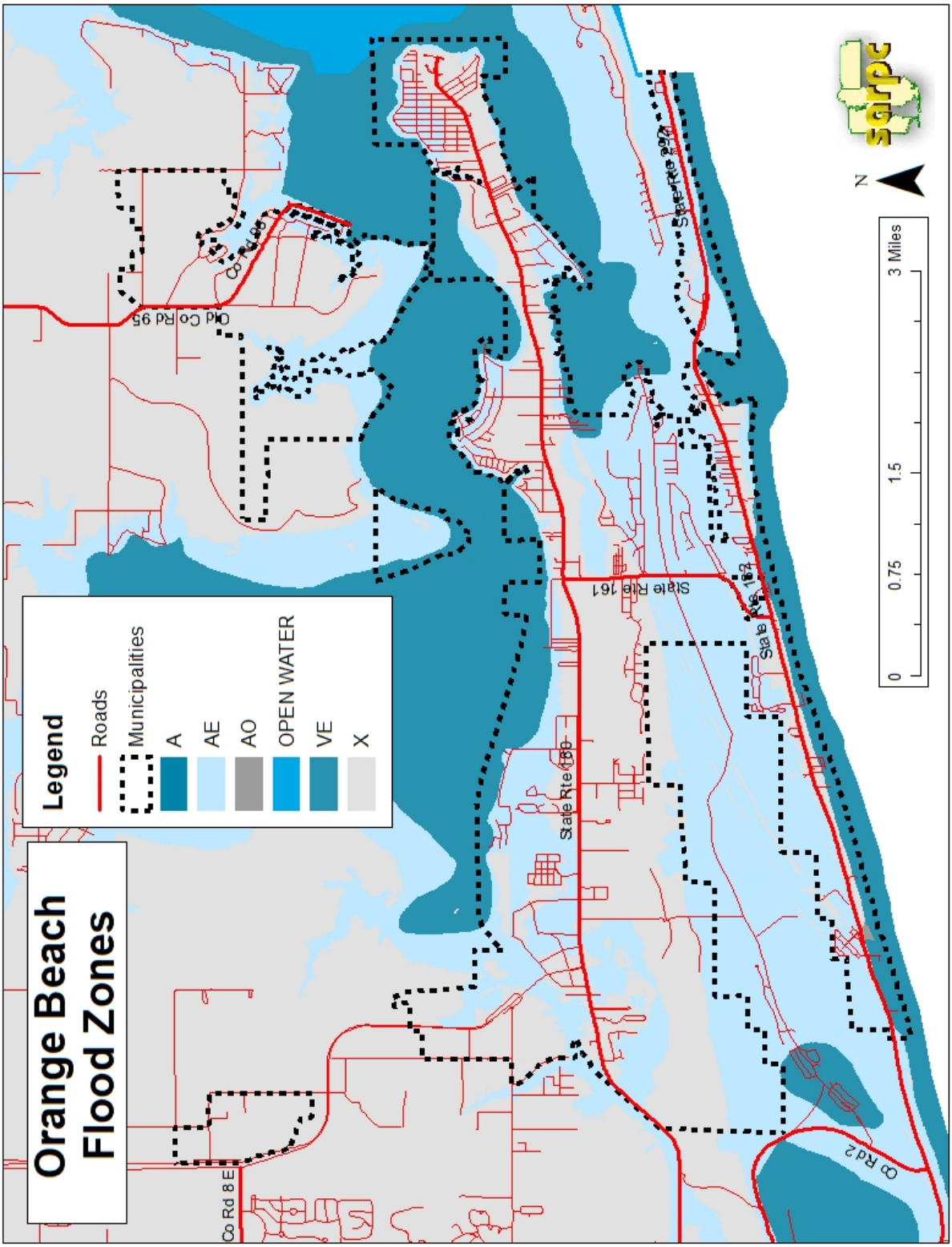


Figure 3.12 Perdido Beach Flood Hazard

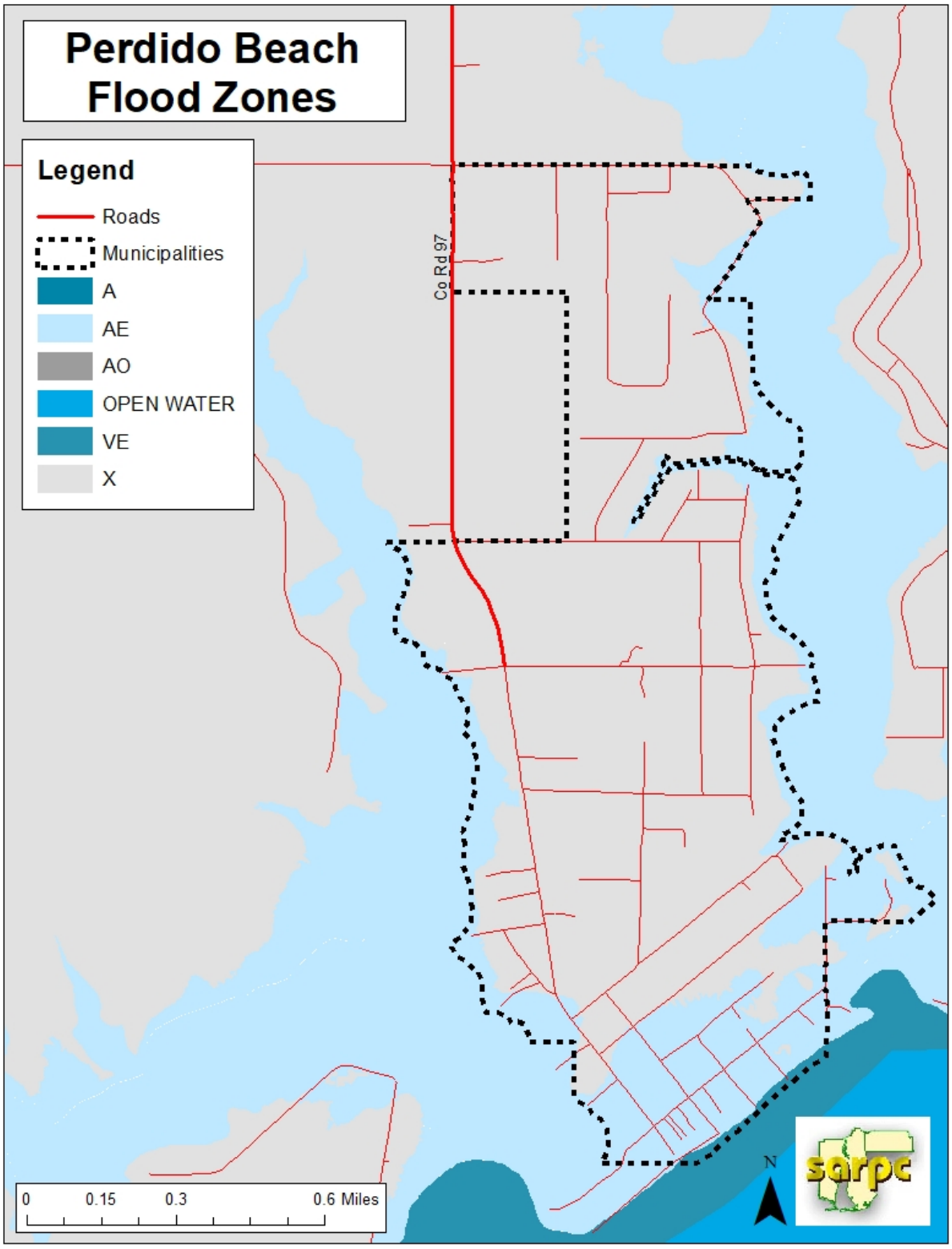


Figure 3.13 Robertsdale Flood Hazard Areas

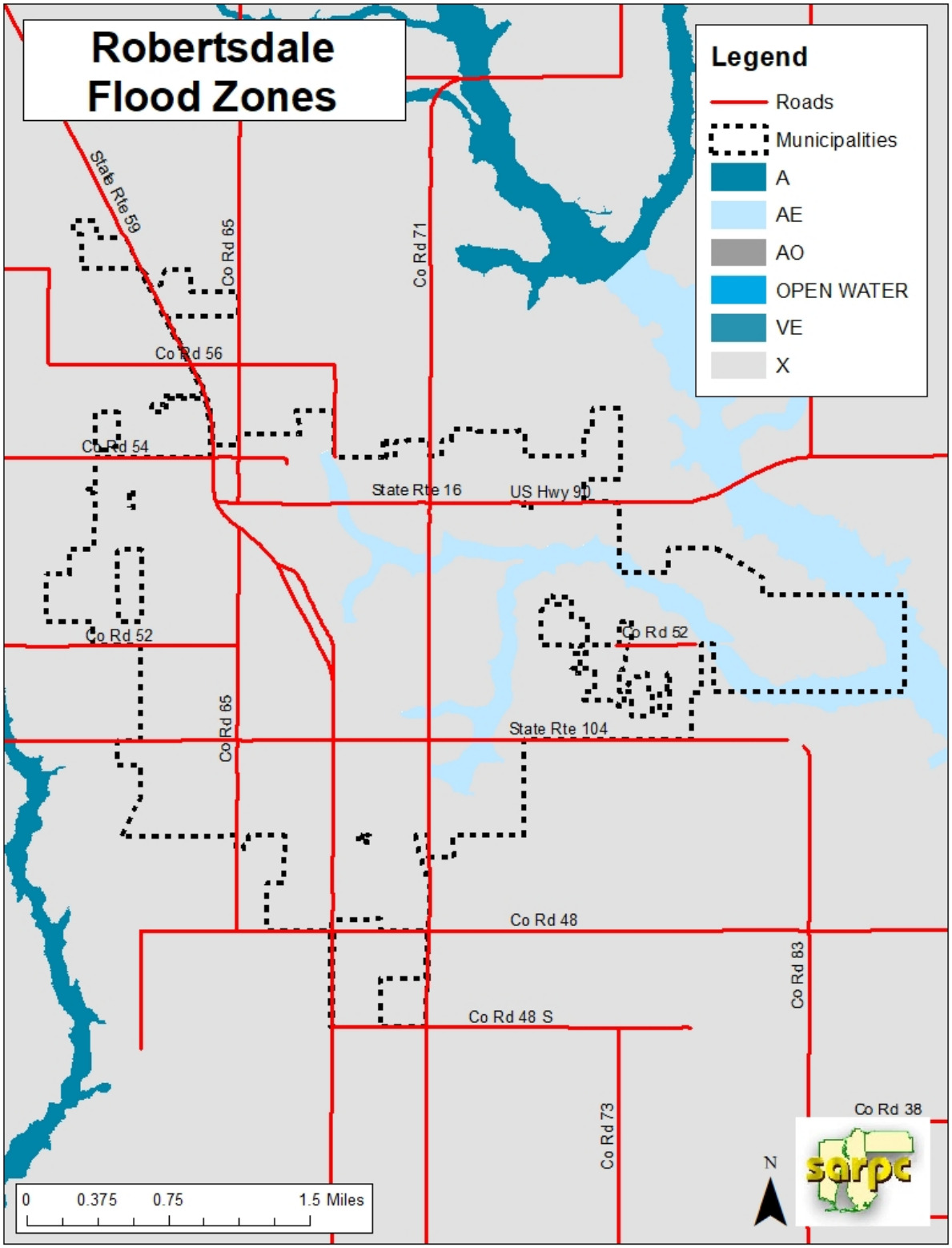


Figure 3.14 Silverhill Flood Hazard Areas

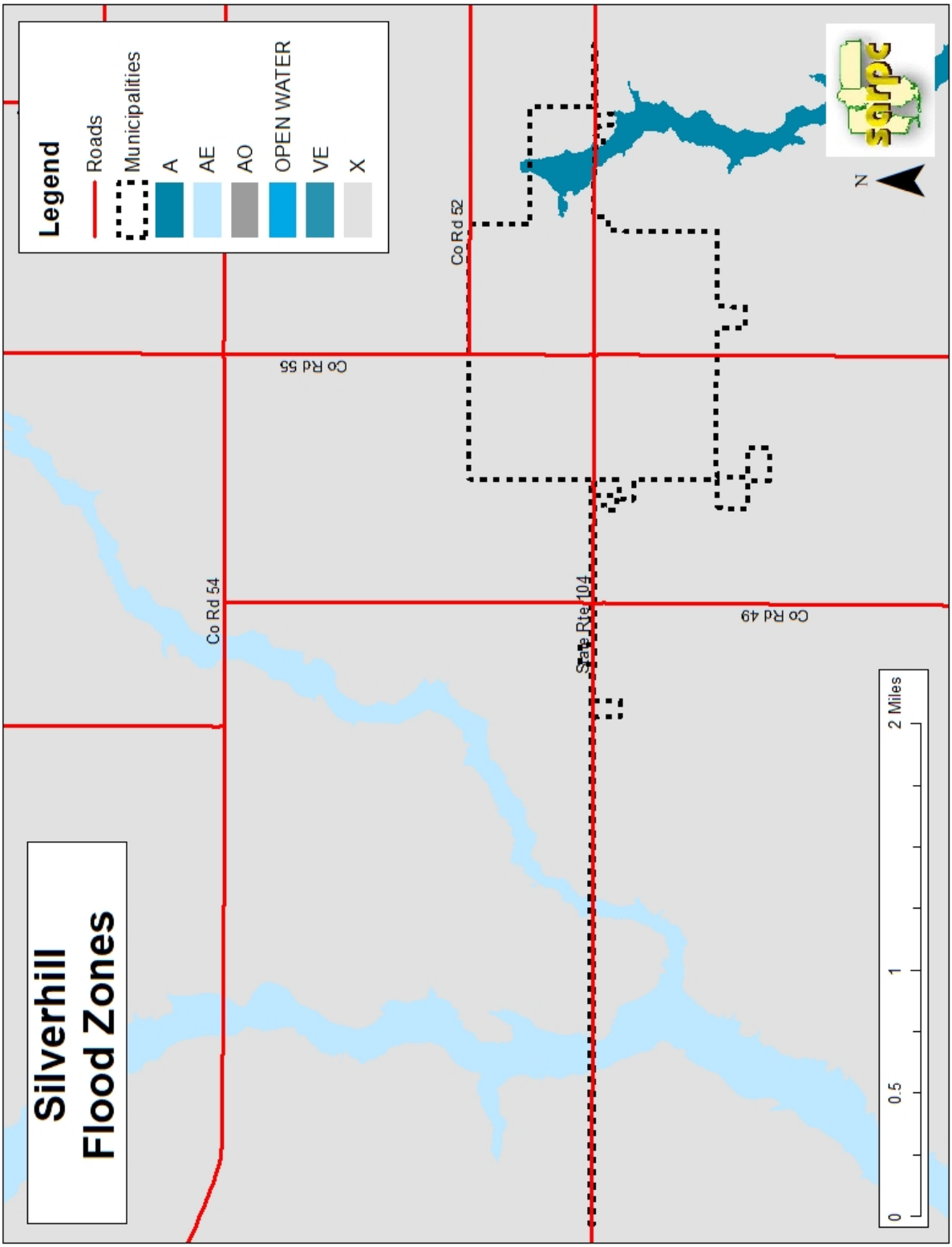


Figure 3.15 Summerdale Flood Hazard Areas

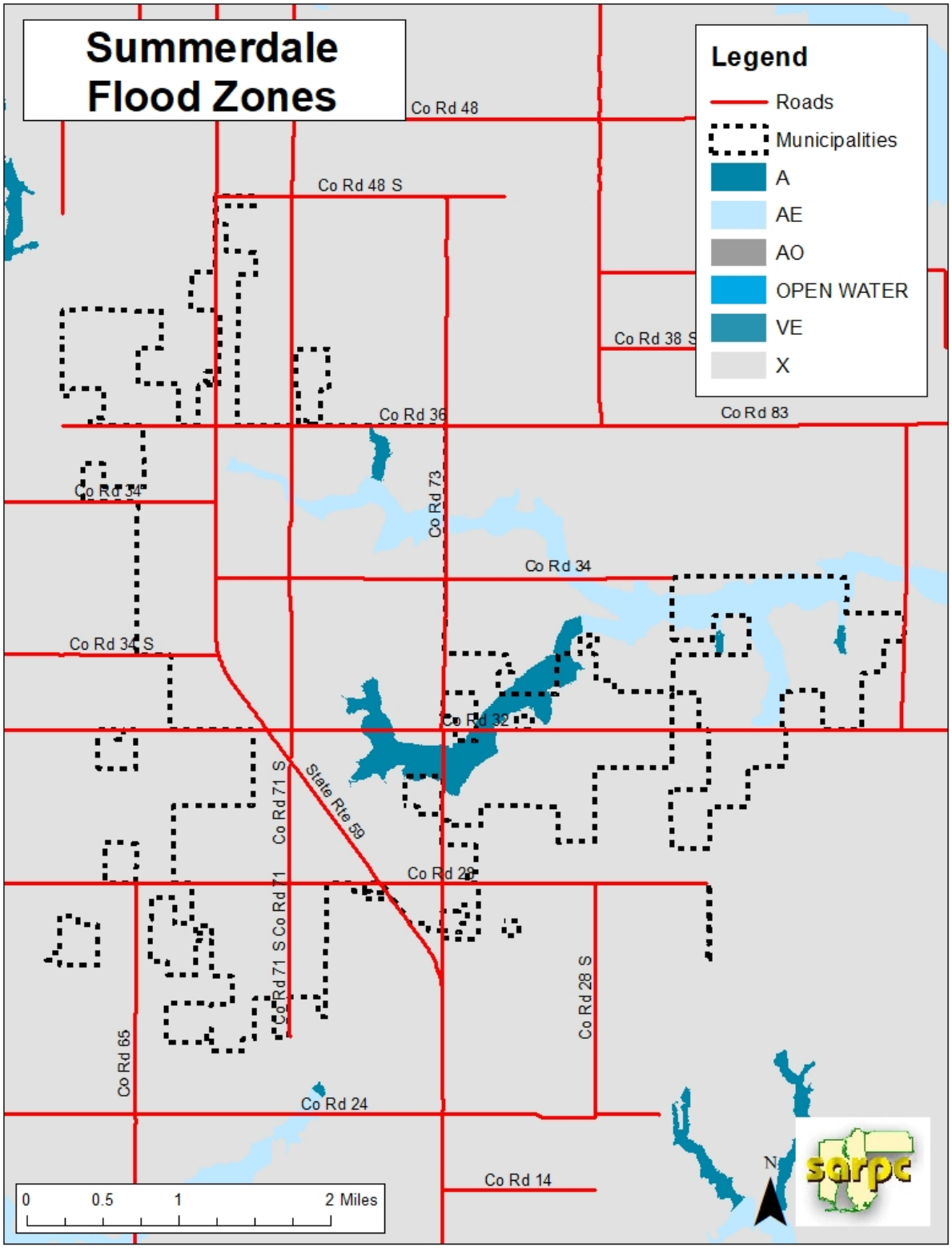
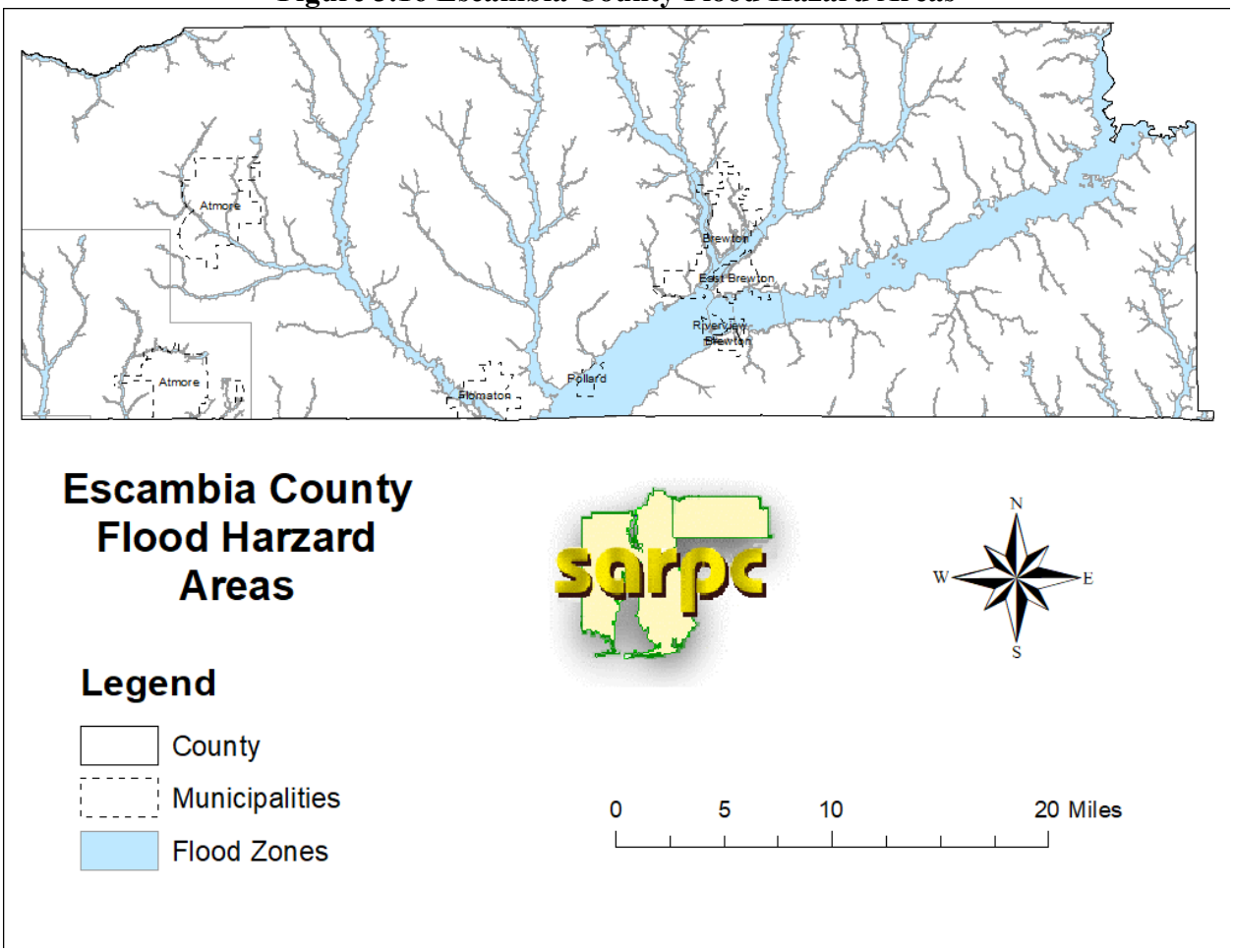


Figure 3.16 Escambia County Flood Hazard Areas



Source: Federal Emergency Management Agency (2019)
Map Produced by South Alabama Regional Planning Commission (2021)

Figure 3.17 Atmore Flood Hazard Areas

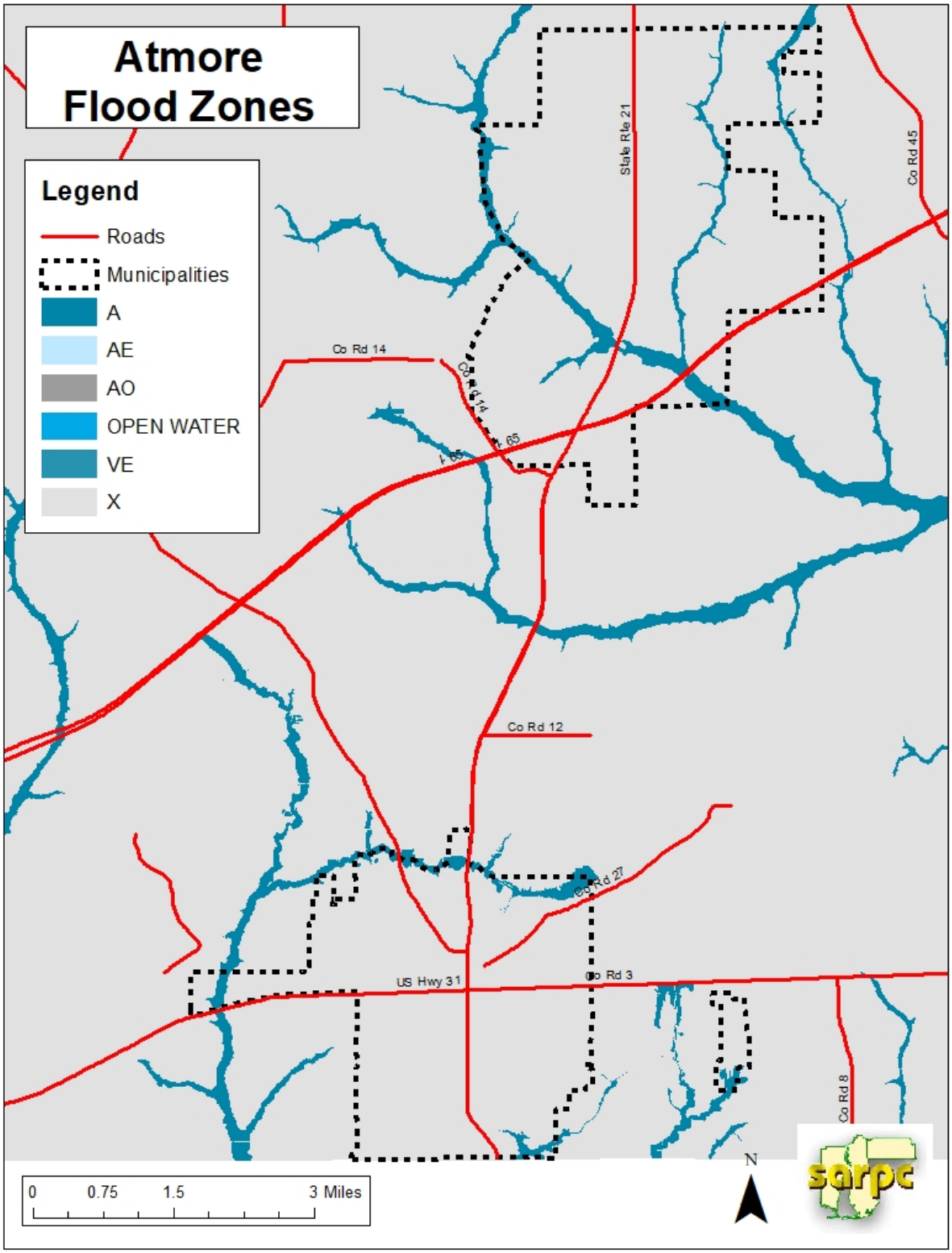


Figure 3.18 Brewton Flood Hazard Areas

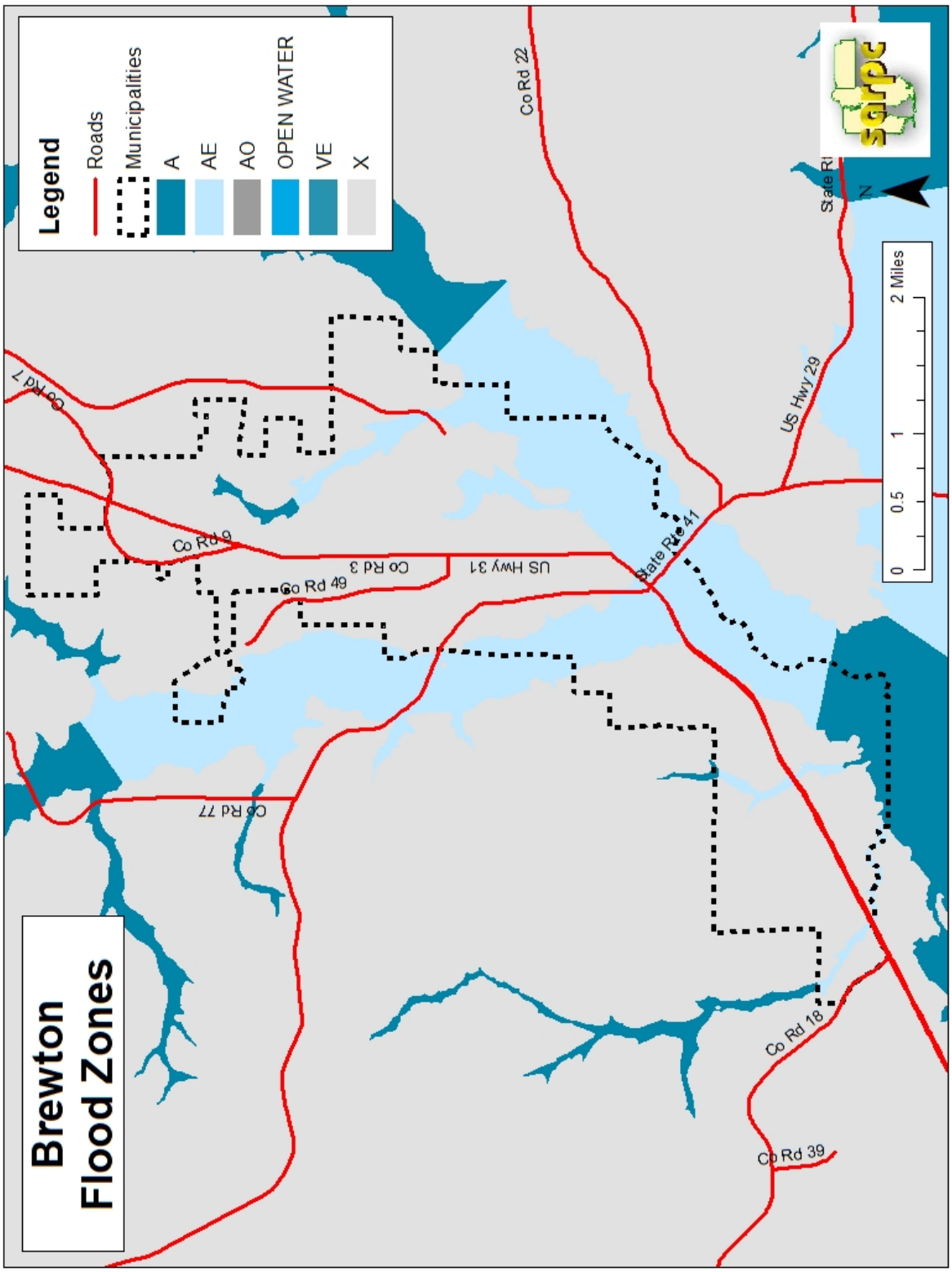


Figure 3.19 East Brewton Flood Hazard Areas

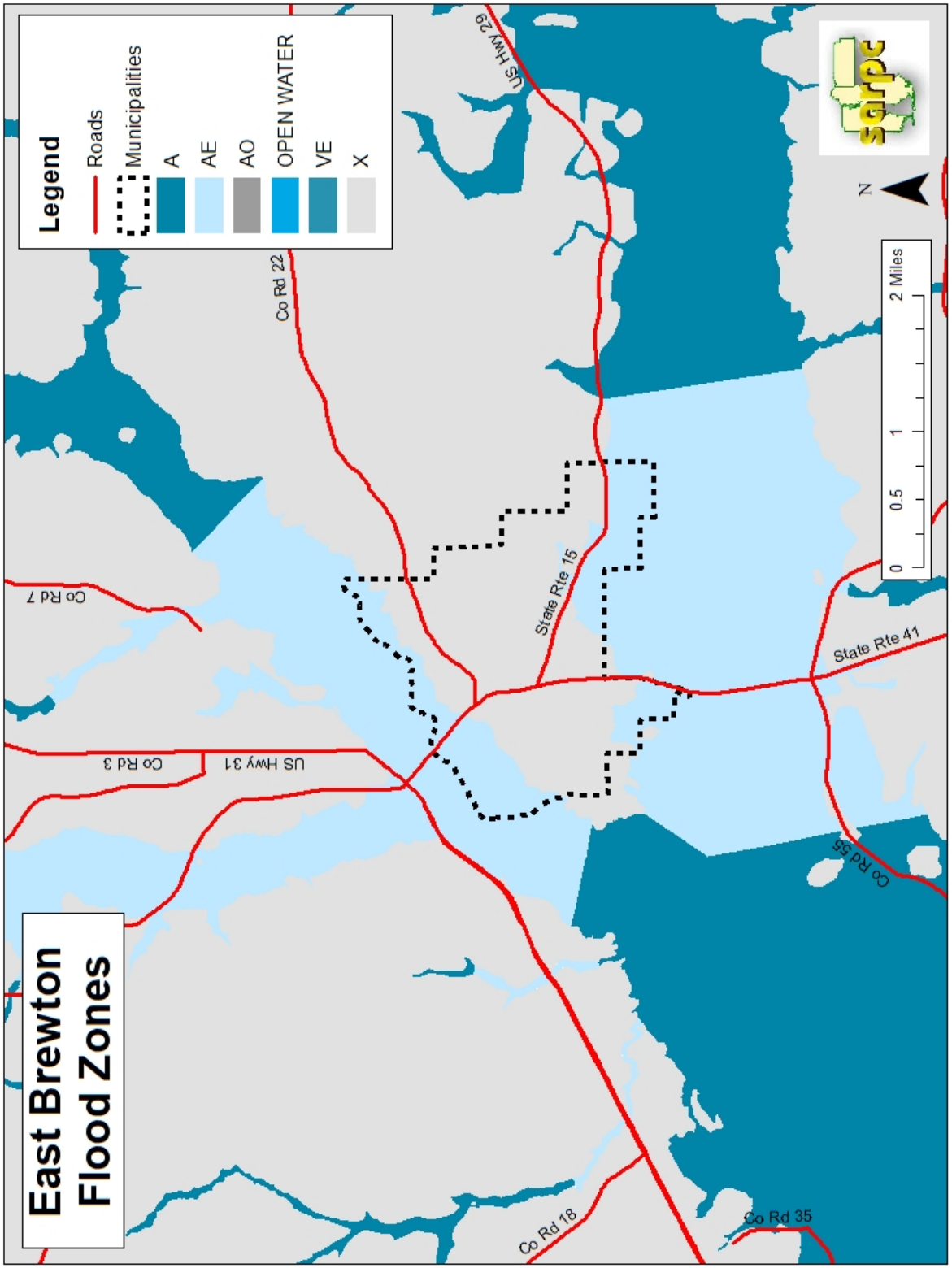


Figure 3.20 Flomaton Flood Hazard Areas

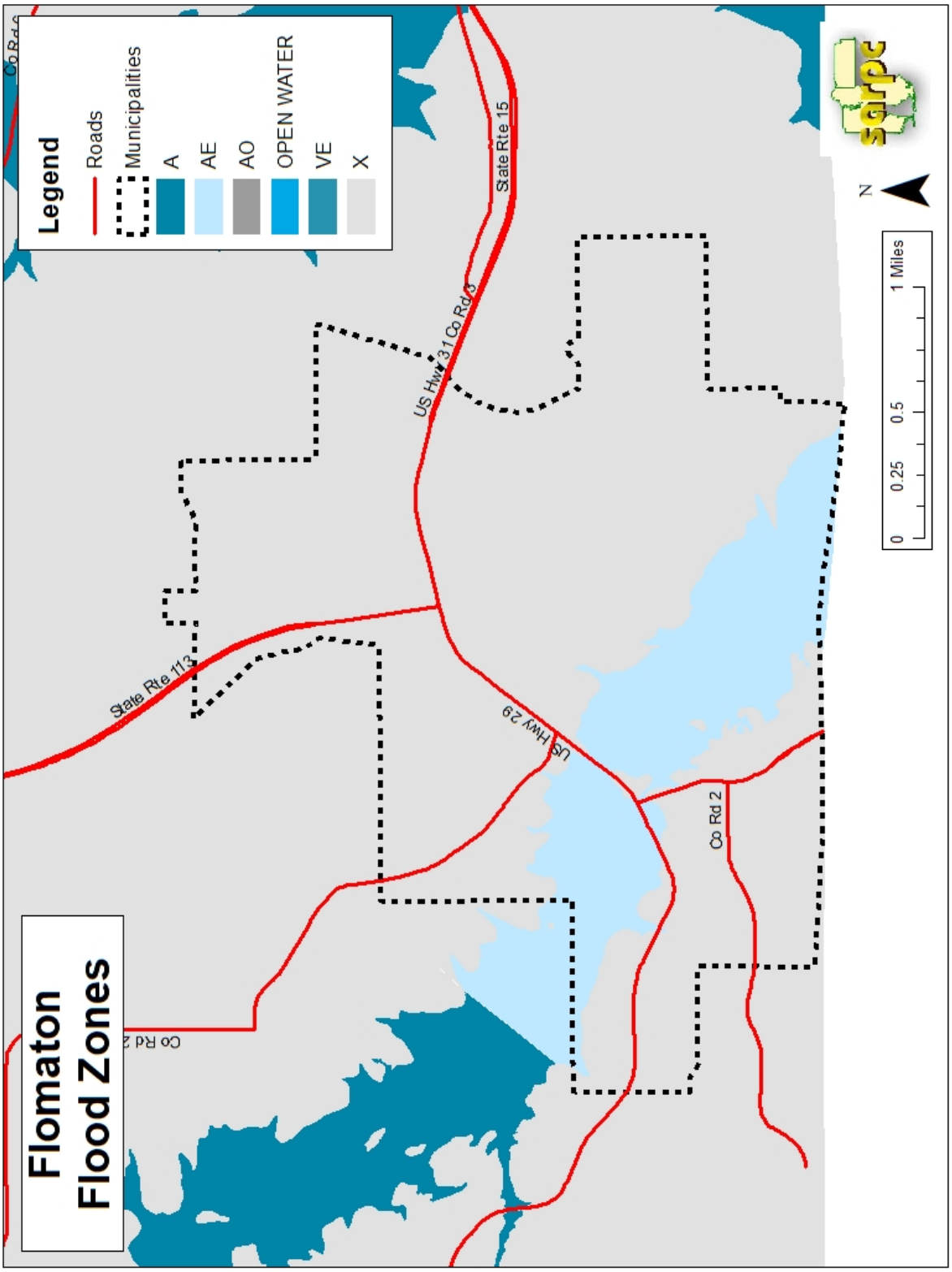


Figure 3.21 Pollard Flood Hazard Areas

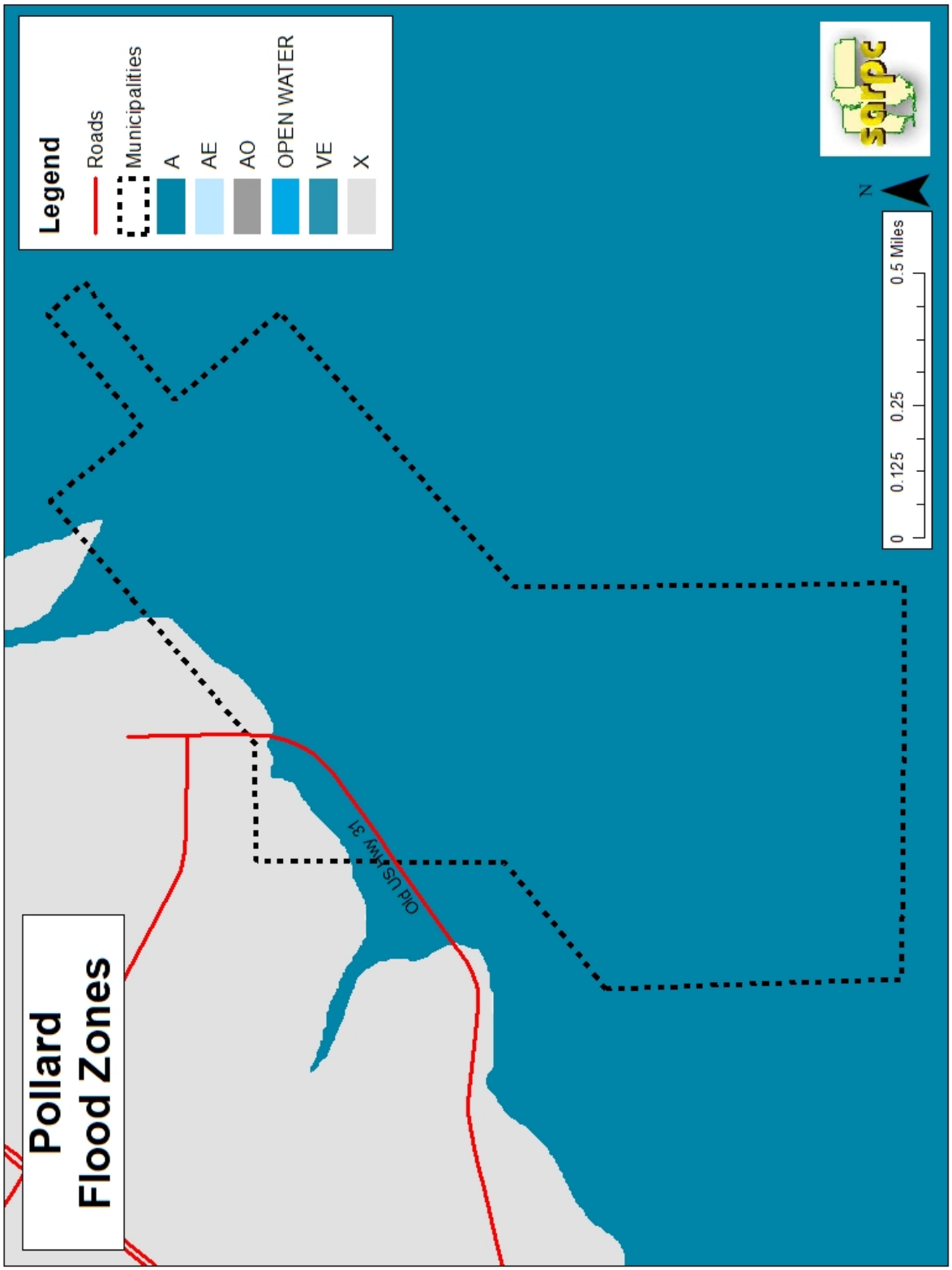


Figure 3.22 Riverview Flood Hazard Areas

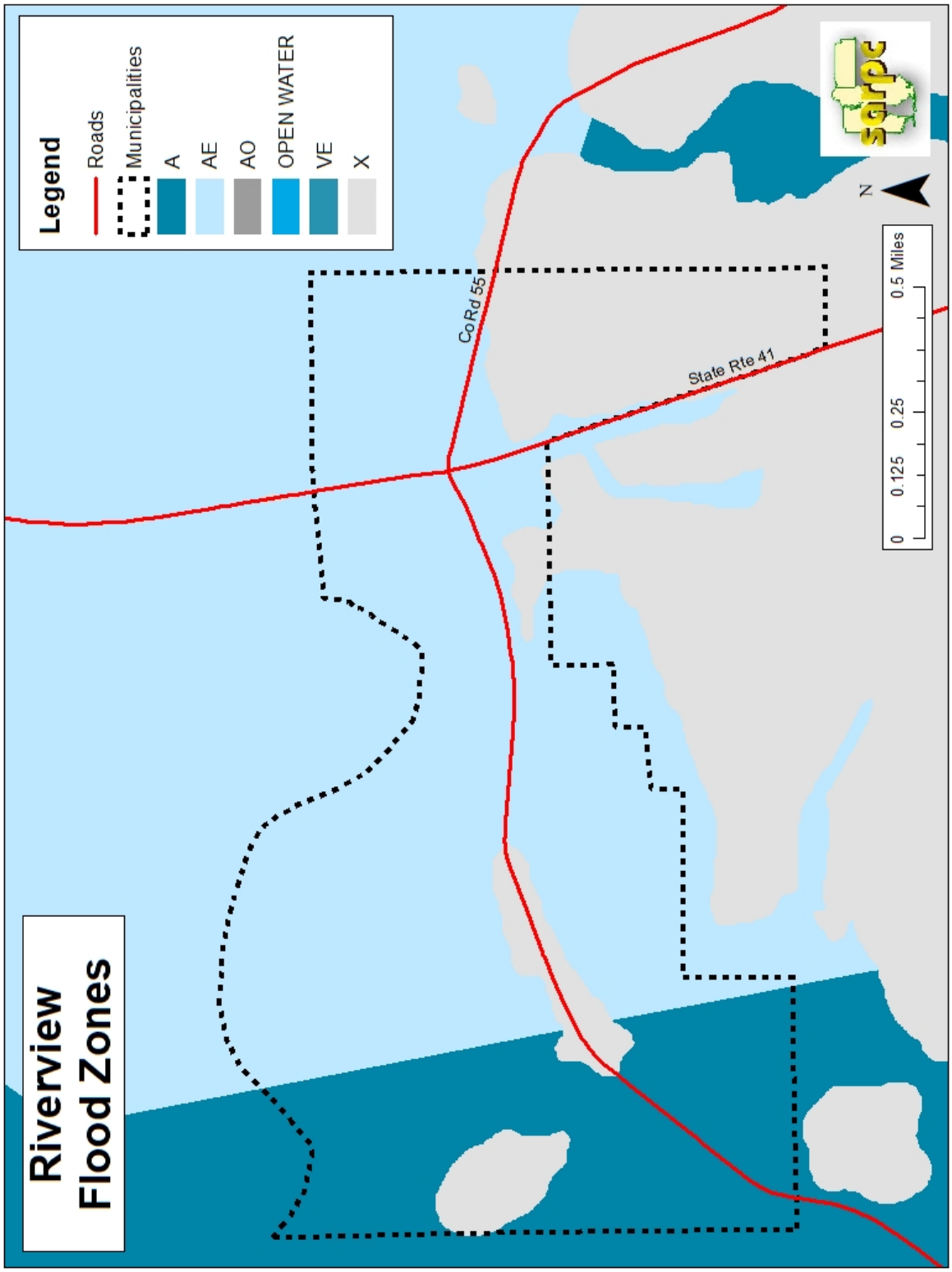
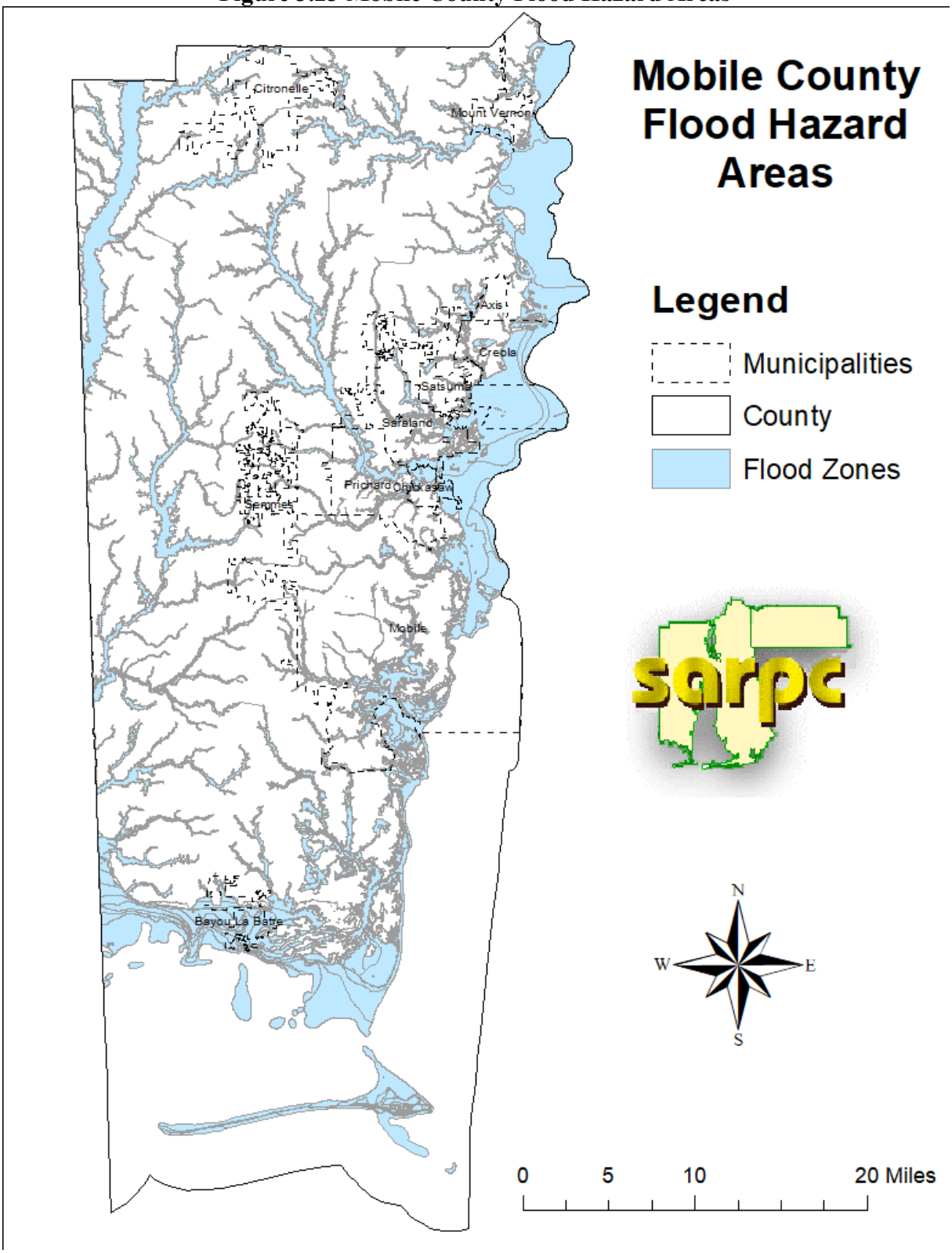


Figure 3.23 Mobile County Flood Hazard Areas



Source: Federal Emergency Management Agency (2019)

Figure 3.24 Bayou La Batre Flood Hazard

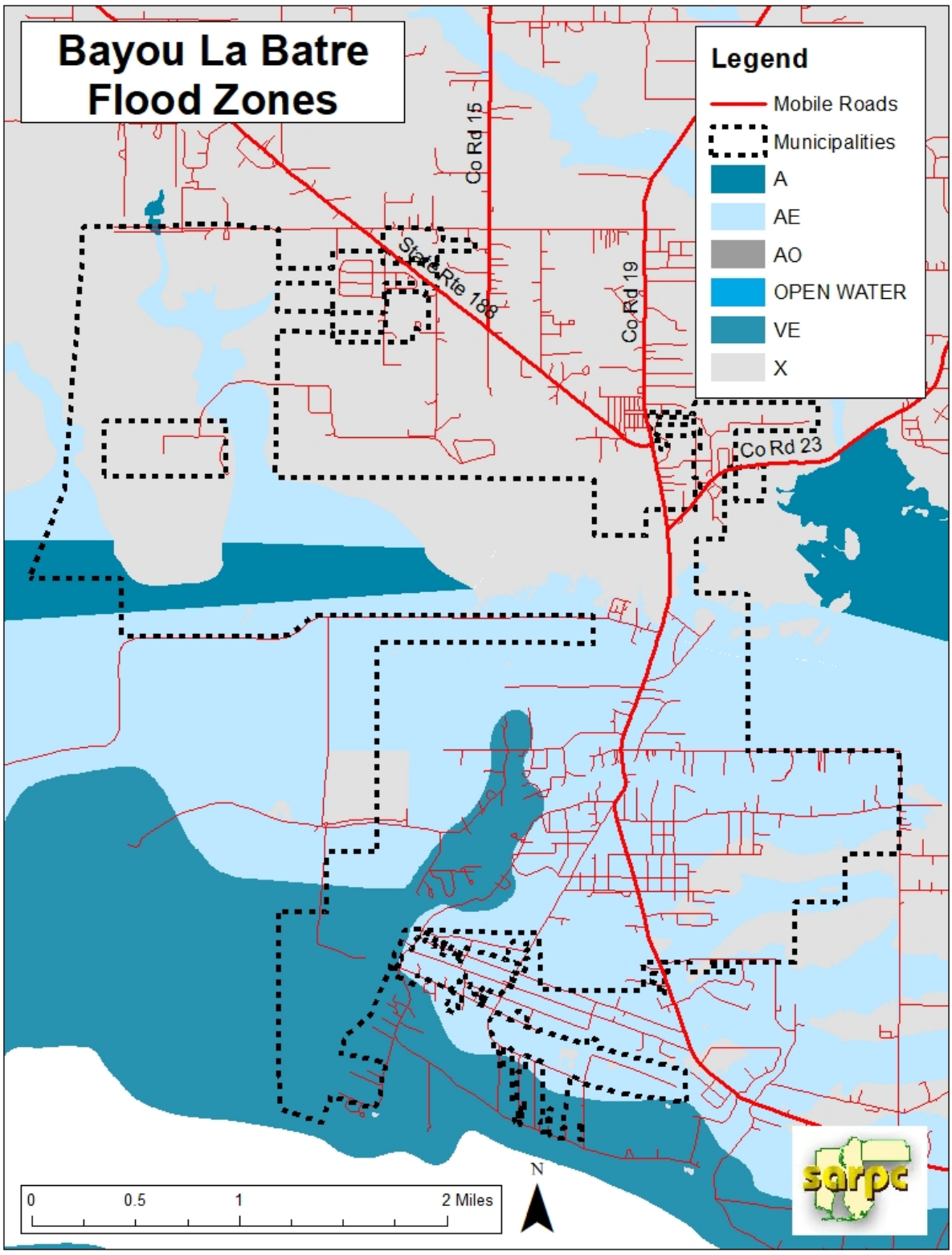


Figure 3.25. Chickasaw Flood Hazard Areas

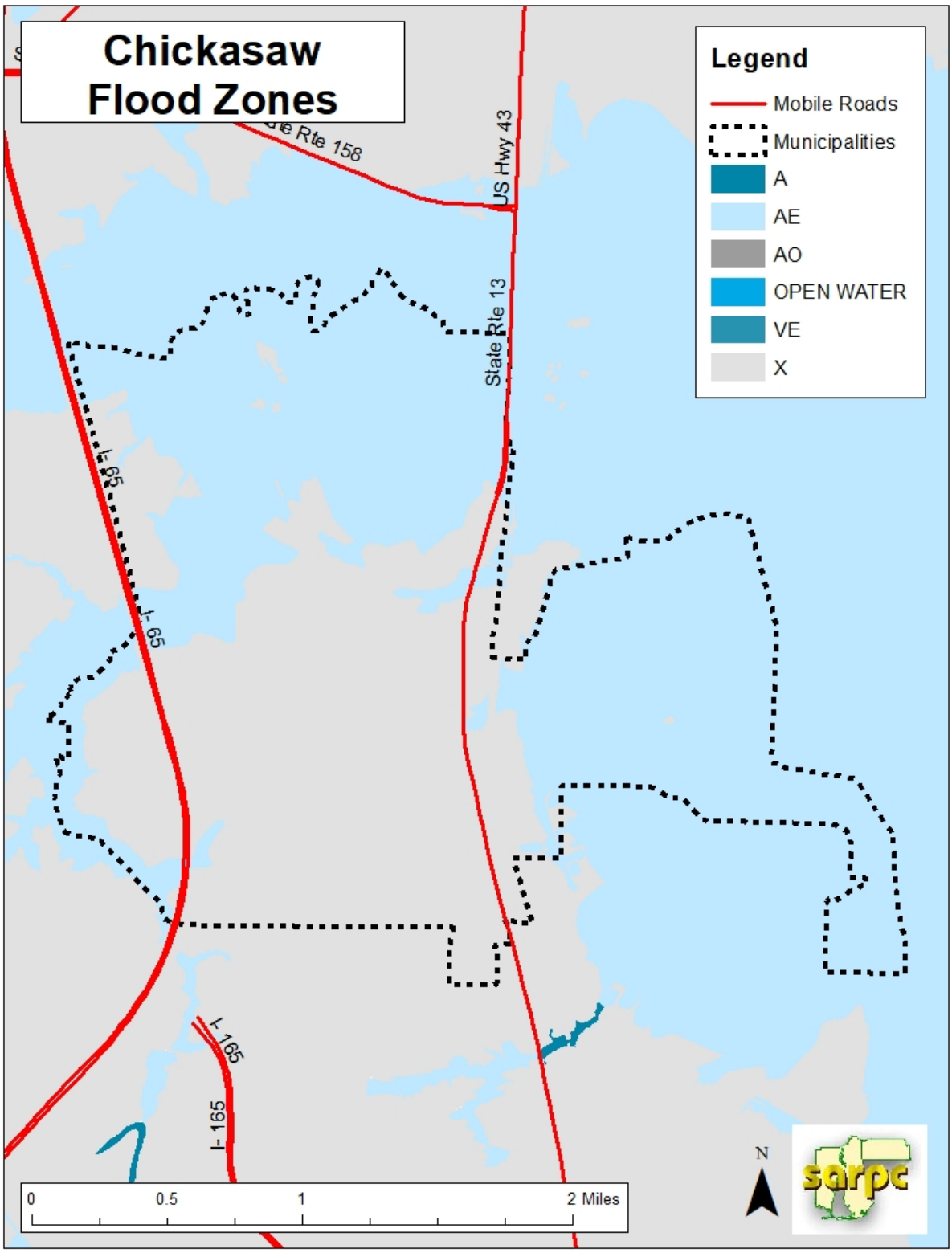


Figure 3.26 Citronelle Flood Hazard Areas

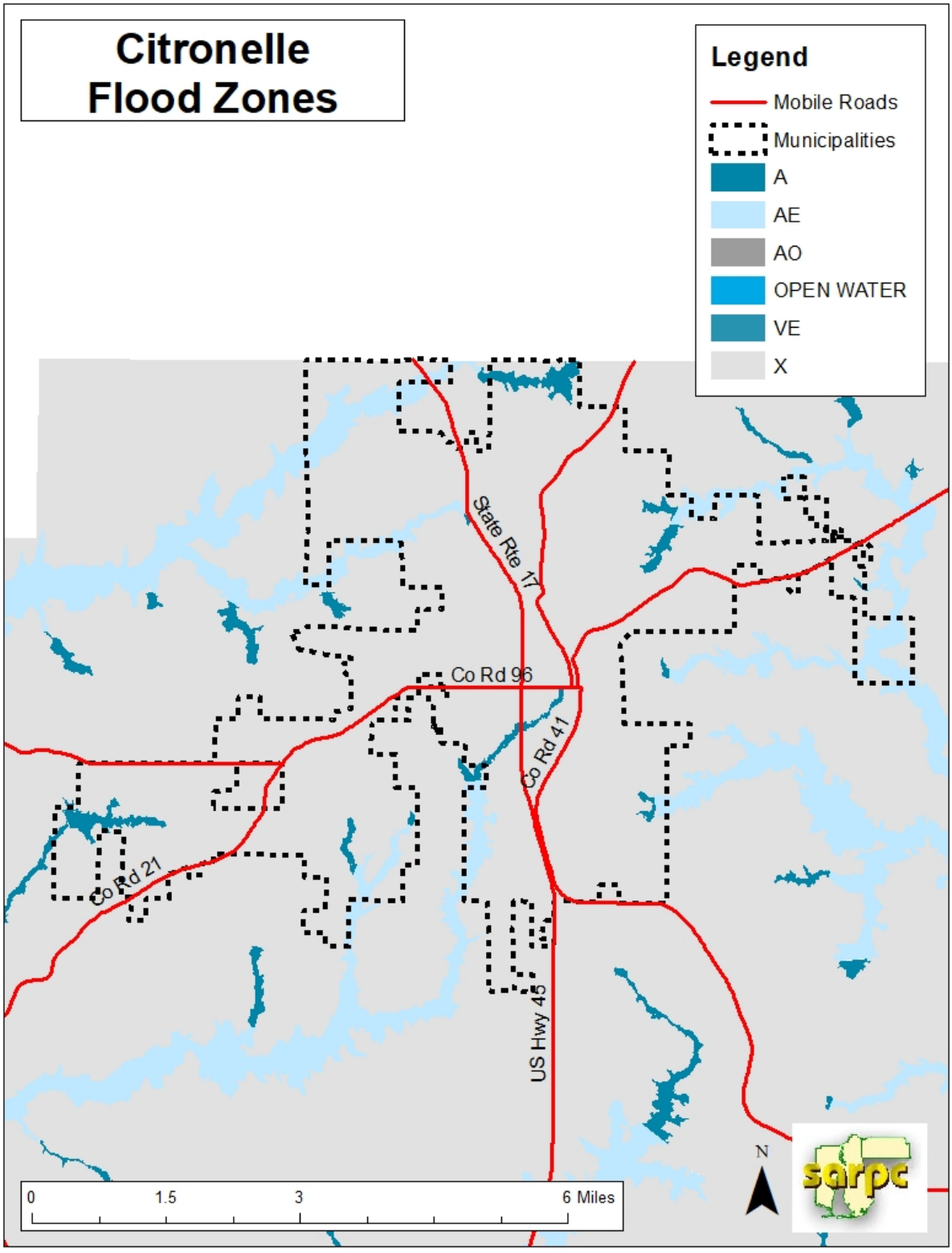


Figure 3.27 Creola Flood Hazard Areas

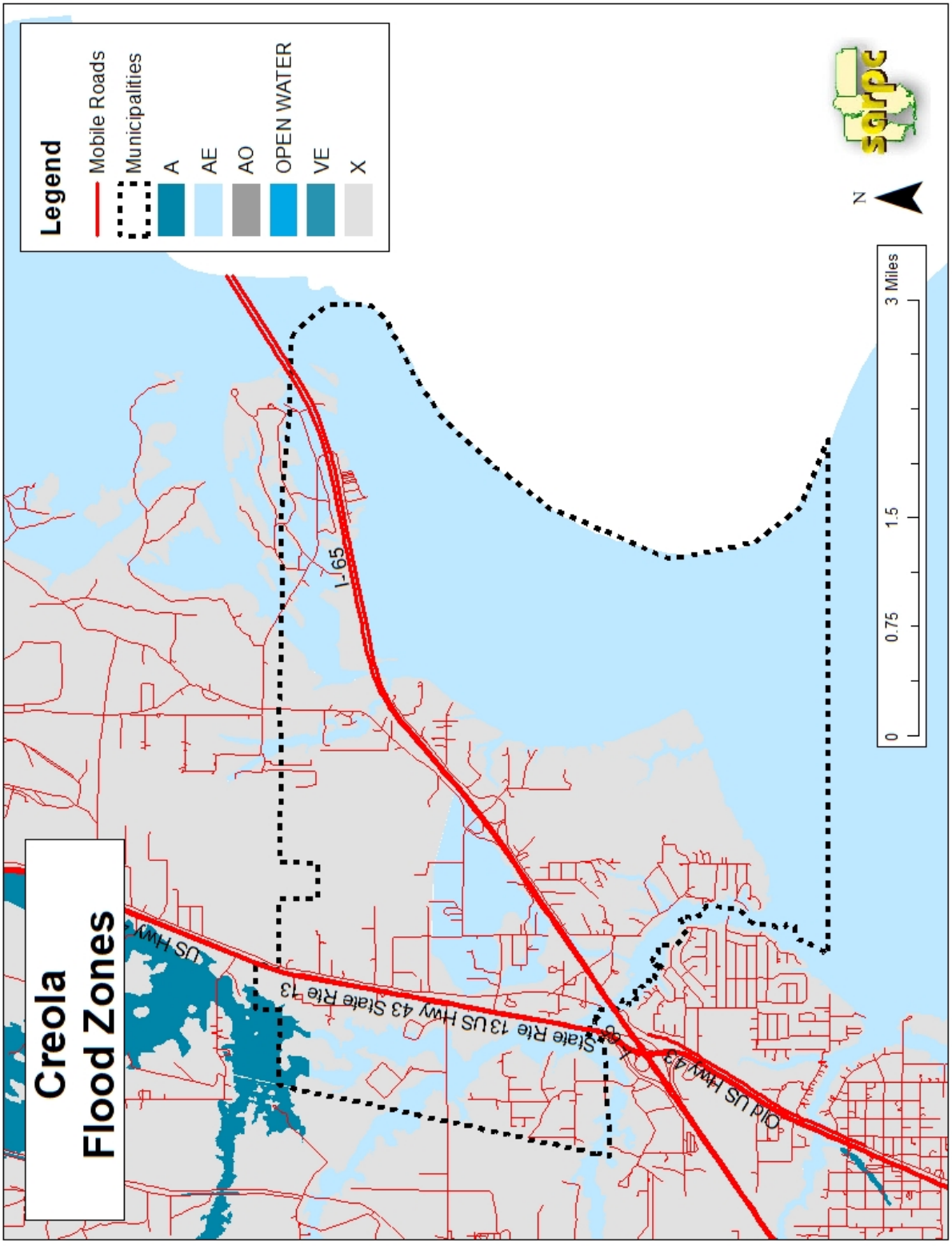


Figure 3.28 Dauphin Island Flood Hazard Areas

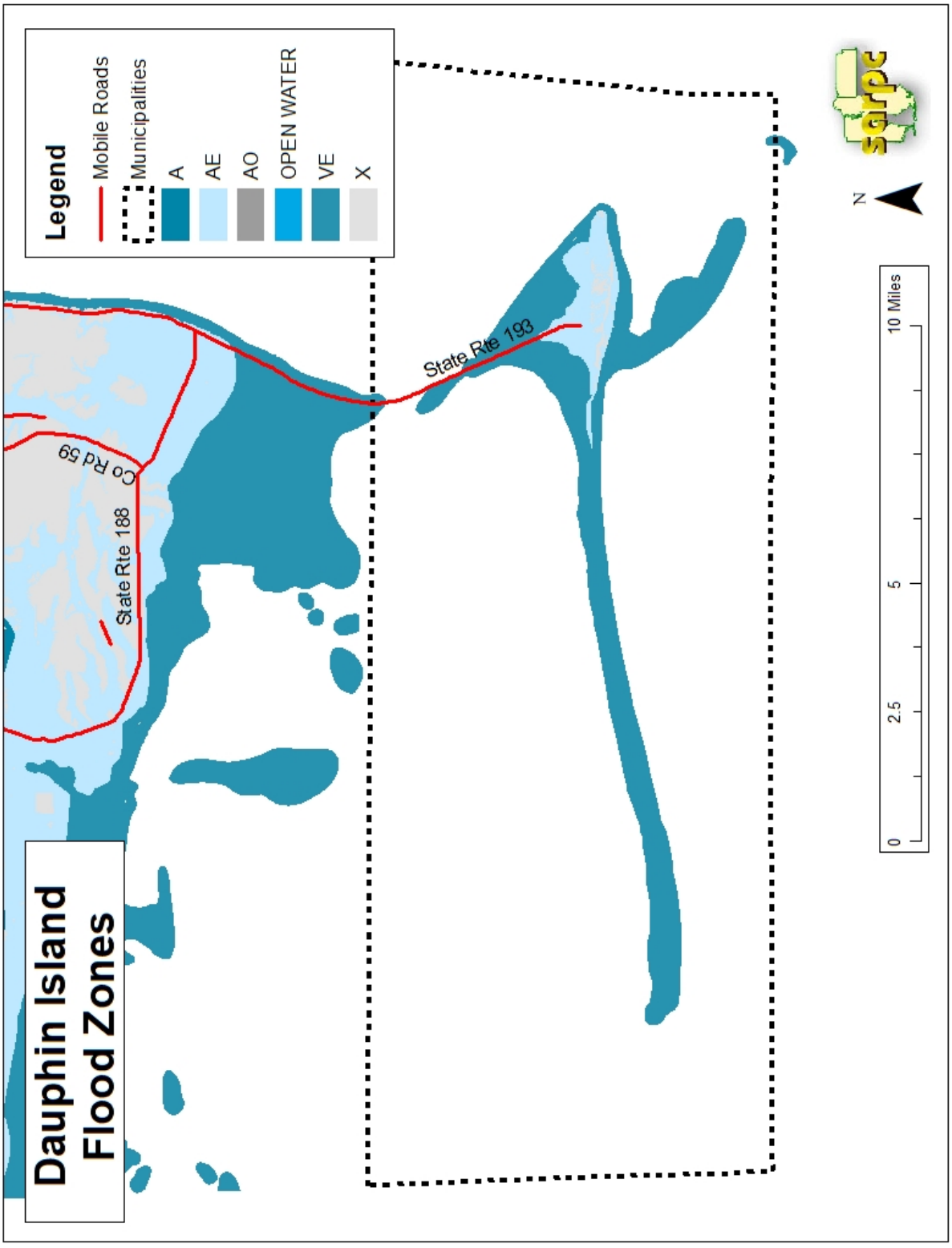


Figure 3.29 Mobile Flood Hazard Areas

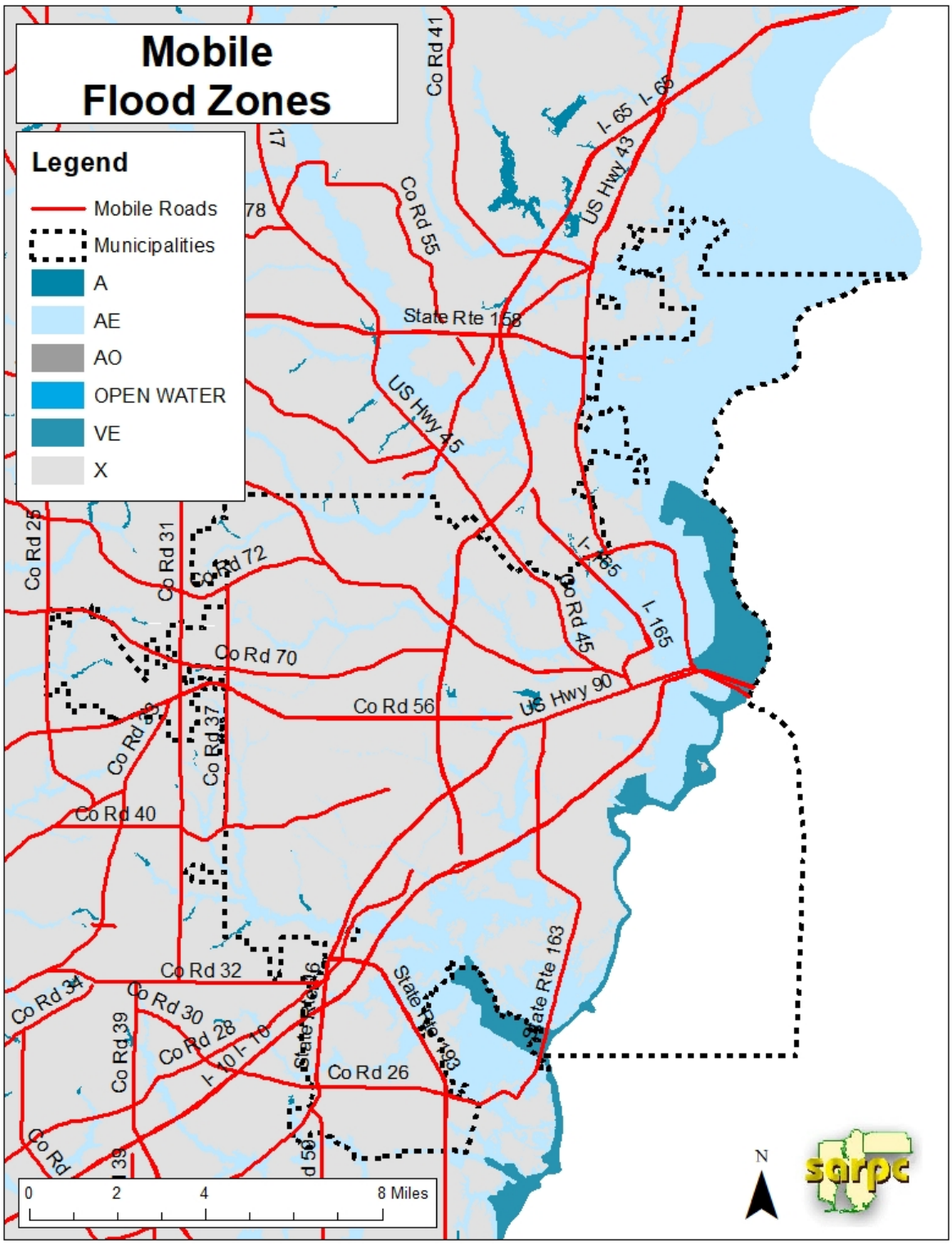


Figure 3.30 Mount Vernon Flood Hazard

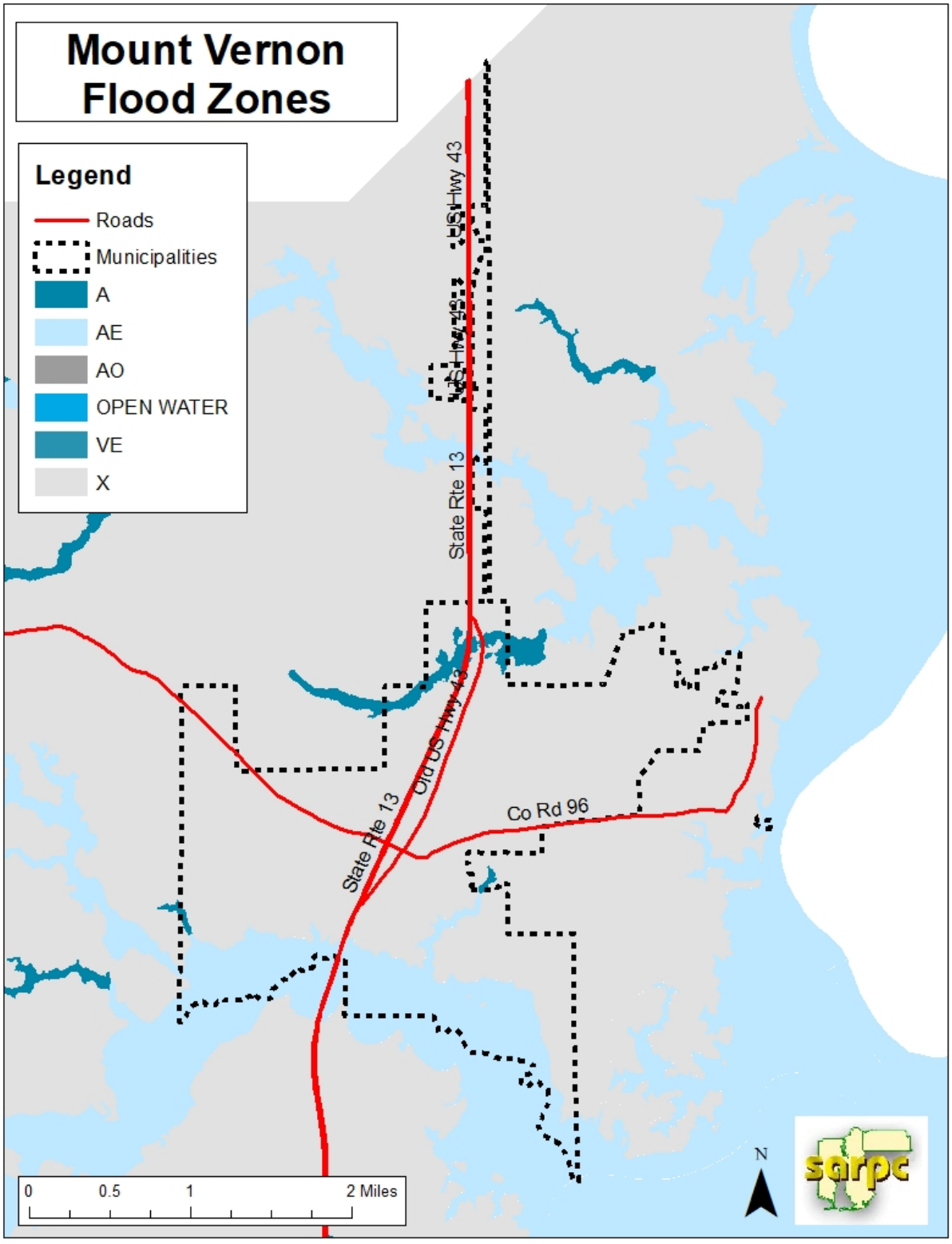


Figure 3.31 Prichard Flood Hazard Areas

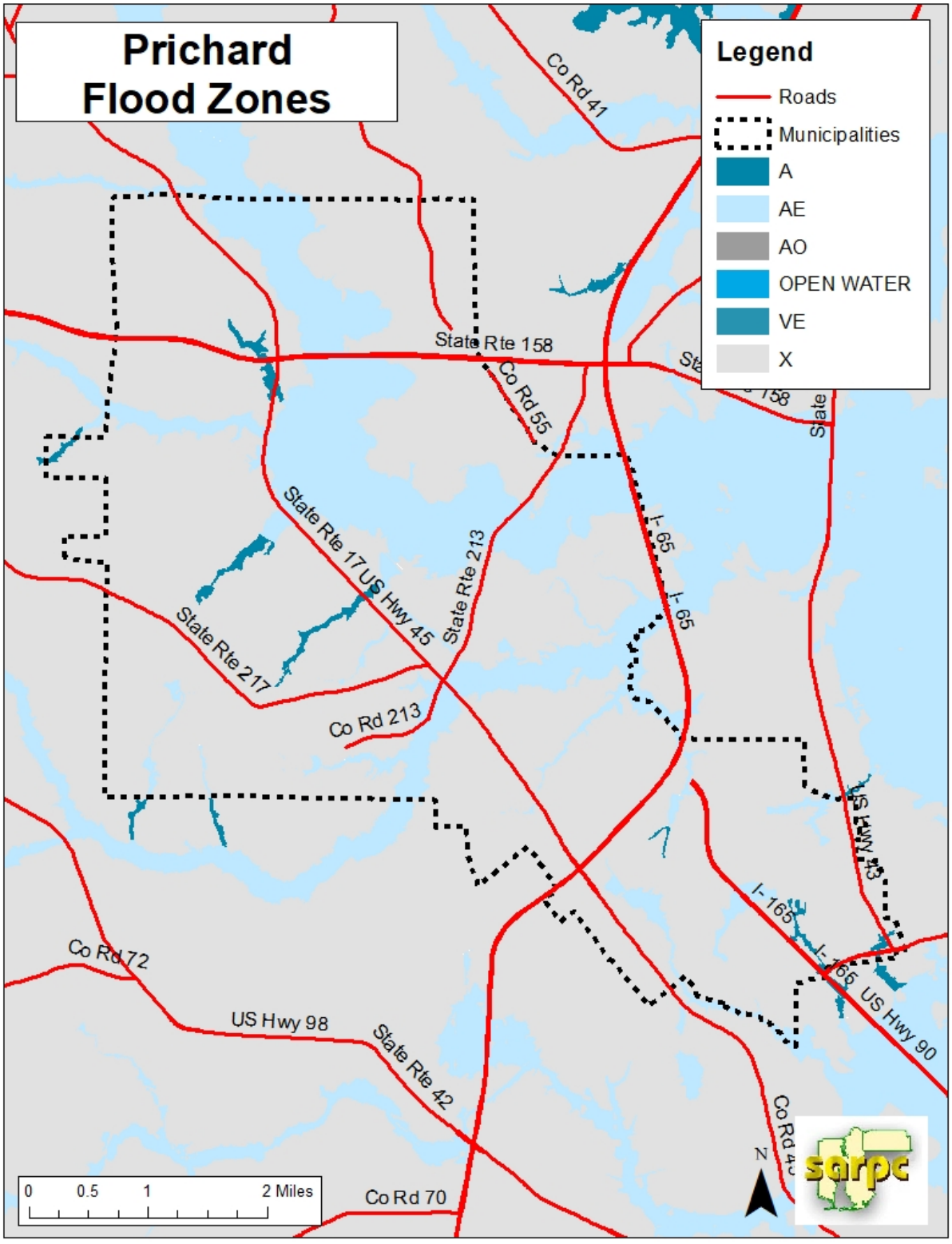


Figure 3.32 Saraland Flood Hazard Areas

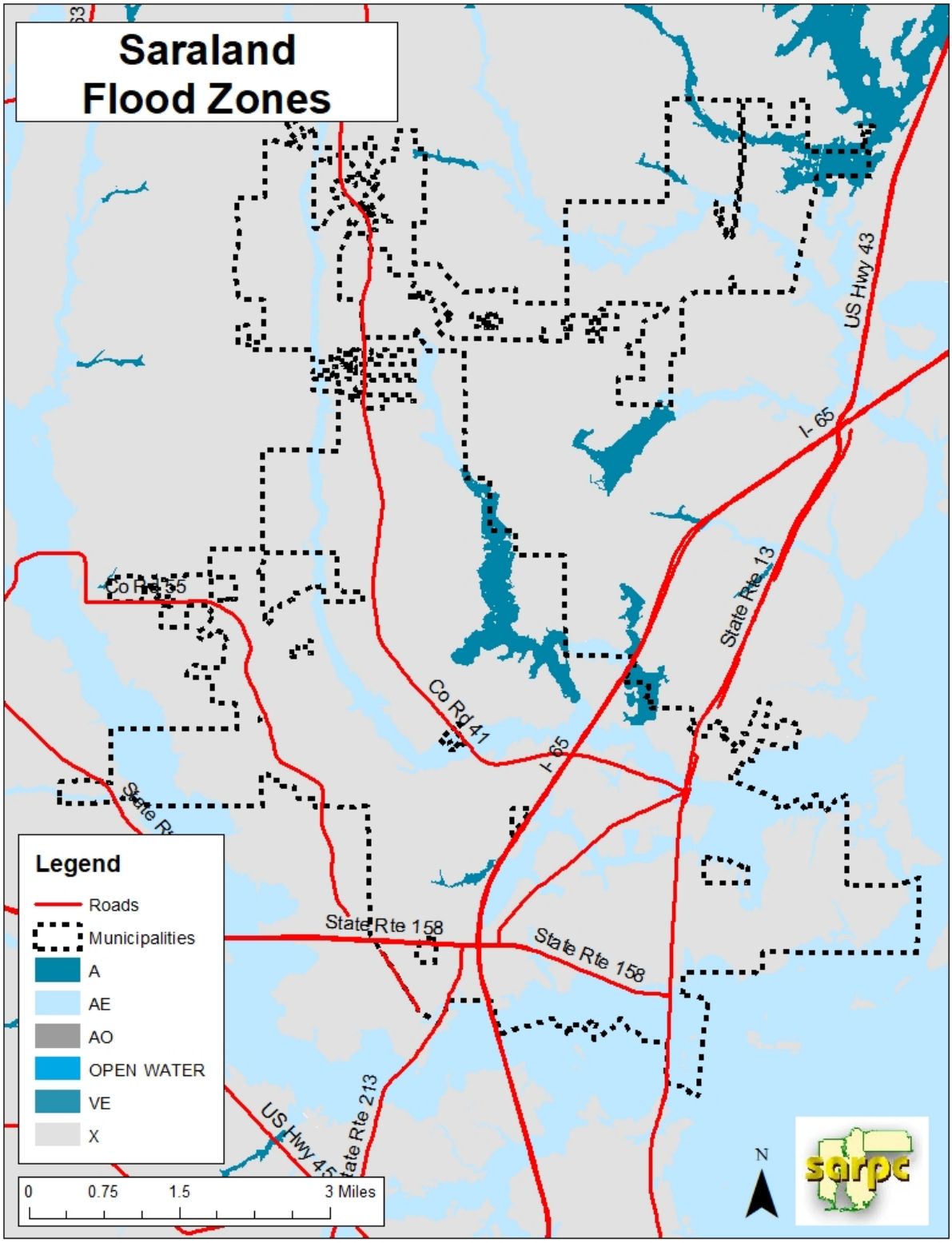


Figure 3.33 Satsuma Flood Hazard Areas

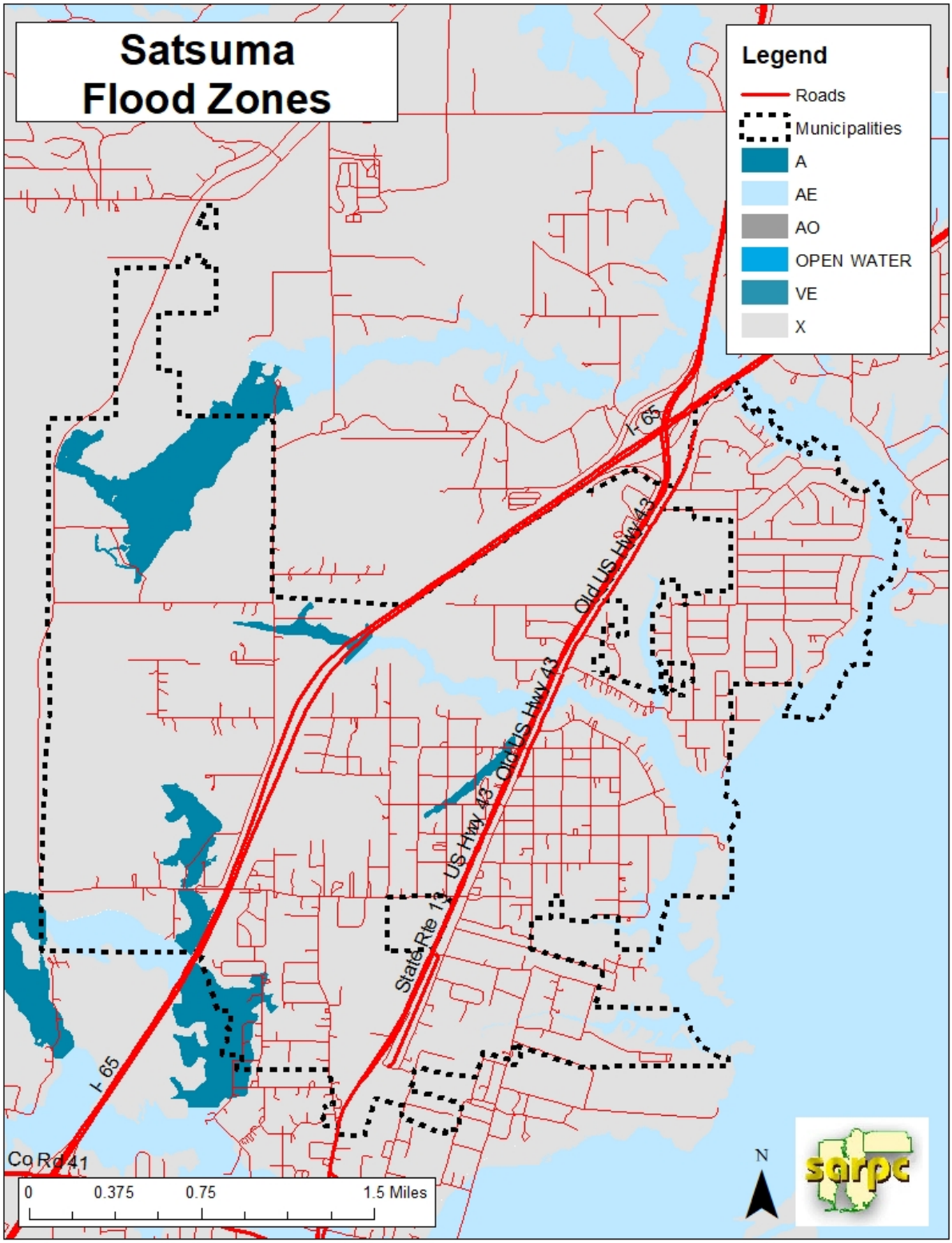


Figure 3.34 Semmes Flood Hazard Areas

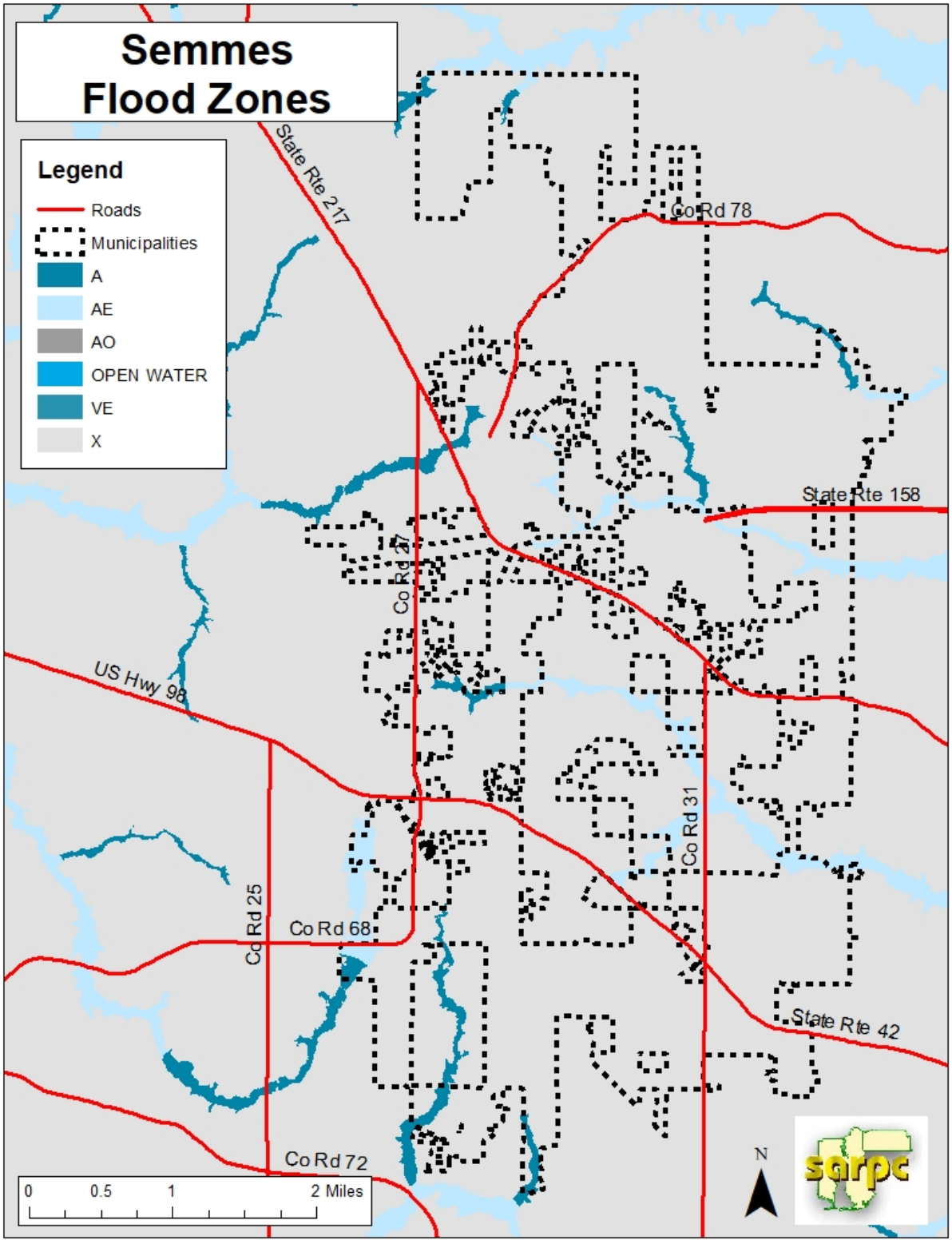


Figure 3.35 Baldwin County Storm Surge Levels Category 1

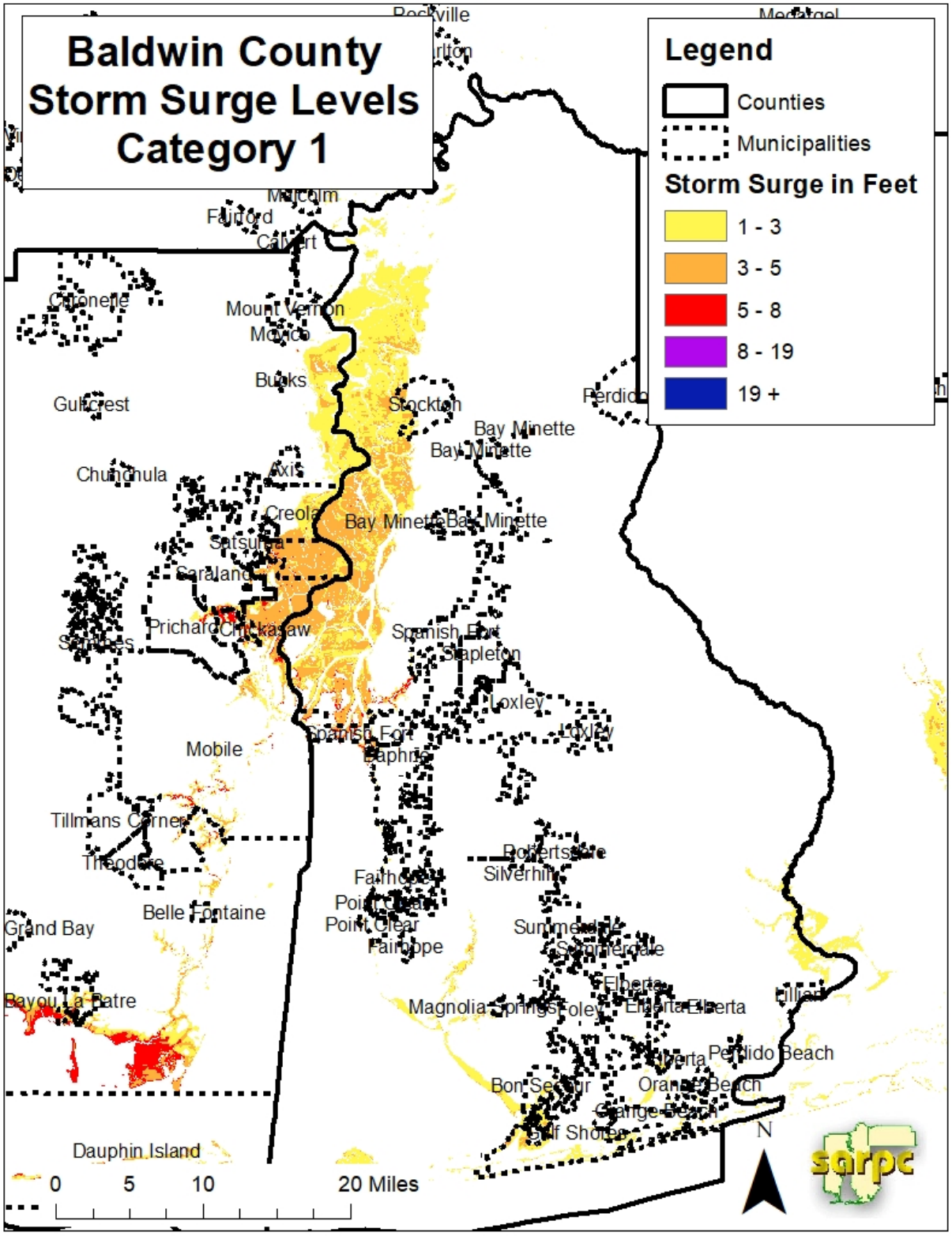


Figure 3.36 Baldwin County Storm Surge Levels Category 2

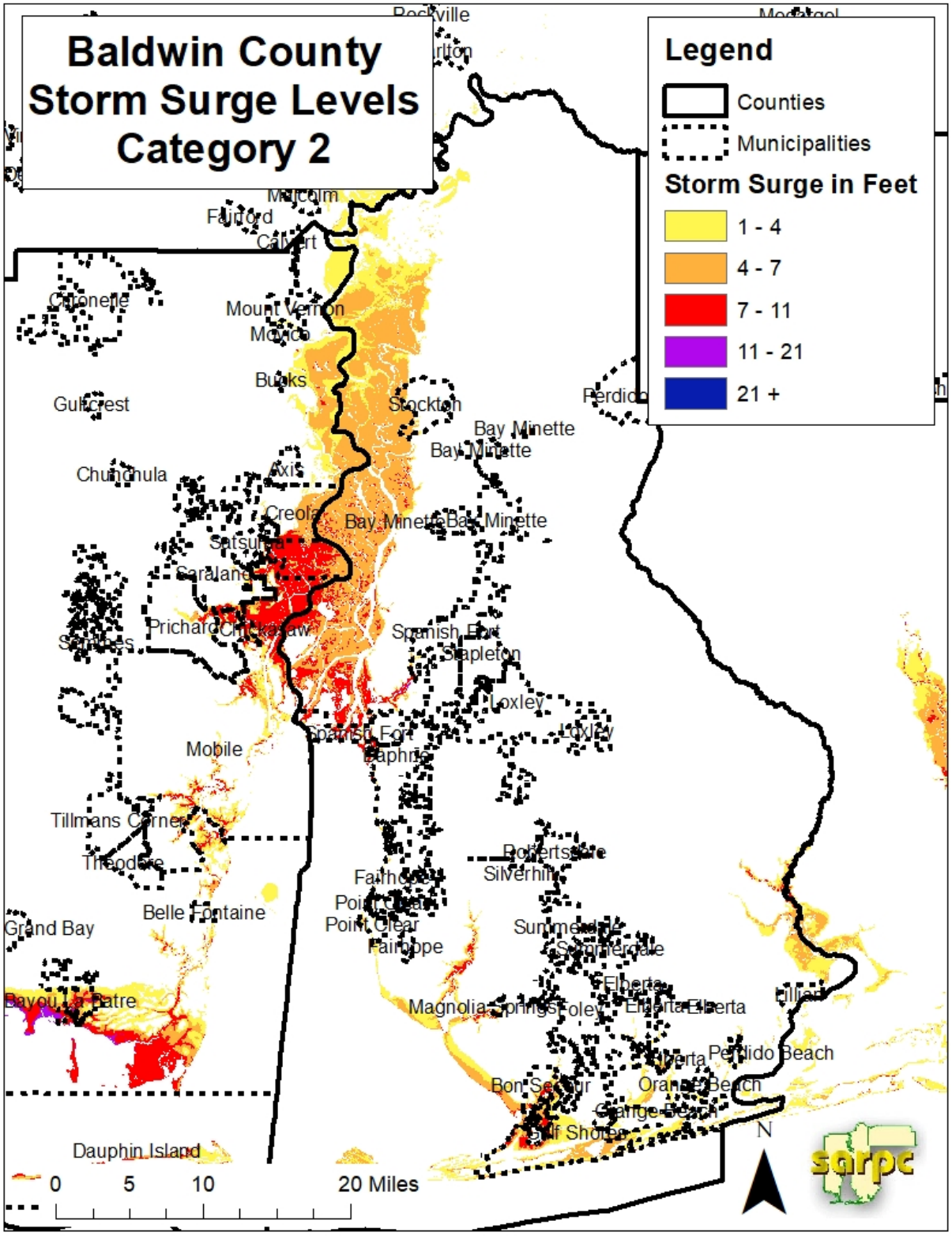


Figure 3.37 Baldwin County Storm Surge Levels Category 3

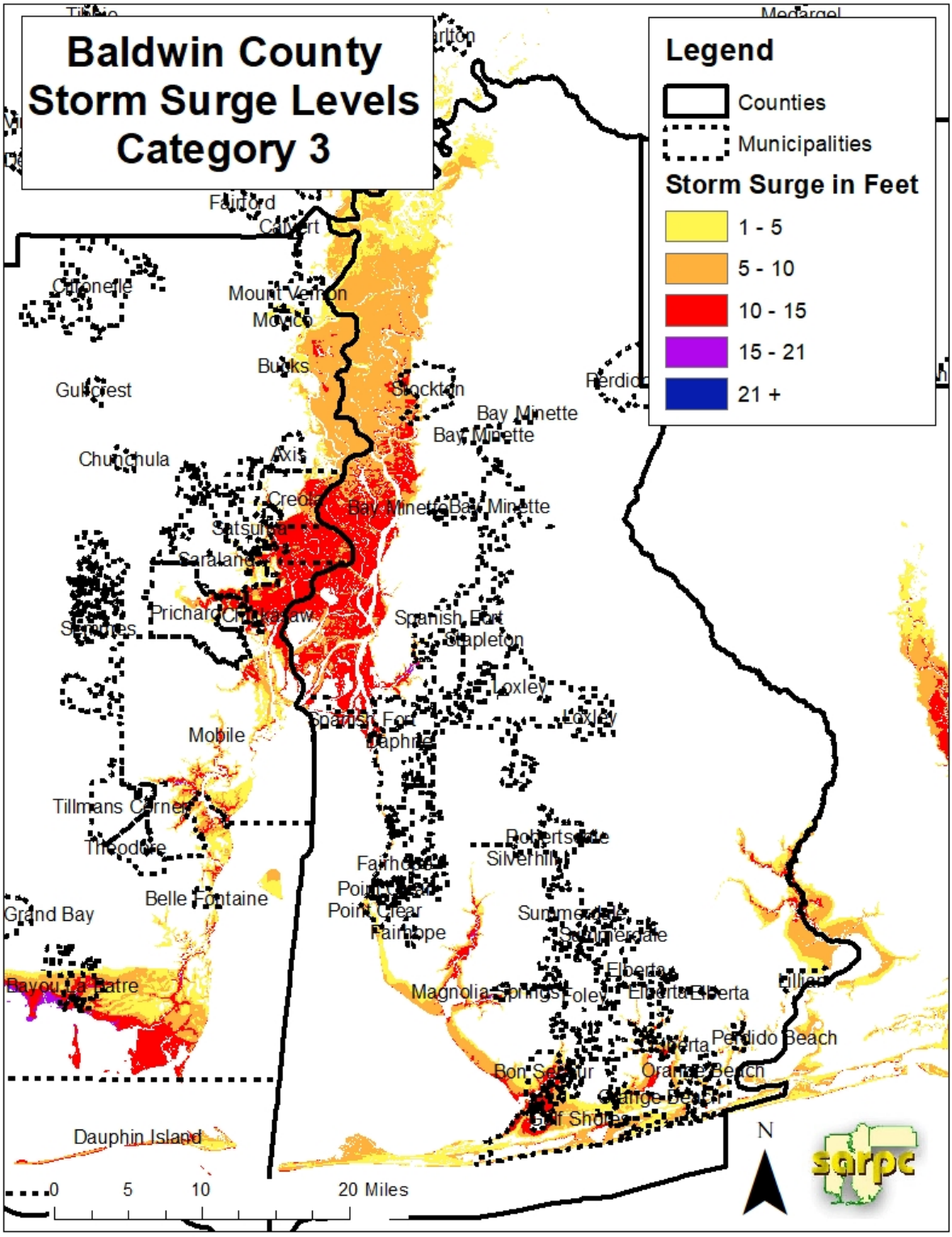


Figure 3.38 Baldwin County Storm Surge Levels Category 4

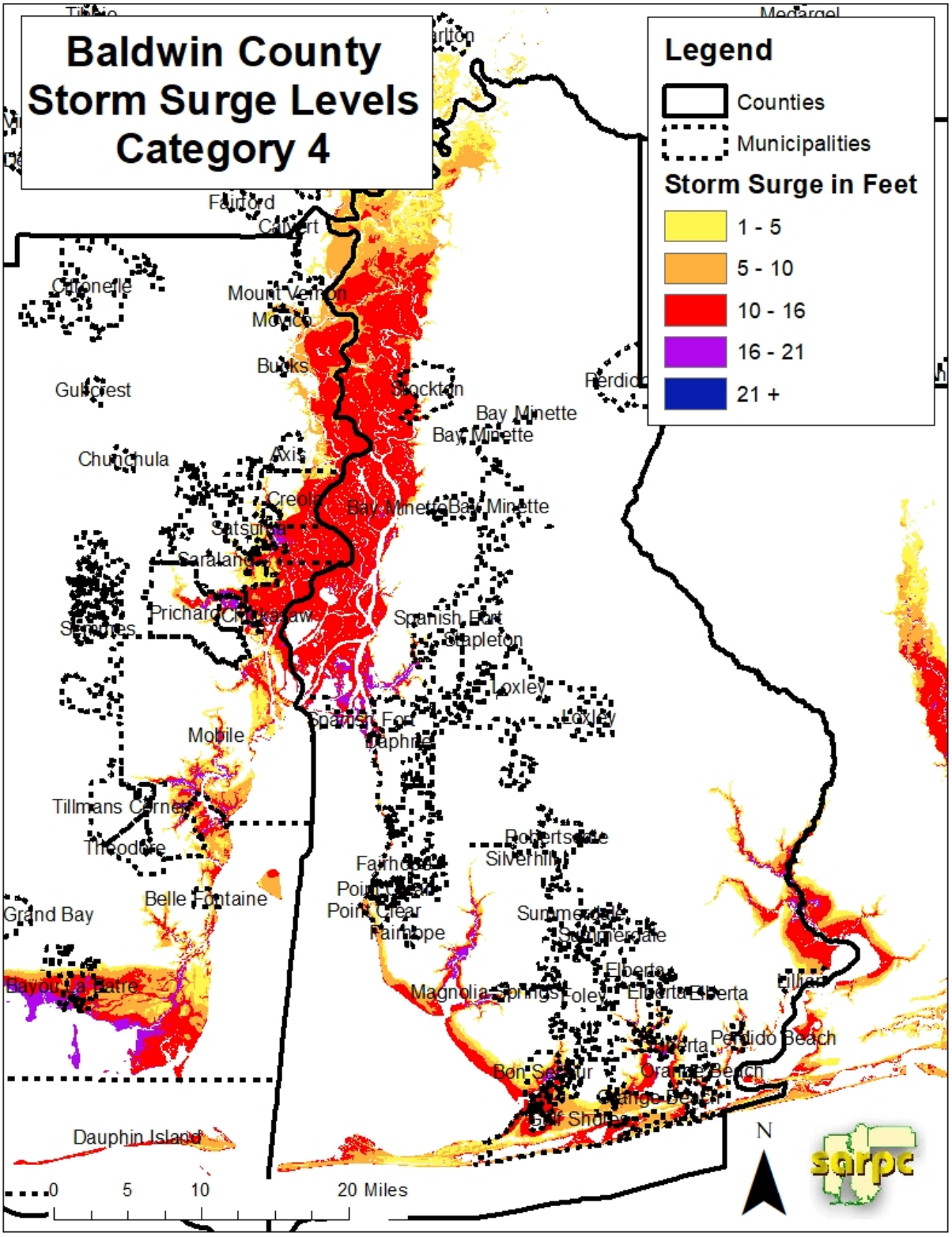


Figure 3.39 Baldwin County Storm Surge Levels Category 5

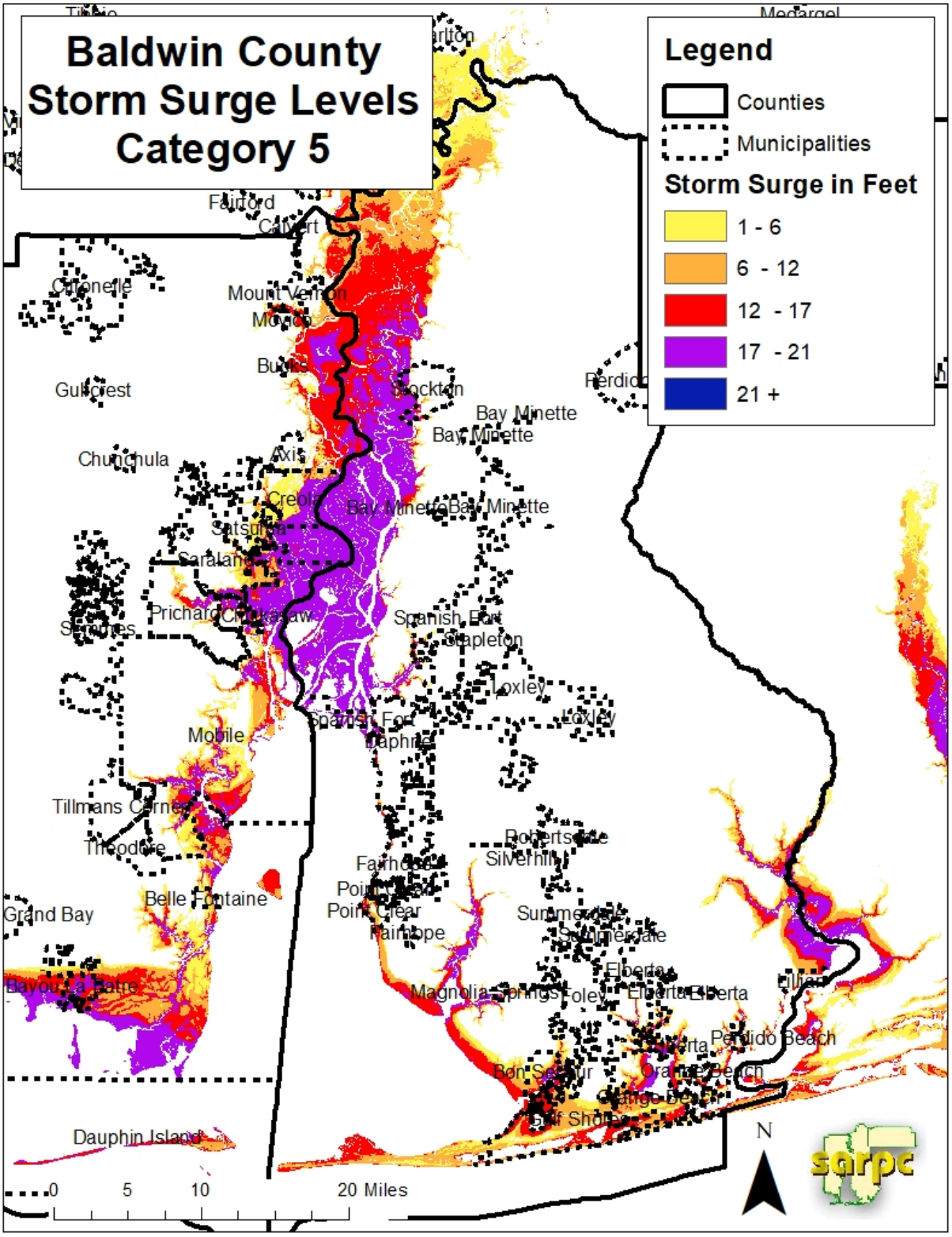


Figure 3.40 Mobile County Storm Surge Levels Category 1

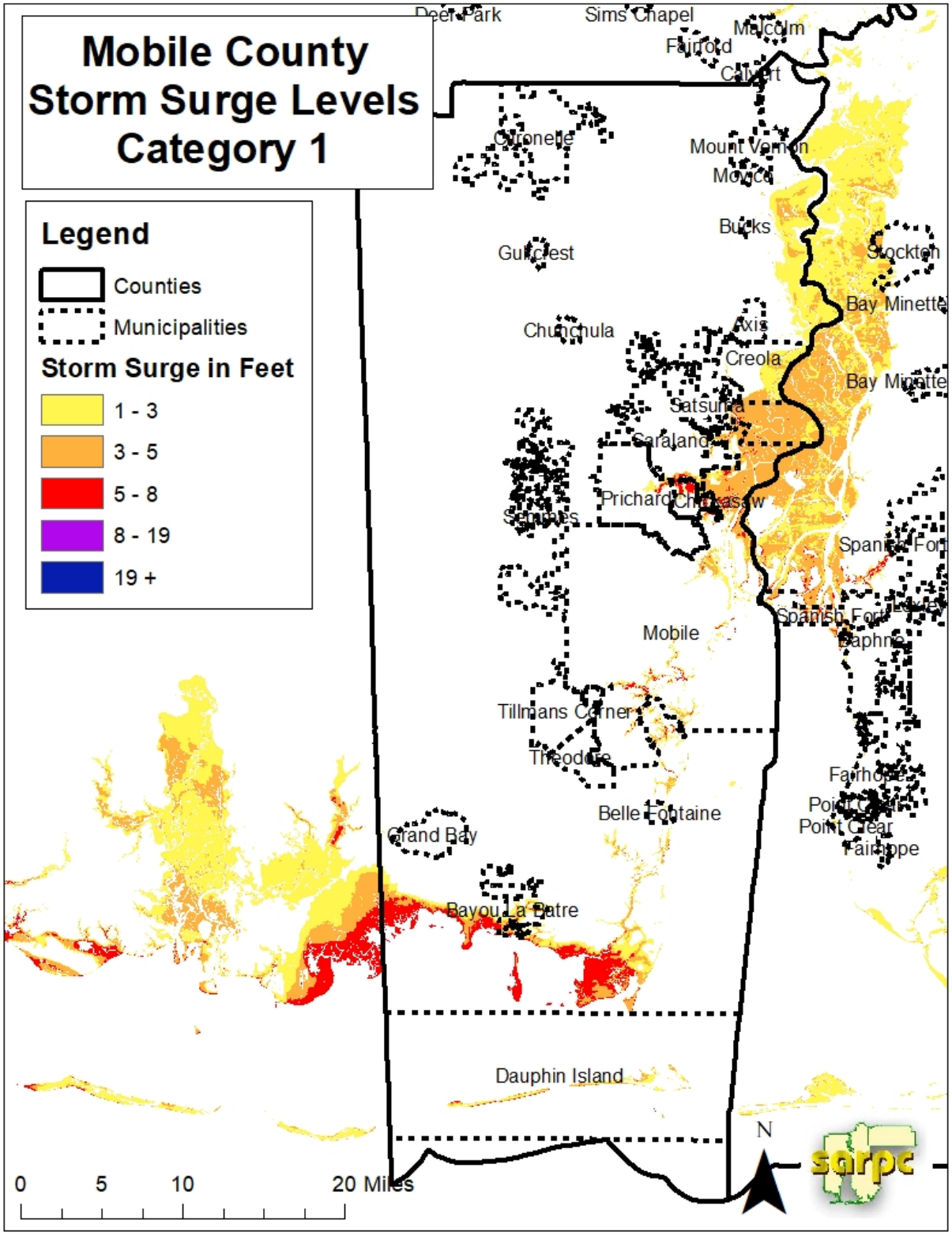


Figure 3.41 Mobile County Storm Surge Levels Category 2

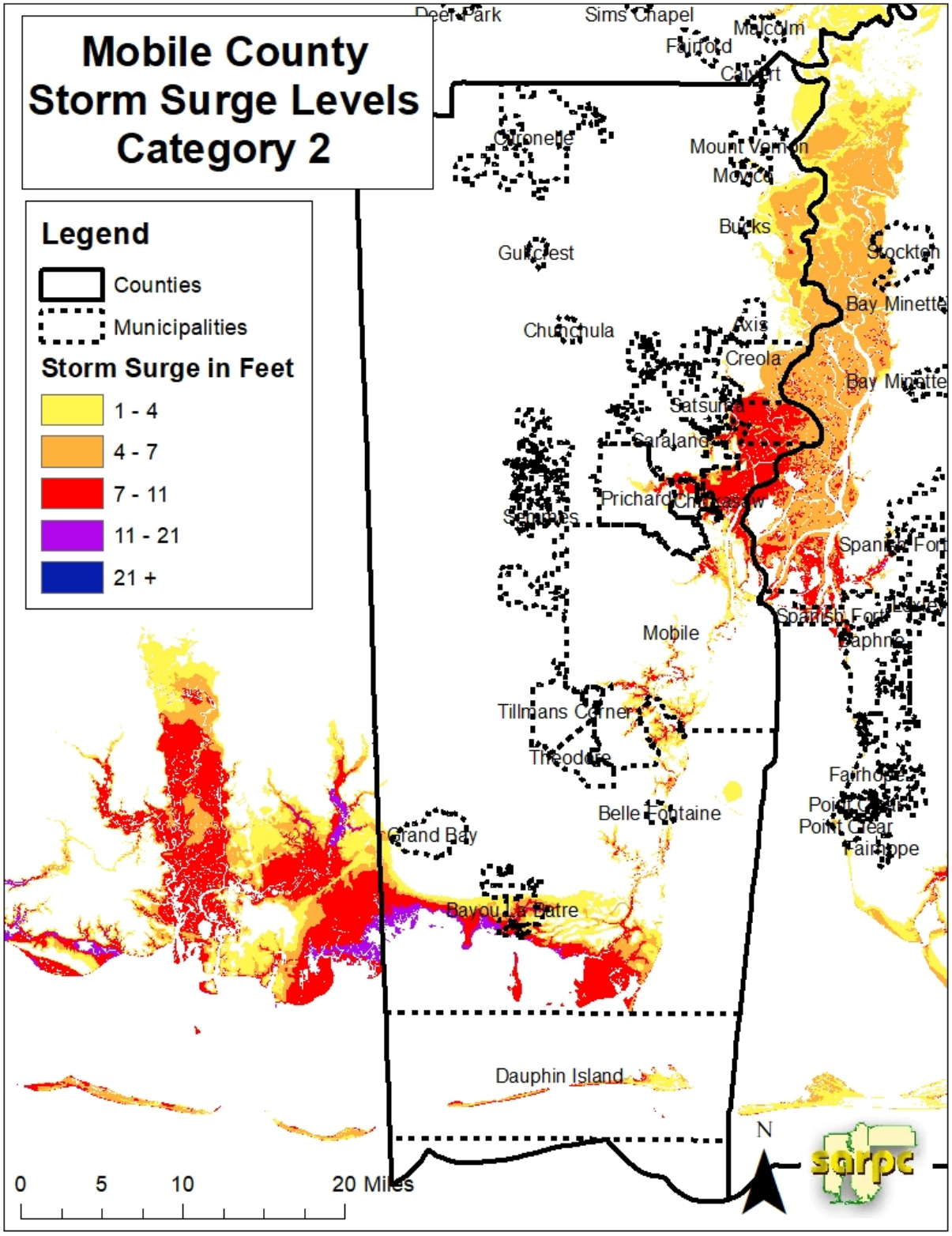


Figure 3.42 Mobile County Storm Surge Levels Category 3

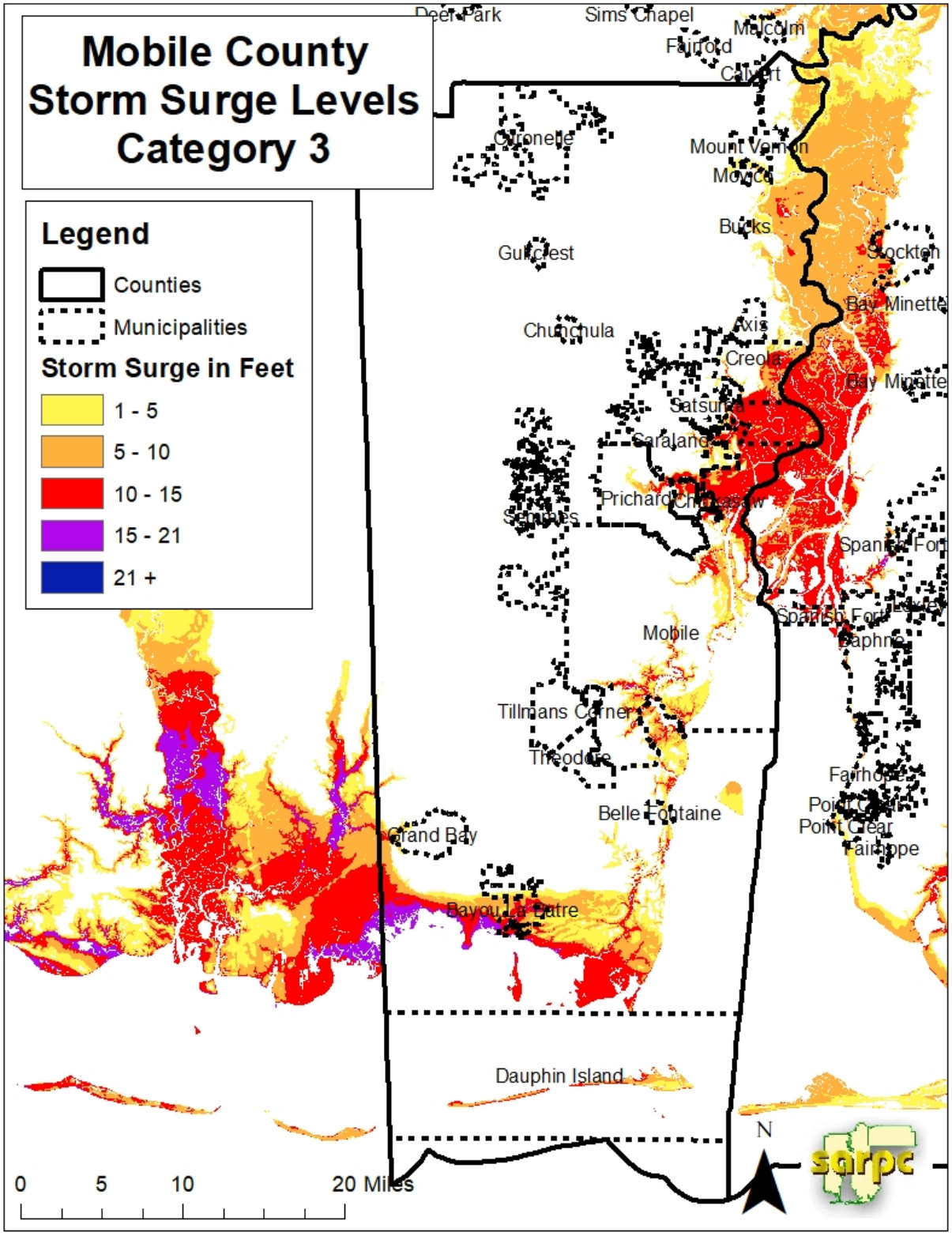


Figure 3.43 Mobile County Storm Surge Levels Category 4

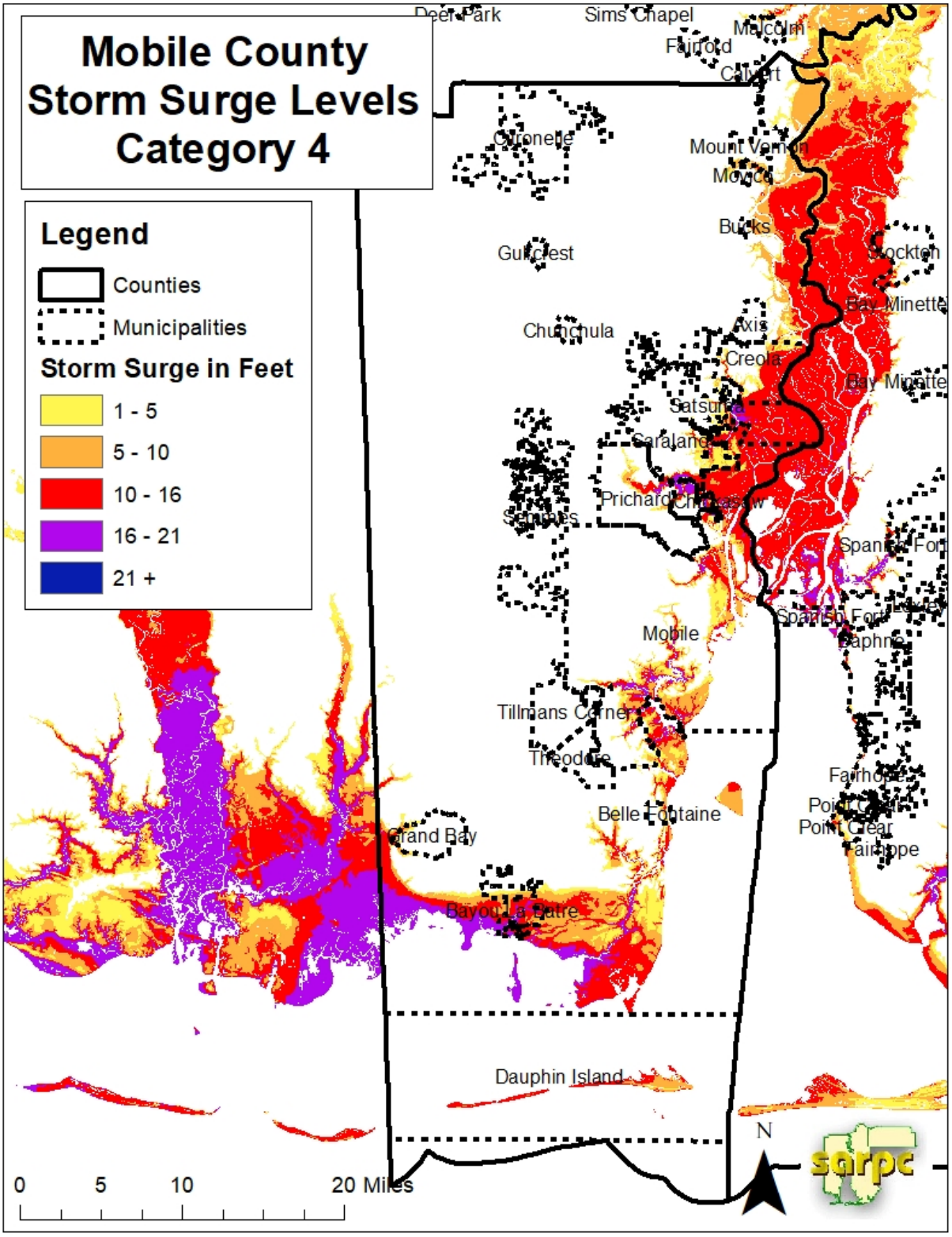


Figure 3.44 Mobile County Storm Surge Levels Category 5

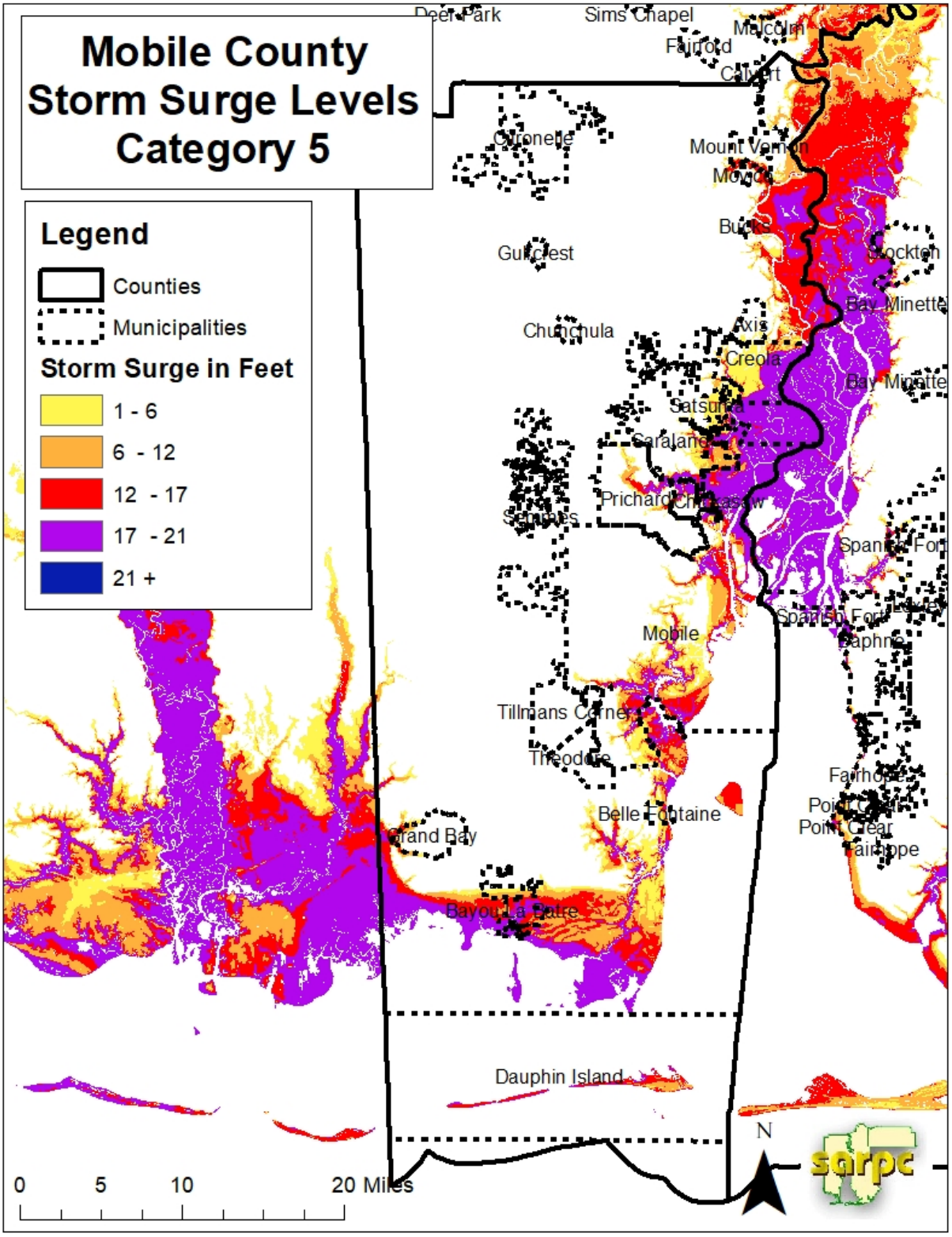


Figure 3.45 Baldwin County Public School Locations

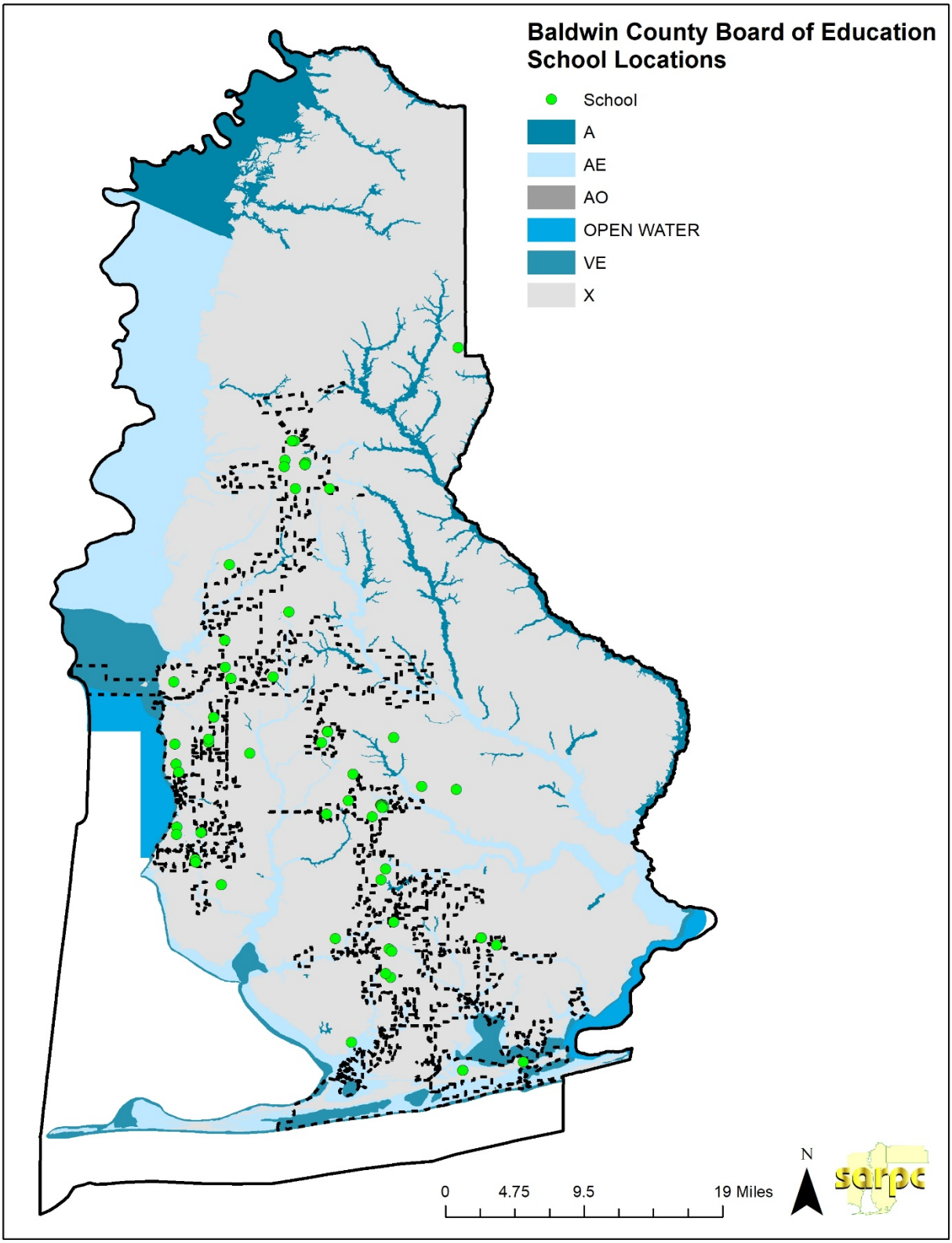
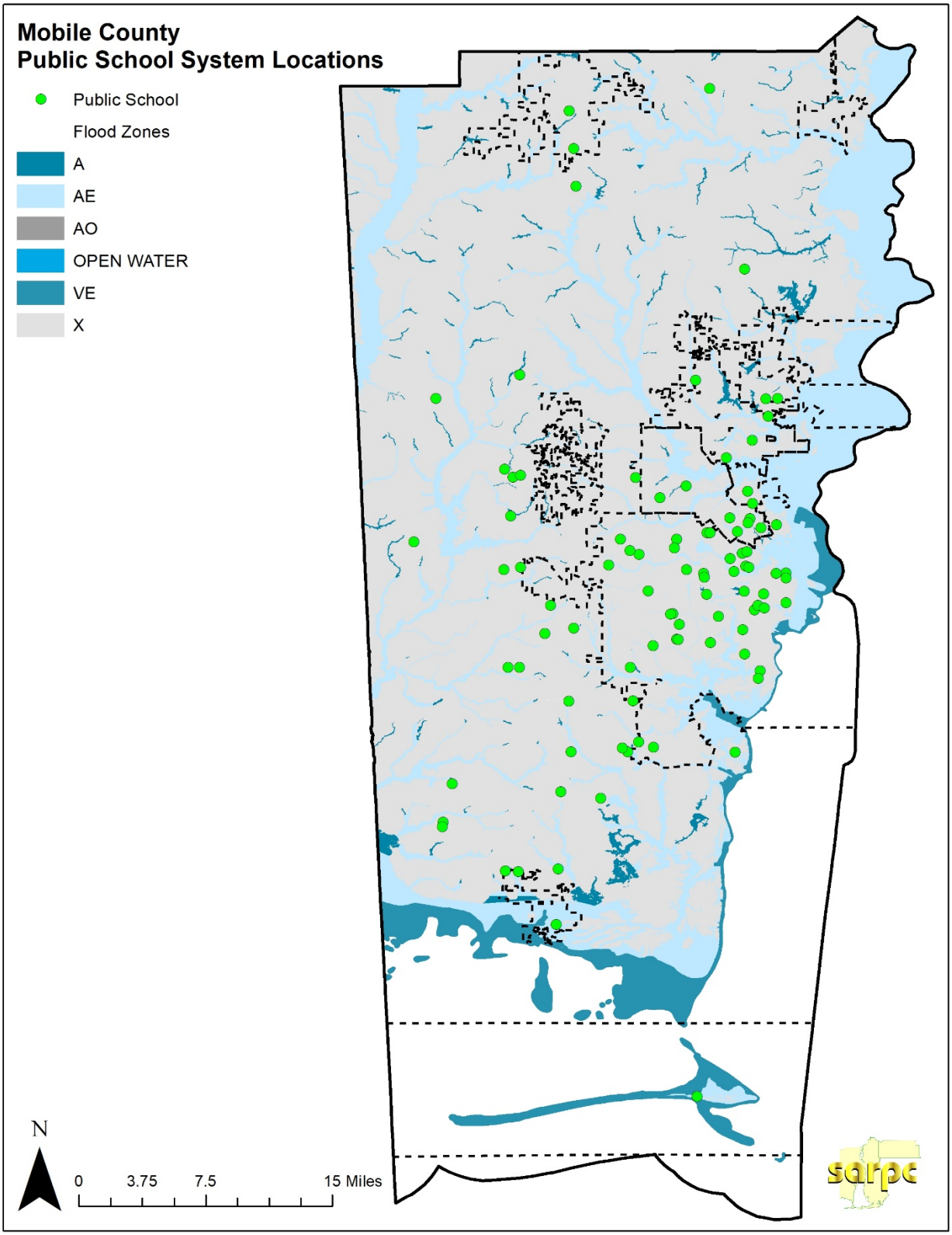


Figure 3.46 Mobile County Public School Locations



Extent

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 the planning area, 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.

Coastal Flooding

NOAA defines coastal flooding as flooding which occurs when water is driven on to land from an adjacent body of water. This generally occurs when there are significant storms, such as tropical storms and hurricanes.

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 up to almost two feet above flood stage as noted by the highest recorded floods described at multiple points in the region.

Historical Occurrences

Information from the National Climatic Data Center reports a total of ninety-four flood events since 2000 within the planning area. The total estimated property and crop damage for these events totals over 38 million dollars. Descriptions of flooding events with the most damage since 2000 are described below. Unfortunately, further information about flood level amounts, for the counties or the jurisdictions was not available.

- May 18, 2003 ($500,000 in damage in Central Baldwin County) Excessive rainfall occurred over a 12 hour period, with radar estimating rainfall totals of 11 to 15 inches.. This produced flooding from Bay Minette to Spanish Fort to Daphne. Bay Minette had eleven homes flooded, and several homes were also flooded in the Daphne area. Several roads were closed, and a few bridges were washed out. The bridge washouts forced residents to take long detours for several weeks, until the bridges were rebuilt.

- December 14, 2009 ($1,250,000 in damage in Escambia County) Heavy rain produced widespread flash flooding in Atmore. Numerous homes, businesses, and roads were flooded. Several cars were stranded in the streets of downtown Atmore. Slow moving

thunderstorms produced heavy rains that caused widespread flooding in portions of south central and southwest Alabama. Flooding from area rivers and small streams produced the most widespread flooding in portions of Escambia County, Alabama in the Atmore, Flomaton and Brewton areas. The Federal Emergency Management Agency places the estimates for flood damage to property near 5.9 million U.S. Dollars in Escambia County, Alabama for this episode.

- April 29, 2014 ($27,000,000 in damage in Baldwin County) A strong storm system brought record flooding along with severe thunderstorms that produced damaging winds and tornadoes to the region. The southern half of Baldwin county experienced historic flooding the night of April 29th into the early morning of April 30th. Rain totals of 12 to 24 inches were reported, with the maximum rainfall occurring in a swath from Foley south to Gulf Shores and Orange Beach, east to the Florida state line. The highest reported was 23.67 inches in Orange Beach via a CoCoRAHS observer. The Fish River at Silverhill crested at record high level of 23.18 feet. The Styx River at Elsanor experienced its second highest crest on record at 20.90 feet. 1400 homes and businesses experienced flooding and private property losses are estimated at $17 million with another $10 million estimated for infrastructure damage. Almost every road south of Highway 104 experienced flooding. Numerous roads were flooded between Highway 104 and just north of Interstate 10. The flooding resulted in extensive damage to numerous roads and bridges throughout the county. Emergency management officials reported having to rescue dozens of people from homes and vehicles due the rapid rise of the water. A significant portion of the bluff in Spanish Fort, along Patrician Drive, was washed away. A 67 year old man was killed in Foley when his car was swept off Airport Drive by fast rising water from the adjacent Magnolia River.

- April 29, 2014 ($6,500,000 in damage in Mobile County) The same storm mentioned above brought severe rain to Mobile County, as ten to seventeen inches of rain fell across much of central and southern Mobile county. Most of that rain fell during the evening of April 29th through the early morning of April 30th. Widespread flash flooding was reported across central and southern Mobile county, including the city of Mobile. Numerous roads were closed due to being impassable and dozens of people had to be rescued from cars that drove into flooded areas. Massive sinkholes developed on Girby Street and on Dauphin Street at Mcgreror Street. Homes were flooded in a Theodore subdivision.

- January 2, 2017 ($600,000 in damage in Baldwin County) A surface low developed over the southern Plains and moved east into the Tennessee Valley, resulting in numerous thunderstorms across the area that produced damaging winds and flooding across southwest and south central Alabama. Significant flash flooding occurred, especially in the Foley area, due to 5 to 7 inches of rain falling the span of only a couple of hours. A water rescue had to be performed on Fernwood Circle due to the rapid rise of Sandy Creek. Numerous roads in the central and southern half of the county were flooded and closed, with several sustaining damage due to the flooding.

Table 3.11 provides historical occurrence data for flooding for the period covering 2000-2020.

Table 3.11 Division A- SARPC Planning Area Flooding Occurrences 2000-2020

Location	County	Date	Type	Deaths	Injuries	Property Damage	Crop Damage
Mobile	Mobile	03/19/00	Flash Flood	0	0	$25,000	$0
Mobile	Mobile	11/06/00	Flash Flood	0	0	$0	$0
Countywide	Baldwin	03/03/01	Flash Flood	0	0	$15,000	$0
Countywide	Escambia	03/03/01	Flash Flood	0	0	$10,000	$0
Countywide	Mobile	03/03/01	Flash Flood	0	0	$15,000	$0
Mobile	Mobile	03/12/01	Flash Flood	0	0	$3,000	$0
Central Portion	Mobile	07/12/01	Flash Flood	0	0	$0	$0
Mobile	Mobile	08/12/01	Flash Flood	0	0	$0	$0
(MOB) Mobile Bates Field	Mobile	08/28/01	Flash Flood	0	0	$1,000	$0
Point Clear	Baldwin	09/14/02	Flash Flood	0	0	$0	$0
Theodore	Mobile	09/14/02	Flash Flood	0	0	$0	$0
Theodore	Mobile	09/24/02	Flash Flood	0	0	$0	$0
Foley	Baldwin	09/25/02	Flash Flood	0	0	$0	$0
South Portion	Baldwin	09/25/02	Flash Flood	0	0	$0	$0
Theodore	Mobile	09/25/02	Flash Flood	0	0	$0	$0
South Portion	Mobile	09/25/02	Flash Flood	0	0	$0	$0
Atmore	Escambia	09/26/02	Flash Flood	0	0	$0	$0
Central Portion	Mobile	12/31/02	Flash Flood	0	0	$0	$0
Central Portion	Baldwin	04/07/03	Flash Flood	0	0	$0	$0
Central Portion	Baldwin	05/18/03	Flash Flood	0	0	$500,000	$0
South Portion	Mobile	05/18/03	Flash Flood	0	0	$0	$0
South Portion	Mobile	05/18/03	Flash Flood	0	0	$0	$0
Central Portion	Baldwin	05/19/03	Flash Flood	0	0	$0	$0
Central Portion	Baldwin	06/06/03	Flash Flood	0	0	$0	$0
West Central Portion	Escambia	06/06/03	Flash Flood	0	0	$0	$0
Mobile	Mobile	06/06/03	Flash Flood	0	0	$0	$0
Countywide	Baldwin	06/30/03	Flash Flood	0	0	$0	$0
Countywide	Escambia	06/30/03	Flash Flood	0	0	$0	$0
Countywide	Mobile	06/30/03	Flash Flood	0	0	$0	$0
Countywide	Baldwin	07/01/03	Flash Flood	0	0	$0	$0
Countywide	Escambia	07/01/03	Flash Flood	0	0	$0	$0
Countywide	Mobile	07/01/03	Flash Flood	0	0	$0	$0
Foley	Baldwin	07/22/03	Flash Flood	0	0	$0	$0
Semmes	Mobile	02/25/04	Flash Flood	0	0	$0	$0
Stockton	Baldwin	05/17/04	Flash Flood	0	0	$0	$0

Satsuma	Mobile	06/01/04	Flash Flood	0	0	$10,000	$0
Poarch	Escambia	06/02/04	Flash Flood	0	0	$0	$0
East Portion	Baldwin	09/16/04	Flash Flood	0	0	$0	$0
West Portion	Escambia	09/16/04	Flash Flood	0	0	$0	$0
Central Portion	Escambia	10/19/04	Flash Flood	0	0	$0	$0
Central Portion	Baldwin	03/31/05	Flash Flood	0	0	$10,000	$0
South Portion	Mobile	03/31/05	Flash Flood	0	0	$5,000	$0
South Portion	Baldwin	04/01/05	Flash Flood	0	0	$100,000	$0
South Portion	Mobile	04/01/05	Flash Flood	0	0	$50,000	$0
South Portion	Baldwin	04/06/05	Flash Flood	0	0	$150,000	$0
South Portion	Mobile	04/06/05	Flash Flood	0	0	$25,000	$0
Central Portion	Baldwin	04/30/05	Flash Flood	0	0	$0	$0
Central Portion	Mobile	04/30/05	Flash Flood	0	0	$0	$0
West Central Portion	Mobile	06/11/05	Flash Flood	0	0	$0	$0
West Portion	Baldwin	07/06/05	Flash Flood	0	0	$0	$0
Countywide	Mobile	07/06/05	Flash Flood	0	0	$0	$0
Countywide	Escambia	07/10/05	Flash Flood	0	0	$0	$0
Countywide	Baldwin	08/29/05	Flash Flood	0	0	$0	$0
Countywide	Escambia	08/29/05	Flash Flood	0	0	$0	$0
Countywide	Mobile	08/29/05	Flash Flood	0	0	$0	$0
Central Portion	Baldwin	05/29/06	Flash Flood	0	0	$0	$0
East Portion	Baldwin	06/16/06	Flash Flood	0	0	$0	$0
North Portion	Mobile	06/16/06	Flash Flood	0	0	$0	$0
Perdido	Baldwin	11/15/06	Flash Flood	0	0	$0	$0
Atmore	Escambia	11/15/06	Flash Flood	0	0	$0	$0
Semmes	Mobile	11/15/06	Flash Flood	0	0	$0	$0
Vaughn	Baldwin	04/01/07	Flash Flood	0	0	$0	$0
Brewton	Escambia	04/01/07	Flash Flood	0	0	$0	$0
Mobile	Mobile	04/01/07	Flash Flood	0	0	$0	$0
Wallace	Escambia	04/14/07	Flash Flood	0	0	$0	$0
Lillian	Baldwin	05/30/07	Flash Flood	0	0	$0	$0
Citronelle	Mobile	06/19/07	Flash Flood	0	0	$0	$0
Mobile	Mobile	07/04/07	Flash Flood	0	0	$0	$0
Fairhope	Baldwin	10/19/07	Flash Flood	0	0	$100,000	$0
Little River	Baldwin	10/23/07	Flash Flood	0	0	$0	$0
Citronelle	Mobile	10/23/07	Flash Flood	0	0	$0	$0
Stockton	Baldwin	01/31/08	Flash Flood	0	0	$0	$0
Boykin	Escambia	01/31/08	Flash Flood	0	0	$0	$0
Tanner Williams	Mobile	01/31/08	Flash Flood	0	0	$0	$0
Fairhope	Baldwin	04/05/08	Flash Flood	0	0	$10,000	$0
Grand Bay	Mobile	04/05/08	Flash Flood	0	0	$15,000	$0
Moffet	Mobile	05/03/08	Flash Flood	0	0	$0	$0

Montrose	Baldwin	05/16/08	Flash Flood	0	0	$10,000	$0
Grand Bay	Mobile	05/16/08	Flash Flood	0	0	$0	$0
Spring Hill	Mobile	06/10/08	Flash Flood	0	0	$5,000	$0
(MOB) Mobile Bates Field	Mobile	08/16/08	Flash Flood	0	0	$0	$0
Spanish Ft	Baldwin	08/25/08	Flash Flood	0	0	$2,000	$0
Alabama Port	Mobile	08/25/08	Flash Flood	0	0	$20,000	$0
Montrose	Baldwin	09/01/08	Flash Flood	0	0	$5,000	$0
Piercie	Mobile	09/01/08	Flash Flood	0	0	$250,000	$0
Gulf Shores	Baldwin	10/07/08	Flash Flood	0	0	$0	$0
Robertsdale	Baldwin	12/10/08	Flash Flood	0	0	$0	$0
Appleton	Escambia	12/10/08	Flash Flood	0	0	$0	$0
Citronelle	Mobile	03/27/09	Flash Flood	0	0	$0	$0
Loxley	Baldwin	03/28/09	Flash Flood	0	0	$0	$0
Citronelle	Mobile	03/28/09	Flash Flood	0	0	$0	$0
Mobile	Mobile	03/28/09	Flash Flood	0	0	$0	$0
Grand Bay	Mobile	03/28/09	Flash Flood	0	0	$0	$0
Dauphin Is	Mobile	05/23/09	Flash Flood	0	0	$0	$0
Bayou La Batre	Mobile	05/23/09	Flash Flood	0	0	$0	$0
Orange Beach	Baldwin	11/09/09	Flash Flood	0	0	$0	$0
Theodore	Mobile	12/12/09	Flash Flood	0	0	$0	$0
Bay Minette	Baldwin	12/14/09	Flash Flood	0	0	$0	$0
Bay Minette	Baldwin	12/14/09	Flash Flood	0	0	$0	$0
Crossroads	Baldwin	12/14/09	Flash Flood	0	0	$0	$0
Appleton	Escambia	12/14/09	Flood	0	0	$400,000	$0
Flomaton	Escambia	12/14/09	Flood	0	0	$362,000	$0
Atmore	Escambia	12/14/09	Flash Flood	0	0	$250,000	$0
Atmore	Escambia	12/14/09	Flash Flood	0	0	$1,250,000	$0
Brewton	Escambia	12/14/09	Flash Flood	0	0	$0	$0
(MOB) Mobile Bates Field	Mobile	12/14/09	Flash Flood	0	0	$0	$0
Saraland	Mobile	12/14/09	Flash Flood	0	0	$0	$0
Perdido	Baldwin	12/15/09	Flash Flood	0	0	$0	$0
Dawes	Mobile	01/20/10	Flash Flood	0	0	$0	$0
Spring Hill	Mobile	01/20/10	Flash Flood	0	0	$0	$0
Mertz	Mobile	01/20/10	Flash Flood	0	0	$0	$0
Mobile Aerospace Airport	Mobile	01/20/10	Flash Flood	0	0	$0	$0
Dawes	Mobile	01/20/10	Flash Flood	0	0	$0	$0
Seven Hills	Mobile	01/20/10	Flash Flood	0	0	$0	$0
Theodore	Mobile	01/20/10	Flash Flood	0	0	$0	$0
Seven Hills	Mobile	01/20/10	Flash Flood	0	0	$0	$0
Forest Hill	Mobile	01/20/10	Flash Flood	0	0	$0	$0

Atmore	Escambia	05/03/10	Flash Flood	0	0	$0	$0
Gasque	Baldwin	05/16/10	Flash Flood	0	0	$0	$0
Gasque	Baldwin	05/16/10	Flash Flood	0	0	$0	$0
Mobile	Mobile	08/15/10	Flash Flood	0	0	$0	$0
Atmore	Escambia	03/09/11	Flash Flood	0	0	$0	$0
Brewton	Escambia	03/09/11	Flash Flood	0	0	$0	$0
Citronelle	Mobile	03/09/11	Flash Flood	0	0	$0	$0
Chickasaw	Mobile	03/09/11	Flash Flood	0	0	$0	$0
Bayou La Batre	Mobile	03/09/11	Flash Flood	0	0	$0	$0
Forest Hill	Mobile	03/09/11	Flash Flood	0	0	$0	$0
Theodore	Mobile	09/03/11	Flash Flood	0	0	$0	$0
Daphne	Baldwin	05/02/12	Flash Flood	0	0	$0	$0
Eight Mile	Mobile	05/02/12	Flash Flood	0	0	$0	$0
(MOB) Mobile Bates Field	Mobile	05/02/12	Flash Flood	0	0	$0	$0
River Park	Baldwin	06/09/12	Flash Flood	0	0	$0	$0
Dawes	Mobile	06/09/12	Flash Flood	0	0	$0	$0
Theodore Idle Hour A	Mobile	06/09/12	Flash Flood	0	0	$5,000	$0
(MOB) Mobile Bates Field	Mobile	02/25/13	Flood	0	0	0	0
Chunchula	Mobile	05/01/13	Flash Flood	0	0	$0	$0
Chunchula	Mobile	06/02/13	Flash Flood	0	0	$0	$0
Foley	Baldwin	07/04/13	Flash Flood	0	0	$0	$0
Yupon	Baldwin	07/11/13	Flash Flood	0	0	$0	$0
Fairhope Municipal Airport	Baldwin	07/11/13	Flash Flood	0	0	$0	$0
Barnwell	Baldwin	07/11/13	Flash Flood	0	0	$0	$0
Montrose	Baldwin	07/11/13	Flash Flood	0	0	$0	$0
Houstonville	Baldwin	07/11/13	Flash Flood	0	0	$75,000	$0
Fairhope	Baldwin	07/11/13	Flood	0	0	$0	$0
Josephine	Baldwin	07/28/13	Flash Flood	0	0	$0	$0
Bayou La Batre	Mobile	07/28/13	Flash Flood	0	0	$0	$0
Semmes	Mobile	09/03/13	Flash Flood	0	0	$0	$0
Atmore	Escambia	09/24/13	Flood	0	0	$5,000	$0
Spring Hill	Mobile	03/16/14	Flash Flood	0	0	$0	$0
Robertsdale	Baldwin	03/28/14	Flood	0	0	$15,000	$0
Summerdale	Baldwin	03/28/14	Flood	0	0	$0	$0
Point Clear	Baldwin	03/28/14	Flood	0	0	$0	$0
Foley	Baldwin	04/14/14	Flash Flood	0	0	$0	$0
Taylors Camp	Baldwin	04/14/14	Flash Flood	0	0	$100,000	$0
Taylors Camp	Baldwin	04/14/14	Flash Flood	0	0	$25,000	$0
Fairhope	Baldwin	04/14/14	Flash Flood	0	0	$0	$0
Fairhope	Baldwin	04/14/14	Flash Flood	0	0	$0	$0

Fairhope	Baldwin	04/14/14	Flash Flood	0	0	$0	$0
Magnolia Springs	Baldwin	04/14/14	Flash Flood	0	0	$0	$0
Grand Bay	Mobile	04/14/14	Flash Flood	0	0	$0	$0
Spanish Ft	Baldwin	04/29/14	Flash Flood	1	1	$27,000,000	$0
(MOB) Mobile Bates Field	Mobile	04/29/14	Flash Flood	0	0	$0	$0
Mertz	Mobile	04/29/14	Flash Flood	0	0	$5,000	$0
Saraland	Mobile	04/29/14	Flash Flood	0	0	$6,500,000	$0
Lillian	Baldwin	05/02/14	Flood	1	0	$0	$0
Fairhope	Baldwin	05/14/14	Flash Flood	0	0	$0	$0
Magnolia Springs	Baldwin	05/14/14	Flash Flood	0	0	$0	$0
Malta	Escambia	05/14/14	Flash Flood	0	0	$0	$0
Flomaton	Escambia	05/14/14	Flash Flood	0	0	$0	$0
Heron Bay	Mobile	04/12/15	Flash Flood	0	0	$200,000	$0
Heron Bay	Mobile	04/13/15	Flood	0	0	0	0
Mertz	Mobile	05/15/15	Flash Flood	0	0	$1,000	$0
Spring Hill	Mobile	09/27/15	Flash Flood	0	0	$200,000	$0
Grand Bay	Mobile	12/23/15	Flash Flood	0	0	$30,000	$0
Romar Beach	Baldwin	02/23/16	Flash Flood	0	0	$0	$0
Perdido Beach	Baldwin	02/23/16	Flood	0	0	$0	$0
(MOB) Mobile Bates Field	Mobile	03/11/16	Flash Flood	0	0	$0	$0
Irvington	Mobile	03/11/16	Flash Flood	0	0	$0	$0
Chickasaw	Mobile	03/11/16	Flash Flood	0	0	$0	$0
Chickasaw	Mobile	03/11/16	Flash Flood	0	0	$0	$0
Theodore	Mobile	03/11/16	Flash Flood	0	0	$0	$0
Semmes	Mobile	03/24/16	Flash Flood	0	0	$0	$0
Plateau	Mobile	03/24/16	Flash Flood	0	0	$0	$0
Mobile	Mobile	03/24/16	Flash Flood	0	0	$0	$0
(MOB) Mobile Bates Field	Mobile	03/24/16	Flood	0	0	0	0
Forest Hill	Mobile	03/24/16	Flood	0	0	$10,000	0
Semmes	Mobile	03/24/16	Flood	0	0	$10,000	0
Appleton	Escambia	04/01/16	Flash Flood	0	0	$0	$0
Keego	Escambia	04/01/16	Flash Flood	0	0	$0	$0
Spanish Ft	Baldwin	05/02/16	Flash Flood	0	0	$10,000	$0
Robertsdale	Baldwin	08/10/16	Flash Flood	0	0	$0	$0
Elberta	Baldwin	08/12/16	Flash Flood	0	0	$0	$0
Bon Secour	Baldwin	08/12/16	Flood	0	0	$0	$0
Cottage Hill	Mobile	08/12/16	Flood	0	0	$0	$0
Belforest	Baldwin	01/02/17	Flash Flood	0	0	$600,000	$0
Big Creek Lake	Mobile	04/03/17	Flash Flood	0	0	$0	$0
Saraland	Mobile	05/20/17	Flash Flood	0	0	$0	$0

(MOB) Mobile Bates Field	Mobile	05/20/17	Flash Flood	0	0	$0	$0
Saraland	Mobile	05/20/17	Flash Flood	0	0	$0	$0
Grand Bay	Mobile	06/06/17	Flash Flood	0	0	$0	$0
Tillmans Corner	Mobile	06/06/17	Flash Flood	0	0	$0	$0
Tillmans Corner	Mobile	06/06/17	Flash Flood	0	0	$0	$0
Elsanor	Baldwin	06/07/17	Flash Flood	0	0	$0	$0
Gulf Shores	Baldwin	06/20/17	Flash Flood	0	0	$0	$0
Appleton	Escambia	06/21/17	Flash Flood	0	0	$0	$0
(MOB) Mobile Bates Field	Mobile	06/21/17	Flash Flood	0	0	$0	$0
Cottage Hill	Mobile	08/04/17	Flash Flood	0	0	$0	$0
(MOB) Mobile Bates Field	Mobile	08/04/17	Flash Flood	0	0	$0	$0
Dawes	Mobile	08/04/17	Flash Flood	0	0	$0	$0
St Elmo Airport	Mobile	08/29/17	Flash Flood	0	0	$0	$0
(MOB) Mobile Bates Field	Mobile	08/29/17	Flash Flood	0	0	$0	$0
Orange Beach	Baldwin	08/30/17	Flash Flood	0	0	$0	$0
Magnolia Springs	Baldwin	08/30/17	Flash Flood	0	0	$0	$0
Seven Hills	Mobile	08/30/17	Flash Flood	0	0	$0	$0
Loxley	Baldwin	10/22/17	Flash Flood	0	0	$30,000	$0
Silverhill	Baldwin	10/22/17	Flash Flood	0	0	$0	$0
Silverhill	Baldwin	10/22/17	Flash Flood	0	0	$0	$0
Marlow	Baldwin	10/22/17	Flash Flood	0	0	$50,000	$0
Grand Bay	Mobile	10/22/17	Flash Flood	0	0	$30,000	$0
Grand Bay	Mobile	10/22/17	Flash Flood	0	0	$0	$0
Mobile	Mobile	10/22/17	Flash Flood	0	0	$30,000	$0
Tillmans Corner	Mobile	10/22/17	Flash Flood	0	0	$0	$0
Oak	Baldwin	10/28/17	Flash Flood	0	0	$0	$0
Elberta	Baldwin	10/28/17	Flash Flood	0	0	$0	$0
Mobile	Mobile	08/01/18	Flash Flood	0	0	$0	$0
Cottage Hill	Mobile	08/01/18	Flash Flood	0	0	$0	$0
Plateau	Mobile	08/01/18	Flash Flood	0	0	$0	$0
Mobile	Mobile	08/01/18	Flash Flood	0	0	$0	$0
(MOB) Mobile Bates Field	Mobile	09/04/18	Flash Flood	0	0	$0	$0
Turkey Branch	Baldwin	09/05/18	Flash Flood	0	0	$0	$0
Elsanor	Baldwin	09/05/18	Flash Flood	0	0	$0	$0
Malbis	Baldwin	09/05/18	Flash Flood	0	0	$0	$0
Seminole	Baldwin	09/05/18	Flood	0	0	$0	$0
Lillian	Baldwin	12/01/18	Flash Flood	0	0	$0	$0
Mobile	Mobile	05/09/19	Flash Flood	0	0	$5,000	$0
Cottage Hill	Mobile	06/28/19	Flash Flood	0	0	$5,000	$0

N/A	Baldwin	07/12/19	Coastal Flooding	0	0	$0	$0
N/A	Baldwin	07/12/19	Coastal Flooding	0	0	$0	$0
N/A	Mobile	07/12/19	Coastal Flooding	0	0	$0	$0
N/A	Mobile	07/12/19	Coastal Flooding	0	0	$0	$0
N/A	Mobile	07/12/19	Coastal Flooding	0	0	$0	$0
N/A	Mobile	07/12/19	Coastal Flooding	0	0	$0	$0
N/A	Mobile	07/12/19	Coastal Flooding	0	0	$0	$0
N/A	Mobile	07/12/19	Coastal Flooding	0	0	$0	$0
N/A	Mobile	07/12/19	Coastal Flooding	0	0	$0	$0
N/A	Mobile	07/12/19	Coastal Flooding	0	0	$0	$0
Bayou La Batre Airport	Mobile	08/26/19	Flash Flood	0	0	$0	$0
Orchard	Mobile	09/19/19	Flash Flood	0	0	$100,000	$0
N/A	Mobile	10/9/19	Coastal Flooding	0	0	$0	$0
Saraland	Mobile	02/12/20	Flood	0	0	0	0
Nokomis	Escambia	04/23/20	Flash Flood	0	0	$5,000	$0
Magazine	Mobile	06/07/20	Flash Flood	0	0	$25,000	$0
Ft Morgan	Baldwin	09/15/20	Flash Flood	0	0	$0	$0
Barnwell	Baldwin	09/15/20	Flash Flood	0	0	$0	$0
Nokomis	Escambia	09/16/20	Flash Flood	0	0	$0	$0
Total				**2**	**1**	**$38,669,000**	**$0**

Source: NOAA Storm Events Database

Probability of Future Events

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 Figures 3.3 through 3.5. These maps provide the areas susceptible to a one-percent annual chance flood (100-year floodplain).

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 flood events is considered to be High.

HIGH WINDS (HURRICANES)

The SARPC Division A planning area is susceptible to high wind events from hurricanes, especially Baldwin and Mobile Counties, as they are both located on the Gulf of Mexico.

Background

Tropical systems are best described by the National Hurricane Center as the following. "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

Baldwin and Mobile Counties in the region are at the highest risk of hurricanes, due to their location on the Gulf of Mexico. Specifically, the coastal communities within these counties and even more vulnerable. These communities for Baldwin County include Gulf Shores, Orange Beach, Perdido Beach and nearby unincorporated areas. For Mobile County, these communities include, Dauphin Island, Bayou La Batre, Mobile, and the nearby unincorporated areas.

Escambia County is also at risk of hurricanes, but less so than the other regional counties, because it is located inland. However, storms can still be quite severe several hundred miles inland and still cause heavy rains, flooding, high winds and residual tornadoes. Atlantic Hurricane Season 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 3.12 gives a basic description of the scale.

Table 3.12 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. Baldwin and Mobile, Alabama's only two coastal counties, are extremely vulnerable as they are both located on the Gulf of Mexico. All of the planning area is at risk for high winds, heavy rainfall, and spin off tornadoes associated with tropical systems, but storm surge and flooding are also risks for areas closer to the coast. The impact of these events can range from localized to extensive.

Historical Occurrences

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

All three counties within SARPC's region of AEMA Division A have been included in federal disaster declarations for tropical storm and hurricane declarations.

Table 3.13 SARPC Planning Area Tropical Weather Occurrences

Name of Storm	Year	Counties Declared Distaster	Estimated Damage (2017 Dollars)*
Hurricane Camille	1969	Mobile, Baldwin	N/A
Hurricane Frederic	1969	Mobile, Baldwin, Escambia	$7.7 billion
Hurricane Elena	1985	Mobile, Baldwin	N/A
Hurricane Opal	1995	Mobile, Baldwin, Escambia	N/A
Hurricane Danny	1997	Mobile, Baldwin	$92.6 million
Hurricane Georges	1998	Mobile, Baldwin, Escambia	$269 million
Tropical Storm Isidore	2002	Mobile, Baldwin	N/A
Hurricane Ivan	2004	Mobile, Baldwin, Escambia	$3.26 billion
Hurricane Dennis	2005	Mobile, Baldwin, Escambia	N/A
Hurricane Katrina	2005	Mobile, Baldwin	$1.25 billion
Hurricane Gustav	2008	Baldwin, Escambia	N/A
Hurricane Ike	2008	Mobile, Baldwin	N/A
Tropical Storm Ida	2009	Mobile, Baldwin	N/A
Hurricane Isaac	2012	Mobile, Baldwin	N/A
Hurricane Nate	2017	Mobile, Baldwin	N/A
Hurricane Michael	2018	Mobile, Baldwin, Escambia	N/A
Hurricane Sally	2020	Mobile, Baldwin, Escambia	N/A
Hurricane Zeta	2020	Mobile	N/A

Source: www.fema.gov and *2018 Alabama Hazard Mitigation Plan

The following figure comes from the State of Alabama Hazard Mitigation Plan and shows the history of hurricanes and wind speed in the state.

Figure 3.47 History of Hurricanes and Wind Speed in Alabama

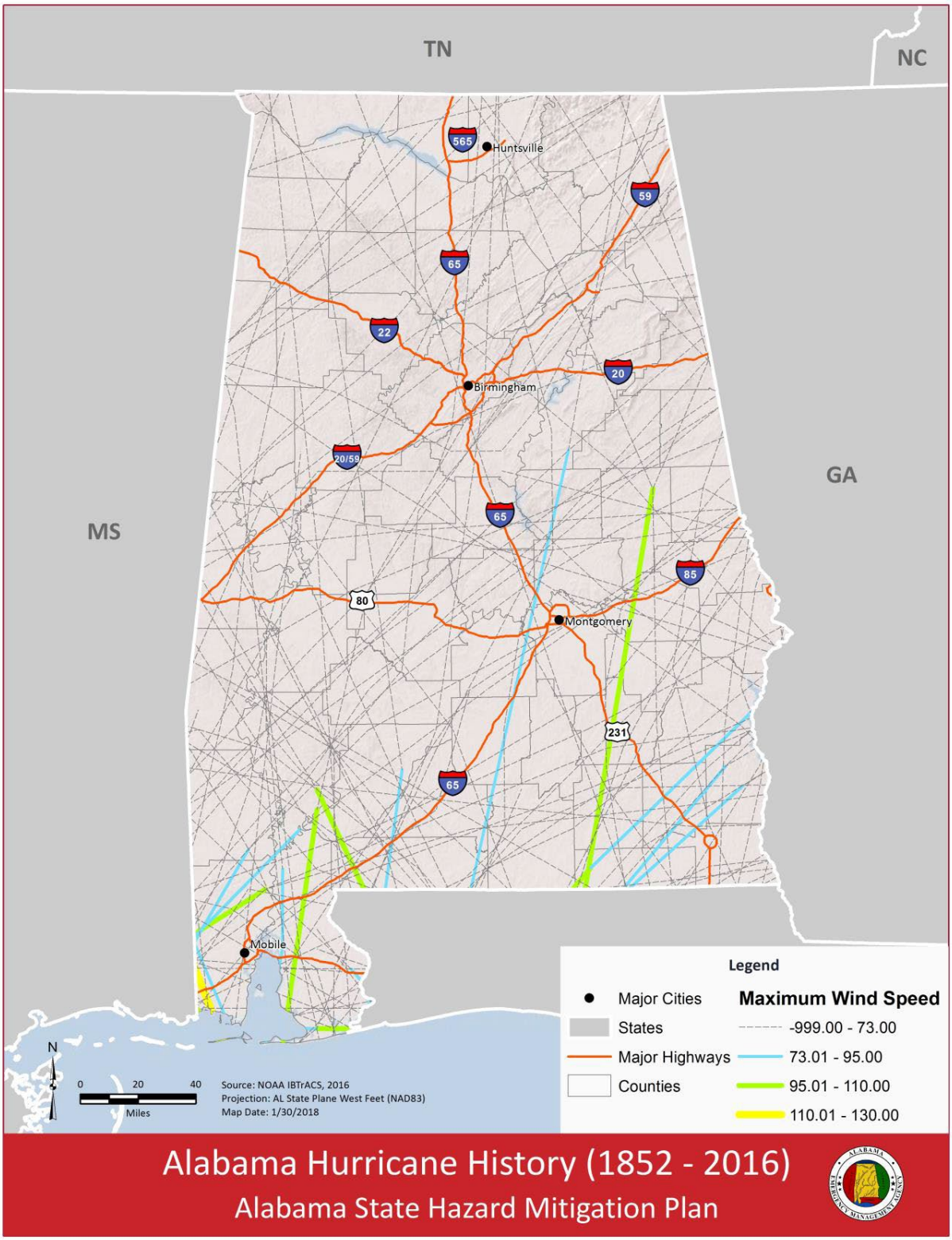

TN
NC
GA
MS
Huntsville
Birmingham
Montgomery
Mobile
565
59
65
22
20
20/59
65
85
80
231
65
Legend
Major Cities
States
Major Highways
Counties
Maximum Wind Speed
-999.00 - 73.00
73.01 - 95.00
95.01 - 110.00
110.01 - 130.00
N
0
20
40
Miles
Source: NOAA IBTrACS, 2016
Projection: AL State Plane West Feet (NAD83)
Map Date: 1/30/2018
Alabama Hurricane History (1852 - 2016)
Alabama State Hazard Mitigation Plan

Table 3.14 lists the hurricanes that have most impacted the planning region in the last 50 years.

Table 3.14 Hurricane History

DATE	CATEGORY	NAME	NOTES
8/17/1969	5	Camille	The strongest known land-falling hurricane in recorded history. Winds were estimated at 190 mph at landfall.
9/12/1979	3	Frederic	Frederic strengthened from a category one to a category four storm in 30 hours while in the Gulf of Mexico, but weakened before landfall. The sustained winds reached 100 mph at landfall with gusts near 145 mph. Frederic moved inland near Mobile Bay and the Dauphin Island Bridge. The wind resulted in incredible damage to Mobile. Frederic was the first major hurricane to affect Mobile since 1926.
9/2/1985	3	Elena	Hurricane Elena, with sustained winds of 124 mph, made landfall on September 2, 1985 near Biloxi, causing extensive damage along the Florida, Mississippi and Alabama coasts. The eye passed 30 miles south of Mobile, battering Gulf Shores and Dauphin Island. Wind gusts were estimated at up to 132 miles per hour on Dauphin Island.
8/3/1995	2	Erin	Hurricane Erin had winds of 100 mph at landfall, and it moved inland near Pensacola, FL. Hurricane Erin was the first of two local Hurricanes in 1995.
10/4/1995	3	Opal	Hurricane winds were estimated near 115 mph at landfall, and Opal moved inland near Santa Rosa Island, FL. Opal reached category four strength, rapidly intensifying from a category one hurricane in only 18 hours. Hurricane Opal attained category four status 200 miles south of Pensacola.
7/19/1997	1	Danny	Hurricane Danny had wind gusts reaching 80 mph at landfall as it crossed Mullet Point south of Point Clear in Baldwin County.
9/28/1998	2	Georges	Hurricane Georges delivered sustained winds of 130 mph at landfall, and then it moved inland near Biloxi MS.
9/16/2004	3	Ivan	Hurricane Ivan had winds around 120 mph at landfall, and it moved inland near Gulf Shores. Ivan was the strongest Hurricane from Baldwin to Santa Rosa Counties in more than 100 years. 160 miles inland, near Demopolis, AL, a wind gust near 90 mph was recorded.
7/10/2005	3	Dennis	Hurricane Dennis carried winds of 121 mph at landfall, as it moved inland near Navarre Beach.
8/29/2005	3	Katrina	Hurricane Katrina had winds at landfall estimated at 120 mph. It moved inland near Waveland MS. Katrina was the costliest and one of the deadliest U.S. disasters.
9/01/2008	2	Gustav	Gustav moved erratically through the Greater Antilles into the Gulf of Mexico, eventually making landfall on the coast of Louisiana. It briefly became a category 4 hurricane and caused many deaths and considerable damage in Haiti, Cuba, and Louisiana.

DATE	CATEGORY	NAME	NOTES
9/13/2008	2	Ike	Ike, with its associated storm surge, caused extensive damage across parts of the northwestern Gulf Coast when it made landfall on September 13, 2008, along the north end of Galveston Island on the Texas coast at the upper end of Category 2 intensity.
11/10/2009	2	Ida	Ida was a late season hurricane that had a large impact on the east coast of Nicaragua and the adjacent islands. It was the first November hurricane in the Gulf of Mexico since Kate of 1985. It made landfall as a tropical storm near Dauphin Island, AL, and quickly dissipated over the Florida Panhandle by the next day.
8/28/2012	1	Isaac	Isaac spared Alabama the worst, leading to flooding and storm surge tides in Mobile County. Scattered blackouts occurred with the greatest impact to Dauphin Island where about 2,400 residences were without electricity. Isaac made landfall in Louisiana as a Category 1.
9/16/2020	2	Sally	Sally made landfall in Gulf Shores and produced widespread wind, storm surge, and freshwater flooding across coastal Alabama and the western Florida Panhandle.

Hurricane Sally made landfall in Gulf Shores, AL at 5am on Wednesday, September 16th as a strong Category 2 hurricane with maximum sustained winds of 105 mph. Sally produced widespread wind, storm surge, and freshwater flooding across coastal AL and the western Florida Panhandle. Flood and wind damage also extended well inland into inland southwest Alabama and south central Alabama. Sally was an extremely slow moving hurricane, which prolonged and exacerbated the local impacts. The storm was moving at less than 5 mph at the time of landfall, resulting in a long duration of tropical storm and hurricane force winds, storm surge, and torrential rainfall. Storm surge and resultant damage was widespread and significant from Baldwin County eastward to Okaloosa County. The highest surge occurred in the bays and sounds of Alabama and the western Florida Panhandle, with generally lower values and lesser impacts on the immediate Gulf facing shores. A peak inundation of 7 to 9 feet above ground level was officially surveyed across some locations in the back bays and sounds of southeast Baldwin County, as well as the northern end of Escambia and Blackwater Bays. A larger area was impacted by 3 to 6 feet of inundation, including along the immediate Gulf facing shores. It should be noted that the extremely heavy rainfall (more details to follow) likely exacerbated the total water levels, although it is difficult to determine the exact extent. Regardless, thousands of structures along coastal areas were flooded by the surge. Wind damage was extensive across the region, especially in areas that experienced the eyewall of Sally over a several hour duration. Wind damage was most extensive from southeast Mobile County eastward across Baldwin County AL into Escambia County FL. These locations experienced prolonged hurricane conditions with wind gusts over 100 mph, especially close to the immediate coast. Many homes across the area suffered roof damage from the winds and an untold number of homes were damaged by fallen trees. The tree damage was most extensive in Baldwin County, but also significant in parts of Mobile and Escambia Counties which experienced hurricane conditions. The pecan farms of Baldwin County took a major hit with well over a thousand pecan trees downed throughout the county. The very slow movement of Sally

resulted in rainfall totals of 15 to 30 inches across Baldwin County into the western Florida Panhandle. 7 to 15 inches of rain fell across parts of inland southwest Alabama, along and east of Interstate 65, and south central Alabama. This torrential rain resulted in major river and flash flooding, especially in Baldwin County eastward into the Florida Panhandle. Thousands of water rescues were conducted during the storm due to rapidly rising water and many homes were flooded. Road closures were extensive, especially in Baldwin County east into the western Florida Panhandle and some roads were damaged or washed out. Several rivers reached moderate to major flood stage and some crested within the top 5 of their historical crests. There were 3 direct fatalities as a result of Sally, one in Alabama. The one Alabama fatality occurred in the Wolf Bay area (Baldwin County, AL.) Two men were riding the storm out on their boat and at some point during the storm attempted to swim to shore. One of the men made it to a pier and was rescued and hospitalised; the other man drowned. There were also 3 indirect fatalities, with two occurring in Alabama. The first fatality was due to storm cleanup in the Foley area, and the second was due to carbon monoxide poisoning from improper generator use. The total reported damage from Public Assistance (PA) and Individual Assistance (IA) is near $550 million. Note that this does not include insured losses and damages. Also, not all county reports were available or finalized at the time of this publication. A breakdown of costs related to each individual hazard was unavailable. All damages are listed under either the Hurricane or Tropical Storm hazard, but it should be noted that a good portion of the damage was caused by storm surge or flooding even though it is not explicitly listed. Timber loss was extensive. The Alabama Forestry Commission estimates that 2,440 forested acres were damaged with 79,175 tons of timber destroyed at a value of $1,564,160. Most of this occurred in Baldwin County.

Baldwin County - The county experienced widespread damage as the eye of Sally moved across a large portion of the county after making landfall in Gulf Shores, AL. A large|storm surge resulted in widespread inundation and major flood damage to structures along the back bay waters with little to no structural damage to buildings along the Gulf facing beaches. There was a walkway at the Cotton Bayou Gulf access that was damaged. The greatest surge occurred east of Gulf Shores across Orange Beach to the Florida State line and all the way north into the northern portion of Perdido Bay, as well as Wolf Bay. Peak inundation was surveyed to be 7 to 9 feet above ground with a much larger area that experienced 3 to 6 feet of inundation. Surge values neared 10 feet above ground at the far western end of Cotton Bayou in Orange Beach. Numerous large boats were moved onto land by the surge. Almost all piers were destroyed and several marinas were heavily damaged. The Gulf State Park Pier in Gulf Shores was also majorly damaged with a large section of the pier now missing. The 20 to 30 inches of rain that fell across the southern part of the county certainly compounded the storm surge flooding and also resulted in widespread flash flooding and river flooding. The Fish and Styx Rivers reached major flood stage and experienced their third and second highest crests respectively. The eyewall of Sally resulted in widespread and extensive damage to trees and power lines. Most of southern Baldwin county experienced sustained hurricane force winds of 75 to 85 mph with gusts over 100 mph. A sailboat anchored in Ingram Bayou measured a 1 minute sustained wind of 113 mph with a gust to 137 mph. These measurements were recorded at an elevated 58 feet. When reduced to the standard measuring height 33 feet, the sustained wind is estimated to have been 104 mph with a gust to 126 mph. The Center of Severe Weather Research recorded a 123 mph gust on the east side of the Perdido Pass bridge from an anemometer on their mobile doppler radar unit with sustained winds of 93 mph. Numerous structures were damaged by fallen trees and many structures in the county suffered

significant roof and siding damage. In Ft. Morgan, a few older homes were destroyed and a boat storage facility at a marina suffered major damage. Almost all of the county lost power during the storm due to substantial damage to the power infrastructure. The pecan farming industry took a devastating hit as likely over a thousand pecan trees were destroyed across the county. There were three fatalities from the storm, one direct and two indirect. A person drowned in Orange Beach during the storm. Another fatality occurred in Foley during the post storm clean up and another individual died due to carbon monoxide poisoning from a generator.|
Escambia County - Widespread trees were downed throughout Escambia county, AL. Some of the trees fell onto homes, but most of the damage was minor. However, 4 homes suffered major damage from the fallen trees. At the peak of the event, 85% of the county was without power. Torrential rainfall|of 10 to 20 inches led to flash flooding and river flooding, resulting in the 10 county roads becoming impassable during the storm. Some of the roads suffered wash outs. A couple of bridges experienced wash outs as well.

Mobile County - The greatest impact of Sally in Mobile County was to Dauphin Island, which was impacted by the western eyewall of Sally for a long duration. Hurricane force winds with gusts over 100 mph were recorded on the island. Winds were out of the north, which resulted in the bay and sound side of the island being the most impacted. Several buildings experienced roof and siding damage, including to two buildings on the campus of the Dauphin Island Sea Lab. Another home on the island lost its roof entirely. A 3 to 4 foot storm surge on the north side of the island resulted in major damage to docks and piers, including at the Dauphin Island marina. Across mainland Mobile county, the southern and central portions of the county experienced a long duration of sustained tropical storm force winds with hurricane force wind gusts recorded all the way west at the Mobile Regional Airport. In fact, the 82 mph gust recorded at the airport was almost as high as the peak gust recorded in Hurricane Katrina of 83 mph. Numerous trees and power lines were downed across the county, especially in central and southern parts of the county. This resulted in widespread power outages. Mobile's Bienville Square suffered major damage to the numerous oaks in the area and there was minor damage reported at some businesses in downtown Mobile. Several homes in the county also experienced roof, siding, and fence damage. Downed trees also damaged some homes.

Probability of Future Events

The probability of future hurricane events directly affecting the planning area is High. As discussed earlier, Division A is more susceptible to high winds, heavy rainfall, flooding and spin off tornadoes associated with direct hits by tropical systems and well as when a system moves inland.

From the 2018 State of Alabama Hazard Mitigation Plan, “hurricane hazards are generally expected to increase through the twenty-first century. The measures of hurricane activity include intensity, frequency, and duration. Since high-quality satellite data first became available in the early 1980s, scientists have observed a substantial increase in all of these measures of hurricane activity for North Atlantic hurricanes, as well as an increase in the frequency of the strongest (Category 4 and 5) hurricanes.80 Although simulations of future hurricane activity span a range of possible outcomes, on average the models project an increase in the annual number of Category 4 and 5 hurricanes by the late twenty-first century, as well as a slight decrease in the

number of tropical cyclones. 81 Changes in the storm tracks of North Atlantic hurricanes are less well understood. The storm tracks of North Atlantic hurricanes are shaped by both atmospheric dynamics and ocean circulation, and projected changes in ocean circulation remain poorly constrained."

HIGH WINDS (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 3.15 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 3.15 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 the planning area since based on Fujita Scale classifications is provided in Table 3.16.

Table 3.16 Historic Occurrences by Scale Classification*

Tornado Scale Classification	Number	Percentage of Historical Occurrences
F0/EF0	63	63%
F1/EF1	28	27%
F2/EF2	9	9%
F3/EF3	2	2%
F4/EF4	0	0%
F5/EF5	0	0%

Since 1995
Source: National Weather Service

It can be seen that the Division has experienced tornadic events primarily classified as F0, F1, and F2. While stronger EF3, EF4, and EF5 events have rarely occurred, there is still a small possibility they could occur.

Locations Affected
All the planning area is susceptible to tornadoes. Tornadoes have affected locations throughout the planning area. 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 NOAA and NWS records, 102 tornadoes have occurred in the planning region since 2015. Fortunately, these storms have resulted in only 1 fatality and 16 injuries. However, property damage is estimate at close to $13,000,000.

Table 3.17 provides a summary of tornado occurrences in the planning area since 2015.

Table 3.17 Division A Tornado Occurrences 2015-2020

County	Location	Date	Magnitude	Deaths	Injuries	Property Damage	Crop Damage	Ending Location
BALDWIN CO.	Loxley	4/22/1995	F0	0	0	0	0	
ESCAMBIA CO.	Atmore	4/23/1995	F0	0	0	0	0	
MOBILE CO.	Mobile	5/9/1995	F0	0	0	2000	0	
MOBILE CO.	Grand Bay	5/10/1995	F0	0	0	0	0	
ESCAMBIA CO.	East	10/4/1995	F0	0	0	25000	0	
MOBILE CO.	GULF CREST	1/26/1996	F1	1	3	100000	0	GULF CREST
BALDWIN CO.	ORANGE BEACH	7/18/1997	F0	0	0	20000	0	ORANGE BEACH
MOBILE CO.	WILMER	10/25/1997	F0	0	0	15000	0	WILMER
MOBILE CO.	SARALAND	11/21/1997	F3	0	0	2000000	0	SARALAND

BALDWIN CO.	GULF SHRS	9/19/1998	F0	0	0	0	0	GULF SHRS
BALDWIN CO.	LOXLEY	9/27/1998	F0	0	0	3000	0	LOXLEY
BALDWIN CO.	SUMMERDALE	2/23/1999	F0	0	0	10000	0	SUMMERDALE
BALDWIN CO.	FT MORGAN	5/29/1999	F0	0	0	10000	0	FT MORGAN
BALDWIN CO.	GULF SHRS	5/31/1999	F0	0	0	0	0	GULF SHRS
BALDWIN CO.	POINT CLEAR	7/12/1999	F0	0	0	0	0	POINT CLEAR
MOBILE CO.	MOBILE	10/9/1999	F0	0	0	40000	0	MOBILE
MOBILE CO.	SARALAND	10/9/1999	F1	0	0	100000	0	SARALAND
MOBILE CO.	MOBILE	4/24/2000	F1	0	0	200000	0	MOBILE
MOBILE CO.	IRVINGTON	11/6/2000	F2	0	2	100000	0	IRVINGTON
BALDWIN CO.	FOLEY	11/8/2000	F1	0	0	150000	0	FOLEY
BALDWIN CO.	FAIRHOPE	11/8/2000	F0	0	0	10000	0	FAIRHOPE
BALDWIN CO.	FAIRHOPE	11/8/2000	F1	0	0	200000	0	FAIRHOPE
BALDWIN CO.	ELSANOR	11/8/2000	F0	0	0	0	0	ELSANOR
MOBILE CO.	(MOB)MOBILE BATES FL	11/24/2000	F0	0	0	10000	0	(MOB)MOBILE BATES FL
MOBILE CO.	(MOB)MOBILE BATES FL	6/11/2001	F0	0	0	20000	0	(MOB)MOBILE BATES FL
BALDWIN CO.	FAIRHOPE	10/13/2001	F1	0	0	50000	0	FAIRHOPE
BALDWIN CO.	MONTROSE	10/13/2001	F0	0	0	10000	0	MONTROSE
BALDWIN CO.	GULF SHRS	10/13/2001	F0	0	0	20000	0	GULF SHRS
BALDWIN CO.	FOLEY	10/13/2001	F3	0	0	250000	0	FOLEY
BALDWIN CO.	FOLEY	10/13/2001	F0	0	0	15000	0	FOLEY
BALDWIN CO.	ROBERTSDALE	10/13/2001	F2	0	0	200000	0	ROBERTSDALE
BALDWIN CO.	SPANISH FT	10/13/2001	F0	0	0	25000	0	SPANISH FT
ESCAMBIA CO.	BREWTON	11/24/2001	F0	0	0	25000	0	BREWTON
MOBILE CO.	THEODORE	9/14/2002	F0	0	0	8000	0	THEODORE
MOBILE CO.	MOBILE BATES FLD	9/22/2002	F0	0	0	1000	0	MOBILE BATES FLD
BALDWIN CO.	GULF SHRS	9/25/2002	F0	0	0	25000	0	GULF SHRS
BALDWIN CO.	GULF SHRS	9/25/2002	F0	0	0	15000	0	GULF SHRS
MOBILE CO.	SEMMES	9/26/2002	F0	0	0	5000	0	SEMMES
BALDWIN CO.	BARNWELL	11/5/2002	F0	0	0	10000	0	BARNWELL
ESCAMBIA CO.	WALLACE	2/21/2003	F0	0	0	8000	0	WALLACE
MOBILE CO.	MOBILE	8/29/2003	F0	0	0	0	0	MOBILE
MOBILE CO.	DAUPHIN IS	6/25/2004	F0	0	0	0	0	DAUPHIN IS
BALDWIN CO.	JOSEPHINE	9/15/2004	F0	0	0	3000	0	JOSEPHINE

ESCAMBIA CO.	DIXIE	9/15/2004	F0	0	0	3000	0	DIXIE
BALDWIN CO.	FAIRHOPE	11/24/2004	F0	0	0	0	0	FAIRHOPE
MOBILE CO.	MON LOUIS	11/24/2004	F0	0	0	5000	0	MON LOUIS
BALDWIN CO.	SUMMERDALE	11/27/2004	F2	0	4	400000	0	SUMMERDALE
BALDWIN CO.	ROBERTSDALE	11/27/2004	F0	0	0	15000	0	ROBERTSDALE
BALDWIN CO.	ELSANOR	11/27/2004	F0	0	0	30000	0	ELSANOR
BALDWIN CO.	SEMINOLE	11/27/2004	F1	0	0	200000	0	SEMINOLE
ESCAMBIA CO.	ATMORE	7/6/2005	F0	0	0	5000	0	ATMORE
MOBILE CO.	SEMMES	7/6/2005	F0	0	0	50000	0	SEMMES
MOBILE CO.	CHUNCHULA	7/6/2005	F0	0	0	20000	0	CHUNCHULA
BALDWIN CO.	FT MORGAN	8/28/2005	F0	0	0	4000	0	FT MORGAN
MOBILE CO.	SEMMES	8/28/2005	F0	0	0	5000	0	SEMMES
MOBILE CO.	ALABAMA PORT	8/28/2005	F0	0	0	5000	0	ALABAMA PORT
ESCAMBIA CO.	HUXFORD	8/29/2005	F0	0	0	5000	0	HUXFORD
BALDWIN CO.	RABUN	11/15/2006	F0	0	0	50000	0	RABUN
BALDWIN CO.	DYAS	11/15/2006	F1	0	0	100000	0	DYAS
MOBILE CO.	DAUPHIN IS	10/22/2007	EF0	0	0	0	0	DAUPHIN IS
MOBILE CO.	BAYOU LA BATRE ARPT	10/22/2007	EF1	0	0	750000	0	BAYOU LA BATRE ARPT
ESCAMBIA CO.	PARKER SPGS	2/17/2008	EF2	0	0	700000	0	DIXIE
MOBILE CO.	DAUPHIN IS	8/18/2008	EF0	0	0	5000	0	DAUPHIN IS
BALDWIN CO.	ELBERTA	9/1/2008	EF0	0	0	20000	0	ELBERTA
ESCAMBIA CO.	APPLETON	3/26/2009	EF1	0	0	30000	0	APPLETON
BALDWIN CO.	ELSANOR	10/24/2010	EF1	0	0	45000	0	ELSANOR
MOBILE CO.	COTTAGE HILL	10/25/2010	EF1	0	0	0	0	COTTAGE HILL
BALDWIN CO.	SILVERHILL	3/9/2011	EF2	0	0	0	0	SILVERHILL
MOBILE CO.	GRAND BAY	3/9/2011	EF1	0	0	0	0	GRAND BAY
MOBILE CO.	THEODORE	3/9/2011	EF2	0	4	0	0	THEODORE
ESCAMBIA CO.	WALLACE	4/15/2011	EF1	0	0	100000	0	KIRKLAND
ESCAMBIA CO.	BOYKIN	4/15/2011	EF2	0	0	2600000	0	DIXIE
MOBILE CO.	CITRONELLE	4/15/2011	EF0	0	0	30000	0	CITRONELLE
MOBILE CO.	DAUPHIN IS	9/3/2011	EF0	0	0	0	0	DAUPHIN IS
BALDWIN CO.	LILLIAN	9/4/2011	EF1	0	0	200000	0	LILLIAN
MOBILE CO.	MON LOUIS	9/4/2011	EF1	0	0	45000	0	SOUTH ORCHARD
MOBILE CO.	COTTAGE HILL	12/20/2012	EF1	0	0	0	0	MAGAZINE

MOBILE CO.	MERTZ	12/25/2012	EF2	0	0	1350000	0	MAGAZINE
MOBILE CO.	PIERCIE	12/25/2012	EF1	0	0	0	0	WILMER
MOBILE CO.	LAURENDINE	4/11/2013	EF1	0	0	1500000	0	BELLEFONTAINE
ESCAMBIA CO.	WAHL	2/15/2016	EF2	0	0	750000	0	POLLARD
ESCAMBIA CO.	BRADLEY	3/3/2016	EF1	0	0	15000	0	BRADLEY
BALDWIN CO.	SUMMERDALE	6/21/2017	EF0	0	0	0	0	SUMMERDALE
ESCAMBIA CO.	PARKER SPGS	6/21/2017	EF0	0	0	0	0	PARKER SPGS
BALDWIN CO.	GULF SHRS	10/7/2017	EF0	0	0	0	0	GULF SHRS
BALDWIN CO.	ORANGE BEACH	10/7/2017	EF0	0	0	5000	0	ORANGE BEACH
MOBILE CO.	(MOB)MOBILE BATES FL	10/7/2017	EF0	0	0	50000	0	(MOB)MOBILE BATES FL
BALDWIN CO.	GASQUE	4/22/2018	EF0	0	0	25000	0	GASQUE
BALDWIN CO.	OAK	4/22/2018	EF0	0	3	100000	0	FOLEY
BALDWIN CO.	ELBERTA	4/22/2018	EF0	0	0	25000	0	ELBERTA
MOBILE CO.	CHICKASAW	6/7/2019	EF0	0	0	25000	0	CHICKASAW
MOBILE CO.	DAWES	10/25/2019	EF1	0	0	0	0	SEVEN HILLS
MOBILE CO.	SEVEN HILLS	10/25/2019	EF0	0	0	0	0	SEVEN HILLS
MOBILE CO.	SEMMES	10/25/2019	EF1	0	0	0	0	GEORGETOWN
MOBILE CO.	PRICHARD	11/7/2019	EF0	0	0	0	0	PRICHARD
BALDWIN CO.	TAYLORS CAMP	4/19/2020	EF1	0	0	0	0	TAYLORS CAMP
MOBILE CO.	TANNER WILLIAMS	4/19/2020	EF1	0	0	0	0	DAWES
MOBILE CO.	THEODORE IDLE HOUR A	4/19/2020	EF1	0	0	0	0	THEODORE IDLE HOUR A
MOBILE CO.	(MOB)MOBILE BATES FL	4/19/2020	EF1	0	0	0	0	COTTAGE HILL
MOBILE CO.	GULF CREST	4/23/2020	EF1	0	0	0	0	GULF CREST
MOBILE CO.	ORCHARD	6/24/2020	EF0	0	0	0	0	ORCHARD
MOBILE CO.	GULF CREST	6/24/2020	EF1	0	0	0	0	BUCKS
MOBILE CO.	IRVINGTON	10/10/2020	EF0	0	0	0	0	IRVINGTON
TOTALS				**1**	**16**	**$12,952,000**		

Source: NOAA Storm Events Database

Probability of Future Events

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

HIGH WINDS/SEVERE THUNDERSTORMS (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)". 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 (50 knots) 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 1995-2019, 600 Thunderstorms have occurred in the region, and of those with recorded knots, 549 were considered severe (50 knots or greater). Total property damage from these 600 storms exceeds $11,000,000. During the same time period, there were 326 hail and 104 lightning occurrences in the region. Only 19 of the hail occurrences caused any monetary damage, but the monetary value of property damage from lightning was over $4,000,000 and resulted in 11 deaths. These severe weather events have occurred in all three counties of the planning area. Tables 3.18-3.20 provide past occurrence data for the 2014-2020 timeframe for severe thunderstorms, hail, and lightning.

Table 3.18 Division A Severe Thunderstorm Occurrences 2014-2019

County	Location	Date	Magnitude (Knots)	Deaths	Injuries	Property Damage	Crop Damage
BALDWIN CO.	Fairhope	01/06/95	0	0	0	$5,000	$0
BALDWIN CO.	Robertsdale	01/06/95	0	0	0	$500	$0
BALDWIN CO.	Central	01/06/95	0	0	0	$50,000	$0
BALDWIN CO.	Barnwell	02/03/95	0	0	0	$5,000	$0
ESCAMBIA CO.	McCullough	02/03/95	0	0	0	$5,000	$0
ESCAMBIA CO.	Atmore	02/03/95	0	0	0	$500	$0

MOBILE CO.	Mobile	02/03/95	0	0	0	$500	$0
BALDWIN CO.	Stockton	04/21/95	0	0	0	$1,000	$0
MOBILE CO.	Citronelle	04/21/95	0	0	0	$500	$0
BALDWIN CO.	Hurricane	04/23/95	0	0	0	$1,000	$0
BALDWIN CO.	Stockton and	05/09/95	0	0	0	$500	$0
ESCAMBIA CO.	Atmore	05/09/95	0	0	0	$70,000	$0
MOBILE CO.	Kushla	05/09/95	0	0	0	$500	$0
BALDWIN CO.	Fairhope	05/10/95	0	0	0	$1,000	$0
ESCAMBIA CO.	Central and East port	05/10/95	0	0	0	$30,000	$0
BALDWIN CO.	Foley	05/11/95	0	0	0	$1,000	$0
BALDWIN CO.	Seminole	05/11/95	0	0	0	$500	$0
MOBILE CO.	Citronelle	06/01/95	0	0	0	$2,000	$0
MOBILE CO.	Dauphin Island	06/01/95	0	0	0	$500	$0
BALDWIN CO.	Silverhill	07/08/95	0	0	0	$500	$0
ESCAMBIA CO.	Atmore	07/08/95	0	0	0	$1,000	$0
MOBILE CO.	Citronelle	07/08/95	0	0	0	$1,500	$0
MOBILE CO.	Semmes	07/08/95	0	0	0	$1,000	$0
MOBILE CO.	Mobile	07/08/95	0	0	0	$2,000	$0
BALDWIN CO.	Stockton	07/09/95	0	0	0	$1,000	$0
BALDWIN CO.	Orange Beach	07/09/95	0	0	0	$500	$0
MOBILE CO.	Mt. Vernon	07/09/95	0	0	0	$1,000	$0
BALDWIN CO.	Fairhope/Silverhill/F	07/10/95	0	0	0	$4,000	$0
BALDWIN CO.	Mobile Bay	07/12/95	0	0	0	$1,500	$0
BALDWIN CO.	Foley	07/12/95	0	0	0	$500	$0
MOBILE CO.	Mobile	07/12/95	0	0	0	$0	$0
MOBILE CO.	Mobile	07/13/95	0	0	0	$1,000	$0
ESCAMBIA CO.	Brewton	07/18/95	0	0	0	$1,000	$0

ESCAMBIA CO.	Flomaton	07/18/95	0	0	0	$3,000	$0
MOBILE CO.	Wilmer	07/26/95	0	0	0	$1,000	$0
BALDWIN CO.	Daphne	08/16/95	0	0	0	$2,000	$0
MOBILE CO.	Mobile	08/16/95	0	0	0	$0	$0
MOBILE CO.	Butler	08/20/95	0	0	0	$50,000	$0
MOBILE CO.	Mobile	09/17/95	0	0	0	$3,000	$0
ESCAMBIA CO.	Atmore	10/04/95	0	0	0	$5,000	$0
MOBILE CO.	Mobile	12/17/95	0	0	0	$0	$0
BALDWIN CO.	Robertsdale	12/18/95	0	0	0	$2,000	$0
BALDWIN CO.	Gulf Shores	12/18/95	0	0	0	$20,000	$0
MOBILE CO.	Citronelle	12/18/95	0	0	0	$2,000	$0
BALDWIN CO.	LATHAM	01/26/96	50	0	0	$2,000	$0
BALDWIN CO.	TENSAW	01/26/96	50	0	0	$2,000	$0
MOBILE CO.	CREOLA	01/26/96	88	0	0	$5,000	$0
MOBILE CO.	MT VERNON	01/26/96	50	0	0	$2,000	$0
MOBILE CO.	MOBILE	02/19/96	60	0	0	$25,000	$0
BALDWIN CO.	BAY MINETTE	03/07/96	45	0	1	$1,500	$0
BALDWIN CO.	STOCKTON	05/24/96	55	0	0	$500	$0
ESCAMBIA CO.	ATMORE	05/24/96	60	0	0	$7,500	$0
MOBILE CO.	GEORGETOWN	07/09/96	55	0	0	$2,000	$0
ESCAMBIA CO.	WALLACE	07/28/96	55	0	0	$2,000	$0
BALDWIN CO.	LOXLEY	08/12/96	40	0	0	$500	$0
BALDWIN CO.	SUMMERDALE	08/24/96	45	0	0	$90,000	$0
BALDWIN CO.	BAY MINETTE	08/25/96	50	0	0	$2,500	$0
MOBILE CO.	CITRONELLE	09/08/96	50	0	0	$1,500	$0
BALDWIN CO.	SUMMERDALE	09/21/96	50	0	0	$2,500	$0
MOBILE CO.	MOBILE BATES FLD	09/21/96	50	0	0	$2,500	$0

BALDWIN CO.	ORANGE BEACH	11/05/96	40	0	0	$500	$0
ESCAMBIA CO.	BREWTON	12/16/96	50	0	0	$1,500	$0
BALDWIN CO.	MAGNOLIA SPGS	01/15/97	52	0	0	$500	$0
BALDWIN CO.	BLACKSHER	01/24/97	50	0	0	$1,500	$0
BALDWIN CO.	MALBIS	01/24/97	55	0	1	$15,000	$0
ESCAMBIA CO.	ATMORE	01/24/97	50	0	0	$1,500	$0
ESCAMBIA CO.	MC CULLOUGH	01/24/97	50	0	0	$1,500	$0
MOBILE CO.	CITRONELLE	01/24/97	50	0	0	$1,500	$0
MOBILE CO.	TILLMANS CORNER	01/24/97	50	0	0	$10,000	$0
MOBILE CO.	CITRONELLE	01/28/97	50	0	0	$1,500	$0
MOBILE CO.	THEODORE	02/21/97	60	0	0	$5,000	$0
MOBILE CO.	CITRONELLE	04/05/97	50	0	0	$1,500	$0
MOBILE CO.	BAYOU LA BATRE	04/05/97	50	0	0	$2,000	$0
BALDWIN CO.	FT MORGAN	04/11/97	50	0	0	$0	$0
ESCAMBIA CO.	ATMORE	04/22/97	50	0	0	$500	$0
MOBILE CO.	CREOLA	05/19/97	45	0	0	$5,000	$0
MOBILE CO.	MOBILE BATES FLD	05/28/97	50	0	0	$1,500	$0
BALDWIN CO.	STOCKTON	06/20/97	50	0	0	$1,500	$0
MOBILE CO.	CITRONELLE	06/20/97	50	0	0	$1,000	$0
MOBILE CO.	COTTAGE HILL	07/05/97	50	0	0	$3,000	$0
BALDWIN CO.	FAIRHOPE	07/11/97	50	0	0	$3,000	$0
MOBILE CO.	ALABAMA PORT	07/18/97	55	0	0	$3,000	$0
BALDWIN CO.	LOXLEY	08/20/97	50	0	0	$5,000	$0
MOBILE CO.	THEODORE	08/20/97	50	0	0	$5,000	$0
MOBILE CO.	GEORGETOWN	10/25/97	60	0	0	$3,000	$0
MOBILE CO.	AXIS	10/25/97	60	0	0	$2,500	$0
ESCAMBIA CO.	ROBINSONVILLE	11/21/97	70	0	0	$25,000	$0

ESCAMBIA CO.	LITTLE ROCK	11/21/97	70	0	0	$35,000	$0
ESCAMBIA CO.	DIXONVILLE	11/21/97	80	0	0	$40,000	$0
MOBILE CO.	SEMMES	12/24/97	50	0	0	$1,500	$0
BALDWIN CO.	WHITEHOUSE FORKS	01/07/98	70	0	0	$25,000	$0
BALDWIN CO.	GULF SHRS	01/07/98	50	0	0	$25,000	$0
BALDWIN CO.	SEMINOLE	01/07/98	50	0	0	$3,000	$0
ESCAMBIA CO.	BREWTON	01/07/98	50	0	0	$3,000	$0
ESCAMBIA CO.	BREWTON	01/07/98	50	0	0	$3,000	$0
MOBILE CO.	MOBILE	01/07/98	50	0	0	$3,000	$0
MOBILE CO.	MOBILE BATES FLD	01/07/98	50	0	0	$3,500	$0
BALDWIN CO.	ELSANOR	01/22/98	50	0	0	$3,000	$0
BALDWIN CO.	MAGNOLIA SPGS	01/22/98	50	0	0	$3,000	$0
ESCAMBIA CO.	BREWTON	01/22/98	50	0	0	$3,000	$0
MOBILE CO.	SEMMES	01/22/98	50	0	0	$3,000	$0
BALDWIN CO.	SPANISH FT	02/11/98	55	0	0	$12,000	$0
MOBILE CO.	DAUPHIN IS	03/07/98	50	0	0	$2,000	$0
BALDWIN CO.	COUNTYWIDE	06/05/98	60	0	0	$100,000	$0
ESCAMBIA CO.	COUNTYWIDE	06/05/98	60	0	0	$50,000	$0
MOBILE CO.	COUNTYWIDE	06/05/98	60	0	0	$200,000	$0
BALDWIN CO.	SEMINOLE	07/05/98	50	0	0	$3,000	$0
ESCAMBIA CO.	HUXFORD	07/05/98	50	0	0	$3,000	$0
BALDWIN CO.	PERDIDO	07/26/98	50	0	0	$5,000	$0
ESCAMBIA CO.	NOKOMIS	07/26/98	50	0	0	$5,000	$0
BALDWIN CO.	ORANGE BEACH	09/28/98	50	0	0	$20,000	$0
BALDWIN CO.	BAY MINETTE	01/02/99	55	0	0	$3,000	$0
BALDWIN CO.	LILLIAN	01/02/99	55	0	0	$5,000	$0
ESCAMBIA CO.	MC CULLOUGH	01/02/99	50	0	0	$5,000	$0

MOBILE CO.	WILMER	01/02/99	50	0	0	$5,000	$0
MOBILE CO.	SARALAND	01/02/99	55	0	0	$10,000	$0
MOBILE CO.	MOBILE	01/22/99	50	0	0	$10,000	$0
BALDWIN CO.	FAIRHOPE	03/03/99	58	0	0	$30,000	$0
MOBILE CO.	SPRING HILL	03/03/99	70	0	0	$60,000	$0
BALDWIN CO.	ELSANOR	03/09/99	70	0	1	$70,000	$0
BALDWIN CO.	GULF SHRS	03/09/99	60	0	0	$50,000	$0
ESCAMBIA CO.	FLOMATON	03/09/99	50	0	0	$10,000	$0
BALDWIN CO.	STOCKTON	03/13/99	58	0	0	$10,000	$0
BALDWIN CO.	SEMINOLE	03/13/99	50	0	0	$3,000	$0
MOBILE CO.	MOBILE	03/13/99	70	0	0	$60,000	$0
ESCAMBIA CO.	DIXONVILLE	05/23/99	50	0	0	$1,000	$0
MOBILE CO.	BAYOU LA BATRE	05/28/99	55	0	0	$7,000	$0
MOBILE CO.	CITRONELLE	06/04/99	50	0	0	$5,000	$0
MOBILE CO.	MOBILE	06/08/99	50	0	0	$5,000	$0
ESCAMBIA CO.	BREWTON	07/23/99	60	0	0	$15,000	$0
BALDWIN CO.	LITTLE RIVER	07/30/99	50	0	0	$4,000	$0
MOBILE CO.	SEMMES	07/30/99	50	0	0	$1,000	$0
BALDWIN CO.	FOLEY	08/14/99	50	0	0	$3,000	$0
ESCAMBIA CO.	ATMORE	08/19/99	60	0	0	$2,000	$0
ESCAMBIA CO.	ATMORE	08/19/99	50	0	0	$3,000	$0
MOBILE CO.	SEMMES	08/19/99	50	0	0	$1,000	$0
MOBILE CO.	BIG CREEK LAKE	10/09/99	60	0	0	$10,000	$0
BALDWIN CO.	TENSAW	01/10/00	50	0	0	$5,000	$0
BALDWIN CO.	TENSAW	03/03/00	50	0	0	$3,000	$0
MOBILE CO.	CITRONELLE	03/03/00	50	0	0	$5,000	$0
MOBILE CO.	MT VERNON	03/03/00	65	0	0	$15,000	$0

BALDWIN CO.	STAPLETON	03/11/00	50	0	0	$3,000	$0
ESCAMBIA CO.	APPLETON	03/19/00	55	0	0	$10,000	$0
MOBILE CO.	SEMMES	04/26/00	50	0	0	$3,000	$0
BALDWIN CO.	TENSAW	06/24/00	55	0	0	$5,000	$0
ESCAMBIA CO.	BREWTON	06/25/00	55	0	0	$7,000	$0
MOBILE CO.	CITRONELLE	07/16/00	55	0	0	$5,000	$0
MOBILE CO.	MOBILE	07/16/00	75	0	0	$40,000	$0
ESCAMBIA CO.	ATMORE	07/20/00	55	0	0	$5,000	$0
BALDWIN CO.	ROSINTON	07/21/00	60	0	0	$7,000	$0
BALDWIN CO.	BAY MINETTE	07/21/00	70	0	0	$8,000	$0
BALDWIN CO.	SILVERHILL	07/21/00	70	0	0	$10,000	$0
MOBILE CO.	IRVINGTON	07/21/00	70	0	0	$15,000	$0
ESCAMBIA CO.	BREWTON	07/22/00	55	0	0	$5,000	$0
MOBILE CO.	GULF CREST	07/22/00	55	0	0	$5,000	$0
MOBILE CO.	TILLMANS CORNER	07/22/00	55	0	0	$6,000	$0
MOBILE CO.	THEODORE	07/22/00	55	0	0	$5,000	$0
MOBILE CO.	BAYOU LA BATRE	07/22/00	55	0	0	$5,000	$0
MOBILE CO.	MOBILE	08/09/00	55	0	0	$10,000	$0
BALDWIN CO.	ELSANOR	08/10/00	55	0	0	$5,000	$0
MOBILE CO.	CITRONELLE	08/10/00	55	0	0	$5,000	$0
MOBILE CO.	MOBILE	08/20/00	55	0	0	$10,000	$0
BALDWIN CO.	STOCKTON	08/27/00	70	0	0	$50,000	$0
MOBILE CO.	EIGHT MILE	08/27/00	55	0	0	$15,000	$0
BALDWIN CO.	DAPHNE	09/02/00	55	0	0	$5,000	$0
MOBILE CO.	CHUNCHULA	09/02/00	60	0	0	$5,000	$0
BALDWIN CO.	LOXLEY	09/05/00	50	0	0	$5,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	11/06/00	55	0	0	$8,000	$0

MOBILE CO.	MOBILE	01/19/01	55	0	0	$2,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	03/03/01	50	0	0	$5,000	$0
BALDWIN CO.	STOCKTON	03/12/01	65	0	0	$10,000	$0
ESCAMBIA CO.	HUXFORD	03/12/01	90	0	1	$1,000,000	$0
ESCAMBIA CO.	DIXIE	03/12/01	60	0	0	$15,000	$0
MOBILE CO.	MT VERNON	03/12/01	55	0	0	$15,000	$0
MOBILE CO.	IRVINGTON	03/12/01	50	0	0	$5,000	$0
MOBILE CO.	MOBILE	03/12/01	60	0	0	$3,000	$0
ESCAMBIA CO.	ATMORE	04/04/01	55	0	0	$0	$0
MOBILE CO.	GRAND BAY	06/11/01	55	0	0	$8,000	$0
MOBILE CO.	SEMMES	06/11/01	65	0	0	$100,000	$0
MOBILE CO.	GEORGETOWN	06/11/01	65	0	0	$70,000	$0
ESCAMBIA CO.	HUXFORD	06/14/01	55	0	0	$5,000	$0
MOBILE CO.	MOBILE	08/10/01	55	0	0	$5,000	$0
BALDWIN CO.	STOCKTON	08/19/01	50	0	0	$8,000	$0
BALDWIN CO.	FAIRHOPE	10/13/01	50	0	0	$10,000	$0
BALDWIN CO.	SUMMERDALE	10/13/01	60	0	0	$40,000	$0
BALDWIN CO.	GULF SHRS	10/13/01	60	0	0	$50,000	$0
ESCAMBIA CO.	MC CULLOUGH	10/13/01	50	0	0	$10,000	$0
ESCAMBIA CO.	ATMORE	10/13/01	60	0	0	$10,000	$0
ESCAMBIA CO.	BREWTON	10/13/01	60	0	0	$10,000	$0
ESCAMBIA CO.	APPLETON	10/13/01	60	0	0	$10,000	$0
ESCAMBIA CO.	ATMORE	10/13/01	55	0	0	$20,000	$0
MOBILE CO.	WILMER	10/13/01	59	0	0	$100,000	$0
MOBILE CO.	MOBILE	10/13/01	64	0	0	$60,000	$0
MOBILE CO.	BUCKS	12/14/01	60	0	0	$25,000	$0
MOBILE CO.	DAWES	03/31/02	55	0	0	$25,000	$0

BALDWIN CO.	FAIRHOPE	04/08/02	55	0	0	$15,000	$0
ESCAMBIA CO.	DIXIE	04/29/02	50	0	0	$7,000	$0
BALDWIN CO.	SUMMERDALE	07/01/02	55	0	0	$5,000	$0
MOBILE CO.	THEODORE	07/13/02	50	0	0	$8,000	$0
ESCAMBIA CO.	MC CULLOUGH	07/28/02	50	0	0	$8,000	$0
MOBILE CO.	CITRONELLE	08/02/02	50	0	0	$10,000	$0
MOBILE CO.	MOBILE	08/19/02	55	0	0	$5,000	$0
BALDWIN CO.	JOSEPHINE	08/25/02	60	0	0	$35,000	$0
MOBILE CO.	CITRONELLE	08/25/02	50	0	0	$8,000	$0
MOBILE CO.	THEODORE	10/29/02	50	0	0	$25,000	$0
BALDWIN CO.	DAPHNE	11/05/02	60	0	0	$15,000	$0
MOBILE CO.	THEODORE	11/05/02	55	0	0	$1,000	$0
MOBILE CO.	TILLMANS CORNER	11/05/02	55	0	0	$2,000	$0
MOBILE CO.	GEORGETOWN	11/15/02	50	0	0	$5,000	$0
BALDWIN CO.	STOCKTON	12/19/02	50	0	0	$8,000	$0
BALDWIN CO.	DAPHNE	12/19/02	50	0	0	$8,000	$0
BALDWIN CO.	SUMMERDALE	12/24/02	50	0	0	$10,000	$0
ESCAMBIA CO.	WALLACE	12/24/02	50	0	0	$5,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	12/24/02	55	0	0	$0	$0
MOBILE CO.	ST ELMO	12/24/02	50	0	0	$5,000	$0
BALDWIN CO.	GULF SHRS	12/31/02	55	0	0	$10,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	12/31/02	52	0	0	$0	$0
MOBILE CO.	(MOB)MOBILE BATES FL	12/31/02	53	0	0	$0	$0
MOBILE CO.	MT VERNON	12/31/02	55	0	0	$20,000	$0
MOBILE CO.	GULF CREST	12/31/02	50	0	0	$5,000	$0
BALDWIN CO.	FAIRHOPE	02/21/03	53	0	0	$5,000	$0
BALDWIN CO.	ROBERTSDALE	03/12/03	55	0	0	$5,000	$0

BALDWIN CO.	SUMMERDALE	03/13/03	50	0	0	$3,000	$0
BALDWIN CO.	MAGNOLIA SPGS	03/13/03	50	0	0	$5,000	$0
ESCAMBIA CO.	FLOMATON	04/25/03	50	0	0	$15,000	$0
BALDWIN CO.	LATHAM	05/02/03	50	0	0	$5,000	$0
MOBILE CO.	COTTAGE HILL	06/03/03	50	0	0	$20,000	$0
MOBILE CO.	COUNTYWIDE	06/30/03	50	0	0	$7,000	$0
MOBILE CO.	COTTAGE HILL	06/30/03	50	0	0	$5,000	$0
BALDWIN CO.	STOCKTON	07/01/03	50	0	0	$5,000	$0
BALDWIN CO.	SUMMERDALE	08/16/03	50	0	0	$7,000	$0
BALDWIN CO.	BELFOREST	11/18/03	50	0	0	$10,000	$0
ESCAMBIA CO.	APPLETON	01/26/04	50	0	0	$8,000	$0
ESCAMBIA CO.	BREWTON	01/26/04	50	0	0	$5,000	$0
BALDWIN CO.	BAY MINETTE	06/02/04	50	0	0	$10,000	$0
BALDWIN CO.	SILVERHILL	06/03/04	55	0	0	$5,000	$0
ESCAMBIA CO.	LITTLE ROCK	06/12/04	50	0	0	$8,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	06/18/04	50	0	0	$5,000	$0
MOBILE CO.	SARALAND	06/22/04	50	0	0	$5,000	$0
ESCAMBIA CO.	HUXFORD	06/24/04	50	0	0	$10,000	$0
ESCAMBIA CO.	BOYKIN	06/27/04	50	0	0	$5,000	$0
MOBILE CO.	SPRING HILL	07/13/04	50	0	0	$15,000	$0
BALDWIN CO.	SPANISH FT	07/25/04	55	0	0	$5,000	$0
MOBILE CO.	MOBILE	07/25/04	55	0	0	$5,000	$0
BALDWIN CO.	ORANGE BEACH	01/29/05	50	0	0	$15,000	$0
BALDWIN CO.	LOXLEY	03/27/05	50	0	0	$10,000	$0
BALDWIN CO.	LOXLEY	04/01/05	50	0	0	$15,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	04/11/05	75	0	0	$150,000	$0
BALDWIN CO.	LOTTIE	05/24/05	50	0	0	$10,000	$0

ESCAMBIA CO.	ATMORE	05/24/05	50	0	0	$10,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	06/15/05	55	0	0	$10,000	$0
MOBILE CO.	MOBILE BATES FLD	07/21/05	50	0	0	$12,000	$0
MOBILE CO.	ALABAMA PORT	09/23/05	52	0	0	$4,000	$0
MOBILE CO.	ALABAMA PORT	09/24/05	50	0	0	$5,000	$0
BALDWIN CO.	BAY MINETTE	01/17/06	50	0	0	$10,000	$0
BALDWIN CO.	SEMINOLE	05/08/06	55	0	0	$10,000	$0
BALDWIN CO.	GULF SHRS	06/23/06	50	0	0	$10,000	$0
BALDWIN CO.	GULF SHRS	06/23/06	50	0	0	$20,000	$0
MOBILE CO.	SEMMES	06/23/06	50	0	0	$10,000	$0
MOBILE CO.	ST ELMO	06/23/06	50	0	0	$15,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	06/25/06	50	0	0	$10,000	$0
BALDWIN CO.	FOLEY	07/20/06	50	0	0	$10,000	$0
MOBILE CO.	GEORGETOWN	08/09/06	50	0	0	$30,000	$0
ESCAMBIA CO.	BREWTON	08/15/06	50	0	0	$10,000	$0
MOBILE CO.	GEORGETOWN	08/15/06	50	0	0	$10,000	$0
BALDWIN CO.	BAY MINETTE	08/30/06	50	0	0	$12,000	$0
BALDWIN CO.	BAY MINETTE	08/30/06	50	0	0	$12,000	$0
ESCAMBIA CO.	BREWTON	08/30/06	50	0	0	$12,000	$0
MOBILE CO.	GRAND BAY	08/30/06	50	0	0	$45,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	10/16/06	50	0	0	$6,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	10/16/06	50	0	0	$6,000	$0
MOBILE CO.	SEMMES	10/16/06	50	0	0	$6,000	$0
BALDWIN CO.	MIFLIN	11/15/06	50	0	0	$10,000	$0
ESCAMBIA CO.	FLOMATON	11/15/06	50	0	0	$10,000	$0
MOBILE CO.	WILMER	11/15/06	50	0	0	$10,000	$0
MOBILE CO.	BAYOU LA BATRE	11/15/06	50	0	0	$12,000	$0

BALDWIN CO.	BELFOREST	05/13/07	50	0	0	$5,000	$0
MOBILE CO.	MOBILE	05/16/07	50	0	0	$15,000	$0
BALDWIN CO.	ROBERTSDALE	06/09/07	52	0	0	$0	$0
BALDWIN CO.	SUMMERDALE	06/09/07	52	0	0	$10,000	$0
MOBILE CO.	FOWL RIVER	06/12/07	52	0	0	$20,000	$0
MOBILE CO.	WILMER	06/19/07	50	0	0	$15,000	$0
MOBILE CO.	MOBILE	07/03/07	61	0	8	$3,500,000	$0
BALDWIN CO.	FAIRHOPE	07/11/07	50	0	0	$10,000	$0
BALDWIN CO.	SPANISH FT	07/14/07	50	0	0	$10,000	$0
BALDWIN CO.	BELFOREST	07/14/07	50	0	0	$10,000	$0
BALDWIN CO.	SPANISH FT	08/24/07	52	0	0	$10,000	$0
MOBILE CO.	GEORGETOWN	10/18/07	50	0	0	$20,000	$0
BALDWIN CO.	LOXLEY	02/12/08	50	0	0	$55,000	$0
ESCAMBIA CO.	BREWTON	02/12/08	50	0	0	$12,000	$0
ESCAMBIA CO.	BREWTON	02/12/08	56	0	0	$0	$0
MOBILE CO.	DAUPHIN IS	02/12/08	64	0	0	$0	$0
MOBILE CO.	(MOB)MOBILE BATES FL	02/12/08	50	0	0	$10,000	$0
ESCAMBIA CO.	BREWTON	02/17/08	50	0	0	$12,000	$0
BALDWIN CO.	GULF SHRS	03/01/08	50	0	0	$18,000	$0
BALDWIN CO.	FAIRHOPE	05/15/08	50	0	0	$12,000	$0
BALDWIN CO.	SUMMERDALE	05/15/08	54	0	0	$30,000	$0
MOBILE CO.	CITRONELLE	05/15/08	54	0	0	$100,000	$0
MOBILE CO.	DIXON CORNER	06/22/08	50	0	0	$12,000	$0
BALDWIN CO.	FAIRHOPE	06/29/08	55	0	0	$25,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	07/12/08	50	0	0	$0	$0
MOBILE CO.	GRAND BAY	07/13/08	50	0	0	$0	$0
ESCAMBIA CO.	BREWTON	03/26/09	52	0	0	$12,000	$0

BALDWIN CO.	ROBERTSDALE	03/27/09	75	0	0	$0	$0
BALDWIN CO.	ROBERTSDALE	03/27/09	104	0	0	$125,000	$0
ESCAMBIA CO.	BREWTON	03/27/09	60	0	0	$35,000	$0
ESCAMBIA CO.	DIXIE	03/27/09	60	0	0	$25,000	$0
MOBILE CO.	DAWES	03/27/09	52	0	0	$20,000	$0
MOBILE CO.	MOBILE BATES FLD	03/27/09	52	0	0	$40,000	$0
ESCAMBIA CO.	ROBINSONVILLE	04/13/09	60	0	0	$70,000	$0
ESCAMBIA CO.	FLOMATON	05/11/09	52	0	0	$20,000	$0
ESCAMBIA CO.	KEEGO	07/02/09	45	0	1	$20,000	$0
ESCAMBIA CO.	BREWTON	07/02/09	52	0	1	$100,000	$0
ESCAMBIA CO.	ROBERTS	07/26/09	52	0	0	$10,000	$0
BALDWIN CO.	DAPHNE	07/31/09	52	0	0	$10,000	$0
MOBILE CO.	MOBILE BATES FLD	07/31/09	52	0	0	$12,000	$0
MOBILE CO.	MOBILE BATES FLD	08/03/09	52	0	0	$10,000	$0
BALDWIN CO.	SEMINOLE	08/04/09	52	0	0	$10,000	$0
BALDWIN CO.	PHILLIPSVILLE	08/05/09	52	0	0	$10,000	$0
BALDWIN CO.	PHILLIPSVILLE	08/05/09	52	0	0	$10,000	$0
BALDWIN CO.	GULF SHRS	12/24/09	50	0	0	$0	$0
MOBILE CO.	(MOB)MOBILE BATES FL	12/24/09	50	0	0	$0	$0
MOBILE CO.	PRICHARD	12/24/09	50	0	0	$0	$0
BALDWIN CO.	ELBERTA	06/18/10	52	0	0	$12,000	$0
ESCAMBIA CO.	APPLETON	08/04/10	52	0	0	$0	$0
ESCAMBIA CO.	ROBERTS	10/24/10	52	0	0	$0	$0
BALDWIN CO.	DAPHNE	12/11/10	52	0	0	$10,000	$0
MOBILE CO.	THEODORE	12/11/10	52	0	0	$5,000	$0
BALDWIN CO.	GULF SHRS	01/18/11	52	0	0	$3,000	$0
BALDWIN CO.	FOLEY	02/01/11	52	0	5	$10,000	$0

BALDWIN CO.	SEMINOLE	02/01/11	52	0	5	$0	$0
MOBILE CO.	DELCHAMPS	03/05/11	52	0	0	$5,000	$0
ESCAMBIA CO.	FLOMATON	03/09/11	52	0	0	$5,000	$0
ESCAMBIA CO.	BREWTON	03/09/11	52	0	0	$5,000	$0
MOBILE CO.	MT VERNON	03/09/11	61	0	0	$7,000	$0
MOBILE CO.	GRAND BAY	03/09/11	70	0	0	$20,000	$0
MOBILE CO.	SPRING HILL	04/04/11	50	0	0	$0	$0
MOBILE CO.	NAVCO	04/04/11	50	0	0	$0	$0
ESCAMBIA CO.	WAWBEEK	05/13/11	52	0	0	$5,000	$0
ESCAMBIA CO.	BREWTON	06/07/11	52	0	0	$5,000	$0
ESCAMBIA CO.	BREWTON	06/07/11	52	0	0	$10,000	$0
ESCAMBIA CO.	BREWTON	06/07/11	52	0	0	$3,000	$0
ESCAMBIA CO.	BREWTON	06/07/11	52	0	0	$5,000	$0
MOBILE CO.	MOBILE BATES FLD	06/16/11	52	0	0	$2,000	$0
MOBILE CO.	MOBILE BATES FLD	06/16/11	52	0	0	$2,000	$0
BALDWIN CO.	LOXLEY	07/02/11	61	0	0	$10,000	$0
ESCAMBIA CO.	NOKOMIS	07/02/11	52	0	0	$7,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	07/02/11	53	0	0	$0	$0
MOBILE CO.	(MOB)MOBILE BATES FL	07/31/11	52	0	0	$0	$0
MOBILE CO.	MOBILE BATES FLD	08/04/11	52	0	0	$2,000	$0
MOBILE CO.	SPRING HILL	08/12/11	52	0	0	$2,000	$0
BALDWIN CO.	FOLEY	08/24/11	51	0	0	$0	$0
MOBILE CO.	GRAND BAY	08/24/11	51	0	0	$0	$0
MOBILE CO.	MOBILE BATES FLD	08/24/11	53	0	0	$0	$0
MOBILE CO.	MOBILE BATES FLD	09/05/11	52	0	0	$2,000	$0
MOBILE CO.	MOBILE	09/05/11	56	0	0	$0	$0
MOBILE CO.	MOBILE	09/05/11	56	0	0	$0	$0

BALDWIN CO.	SEMINOLE	02/18/12	61	0	0	$10,000	$0
BALDWIN CO.	LILLIAN	02/18/12	61	0	0	$10,000	$0
ESCAMBIA CO.	FREEMANVILLE	02/18/12	52	0	0	$5,000	$0
ESCAMBIA CO.	POARCH	02/18/12	52	0	0	$2,000	$0
ESCAMBIA CO.	APPLETON	02/18/12	61	0	0	$5,000	$0
MOBILE CO.	GRAND BAY	02/18/12	52	0	0	$3,000	$0
BALDWIN CO.	ELSANOR	05/30/12	52	0	0	$8,000	$0
ESCAMBIA CO.	ATMORE	06/14/12	56	0	0	$0	$0
MOBILE CO.	BAYOU LA BATRE	07/02/12	52	0	0	$2,000	$0
BALDWIN CO.	SILVERHILL	07/03/12	52	0	0	$7,000	$0
BALDWIN CO.	SUMMERDALE	07/04/12	52	0	0	$5,000	$0
BALDWIN CO.	WHITEHOUSE FORKS	07/17/12	52	0	0	$2,000	$0
BALDWIN CO.	DAPHNE	07/17/12	52	0	0	$2,000	$0
BALDWIN CO.	FOLEY	07/30/12	52	0	0	$7,000	$0
ESCAMBIA CO.	FREEMANVILLE	12/25/12	70	0	0	$50,000	$0
MOBILE CO.	SEMMES	12/25/12	61	0	0	$4,000	$0
BALDWIN CO.	GULF SHRS	04/14/13	52	0	0	$10,000	$0
BALDWIN CO.	FAIRHOPE	04/14/13	52	0	0	$2,000	$0
MOBILE CO.	SOUTH ORCHARD	04/14/13	52	0	0	$5,000	$0
BALDWIN CO.	FAIRHOPE	07/22/13	50	0	0	$4,500	$0
BALDWIN CO.	ROSINTON	07/22/13	50	0	0	$4,500	$0
BALDWIN CO.	SEMINOLE	07/22/13	50	0	0	$4,500	$0
ESCAMBIA CO.	ROCKHILL	09/24/13	52	0	0	$1,000	$0
BALDWIN CO.	BAY MINETTE	02/21/14	52	0	0	$2,000	$0
MOBILE CO.	SEVEN HILLS	02/21/14	52	0	0	$2,000	$0
ESCAMBIA CO.	ATMORE	03/16/14	78	0	0	$250,000	$0
ESCAMBIA CO.	ATMORE	03/16/14	62	0	0	$0	$0

ESCAMBIA CO.	ATMORE	03/16/14	61	0	0	$7,000	$0
MOBILE CO.	SARALAND	03/16/14	52	0	0	$2,000	$0
MOBILE CO.	SARALAND	03/16/14	61	0	0	$4,000	$0
MOBILE CO.	SARALAND	03/16/14	61	0	0	$5,000	$0
MOBILE CO.	SARALAND	03/16/14	52	0	0	$2,000	$0
ESCAMBIA CO.	JACK SPGS	04/07/14	52	0	0	$10,000	$0
BALDWIN CO.	ROBERTSDALE	04/14/14	52	0	0	$5,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	04/29/14	50	0	0	$0	$0
BALDWIN CO.	ELSANOR	05/28/14	61	0	0	$0	$0
MOBILE CO.	PRICHARD	08/09/14	52	0	0	$10,000	$0
MOBILE CO.	SARALAND	08/09/14	61	0	0	$25,000	$0
BALDWIN CO.	ELBERTA	12/23/14	45	0	0	$1,000	$0
BALDWIN CO.	FAIRHOPE	04/25/15	50	0	0	$90,000	$0
BALDWIN CO.	POINT CLEAR	04/25/15	52	0	0	$5,000	$0
BALDWIN CO.	SILVERHILL	04/25/15	52	0	0	$10,000	$0
BALDWIN CO.	ROBERTSDALE	04/25/15	61	0	0	$120,000	$0
BALDWIN CO.	FOLEY	04/25/15	52	0	0	$10,000	$0
BALDWIN CO.	ROSINTON	04/25/15	52	0	0	$30,000	$0
ESCAMBIA CO.	FLOMATON	04/25/15	52	0	0	$5,000	$0
ESCAMBIA CO.	POLLARD	04/25/15	52	0	0	$10,000	$0
ESCAMBIA CO.	BREWTON	04/25/15	61	0	0	$2,000	$0
MOBILE CO.	SEMMES	04/25/15	52	0	0	$2,000	$0
MOBILE CO.	TANNER WILLIAMS	04/25/15	52	0	0	$2,000	$0
MOBILE CO.	GRAND BAY	04/25/15	52	0	0	$1,000	$0
MOBILE CO.	ST ELMO ARPT	04/25/15	52	0	0	$1,000	$0
MOBILE CO.	ORCHARD	04/25/15	52	0	0	$1,000	$0
MOBILE CO.	SPRING HILL	04/25/15	52	0	0	$1,000	$0

ESCAMBIA CO.	APPLETON	05/20/15	52	0	0	$1,000	$0
MOBILE CO.	MOBILE	06/22/15	52	0	0	$5,000	$0
MOBILE CO.	CHICKASAW	06/22/15	52	0	0	$2,000	$0
MOBILE CO.	SEVEN HILLS	06/27/15	52	0	0	$2,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	06/27/15	52	0	0	$2,000	$0
BALDWIN CO.	BRIDGEHEAD	07/17/15	61	0	0	$5,000	$0
MOBILE CO.	MOBILE	07/17/15	61	0	0	$5,000	$0
MOBILE CO.	MOBILE	07/17/15	61	0	0	$5,000	$0
MOBILE CO.	MOBILE	07/17/15	70	0	0	$5,000	$0
MOBILE CO.	MOBILE	07/17/15	70	0	0	$5,000	$0
MOBILE CO.	MOBILE	07/17/15	70	0	0	$5,000	$0
MOBILE CO.	MOBILE	07/17/15	66	0	0	$0	$0
MOBILE CO.	MOBILE BATES FLD	07/17/15	61	0	0	$5,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	07/17/15	61	0	0	$5,000	$0
MOBILE CO.	THEODORE	07/17/15	61	0	0	$5,000	$0
BALDWIN CO.	GULF SHRS	07/19/15	53	0	0	$0	$0
ESCAMBIA CO.	BREWTON	07/19/15	52	0	0	$3,000	$0
MOBILE CO.	CITRONELLE	08/08/15	52	0	0	$5,000	$0
MOBILE CO.	CHUNCHULA	08/08/15	52	0	0	$5,000	$0
MOBILE CO.	SARALAND	08/08/15	52	0	0	$5,000	$0
MOBILE CO.	(BFM)MOBILE BROOKLEY	08/08/15	50	0	0	$0	$0
BALDWIN CO.	SPANISH FT	08/09/15	52	0	1	$30,000	$0
MOBILE CO.	COTTAGE HILL	09/27/15	52	0	0	$2,000	$0
MOBILE CO.	SPRING HILL	09/27/15	52	0	0	$2,000	$0
MOBILE CO.	MOBILE	10/31/15	60	0	0	$3,000	$0
MOBILE CO.	GRAND BAY	12/23/15	50	0	0	$5,000	$0
MOBILE CO.	THEODORE	12/23/15	50	0	0	$10,000	$0

BALDWIN CO.	DYAS	01/21/16	52	0	0	$5,000	$0
ESCAMBIA CO.	ATMORE	01/21/16	61	0	0	$5,000	$0
ESCAMBIA CO.	ATMORE	01/21/16	52	0	0	$5,000	$0
ESCAMBIA CO.	PORCH	01/21/16	61	0	0	$10,000	$0
ESCAMBIA CO.	FLOMATON	01/21/16	52	0	0	$5,000	$0
ESCAMBIA CO.	HUXFORD	01/21/16	52	0	0	$5,000	$0
MOBILE CO.	MOBILE	02/03/16	52	0	0	$10,000	$0
ESCAMBIA CO.	BREWTON	02/15/16	52	0	0	$5,000	$0
MOBILE CO.	MON LOUIS	02/15/16	53	0	0	$2,000	$0
ESCAMBIA CO.	BRADLEY	03/03/16	52	0	0	$10,000	$0
BALDWIN CO.	FAIRHOPE	03/17/16	61	0	0	$30,000	$0
BALDWIN CO.	MALBIS	03/17/16	52	0	0	$1,000	$0
MOBILE CO.	SEMMES	03/17/16	52	0	0	$2,000	$0
MOBILE CO.	SARALAND	03/17/16	52	0	0	$2,000	$0
MOBILE CO.	MOBILE BATES FLD	03/17/16	52	0	0	$2,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	03/17/16	54	0	0	$2,000	$0
MOBILE CO.	TILLMANS CORNER	03/17/16	61	0	0	$5,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	03/17/16	61	0	0	$10,000	$0
ESCAMBIA CO.	WALLACE	03/24/16	52	0	0	$2,000	$0
ESCAMBIA CO.	APPLETON	03/24/16	52	0	0	$2,000	$0
ESCAMBIA CO.	BREWTON	03/24/16	52	0	0	$5,000	$0
ESCAMBIA CO.	KIRKLAND	03/24/16	61	0	0	$10,000	$0
ESCAMBIA CO.	MC KENZIE	03/24/16	52	0	0	$2,000	$0
MOBILE CO.	MOBILE	03/24/16	61	0	0	$2,000	$0
MOBILE CO.	SPRING HILL	03/24/16	52	0	0	$10,000	$0
ESCAMBIA CO.	CARNEY	03/31/16	60	0	0	$5,000	$0
MOBILE CO.	GRAND BAY	05/19/16	52	0	0	$5,000	$0

BALDWIN CO.	FT MORGAN	05/20/16	60	0	0	$0	$0
BALDWIN CO.	STOCKTON	05/20/16	52	0	0	$3,000	$0
BALDWIN CO.	BAY MINETTE	05/20/16	52	0	0	$3,000	$0
MOBILE CO.	SEVEN HILLS	05/20/16	52	0	0	$1,000	$0
MOBILE CO.	WILMER	05/20/16	52	0	0	$5,000	$0
MOBILE CO.	KUSHLA	05/20/16	52	0	0	$3,000	$0
MOBILE CO.	COTTAGE HILL	05/20/16	52	0	0	$3,000	$0
MOBILE CO.	MERTZ	05/20/16	52	0	0	$5,000	$0
MOBILE CO.	SOUTH ORCHARD	05/20/16	52	0	0	$2,000	$0
MOBILE CO.	AXIS	05/20/16	52	0	0	$1,000	$0
ESCAMBIA CO.	ATMORE	05/31/16	52	0	0	$10,000	$0
MOBILE CO.	BUCKS	05/31/16	52	0	0	$5,000	$0
ESCAMBIA CO.	FLOMATON	06/13/16	52	0	0	$2,000	$0
BALDWIN CO.	RABUN	06/17/16	61	0	0	$10,000	$0
ESCAMBIA CO.	BREWTON	06/17/16	52	0	0	$4,000	$0
ESCAMBIA CO.	ATMORE MUNI ARPT	06/17/16	52	0	0	$0	$0
MOBILE CO.	CITRONELLE	06/17/16	52	0	0	$0	$0
MOBILE CO.	CITRONELLE	06/17/16	52	0	0	$2,000	$0
MOBILE CO.	MOBILE	06/17/16	52	0	0	$3,000	$0
ESCAMBIA CO.	EAST BREWTON	06/26/16	52	0	0	$5,000	$0
ESCAMBIA CO.	ATMORE	06/26/16	52	0	0	$10,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	07/10/16	52	0	0	$5,000	$0
MOBILE CO.	(BFM)MOBILE BROOKLEY	07/20/16	60	0	0	$50,000	$0
MOBILE CO.	(BFM)MOBILE BROOKLEY	07/20/16	60	0	0	$5,000	$0
BALDWIN CO.	GULF SHRS	01/02/17	70	0	1	$950,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	01/02/17	52	0	0	$5,000	$0
ESCAMBIA CO.	APPLETON	01/21/17	61	0	0	$40,000	$0

ESCAMBIA CO.	BREWTON	01/21/17	52	0	0	$5,000	$0
MOBILE CO.	PIERCIE	01/21/17	52	0	0	$4,000	$0
MOBILE CO.	SEVEN HILLS	01/21/17	52	0	0	$10,000	$0
MOBILE CO.	COTTAGE HILL	01/21/17	70	0	0	$300,000	$0
BALDWIN CO.	BAY MINETTE	02/07/17	52	0	0	$2,000	$0
BALDWIN CO.	GULF SHRS	02/07/17	51	0	0	$0	$0
MOBILE CO.	SATSUMA	02/07/17	61	0	0	$2,000	$0
ESCAMBIA CO.	FLOMATON	04/03/17	52	0	0	$2,000	$0
ESCAMBIA CO.	BREWTON	04/03/17	52	0	0	$5,000	$0
MOBILE CO.	CITRONELLE	04/03/17	61	0	0	$5,000	$0
BALDWIN CO.	BAY MINETTE	05/12/17	52	0	0	$20,000	$0
BALDWIN CO.	PHILLIPSVILLE	05/12/17	61	0	0	$15,000	$0
MOBILE CO.	SEMMES	05/12/17	52	0	0	$10,000	$0
MOBILE CO.	KUSHLA	05/12/17	52	0	0	$4,000	$0
MOBILE CO.	HERON BAY	06/21/17	52	0	0	$5,000	$0
MOBILE CO.	DAWES	06/21/17	52	0	0	$5,000	$0
BALDWIN CO.	MIFLIN	07/26/17	54	0	0	$0	$0
BALDWIN CO.	GULF SHRS	07/26/17	52	0	0	$10,000	$0
MOBILE CO.	MOBILE BATES FLD	09/22/17	52	0	0	$5,000	$0
MOBILE CO.	SPRING HILL	04/14/18	50	0	0	$10,000	$0
ESCAMBIA CO.	ROBERTS	04/22/18	70	0	0	$50,000	$0
ESCAMBIA CO.	ATMORE	05/17/18	52	0	0	$5,000	$0
ESCAMBIA CO.	POLLARD	05/17/18	52	0	0	$2,000	$0
ESCAMBIA CO.	BREWTON	05/17/18	52	0	0	$2,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	06/09/18	52	0	0	$2,000	$0
BALDWIN CO.	BAY MINETTE	06/28/18	52	0	0	$5,000	$0
ESCAMBIA CO.	BREWTON	06/28/18	52	0	0	$10,000	$0

MOBILE CO.	SEMMES	06/28/18	52	0	0	$3,000	$0
BALDWIN CO.	STOCKTON	11/01/18	52	0	0	$5,000	$0
BALDWIN CO.	BAY MINETTE	11/01/18	52	0	0	$5,000	$0
MOBILE CO.	DAWES	11/01/18	61	0	0	$10,000	$0
MOBILE CO.	TILLMANS CORNER	11/01/18	61	0	0	$10,000	$0
ESCAMBIA CO.	FREEMANVILLE	03/03/19	52	0	0	$5,000	$0
ESCAMBIA CO.	BREWTON	04/14/19	52	0	0	$10,000	$0
ESCAMBIA CO.	BREWTON MUNI ARPT	04/14/19	52	0	0	$10,000	$0
MOBILE CO.	SARALAND	04/14/19	52	0	0	$5,000	$0
BALDWIN CO.	STOCKTON	04/18/19	52	0	0	$5,000	$0
BALDWIN CO.	DOUGLASVILLE	04/18/19	52	0	0	$10,000	$0
BALDWIN CO.	SEMINOLE	04/18/19	52	0	0	$2,000	$0
MOBILE CO.	MOBILE BATES FLD	04/18/19	52	0	0	$5,000	$0
MOBILE CO.	(MOB)MOBILE BATES FL	04/18/19	52	0	0	$5,000	$0
MOBILE CO.	COTTAGE HILL	04/18/19	52	0	0	$25,000	$0
MOBILE CO.	SPRING HILL	04/18/19	52	0	0	$2,000	$0
MOBILE CO.	SPRING HILL	04/18/19	52	0	0	$5,000	$0
MOBILE CO.	COTTAGE HILL	04/18/19	52	0	0	$20,000	$0
MOBILE CO.	SPRING HILL	04/18/19	50	0	0	$5,000	$0
MOBILE CO.	CITRONELLE	04/25/19	52	0	0	$2,000	$0
MOBILE CO.	GRAND BAY	05/04/19	52	0	0	$0	$0
MOBILE CO.	(MOB)MOBILE BATES FL	05/04/19	52	0	0	$0	$0
MOBILE CO.	THEODORE	05/04/19	52	0	1	$0	$0
MOBILE CO.	TILLMANS CORNER	05/04/19	52	0	0	$0	$0
BALDWIN CO.	ROBERTSDALE	05/12/19	52	0	0	$0	$0
BALDWIN CO.	FOLEY MUNI ARPT	05/12/19	61	0	0	$0	$0
BALDWIN CO.	GULF SHRS	05/12/19	70	0	0	$0	$0

BALDWIN CO.	GULF SHRS	05/12/19	63	0	0	$0	$0
MOBILE CO.	DAUPHIN IS	05/12/19	70	0	0	$0	$0
BALDWIN CO.	SPANISH FT	06/07/19	52	0	0	$0	$0
BALDWIN CO.	BAY MINETTE	06/25/19	52	0	0	$0	$0
BALDWIN CO.	BAY MINETTE	06/27/19	52	0	0	$0	$0
BALDWIN CO.	DAPHNE	06/27/19	52	0	0	$0	$0
BALDWIN CO.	GULF SHRS	06/27/19	52	0	0	$0	$0
MOBILE CO.	CITRONELLE	06/27/19	52	0	0	$0	$0
MOBILE CO.	SEMMES	06/27/19	52	0	0	$0	$0
MOBILE CO.	MOBILE	06/27/19	52	0	0	$0	$0
MOBILE CO.	MOBILE	06/27/19	52	0	0	$0	$0
MOBILE CO.	MOBILE	06/27/19	52	0	0	$0	$0
MOBILE CO.	IRVINGTON	06/27/19	52	0	0	$0	$0
MOBILE CO.	(MOB)MOBILE BATES FL	06/28/19	51	0	0	$0	$0
MOBILE CO.	(MOB)MOBILE BATES FL	06/28/19	52	0	0	$0	$0
MOBILE CO.	MON LOUIS	07/23/19	52	0	0	$0	$0
ESCAMBIA CO.	APPLETON	01/11/20	52	0	0	$0	$0
ESCAMBIA CO.	BREWTON	01/11/20	52	0	0	$0	$0
MOBILE CO.	MOBILE	01/11/20	52	0	0	$0	$0
ESCAMBIA CO.	SARDINE	03/04/20	52	0	0	$0	$0
ESCAMBIA CO.	BREWTON	03/04/20	61	0	0	$0	$0
BALDWIN CO.	TAYLORS CAMP	03/31/20	52	0	0	$0	$0
MOBILE CO.	DAUPHIN IS	04/09/20	61	0	0	$0	$0
BALDWIN CO.	FT MORGAN	04/10/20	58	0	0	$0	$0
MOBILE CO.	DAUPHIN IS	04/10/20	53	0	0	$0	$0
BALDWIN CO.	MALBIS	04/19/20	70	0	0	$0	$0
BALDWIN CO.	JACKSON OAK	04/19/20	61	0	0	$0	$0

BALDWIN CO.	LOXLEY	04/19/20	64	0	0	$0	$0
BALDWIN CO.	BATTLES WHARF	04/19/20	70	0	0	$0	$0
ESCAMBIA CO.	HUXFORD	04/19/20	61	0	0	$0	$0
MOBILE CO.	IRVINGTON	04/19/20	52	0	0	$0	$0
MOBILE CO.	CODEN	04/19/20	52	0	0	$0	$0
ESCAMBIA CO.	FREEMANVILLE	04/23/20	52	0	0	$0	$0
ESCAMBIA CO.	OSAKA	04/23/20	52	0	0	$0	$0
ESCAMBIA CO.	FREEMANVILLE	04/23/20	52	0	0	$0	$0
ESCAMBIA CO.	APPLETON	04/23/20	61	0	0	$0	$0
ESCAMBIA CO.	PARKER SPGS	04/23/20	52	0	0	$0	$0
MOBILE CO.	CITRONELLE	04/23/20	52	0	0	$0	$0
MOBILE CO.	SATSUMA	04/23/20	52	0	0	$0	$0
BALDWIN CO.	BAY MINETTE	05/27/20	52	0	0	$0	$0
BALDWIN CO.	BAY MINETTE	05/27/20	52	0	0	$0	$0
BALDWIN CO.	BAY MINETTE	05/27/20	52	0	0	$0	$0
BALDWIN CO.	POINT CLEAR	06/23/20	52	0	0	$0	$0
ESCAMBIA CO.	KIRKLAND	06/26/20	52	0	0	$0	$0
BALDWIN CO.	DAPHNE	07/01/20	52	0	0	$0	$0
BALDWIN CO.	MONTROSE	07/01/20	52	0	0	$0	$0
BALDWIN CO.	PARK CITY	07/12/20	50	0	0	$0	$0
BALDWIN CO.	FAIRHOPE	07/12/20	50	0	0	$0	$0
ESCAMBIA CO.	BREWTON	07/12/20	52	0	0	$0	$0
MOBILE CO.	MOBILE	07/12/20	50	0	0	$0	$0
MOBILE CO.	MON LOUIS	07/12/20	50	0	0	$0	$0
MOBILE CO.	DAUPHIN IS	07/12/20	50	0	0	$0	$0
MOBILE CO.	PRICHARD	08/11/20	52	0	0	$0	$0
MOBILE CO.	DIXON CORNER	10/10/20	50	0	0	$0	$0

Totals				0	27	$11,726,500	$0

Source: NOAA Storm Events Database

Table 3.19 Division A Hail Occurrences 2014-2019

Name	Location	Date	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
BALDWIN CO.	Tensaw	02/03/95	0.75	0	0	$0	0
ESCAMBIA CO.	McCullough	02/03/95	1.75	0	0	$0	0
BALDWIN CO.	Lottie	02/17/95	0.75	0	0	$0	0
BALDWIN CO.	Daphne	03/15/95	1.75	0	0	$0	0
BALDWIN CO.	Spanish Fort	03/15/95	1.75	0	0	$0	0
BALDWIN CO.	Stapleton	03/15/95	0.88	0	0	$0	0
BALDWIN CO.	Bay Minette	03/15/95	0.75	0	0	$0	0
BALDWIN CO.	Bay Minette	03/15/95	0.75	0	0	$0	0
BALDWIN CO.	Bay Minette	03/15/95	0.75	0	0	$0	0
BALDWIN CO.	Bay Minette	03/15/95	0.88	0	0	$0	0
MOBILE CO.	Mobile	03/15/95	0.75	0	0	$0	0
BALDWIN CO.	Gulf Shores	04/11/95	0.75	0	0	$0	0
BALDWIN CO.	Gulf Shores	04/11/95	0.88	0	0	$1,000	0
MOBILE CO.	Dauphin Is.	05/10/95	1	0	0	$300	0
BALDWIN CO.	Gulf Shores	05/11/95	0.75	0	0	$0	0
MOBILE CO.	Dauphin Island	05/29/95	0.75	0	0	$0	0
MOBILE CO.	Citronelle	07/09/95	0.75	0	0	$0	0
MOBILE CO.	Mobile	12/18/95	0.75	0	0	$0	0
MOBILE CO.	Mobile	12/18/95	0.75	0	0	$0	0
BALDWIN CO.	BAY MINETTE	02/19/96	1.75	0	0	$0	0
BALDWIN CO.	ROBERTSDALE	03/18/96	1.75	0	0	$0	0
MOBILE CO.	CITRONELLE	03/18/96	1	0	0	$0	0
MOBILE CO.	SARALAND	03/18/96	0.75	0	0	$0	0

MOBILE CO.	THEODORE	03/30/96	1	0	0	$0	0
MOBILE CO.	TILLMANS CORNER	03/30/96	0.88	0	0	$0	0
BALDWIN CO.	ELBERTA	04/14/96	1.75	0	0	$0	0
BALDWIN CO.	ROBERTSDALE	04/14/96	0.75	0	0	$0	0
MOBILE CO.	IRVINGTON	04/14/96	0.75	0	0	$0	0
MOBILE CO.	DAUPHIN IS	04/14/96	0.75	0	0	$0	0
ESCAMBIA CO.	ATMORE	04/29/96	0.75	0	0	$0	0
BALDWIN CO.	BAY MINETTE	05/23/96	1.75	0	0	$0	0
MOBILE CO.	CITRONELLE	05/24/96	0.75	0	0	$0	0
MOBILE CO.	SEMMES	07/09/96	0.75	0	0	$0	0
MOBILE CO.	TILLMANS CORNER	08/08/96	0.75	0	0	$0	0
BALDWIN CO.	BAY MINETTE	08/25/96	0.75	0	0	$0	0
BALDWIN CO.	TENSAW	12/12/96	0.75	0	0	$0	0
MOBILE CO.	CITRONELLE	12/12/96	0.75	0	0	$0	0
MOBILE CO.	WILMER	01/08/97	0.75	0	0	$0	0
BALDWIN CO.	FAIRHOPE	01/24/97	1.75	0	0	$0	0
BALDWIN CO.	SILVERHILL	01/24/97	1.75	0	0	$0	0
BALDWIN CO.	ROBERTSDALE	01/24/97	1.75	0	0	$0	0
BALDWIN CO.	ORANGE BEACH	01/24/97	0.75	0	0	$0	0
BALDWIN CO.	FAIRHOPE	01/24/97	0.75	0	0	$0	0
BALDWIN CO.	FAIRHOPE	01/24/97	0.75	0	0	$0	0
BALDWIN CO.	ORANGE BEACH	01/24/97	0.75	0	0	$0	0
MOBILE CO.	GRAND BAY	01/24/97	0.75	0	0	$0	0
MOBILE CO.	THEODORE	01/24/97	2	0	0	$0	0
MOBILE CO.	BELLEFONTAINE	01/24/97	0.75	0	0	$0	0
MOBILE CO.	MOBILE BATES FLD	01/24/97	0.75	0	0	$0	0
MOBILE CO.	MOBILE BROOKLEY FLD	01/24/97	0.75	0	0	$0	0

MOBILE CO.	DAUPHIN IS	01/24/97	0.75	0	0	$0	0
BALDWIN CO.	STOCKTON	04/21/97	1	0	0	$0	0
BALDWIN CO.	BAY MINETTE	04/21/97	1.75	0	0	$0	0
MOBILE CO.	MT VERNON	04/21/97	1.75	0	0	$1,000	0
MOBILE CO.	MT VERNON	04/21/97	1.75	0	0	$0	0
BALDWIN CO.	STAPLETON	04/22/97	1	0	0	$0	0
BALDWIN CO.	BAY MINETTE	04/22/97	0.75	0	0	$0	0
BALDWIN CO.	STOCKTON	04/22/97	0.75	0	0	$0	0
BALDWIN CO.	ROBERTSDALE	04/22/97	0.75	0	0	$0	0
MOBILE CO.	CITRONELLE	04/22/97	0.75	0	0	$0	0
MOBILE CO.	SARALAND	05/15/97	1.75	0	0	$0	0
ESCAMBIA CO.	WALLACE	05/23/97	0.75	0	0	$0	0
BALDWIN CO.	CHRYSLER	05/27/97	0.75	0	0	$0	0
ESCAMBIA CO.	FLOMATON	05/27/97	0.75	0	0	$0	0
MOBILE CO.	CITRONELLE	06/20/97	0.75	0	0	$0	0
MOBILE CO.	TANNER WILLIAMS	11/01/97	0.75	0	0	$0	0
BALDWIN CO.	SEMINOLE	11/06/97	1.75	0	0	$2,000	0
MOBILE CO.	TILLMANS CORNER	12/26/97	0.75	0	0	$0	0
MOBILE CO.	CITRONELLE	01/22/98	0.75	0	0	$0	0
MOBILE CO.	ALABAMA PORT	01/22/98	0.75	0	0	$0	0
MOBILE CO.	TANNER WILLIAMS	02/22/98	0.75	0	0	$0	0
BALDWIN CO.	STOCKTON	03/05/98	0.88	0	0	$0	0
BALDWIN CO.	PERDIDO	03/05/98	0.75	0	0	$0	0
ESCAMBIA CO.	POARCH	03/05/98	0.75	0	0	$0	0
MOBILE CO.	SARALAND	03/05/98	1	0	0	$0	0
MOBILE CO.	CREOLA	03/05/98	0.88	0	0	$0	0
MOBILE CO.	BAYOU LA BATRE	03/07/98	0.75	0	0	$0	0

ESCAMBIA CO.	BREWTON	03/08/98	0.75	0	0	$0	0
BALDWIN CO.	LATHAM	04/08/98	0.75	0	0	$0	0
BALDWIN CO.	LITTLE RIVER	04/08/98	0.75	0	0	$0	0
MOBILE CO.	CHASTANG	04/08/98	0.75	0	0	$0	0
BALDWIN CO.	LITTLE RIVER	04/17/98	1	0	0	$0	0
BALDWIN CO.	LITTLE RIVER	04/17/98	1	0	0	$0	0
MOBILE CO.	CITRONELLE	04/17/98	0.75	0	0	$0	0
ESCAMBIA CO.	APPLETON	04/22/98	1.75	0	0	$0	0
MOBILE CO.	PRICHARD	05/02/98	1	0	0	$0	0
BALDWIN CO.	BAY MINETTE	05/03/98	0.75	0	0	$0	0
BALDWIN CO.	BAY MINETTE	05/03/98	1.75	0	0	$0	0
BALDWIN CO.	BAY MINETTE	05/03/98	0.75	0	0	$0	0
ESCAMBIA CO.	BREWTON	05/03/98	0.75	0	0	$0	0
MOBILE CO.	SARALAND	05/03/98	0.88	0	0	$0	0
MOBILE CO.	MT VERNON	05/03/98	1.75	0	0	$0	0
MOBILE CO.	CITRONELLE	05/03/98	0.75	0	0	$0	0
MOBILE CO.	DAUPHIN IS	05/06/98	1.75	0	0	$0	0
ESCAMBIA CO.	ATMORE	06/21/98	1.75	0	0	$6,000	0
BALDWIN CO.	LITTLE RIVER	08/30/98	0.75	0	0	$0	0
BALDWIN CO.	STAPLETON	01/09/99	0.75	0	0	$0	0
BALDWIN CO.	PERDIDO	03/09/99	1	0	0	$0	0
BALDWIN CO.	ROBERTSDALE	03/09/99	0.75	0	0	$0	0
ESCAMBIA CO.	DIXIE	04/29/99	0.75	0	0	$0	0
MOBILE CO.	BAYOU LA BATRE	04/29/99	1	0	0	$0	0
BALDWIN CO.	FT MORGAN	05/04/99	0.75	0	0	$0	0
BALDWIN CO.	STAPLETON	05/04/99	0.75	0	0	$0	0
ESCAMBIA CO.	BREWTON	05/18/99	1.5	0	0	$0	0

MOBILE CO.	SPRING HILL	05/23/99	1	0	0	$0	0
ESCAMBIA CO.	BRADLEY	05/26/99	0.88	0	0	$0	0
MOBILE CO.	BUCKS	05/26/99	0.75	0	0	$0	0
MOBILE CO.	GRAND BAY	05/28/99	0.88	0	0	$0	0
BALDWIN CO.	DAPHNE	06/08/99	0.88	0	0	$0	0
BALDWIN CO.	LOXLEY	07/30/99	0.75	0	0	$0	0
MOBILE CO.	TILLMANS CORNER	07/30/99	0.88	0	0	$0	0
MOBILE CO.	CODEN	08/14/99	0.88	0	0	$0	0
MOBILE CO.	MT VERNON	08/20/99	0.88	0	0	$0	0
BALDWIN CO.	FT MORGAN	01/24/00	0.75	0	0	$0	0
MOBILE CO.	DAUPHIN IS	01/24/00	0.88	0	0	$0	0
BALDWIN CO.	PERDIDO	03/29/00	0.88	0	0	$0	0
MOBILE CO.	DAUPHIN IS	03/29/00	1.75	0	0	$0	0
MOBILE CO.	DAUPHIN IS	03/29/00	0.75	0	0	$0	0
MOBILE CO.	(MOB)MOBILE BATES FL	04/24/00	1	0	0	$0	0
MOBILE CO.	SEMMES	04/26/00	1	0	0	$0	0
MOBILE CO.	MOBILE	04/26/00	1	0	0	$5,000	0
MOBILE CO.	CITRONELLE	05/13/00	1	0	0	$0	0
ESCAMBIA CO.	CANOE	07/11/00	0.75	0	0	$0	0
MOBILE CO.	MOBILE	07/11/00	0.75	0	0	$0	0
BALDWIN CO.	ROSINTON	07/21/00	1	0	0	$0	0
MOBILE CO.	GULF CREST	07/22/00	0.88	0	0	$0	0
MOBILE CO.	TILLMANS CORNER	07/22/00	0.75	0	0	$0	0
MOBILE CO.	THEODORE	07/22/00	0.75	0	0	$0	0
BALDWIN CO.	LOXLEY	08/09/00	0.75	0	0	$0	0
MOBILE CO.	MOBILE	08/09/00	0.75	0	0	$0	0
MOBILE CO.	CITRONELLE	08/10/00	1.75	0	0	$0	0

MOBILE CO.	BUCKS	08/25/00	1.75	0	0	$0	0
ESCAMBIA CO.	BREWTON	08/27/00	1.75	0	0	$0	0
BALDWIN CO.	LOXLEY	09/05/00	0.88	0	0	$0	0
MOBILE CO.	GRAND BAY	09/05/00	0.88	0	0	$0	0
BALDWIN CO.	DAPHNE	03/12/01	0.75	0	0	$0	0
ESCAMBIA CO.	ATMORE	04/04/01	1.75	0	0	$0	0
ESCAMBIA CO.	CANOE	04/04/01	1.75	0	0	$7,000	0
MOBILE CO.	DAUPHIN IS	04/24/01	0.75	0	0	$0	0
MOBILE CO.	SATSUMA	05/02/01	1	0	0	$0	0
MOBILE CO.	WILMER	05/02/01	0.88	0	0	$0	0
MOBILE CO.	KUSHLA	07/12/01	1	0	0	$0	0
BALDWIN CO.	DAPHNE	04/03/02	1	0	0	$0	0
BALDWIN CO.	DAPHNE	04/03/02	1	0	0	$0	0
BALDWIN CO.	LOXLEY	05/29/02	1	0	0	$0	0
BALDWIN CO.	ROBERTSDALE	05/29/02	0.88	0	0	$0	0
BALDWIN CO.	ROBERTSDALE	05/29/02	0.88	0	0	$0	0
ESCAMBIA CO.	BREWTON	07/03/02	0.75	0	0	$0	0
MOBILE CO.	THEODORE	08/02/02	0.75	0	0	$0	0
MOBILE CO.	SARALAND	10/20/02	0.88	0	0	$0	0
MOBILE CO.	MOBILE	12/31/02	0.75	0	0	$0	0
ESCAMBIA CO.	BREWTON	03/09/03	1	0	0	$0	0
ESCAMBIA CO.	BREWTON	03/09/03	1	0	0	$0	0
BALDWIN CO.	FOLEY	03/12/03	0.75	0	0	$0	0
BALDWIN CO.	ELBERTA	03/12/03	1	0	0	$0	0
BALDWIN CO.	SEMINOLE	03/13/03	0.75	0	0	$0	0
BALDWIN CO.	BAY MINETTE	03/13/03	1	0	0	$0	0
MOBILE CO.	(MOB)MOBILE BATES FL	03/13/03	0.75	0	0	$0	0

MOBILE CO.	SARALAND	03/13/03	0.88	0	0	$0	0
ESCAMBIA CO.	ATMORE	03/14/03	1.75	0	0	$4,000	0
BALDWIN CO.	BAY MINETTE	04/25/03	1.75	0	0	$5,000	0
BALDWIN CO.	STAPLETON	04/25/03	0.75	0	0	$0	0
BALDWIN CO.	LOXLEY	04/25/03	0.75	0	0	$0	0
ESCAMBIA CO.	ATMORE	04/25/03	0.75	0	0	$0	0
MOBILE CO.	CITRONELLE	04/25/03	0.75	0	0	$0	0
MOBILE CO.	CITRONELLE	04/25/03	1.75	0	0	$5,000	0
MOBILE CO.	CREOLA	04/25/03	1	0	0	$0	0
MOBILE CO.	SATSUMA	04/25/03	1.75	0	0	$5,000	0
BALDWIN CO.	LATHAM	05/02/03	1.75	0	0	$0	0
BALDWIN CO.	STOCKTON	05/02/03	1.75	0	0	$0	0
BALDWIN CO.	DYAS	05/02/03	0.75	0	0	$0	0
BALDWIN CO.	LITTLE RIVER	05/02/03	0.75	0	0	$0	0
ESCAMBIA CO.	HUXFORD	05/02/03	1	0	0	$0	0
ESCAMBIA CO.	WALLACE	05/02/03	0.75	0	0	$0	0
ESCAMBIA CO.	ATMORE	05/02/03	0.75	0	0	$0	0
BALDWIN CO.	LITTLE RIVER	05/03/03	1	0	0	$0	0
BALDWIN CO.	LITTLE RIVER	05/03/03	0.75	0	0	$0	0
BALDWIN CO.	SEMINOLE	05/03/03	0.75	0	0	$0	0
ESCAMBIA CO.	FOSHEE	05/03/03	1	0	0	$0	0
ESCAMBIA CO.	POARCH	05/03/03	0.75	0	0	$0	0
MOBILE CO.	MT VERNON	05/03/03	0.75	0	0	$0	0
MOBILE CO.	WILMER	05/03/03	1.75	0	0	$0	0
MOBILE CO.	SEMMES	05/03/03	1.75	0	0	$0	0
MOBILE CO.	GRAND BAY	05/03/03	0.88	0	0	$0	0
BALDWIN CO.	DAPHNE	07/12/03	0.75	0	0	$0	0

BALDWIN CO.	FOLEY	07/17/03	0.88	0	0	$0	0
BALDWIN CO.	GULF SHRS	07/17/03	1	0	0	$0	0
MOBILE CO.	CODEN	07/21/03	0.88	0	0	$0	0
BALDWIN CO.	BAY MINETTE	08/06/03	1.75	0	0	$0	0
MOBILE CO.	SEMMES	08/06/03	0.75	0	0	$0	0
ESCAMBIA CO.	ATMORE	05/18/04	0.75	0	0	$0	0
MOBILE CO.	WILMER	06/01/04	1.75	0	0	$0	0
MOBILE CO.	SEMMES	07/03/04	0.75	0	0	$0	0
BALDWIN CO.	PERDIDO	03/26/05	1	0	0	$0	0
MOBILE CO.	AXIS	03/26/05	0.75	0	0	$0	0
BALDWIN CO.	LOXLEY	03/27/05	0.75	0	0	$0	0
BALDWIN CO.	VAUGHN	03/27/05	1	0	0	$0	0
MOBILE CO.	DAWES	03/31/05	0.75	0	0	$0	0
MOBILE CO.	MOBILE	04/01/05	0.88	0	0	$0	0
MOBILE CO.	DAUPHIN IS	04/01/05	0.88	0	0	$0	0
MOBILE CO.	(MOB)MOBILE BATES FL	04/01/05	0.88	0	0	$0	0
MOBILE CO.	(MOB)MOBILE BATES FL	04/01/05	1	0	0	$0	0
MOBILE CO.	TANNER WILLIAMS	04/01/05	1	0	0	$0	0
BALDWIN CO.	FOLEY	04/06/05	0.75	0	0	$0	0
ESCAMBIA CO.	BREWTON	04/21/05	0.88	0	0	$0	0
BALDWIN CO.	BAY MINETTE	04/22/05	1	0	0	$0	0
BALDWIN CO.	BAY MINETTE	04/22/05	0.75	0	0	$0	0
MOBILE CO.	CITRONELLE	04/22/05	1.75	0	0	$4,000	0
BALDWIN CO.	WHITEHOUSE FORKS	04/26/05	1.75	0	0	$4,000	0
MOBILE CO.	SARALAND	04/26/05	0.88	0	0	$0	0
BALDWIN CO.	ELBERTA	04/30/05	0.75	0	0	$0	0
MOBILE CO.	SEMMES	07/08/05	0.88	0	0	$0	0

MOBILE CO.	BAYOU LA BATRE	01/01/06	0.88	0	0	$0	0
MOBILE CO.	TILLMANS CORNER	01/01/06	1.5	0	0	$0	0
MOBILE CO.	ST ELMO	01/01/06	1	0	0	$0	0
BALDWIN CO.	PERDIDO BEACH	01/13/06	0.75	0	0	$0	0
BALDWIN CO.	FAIRHOPE	04/21/06	0.75	0	0	$0	0
BALDWIN CO.	SEMINOLE	04/25/06	0.75	0	0	$0	0
BALDWIN CO.	WHITEHOUSE FORKS	05/08/06	0.88	0	0	$0	0
ESCAMBIA CO.	BREWTON	05/08/06	1	0	0	$0	0
MOBILE CO.	GULF CREST	05/08/06	1	0	0	$0	0
BALDWIN CO.	SPANISH FT	05/09/06	0.88	0	0	$0	0
BALDWIN CO.	MALBIS	05/09/06	0.75	0	0	$0	0
BALDWIN CO.	CROSSROADS	05/09/06	0.75	0	0	$0	0
BALDWIN CO.	WHITEHOUSE FORKS	05/09/06	0.75	0	0	$0	0
ESCAMBIA CO.	BREWTON	05/09/06	2	0	0	$40,000	0
MOBILE CO.	MOBILE	05/09/06	0.88	0	0	$0	0
BALDWIN CO.	BAY MINETTE	05/23/06	0.88	0	0	$0	0
BALDWIN CO.	SILVERHILL	05/29/06	0.75	0	0	$0	0
MOBILE CO.	(MOB)MOBILE BATES FL	06/02/06	0.88	0	0	$0	0
BALDWIN CO.	FOLEY	06/23/06	1.75	0	0	$0	0
MOBILE CO.	SEMMES	06/23/06	0.75	0	0	$0	0
BALDWIN CO.	LOXLEY	08/08/06	0.75	0	0	$0	0
BALDWIN CO.	ELBERTA	08/09/06	1.75	0	0	$0	0
MOBILE CO.	SEMMES	08/09/06	0.88	0	0	$0	0
MOBILE CO.	SATSUMA	08/09/06	1	0	0	$0	0
MOBILE CO.	CITRONELLE	02/13/07	0.75	0	0	$0	0
MOBILE CO.	GRAND BAY	02/13/07	0.75	0	0	$0	0
MOBILE CO.	DAUPHIN IS	04/10/07	0.88	0	0	$0	0

BALDWIN CO.	PERDIDO	05/11/07	0.75	0	0	$0	0
MOBILE CO.	(MOB)MOBILE BATES FL	05/11/07	1	0	0	$0	0
MOBILE CO.	THEODORE	05/11/07	0.88	0	0	$0	0
MOBILE CO.	MOBILE BROOKLEY FLD	05/12/07	0.88	0	0	$0	0
MOBILE CO.	IRVINGTON	05/13/07	0.88	0	0	$0	0
BALDWIN CO.	LOXLEY	06/09/07	1.75	0	0	$8,000	0
BALDWIN CO.	MALBIS	06/27/07	1	0	0	$0	0
BALDWIN CO.	DAPHNE	02/12/08	0.88	0	0	$0	0
MOBILE CO.	WHISTLER	02/12/08	0.88	0	0	$0	0
BALDWIN CO.	FOLEY	05/25/08	1	0	0	$0	0
MOBILE CO.	IRVINGTON	06/17/08	0.88	0	0	$10,000	0
MOBILE CO.	GULF CREST	06/17/08	1.25	0	0	$2,000	0
MOBILE CO.	TILLMANS CORNER	06/22/08	0.88	0	0	$10,000	0
MOBILE CO.	SOUTH ORCHARD	06/22/08	0.75	0	0	$0	0
ESCAMBIA CO.	EAST BREWTON	06/26/08	1	0	0	$0	0
MOBILE CO.	SEVEN HILLS	07/27/08	1.25	0	0	$0	0
BALDWIN CO.	BAY MINETTE	12/24/08	1	0	0	$0	0
MOBILE CO.	CITRONELLE	01/03/09	0.88	0	0	$0	0
BALDWIN CO.	ELSANOR	03/27/09	1.75	0	0	$0	0
MOBILE CO.	MOBILE BATES FLD	03/28/09	0.88	0	0	$0	0
MOBILE CO.	WILMER	03/31/09	1	0	0	$0	0
MOBILE CO.	SARALAND	03/31/09	1	0	0	$0	0
ESCAMBIA CO.	BREWTON	04/02/09	0.88	0	0	$0	0
BALDWIN CO.	LOXLEY	04/13/09	0.75	0	0	$0	0
ESCAMBIA CO.	WALLACE	04/13/09	1.75	0	0	$0	0
ESCAMBIA CO.	BREWTON	04/13/09	0.75	0	0	$0	0
MOBILE CO.	CITRONELLE	05/05/09	0.88	0	0	$0	0

MOBILE CO.	GULF CREST	05/12/09	0.88	0	0	$0	0
MOBILE CO.	CITRONELLE	05/14/09	0.75	0	0	$0	0
MOBILE CO.	CITRONELLE	04/24/10	1	0	0	$0	0
MOBILE CO.	CODEN	04/24/10	2	0	0	$0	0
MOBILE CO.	WHISTLER	05/29/10	0.88	0	0	$0	0
ESCAMBIA CO.	APPLETON	08/04/10	1	0	0	$0	0
MOBILE CO.	WILMER	10/24/10	0.88	0	0	$0	0
MOBILE CO.	CITRONELLE	03/08/11	1	0	0	$0	0
MOBILE CO.	CITRONELLE	03/09/11	1	0	0	$0	0
MOBILE CO.	GEORGETOWN	05/26/11	1.75	0	0	$0	0
BALDWIN CO.	FOLEY	06/06/11	1.75	0	0	$0	0
BALDWIN CO.	SUMMERDALE	06/06/11	1	0	0	$0	0
BALDWIN CO.	SUMMERDALE	06/06/11	1.75	0	0	$0	0
MOBILE CO.	GRAND BAY	06/06/11	1	0	0	$0	0
MOBILE CO.	MOBILE BATES FLD	06/16/11	1	0	0	$0	0
MOBILE CO.	MOBILE BATES FLD	06/16/11	1	0	0	$0	0
MOBILE CO.	MOBILE BATES FLD	06/16/11	1.5	0	0	$0	0
BALDWIN CO.	LOXLEY	07/02/11	1	0	0	$0	0
MOBILE CO.	CODEN	08/12/11	0.75	0	0	$0	0
BALDWIN CO.	FOLEY	05/21/12	1.75	0	0	$0	0
MOBILE CO.	BELLEFONTAINE	05/21/12	1	0	0	$0	0
MOBILE CO.	TILLMANS CORNER	05/30/12	1	0	0	$0	0
MOBILE CO.	MOBILE BATES FLD	05/30/12	1.25	0	0	$0	0
MOBILE CO.	MOBILE BROOKLEY FLD	05/30/12	1.25	0	0	$0	0
BALDWIN CO.	LOXLEY	06/05/12	1	0	0	$0	0
ESCAMBIA CO.	BREWTON	07/17/12	1	0	0	$0	0
ESCAMBIA CO.	BREWTON	07/17/12	1	0	0	$0	0

BALDWIN CO.	DAPHNE	05/01/13	1	0	0	$0	0
MOBILE CO.	SATSUMA	03/29/14	1.25	0	0	$0	0
MOBILE CO.	DAWES	04/29/14	1	0	0	$10,000	0
MOBILE CO.	CITRONELLE	06/07/14	0.88	0	0	$0	0
ESCAMBIA CO.	BREWTON	06/08/14	0.88	0	0	$0	0
ESCAMBIA CO.	BREWTON	06/08/14	1.75	0	0	$0	0
MOBILE CO.	MOBILE	12/23/14	0.88	0	0	$0	0
ESCAMBIA CO.	APPLETON	05/20/15	1	0	0	$0	0
MOBILE CO.	(MOB)MOBILE BATES FL	06/22/15	0.88	0	0	$0	0
BALDWIN CO.	FOLEY	06/23/15	1.75	0	0	$0	0
MOBILE CO.	IRVINGTON	06/23/15	1	0	0	$0	0
MOBILE CO.	NAVCO	12/23/15	2	0	0	$0	0
MOBILE CO.	SARALAND	02/15/16	1	0	0	$0	0
BALDWIN CO.	CROSSROADS	03/17/16	1	0	0	$0	0
BALDWIN CO.	SPANISH FT	03/17/16	1	0	0	$0	0
BALDWIN CO.	CROSSROADS	03/17/16	1	0	0	$0	0
MOBILE CO.	SARALAND	03/17/16	1	0	0	$0	0
ESCAMBIA CO.	APPLETON	03/31/16	1	0	0	$0	0
BALDWIN CO.	FOLEY	01/21/17	1.75	0	0	$0	0
BALDWIN CO.	ELBERTA	01/21/17	1.5	0	0	$0	0
MOBILE CO.	(MOB)MOBILE BATES FL	01/21/17	2	0	0	$0	0
BALDWIN CO.	FOLEY	01/22/17	2	0	0	$0	0
BALDWIN CO.	FOLEY	01/22/17	1	0	0	$0	0
BALDWIN CO.	ELBERTA	02/07/17	1	0	0	$0	0
MOBILE CO.	DAUPHIN IS	02/07/17	1.75	0	0	$0	0
MOBILE CO.	WILMER	04/03/17	1	0	0	$0	0
MOBILE CO.	ORCHARD	06/09/18	1	0	0	$0	0

MOBILE CO.	(MOB)MOBILE BATES FL	06/09/18	1.25	0	0	$0	0
ESCAMBIA CO.	ROBERTS	03/25/19	1	0	0	$0	0
MOBILE CO.	AXIS	06/27/19	1	0	0	$0	0
MOBILE CO.	TANNER WILLIAMS	05/27/20	1	0	0	$0	0
MOBILE CO.	SEMMES	05/27/20	1	0	0	$0	0
BALDWIN CO.	LOXLEY	07/12/20	1.75	0	0	$0	0
Totals				**0**	**0**	**$129,300**	**0**

Source: NOAA Storm Events Database

Table 3.20 Division A Lightning Occurrences 2014-2019

County	Location	Date	Deaths	Injuries	Property Damage	Crop Damage
BALDWIN CO.	LOXLEY	04/14/96	0	0	$25,000	0
MOBILE CO.	MOBILE	07/13/96	0	0	$15,000	0
MOBILE CO.	MOBILE	07/20/96	0	0	$300,000	0
BALDWIN CO.	BAY MINETTE	08/25/96	0	0	$0	0
MOBILE CO.	MOBILE	08/28/96	0	0	$10,000	0
BALDWIN CO.	LOXLEY	01/24/97	0	0	$90,000	0
MOBILE CO.	BELLEFONTAINE	01/24/97	0	0	$75,000	0
MOBILE CO.	(BFM)MOBILE BROOKLEY	03/13/97	0	5	$0	0
MOBILE CO.	MOBILE	05/19/97	0	0	$15,000	0
MOBILE CO.	DAUPHIN IS	05/28/97	1	0	$0	0
BALDWIN CO.	ROBERTSDALE	08/09/97	0	0	$3,000	0
BALDWIN CO.	DAPHNE	01/22/98	0	0	$100,000	0
MOBILE CO.	MOBILE	03/07/98	1	0	$0	0
BALDWIN CO.	BAY MINETTE	03/08/98	0	0	$20,000	0
BALDWIN CO.	BAY MINETTE	07/24/98	0	0	$60,000	0
MOBILE CO.	MOBILE	07/25/98	0	0	$10,000	0
MOBILE CO.	MOBILE	08/12/98	0	0	$10,000	0
BALDWIN CO.	LOXLEY	03/09/99	0	0	$0	0
BALDWIN CO.	LOXLEY	03/13/99	0	0	$0	0
MOBILE CO.	MOBILE	07/08/99	0	0	$5,000	0
BALDWIN CO.	LOXLEY	07/30/99	0	0	$5,000	0
BALDWIN CO.	ROSINTON	07/30/99	0	0	$3,000	0
BALDWIN CO.	SILVERHILL	07/30/99	0	0	$5,000	0
BALDWIN CO.	BELFOREST	07/30/99	0	0	$5,000	0
BALDWIN CO.	DAPHNE	07/30/99	0	0	$3,000	0
ESCAMBIA CO.	FLOMATON	08/24/99	0	0	$10,000	0

MOBILE CO.	MOBILE	06/25/00	0	1	$0	0
MOBILE CO.	MOBILE	06/25/00	0	1	$0	0
MOBILE CO.	MOBILE	07/21/00	0	0	$5,000	0
MOBILE CO.	MOBILE	07/22/00	0	0	$100,000	0
MOBILE CO.	PRICHARD	09/01/00	0	0	$5,000	0
BALDWIN CO.	DAPHNE	09/02/00	0	0	$5,000	0
MOBILE CO.	MOBILE	03/12/01	0	0	$100,000	0
MOBILE CO.	MOBILE	05/02/01	0	0	$5,000	0
BALDWIN CO.	BAY MINETTE	05/28/01	0	0	$25,000	0
MOBILE CO.	EIGHT MILE	05/30/01	0	1	$0	0
MOBILE CO.	PRICHARD	05/30/01	0	1	$0	0
BALDWIN CO.	DAPHNE	08/19/01	0	0	$3,000	0
MOBILE CO.	(MOB)MOBILE BATES FL	08/28/01	0	0	$100,000	0
BALDWIN CO.	FT MORGAN	09/08/01	0	0	$20,000	0
MOBILE CO.	MOBILE	09/23/01	0	1	$0	0
MOBILE CO.	(MOB)MOBILE BATES FL	06/30/02	0	0	$85,000	0
MOBILE CO.	BAYOU LA BATRE	07/11/02	0	2	$0	0
MOBILE CO.	(MOB)MOBILE BATES FL	08/05/02	0	2	$0	0
MOBILE CO.	(MOB)MOBILE BATES FL	08/16/02	0	1	$0	0
BALDWIN CO.	BAY MINETTE	08/29/02	0	0	$30,000	0
MOBILE CO.	TANNER WILLIAMS	06/03/03	0	0	$50,000	0
MOBILE CO.	(MOB)MOBILE BATES FL	06/13/03	0	0	$20,000	0
ESCAMBIA CO.	APPLETON	07/30/03	0	0	$3,000	0
MOBILE CO.	SARALAND	08/06/03	0	1	$0	0
MOBILE CO.	MOBILE	08/06/03	0	0	$30,000	0
MOBILE CO.	MOBILE	06/06/04	0	1	$0	0
MOBILE CO.	MOBILE	08/10/04	0	0	$30,000	0
MOBILE CO.	SARALAND	08/10/04	0	0	$10,000	0
MOBILE CO.	CHICKASAW	08/10/04	0	0	$5,000	0
MOBILE CO.	MOBILE	08/10/04	0	0	$50,000	0
MOBILE CO.	SEVEN HILLS	08/20/04	0	0	$500,000	0
MOBILE CO.	TILLMANS CORNER	08/23/04	0	0	$50,000	0
MOBILE CO.	FOREST HILL	08/30/04	0	1	$0	0
MOBILE CO.	CITRONELLE	06/07/05	0	0	$10,000	0
BALDWIN CO.	GULF SHRS	07/23/05	2	0	$0	0
MOBILE CO.	SEMMES	08/20/05	0	0	$0	0
MOBILE CO.	THEODORE	08/20/05	0	0	$25,000	0
BALDWIN CO.	DAPHNE	08/24/05	0	0	$0	0
MOBILE CO.	SEMMES	04/22/06	0	0	$800,000	0

BALDWIN CO.	DAPHNE	05/29/06	0	1	$15,000	0
MOBILE CO.	MOBILE	06/02/06	0	0	$100,000	0
MOBILE CO.	THEODORE	06/02/06	0	1	$0	0
BALDWIN CO.	GULF SHRS	07/06/06	0	1	$0	0
BALDWIN CO.	ELBERTA	07/16/06	1	0	$0	0
MOBILE CO.	COTTAGE HILL	07/30/06	0	0	$40,000	0
MOBILE CO.	(MOB)MOBILE BATES FL	08/09/06	0	0	$40,000	0
BALDWIN CO.	SPANISH FT	08/15/06	0	0	$100,000	0
MOBILE CO.	MT VERNON	08/15/06	0	0	$500,000	0
MOBILE CO.	(MOB)MOBILE BATES FL	08/15/06	0	0	$150,000	0
BALDWIN CO.	DAPHNE	10/17/06	0	0	$30,000	0
BALDWIN CO.	BELFOREST	05/13/07	0	0	$60,000	0
MOBILE CO.	PRICHARD	06/19/07	0	0	$100,000	0
MOBILE CO.	MOBILE	06/27/07	0	0	$0	0
BALDWIN CO.	FAIRHOPE	07/11/07	0	0	$250,000	0
MOBILE CO.	MOBILE	07/15/07	0	0	$16,000	0
BALDWIN CO.	MARLOW	08/09/07	0	1	$0	0
MOBILE CO.	MOBILE	08/30/07	0	0	$65,000	0
MOBILE CO.	MOBILE	07/26/08	0	0	$10,000	0
MOBILE CO.	TILLMANS CORNER	07/26/08	0	0	$5,000	0
MOBILE CO.	THEODORE	08/18/08	0	0	$0	0
ESCAMBIA CO.	WAWBEEK	07/06/09	1	0	$0	0
BALDWIN CO.	GULF SHRS	08/03/10	0	2	$0	0
BALDWIN CO.	HURRICANE	08/07/10	1	0	$0	0
BALDWIN CO.	ELBERTA	08/04/11	0	1	$0	0
BALDWIN CO.	GULF SHRS	06/10/12	0	1	$0	0
MOBILE CO.	MOBILE BATES FLD	02/25/13	0	0	$5,000	0
MOBILE CO.	THEODORE	05/02/13	0	0	$15,000	0
MOBILE CO.	MOBILE BATES FLD	08/05/13	0	0	$10,000	0
MOBILE CO.	MOBILE BATES FLD	08/05/13	0	0	$10,000	0
ESCAMBIA CO.	BREWTON MUNI ARPT	04/27/15	0	0	$10,000	0
BALDWIN CO.	FOLEY	06/09/15	0	0	$5,000	0
BALDWIN CO.	FT MORGAN	07/05/15	1	0	$0	0
MOBILE CO.	MOBILE BATES FLD	07/17/15	0	1	$0	0
MOBILE CO.	(MOB)MOBILE BATES FL	01/02/17	0	0	$10,000	0
MOBILE CO.	COTTAGE HILL	01/02/17	0	0	$10,000	0
BALDWIN CO.	GULF SHRS	08/26/17	1	5	$0	0
MOBILE CO.	PRICHARD	06/16/19	1	0	$0	0

BALDWIN CO.	OAK	08/15/19	1	0	$0	0
Totals			**11**	**32**	**$4,391,000**	**0**

Source: NOAA Storm Events Database

Probability of Future Events

AEMA Division A 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 A to determine that there is a High probability of severe thunderstorm occurrences.

LANDSLIDE

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

Figures 3.48 – 3.50 are maps of the planning area illustrating susceptibility to landslides. By examining the map, one can see that the majority of the area 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.

Figure 3.48 Baldwin Landslide Susceptibility and Historic Occurrence Map

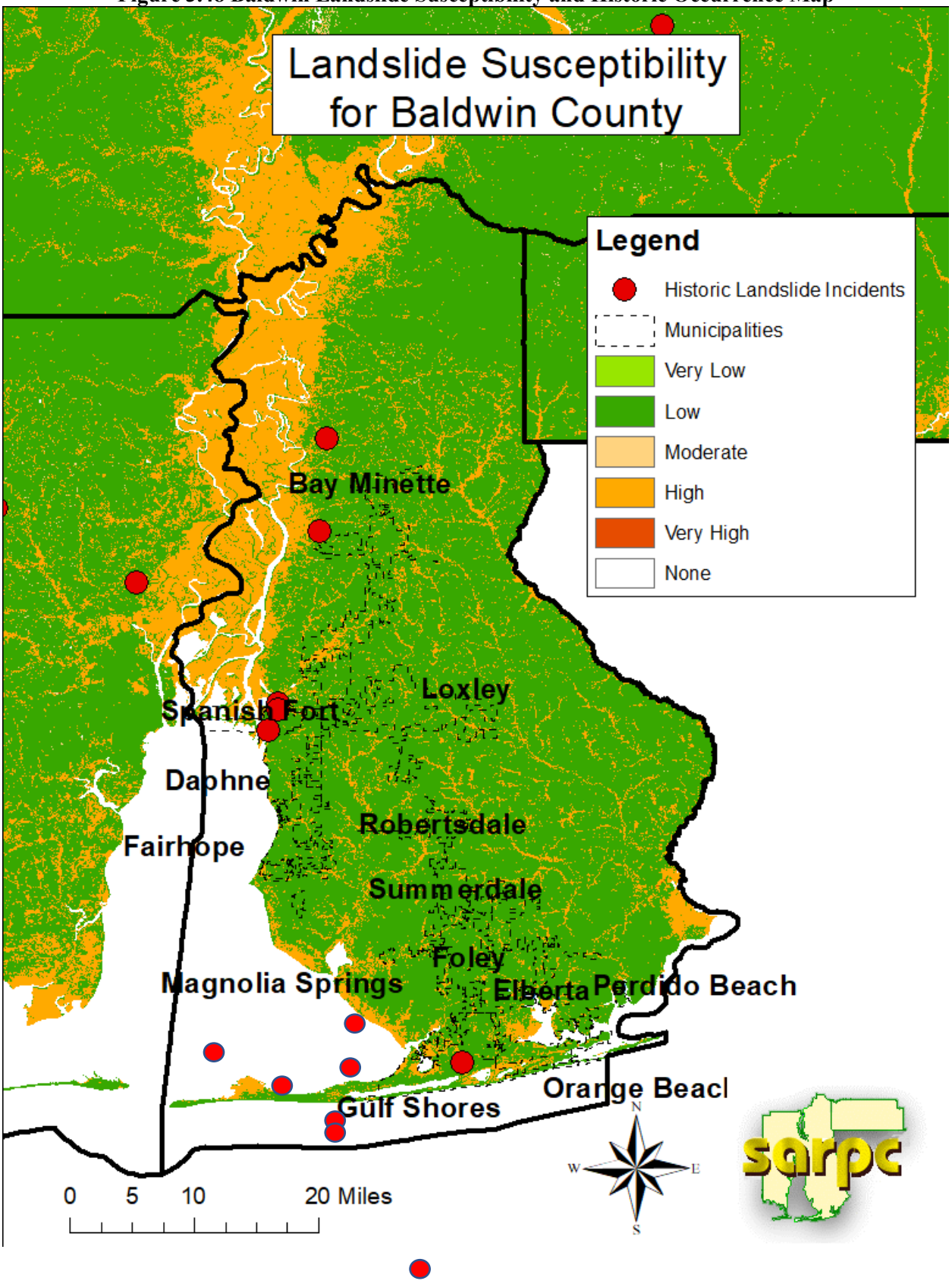


Figure 3.49 Escambia Landslide Susceptibility and Historic Occurrence Map

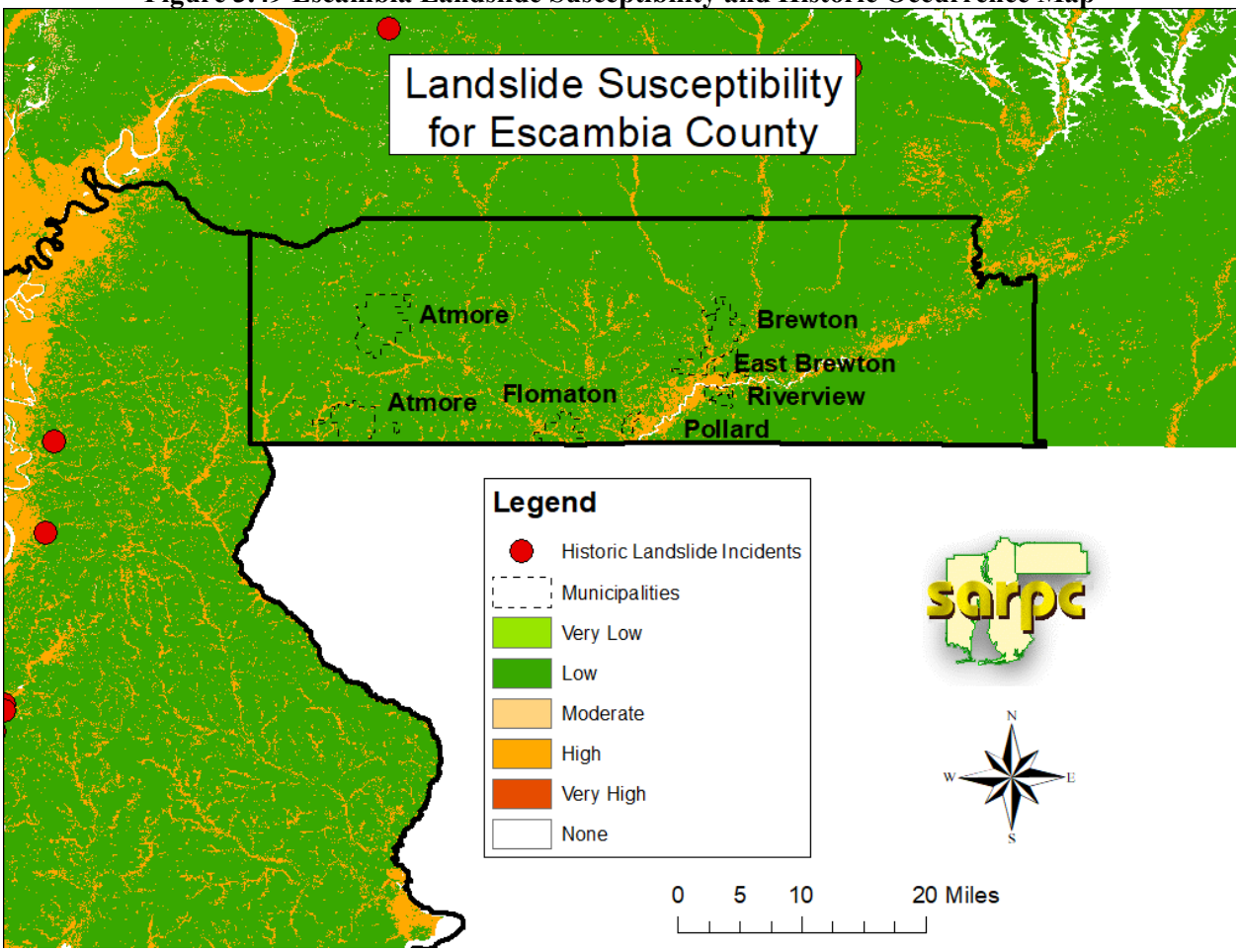
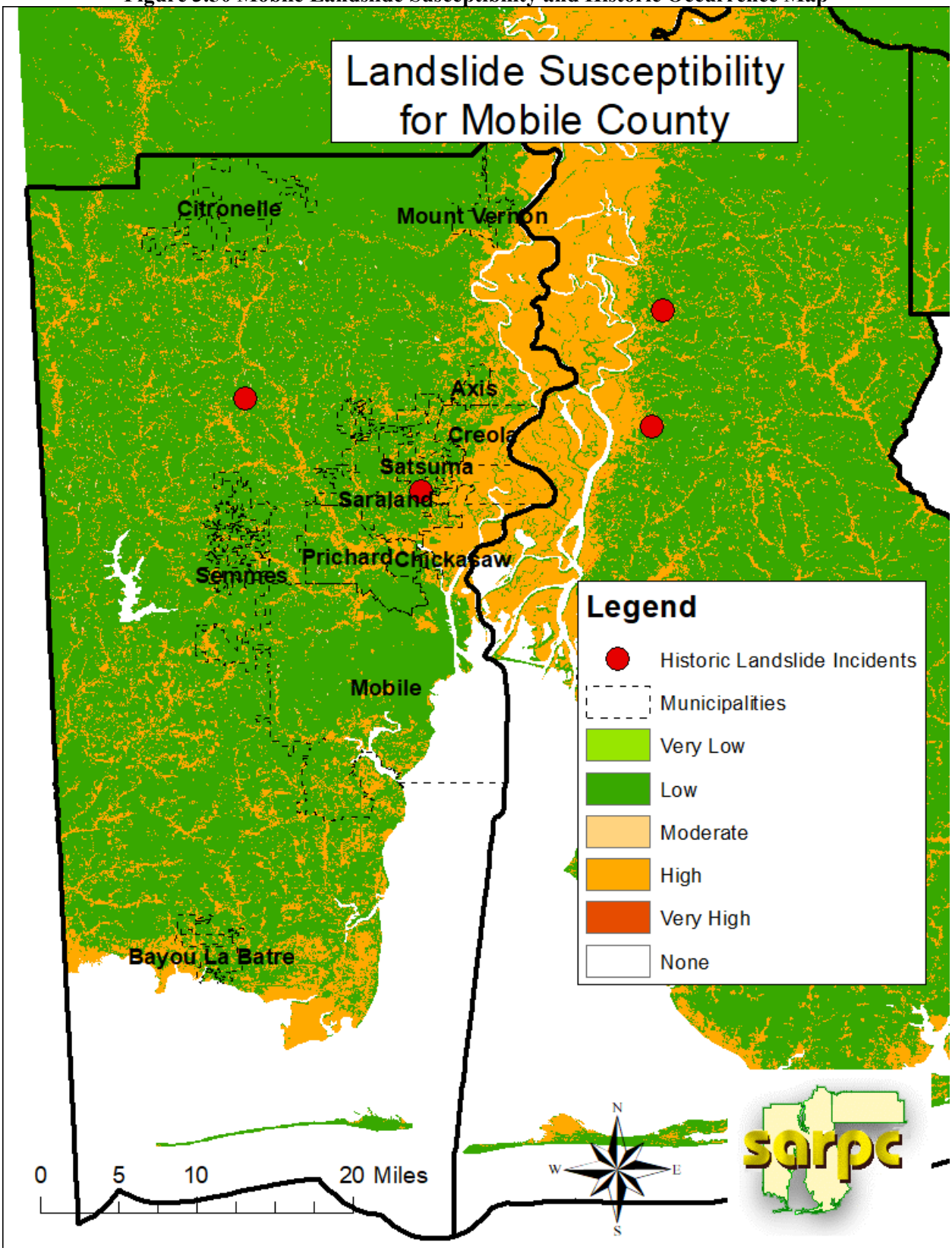


Figure 3.50 Mobile Landslide Susceptibility and Historic Occurrence Map



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.

Overall, the region has experienced very few landslides. The extent is small, and there are no recorded estimates for loss due to landslides. The most succeptible area is located in Spanish Ford. The bluffs located along the eastern shore of the Mobile Bay are slowly receding due to wave erosion causing a substantial threat to a number of homes along the bluff. The City of Spanish Fort and the State of Alabama applied for funds to stabilize the bluff to reduce future property and infrastructure damage that could be caused by a landslide in this area.

Table 3.21 Landslide Summary by Jurisdiction

	# of Landslides	Extent	Probability
Baldwin County	13	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Bay Minette	1	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Daphne	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Elberta	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Fairhope	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Foley	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Gulf Shores	1	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Loxley	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Magnolia Springs	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Orange Beach	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Perdido Beach	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Robertsdale	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Silverhill	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Spanish Fort	3	<2 acres affected per incidence, however, where incidents are occurring, damage to structures and infrastructure is possible	Moderate
Summerdale	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Escambia County	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Atmore	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Brewton	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low

East Brewton	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Flomaton	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Pollard	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Riverview	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Mobile County	2	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Bayou La Batre	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Chickasaw	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Citronelle	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Creola	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Dauphin Island	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Mobile	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Mount Vernon	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Prichard	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Saraland	1	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Satsuma	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Semmes	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low

Historical Occurrences

Historic occurrence data from GSA is included in Figure 3.7. 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. Mobile and Baldwin counties have historic incidences, but there are no documented incidences in Escambia County. 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

The entire planning region has low susceptibility to landslide incidences. Based on susceptibility and historical data, the assessed susceptibility to landslide events is 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.

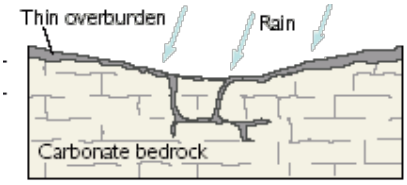
Sinkholes can form from a variety of causes including natural and man-made activities and include ground collapse related to:

- 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.

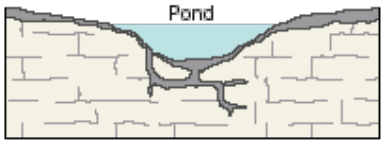
There are three types of sinkholes. A description and illustration (Figure 3.51) of each follow:

Figure 3.51 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.

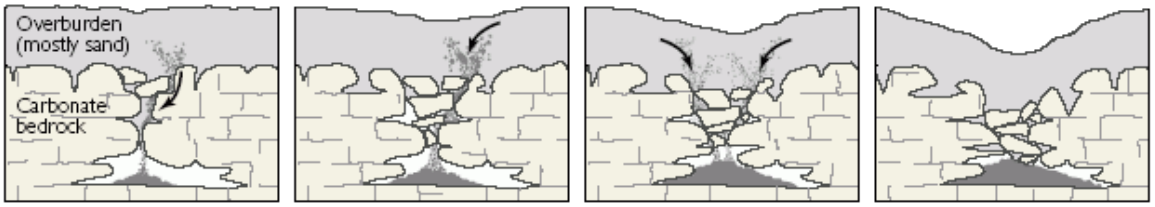
- Cover subsidence:

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

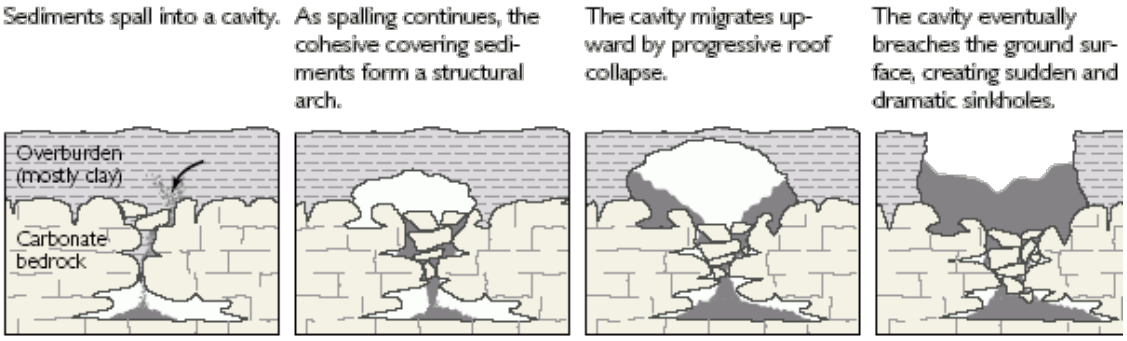
A column of overlying sediments settles into the vacated spaces (a process termed "piping").

Dissolution and infilling continue, forming a noticable 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



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 A. Figure 3.9 and the following county detail maps illustrate areas in the division with karst topography and show topographic depression sites. 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.

Figure 3.52 SARPC Planning Area Karst Topography and Topographic Depressions

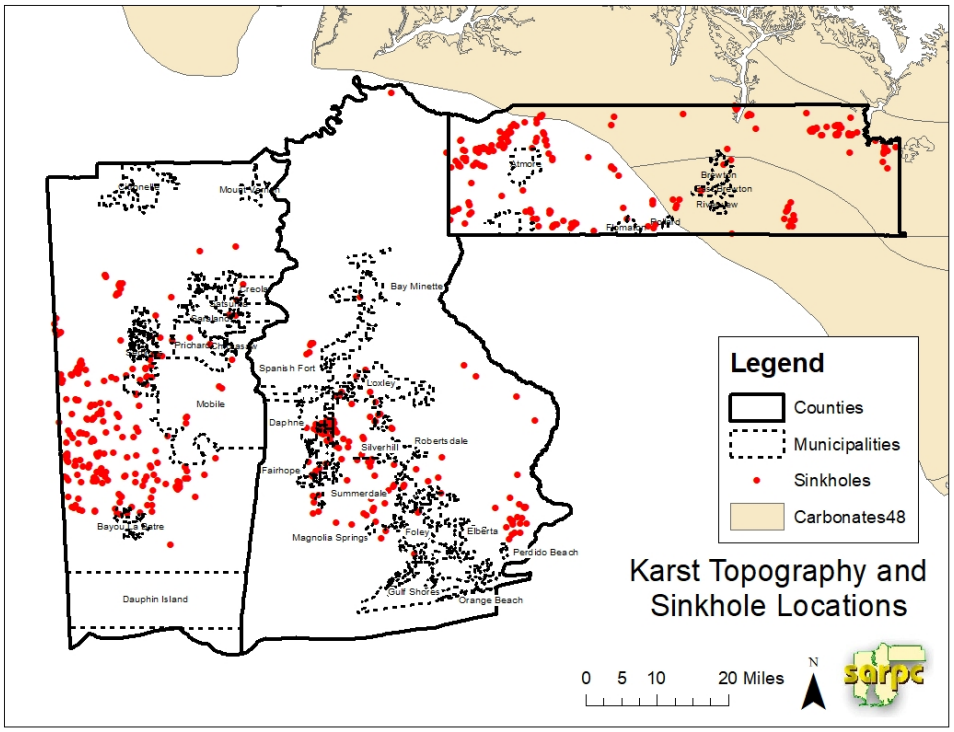


Figure 3.53 Bay Minette Karst Topography and Sinkhole Locations

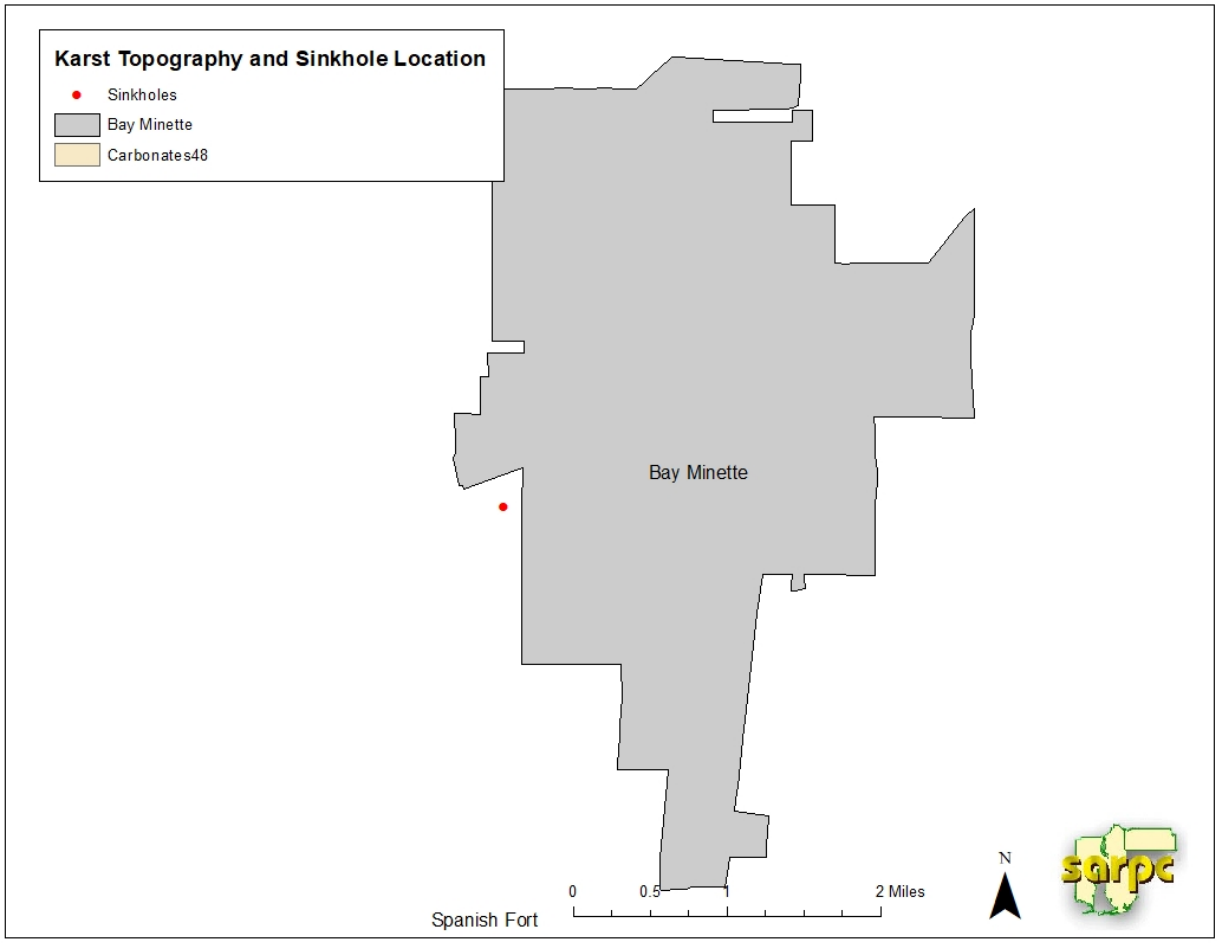


Figure 3.54 Daphne Karst Topography and Sinkhole Locations

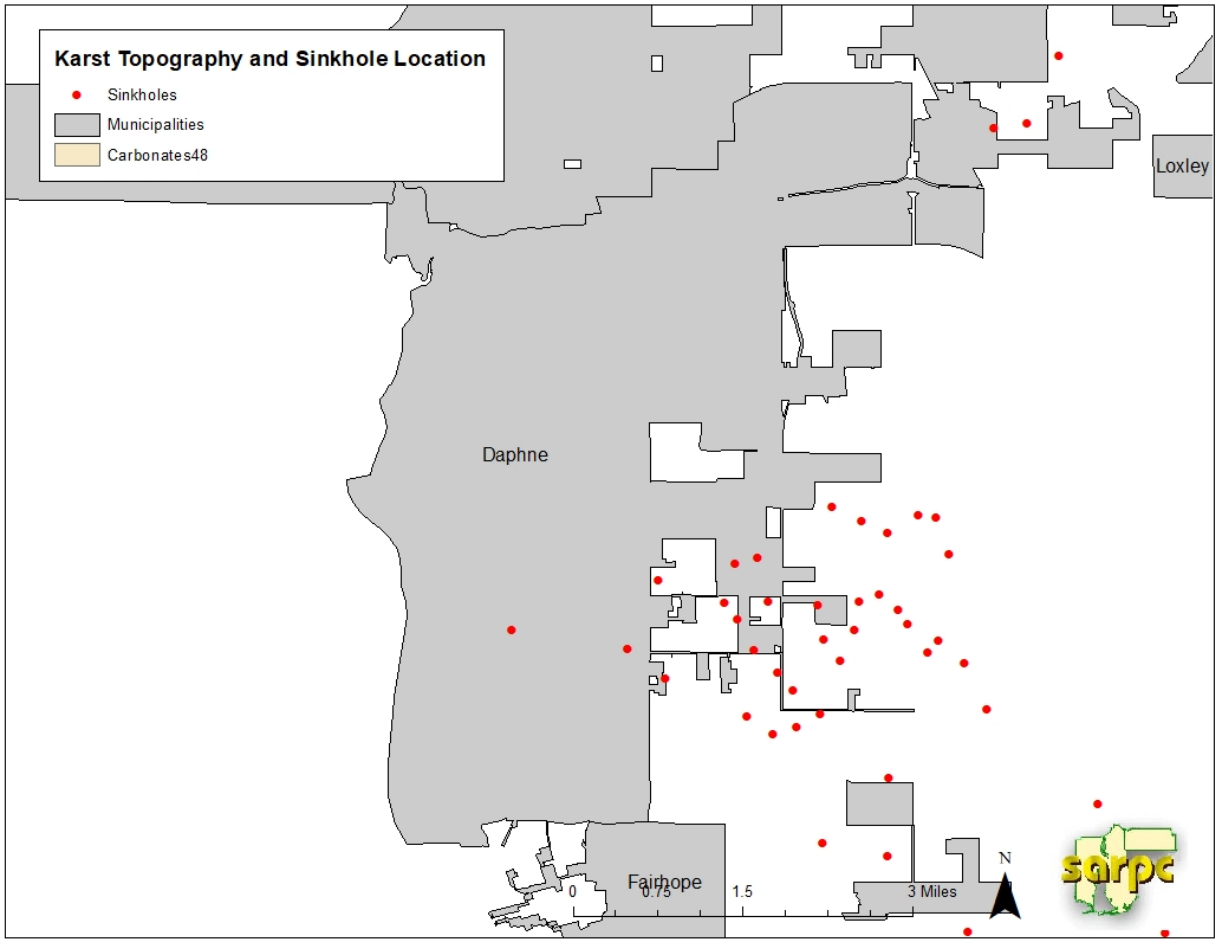


Figure 3.55 Elberta Karst Topography and Sinkhole Locations

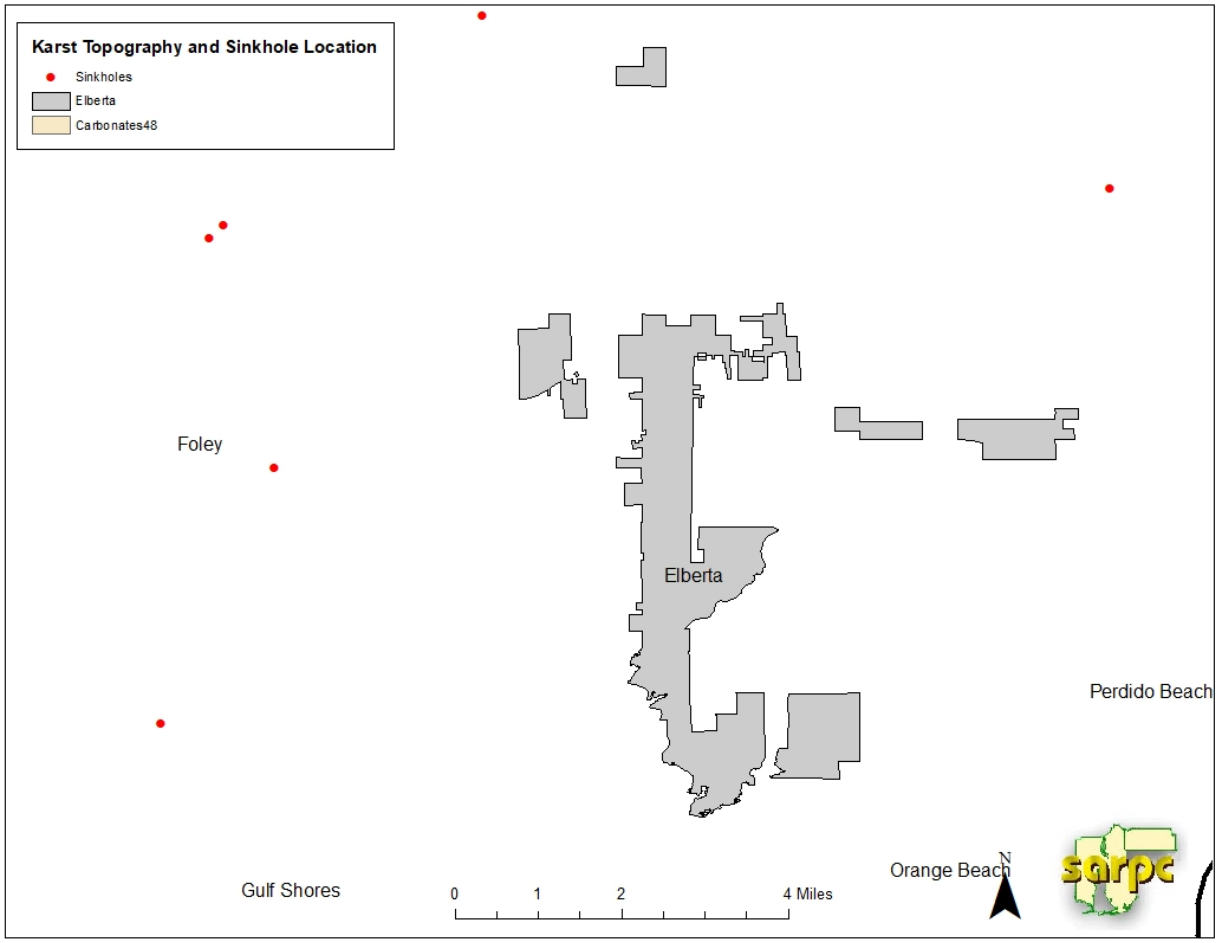


Figure 3.56 Fairhope Karst Topography and Sinkhole Locations

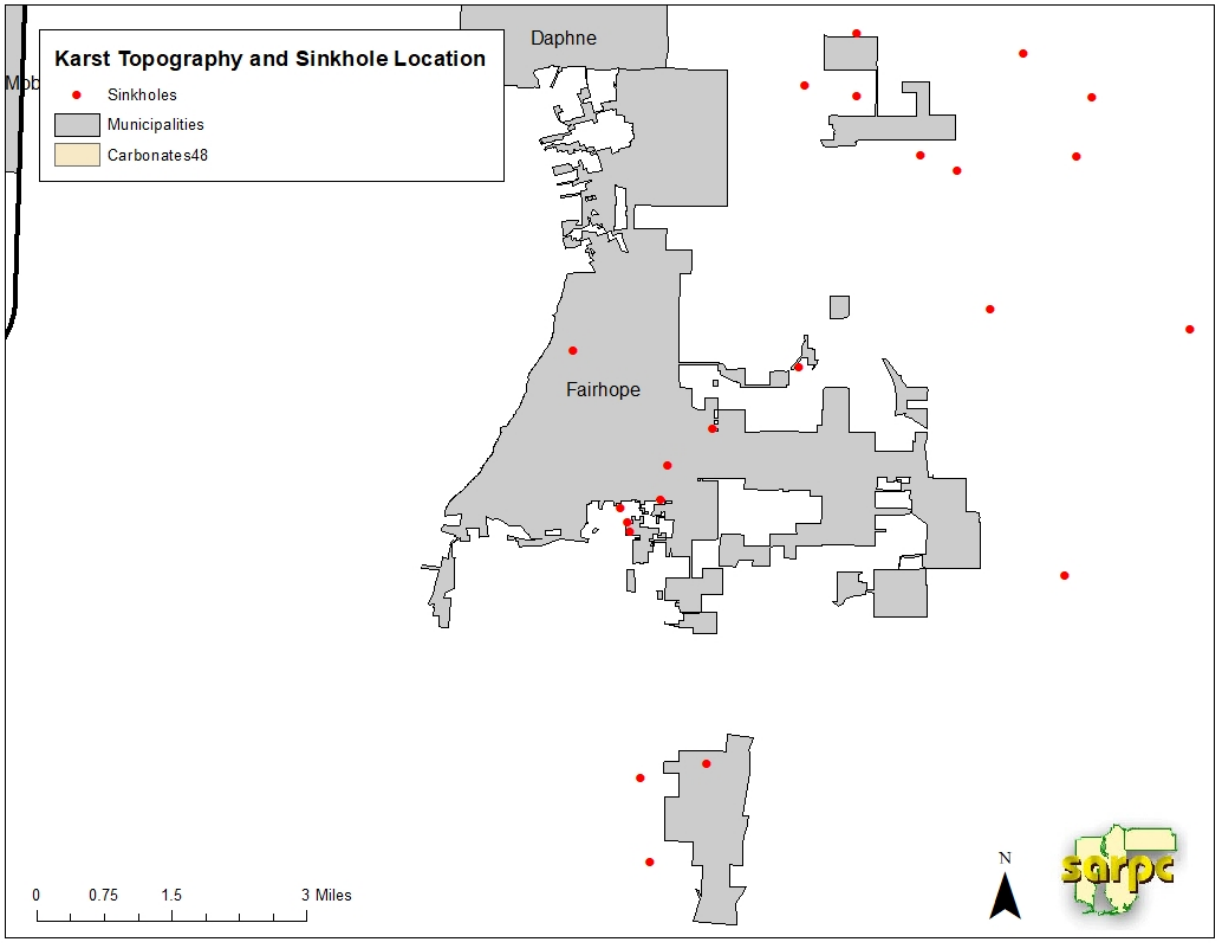


Figure 3.57 Foley Karst Topography and Sinkhole Locations

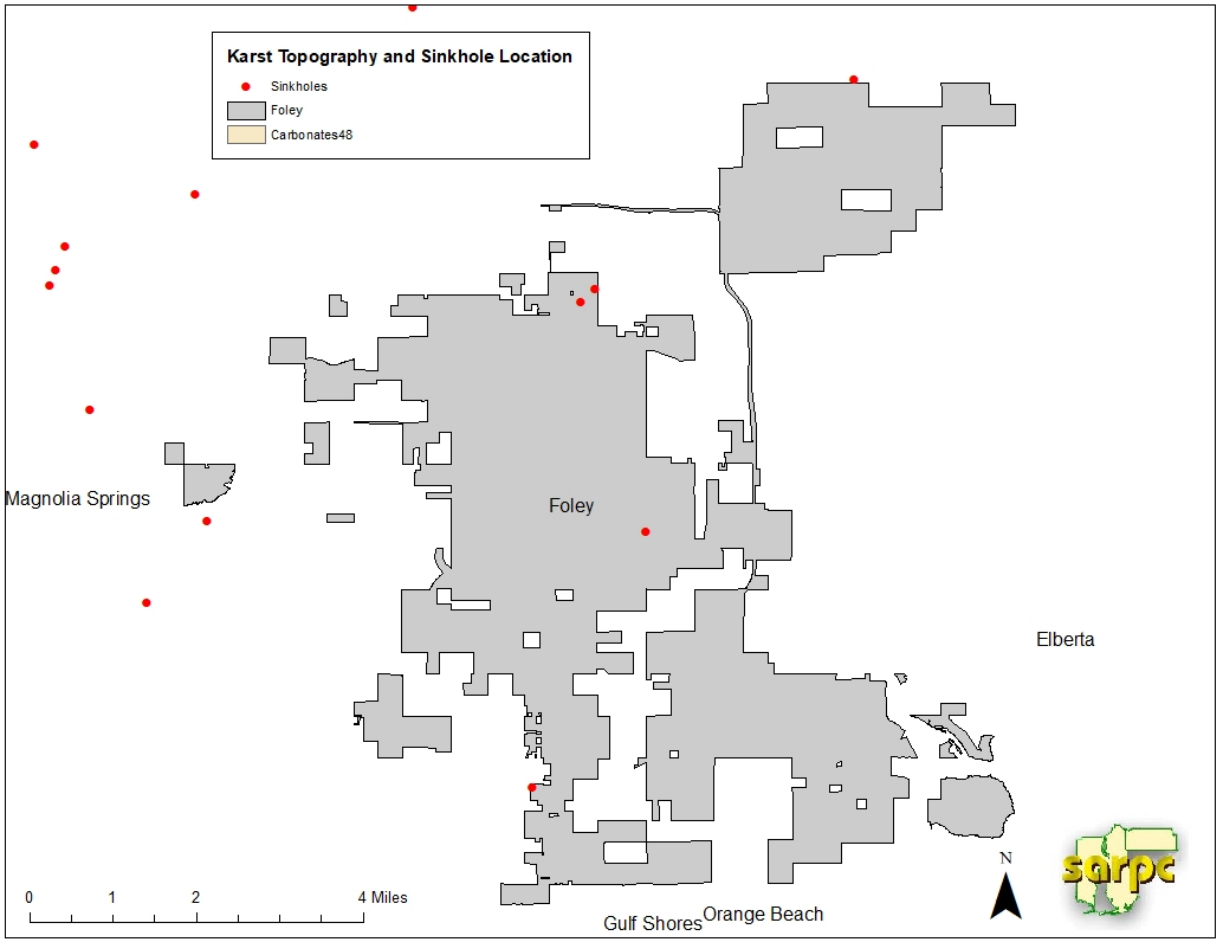


Figure 3.58 Gulf Shores Karst Topography and Sinkhole Locations

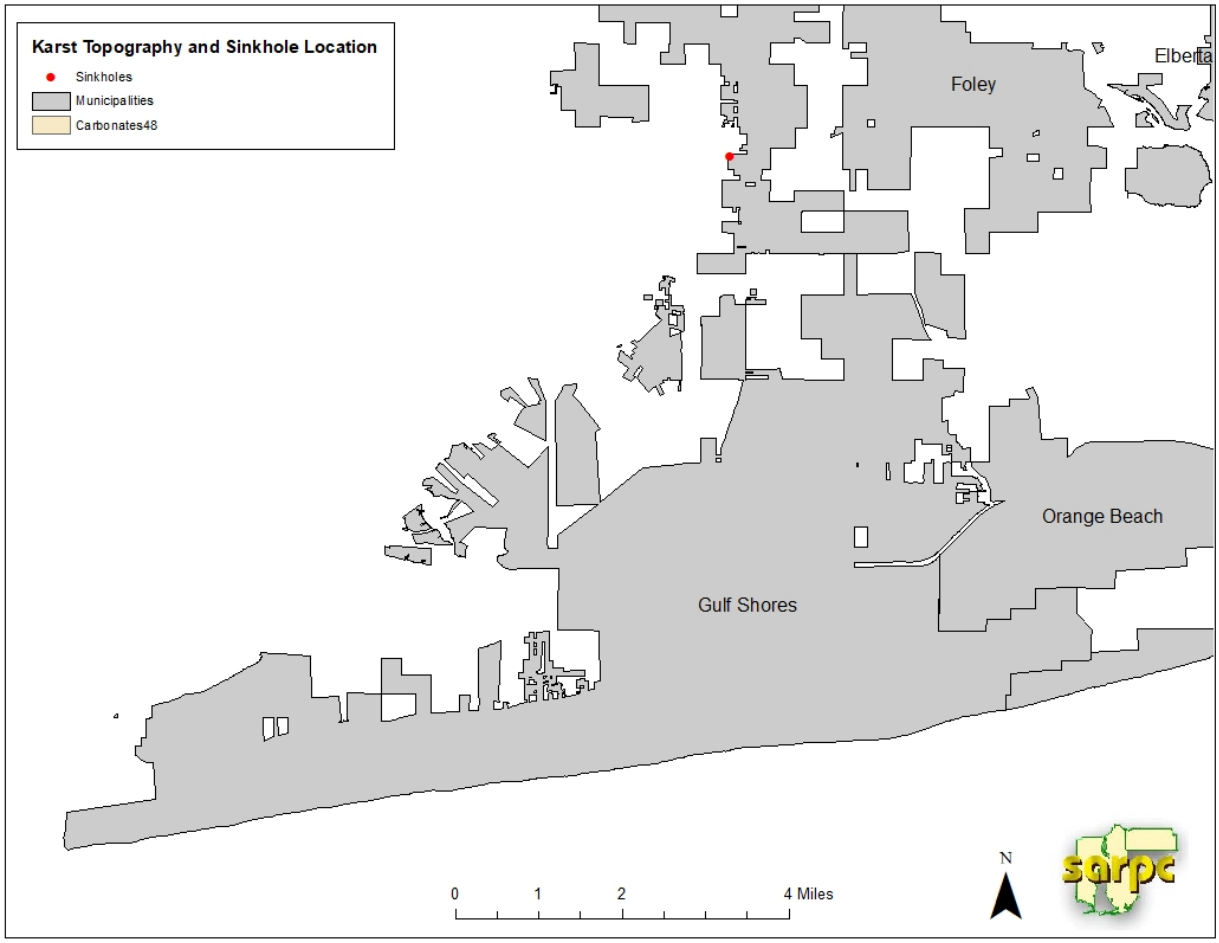


Figure 3.59 Loxley Karst Topography and Sinkhole Locations

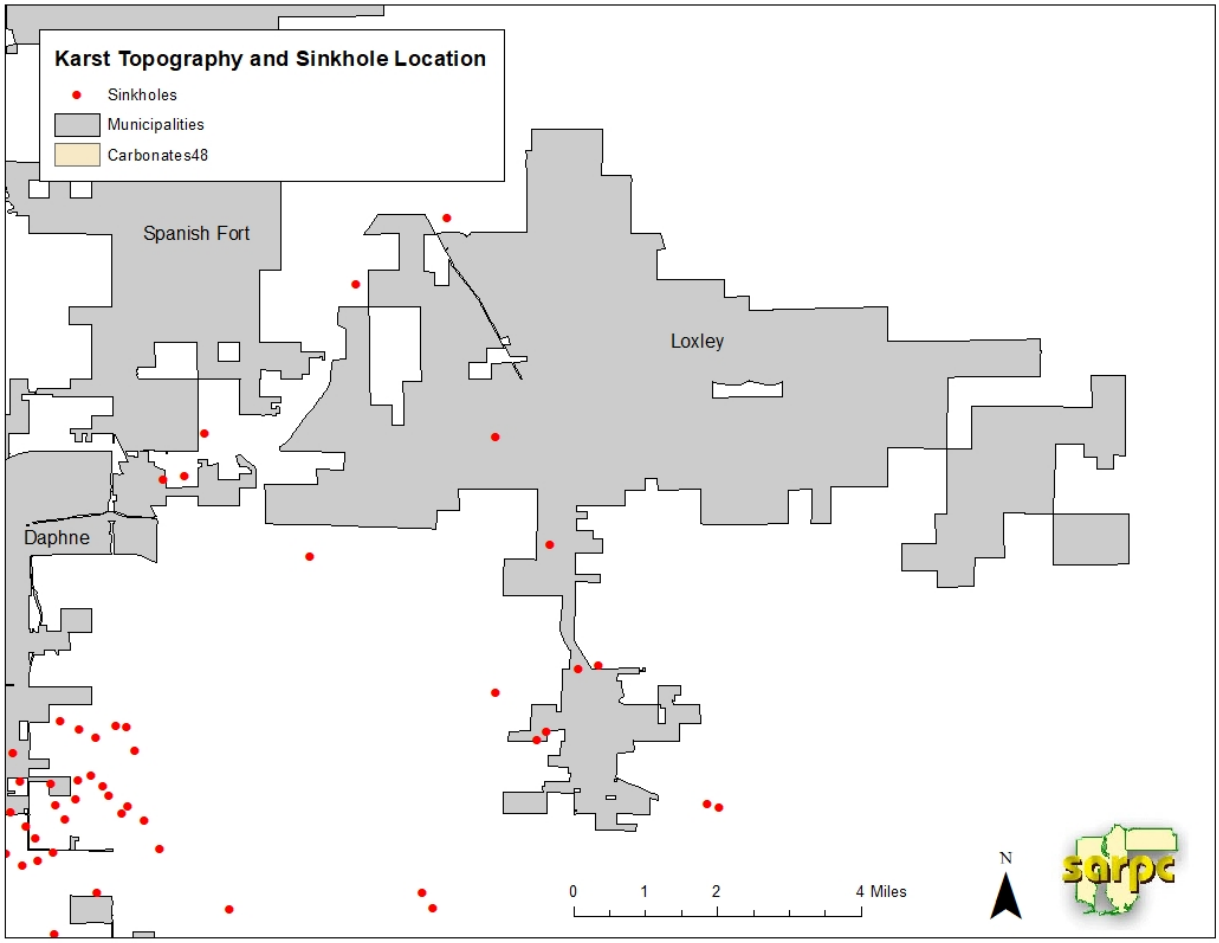


Figure 3.60 Magnolia Springs Karst Topography and Sinkhole Locations

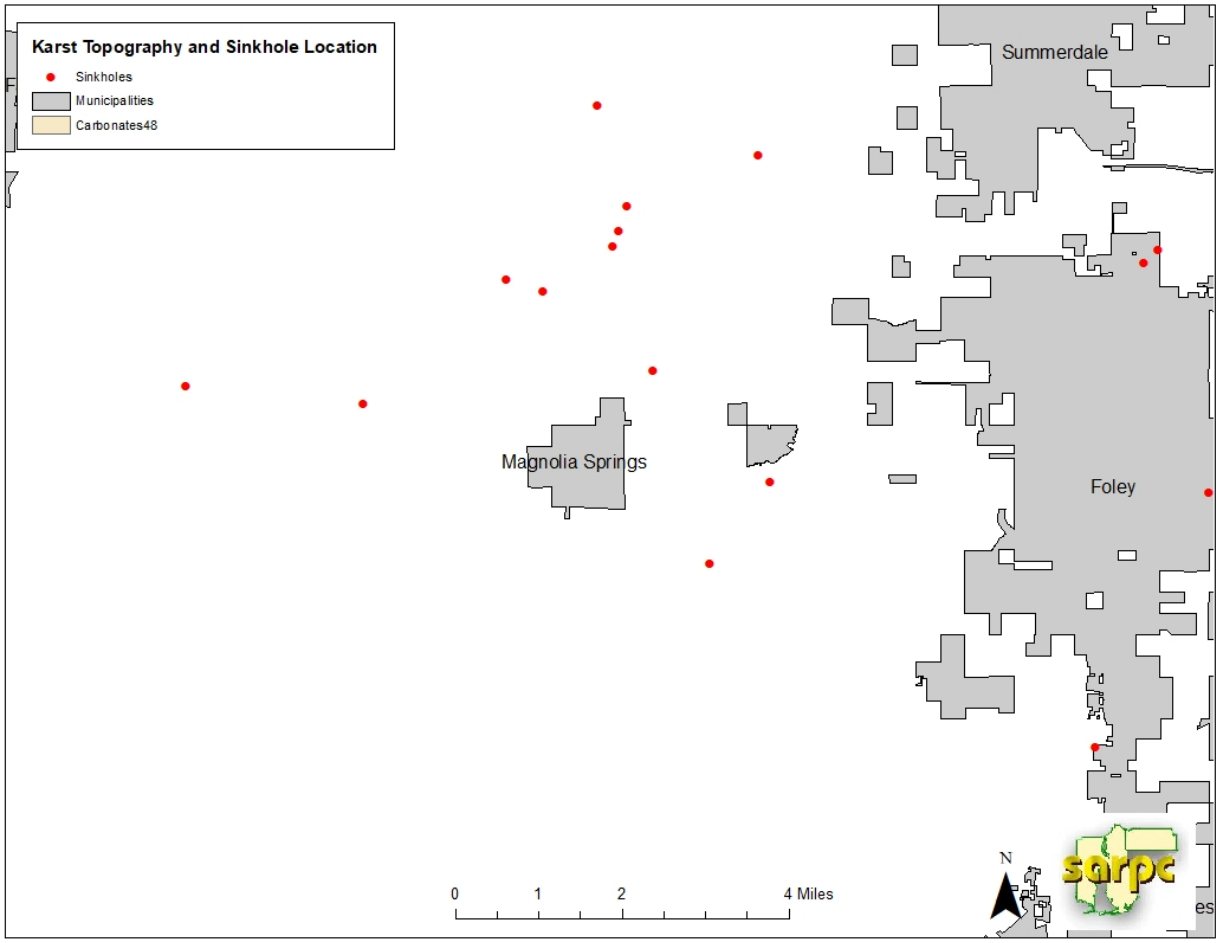


Figure 3.61 Orange Beach and Perdido Beach Karst Topography and Sinkhole Locations

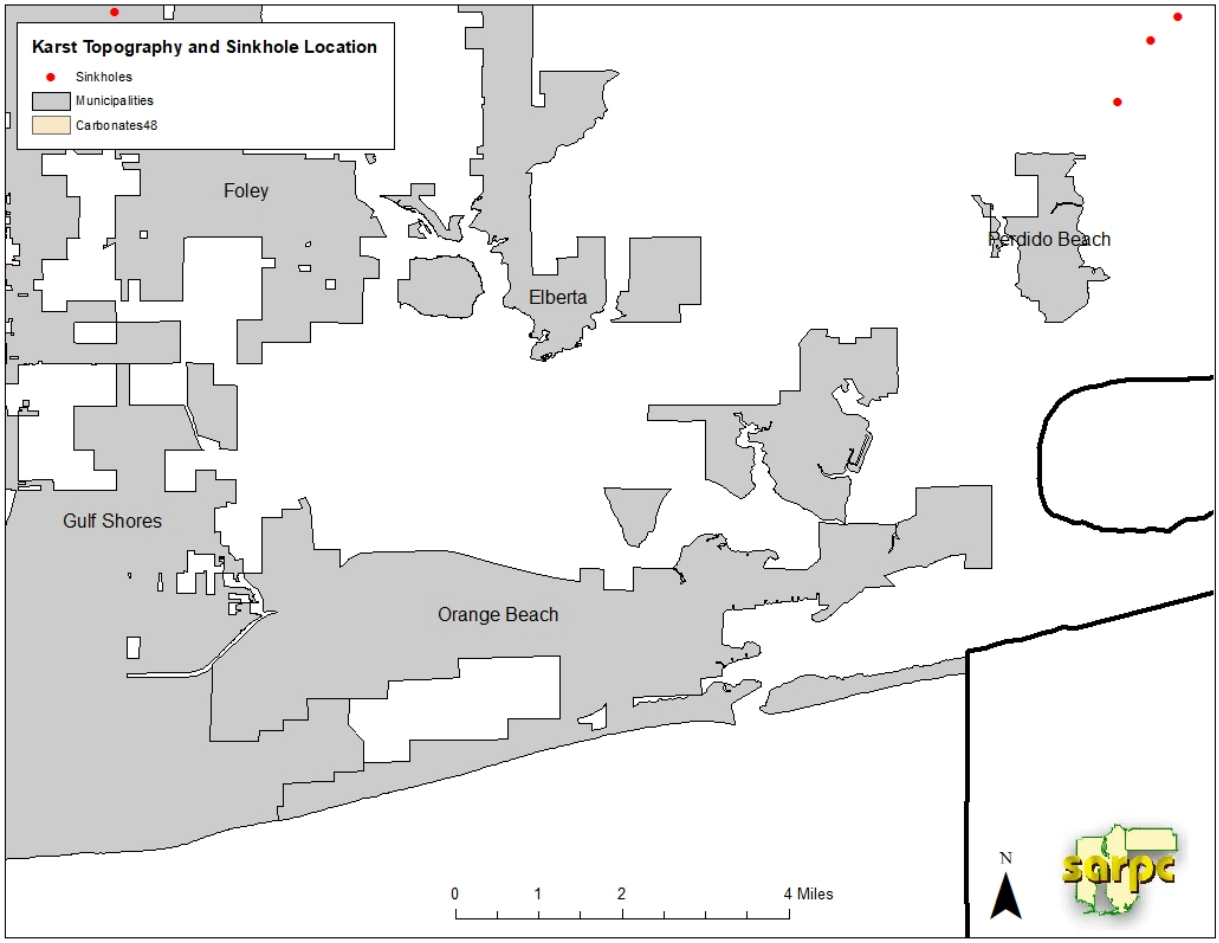


Figure 3.62. Silverhill, Robertsdale and Summerdale Karst Topography and Sinkhole Locations

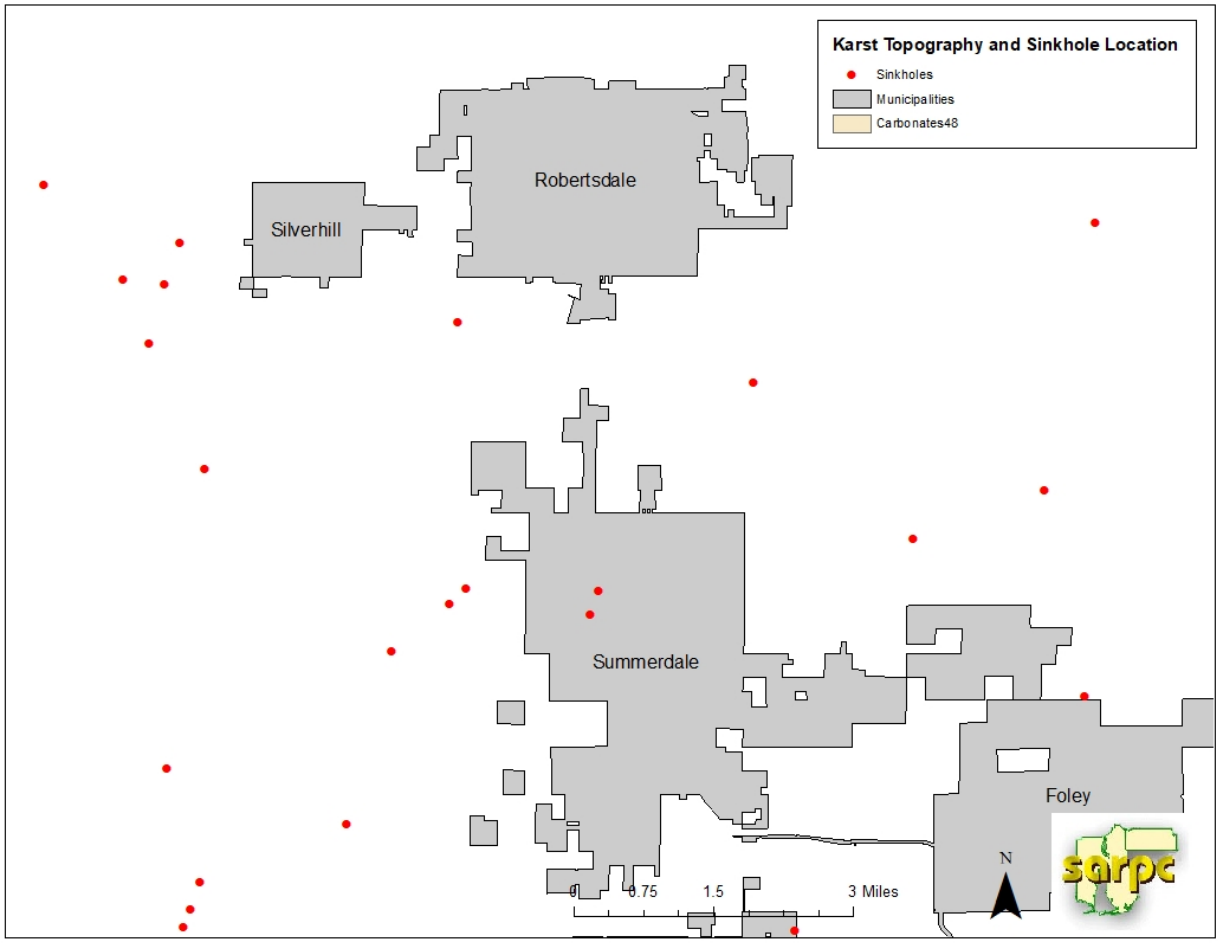


Figure 3.63 Spanish Fort Karst Topography and Sinkhole Locations

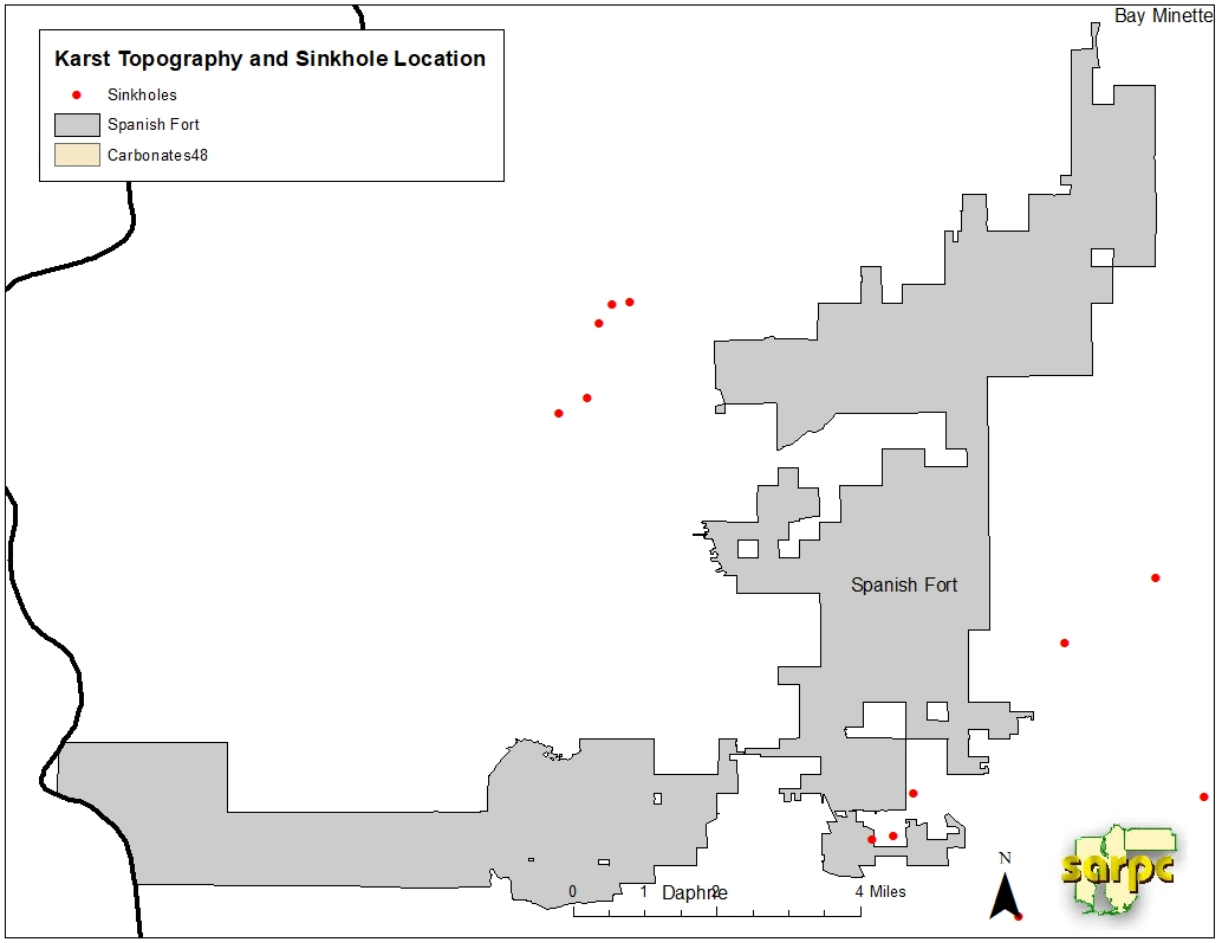


Figure 3.64 Brewton, East Brewton, Riverview, Pollard and Flomaton Karst Topography and Sinkhole Locations

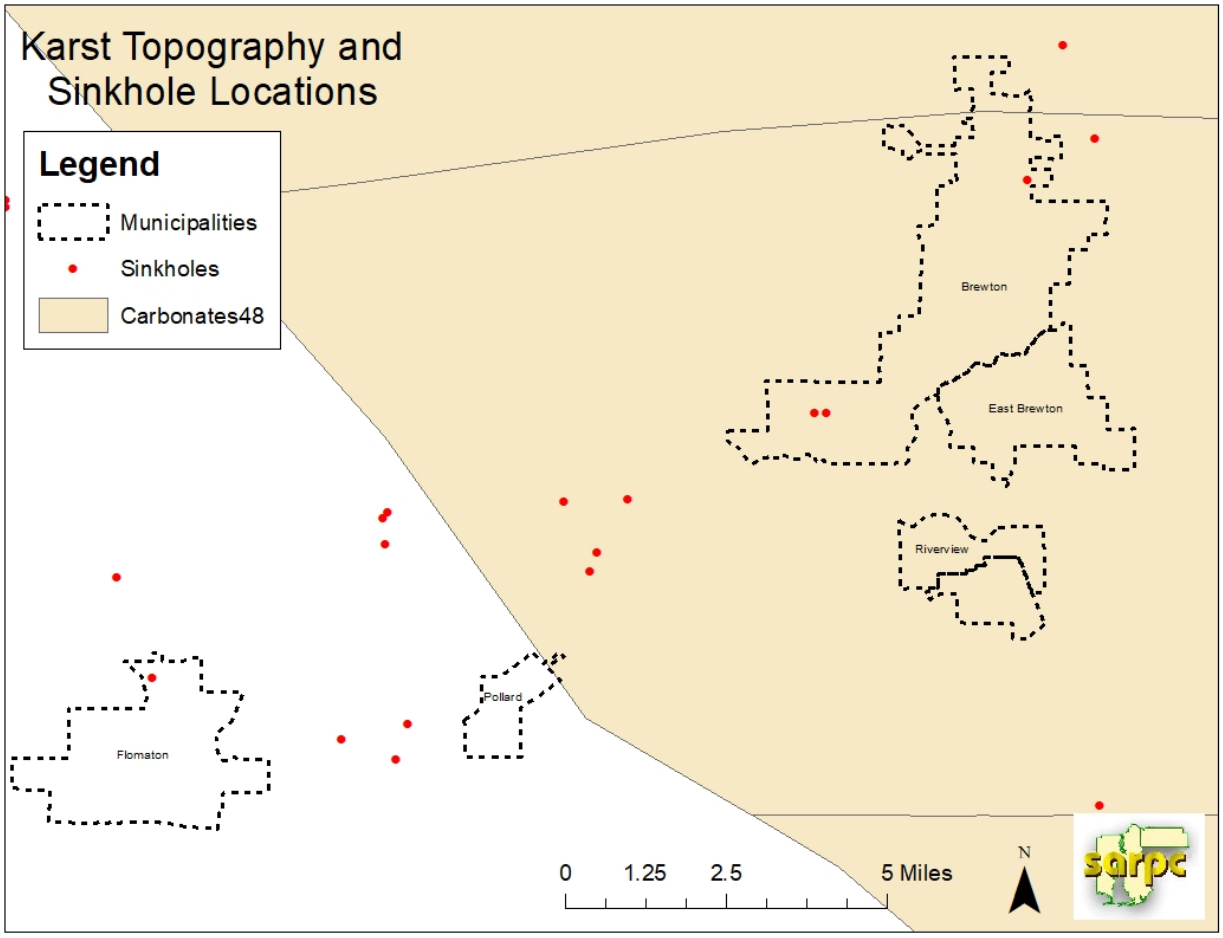


Figure 3.65 Atmore Karst Topography and Sinkhole Locations

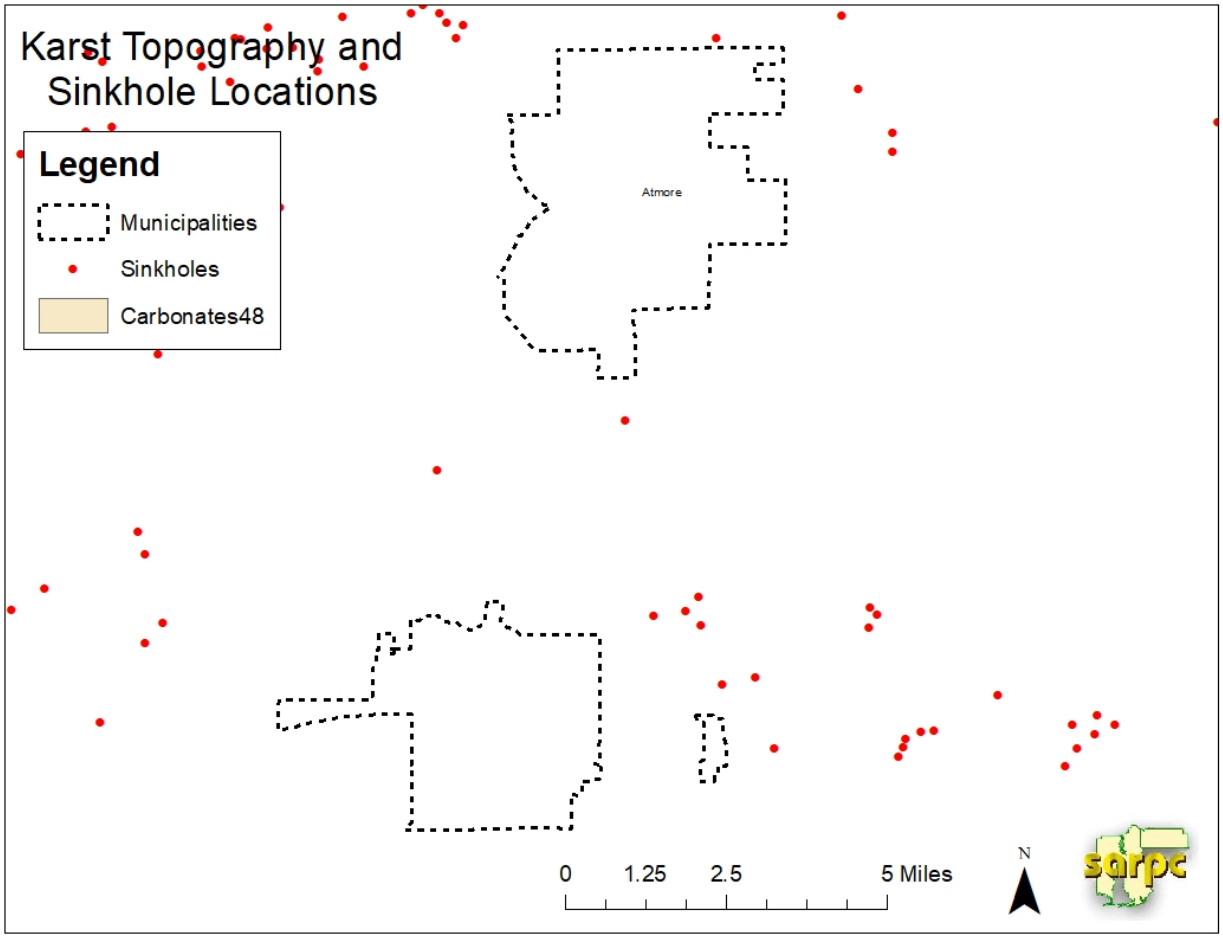


Figure 3.66 Bayou La Batre Karst Topography and Sinkhole Locations

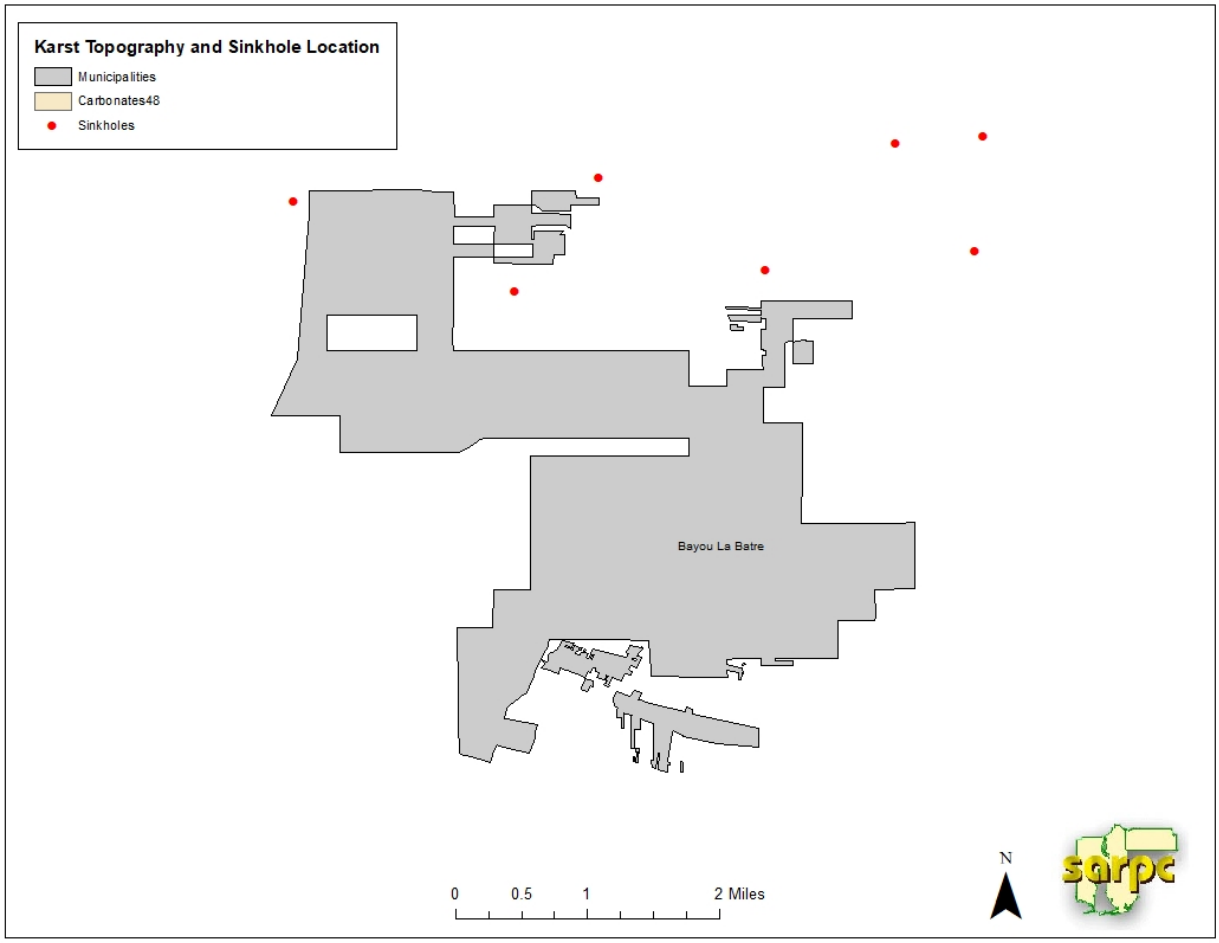


Figure 3.67 Mobile and Prichard Karst Topography and Sinkhole Locations

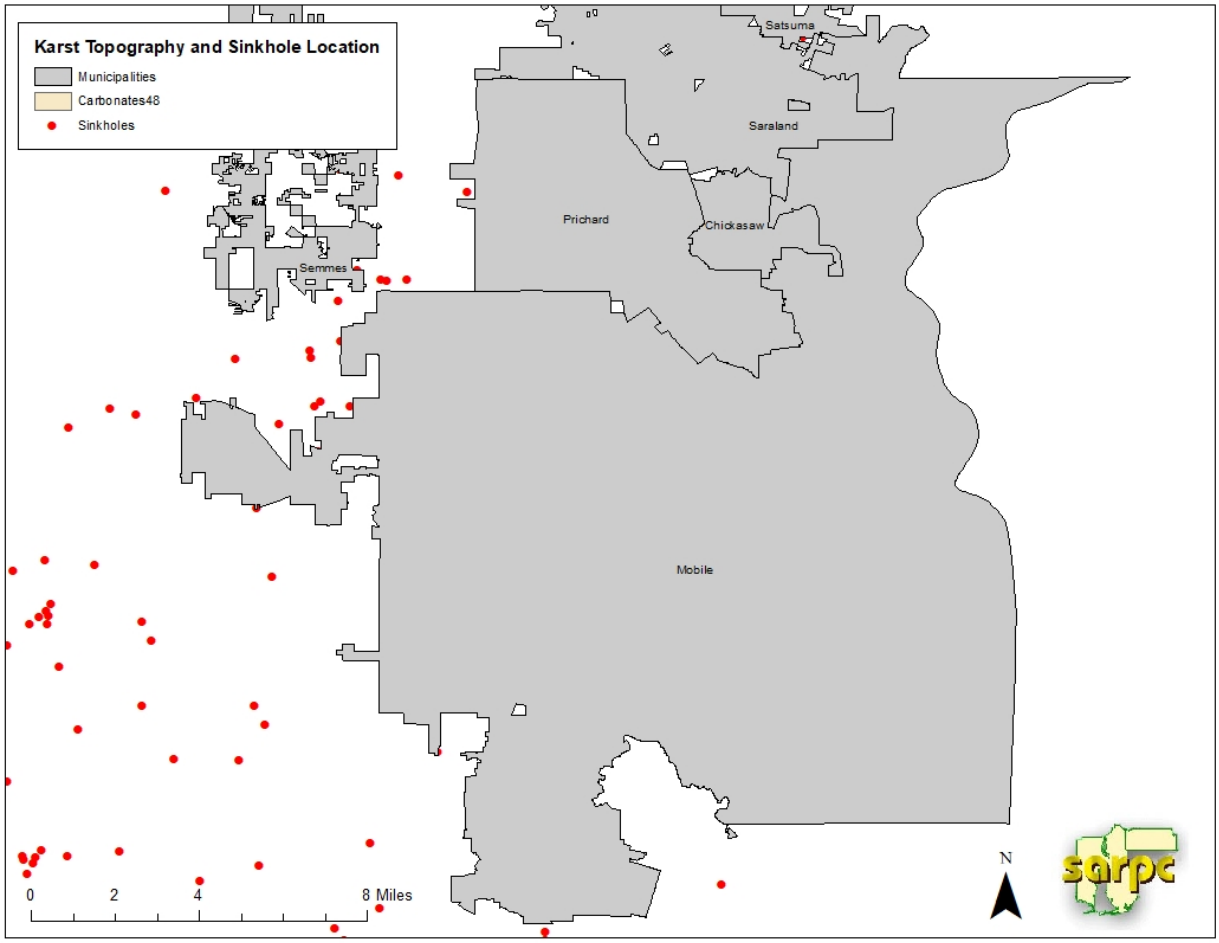


Figure 3.68 Citronelle Karst Topography and Sinkhole Locations

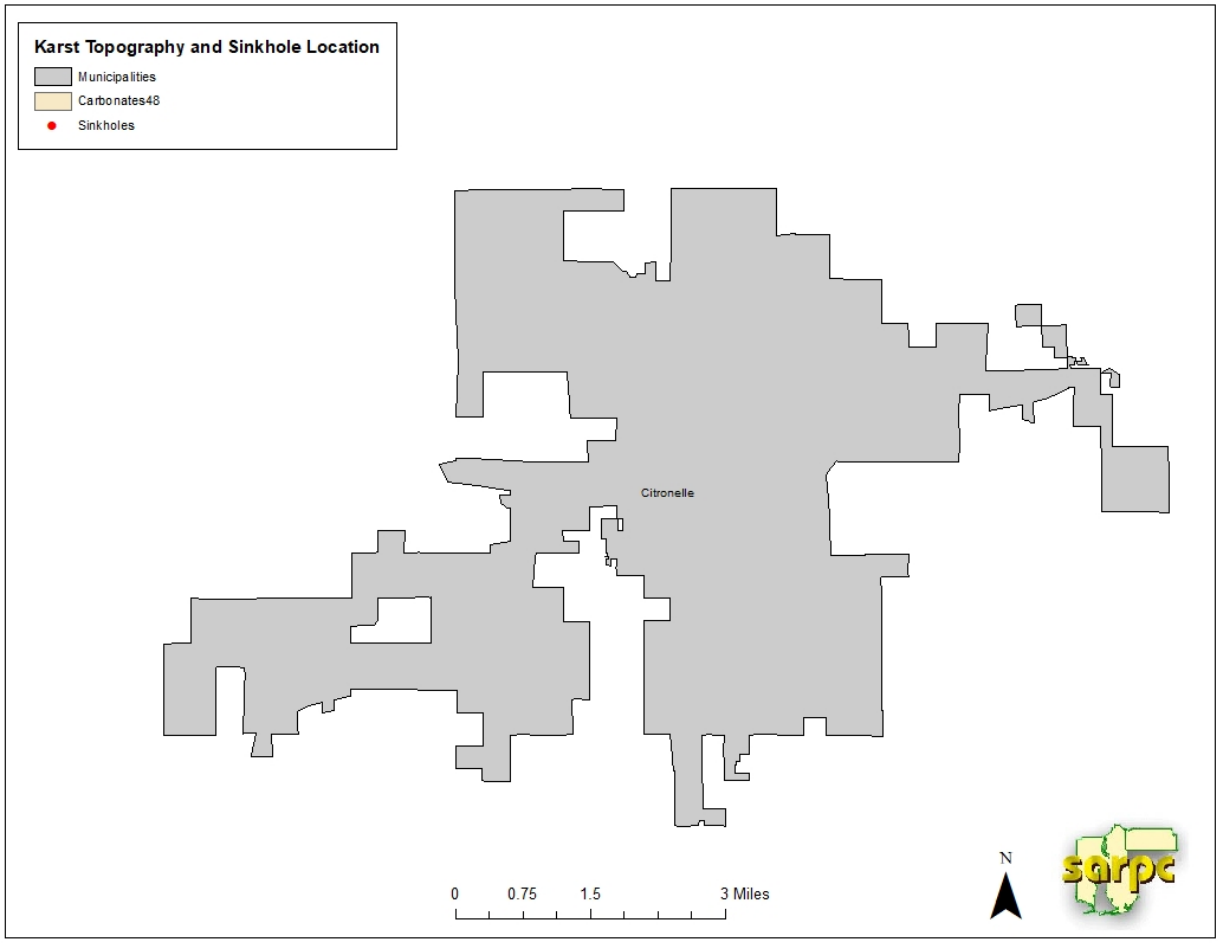


Figure 3.69 Dauphin Island Karst Topography and Sinkhole Locations

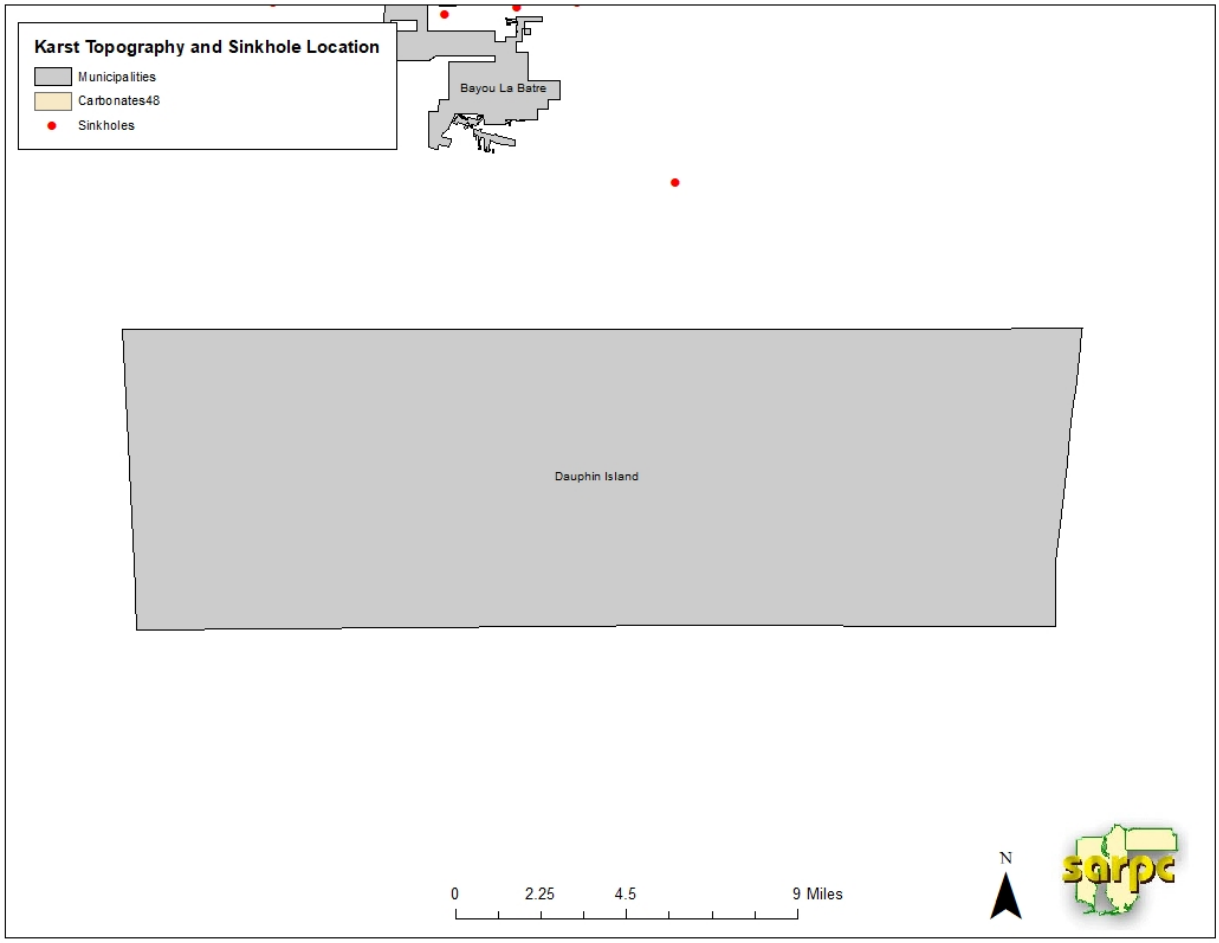


Figure 3.70 Mount Vernon Karst Topography and Sinkhole Locations

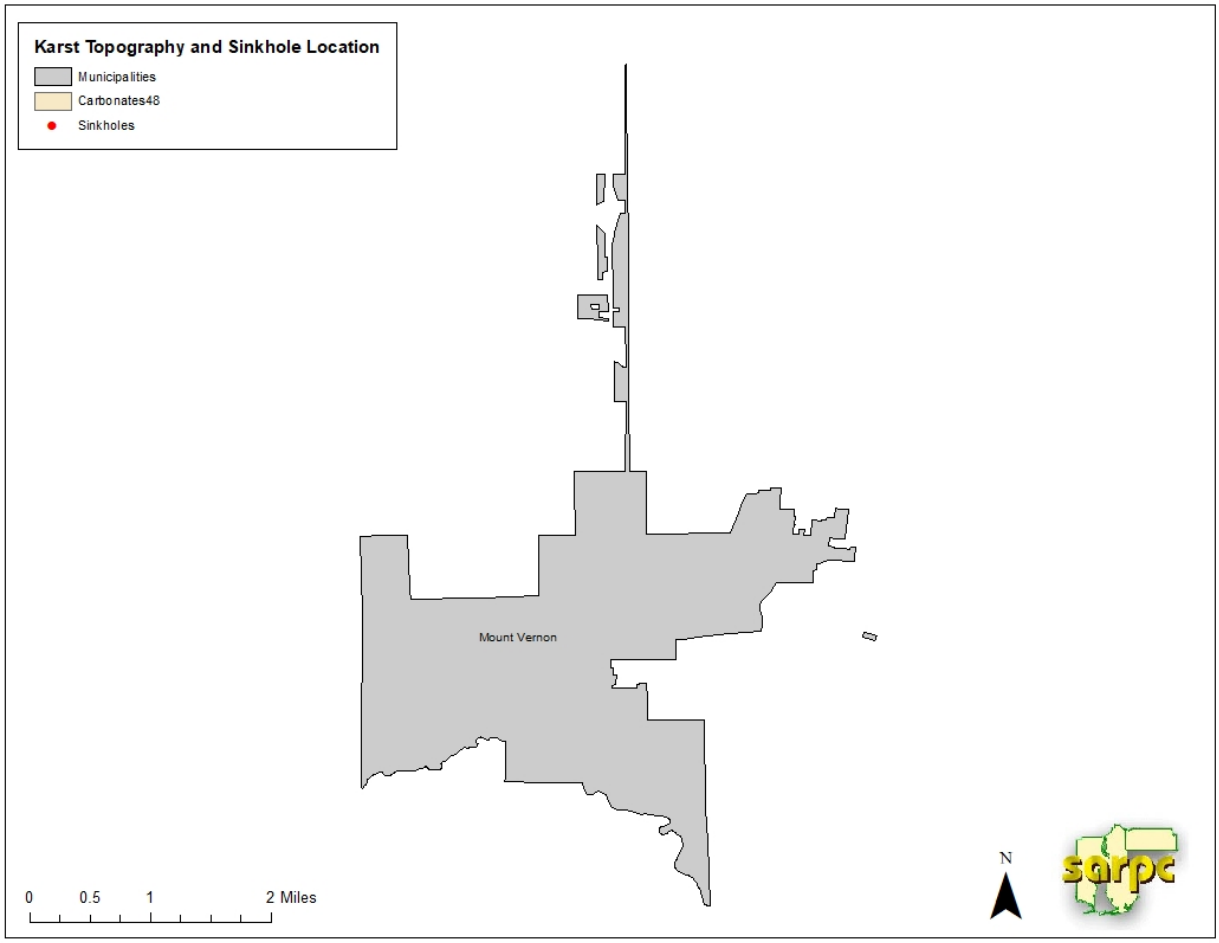


Figure 3.71 Saraland and Satsuma Karst Topography and Sinkhole Locations

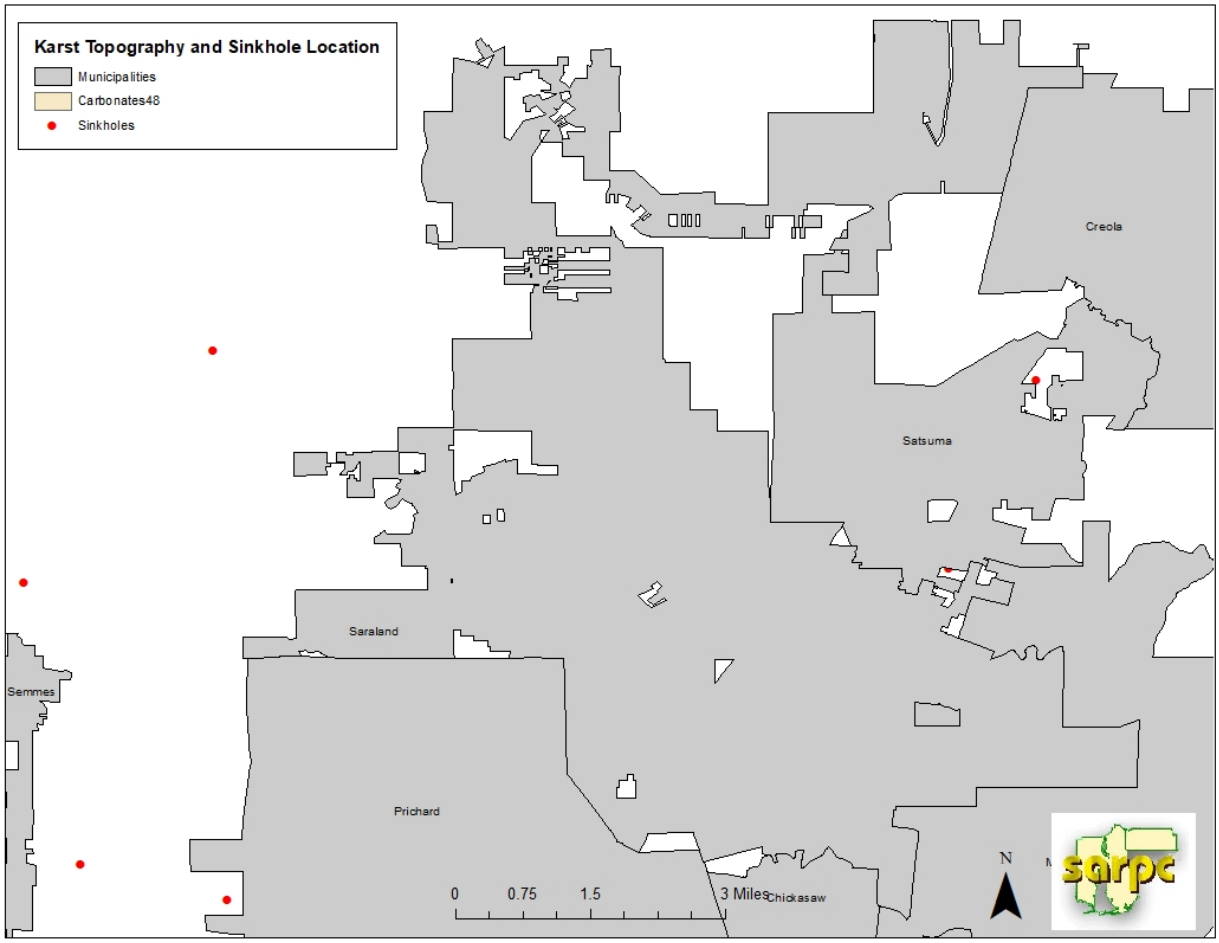
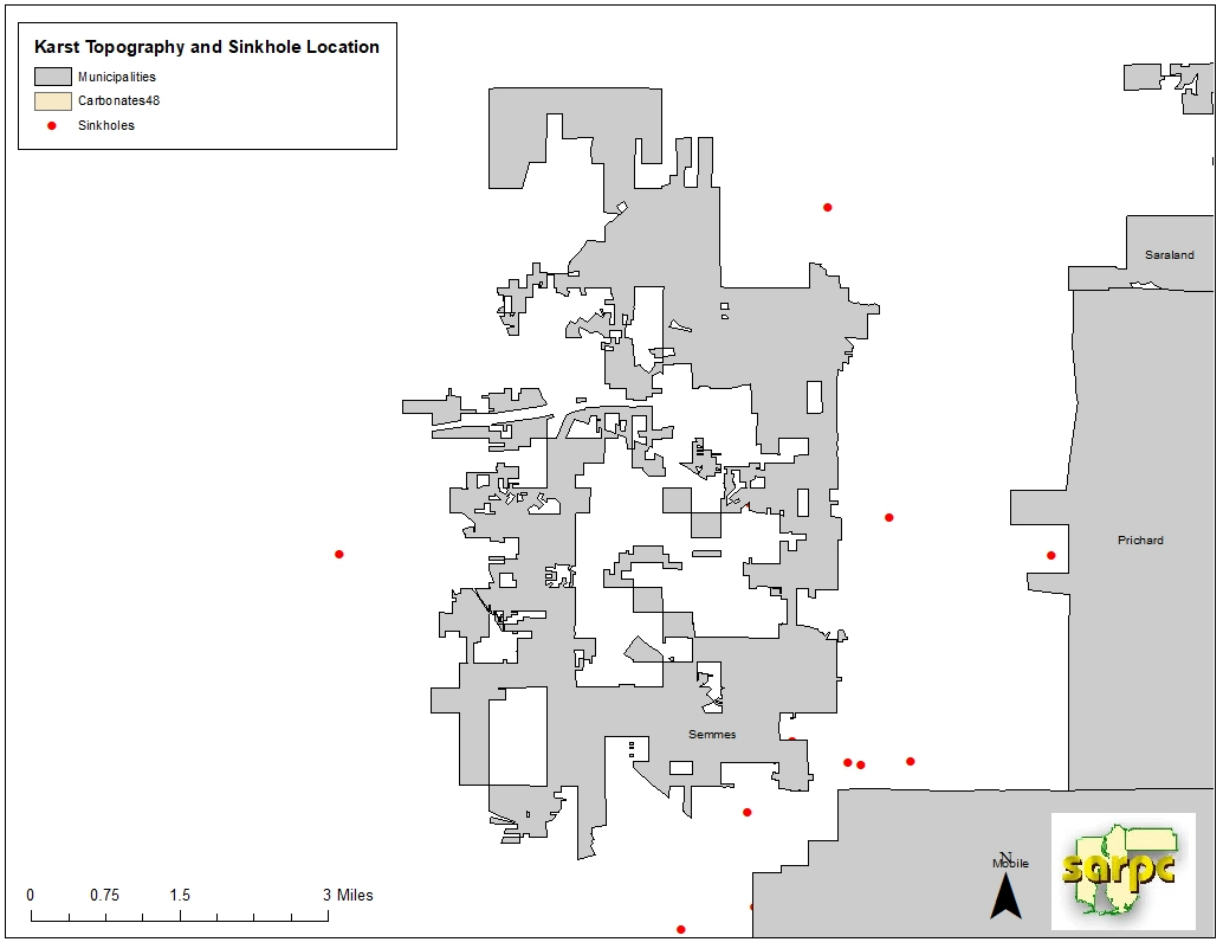


Figure 3.72 Semmes Karst Topography and Sinkhole Locations



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 the planning area, the extent of these incidents in the area are estimated to be primarily isolated with little damage to structures and infrastructure. As seen in the chart below, the majority of the sinkholes have not occurred in municipalities, but in more unpopulated unincorporated areas.

Table 3.22 Land Subsidence Summary by Jurisdiction

	# of Sinkholes	Extent	Probability
Baldwin County	140	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Bay Minette	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low

Daphne	18	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Elberta	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Fairhope	7	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Foley	4	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Gulf Shores	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Loxley	6	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Magnolia Springs	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Orange Beach	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Perdido Beach	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Robertsdale	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Silverhill	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Spanish Fort	1	<2 acres affected per incidence, however, where incidents are occurring, damage to structures and infrastructure is possible	Moderate
Summerdale	1	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Escambia County	195	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Atmore	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Brewton	3	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
East Brewton	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Flomaton	1	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Pollard	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Riverview	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Mobile County	225	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Bayou La Batre	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Chickasaw	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Citronelle	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Creola	1	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Dauphin Island	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Mobile	1	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low

Mount Vernon	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Prichard	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Saraland	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Satsuma	1	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low
Semmes	0	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low

Historical Occurrences

There are historical occurrences of subsidence in the planning area. The Geologic Survey of Alabama digitized historical topographic depression features on historical 1:24,000-scale topographic maps. Figure 3.9 includes 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 Events

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.

TSUNAMIS

Background

Tsunamis are large ocean waves triggered by earthquakes, volcanic eruptions, submarine landslides, and onshore landslides. Since the Gulf Coast is not located near a tectonic plate boundary or any active volcano areas, the risk of a tsunami caused by earthquake or volcanic eruption is minimal. Onshore landslides are also rare. The tsunami threat to the region would most likely be caused by a submarine landslide, which is a landslide that occurs under water. Large submarine landslides occurred in the Gulf of Mexico over 7,500 years ago.

Locations Affected

There are three geologic landslide provinces in the Gulf of Mexico, the West Florida Landslide, the Mississippi Canyon Landslide, and the East-Breaks Landslide. All of these are located along the continental margin of the gulf.

Extent

Communities in Coastal Mobile and Baldwin Counties in low-lying areas are vulnerable to tsunami damage, especially because of the amount of people located in these areas.

Historical Occurrences

There are no previous occurrences of tsunamis affecting Baldwin or Mobile Counties

Probability of Future Events

Due to the lack of historical evidence for tsunami activity, the probability of future occurrence is low.

WILDFIRES

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 were development occurs near or within the vegetative cover.

Locations Affected

SARPC used the Southern Wildfire Risk Assessment Summary Report for the planning area to analyze the area's susceptibility to wildfires. Figure 3.13 illustrates 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. This is illustrated in Figure 3.73 where areas around the most populous cities have the higher WUI. Table 3.23 shows that approximately 477,880 acres of the land area in the county is classified as experiencing moderate or above impacts from WUI fires. This is roughly 16 % of the planning area.

Figure 3.73 Wildland Urban Interface Risk Index for AEMA Division A-SARPC Planning Area

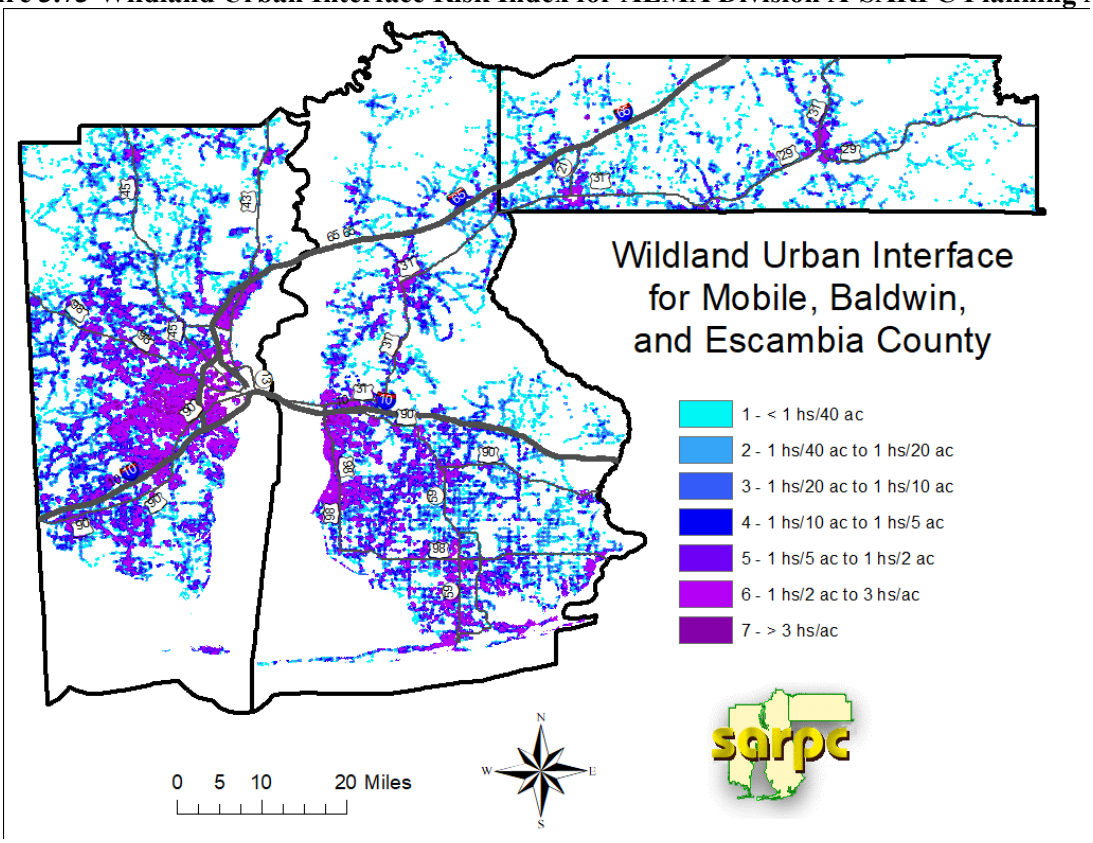


Table 3.23 Wildland Urban Interface Risk Index
For AEMA Division A-SARPC Planning Area

	Class	Acres	Percent
	-9 Major Impacts	1,695	0.06%
	-8	54,639	1.85%
	-7	102,537	3.46%
	-6	69,003	2.33%
	-5 Moderate	250,006	8.45%
	-4	150,696	5.09%
	-3	78,767	2.66%
	-2	101,847	3.44%
	-1 Minor Impacts	15,964	0.54%
	0	2,134,187	72.12%
	Total	2,959,342	**100.0 %**

Source: Southern Wildfire Risk Assessment

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 the planning area, approximately 60% of the land area is located in an area with a burn probability of 6 or greater. However, that figure is distorted by the fact that the data includes the significant areas of water in the region, including Mobile Bay and the Delta. If the water acreages, mostly in burn probability categories 1-3 were taken out of the equation, the percentage of acreage located in category 6 or higher would be significantly less. Figure 3.74 shows the burn probability for the counties in the division. Table 3.24 provides the acreage and percent of the division which falls into each burn probability category.

Figure 3.74 Burn Probability for AEMA Division A- SARPC Planning Area

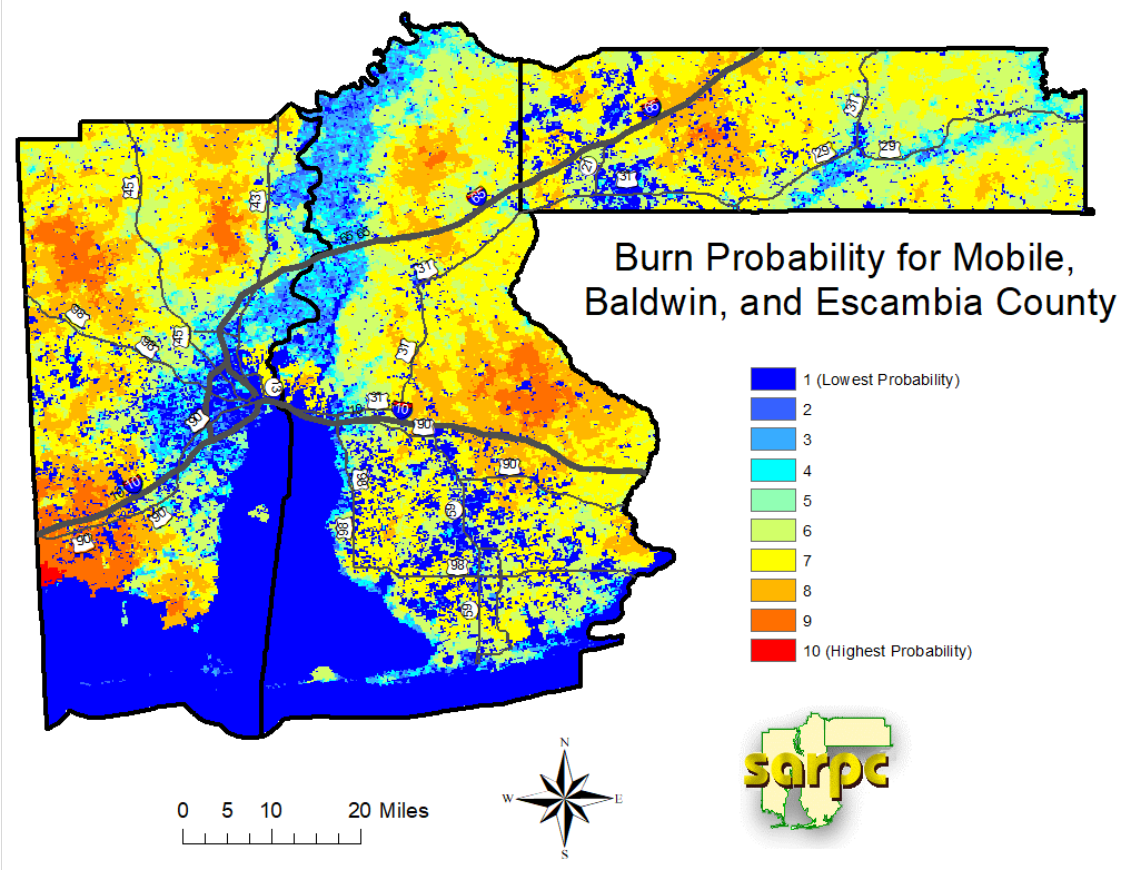


Table 3.24 Burn Probability for AEMA Division A- SARPC Planning Area

	Class	Acres	Percent
	1	821,134.81	27.77%
	2	35,289.29	1.19%
	3	92,351.47	3.12%
	4	119,535.77	4.04%
	5	117,464.86	3.97%
	6	521,590.30	17.64%
	7	777,156.19	26.28%
	8	367,107.23	12.41%
	9	102,786.81	3.48%
	10	2,789.79	0.09%
	Total	**2,957,206.52**	**100.0 %**

Source: Southern Wildfire Risk Assessment

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 the planning area, wildfires are a threat to the residents' property and health. There have been several fires over the past decade that affected over 1,000 acres, but fortunately, most are minor/moderate, and are located in unpopulated areas. However, as population and development increases in high growth areas, the wildland urban interface should be closely monitored for potential effects. Table 3.25 shows the number of fires in each county by year, and the amount of acreage affected.

Historical Occurrences

The planning area has experienced many wildfires in recent history, with varied extents. Throughout the planning region, "controlled burns" through land management are performed, which often aids in the prevention of wildfires, or limits the impact of the fires. Rivers, streams, cultivated fields, wide roadways all serve as natural and manmade firebreaks.

Table 3.25 Fire Occurrences

County	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Baldwin											
# Fires	189	373	80	91	89	125	129	50	51	52	46
Total Acres Burned	1,089	8,903	2,381	1,943	2,069	2,395	1,208	749	1,045	1,551	2,068
Average Acres Burned per Fire	5.8	23.9	29.8	21.3	23.2	19.2	9.4	15.0	20.5	29.8	45.0
Largest Fire (Acres)	85	1,300	1,545	350	470	432	110	134	200	1,100	1,200
Escambia											
# Fires	87	101	37	35	50	47	46	26	36	35	19
Total Acres Burned	717	3,800	561	426	584	1,133	789	1,179	500	170	162
Average Acres Burned per Fire	8.2	37.7	15.2	12.2	11.7	24.1	17.2	45.3	13.9	4.9	8.5
Largest Fire (Acres)	200	428	216	88	180	420	400	295	150	60	45
Mobile											
# Fires	178	183	83	98	108	85	105	50	66	60	47
Total Acres Burned	3,153	5,893	1,783	3,232	2,475	3,111	3,339	1,162	828	2366	2400
Average Acres Burned per Fire	17.7	32.2	21.5	33.0	22.9	29.6	31.8	23.24	12.5	39.4	51.1
Largest Fire (Acres)	220	450	140	350	450	1,594	800	280	93	729	1,120

Probability of Future Events

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, but the majority of these have been minor in nature and have not greatly impacted the planning area. Based on the information in this profile, the entire planning area will be said to have a Medium probability for major damage from wildfire events.

WINTER STORMS

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 the planning area, but when they do occur, they have a significant impact. Local governments have improved their response to winter storm events but they are unpredictable events. 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 severe 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.

Extent of winter storm/winter weather in **Baldwin County**

12/8/17

- Storm total snow amounts of 2 inches in Bay Minette and 1.25 in Phillipsville
- Storm total snowfall of 2 inches in Loxley, 1.4 in Robertsdale, 1 in Rosinton, 0.5 to 1 in Malbis, 0.4 to 1 in Fairhope and a trace in Foley. Reports came from a mix of Public, Coop, CoCoRaHS and Social Media

1/17/18

- Storm total sleet and freezing rain totals of 0.1 in Malbis 0.08 in Loxley
- A dusting of sleet and snow was recorded in Robertsdale and Orange Beach
- Storm total sleet and freezing rain totals of 0.15 to 0.4 inches in Phillipsville.

Extent of winter storm/winter weather in **Escambia County**

2/12/10

- Public reported 1 inch of snow in Brewton
- A Spotter measured 2 inches of snow in Atmore
- Broadcast media reported 6 inches of snow in Wallace
- WEBJ radio reported 2.5 inches of snow in Brewton

12/8/17

- Storm total snow amount of 2.5 inches in Brewton. 1.5 inches in Appleton and 1 inch in Atmore

Extent of winter storm/winter weather in **Mobile County**

12/8/17

- Storm total snowfall of 1 inch at Mobile Regional Airport, 1 inch in Tillman's Corner, 0.3 in Wilmer and 0.5 near the Fowl River
- Storm total snowfall of 0.2 inches on Dauphin Island

1/16/18

- Storm total snow and sleet accumulations of around 1 inch in Citronelle and Chickasaw
- Storm total snow and sleet accumulations of 0.10 at the NWS Office in West Mobile

Historical Occurrences

There have been minor winter weather events over portions of the planning area since 1995. Most recently, and not even documented in the NOAA Storms Events Database, a week long span of nightly below freezing temperatures caused minor icing in certain areas of the region, mainly those to the north. However, minimal destruction and disruption occurred.

Table 3.26 Division A- SARPC Counties Winter Storm Occurrences 1995-2020

Location	Date	Event	Deaths	Injuries	Property Damage	Crop Damage
Escambia	1/2/2002	Winter Storm	0	0	0	0
Escambia	2/12/2010	Winter Storm	0	0	0	0
Escambia	2/12/2010	Winter Storm	0	0	0	0
Escambia	2/12/2010	Winter Storm	0	0	0	0
Escambia	2/12/2010	Winter Storm	0	0	0	0
Baldwin Inland	12/8/2017	Winter Weather	0	0	0	0
Baldwin Central	12/8/2017	Winter Weather	0	0	0	0
Escambia	12/8/2017	Winter Weather	0	0	0	0
Mobile Central	12/8/2017	Winter Weather	0	0	0	0
Mobile Coastal	12/8/2017	Winter Weather	0	0	0	0
Mobile Inland	1/16/2018	Winter Weather	0	0	0	0
Mobile Central	1/16/2018	Winter Weather	0	0	0	0
Baldwin Central	1/17/2018	Winter Weather	0	0	0	0
Baldwin Coastal	1/17/2018	Winter Weather	0	0	0	0
Baldwin Inland	1/17/2018	Winter Weather	0	0	0	0

Source: NOAA Storms Events Database

Probability of Future Events

Winter storms in southwest Alabama are infrequent and generally short-term events; therefore, they have a low probability of causing major damage in the planning area.

3.3 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 at total value with a maximum score of 4.0.

Table 3.27 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 3.28 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 3.23 Summary of Regional Hazard Risk Impact

Hazard	Degree of Risk					
	Probability	**Impact**	**Location Extent**	**Warning Time**	**Duration**	**Weighted Score**
	30%	30%	20%	10%	10%	
Dam Failure	Very Low 1	Critical 3	Small 2	6-12 hours 3	Less than 24 hours 2	2.1
Drought/ Extreme Heat	Medium 3	Minor 1	Moderate 3	More than 24 hours 1	More than one week 4	2.3
Earthquake	Medium 3	Minor 1	Small 2	Less than 6 hours 4	Less than 6 hours 1	2.1
Flooding	High 4	Critical 3	Moderate 3	6-12 hours 3	Less than one week 3	3.3
High Winds-Hurricanes	Medium 3	Catastrophic 4	Large 4	More than 24 hours 1	Less than 24 hours 2	3.2
High Winds-Tornadoes	High 4	Critical 3	Small 2	Less than 6 hours 4	Less than 6 hours 1	3.0
High Winds-Severe Thunderstorms	High 4	Minor 1	Moderate 3	Less than 6 hours 4	Less than 6 hours 1	2.8
Landslides	Low 2	Minor 1	Negligible 1	Less than 6 hours 4	Less than 6 hours 1	1.6
Land Subsidence/ Sinkholes	Low 2	Minor 1	Small 2	Less than 6 hours 4	Less than 6 hours 1	1.8
Tsunamis	Very Low 1	Minor 1	Negligible 1	Less than 6 hours 4	Less than 6 hours 1	1.3
Wildfires	High	Minor	Moderate	Less than 6 hours	Less than one week	

	4	1	3	4	3	2.8
Winter Storms	Low	Limited	Large	More than 24 hours	Less than one week	
	2	2	4	1	3	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-Hurricanes (3.2 Score), and High Winds-Tornadoes (3.0 Score).

Jurisdictions in the division share similar vulnerabilities with respect to natural hazards. A discussion of these vulnerabilities is provided below. All of age, poverty, and housing information came from the 2019 American Community Survey 5-year estimates.

Baldwin County

- With respect to vulnerable populations, there are nine jurisdictions in which over 20% of the population is aged 65 and older. Older individuals are generally accepted to have higher vulnerability to hazards due to lessened physical and often mental capacity. Elberta, Fairhope, Foley, Gulf Shores, Magnolia Springs, Orange Beach, Perdido Beach, Silverhill, and Summerdale are the jurisdictions with over 20% aged 65 and up.
- Additionally, lower income individuals are classified as having higher vulnerability due lack of resources to prepare and to recover from disasters. The jurisdictions that have at least 20% of their population living below the poverty line include Bay Minette and Robertsdale.
- The type of housing is also a factor for vulnerability, specifically mobile homes. While Elberta is the only jurisdiction in the county where mobile homes account for more than 20% of the housing stock, it is important to note that any mobile home is more susceptible to hazards, especially high winds.
- Group living facilities such as assisted living facilities and nursing homes have higher population density which make them more vulnerable to hazards. More density can lead to difficulties evacuating if necessary, and greater injury or loss of life. Specifically these locations are more vulnerable to High Wind Events (Hurricanes, Tornadoes, Severe Thunderstorms) and Wildfires.
- A number of factors influence jurisdiction's vulnerability to flooding and flash flooding. There are floodplain areas located throughout the county (refer to Figure 3.3). All municipalities and counties in the region participate in the NFIP, but the smaller jurisdictions do not have certified floodplain managers. Flash flooding vulnerability exists throughout the county and is influenced by multiple areas throughout the county that flood due to nonexistent, undersized, or deteriorated drainage infrastructure. Coastal areas of the county are especially vulnerable to flooding due to elevation and a higher risk of hurricanes.
- Important industries in the county include agriculture and tourism. If an event occurred that damaged the county's agricultural resources or shut down tourism, it would cripple the economy. Strong winds (Hurricanes and Tornadoes) and flooding could have a devastating impact of both of these industries, and wildfires could be devastating for the agricultural industry with respect to timber. All of these hazards can affect other

industries as well, with issues such as damage, power outages and impassable roads, affecting other major industries in the county such as education, medical trade, and retail operations.

- 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.
- Most of 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.
- Many areas in the county have limited cellphone service, many individuals depend on their phones to alert them to severe weather. The limited coverage makes these individuals more vulnerable to severe thunderstorms, flash flooding events, and tornadoes.

Escambia County

- With respect to vulnerable populations, there is only one jurisdiction, Riverview, in which over 20% of the population is aged 65 and older. 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. The jurisdictions with at least 20% of their population living below the poverty line include Brewton, East Brewton, Flomaton, and Riverview. People living in poverty may not have access to emergency management equipment, and also may not be able to evacuate quickly or have the ability to afford to evacuate, if necessary.
- The type of housing is also a factor for vulnerability, specifically mobile homes. Pollard and Riverview are the only jurisdictions in the county where mobile homes account for more than 20% of the housing stock, but it is important to note that any mobile home is more susceptible to hazards, especially high winds.
- Group living facilities such as assisted living facilities and nursing homes have higher population density which make them more vulnerable to hazards. More density can lead to difficulties evacuating if necessary, and greater injury or loss of life. Specifically these locations are more vulnerable to High Wind Events (Hurricanes, Tornadoes, Severe Thunderstorms) and Wildfires.
- A number of factors influence jurisdiction's vulnerability to flooding and flash flooding. There are floodplain areas located throughout the county (refer to Figure 3.3). All municipalities and counties in the region participate in the NFIP, but none of the municipalities have certified floodplain managers. Flash flooding vulnerability exists throughout the county and is influenced by multiple areas throughout the county that flood due to nonexistent, undersized, or deteriorated drainage infrastructure. Coastal areas of the county are especially vulnerable to flooding due to elevation and a higher risk of hurricanes.
- Important industries in the county include agriculture, tourism (gambling), and paper manufacturing. If an event occurred that damaged the county's agricultural resources or shut down the Wind Creek Casino, it would be devastating to the economy. Strong winds (Hurricanes and Tornadoes) and flooding could have a devastating impact of both

of these industries, and wildfires could be devastating for the agricultural and paper industry with respect to timber. All of these hazards can affect other industries as well, with issues such as damage, power outages and impassable roads, affecting other major industries in the county such as education and retail operations.

- 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.
- Most of 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.
- Many areas in the county have limited cellphone service, many individuals depend on their phones to alert them to severe weather. The limited coverage makes these individuals more vulnerable to severe thunderstorms, flash flooding events, and tornadoes.

Mobile County

- With respect to vulnerable populations, there are only two jurisdictions, Dauphin Island and Semmes, in which over 20% of the population is aged 65 and older. 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. The jurisdictions that have at least 20% of their population living below the poverty line include Bayou La Batre, Chickasaw, Citronelle, Creola, Mobile, Mount Vernon, and Prichard.
- The type of housing is also a factor for vulnerability, specifically mobile homes. While Creola is the only jurisdiction in the county where mobile homes account for more than 20% of the housing stock, it is important to note that any mobile home is more susceptible to hazards, especially high winds.
- Group living facilities such as assisted living facilities and nursing homes have higher population density which make them more vulnerable to hazards. More density can lead to difficulties evacuating if necessary, and greater injury or loss of life. Specifically these locations are more vulnerable to High Wind Events (Hurricanes, Tornadoes, Severe Thunderstorms) and Wildfires.
- A number of factors influence jurisdiction's vulnerability to flooding and flash flooding. There are floodplain areas located throughout the county (refer to Figure 3.3). All municipalities and counties in the region participate in the NFIP, but the smaller jurisdictions do not have certified floodplain managers. Flash flooding vulnerability exists throughout the county and is influenced by multiple areas throughout the county that flood due to nonexistent, undersized, or deteriorated drainage infrastructure. Coastal areas of the county are especially vulnerable to flooding due to elevation and a higher risk of hurricanes.
- Important industries in the county include shipbuilding, government and education (including college). Strong winds (Hurricanes and Tornadoes) and flooding could have a devastating impact of both of these industries, and wildfires could be devastating for the agricultural industry with respect to timber. All of these hazards can affect other

industries as well, with issues such as damage, power outages and impassable roads, affecting other major industries in the county such as retail and tourism.

- 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.
- Most of 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.
- Many areas in the county have limited cellphone service, many individuals depend on their phones to alert them to severe weather. The limited coverage makes these individuals more vulnerable to severe thunderstorms, flash flooding events, and tornadoes.

Vulnerability and Changes in Development

Overall, the population changes in Mobile and Escambia counties are not going to drastically affect vulnerability. Both Mobile and Escambia Counties have seen new industry, but without a major increase in population.

The majority of development in the planning area is occurring in Baldwin County, with Fairhope, Foley, Gulf Shores, Loxley, Robertsdale, and Spanish Fort experiencing greater than 20% population growth between the 2010 Census and the 2019 American Community Survey. Two of the largest new commercial facilities to be located in Baldwin County within the last five years are Buckee's and the proposed ALDI distribution center. Steady growth continues along the I-10 corridor and along the coasts.

The increased development in Baldwin county 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 development's 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.

3.4 Probability of Future Occurrences and Damage Estimates

Table 3.29 estimates the hazard event frequency of occurrences cumulatively for the planning area. These estimates were calculated from events recorded at different time periods, based on source data, which is described below. There is no guarantee the recorded level of hazard events will continue into the future at the same rate; however, the figures below provide a possible estimate of potential damages.

The period for each recorded hazard is listed below (when known and/or applicable) in Table 3.29.

Dam Failure: Not Available
Drought/Extreme Heat: 2000 - 2020
Earthquake: 1974 - 2020
Flooding: 2000 - 2020
High Winds - Hurricanes: 1979 - 2020
High Winds – Tornadoes: 2015 - 2020
High Winds – Severe Thunderstorms: 2014 - 2019
Landslides: Unknown
Land Subsidence/Sinkholes: Unknown
Tsunamis: All years
Wildfire: Unavailable
Winter Storms: 1995 through March 2020

Table 3.29 Natural Hazard Probability and Damage Estimates

Hazard	Occurrences	Time (Years)	Damages Recorded	Probability (Annual)	Estimated Future Damage (Annual)
Dam Failure	0	N/A	0	N/A	N/A
Drought/Extreme Heat	2	21	N/A	100%	N/A
Earthquake	21	47	N/A	45%	N/A
Flooding	94	21	$38,669,000	100%	$1,841,381
High Winds-Hurricanes	18	42	$12,571,600,000*	43%	N/A
High Winds-Tornados	102	6	$12,952,000	100%	$2,158,667
High Winds-Severe Thunderstorms	600	6	$11,726,500	100%	$1,954,417
Landslides	N/A	N/A	N/A	N/A	N/A
Land Subsidence/Sinkholes	N/A	N/A	N/A	N/A	N/A
Tsunamis	0	All	0	0	0
Wildfires	N/A	N/A	N/A	N/A	N/A
Winter Storms	15	26	0	58%	0

Sources: National Climatic Data Center (NCDC), Alabama Forestry Commission
*Damages do not include all recorded hurricanes during this period. See description below.

Dam Failure: The risk of losses from dam failure cannot be calculated based on historic records due to lack of data. Even though dam failure is a rare occurrence and is mostly unprecedented in the planning area, an occurrence could cause critical damages downstream.

Drought/Extreme Heat: The risk of losses from drought and extreme heat cannot be calculated 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. The probability of drought and extreme heat occurring within the region is relatively high. The probability of an impactful drought or an extreme heat event occurring in the planning area is classified as medium (10-50 years).

Flooding: The division is both subject to flash, riverine, and coastal flooding. Incidences and damages have been reported as a result of all three, but risks vary by jurisdiction. There have been 94 occurrences of flooding in the past 21 years, with an estimated cost in damages of over $38 million in damages. Flooding is the third highest damaging hazard in the division.

High Winds (Hurricanes): Since 1979, the planning area has experienced 18 hurricanes. From only five of these storms (Frederic, Danny, Georges, Ivan and Katrina) the damage exceeds $12 trillion making hurricanes the highest damaging hazard in the division. While hurricanes don't occur every year in the planning area, they are by far the most expensive and can cause the most widespread damage.

High Winds (Tornadoes): Since 1950, the planning area has experienced tornadoes almost every year. The planning area has had 102 occurrences of high wind events over the past 6 years. These occurrences have caused over $12 million in damages, making it the second highest damaging hazard in the planning area, behind hurricanes.

High Winds (Severe Thunderstorms): The planning area experiences numerous severe thunderstorms each year. In the last six years, 600 severe thunderstorms have been recorded in the planning area with damages totaling over $11 million and ranking the category the third highest damaging hazard in the planning area.

Landslides: The 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 the planning area, there are no damage estimates attached to those events. Any landslide occurrence in the planning area would most likely be minor in impact due to the localized nature of these events.

Land Subsidence/Sinkholes: 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 region would most likely be minor in impact due to the localized nature of these events.

Tsunamis: There have been no recorded occurrences of tsunamis in the planning region ever.

Wildfires: Though wildfires are the most likely hazard to occur in the planning area, the impact of wildfires have been very minor and localized in mostly undeveloped areas. Though historically, wildfires have mostly affected timber resources in the planning area, future development in wildland urban interface areas should be mindful of this potential hazard.

Winter Storms: There have been 15 winter storms over the past 26 years but has resulted in $0 in damages. These events normally have a short duration and have minor impacts, though the planning area is not especially prepared for a long duration event, if it would occur.

3.5 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 3.30 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 73 dams listed in the National Inventory of Dams (NID) database for the planning region. Of these dams, three 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 the planning region. 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 2.3 (on a scale of 0 to 4).

Table 3.31 Risk Impact Assessment for Drought/Extreme Heat

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

Both extreme heat and drought can occur at any location in the planning area 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 the planning area, only Escambia County has experienced a drought since 2000. Two droughts occurred in 2016 and were D-3 and D-3/D-2 respectively. D4 drought conditions are certainly possible and 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 also 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 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. All of the planning area is subject to extreme temperatures.

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.

EARTHQUAKES

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

Table 3.32 Risk Impact Assessment for Earthquakes

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

Since 1974, there have been 21 recorded earthquakes in SARPC's planning area, and none above a 5 on the Richter scale. All but two of these earthquakes occurred in Escambia County, and none in Baldwin County. These occurances have happened in Escambia and Mobile Counties, but not Baldwin County.

The possibility of earthquakes occurring in the planning area is medium, however, due to the unlikeliness of a strong magnitude earthquake, the risk of impact is minor and the area of impact also small.

FLOODING

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

Table 3.33 Risk Impact Assessment for Flooding

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

Figures 3.3-3.5 provide floodplain areas for each county in the planning area. 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 the planning area. 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 except for coastal flooding which is usually due to tropical weather systems. In the case of tropical systems, there is usually enough advance warning that people can prepare and evacuate.

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 SARPC's GIS system. Therefore, analysis from the HAZUS-MH flood model will be incorporated in the next plan update. Information pertaining to historical insured flood losses and repetitive flooded properties are included to provide more detailed information of areal losses based from flooding.

Historical Flood Losses

According to FEMA flood insurance policy records as of January 28, 2021, there have been 29,185 flood losses reported through the NFIP since 1970 in the planning area, totaling $401,896,656 in claims payments. A summary of these figures is provided in Table 3.34. It should be noted that these loss numbers only include structures that were insured through NFIP and that were reported. It is likely that there are many other flood losses not reported, in uninsured structures, or denied payment.

Table 3.34 Historical Summary of Insured Flood Losses

Jurisdiction	Flood Losses	Claims Payments
Baldwin County Total (Municipalities + Unincorporated)	26,552	$329,249,754
City of Bay Minette	17	$129,332
City of Daphne	87	$1,971,627
Town of Elberta	200	$8,936,847
City of Fairhope	700	$18,934,910
City of Foley	228	$9,810,551
City of Gulf Shores	10,494	$97,545,682
Town of Loxley	8	$157,767
Town of Magnolia Springs	99	$2,511,728
City of Orange Beach	13,987	$158,934,367
Town of Perdido Beach	28	$1,147,434
City of Robertsdale	18	$496,880
Town of Silverhill	29	$1,252,809
City of Spanish Fort	41	$2,797,267
Town of Summerdale	80	$2,961,572
Escambia County Total (Municipalities + Unincorporated)	101	$5,413,206
City of Atmore	33	$550,726
City of Brewton	62	$4,779,651
City of East Brewton	3	$17,364
Town of Flomaton	1	$9,464
Town of Pollard	-	-
Town of Riverview	-	-
Mobile County Total (Municipalities + Unincorporated)	2,532	$67,233,696
City of Bayou La Batre	236	$14,905,560
City of Chickasaw	112	$2,877,653
City of Citronelle	1	$0
City of Creola	5	$2,612
Town of Dauphin Island	1,587	$40,721,785
City of Mobile	291	$5,412,191
Town of Mount Vernon	-	-
City of Prichard	56	$326,423

City of Saraland	149	$1,164,141
City of Satsuma	7	$108,971
City of Semmes	1	$950

Source: Federal Emergency Management Agency, National Flood Insurance Program

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). The following is a discussion of repetitive loss properties by county and jurisdiction:

Table 3.35 Repetitive Loss Properties in the NFIP

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
BALDWIN COUNTY							
UNINCORPORATED	2-4 FAMILY	-	-	$0.00	4	1	$157,639
UNINCORPORATED	ASSMD CONDO	-	-	$0.00	4	3	$202,344.95
UNINCORPORATED	ASSMD CONDO	3	2	$513,081.77	3	2	$715,911.96
UNINCORPORATED	OTHER RESID	-	-	$0.00	1	-	$90,548.17
UNINCORPORATED	OTHR-NONRES	-	-	$0.00	4	2	$560,533.13
UNINCORPORATED	SINGLE FMLY	-	-	$0.00	316	192	$17,814,772.34
UNINCORPORATED	SINGLE FMLY	94	39	$17,460,337.97	111	37	$21,587,340.28
BAY MINETTE	2-4 FAMILY	-	-	$0.00	1	-	$21,870.89
DAPHNE	SINGLE FMLY	-	-	$0.00	12	5	$685,153.71
DAPHNE	SINGLE FMLY	2	1	$407,129.19	3	1	$528,755.01
ELBERTA	SINGLE FMLY	-	-	$0.00	1	1	$89,462.70
ELBERTA	SINGLE FMLY	1	-	$439,501.68	1	-	$467,662.36
FAIRHOPE	ASSMD CONDO	-	-	$0.00	1	1	$432,894.52
FAIRHOPE	ASSMD CONDO	3	1	$1,016,098.60	4	1	$3,744,688.77
FAIRHOPE	BUSI-NONRES	-	-	$0.00	1	-	$11,918.69

FAIRHOPE	OTHER RESID	-	-	$0.00	1	-	$29,270.97
FAIRHOPE	OTHER RESID	1	-	$89,211.05	1	-	$89,211.05
FAIRHOPE	OTHR-NONRES	1	-	$315,926.60	2	-	$1,155,513.45
FAIRHOPE	SINGLE FMLY	-	-	$0.00	42	18	$4,085,403.49
FAIRHOPE	SINGLE FMLY	9	4	$1,790,056.10	12	4	$2,276,890.62
FOLEY	ASSMD CONDO	-	-	$0.00	1	-	$51,259.02
FOLEY	SINGLE FMLY	-	-	$0.00	6	5	$814,192.84
GULF SHORES	2-4 FAMILY	-	-	$0.00	81	45	$3,681,980.77
GULF SHORES	2-4 FAMILY	4	2	$526,003.62	14	2	$1,990,613.15
GULF SHORES	ASSMD CONDO	-	-	$0.00	27	18	$6,758,657.34
GULF SHORES	ASSMD CONDO	3	1	$1,049,677.41	7	1	$5,931,438.84
GULF SHORES	OTHER RESID	-	-	$0.00	69	36	$12,990,228.75
GULF SHORES	OTHER RESID	5	-	$1,781,354.49	23	-	$11,888,633.59
GULF SHORES	OTHR-NONRES	-	-	$0.00	35	15	$6,122,518.71
GULF SHORES	OTHR-NONRES	9	2	$4,710,095.32	14	2	$9,550,615.80
GULF SHORES	SINGLE FMLY	-	-	$0.00	891	555	$37,109,312.62
GULF SHORES	SINGLE FMLY	76	28	$7,842,413.55	138	27	$16,402,489.81
LOXLEY	SINGLE FMLY	-	-	$0.00	2	1	$85,689.03
LOXLEY	SINGLE FMLY	1	-	$57,760.13	1	-	$92,121.56
ORANGE BEACH	2-4 FAMILY	-	-	$0.00	9	6	$737,576.74
ORANGE BEACH	ASSMD CONDO	-	-	$0.00	10	7	$15,500,385.07
ORANGE BEACH	OTHER RESID	-	-	$0.00	21	15	$18,414,723.23
ORANGE BEACH	OTHER RESID	2	-	$2,539,441.96	6	-	$11,415,614.84
ORANGE BEACH	OTHR-NONRES	-	-	$0.00	9	7	$5,950,328.64
ORANGE BEACH	OTHR-NONRES	1	1	$250,855.25	3	1	$1,849,944.16

ORANGE BEACH	SINGLE FMLY	-	-	$0.00	116	66	$5,072,425.52
ORANGE BEACH	SINGLE FMLY	12	1	$2,201,488.03	21	1	$3,413,499.31
ROBERTSDALE	OTHER RESID	-	-	$0.00	2	2	$334,229.79
SILVERHILL	SINGLE FMLY	-	-	$0.00	1	-	$33,405.71
SPANISH FORT	OTHR-NONRES	-	-	$0.00	4	-	$284,418.92
SPANISH FORT	SINGLE FMLY	-	-	$0.00	3	-	$480,352.88
SPANISH FORT	SINGLE FMLY	1	-	$274,681.50	1	-	$313,765.06
TOTAL BALDWIN COUNTY		**228**	**82**	**$43,265,114.22**	**2,040**	**1,080**	**$232,018,207.87**

ESCAMBIA COUNTY							
ATMORE	OTHR-NONRES	-	-	$0.00	1	-	$20,183.18
ATMORE	SINGLE FMLY	-	-	$0.00	6	1	$345,737.42
ATMORE	SINGLE FMLY	-	-	$0.00	1	-	$82,936.01
BREWTON	ASSMD CONDO	-	-	$0.00	1	1	$205,618.33
BREWTON	OTHR-NONRES	-	-	$0.00	19	6	$3,231,933.55
BREWTON	OTHR-NONRES	1	-	$43,872.40	2	-	$1,613,490.40
BREWTON	SINGLE FMLY	-	-	$0.00	3	-	$142,851.00
EAST BREWTON	OTHR-NONRES	-	-	$0.00	2	-	$344,194.82
EAST BREWTON	OTHR-NONRES	1	-	$140,022.47	2	-	$427,519.03
EAST BREWTON	SINGLE FMLY	-	-	$0.00	1	-	$33,324.18
EAST BREWTON	SINGLE FMLY	1	-	$33,741.82	1	-	$49,564.01
UNINCORPORATED	SINGLE FMLY	-	-	$0.00	2	-	$119,473.68
TOTAL ESCAMBIA COUNTY		3	-	$217,636.69	41	8	$6,616,825.61

MOBILE COUNTY							
UNINCORPORATED	ASSMD CONDO	-	-	$0.00	1	1	$71,640.25
UNINCORPORATED	ASSMD CONDO	1	-	$273,506.00	1	-	$357,135.27

UNINCORPORATED	BUSI-NONRES	-	-	$0.00	1	-	$359,156.04
UNINCORPORATED	OTHER RESID	-	-	$0.00	1	-	$59,409.69
UNINCORPORATED	OTHR-NONRES	-	-	$0.00	4	1	$607,083.39
UNINCORPORATED	OTHR-NONRES	2	-	$202,996.80	3	-	$289,853.78
UNINCORPORATED	SINGLE FMLY	-	-	$0.00	162	75	$9,453,650.93
UNINCORPORATED	SINGLE FMLY	63	11	$6,793,590.14	68	11	$8,184,190.01
BAYOU LA BATRE	ASSMD CONDO	1	-	$1,466,733.38	3	-	$2,290,079.49
BAYOU LA BATRE	OTHR-NONRES	-	-	$0.00	18	2	$3,854,875.82
BAYOU LA BATRE	OTHR-NONRES	2	1	$595,023.11	4	1	$929,104.44
BAYOU LA BATRE	SINGLE FMLY	-	-	$0.00	28	10	$2,505,797.46
BAYOU LA BATRE	SINGLE FMLY	18	5	$1,466,346.28	16	3	$1,363,714.69
CHICKASAW	OTHR-NONRES	-	-	$0.00	1	-	$126,270.25
CHICKASAW	SINGLE FMLY	-	-	$0.00	25	9	$2,018,546.59
CHICKASAW	SINGLE FMLY	6	2	$860,359.21	5	1	$721,195.69
DAUPHIN ISLAND	2-4 FAMILY	-	-	$0.00	13	6	$407,429.51
DAUPHIN ISLAND	2-4 FAMILY	2	1	$378,749.05	2	1	$451,390.31
DAUPHIN ISLAND	ASSMD CONDO	-	-	$0.00	6	6	$3,808,552.32
DAUPHIN ISLAND	ASSMD CONDO	2	1	$234,076.02	2	1	$288,474.00
DAUPHIN ISLAND	BUSI-NONRES	1	-	$89,193.28	1	-	$117,183.99
DAUPHIN ISLAND	OTHER RESID	-	-	$0.00	4	4	$331,022.37
DAUPHIN ISLAND	OTHR-NONRES	-	-	$0.00	15	5	$720,835.23
DAUPHIN ISLAND	OTHR-NONRES	1	-	$384,931.70	2	-	$663,761.52
DAUPHIN ISLAND	SINGLE FMLY	-	-	$0.00	420	320	$19,200,234.31
DAUPHIN ISLAND	SINGLE FMLY	98	37	$16,272,499.92	158	39	$28,934,592.20
MOBILE	2-4 FAMILY	-	-	$0.00	1	1	$14,643.00

MOBILE	ASSMD CONDO	-	-	$0.00	8	4	$1,231,128.54
MOBILE	ASSMD CONDO	1	-	$232,866.01	1	-	$240,941.26
MOBILE	BUSI-NONRES	-	-	$0.00	2	2	$647,206.86
MOBILE	BUSI-NONRES	1	1	$192,400.00	1	1	$339,950.08
MOBILE	OTHER RESID	-	-	$0.00	19	2	$811,436.49
MOBILE	OTHER RESID	-	-	$0.00	2	-	$335,356.24
MOBILE	OTHR-NONRES	-	-	$0.00	43	11	$8,220,524.81
MOBILE	OTHR-NONRES	4	-	$1,084,240.55	9	-	$4,486,270.17
MOBILE	SINGLE FMLY	-	-	$0.00	253	87	$13,903,326.72
MOBILE	SINGLE FMLY	95	20	$11,932,019.60	107	19	$14,877,799.01
PRICHARD	2-4 FAMILY	-	-	$0.00	2	-	$44,022.96
PRICHARD	OTHER RESID	-	-	$0.00	1	-	$48,378.74
PRICHARD	SINGLE FMLY	-	-	$0.00	11	1	$223,138.83
PRICHARD	SINGLE FMLY	2	-	$92,638.30	2	-	$151,456.08
SARALAND	2-4 FAMILY	-	-	$0.00	1	1	$13,367.66
SARALAND	ASSMD CONDO	-	-	$0.00	1	-	$83,178.43
SARALAND	OTHER RESID	-	-	$0.00	1	-	$5,499.00
SARALAND	OTHR-NONRES	-	-	$0.00	3	-	$39,312.15
SARALAND	SINGLE FMLY	-	-	$0.00	28	12	$893,096.64
SARALAND	SINGLE FMLY	3	-	$215,963.29	6	-	$441,386.48
SATSUMA	SINGLE FMLY	-	-	$0.00	15	1	$447,240.29
SATSUMA	SINGLE FMLY	2	2	$165,406.86	3	2	$292,713.04
TOTAL MOBILE COUNTY		**239**	**70**	**$35,663,446.56**	**1,243**	**552**	**$116,524,433.67**

HIGH WINDS – HURRICANES

According to the Risk Impact Assessment, the hurricane hazard scored a value of 3.2 (on a scale of 0 to 4).

Table 3.36 Risk Impact Assessment for Hurricanes

Probability	Medium
Impact	Catastrophic
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 the planning area are vulnerable to this hazard and its impacts. The planning area includes coastal areas in Baldwin and Mobile County and is at a higher risk than other non-coastal areas. The intensity of tropical systems affecting the Gulf Coast can remain high as these storms travel inland into the region.

Severe storms, tornadoes, high winds, hail, torrential rains, river flooding, and flash flooding are all associated with tropical systems as they move inland. Again, the coastal areas in the planning area are associated with a higher risk than the inland areas of the region. The loss of life, property, and possessions is greater in coastal areas, but can certainly can occur inland. Interruption of utility and communication service is expected. Tornadoes and flash flooding can occur secondary to the tropical systems and 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 damage. Another concern is the large amount of debris that results. Normally there are a few days of warnings before a tropical system impacts the planning area allowing for preparations and evacuations.

The landscape of the counties within the planning area 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.

HIGH WINDS - TORNADOES

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

Table 3.37 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 the planning area 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 3.38 provides a county by county description of impact based on historical data for the past 6 years. In addition, each county has also experienced numerous tornadoes rating a 0 or 1

Table 3.38 Potential Impact of Tornadic Events by County
SARPC's Division A Region

Baldwin County	F2 (Fujita Scale) 113-157 mph	Considerable Damage: Roofs torn off frame houses; mobile homes demolished; boxcars overturned; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.
	F3 (Fujita Scale) 158-207 mph	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.
Escambia County	EF2 (Enhanced Fujita Scale) 111-135 mph	Considerable Damage: Roofs torn off frame houses; mobile homes demolished; boxcars overturned; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.
Mobile County	F2 (Fujita Scale) 113-157 mph	Considerable Damage: Roofs torn off frame houses; mobile homes demolished; boxcars overturned; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.
	F3 (Fujita Scale) 158-207 mph	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.

Source: NOAA Storms Database/ Fujita Damage Scale

HIGH WINDS/SEVERE THUNDERSTORMS

According to the Risk Impact Assessment, the severe thunderstorm hazard scored a value of 2.8 (on a scale of 0 to 4).

Table 3.39 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 the planning area.

Since 1994, the highest wind speed measured in Baldwin County was 104 knots, and there were 10 other occurrences with speeds of over 70 knots. Escambia County has a 90 knot wind gust on record and six other reports of speeds over 70. Mobile County's highest recorded speed since 1994 was 88 knots, with 11 other events with speeds over 70. 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 1.6 (from a scale of 0 to 4).

Table 3.40 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 Figure 3.7 which provides areas with higher susceptibility. 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 3.41 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 Figures 3.9-3.12 which provides areas with karst topography and topographic depressions which leads to higher susceptibility. 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 2.8 (on a scale of 0 to 4).

Table 3.42 Risk Impact Assessment for Wildfires

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

Due to the large areas of forest-covered land in the planning area, wildfires are a threat to all four counties. Potential risk by jurisdiction can be seen from examining Figures 3.13 and 3.14. 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.

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.

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 3.43 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 4- 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 A to practice becoming less vulnerable to the identified hazards in the Risk Assessment.

Section Contents

4.1 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.

4.2 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 A 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).

4.3 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 4.4 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 A - SARPC Planning Area is composed of 31 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 4.3 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 participate in the National Flood Insurance Program (NFIP) and maintain compliance with the applicable regulations (Table 4.3). 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 commission (SARPC) 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 2.1 of this plan.

Table 4.1 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 4.1 Statutory Authority and Resources

Division A Hazard Mitigation Action Plan: Capabilities Assessment	Authorized for…	Practiced by…	Proposed for…	Incorporated through…
Police power: Ability to regulate activities of individuals in the jurisdiction for purposes of health, safety, and public welfare	Municipalities, Counties	**Baldwin County**: Baldwin County Sheriff's Department, City of Bay Minette, City of Daphne, Town of Elberta, City of Fairhope, City of Foley, City of Gulf Shores, Town of Loxley, Town of Magnolia Springs, City of Orange Beach **Escambia County:** Escambia County Sheriff's Department, City of Atmore, City of Brewton, City of East Brewton, Town of Flomaton, Town of Pollard, Town of Riverview **Mobile County:** Mobile County Sheriff's Department, City of Bayou La Batre, City of Chickasaw, City of Citronelle, City of Creola, Town of Dauphin Island, City of Mobile, Town of Mount Vernon, City of Prichard, City of Saraland, City of Satsuma, City of Semmes	All municipal jurisdictions	Council or Commission action to enact and enforce regulations

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

Table 4.1 Statutory Authority and Resources (continued)

Division A Hazard Mitigation Action Plan: Capabilities Assessment	**Authorized for…**	**Practiced by…**	**Proposed for…**	**Incorporated through…**
Building code enforcement: Ability to enforce codes related to building materials and construction standards outside of flood hazard areas	Municipalities, Counties	**Baldwin County**: Baldwin County, City of Bay Minette, City of Daphne, Town of Elberta, City of Fairhope, City of Foley, City of Gulf Shores, Town of Loxley, Town of Magnolia Springs, City of Orange Beach **Escambia County:** City of Atmore, City of Brewton, City of East Brewton **Mobile County:** Mobile County, City of Bayou La Batre, City of Chickasaw, City of Citronelle, City of Creola, Town of Dauphin Island, City of Mobile, Town of Mount Vernon, City of Prichard, City of Saraland, City of Satsuma, City of Semmes		Council or Commission action to enact and enforce regulations

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
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 4.1 Statutory Authority and Resources (continued)

Division A Hazard Mitigation Action Plan: Capabilities Assessment	**Authorized for…**	**Practiced by…**	**Proposed for…**	**Incorporated through…**
Purchase properties subject to flooding and maintain as permanent open space.	Municipalities, Counties, School Boards, Utilities	All Jurisdictions	All Jurisdictions	Action to approve expenditures by local county commission, city council, school board, or utility board

Zoning authority: Ability to divide political jurisdiction into districts for purposes of regulating buildings and their use (inside and outside of flood hazard areas)	Municipalities	**Baldwin County**: Baldwin County, City of Bay Minette, City of Daphne, City of Fairhope, City of Foley, City of Gulf Shores, Town of Loxley, Town of Magnolia Springs, City of Orange Beach **Escambia County:** City of Atmore, City of Brewton, City of East Brewton, **Mobile County:** City of Bayou La Batre, City of Chickasaw, City of Citronelle, City of Creola, Town of Dauphin Island, City of Mobile, Town of Mount Vernon, City of Prichard, City of Saraland, City of Satsuma		Council action to enact and enforce regulations
Subdivision regulations: A ability to control new developments involving new lot lines and infrastructure (inside and outside of flood hazard areas)	Municipalities, Counties	**Baldwin County**: Baldwin County, City of Bay Minette, City of Daphne, Town of Elberta, City of Fairhope, City of Foley, City of Gulf Shores, Town of Loxley, Town of Magnolia Springs, City of Orange Beach **Escambia County:** Escambia County, City of Atmore, City of Brewton, City of East Brewton **Mobile County:** Mobile County, City of Bayou La Batre, City of Chickasaw, City of Citronelle, City of Creola, Town of Dauphin Island, City of Mobile, Town of Mount Vernon, City of Prichard, City of Saraland, City of Satsuma, City of Semmes		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			Council action to enact and enforce regulations

Table 4.2 below provides a summary of local plans, ordinances, and programs currently in place, or being developed within jurisdictions in Division A. 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 4.2 Relevant Plans, Ordinances, and Programs

	Zoning Ordinance	Code Enforcement	Recent Master Plan	Certified Flood Manager	NFIP Participation
Baldwin County					Y
Baldwin County	Y	Y	Y	Y	Y
City of Bay Minette	Y	Y	Y	Y	Y
City of Daphne	Y	Y	N	N	Y
Town of Elberta	Y	Y	N	Y	Y
City of Fairhope	Y	Y	Y	Y	Y
City of Foley	Y	Y	Y	Y	Y
City of Gulf Shores	Y	Y	Y	Y	Y
Town of Loxley	Y	Y	Y	N	Y
Town of Magnolia Springs	Y	Y	Y	N	Y
City of Orange Beach	Y	Y	Y	Y	Y
Town of Perdido Beach	Y	Y	Y	N	Y
City of Robertsdale	Y	Y	N	Y	Y
Town of Silverhill	Y	Y	N	N	Y
City of Spanish Fort	Y	Y	N	Y	Y
Town of Summerdale	Y	Y	Y	Y	Y
Escambia County					Y
Escambia County	N	Y	N	N	Y
City of Atmore	Y	Y	N	N	Y
City of Brewton	Y	Y	N	N	Y
City of East Brewton	Y	Y	N	N	Y
Town of Flomaton	N	Y	N	N	Y
Town of Pollard	N	Y	N	N	Y
Town of Riverview	N	Y	N	N	Y
Mobile County					Y
Mobile County	N	Y	N	Y	Y
City of Bayou La Batre	Y	Y	Y	N	Y
City of Chickasaw	Y	Y	Y	Y	Y
City of Citronelle	Y	Y	Y	N	Y
City of Creola	Y	Y	Y	N	Y

Town of Dauphin Island	Y	Y	Y	Y	Y
City of Mobile	Y	Y	Y	Y	Y
Town of Mount Vernon	Y	Y	Y	N	Y
City of Prichard	Y	Y	Y	N	Y
City of Saraland	Y	Y	Y	N	Y
City of Satsuma	Y	Y	Y	N	Y
City of Semmes	*	Y	Y	Y	*

Table 4.3 below summarizes NFIP participation and policy statistics for each jurisdiction in the planning area as of March 12, 2021. More site-specific information on at-risk structures and repetitive loss properties is provided in Section 3.6 in the Risk Assessment. The only jurisdiction that is not currently participating, is Semmes, but they did participate in the hazard mitigation planning process.

Table 4.3 National Flood Insurance (NFIP) Status

Jurisdiction	Participation Status	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date
Baldwin County				
Baldwin County	Participating	NA	1/12/73	4/19/19
City of Bay Minette	Participating	10/24/75	12/01/81	4/19/19
City of Daphne	Participating	6/7/74	3/2/81	4/19/19
Town of Elberta	Participating	11/15/74	6/17/02	4/19/19
City of Fairhope	Participating	5/24/74	1/5/78	4/19/19
City of Foley	Participating	11/26/76	7/3/86	4/19/19
City of Gulf Shores	Participating	7/10/71	7/10/71	4/19/19
Town of Loxley	Participating	6/28/74	12/1/81	4/19/19
Town of Magnolia Springs	Participating	N/A	6/17/02	4/19/19
City of Orange Beach	Participating	N/A	1/12/73	4/19/19
Town of Perdido Beach	Participating	N/A	6/17/02	4/19/19
City of Robertsdale	Participating	1/28/77	12/1/81	4/19/19
Town of Silverhill	Participating	6/28/74	12/14/79	4/19/19
City of Spanish Fort	Participating	N/A	6/17/02	4/19/19
Town of Summerdale	Participating	1/13/78	6/17/02	4/19/19
Escambia County				
Escambia County	Participating	10/27/78	9/28/07	3/6/20
City of Atmore	Participating	4/5/74	6/24/77	3/6/20
City of Brewton	Participating	12/7/73	12/18/79	6/5/12
City of East Brewton	Participating	11/28/73	12/4/79	6/5/12
Town of Flomaton	Participating	11/23/73	12/17/87	6/5/12
Town of Pollard	Participating	1/31/75	9/28/07	6/5/12
Town of Riverview	Participating	8/30/74	9/4/86	6/5/12
Mobile County				
Mobile County	Participating	N/A	12/11/70	6/5/20
City of Bayou La Batre	Participating	N/A	3/17/72	6/5/20

City of Chickasaw	Participating	N/A	2/19/71	6/5/20
City of Citronelle	Participating	1/31/75	6/17/77	6/5/20
City of Creola	Participating	N/A	1/8/72	6/5/20
Town of Dauphin Island	Participating	N/A	6/5/20	6/5/20
City of Mobile	Participating	N/A	9/15/72	6/5/20
Town of Mount Vernon	Participating	12/17/73	12/16/77	6/5/20
City of Prichard	Participating	6/28/74	2/4/81	6/5/20
City of Saraland	Participating	5/24/74	12/18/79	6/5/20
City of Satsuma	Participating	5/3/74	9/29/78	6/5/20
City of Semmes	Applying	N/A	N/A	6/5/20

Source: NFIP Community Status Book (3/12/21)

4.5 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.

Jurisdiction Name	
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

Priority/Status	Participants prioritized the available mitigation measures and projects considering the following criteria: •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. •Social considerations including but not limited to environmental justice, neighborhood impact, community support, and impact on social and cultural resources. •Environmental considerations including but not limited to compliance with the National Environmental Policy Act (NEPA), state and local environmental regulations, and environmental conservation goals. •Administrative, legal, and political considerations including but not limited to staffing, maintenance, timing, legal authority, and political support. •Technical considerations including but not limited to technical feasibility. 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 Overall, the participating jurisdictions priorities have not changed much since the previous planning cycle.
Cost	Estimated cost (if known) of action to be taken

4.5.1 SARPC Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority/ Status	Cost
1	SARPC will maintain the mitigation plan by seeking additional grant funding, as needed	All	SARPC	HMGP/ Local Funds	High	TBD
1	SARPC will coordinate multi-jurisdiction collaboration by attending AEMA Division A meetings on at least an annual basis	All	SARPC	Local Funds	High	TBD
1	SARPC will incorporate HAZUS-MH and Risk MAP information in Risk Assessment for future plan updates	Flooding/ High Winds	SARPC	HMGP/ Local Funds	High	TBD

4.5.2 SARPC Region Jurisdiction Action Plans

All SARPC Region Jurisdictional Community Action Plans are found in Appendices A-C.

Section 5- Plan Maintenance Process

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

Section Contents

5.1 Hazard Mitigation Plan Monitoring, Evaluation, and Update Process

The South Alabama Regional Planning Commission (SARPC) 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. SARPC will facilitate the annual update process at the regional level. During the fourth quarter of each calendar year, SARPC will coordinate a meeting(s) of all EMA directors/committee members in SARPC's planning area 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 SARPC 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 A 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.

5.2 Hazard Mitigation Plan Incorporation

The AEMA Division A 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 A 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 a few of the jurisdictions in Division A do not have formal planning processes in place. For those who do not, 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 South Alabama Regional Planning and Development Commission (SARPDC), as well as local economic development councils, for consistency with other regional planning and economic development activities.

5.3 Public Awareness/Participation

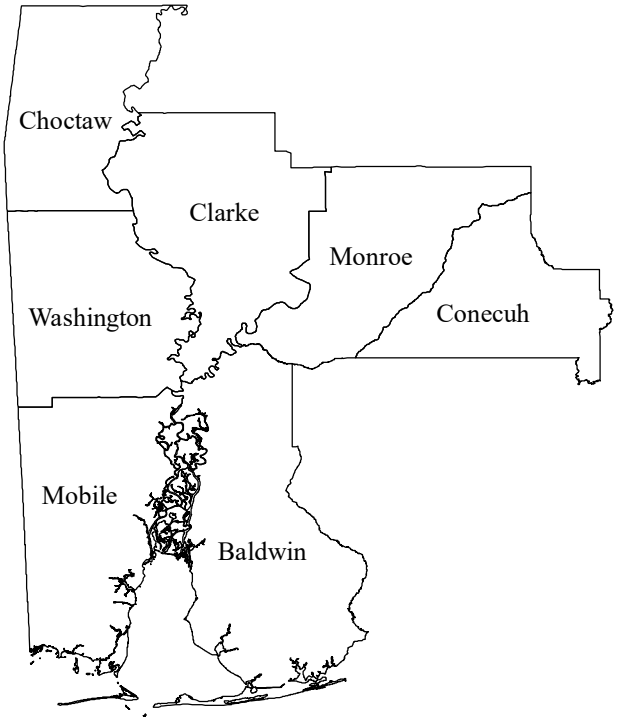
Public participation is a key component in the hazard mitigation planning process. Outreach activities give jurisdictions the ability to garner the public's opinions and ideas regarding hazard mitigation. In addition, outreach gives jurisdictions an opportunity to educate the public about hazards and mitigation strategies being undertaken. Participation throughout the planning process is important. Division A 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.

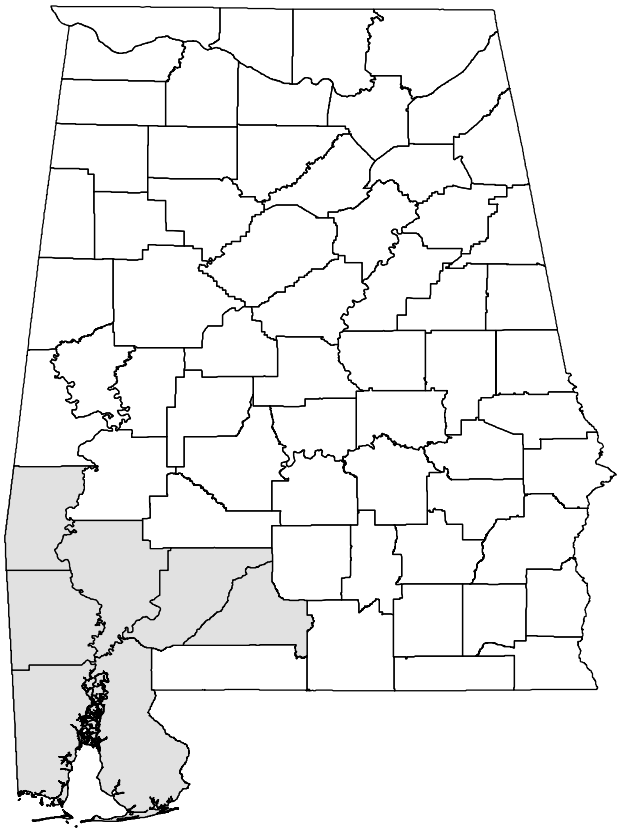
Any significant changes or amendments to the Hazard Mitigation Plan shall require a public hearing prior to adoption. Significant amendments would be those changes that affect the entire Division. The public will be informed of public hearings and other Hazard Mitigation related meetings through a variety 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 SARPC). ATRC, SARPC, 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 SARPC 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.

No public comments have been received to date.

Division A
Regional Multi-Jurisdictional Hazard Mitigation Plan
PHASE III

A HAZARD MITIGATION PLAN FOR BALDWIN, CLARKE, CONECUH, ESCAMBIA, MOBILE, MONROE, AND WASHINGTON COUNTIES INCLUDING ELIGIBLE JURISDICTIONS





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Hazard Mitigation Plan Introduction

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 A. This division includes the following counties and the municipalities and jurisdictions within them: Baldwin, Choctaw, Clarke, Conecuh, Escambia, Mobile, Monroe, and Washington.
This plan will be the first regional mitigation plan for the area. Currently, each county is covered by a multi-jurisdictional county plan. 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.

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.

Funding

Funding for the AEMA Division A Regional Multi-Jurisdictional Hazard Mitigation Plan was provided through the Hazard Mitigation Grant Program (HMGP), under Disaster Recovery Declaration 4349, (DR-4349).

Purpose

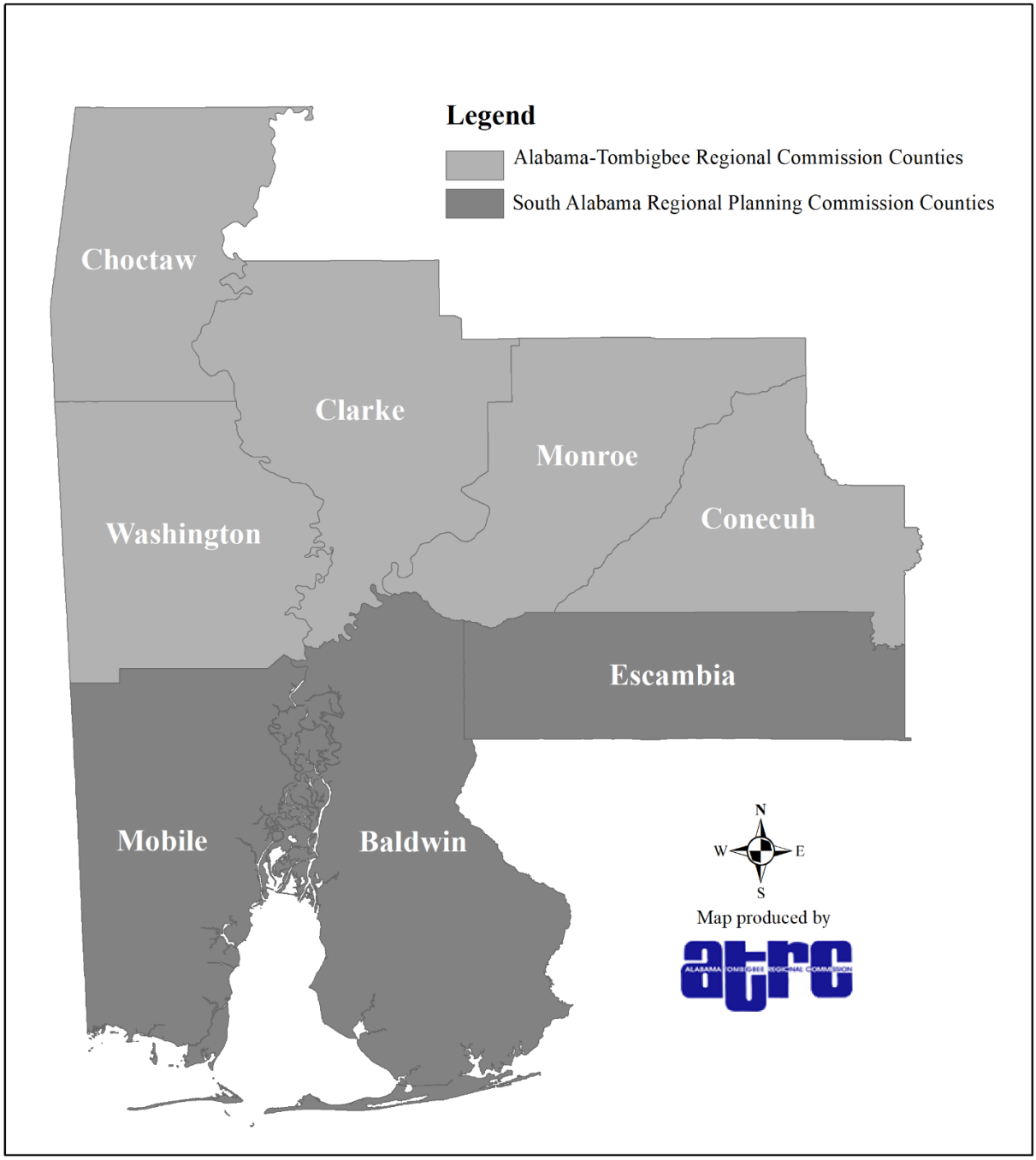
The purpose of the Division A Multi-Jurisdictional Hazard Mitigation Plan is to evaluate and identify all prioritized hazards which may affect the region. Mitigation strategies that address each of the identified hazards are presented. This plan is only one of many steps Division A jurisdictions will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

Planning Document Format

The *Division A Multi-Jurisdictional Hazard Mitigation Plan 2020* will be a multi-phase planning process. Clarke and Conecuh Counties will be included in Phase I. The remaining counties in the division will be incorporated as their current county plans expire. Choctaw County will not be part of the regional plan at this time and will continue to have a county mitigation plan.

Division A is served by two regional planning commissions, the Alabama-Tombigbee Regional Commission (ATRC) and the South Alabama Regional Planning Commission (SARPC) (Figure 1.1). ATRC serves Choctaw, Clarke, Conecuh, Monroe, and Washington Counties. SARPC serves Baldwin, Escambia, and Mobile Counties. There are considerable differences between the counties served by ATRC and those served by SARPC. Due to these differences and the phased planning process, the Division A plan will be divided into two parts: Division A-ATRC Region and Division A- SARPC Region.

Alabama Emergency Management Division A



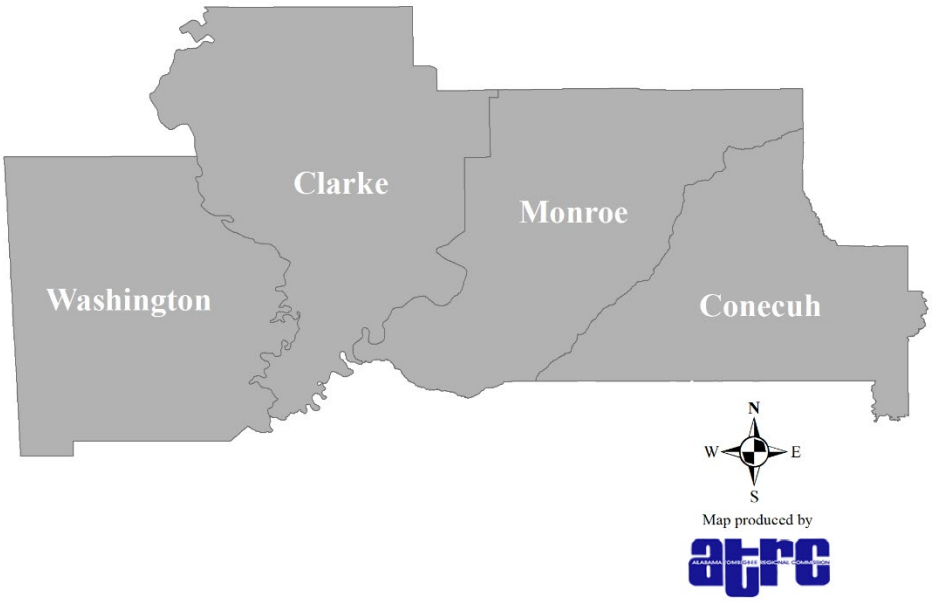
Part I- ATRC Planning Area

Clarke County

Conecuh County

Monroe County

Washington County



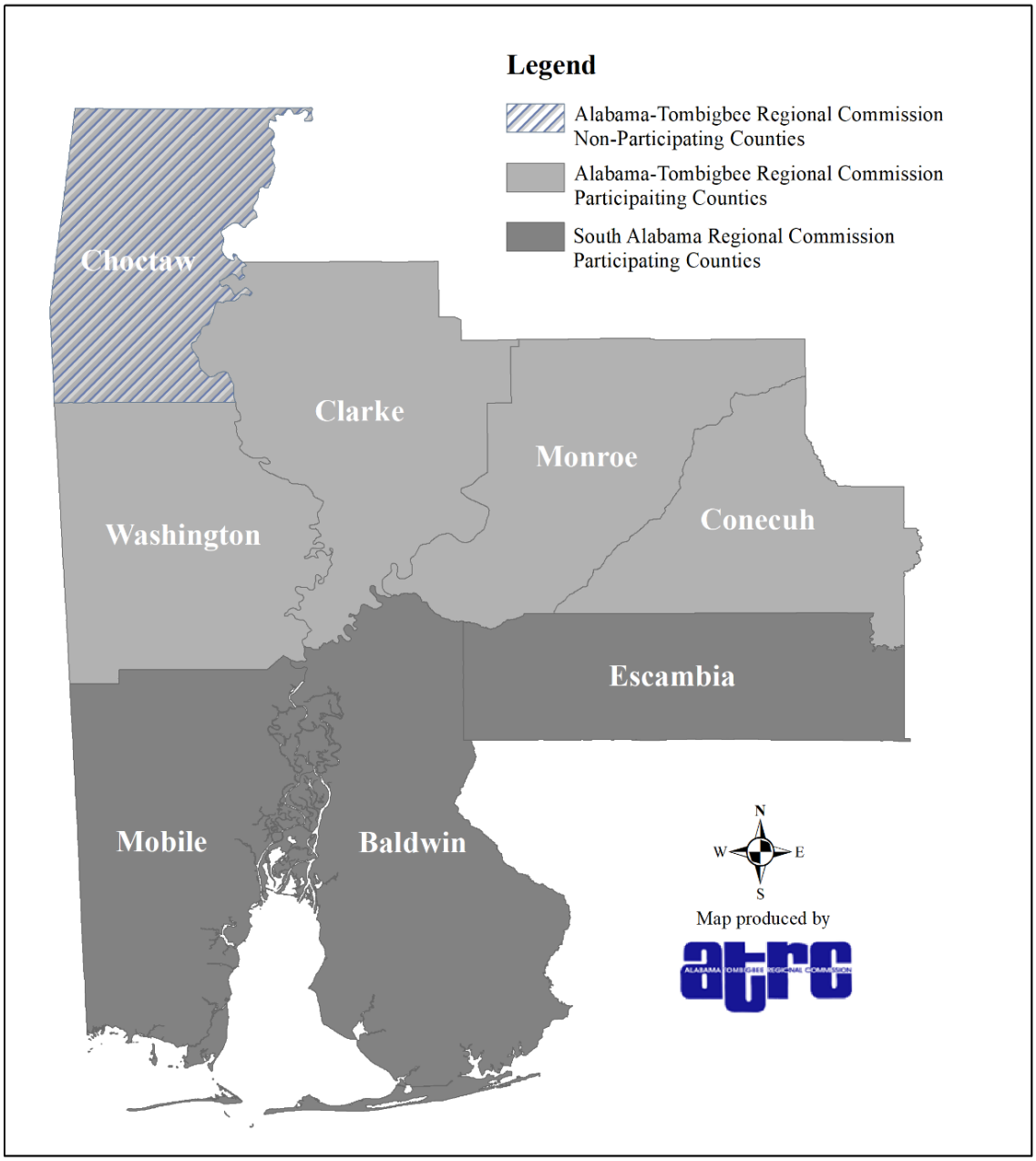
Section I. ATRC Planning Area Profile

Section Contents

1.1 Background

The planning area for this part of the plan is the Alabama Emergency Management Agency (AEMA) Division A counties served by the Alabama Tombigbee Regional Commission with the exception of Choctaw County. Counties included in the planning area are Clarke, Conecuh, Monroe, and Washington. Within these four counties there are sixteen municipalities. This version of the multi-jurisdictional hazard mitigation plan (Phase III) includes all participating ATRC counties (Clarke, Conecuh, Monroe, and Washington).

Figure 1.1 Alabama Emergency Management Division A Counties



The largest county in the planning area is Clarke County which is 1,238.46 square miles, making it the third largest county with regards to area in the state. The total land area of this four county area is 4,194.5 square miles, which is roughly 8% of the state. Table 1.1 provides the total area and population density of each county located within the planning area.

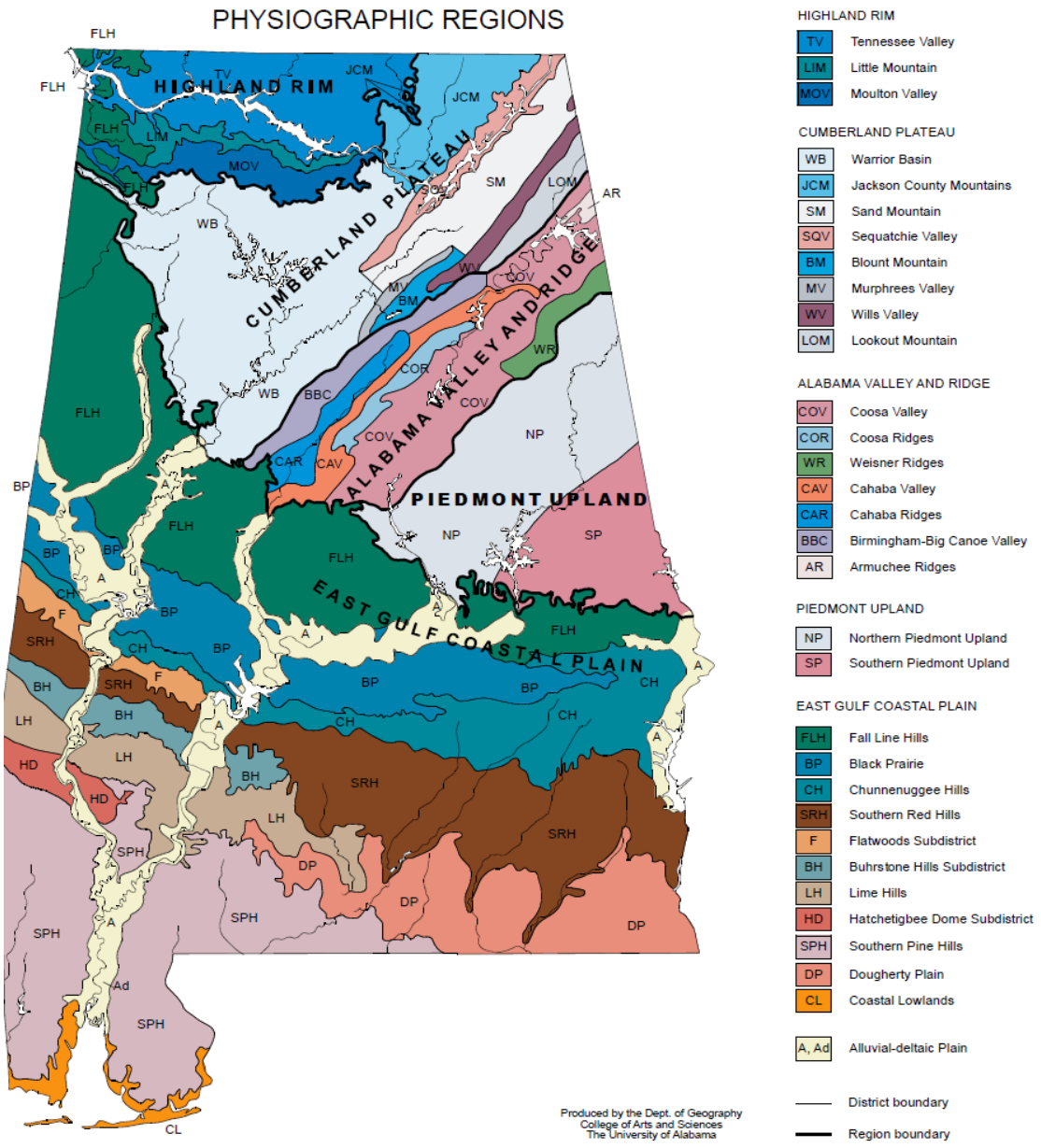
Table 1.1: Total Area by County

County	Total Area	Population per Square Mile
Clarke	1,238.46	20.9
Conecuh	850.16	15.6
Monroe	1,025.67	22.5
Washington	1,080.21	16.3

Source: U.S. Census Bureau

The entire expanse of the planning area lays within the East Gulf Coastal Plain physiographic region (Figure 1.2). 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, Escatawpa, Tombigbee, and Sepulga river systems.

Figure 1.2 Physiographic Regions of the State of Alabama



Source : http://alabamamaps.ua.edu/contemporarymaps/alabama/physical/al_physio.pdf
Last accessed 1/12/2020

A number of rivers flow through the planning area (Figure 1.3). The Alabama River flows southwest through Clarke and Monroe counties. The Escatawpa River is a tributary of the Pascagoula River and flows south through Washington County. The Sepulga River flows southeasterly through Conecuh County, it originates at the confluence of the East Sepulga and West Sepulga Rivers and discharges into the Conecuh River near the northwestern border of the Conecuh National Forest. The Tombigbee River flows southerly through Clarke and Washington Counties.

Figure 1.3 Map of Major Rivers in Alabama

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

1.2 Demographics

According to the 2018 American Community Survey data from the Census, the total population of the planning area is 75,056 people. This population spans over a total area of 4,194.5 square miles. The populations of the counties in the planning area varies. Clarke County is the most populous county with 24,387 residents. Monroe County is the second most populous with 21,512 residents. Both Washington and Conecuh have populations less than 20,000. Table 1.2 provides population counts for all jurisdictions in the ATRC planning area for AEMA Division A from the 2010 Census and the 2018 American Community Survey.

Table 1.2 Division A- ATRC Planning Area Population Change

	2010 CENSUS	2018 ACS	% Change
Clarke County	25,833	24,387	-5.60
Coffeeville	352	420	19.32
Fulton	272	208	-23.53
Grove Hill	1,570	1,573	0.19
Jackson	5,228	4,851	-7.21
Thomasville	4,209	3,997	-5.04
Conecuh County	13,236	12,514	-5.45
Castleberry	583	510	-12.52
Evergreen	3,944	3,705	-6.06
Repton	282	288	2.13
Monroe County	23,067	21,512	-6.74
Beatrice	301	310	2.99
Excel	723	1,013	40.11
Frisco City	1,309	1,459	11.46
Monroeville	6,519	6,011	-7.79
Vredenburgh	312	363	16.35
Washington County	17,580	16,643	-5.33
Chatom	1,288	980	-23.91
McInotsh	238	431	81.09
Millry	546	602	10.26

Source: U.S. Census Bureau (2010 and 2018)

Racial and ethnic characteristics from the 2019 U.S. Census estimates are provided by county in Table 1.3. The median age for the planning area is 43.25 years.

Table 1.3 Racial and Ethnic Demographics by County

	White	Black	Other	Hispanic
Clarke	53.00%	45.00%	2.00%	1.30%
Conecuh	52.00%	46.00%	2.00%	2.30%
Monroe	55.00%	41.00%	4.00%	1.70%
Washington	66.00%	23.00%	11.00%	1.60%

Source: U.S. Census Bureau (2019 Estimates)
****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 1.4.

Table 1.4 Housing Demographics by County

County	Occupied Housing Units	% Mobile Homes	% Over 35 years old
Clarke	9,358	26.91%	42.85%
Conecuh	4,574	26.21%	39.55%
Monroe	8,149	21.88%	41.72%
Washington	6,007	28.53%	39.92%

Source: US Census Bureau American Community Survey 2018

Unemployment rates for counties in the planning area vary. For 2019, unemployment rates vary from a low of 4.0% in Conecuh County to a high of 5.8% in Clarke County. Table 1.5 provides unemployment rates by county.

Table 1.5 Average Unemployment Rates by County

County	Unemployment Rate 2019
Clarke	5.8%
Conecuh	4.0%
Monroe	4.9%
Washington	4.6%

Source: Alabama Department of Labor (2019)

1.3 Business and Industry

Division A has a wide variety of both commercial and industrial stakeholders. The ATRC planning region is located along United States Highway 43 and United States Highway 84. The region includes a number of navigable inland waterways, local airports, and railroad lines. Within the planning region the economic base relies heavily on wood products.

Table 1.6 Largest Employers in AEMA Division A-ATRC Planning Area

County	Employer	Product	Employees
Clarke	Boise Cascade	Paper	570
Conecuh	Guyoung Tech	Automobile Parts	450
Monroe	Georgia Pacific- Alabama River Cellulose	Fluff Pulp	479
Washington	BASF	Chemical	400

Source: EDPA, Local Economic Developers

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.

1.4 Infrastructure

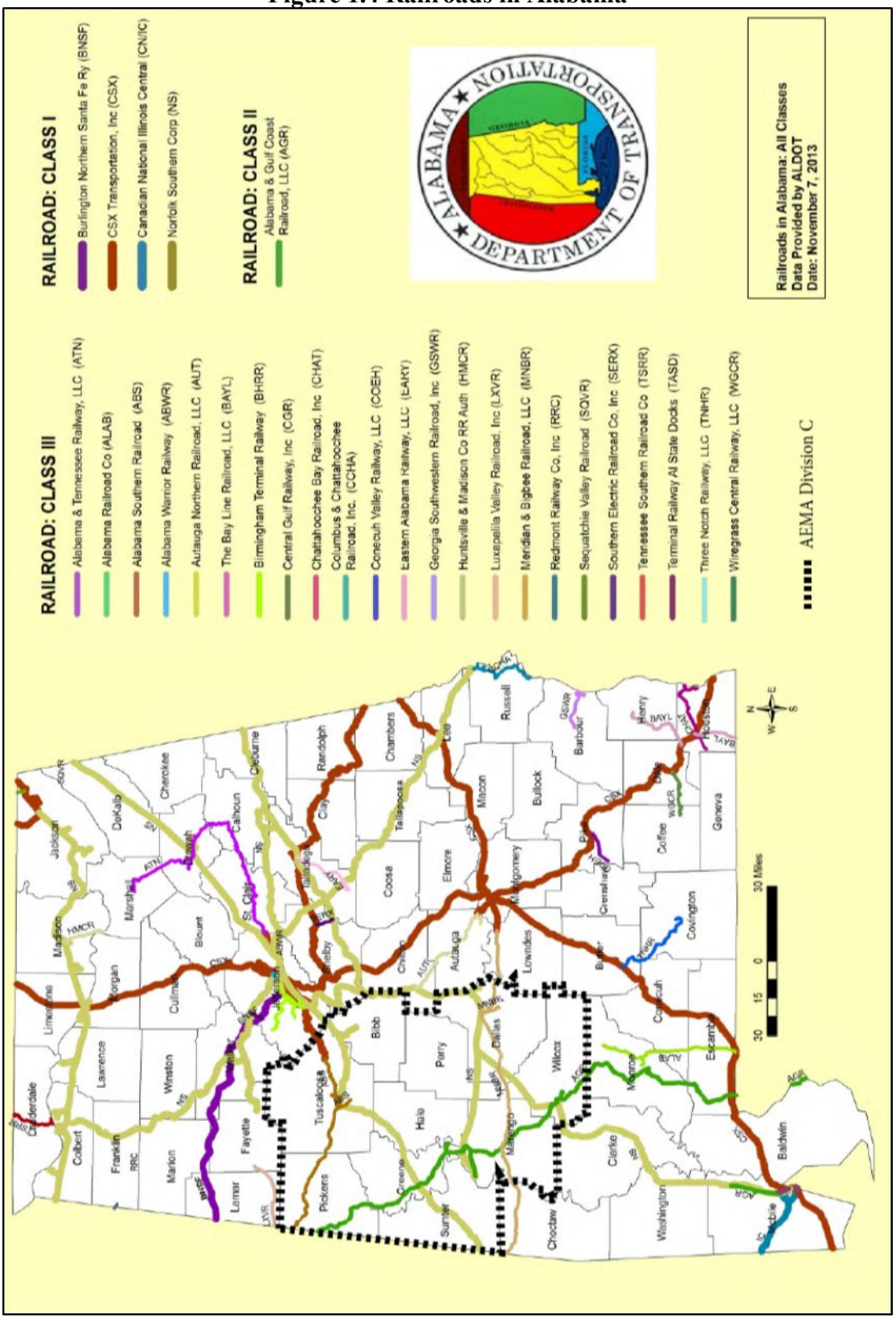
Transportation

The ATRC portion of Division A has several major federal highways. United States Highway 43 runs north-south through Clarke and Washington County. This highway serves as an important trucking and evacuation route for the central gulf coast. United States Highway 84 runs east-west through Clarke and Monroe County. It is a major truck route. United States Highway 45 runs through southern Washington County. In addition to federal routes, there are numerous state and local routes that connect the communities in the region.

ATRC Division A counties house several airports. There are no international airports located within the planning area. The planning region includes several general aviation airports including Jackson Municipal Airport (Clarke County), Monroe County Airport (Monroe County), Middleton Field (Conecuh County), and Roy Wilcox Field (Washington County). There are plans to construct a regional airport facility in Thomasville in Clarke County.

There are three railroads within the ATRC Division A planning area (Figure1.4). 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 is one Class I railroads in the planning area, this line is operated by Norfolk Southern. This line runs through Clarke and Washington Counties. 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 Monroe County. 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 is one Class III railroad in the planning area, this line is operated by the Alabama Railroad Company (ALAB) and runs through Monroe and Conecuh Counties.

Figure 1.4 Railroads in Alabama



Source: ALDOT Rail Directory 2014

Utilities

Electric service throughout the planning area is provided by Alabama Power and electric cooperatives. Clarke, Washington, and a portion of Monroe County is served by the Clarke Washington Electric Membership Co-Op. The Southern Pine Electric Co-Op serves portions of Conecuh and Monroe Counties.

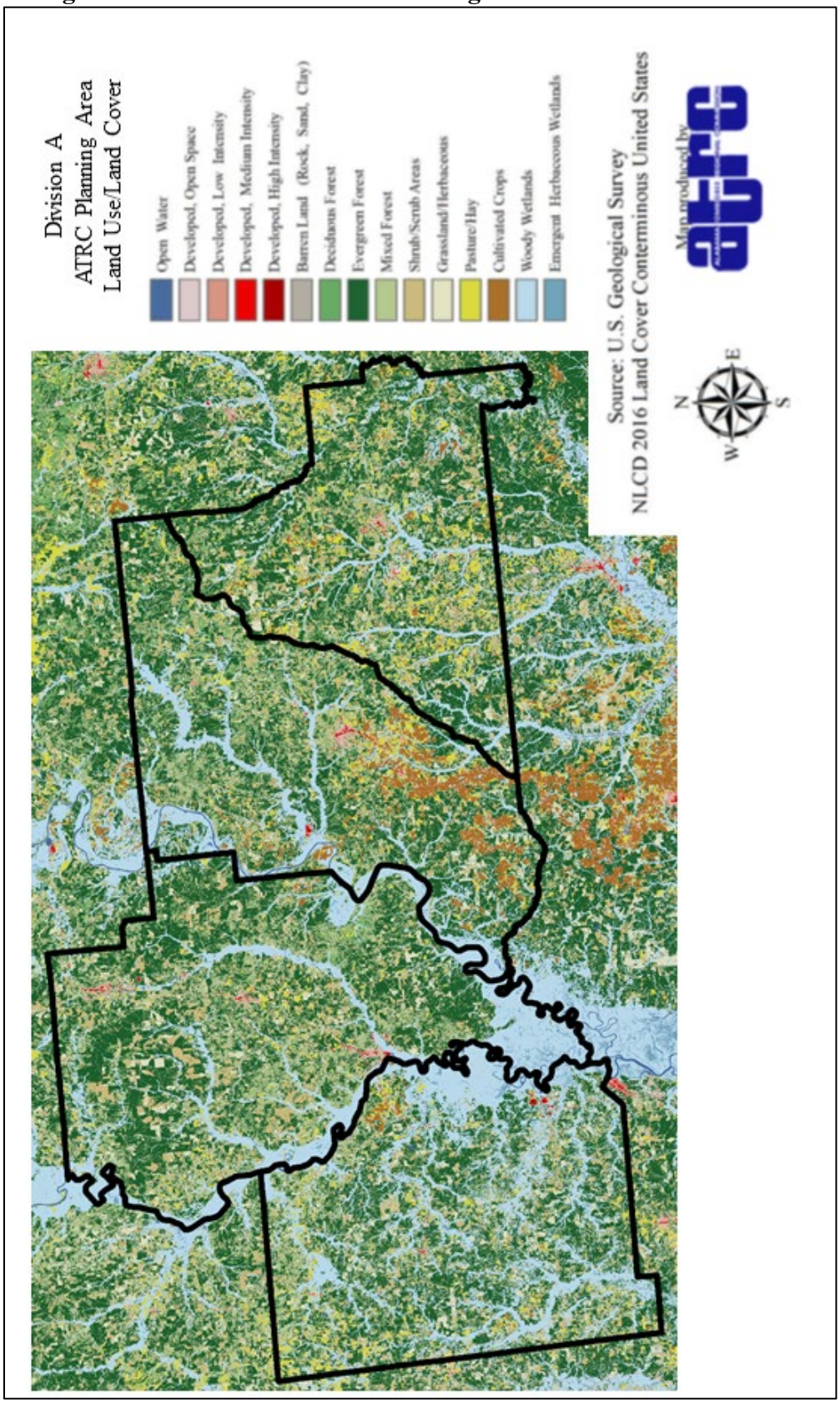
Water and sewer services are provided through municipal and county utility authorities. Most populated areas in the planning region have public water service, where there are only a few instances of areas that have no connection. The majority of the unincorporated areas throughout the region rely on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

Natural Gas is provided by municipal and county authorities as well as the Clarke-Mobile Gas District (Clarke and Washington), and the South Alabama Gas District (Conecuh and Monroe).

1.5 Land Use and Development Trends

The counties served by ATRC in Division A are primarily rural (Figure 1.5). 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.

Figure 1.5 Division A- ATRC Planning Area Land Use/Land Cover



Section 2- ATRC 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

2.1 Multi-Jurisdictional Plan Adoption

Each of the participating jurisdictions will adopt the plan once it is deemed "approvable pending adoption" by the Federal Emergency Management Agency (FEMA). Eligible jurisdictions include regional planning councils, local governing bodies including municipal councils, county commissions and local school districts as well as other public or private entities as applicable within each county, other entities may include health systems, fire associations and institutions of higher education that participated in the planning process and will adopt the Division A plan in order to be included as eligible applicants for FEMA HMA grant assistance.

2.2 Multi-Jurisdictional Planning Participation

All eligible jurisdictions in Clarke, Conecuh, Monroe, and Washington 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. Table 2.1 provides a list of entities that will adopt the mitigation plan.

Table 2.1 Division A Plan Participants Adopting Plan

Conecuh County	**Monroe County**
Conecuh County Board of Education	Monroe County Board of Education
Conecuh County Commission	Monroe County Commission
City of Evergreen	Town of Excel
Town of Castleberry	Town of Frisco City
Town of Repton	City of Monroeville
	Town of Vredenburgh
Clarke County	
Clarke County Board of Education	**Washington County**
Clarke County Commission	Washington County Board of Education
Thomasville City School System	Washington County Commission
Town of Coffeeville	Town of Chatom
Town of Fulton	Town of McIntosh
Town of Grove Hill	Town of Millry
City of Jackson	
City of Thomasville	

2.3 Hazard Mitigation Planning Process

This part of the AEMA Division A Multi-Jurisdictional Hazard Mitigation Plan was developed through interaction between AEMA Division A EMA directors and the Alabama Tombigbee Regional Commission (ATRC). 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.

Members of the Regional Hazard Mitigation Planning Committee developed county-level planning subcommittees. 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 ATRC 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.

During Phase III of the planning process in 2022, Monroe and Washington County EMA directors worked with each jurisdiction to review and finalize updated jurisdictional information. The plan was posted online to solicit public input. Due to local guidelines regarding public meetings, in person meetings were not held during this time. Elevated COVID risks rates existed in both counties.

Table 2.2 Regional Hazard Mitigation Planning Participants by County

Clarke County (Committee Members in BOLD)				
Jurisdiction	**Primary Contact/Title**	**Attended Meetings**	**Provided Written Comments**	**In-Person or Phone Consultation**
Clarke County Commission	**Jake Bailey, County Engineer**	**X**	**X**	
Clarke County Emergency Management	**Roy Waite, Director**	**X**	**X**	**X**
Town of Coffeeville	**Annie Latham, Town Clerk**		**X**	**X**
Town of Fulton	**Mike Norris, Mayor**		**X**	**X**
Town of Grove Hill	**Cynthia Jackson, Mayor**	**X**	**X**	**X**
City of Jackson	**Paul South, Mayor**		**X**	**X**

City of Thomasville	**Kevin Heartsill, Public Works Director**	**X**	**X**	**X**
Clarke County Board of Education	**Paul Stanley, Transportation Supervisor**	**X**	**X**	
Thomasville City Schools	**Garth Moss, Superintendent**			**X**
Kiki Moore	**Coastal Alabama Community College, Thomasville Campus Director**	**X**		
Clarke Preparatory School	**Doug Bradford, Headmaster**	**X**		
Jackson Academy	**Joe Jones, Headmaster**	**X**		
Clarke County EMA	Brian Wilkerson, EMA Assistant			
Old Line Water Authority	Johnnie Jones, Manager	X		
Jackson Water	Jamey Sullivan, Operator	X		
Salitpa VFD	Mac Henley, Firefighter	X		
Antioch VFD	Keith Harrell, Firefighter	X		
Alabama Tombigbee Regional Commission	Mary Zimmerman, Development Assistant	X		
Alabama Tombigbee Regional Commission	Brandy Wilkerson, Planning Director	X		
Jackson Medical Center	Judith Reeves, Nursing Services	X		
Jackson Medical Center	Teresa Napper, Chief Nursing Officer	X		
Jackson Police Department	Jasaya Thomas, Officer	X		
Clarke-Mobile Gas District	Keith Harrell, Service Technician	X		
Conecuh County (Committee Members in BOLD)				
Conecuh County Commission	**Leonard Millender, Commissioner**		**X**	**X**
Conecuh County Emergency Management	**Johnny Brock, Director**	**X**	**X**	**X**
City of Evergreen	**Jeff Sullivan, City Projects Manager**	**X**	**X**	**X**
Town of Castleberry	**Henry Kirksey, Mayor**	**X**	**X**	**X**
Town of Repton	**Daryl Knowles, Chief of Police**	**X**		
Conecuh County Board of Education	**Zickeyous Byrd, EdD**		**X**	**X**
Alabama Tombigbee Regional Commission	Mary Zimmerman, Development Assistant	X		
Evergreen Police Department	James Simpson, Chief of Police	X		

Monroe County (Committee Members in BOLD)				
Jurisdiction	**Primary Contact/Title**	**Attended Meetings**	**Provided Written Comments**	**In-Person or Phone Consultation**
Monroe County Commission	**Sonya Stenson, President**		**X**	**X**
Monroe County EMA	**Chuck Downing, Director**		**X**	**X**
Town of Beatrice	**Annie Shelton, Mayor**		**X**	**X**
Town of Excel	**Jenny Countryman, Mayor**		**X**	**X**
Town of Frisco City	**Allen Lang, Mayor**		**X**	**X**
City of Monroeville	**Charles Andrews, Mayor**		**X**	**X**
Alabama Tombigbee Regional Commission	Brandy Wilkerson, Planning Director		X	X
Washington County (Committee Members in BOLD)				
Washington County Commission	**Allen Bailey, Chairman**		**X**	**X**
Washington County Emergency Management	**Danny Overton, Director**		**X**	**X**
Town of Chatom	**Harold Crouch, Mayor**		**X**	**X**
Town of McIntosh	**Wilbert Dixon, Mayor**		**X**	**X**
Town of Millry	**Stanton Hendry, Mayor**		**X**	**X**
Washington County Board of Education	**Lisa Connell, Superintendent**		**X**	**X**
Alabama Tombigbee Regional Commission	Brandy Wilkerson, Planning Director		X	X

2.4 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. In Clarke and Conecuh 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. 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.

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, 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 A plan. Neighboring communities were invited to participate in

the process. These communities were sent a letter inviting them to planning meetings and notifying them of the availability of the draft document.

Documentation of public participation, though limited, is included in Appendix A. 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 5.3.

During Phase III, the plan's availability for public review was advertised. The website provided an avenue to submit comments to ATRC. In addition, stakeholders were invited to review the plan and provide comments. In person meeting were not held in Monroe or Washington County due to high COVID risk rates. Documentation of public participation, though limited, is included in Appendix A. Future updates will work to incorporate additional public involvement, as described in Section 5.3.

The Alabama-Tombigbee Regional Commission 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, mail, or email and invited to participate or provide information. Most of the stakeholders listed attended meetings. 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.

2.5 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 four participating ATRC counties in AEMA Division A 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.

Emergency Operations Plans
Each county in AEMA Division A 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 4.2 were reviewed with jurisdictions during this process to ensure consistency. These plans include (list will be updated in subsequent phases):

- Town of Grove Hill Comprehensive Plan
- City of Evergreen Strategic Plan

Other sources utilized for data incorporation are listed in the Section 3 – Risk Assessment.

Section 3- ATRC Planning Area Risk Assessment

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

Section Contents

3.1 Hazard Overview

ATRC's Division A counties are 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.

ATRC's Division A counties have been included in 20 Federal Disaster Declarations, as shown in Table 3.1. 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 3.1 ATRC Division A Planning Area Federally Declared Disasters

Disaster Number	Declaration Date	Counties Declared	Type of Incident
DR-369	March 27, 1973	Clarke	Tornadoes, Flooding
DR-458	March 13, 1975	Washington	Severe Storms, Flooding
DR-464	April 23, 1975	Conecuh, Monroe	Severe Storms, Flooding
DR-598	September 12, 1979	Clarke, Conecuh, Monroe, Washington	Hurricane Frederic
DR-861	March 21, 1990	Clarke, Conecuh, Monroe, Washington	Flooding, Severe Storms, Tornadoes
DR-1034	July 8, 1994	Conecuh	Tropical Storm Alberto
DR-1070	October 4, 1995	Clarke, Conecuh	Hurricane Opal
DR-1208	March 9, 1998	Conecuh	Severe Storms, Flooding
DR-1250	September 30, 1998	Clarke, Conecuh, Monroe, Washington	Hurricane Georges
DR-1466	May 11, 2003	Clarke, Monroe, Washington	Severe Storms, Tornadoes, and Flooding
DR-1549	September 14, 2004	Clarke, Monroe, Washington	Hurricane Ivan
DR-1593	July 9, 2005	Clarke, Monroe, Washington	Hurricane Dennis
DR-1605	August 28, 2005	Clarke, Washington	Hurricane Katrina
DR-1835	April 27, 2009	Clarke, Washington	Severe Storms, Flooding, Tornadoes and Straight-line Winds
DR-1870	December 31, 2009	Clarke, Conecuh	Tornadoes and Straight-line Winds

Disaster Number	Declaration Date	Counties Declared	Type of Incident
DR-1971	April 27, 2011	Clarke, Monroe, Washington	Severe Storms, Tornadoes, Straight-line Winds and Flooding
DR-4082	September 20, 2012	Monroe	Hurricane Isaac
DR-4176	May 1, 2014	Washington	Tornadoes, Straight-line Winds and Flooding
DR-4251	January 20, 2016	Monroe, Conecuh	Straight-line Winds and flooding
DR-4349	November 16, 2017	Clarke, Washington	Hurricane Nate

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.

3.2 Hazard Profiles

Multiple natural hazards affect the ATRC's Division A counties. 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. Although Monroe and Washington counties are not full participants in this version of the Regional Hazard Mitigation Plan, information from all four participating ATRC counties is included in hazard profiles to provide a comprehensive view of regional impacts.

Due to its geographical location, ATRC's Division A counties are vulnerable to hazards that can disrupt life at any time throughout the year. There are numerous hazard types that are not applicable to these counties. These hazards include avalanche, coastal erosion, tsunami, and volcanoes. No other mention of these hazards will be made. Table 3.2 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 3.2 Potential Hazards and Data Sources

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

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

The National Inventory of Dams (NID) lists 67 dams in the ATRC planning area. Figures 3.1-3.4 provide maps of each county indicating dam location and hazard classification. Of these, one is classified as a high hazard dams and twenty are classified as significant risk. 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 higher.

Participating Boards of Educations do not have properties located in areas with a risk for dam failure.

Figure 3.1 Clarke County Dams by Hazard Classification

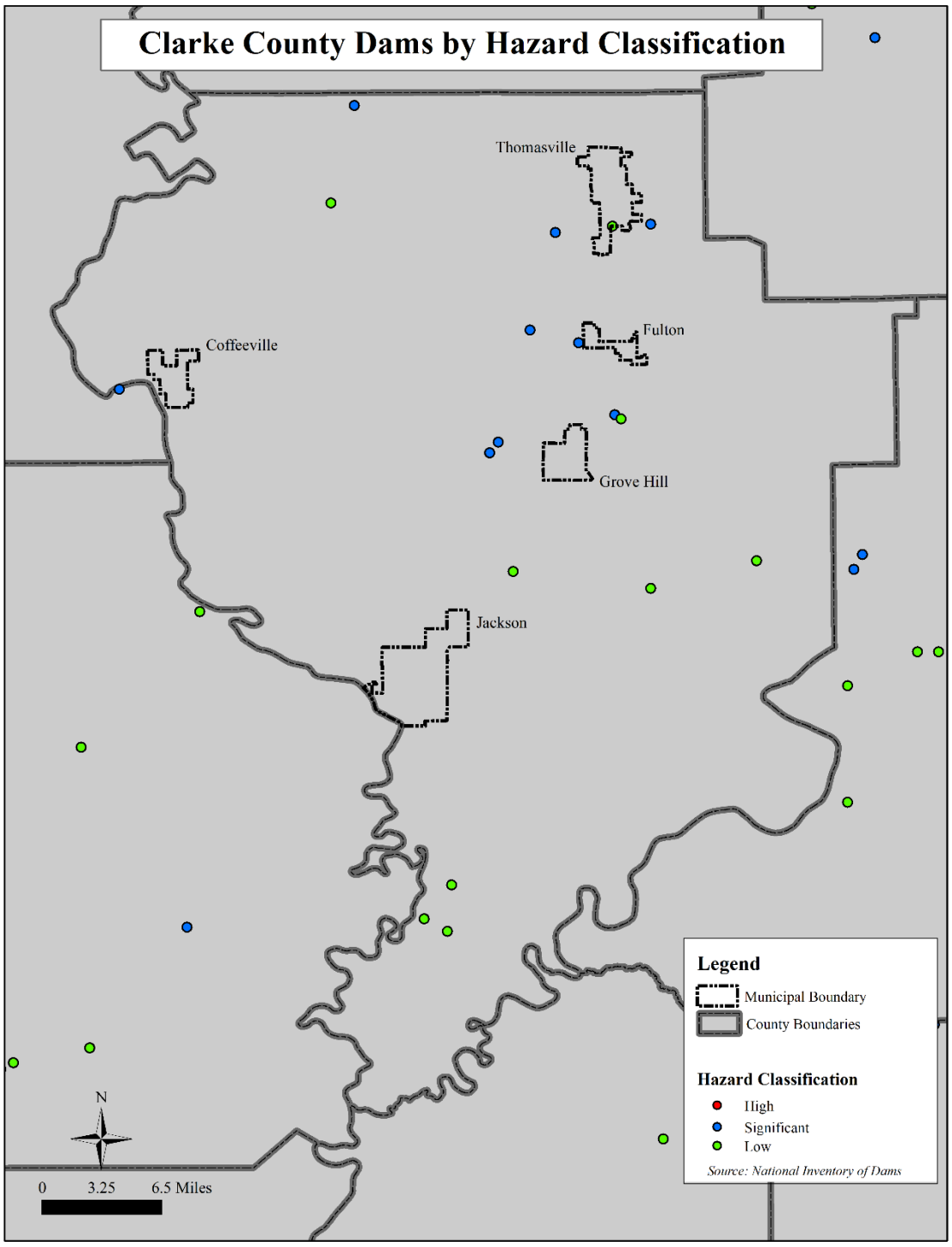


Figure 3.2 Conecuh County Dams by Hazard Classification

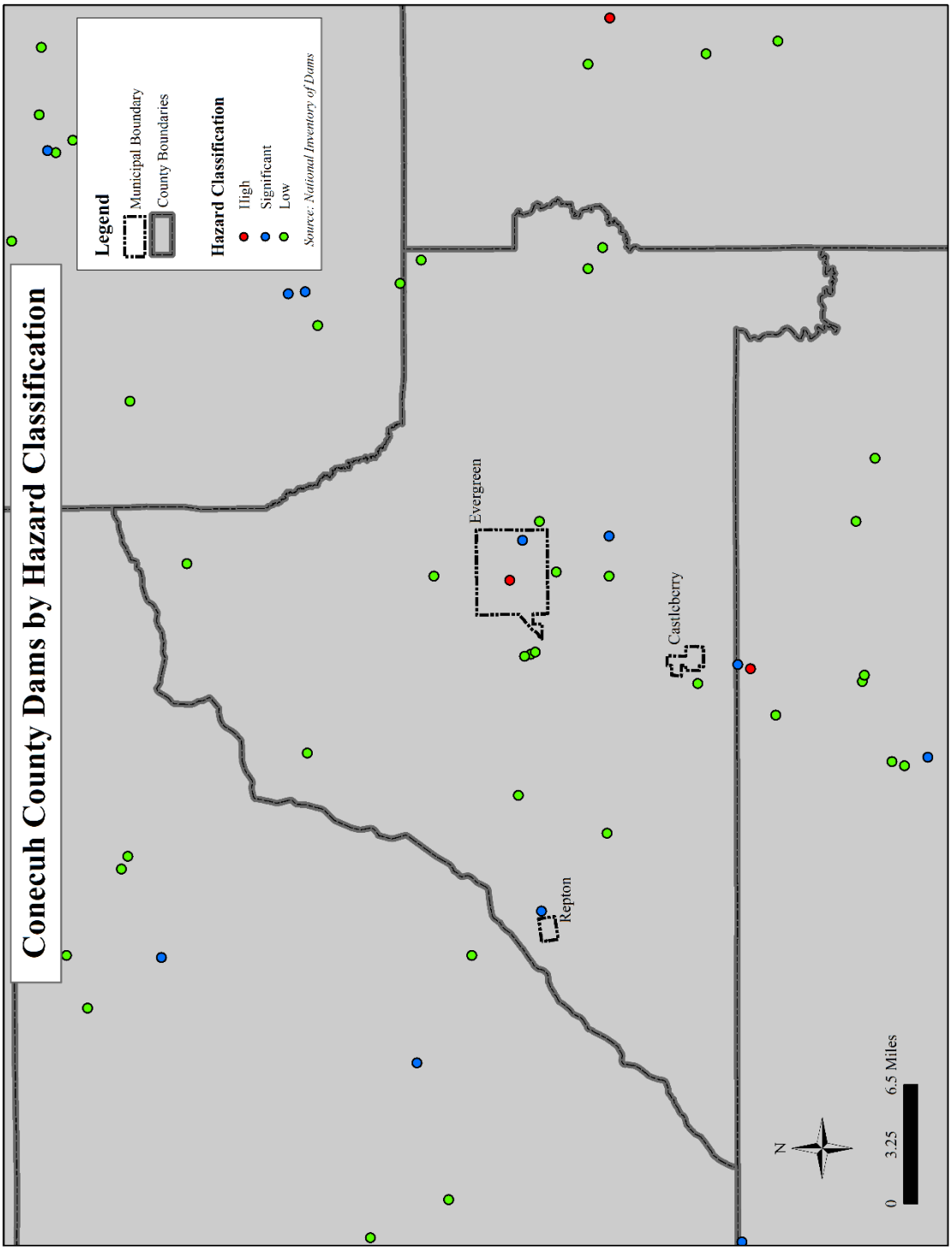


Figure 3.3 Monroe County Dams by Hazard Classification

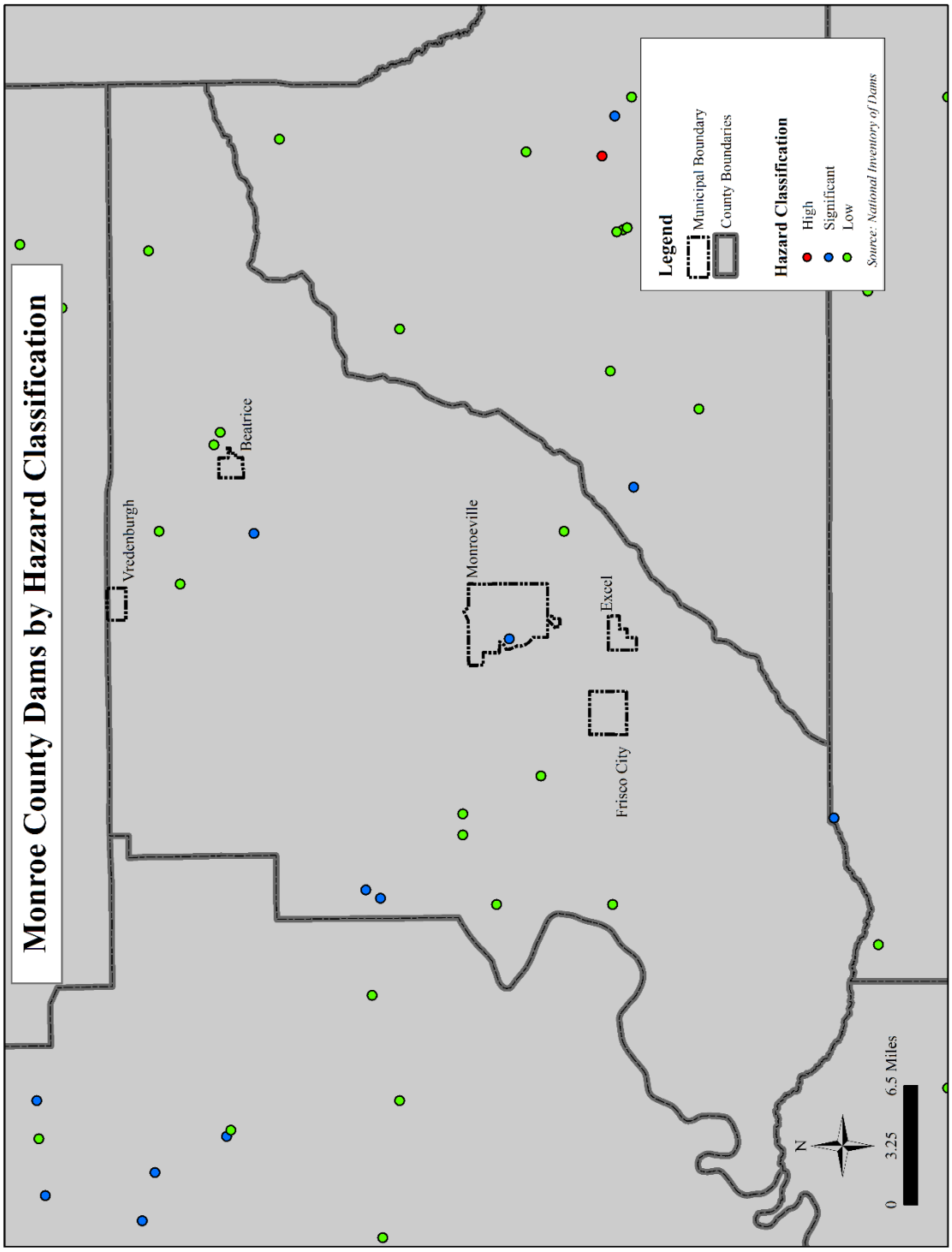
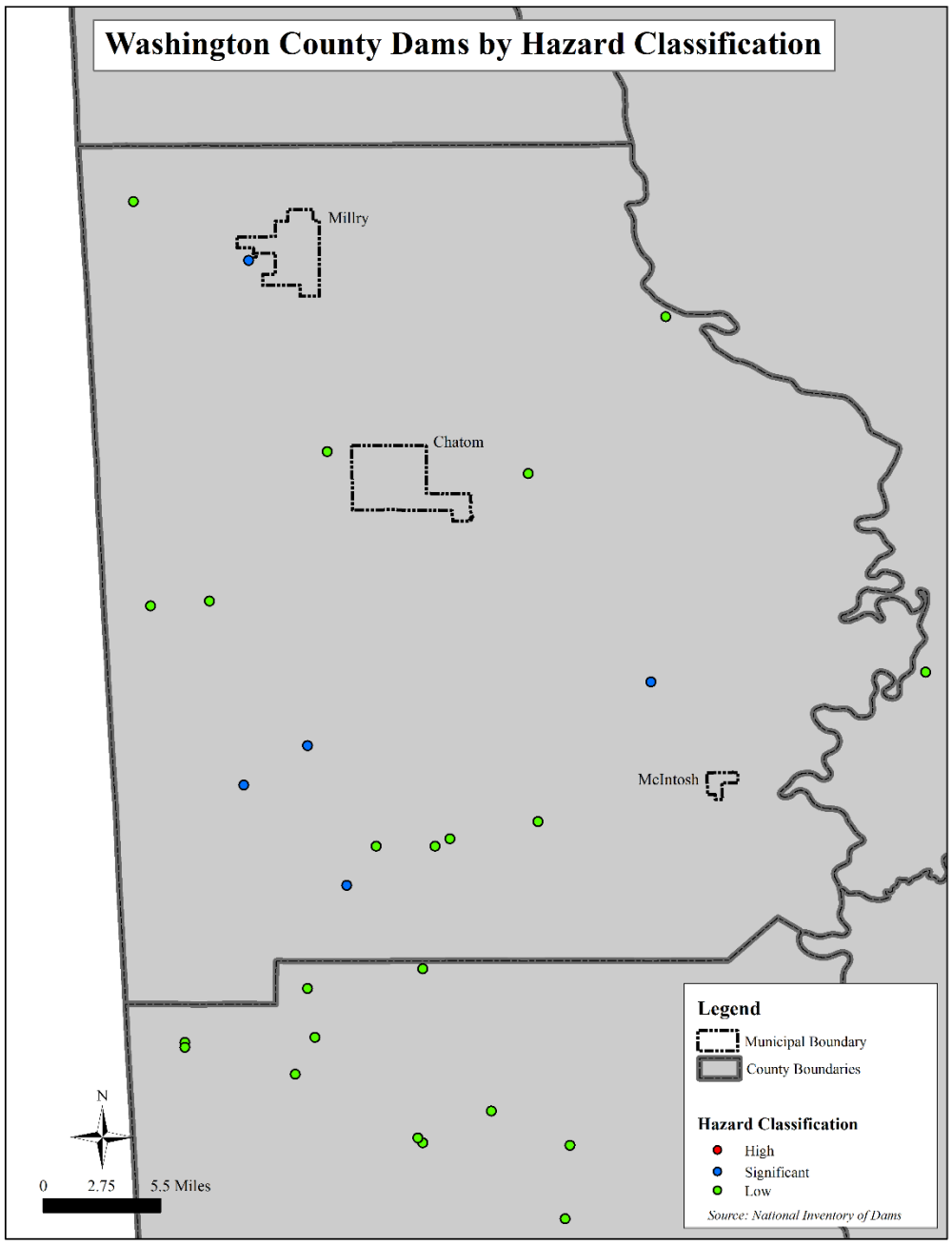


Figure 3.4 Washington County Dams by Hazard Classification



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

- The Corps of Engineers manages the Coffeeville Lock and Dam on the Tombigbee River and the Claiborne Lock and Dam on the Alabama River. 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.

Extent

Federal Guidelines for Dam Safety presents three classifications for "hazard potential." Currently, this classification is the best indicator of the potential extent of dam failure. Table 3.3 provides details of the classification.

Table 3.3 Dam Hazard Classification

Hazard Potential Classification	Loss of Human Life	Economic, Environmental, Lifeline Losses
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 the planning area. There are no documented occurrences of dam failures within the planning region.

Probability of Future Events

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.

Summary

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 3.4 Dam Failure Summary by Jurisdiction

Jurisdiction	High Risk Dams Located in Jurisdiction	Historical Occurrences	Extent	Probability of Dam Failure	Future Loss Estimate
Clarke County (unincorporated)	No	0	*	*	*
Town of Coffeeville	No	0	None	None	None
Town of Fulton	No	0	None	None	None
Town of Grove Hill	No	0	None	None	None
City of Jackson	No	0	None	None	None
City of Thomasville	No	0	*	*	*
Conecuh County (unincorporated)	No	0	*	*	*
Town of Castleberry	No	0	None	None	None
City of Evergreen	Yes	0	None	None	None
Town of Repton	No	0	*	*	*
Monroe County (unincorporated)	No	0	*	*	*
Town of Beatrice	No	0	None	None	None
Town of Excel	No	0	None	None	None
Town of Frisco City	No	0	None	None	None
City of Monroeville	No	0	*	*	*
Town of Vredenburgh	No	0	*	*	*
Washington County (unincorporated)	No	0	*	*	*
Town of Chatom	No	0	0	None	None
Town of McIntosh	No	0	0	None	None
Town of Millry	No	0	0	None	None

** Unable to provide due to lack of data*

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 3.5.

Table 3.5 Drought Classifications

Meteorological Drought	Departure of actual precipitation from an expected average or normal amount based on monthly, seasonal, or annual time scales.
Hydrologic Drought	Effects of precipitation shortfalls on stream flows and reservoir, lake, and groundwater levels.
Agricultural Drought	Soil moisture deficiencies relative to water demands of plant life, usually crops.
Socioeconomic Drought	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. All ATRC Division A counties are prone to unpredictable precipitation patterns including extended periods of below-average rainfall which lead to drought conditions. High, subtropical temperatures are common in south Alabama. 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 3.6 provides a description of each level of intensity.

Table 3.6 U.S. Drought Monitor Classification Scheme

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

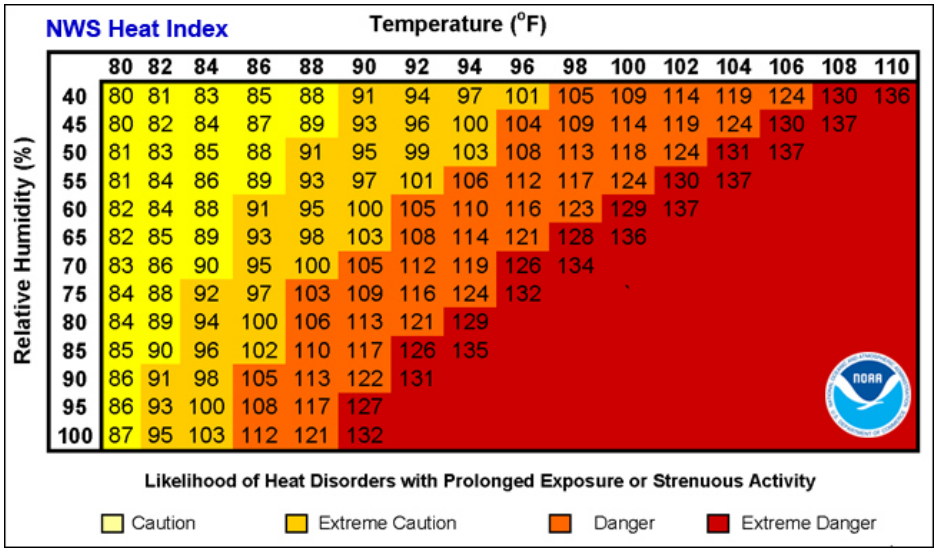
Source: https://droughtmonitor.unl.edu/About/AbouttheData/DroughtClassification.aspx
Last Accessed on 1/13/20

Drought conditions will occur in the planning area 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 ATRC Division A counties, 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 the planning area 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 3.7 provides a guide to how dangerous higher temperatures can be when occurring with high humidity.

Table 3.7 Heat Index



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

Historical Occurrences

ATRC Division A counties have 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 the planning area experienced some degree of drought between 2010 and 2019. Table 3.8 provides a summary of drought conditions in the region since 2010 that were recorded in the NOAA Storm Events Database. Drought events are recorded at the county level. No records for this time period were found for extreme heat.

Table 3.8 Division A- ATRC Planning Area Drought Occurrences 2010-2020

Clarke County				
Location	**Date**	**Magnitude**	**Property Damage**	**Crop Damage**
Clarke	10/1/2016	D2	$0	$0
Clarke	11/1/2016	D3	$0	$0
Clarke	12/1/2016	D3	$0	$0
Conecuh County				
Location	**Date**	**Magnitude**	**Property Damage**	**Crop Damage**
Conecuh	11/1/2016	D2	$0	$0
Conecuh	12/1/2016	D3	$0	$0
Monroe County				
Location	**Date**	**Magnitude**	**Property Damage**	**Crop Damage**
Monroe	11/1/2016	D3	$0	$0
Monroe	12/1/2016	D3	$0	$0
Washington County				
Location	**Date**	**Magnitude**	**Property Damage**	**Crop Damage**
Washington	10/1/2016	D2	$0	$0
Washington	11/1/2016	D3	$0	$0
Washington	12/1/2016	D3	$0	$0
Totals:			**$0**	**$0**

Source: NOAA Storm Events Database

Historical occurrences before 2010, can be accessed through the NOAA Storm Events Database site at https://www.ncdc.noaa.gov/stormevents/.

Probability of Future Events

The probability of drought and extreme heat occurring within the region is relatively high. Most 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).

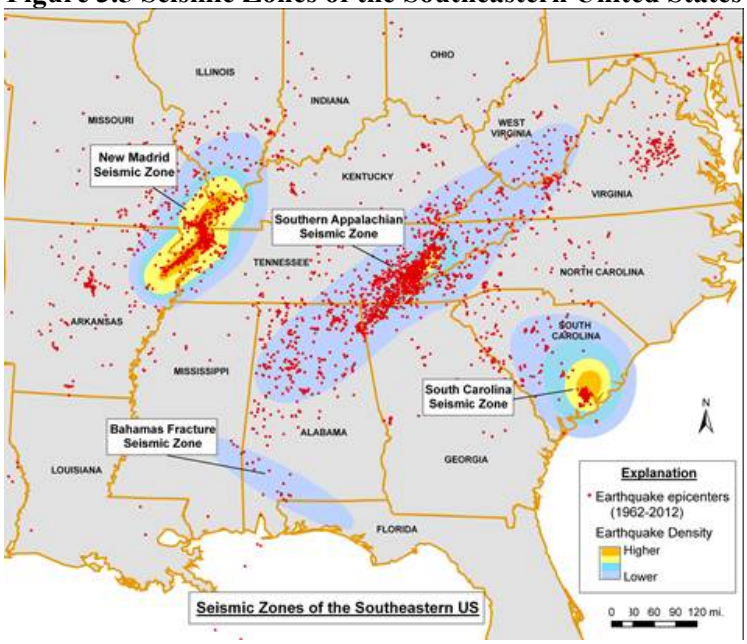
EARTHQUAKES

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 3.5). Portions of Clarke, Conecuh, Monroe, and Washington are within the Bahamas Fracture Seismic Zone.

Figure 3.5 Seismic Zones of the Southeastern United States



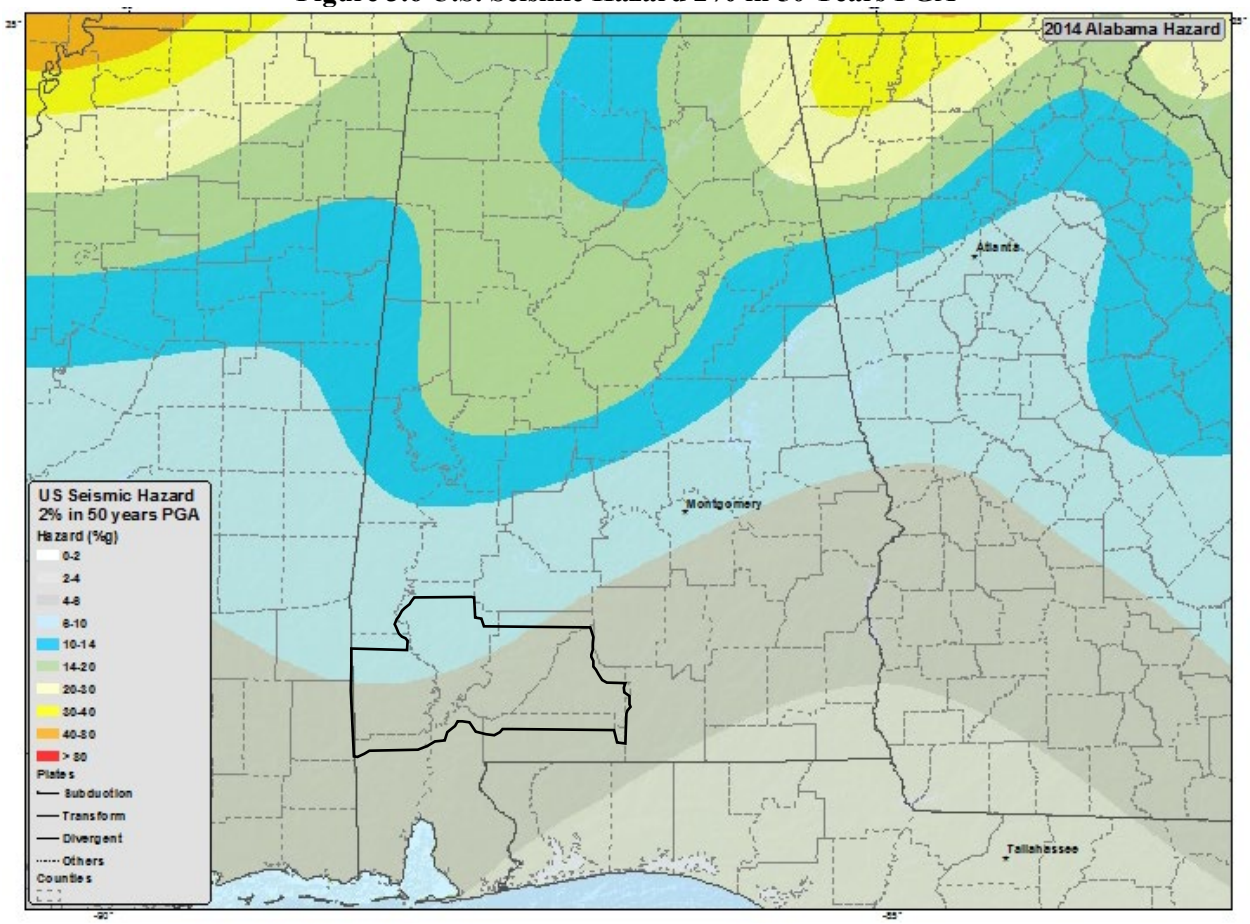
Source: https://www.gsa.state.al.us/gsa/geologic/hazards/earthquakes/alquakes

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 3.6 is the seismic hazard map for Alabama. As you move north in Division A, the seismic risk increases.

Northern Clarke and Washington, and northwest Monroe have the highest risk with a 2% chance of shaking exceeding between 6-10%g in the next 50 years.

Figure 3.6 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 Mw, 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 3.9). 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.

Table 3.9 Modified Mercalli Earthquake Measurement Scale

PGA (%g)	Magnitude (Richter)	Intensity (MMI)	Description (MMI)
<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.

Table 3.9 Modified Mercalli Earthquake Measurement Scale			
PGA (%g)	**Magnitude (Richter)**	**Intensity (MMI)**	**Description (MMI)**
			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.
Source: United States Geological Survey http://earthquake.usgs.gov Last accessed 12/19/2019			

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 the planning area, earthquakes up to 3.3 on the Richter Scale have occurred. An earthquake of this magnitude is not felt and only detected by scientific instruments. The average intensity of earthquakes in the planning area is 2.8, which is a very weak earthquake. These earthquakes are usually identified by the review of seismograms.

Historical Occurrences

There are recorded earthquake occurrences for Clarke, Monroe, and Washington Counties (Table 3.10). The magnitude 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.

Table 3.10 Division A- ATRC Planning Area
Historic Earthquake Incidences

County	Year	Magnitude	Latitude	Longitude
Clarke	1984	3.0	31.6100	-87.8100
Clarke	2000	2.5	32.1210	-87.8600
Clarke	2005	3.3	31.8400	-88.0600
Monroe	2000	2.5	31.5350	-87.3100
Washington	1997	2.7	31.6300	-88.1700

Source: Geological Survey of Alabama

Probability of Future Events

Historically, earthquakes have occurred in Clarke, Monroe, and Washington Counties. Overall, the occurrence of earthquakes in Division A is likely. The probability of a high intensity quake in the division is low.

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 the planning area:

- 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 A 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

Counties in Division A are susceptible to both flash flooding and riverine flooding. Due to the nature of flash floods, the entire planning area 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 floodzones are shown by jurisdiction in Figures 3.7 through 3.26. This information is based on the most recent FEMA National Flood Layer available.

Participating Boards of Educations do not have properties located in designated floodzones.

Figure 3.7 Clarke County Flood Zones

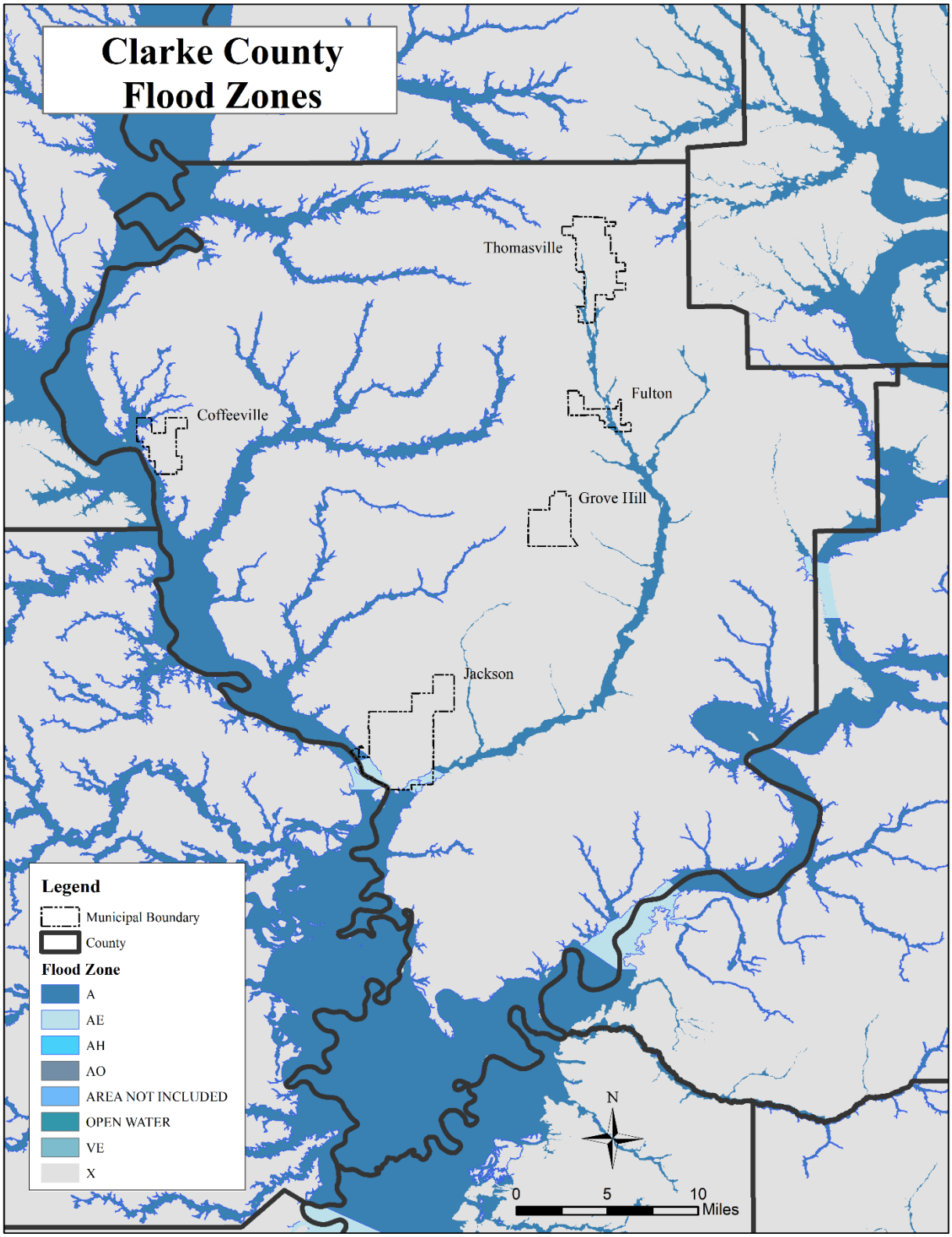


Figure 3.8 Town of Coffeeville Flood Zones

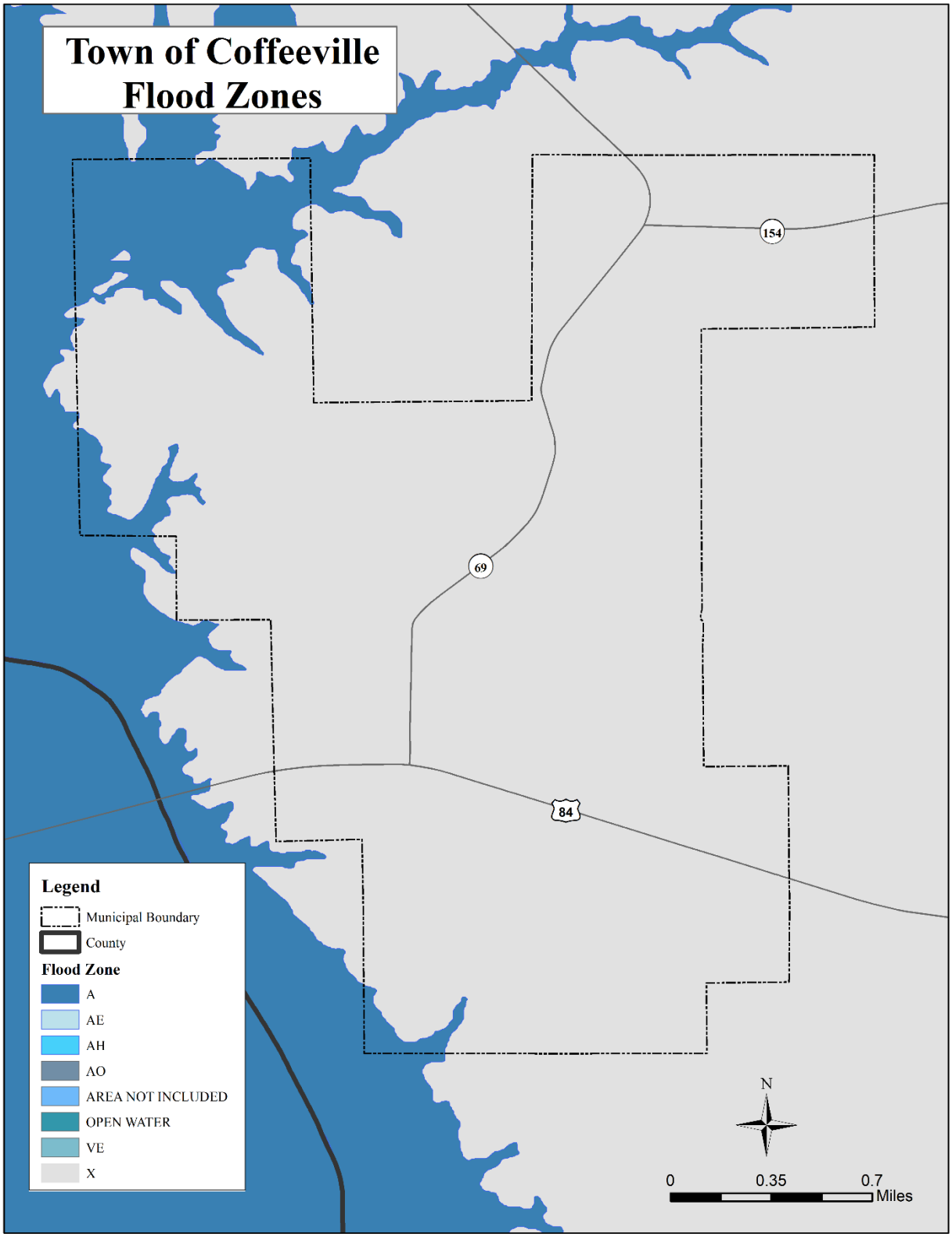


Figure 3.9 Town of Fulton Flood Zones

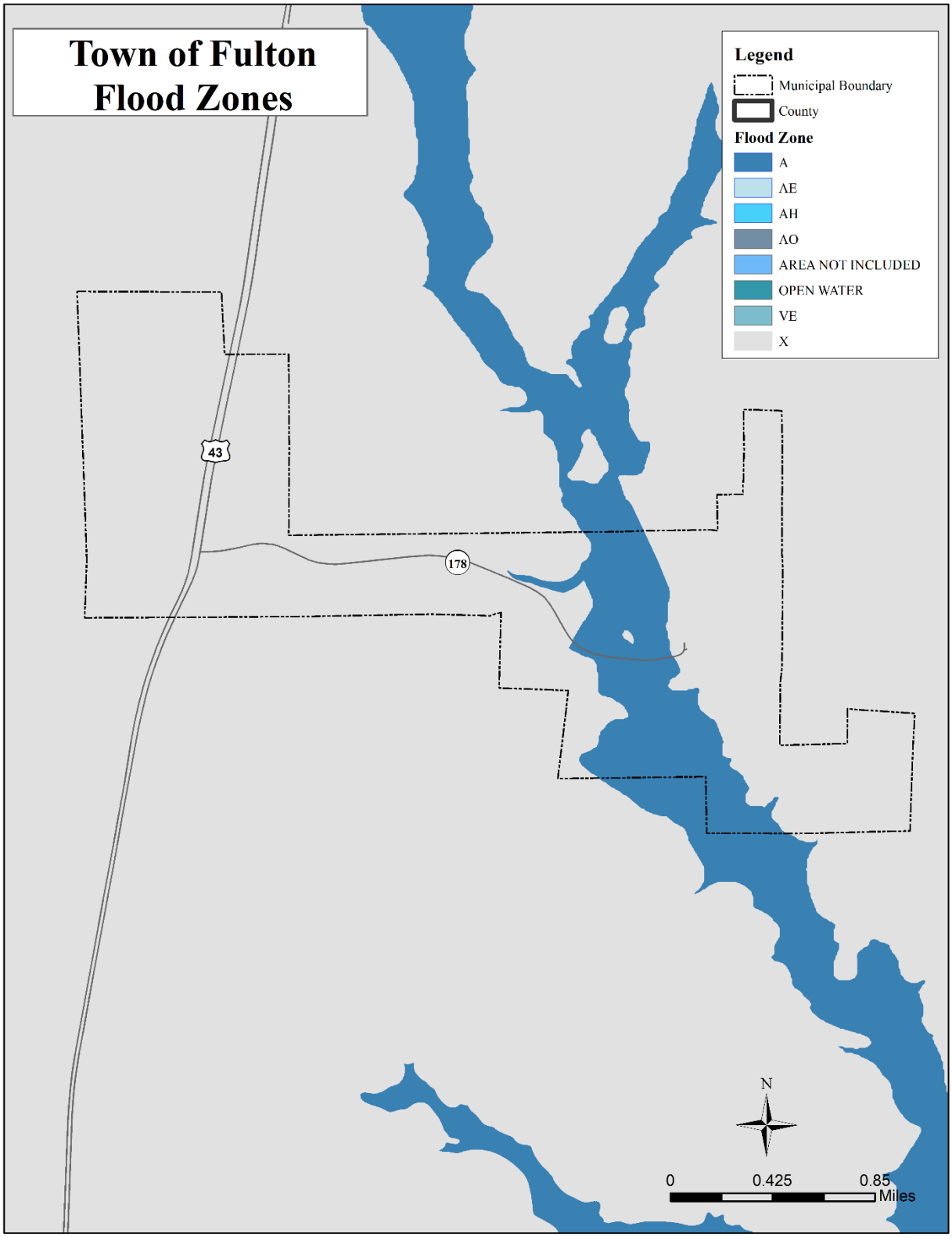


Figure 3.10 Town of Grove Hill Flood Zones

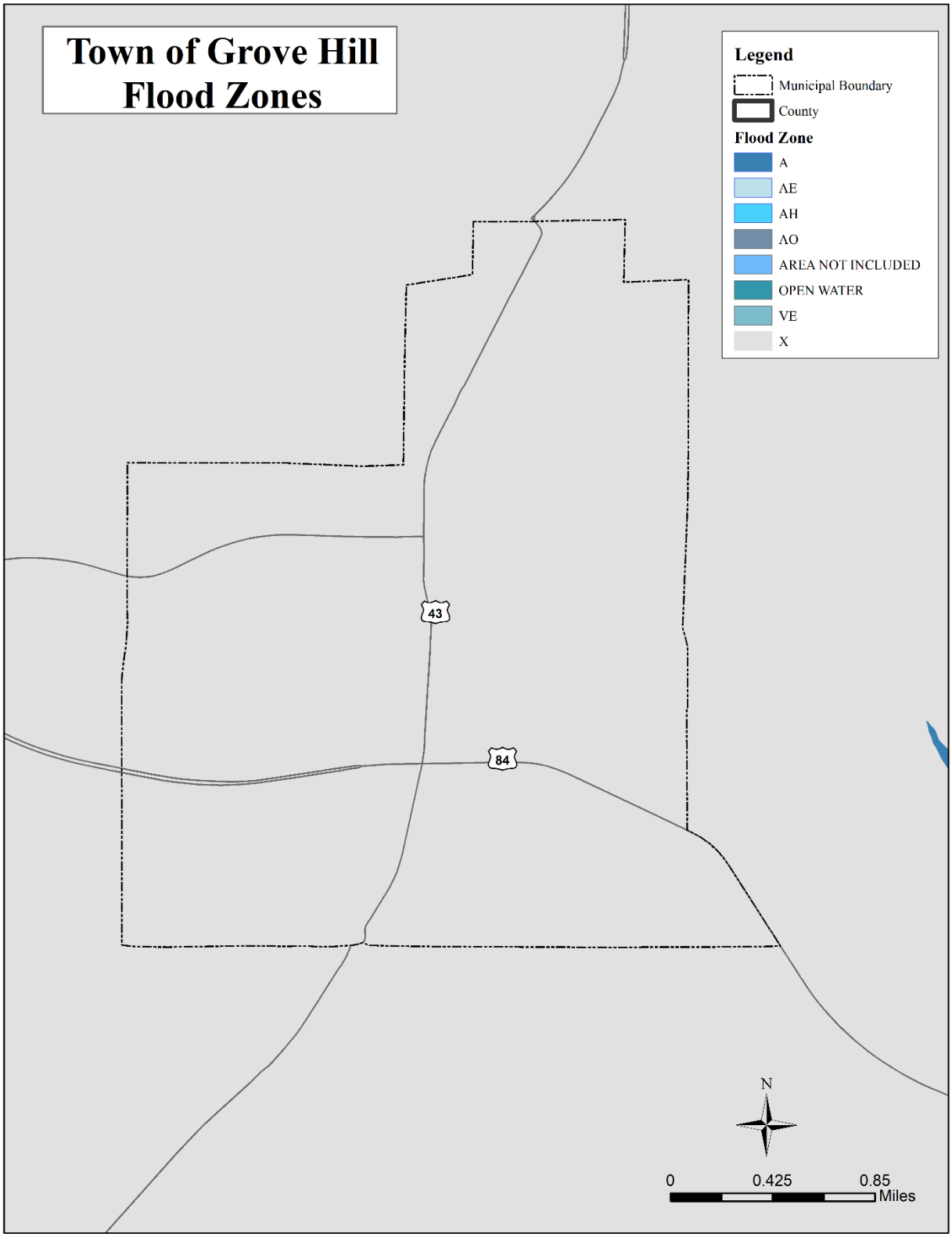


Figure 3.11 City of Jackson Flood Zones

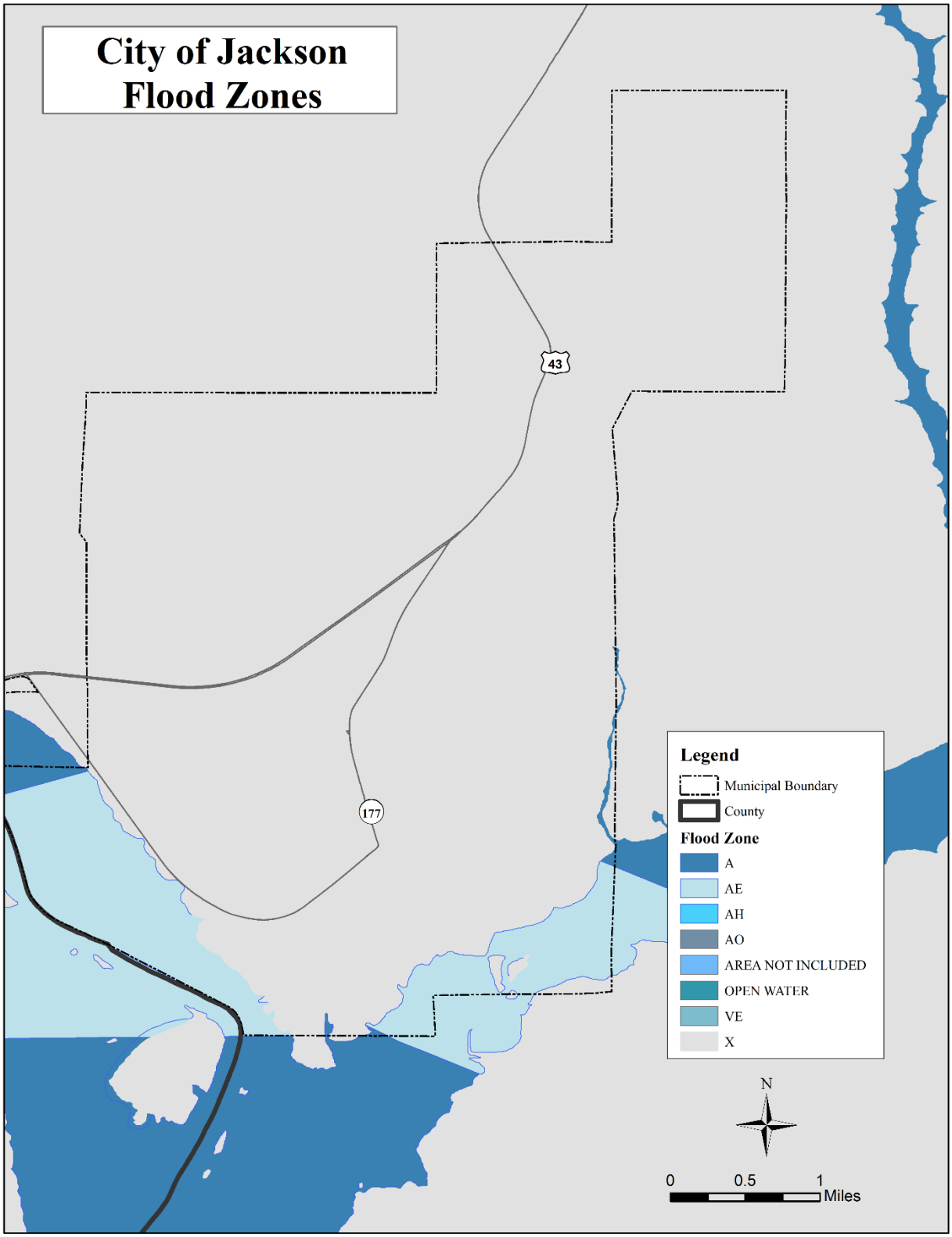


Figure 3.12 City of Thomasville Flood Zones

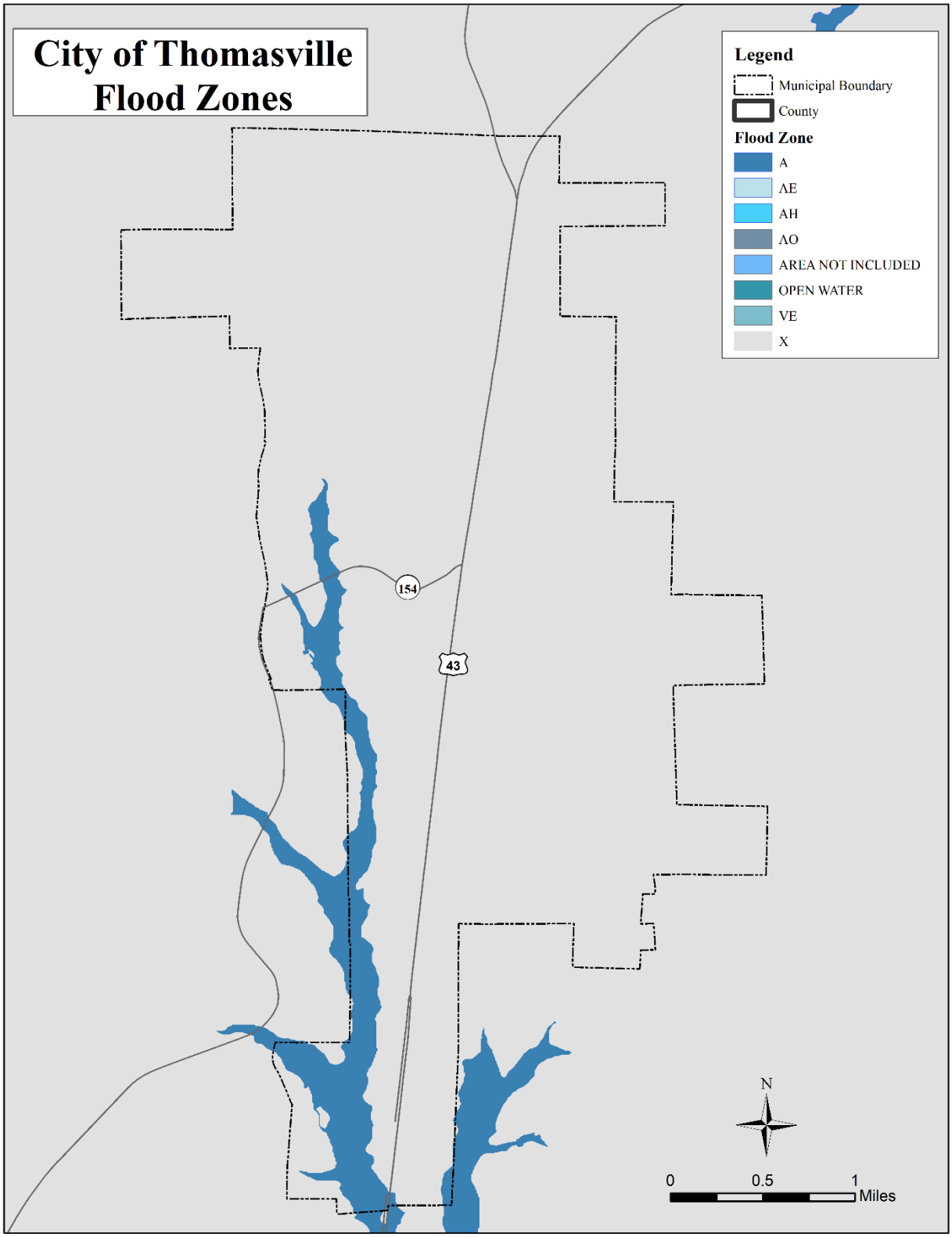


Figure 3.13 Conecuh County Flood Zones

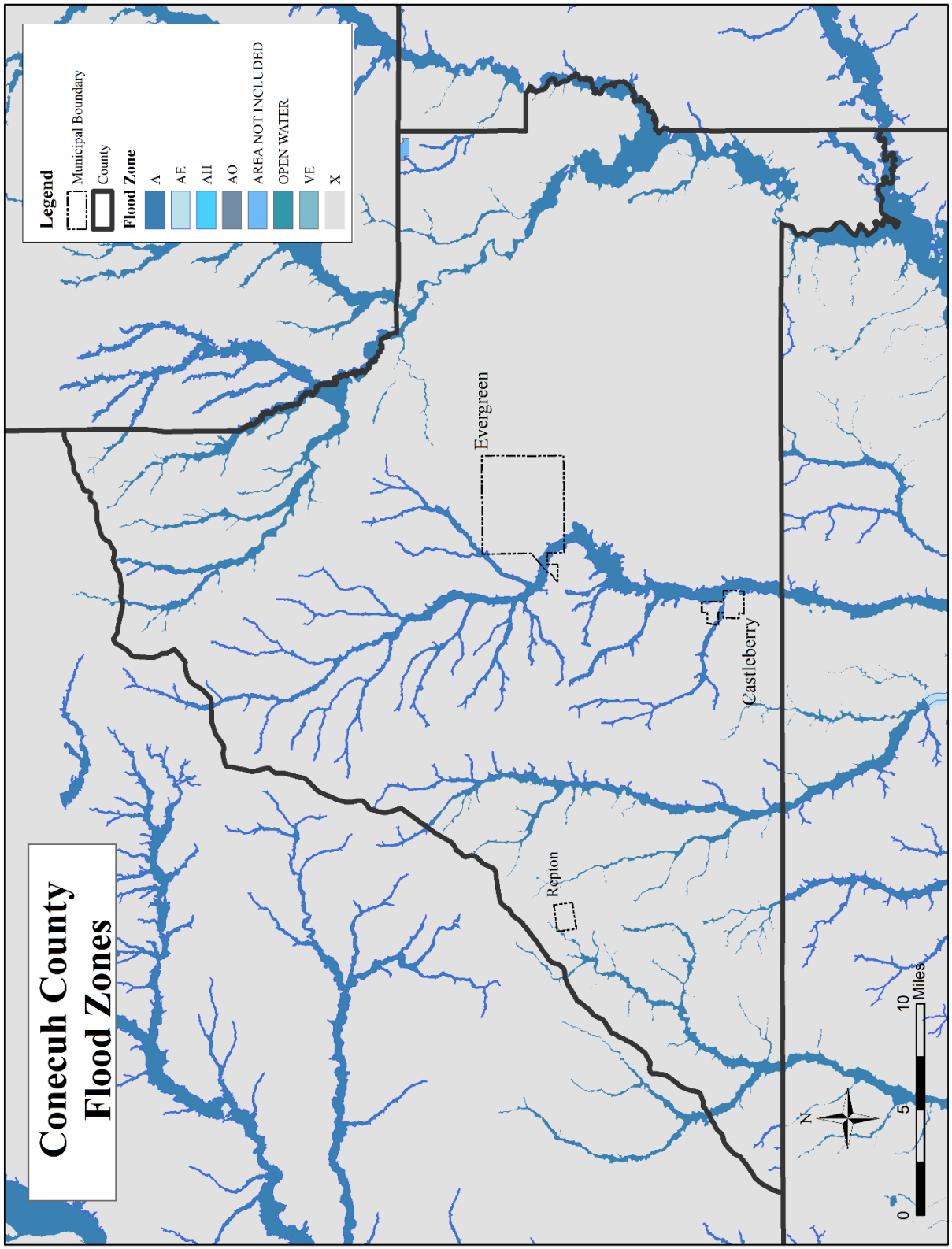


Figure 3.14 Town of Castleberry Flood Zones

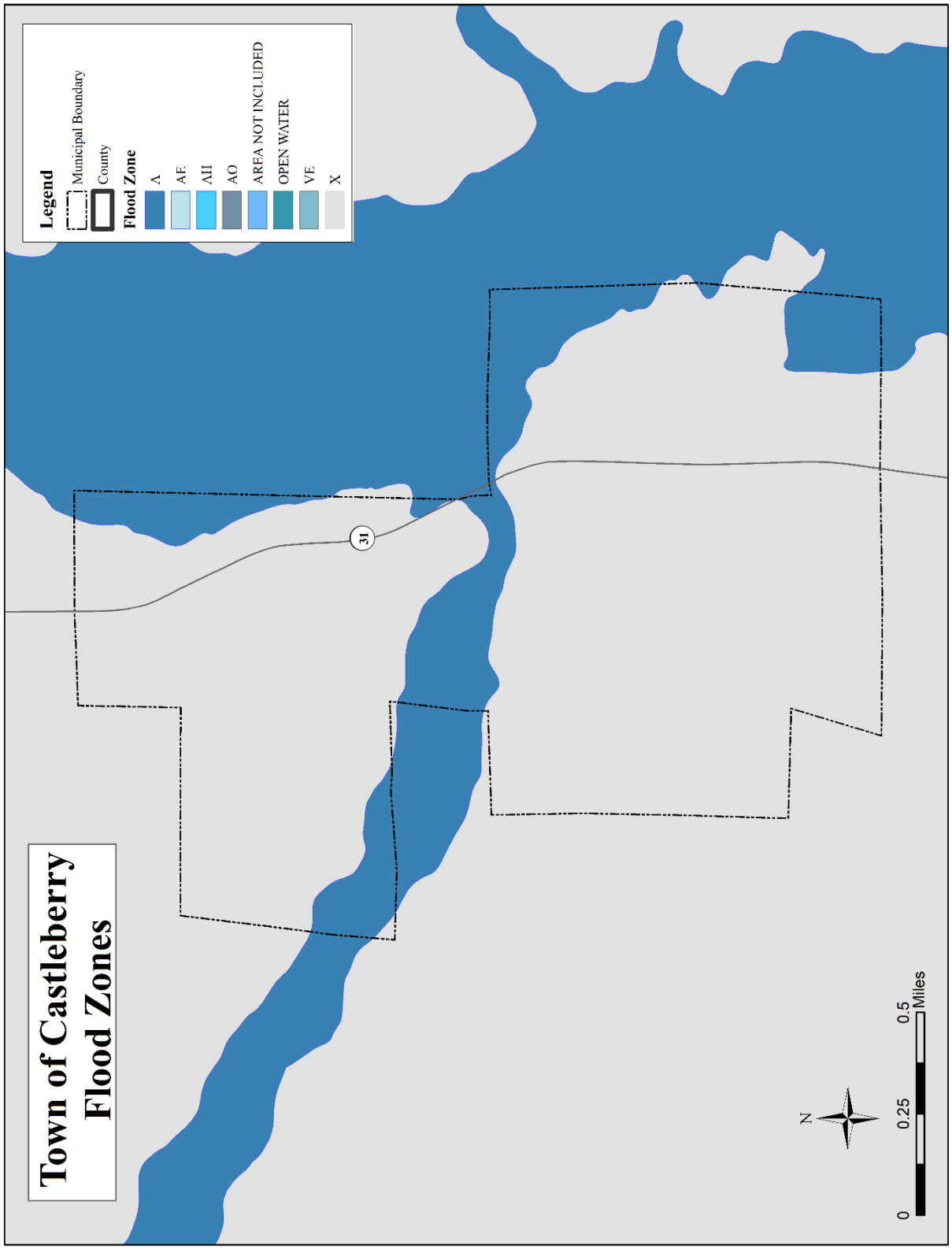


Figure 3.15 City of Evergreen Flood Zones

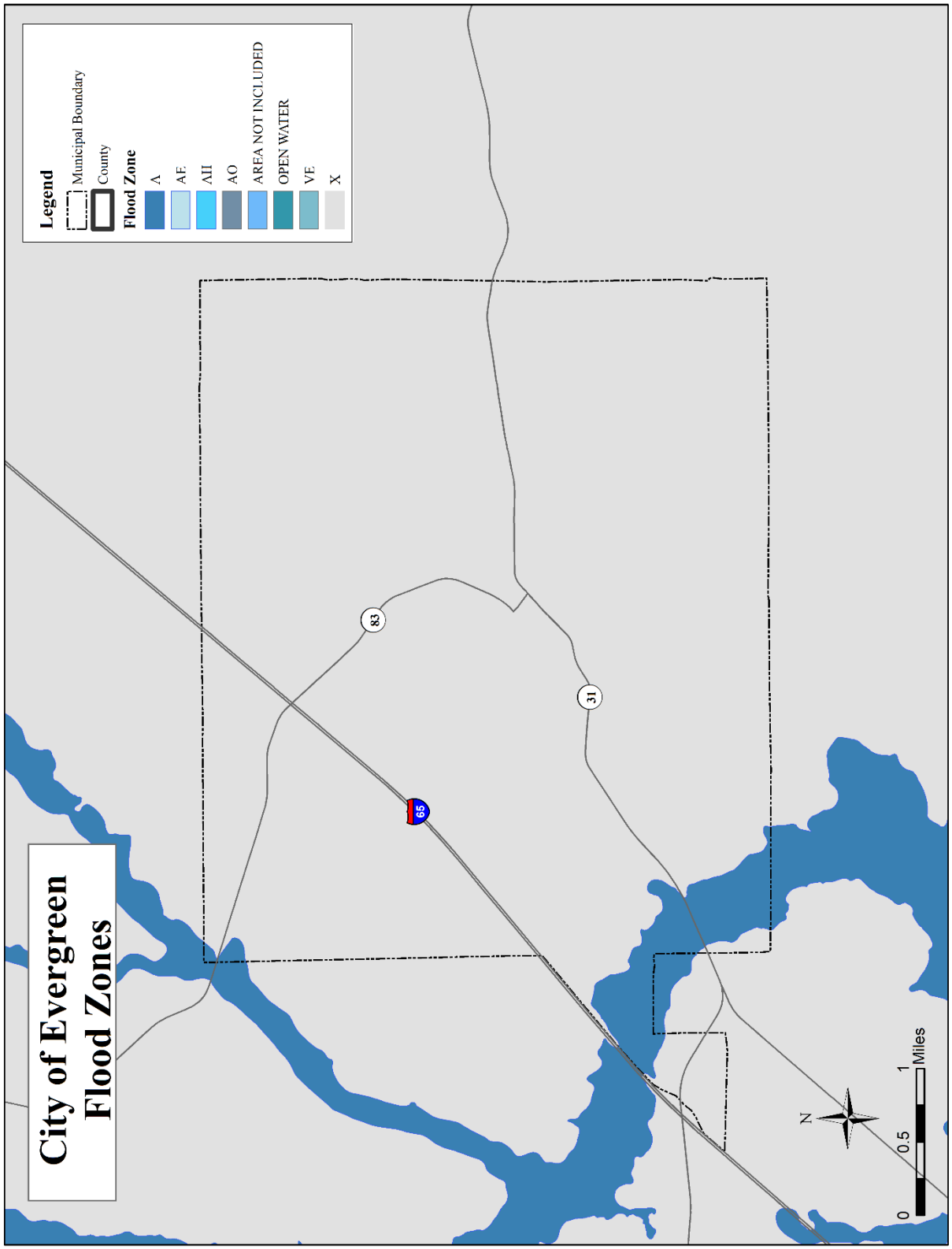


Figure 3.16 Town of Repton Flood Zones

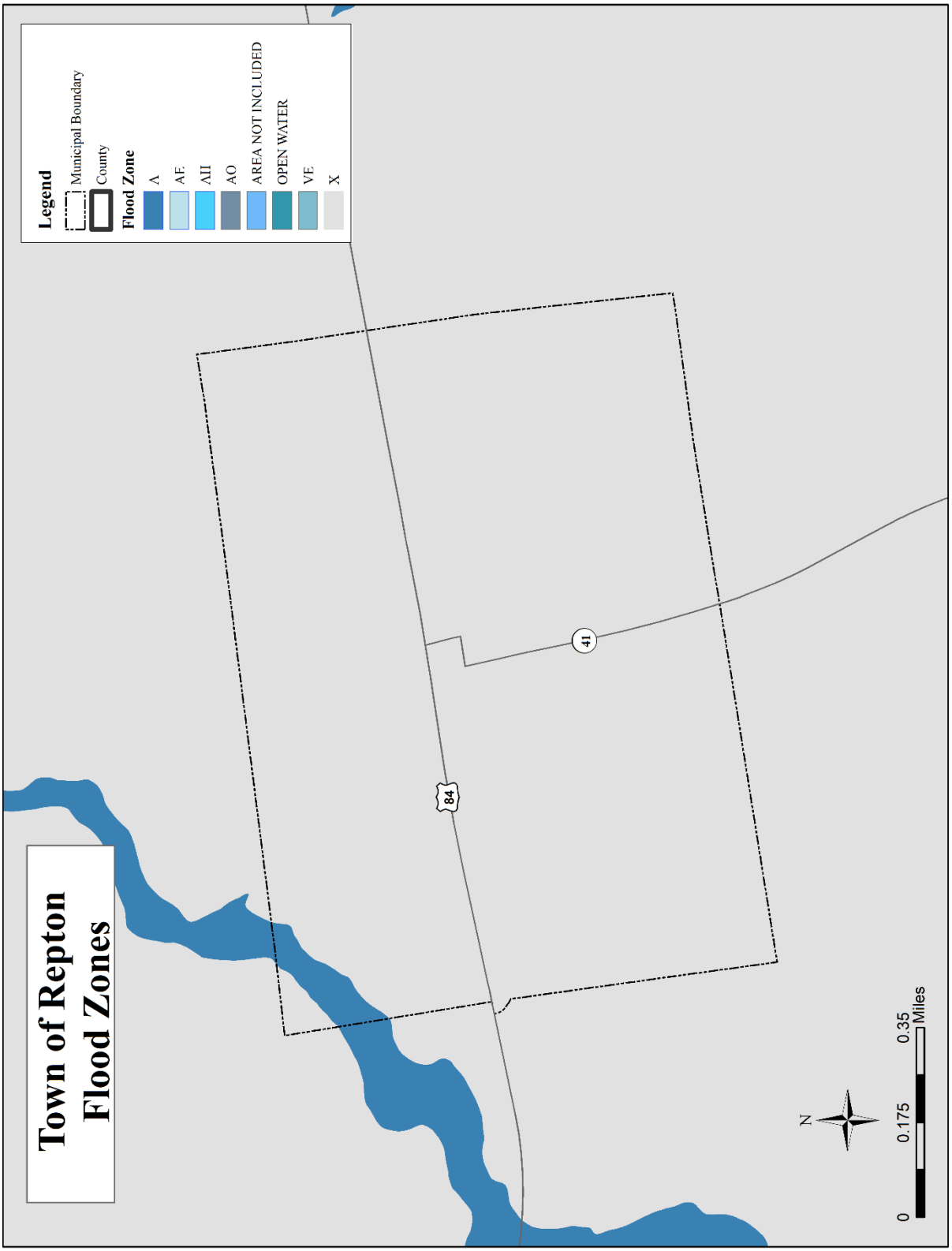


Figure 3.17 Monroe County Flood Zones

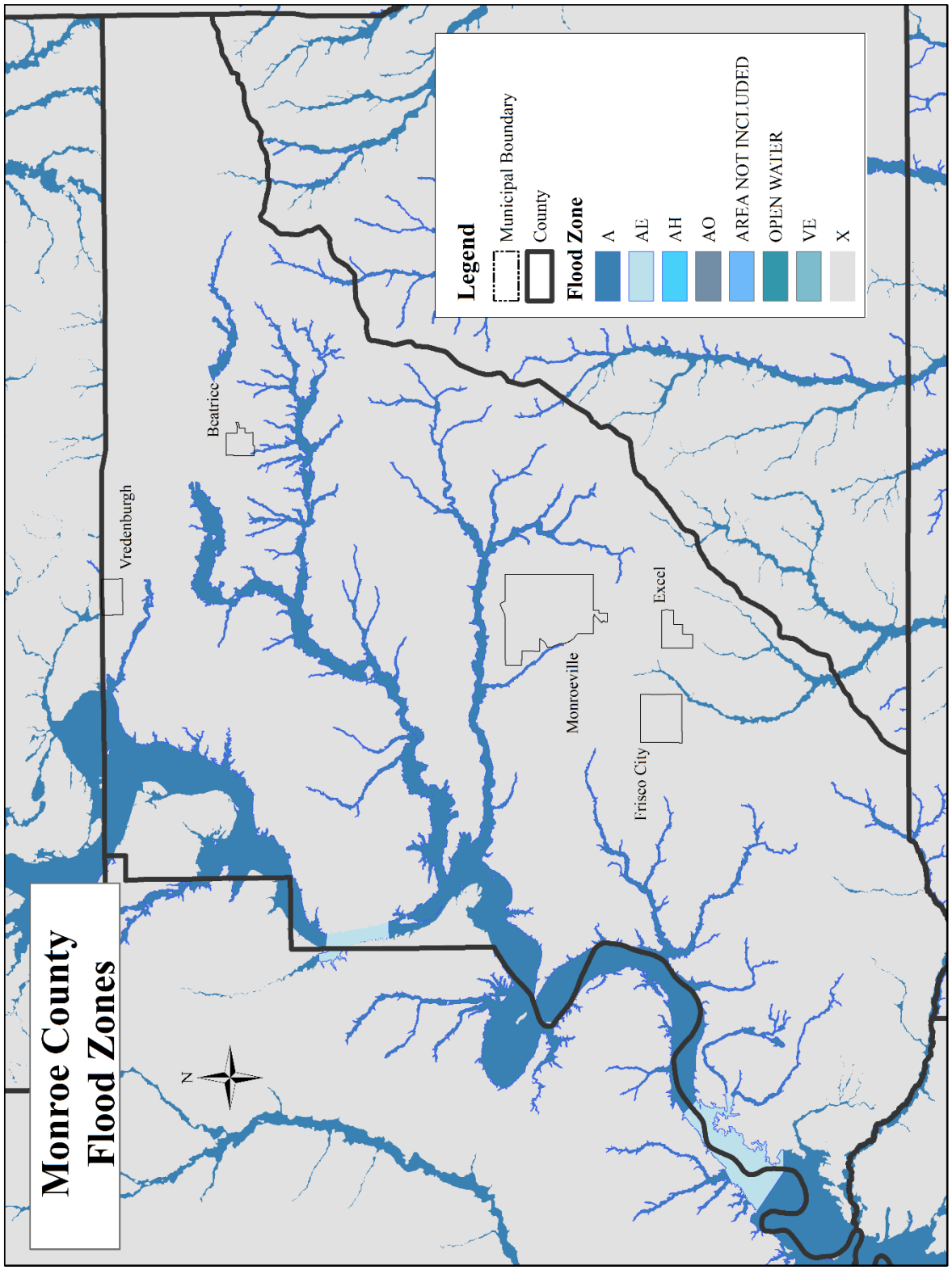


Figure 3.18 Town of Beatrice Flood Zones

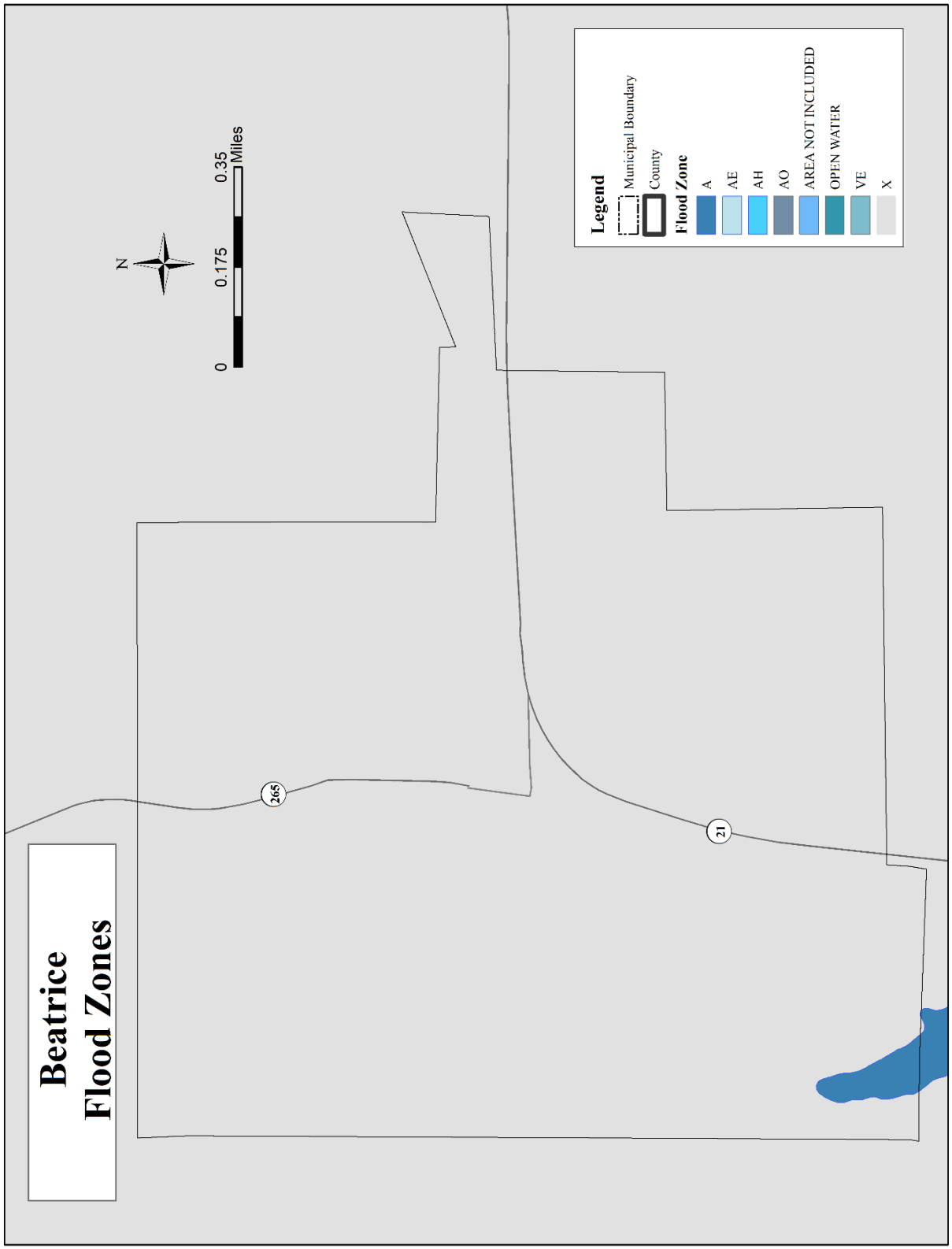


Figure 3.19 Town of Excel Flood Zones

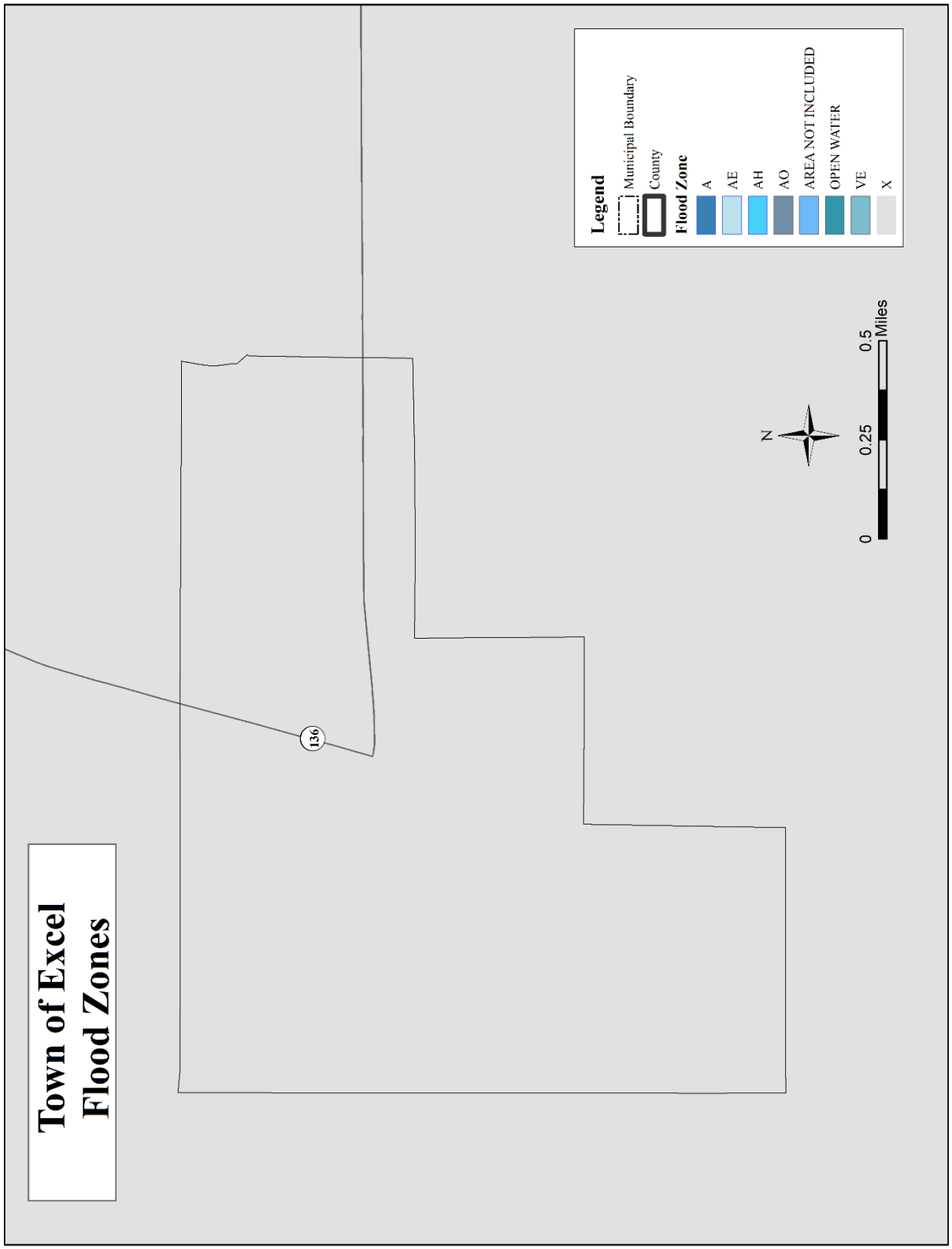


Figure 3.20 Town of Frisco City Flood Zones

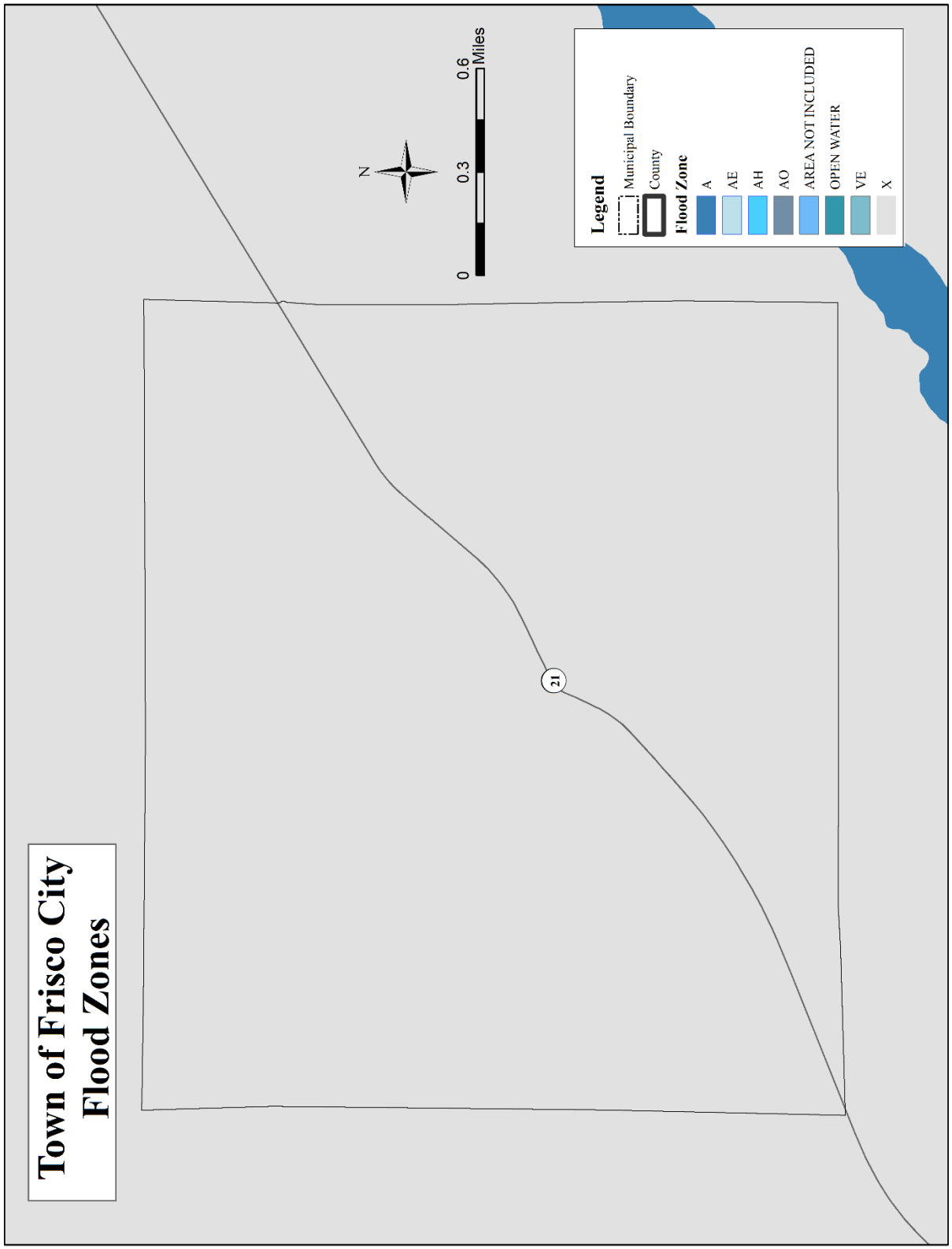


Figure 3.21 City of Monroeville Flood Zones

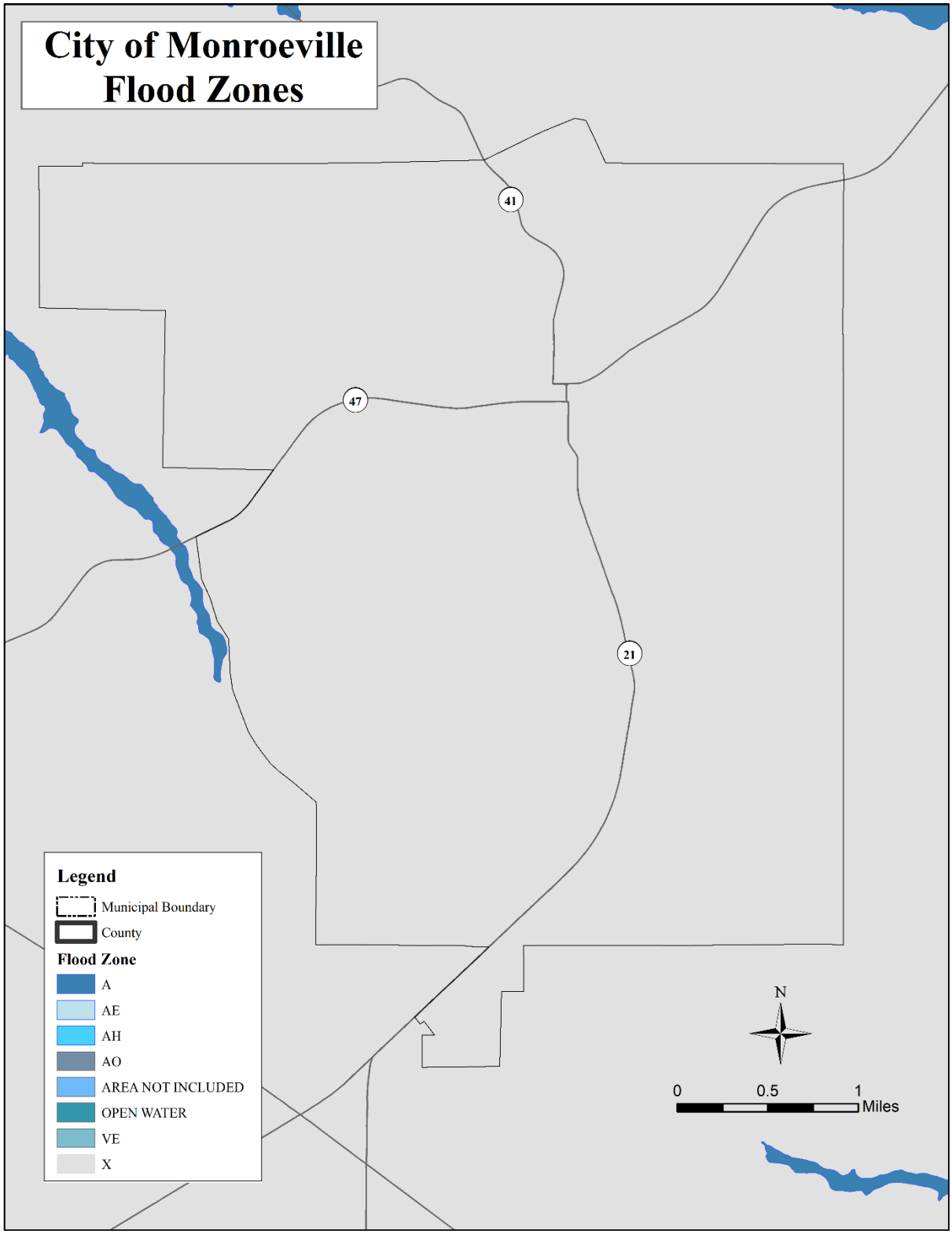


Figure 3.22 Town of Vredenburgh Flood Zones

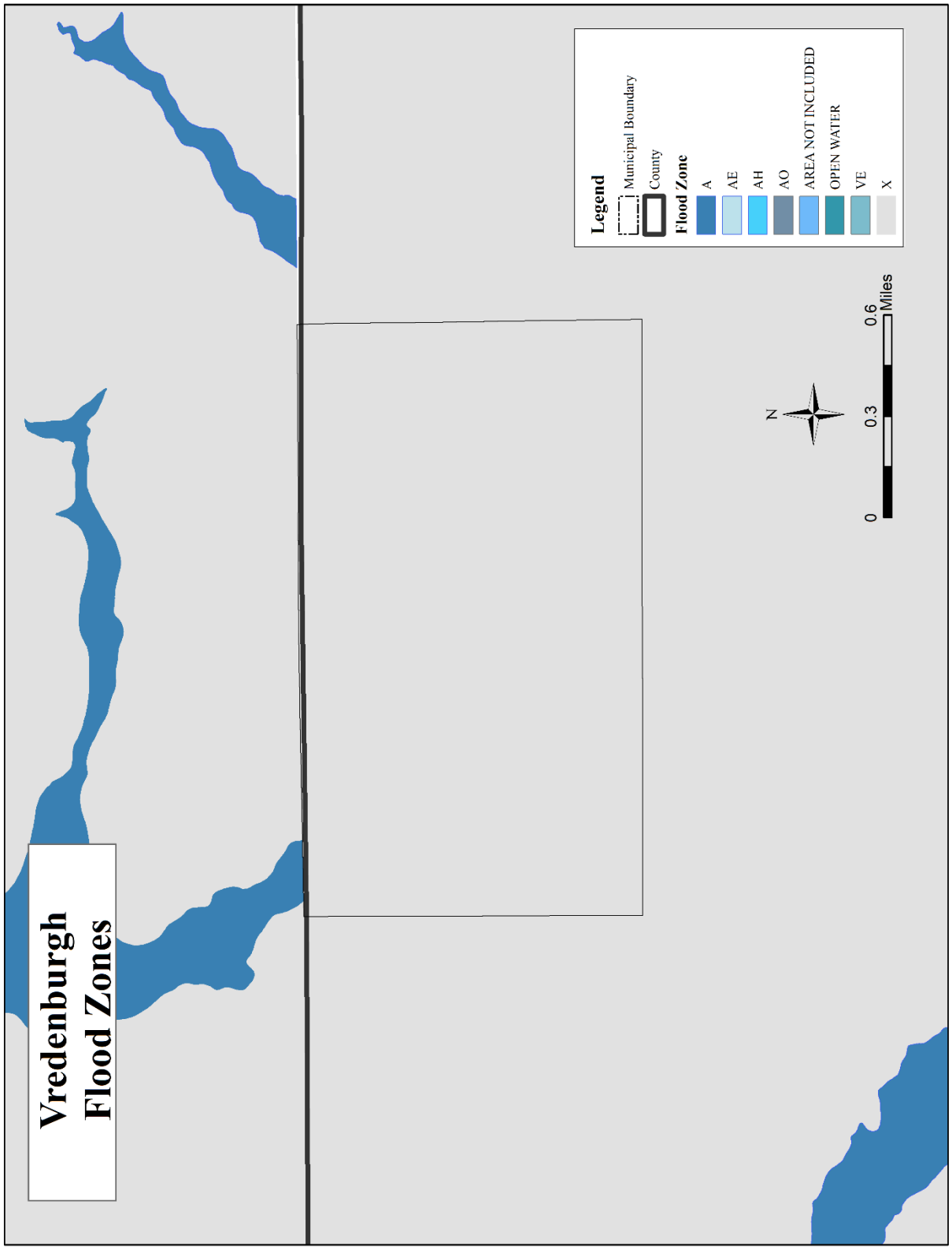


Figure 3.23 Washington County Flood Zones

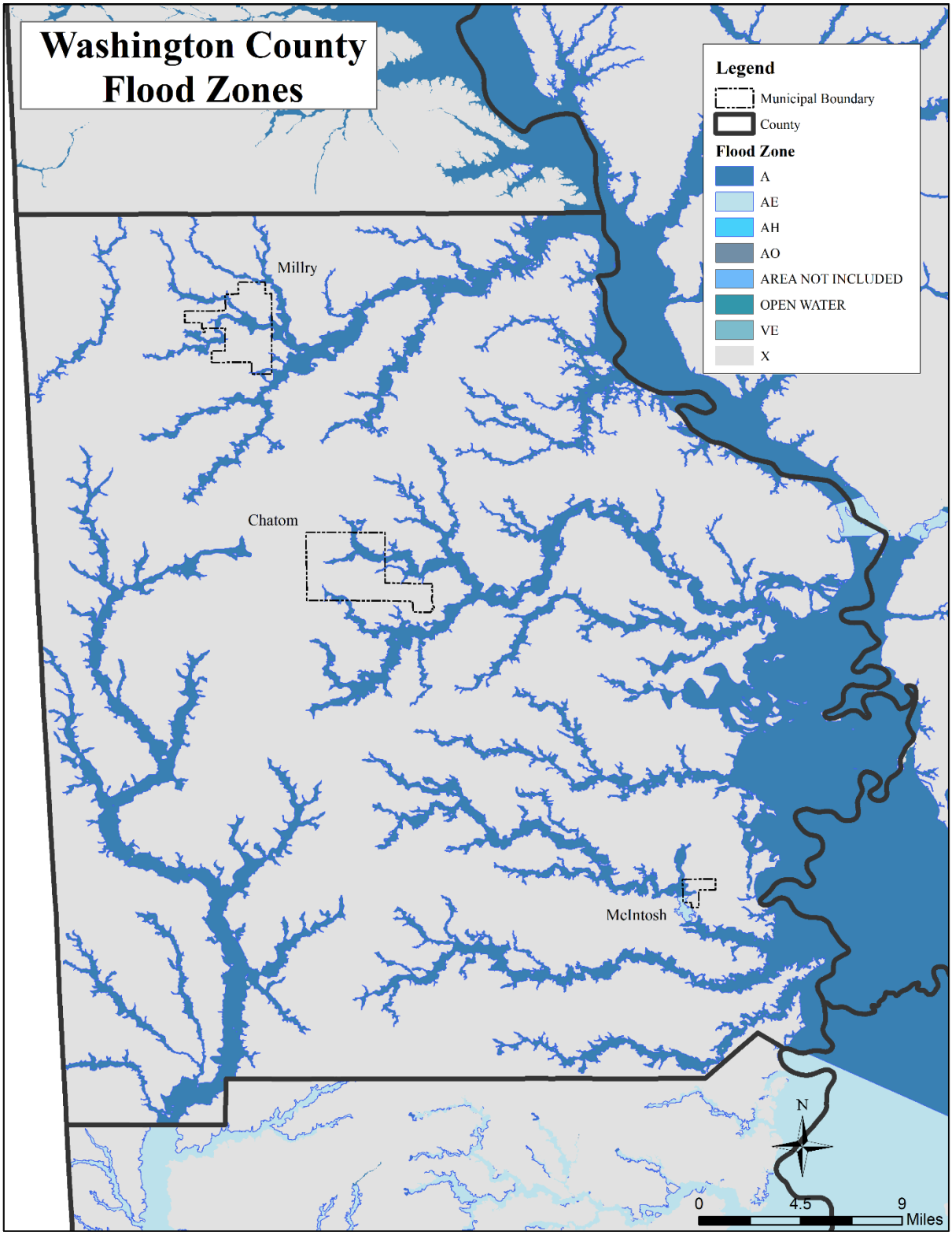


Figure 3.24 Town of Chatom Flood Zones

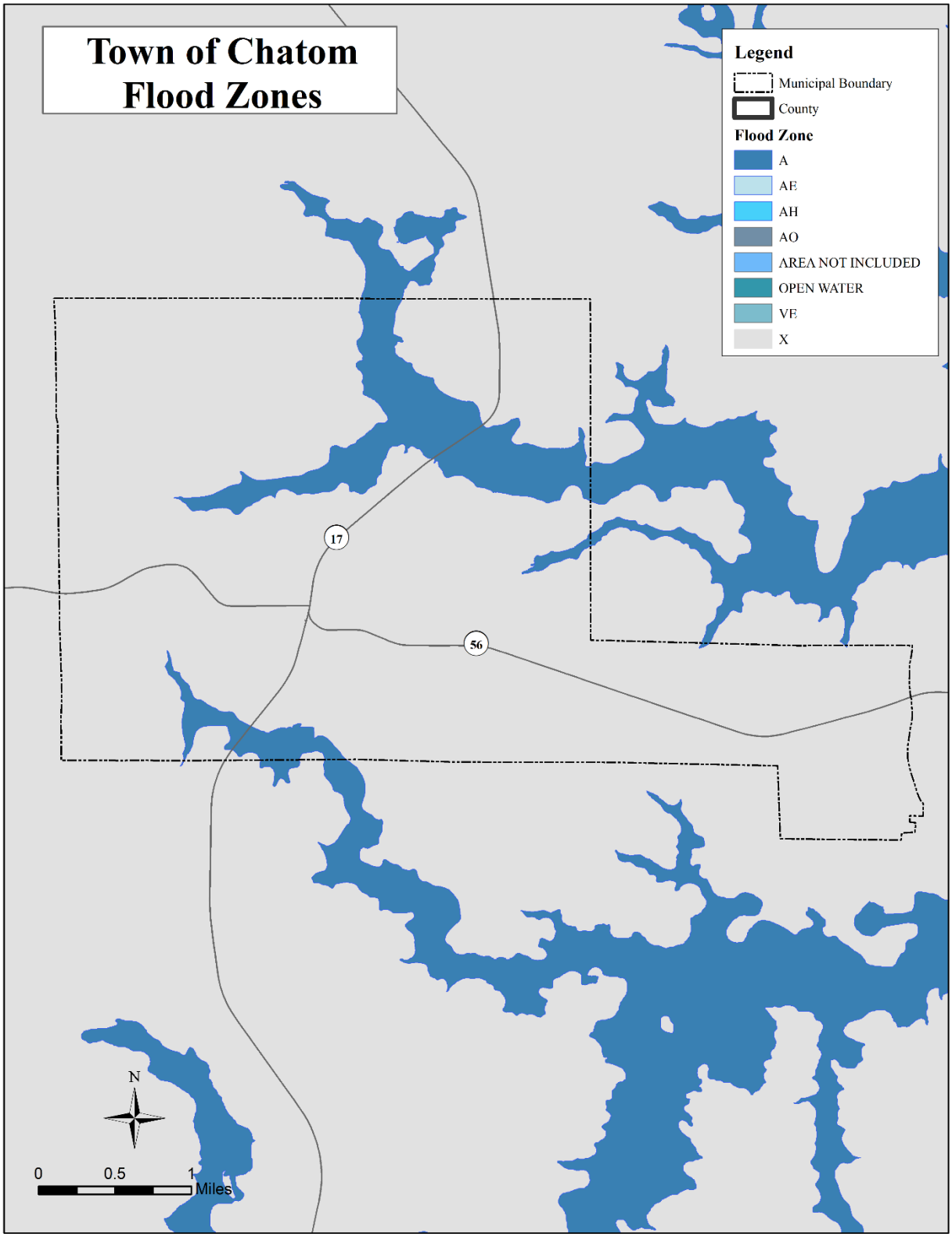


Figure 3.25 Town of McIntosh Flood Zones

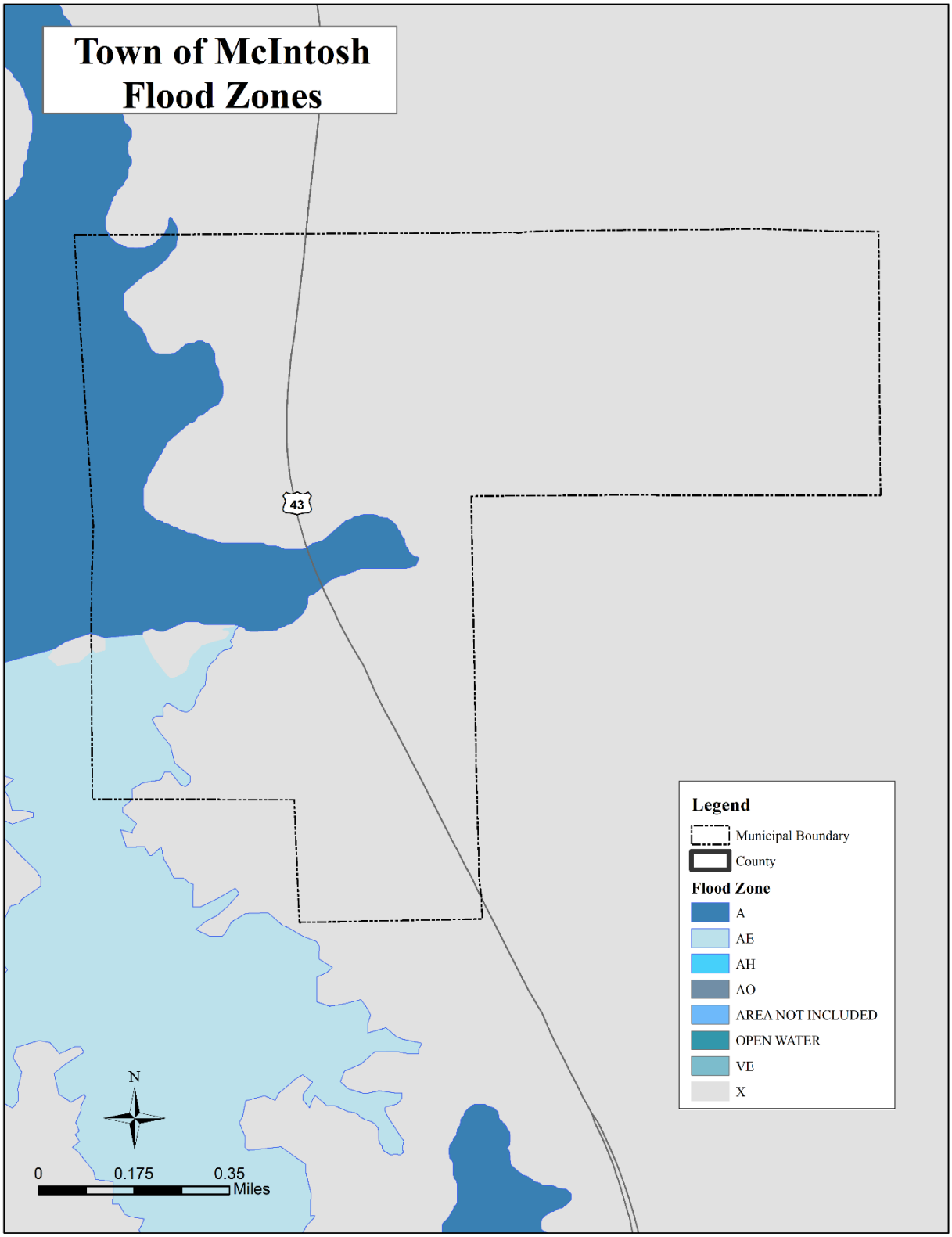
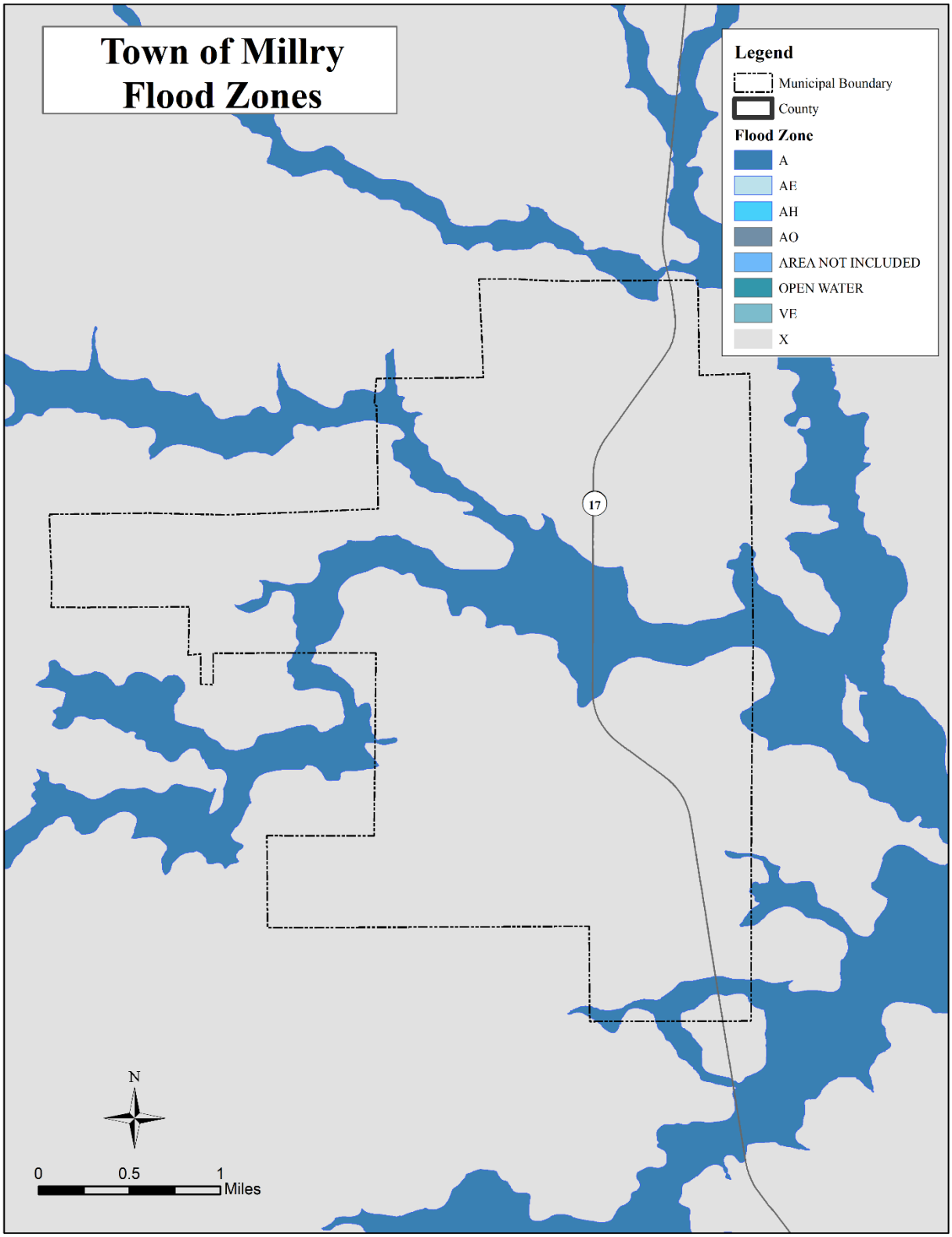


Figure 3.26 Town of Millry Flood Zones



Extent

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 the planning area, 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 up to almost two feet above flood stage as noted by the highest recorded floods described at multiple points in the region. The Tombigbee River near the Coffeeville Lock and Dam recorded a flood crest of 52.5 feet, which is 23.5 feet above flood stage. The Tombigbee River near Leroy recorded a crest of 35.89 feet in 1979, which is 11.89 feet over flood stage. The Alabama River at Claiborne Lock and Dam recorded a crest of 56.6 feet in 1990, which is 14.6 feet over flood stage.

Table 3.11 provides extent by jurisdiction.

Table 3.11 Flood Extent by Jurisdiction

Jurisdiction	Extent
Clarke County (unincorporated)	Flooding depths from 1±25 feet affecting agricultural lands, persons, structures, and infrastructure
Town of Coffeeville	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Fulton	Localized flooding to depths from less than 1 feet; moderate impact on persons, structures, and infrastructure
Town of Grove Hill	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
City of Jackson	Localized flooding to depths from less than 1 feet; moderate impact on persons, structures, and infrastructure

Jurisdiction	Extent
City of Thomasville	Localized flooding to depths from less than 1 feet; moderate impact on persons, structures, and infrastructure
Conecuh County (unincorporated)	Flooding depths from 1±15 feet affecting agricultural lands, persons, structures, and infrastructure
Town of Castleberry	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
City of Evergreen	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Repton	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Monroe County (unincorporated)	Flooding depths from 1±15 feet affecting agricultural lands, persons, structures, and infrastructure
Town of Beatrice	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Excel	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Frisco City	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
City of Monroeville	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Vredenburgh	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Washington County (unincorporated)	Flooding depths from 1±15 feet affecting agricultural lands, persons, structures, and infrastructure
Town of Chatom	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of McIntosh	Localized flooding to depths from less than 1 feet; minimal impact on persons, structures, and infrastructure
Town of Millry	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 flood events since 2000 within the planning area. The total estimated property and crop damage for these events totals over five million dollars. Descriptions of the events with the most damage are provided below:

- March 3, 2001 ($365,000 in damages in Clarke County): Heavy rainfall caused extensive washouts to secondary roads and bridges across the counties. Most of the water had drained by sunset and most of the roads were reopened. However, some of the roads and bridges had to be rebuilt and were closed for several days before they were reopened. Radar estimated four to six inches of rainfall fell across the area.
- May 14, 2014 ($100,000.00 in damages in Conecuh County): Heavy rain caused a bridge to be washed out on Calloway Road. At least 4 other county roads in eastern Conecuh County were closed due to flooding.
- December 24, 2015 ($275,000.00 in damages in Monroe County): Several rounds of heavy rainfall impacted Monroe County during the last 2 weeks of December. Numerous roads were closed due to flooding. Many dirt roads were damaged during the flood event.
- January 2, 2017 ($750,000.00 in damages in Jackson- Clarke County): Significant flash flooding occurred in the Jackson, AL area due to 5 to 7 inches of rain falling over a very short period of time. 5 1/2 inches were measured in just 90 minutes. Numerous homes and roads flooded, with a few water rescues becoming necessary. Numerous homes on Cherry Avenue were flooded. 3 mobile homes were flooded on Warren Street. The Fish House Restaurant was also flooded. Several roads suffered damage.
- January 2, 2017 ($1,200,000 in damages in Washington County): Significant flash flooding occurred near the Leroy area of Washington County. The flash flooding was the result of over 6 inches of rain falling over just a couple of hours of time, with most of the rainfall occurring in just 90 minutes. Roads were washed out near Highway 43, including Lower Ferry Road, Sullivan Lane, Powell Cutoff Road, and Upper Ferry Roadway. The washouts also exposed and damaged a water main and natural gas line. Over a foot of water was reported on Luke River Road.
- June 22, 2017 ($460,000 in damages in Washington County): Flash flooding caused significant damage to County Road 36 and County Road 11 west of Millry.
- April 14, 2018 ($1,200,000 in damages in Clarke County): Five to nine inches of rain fell in a short duration along and east and west of the Highway 43 corridor from Thomasville to southwest of Grove Hill. At the height of the flash flood event, Highway 43 near Bassett Creek was covered in 6 feet of water. Several other roads in this area were also submerged in several feet of water, including Butler Drive in Thomasville. Multiple vehicles were submerged across the area. Approximately 20 water rescues had to be made from houses and residences with rescues reported 5 miles southwest of Grove Hill up toward Fulton. 25 homes experienced significant flooding. The flash flooding also resulted in significant infrastructure damage to roads, water lines, and drainage. The Clarke County Emergency Management Director reported 9.2 inches of rainfall.

Table 3.12 provides historical occurrence data for flooding for the period covering 2000-2020.

Table 3.12 Division A- ATRC Planning Area Flooding Occurrences 2014-2019

Unincorporated Clarke County							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Countywide	Clarke	3/3/2001	Flash Flood	0	0	$365,000.00	$0.00
Barlow Bend	Clarke	7/2/2003	Flash Flood	0	0	$0.00	$0.00
Southwest Portion	Clarke	3/31/2005	Flash Flood	0	0	$0.00	$0.00
Southwest Portion	Clarke	7/6/2005	Flash Flood	0	0	$0.00	$0.00
Countywide	Clarke	7/10/2005	Flash Flood	0	0	$0.00	$0.00
Countywide	Clarke	8/29/2005	Flash Flood	0	0	$0.00	$0.00
West Bend	Clarke	9/23/2009	Flash Flood	0	0	$5,000.00	$0.00
Salitpa	Clarke	12/12/2009	Flash Flood	0	0	$0.00	$0.00
Morvin	Clarke	1/30/2013	Flash Flood	0	0	$15,000.00	$0.00
Scyrene	Clarke	2/11/2013	Flash Flood	0	0	$25,000.00	$0.00
Bashi	Clarke	6/22/2017	Flash Flood	0	0	$0.00	$0.00
West Bend	Clarke	6/23/2017	Flash Flood	0	0	$50,000	$0.00
Tallahatta Springs	Clarke	4/14/2018	Flash Flood	0	1	$1,200,000.00	$0.00
Morvin	Clarke	9/5/2018	Flash Flood	0	0	$25,000	$0.00
Atkinson	Clarke	9/6/2018	Flash Flood	0	0	$0.00	$0.00
Whatley	Clarke	12/27/2018	Flash Flood	0	0	$100,000	$0.00
Atkinson	Clarke	1/23/2019	Flash Flood	0	0	$0.00	$0.00
Tallahatta Springs (unincorporated)	Clarke	1/23/2019	Flash Flood	0	0	$50,000	$0.00
Rural	Clarke	1/23/2019	Flash Flood	0	0	$25,000	$0.00
Woods Bluff	Clarke	2/7/2020	Flood	0	0	$250,000	$0.00
			Totals	**0**	**0**	**$2,110,000.00**	**$0.00**
Town of Coffeeville (Clarke County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Coffeeville	Clarke	4/11/2008	Flash Flood	0	0	$0.00	$0.00
Coffeeville	Clarke	1/23/2019	Flash Flood	0	0	$0.00	$0.00

			Totals	**0**	**0**	**$0.00**	**$0.00**
Town of Fulton (Clarke County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Fulton	Clarke	4/12/2009	Flash Flood	0	0	$50,000.00	$0.00
Fulton	Clarke	6/23/2017	Flash Flood	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$50,000.00**	**$0.00**
Town of Grove Hill (Clarke County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Grove Hill	Clarke	9/5/2018	Flash Flood	0	0	$0.00	$0.00
Grove Hill	Clarke	9/5/2018	Flash Flood	0	0	$10,000.00	$0.00
			Totals	**0**	**0**	**$10,000.00**	**$0.00**
City of Jackson (Clarke County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Jackson	Clarke	4/3/2001	Flash Flood	0	0	$3,000.00	$0.00
Jackson	Clarke	10/22/2007	Flash Flood	0	0	$0.00	$0.00
Jackson	Clarke	12/12/2009	Flash Flood	0	0	$0.00	$0.00
Jackson	Clarke	9/5/2018	Flash Flood	0	0	$25,000.00	$0.00
Jackson	Clarke	9/5/2018	Flash Flood	0	0	$0.00	$0.00
Jackson	Clarke	1/2/2017	Flash Flood	0	0	$750,000.00	$0.00
			Totals	**0**	**0**	**$778,000.00**	**$0.00**
City of Thomasville (Clarke County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Thomasville	Clarke	2/11/2013	Flash Flood	0	0	$10,000.00	$0.00
Thomasville	Clarke	7/23/2013	Flash Flood	0	0	$0.00	$0.00
Thomasville	Clarke	4/17/2015	Flood	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$10,000.00**	**$0.00**
Unincorporated Conecuh County							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Countywide	Conecuh	3/3/2001	Flash Flood	0	0	$0.00	$0.00
Countywide	Conecuh	7/10/2005	Flash Flood	0	0	$0.00	$0.00
Countywide	Conecuh	8/29/2005	Flash Flood	0	0	$0.00	$0.00

Brownville	Conecuh	5/14/2014	Flash Flood	0	0	$0.00	$0.00
Brooks	Conecuh	5/14/2014	Flash Flood	0	0	$100,000.00	$0.00
			Totals	**0**	**0**	**$100,000.00**	**$0.00**
City of Evergreen (Conecuh County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Evergreen	Conecuh	7/20/2002	Flash Flood	0	0	$0.00	$0.00
Evergreen	Conecuh	7/16/2003	Flash Flood	0	0	$0.00	$0.00
Evergreen	Conecuh	4/4/2007	Flash Flood	0	0	$0.00	$0.00
Evergreen	Conecuh	12/14/2009	Flash Flood	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$0.00**	**$0.00**
Unincorporated Monroe County							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Countywide	Monroe	3/3/2001	Flash Flood	0	0	$15,000.00	$0.00
Uriah	Monroe	7/2/2003	Flash Flood	0	0	$0.00	$0.00
Uriah	Monroe	7/3/2003	Flash Flood	0	0	$0.00	$0.00
West Portion	Monroe	7/15/2004	Flash Flood	0	0	$0.00	$0.00
South Portion	Monroe	9/16/2004	Flash Flood	0	0	$0.00	$0.00
South Portion	Monroe	7/6/2005	Flash Flood	0	0	$0.00	$0.00
Countywide	Monroe	8/29/2005	Flash Flood	0	0	$0.00	$0.00
Uriah	Monroe	11/15/2006	Flash Flood	0	0	$0.00	$0.00
Claiborne	Monroe	10/23/2007	Flash Flood	0	0	$0.00	$0.00
Deer	Monroe	12/24/2015	Flood	0	0	$275,000.00	$0.00
Hybart	Monroe	2/9/2020	Flood	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$290,000.00**	**$0.00**
Town of Excel (Monroe County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Excel	Monroe	4/7/2014	Flash Flood	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$0.00**	**$0.00**
Town of Frisco City (Monroe County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Frisco City	Monroe	7/22/2003	Flash Flood	0	0	$0.00	$0.00

Frisco City	Monroe	4/7/2014	Flash Flood	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$0.00**	**$0.00**
City of Monroeville (Monroe County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Monroeville	Monroe	2/11/2013	Flood	0	0	$25,000.00	$0.00
West Monroeville	Monroe	1/2/2017	Flash Flood	0	0	$250,000.00	$0.00
			Totals	**0**	**0**	**$275,000.00**	**$0.00**
Town of Vredenburgh (Monroe County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Vredenburgh	Monroe	8/2/2010	Flash Flood	0	0	$0.00	$0
			Totals	**0**	**0**	**$0.00**	**$0.00**
Unincorporated Washington County							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Countywide	Washington	3/3/2001	Flash Flood	0	0	$30,000.00	$0.00
North Portion	Washington	3/31/2005	Flash Flood	0	0	$0.00	$0.00
Countywide	Washington	7/6/2005	Flash Flood	0	0	$0.00	$0.00
Countywide	Washington	8/29/2005	Flash Flood	0	0	$0.00	$0.00
Yellow Pine	Washington	10/22/2007	Flash Flood	0	0	$0.00	$0.00
Copeland	Washington	4/18/2008	Flash Flood	0	0	$0.00	$0.00
Escatawpa	Washington	9/1/2008	Flash Flood	0	0	$4,000.00	$0.00
Leroy	Washington	1/2/2017	Flash Flood	0	0	$1,200,000.00	$0.00
Copeland	Washington	6/22/2017	Flash Flood	0	0	$460,000	$0.00
Jordan	Washington	6/22/2017	Flash Flood	0	0	$25,000	$0.00
Fruitdale	Washington	4/14/2018	Flash Flood	0	0	$25,000	$0.00
Healing Springs	Washington	12/28/2018	Flash Flood	0	0	$0.00	$0.00
Escatawpa	Washington	1/23/2019	Flash Flood	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$1,744,000.00**	**$0.00**
Town of McIntosh (Washington County)							
Location	**County**	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
McIntosh	Washington	3/27/2009	Flash Flood	0	0	$0.00	$0.00

McIntosh	Washington	3/22/2012	Flash Flood	0	0	$0.00	$0.00
McIntosh	Washington	6/22/2017	Flash Flood	0	0	$15,000.00	$0.00
			Totals	**0**	**0**	**$15,000.00**	**$0.00**

Source: NOAA Storm Events Database

Historical occurrences prior to 2000, can be accessed through the NOAA Storm Events Database site at https://www.ncdc.noaa.gov/stormevents/.

Probability of Future Events

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 Figures 3.7 through 3.26. These maps provide the areas susceptible to a one-percent annual chance flood (100-year floodplain).

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 flood events is considered to be High.

HIGH WINDS (HURRICANES, TORNADOES, AND SEVERE THUNDERSTORM: HIGH WINDS/HAIL/LIGHTINING)

The ATRC Division A planning area 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

The planning area 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 3.13 gives a basic description of the scale.

Table 3.13 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. The ATRC planning is vulnerable to the effects of these storms. In general though, these storms have historically weakened to weak hurricanes or tropical storms before affecting the planning 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 the planning area, 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 A felt the effects of Ivan also suffering damage, due predominantly to high winds.
- In August 2005 Division A felt the after effects of Hurricane Katrina as trees and power lines were damaged from strong storms.

Some counties within AEMA Division A have been included in federal disaster declarations for hurricanes Frederick (1979), Opal (1995), Ivan (2004), Dennis (2005), Katrina (2005), Isaac (2012), and Nate (2017).

There are numerous tropical events listed in the NOAA Storm Events Database for the 2000-2019 timeframe (Table 3.14).

Table 3.14 ATRC Planning Area Tropical Weather Occurrences 2000-2019

Clarke County						
County	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Clarke	9/13/2004	Hurricane	0	0	--	--
Clarke	6/10/2005	Tropical Storm	0	0	--	--
Clarke	7/5/2005	Tropical Storm	0	0	--	--
Clarke	7/9/2005	Hurricane	0	0	--	--
Clarke	10/7/2017	Tropical Storm	0	0	--	--
Clarke	9/15/2020	Tropical Storm	0	0	--	--
		Totals	0	0	--	--
Conecuh County						
Conecuh	8/6/2001	Tropical Storm	0	0	--	--
Conecuh	9/13/2004	Hurricane	0	0	--	--
Conecuh	6/10/2005	Tropical Storm	0	0	--	--
Conecuh	7/9/2005	Hurricane	0	0	--	--
Conecuh	9/15/2020	Tropical Storm	0	0	--	--
		Totals	0	0	--	--
Monroe County						
Monroe	8/6/2001	Tropical Storm	0	0	--	--
Monroe	9/13/2004	Hurricane	0	0	--	--
Monroe	6/10/2005	Tropical Storm	0	0	--	--
Monroe	7/9/2005	Hurricane	0	0	--	--
Monroe	10/7/2017	Tropical Storm	0	0	--	--

Monroe	9/15/2020	Tropical Storm	0	0	--	--
		Totals	0	0	--	--
Washington County						
Washington	9/13/2004	Hurricane	0	0	--	--
Washington	6/10/2005	Tropical Storm	0	0	--	--
Washington	7/5/2005	Tropical Storm	0	0	--	--
Washington	8/27/2005	Hurricane	0	0	--	--
Washington	10/7/2017	Tropical Storm	0	0	--	--
		Totals	0	0	--	--

Source: NOAA Storm Events Database

Probability of Future Events

The probability of future hurricane events directly affecting the planning area is Moderate. This applies to all jurisdictions in the planning area. As discussed earlier, Division A is more susceptible to high winds and spin off tornadoes associated with wakening tropical systems as they move inland.

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 3.15 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 Fajita 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 3.15 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 the planning area based on Fujita Scale classifications is provided in Table 3.16.

Table 3.16 Historic Occurrences by Scale Classification*

Tornado Scale Classification	Percentage of Historical Occurrences
F0/EF0	35%
F1/EF1	34%
F2/EF2	27%
F3/EF3	4%
F4/EF4	-%
F5/EF5	-%

Since 1950
Source: National Weather Service

It can be seen that the Division has experienced tornadic events primarily classified as F0, F1, and F2. While stronger EF3, EF4, and EF5 events are a very small percentage of overall occurrences, they have occurred and are possible in the area.

Locations Affected
All the planning area is susceptible to tornadoes. Tornadoes have affected locations throughout the planning area. 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 NOAA and NWS records, 113 tornadoes have occurred in the planning region since 1819. These storms have resulted in 59 fatalities, 255 injuries, and more than $18 million in damages.

Table 3.17 is a summary of the annual tornado activity in the planning area since 1950.

Table 3.17 Annual Tornado Summary- ATRC Planning Area										
Year	**Tornadoes**	**Fatalities**	**Injuries**	**Damages ($)**	**FO/EFO**	**F1/EF1**	**F2/EF2**	**F3/EF3**	**F4/EF4**	**F5/EF5**
1950	0	0	0	$25,000.00						
1951	0	0	0	-						
1952	0	0	0	-						
1953	1	0	1	-				1		
1954	0	0	0	-						
1955	0	0	0	-						
1956	1	0	0	$2,750.00			1			
1957	6	0	6	$782,500.00		3	3			
1958	0	0	0	-						
1959	0	0	0	-						
1960	2	0	0	$25,000.00			2			
1961	0	0	0	-						
1962	0	0	0	-						
1963	1	0	0	$2,500.00			1			
1964	1	0	0	$2,500.00		1				
1965	0	0	0	-						
1966	0	0	0	-						
1967	1	0	0	$250,000.00			1			
1968	0	0	0	-						
1969	0	0	0	$2,500.00						
1970	3	0	0	$25,000.00	1	1	1			
1971	5	0	1	$575,000.00		1	1	2	1	
1972	1	0	0	$2,500.00			1			
1973	1	0	2	$250,000.00		1				
1974	1	0	0	$25,000.00	1					
1975	1	0	0	-	1					
1976	1	0	0	$25,000.00			1			
1977	0	0	0	-						
1978	1	0	30	$2,500,000.00				1		
1979	4	0	2	$277,500.00	1	2	1			
1980	2	0	0	$27,500.00		2				
1981	0	0	0	-						
1982	1	0	0	$25,000.00		1				
1983	3	0	0	$277,500.00	1	1	1			
1984	3	0	0	$500,000.00			2	1		
1985	3	0	4	$502,500.00		1	2			
1986	0	0	0	-						
1987	0	0	0	-						
1988	1	0	0	-			1			

Table 3.17 Annual Tornado Summary- ATRC Planning Area (continued)										
Year	**Tornadoes**	**Fatalities**	**Injuries**	**Damages ($)**	**FO/EFO**	**F1/EF1**	**F2/EF2**	**F3/EF3**	**F4/EF4**	**F5/EF5**
1989	0	0	0	-						
1990	0	0	0	-						
1991	2	0	0	-	1	1				
1992	1	0	0	$25,000.00		1				
1993	0	0	0	-						
1994	0	0	0	-						
1995	1	0	0	$10,000.00	1					
1996	8	0	15	$1,312,000.00	4	3	1			
1997	0	0	0	-						
1998	0		0	-						
1999	1	0	0	$100,000.00	1					
2000	0	0	0	-						
2001	1	0	0	$15,000.00	1					
2002	9	0	0	$81,000.00	9					
2003	1	0	0	$8,000.00	1					
2004	3	0	0	$212,000.00	2	1				
2005	4	0	0	$310,000.00	4					
2006	5	1	0	$1,300,000.00	3	2				
2007	2	0	0	$900,000.00		2				
2008	1	0	0	$25,000.00	1					
2009	1	0	0	$2,500,000.00		1				
2010	2	0	0	-	2					
2011	11	3	4	$4,117,000.00	1	4	5	1		
2012	2	0	0	-		1	1			
2013	3	0	0	$70,000.00		3				
2014	3	0	0	$255,000.00		3				
2015	1	0	0	$10,000.00	1					
2016	1	0	0	$750,000.00			1			
2017	1	0	0	$25,000.00	1					
2018	1	0	0	$10,000.00	1					
2019	3	0	0	$60,000.00		3				

Source: National Weather Service Tornado Database

Table 3.18 provides previous occurrences of tornadoes by jurisdiction since 2000 when the last county-level mitigation plans were compiled.

Table 3.18 Tornado Occurrences Since 2000

Clarke County Unincorporated							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Bashi	Clarke	11/5/2002	F0	0	0	$8,000.00	$0.00
Walker Springs	Clarke	12/24/2002	F0	0	0	$8,000.00	$0.00
Chilton	Clarke	11/24/2004	F1	0	0	$200,000.00	$0.00
Walker Springs	Clarke	7/6/2005	F0	0	0	$15,000.00	$0.00
Tallahatta	Clarke	5/10/2006	F0	0	0	$15,000.00	$0.00
Carlton	Clarke	4/15/2011	EF1	0	0	$102,000.00	$3,000,000.00
Gainestown	Clarke	4/15/2011	EF2	0	0	$145,000.00	$0.00
Tallahatta Springs	Clarke	11/16/2011	EF0	0	0	$5,000.00	$0.00
Winn	Clarke	12/25/2012	EF2	0	0	$0.00	$0.00
Salitpa	Clarke	2/10/2013	EF1	0	0	$30,000.00	$0.00
Winn	Clarke	2/10/2013	EF1	0	0	$10,000.00	$0.00
Allen	Clarke	4/28/2014	EF1	0	0	$5,000.00	$0.00
Salitpa	Clarke	11/17/2014	EF1	0	0	$150,000.00	$0.00
Whatley	Clarke	6/21/2017	EF0	0	0	$25,000.00	$0.00
Rural	Clarke	10/25/2019	EF1	0	0	$0.00	$0.00
West Bend	Clarke	4/12/2020	EF1	0	0	$0.00	$0.00
		Totals		**0**	**0**	**$718,000.00**	##########
Conecuh County Unincorporated							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Lenox	Conecuh	11/5/2002	F0	0	0	$8,000.00	$0.00
Lenox	Conecuh	2/21/2003	F0	0	0	$8,000.00	$0.00
Owassa	Conecuh	10/19/2004	F0	0	0	$10,000.00	$0.00
Belleville	Conecuh	1/13/2006	F1	1	0	$500,000.00	$0.00
Paul	Conecuh	5/15/2008	EF0	0	0	$25,000.00	$0.00
Brooklyn	Conecuh	4/15/2011	EF1	0	0	$615,000.00	$0.00
Brooklyn	Conecuh	2/15/2016	EF2	0	0	$750,000.00	$0.00
		Totals		**1**	**0**	**$1,916,000.00**	**$0.00**
Town of Castleberry (Conecuh County)							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Castleberry	Conecuh	9/15/2004	F0	0	0	$2,000.00	$0.00
Castleberry	Conecuh	4/14/2007	EF1	0	0	$150,000.00	$0.00
		Totals		**2**	**0**	**$152,000.00**	**$0.00**
City of Evergreen (Conecuh County)							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Evergreen	Conecuh	11/24/2001	F0	0	0	$15,000.00	$0.00
Evergreen	Conecuh	2/2/2006	F0	0	0	$10,000.00	$0.00
		Totals		**4**	**0**	**$25,000.00**	**$0.00**

Monroe County Unincorporated							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Perdue Hill	Monroe	12/24/2002	F0	0	0	$8,000.00	$0.00
Monroe County Airprot	Monroe	9/26/2005	F0	0	0	$200,000.00	$0.00
Tunnell Springs	Monroe	2/2/2006	F0	0	0	$25,000.00	$0.00
Tunnell Springs	Monroe	4/15/2011	EF2	0	0	$200,000.00	$0.00
Turnbull	Monroe	4/15/2011	EF2	0	0	$300,000.00	$0.00
Turnbull	Monroe	4/15/2011	EF2	0	0	$400,000.00	$0.00
Turnbull	Monroe	1/3/2015	EF0	0	0	$10,000.00	$0.00
		Totals		**6**	**0**	**$1,143,000.00**	**$0.00**
Town of Beatrice (Monroe County)							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Beatrice	Monroe	4/15/2011	EF1	0	0	$0.00	$0.00
		Totals		**10**	**0**	**$0.00**	**$0.00**
Town of Excel (Monroevile)							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Excel	Monroe	9/25/2005	F0	0	0	$80,000.00	$0.00
			Totals	**0**	**0**	**$80,000.00**	**$0.00**
City of Monroeville (Monroe County)							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Monroeville	Monroe	12/19/2002	F0	0	0	$10,000.00	$0.00
			Totals	0	0	$10,000.00	$0.00
Town of Vredenburgh (Monroe County)							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Vredenburgh	Monroe	4/14/2007	EF1	0	0	$750,000.00	$0.00
			Totals	**0**	**0**	**$750,000.00**	**$0.00**
Washington County Unincorporated							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Malcolm	Washington	12/19/2002	F0	0	0	$8,000.00	$0.00
Fruitdale	Washington	12/23/2002	F0	0	0	$8,000.00	$0.00
Leroy	Washington	12/24/2002	F0	0	0	$15,000.00	$0.00
Leroy	Washington	7/6/2005	F0	0	0	$15,000.00	$0.00
Jordan	Washington	11/15/2006	F1	0	0	$750,000.00	$0.00
McIntosh	Washington	1/10/2009	EF1	0	0	$2,500,000.00	$0.00
Yellow Pine	Washington	3/10/2010	EF0	0	0	$0.00	$0.00
Malcolm	Washington	4/8/2010	EF0	0	0	$0.00	$0.00
Yellow Pine	Washington	4/15/2011	EF1	0	0	$300,000.00	$0.00
Yarbo	Washington	4/15/2011	EF2	0	1	$50,000.00	$0.00
Escatawpa	Washington	4/15/2011	EF3	3	3	$2,000,000.00	$0.00

Deer Park	Washington	12/25/2012	EF1	0	0	$0.00	$0.00
Bigbee	Washington	2/10/2013	EF1	0	0	$30,000.00	$0.00
Yellow Pine	Washington	2/10/2018	EF0	0	0	$10,000.00	$0.00
Tibbie	Washington	3/3/2019	EF1	0	0	$10,000.00	$0.00
Sims Chapel	Washington	3/3/2019	EF1	0	0	$50,000.00	$0.00
			Totals	**0**	**0**	**$5,746,000.00**	**$0.00**
Town of Chatom (Washington County)							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Chatom	Washington	11/17/2014	EF1	0	0	$ 100,000.00	$0.00
			Totals	**0**	**0**	**$100,000.00**	**$0.00**
Town of Millry (Washington County)							
Location	**County**	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Millry	Washington	12/24/2002	F0	0	0	$ 8,000.00	$0.00
			Totals	**0**	**0**	**$8,000.00**	**$0.00**

Source: NOAA Storm Events Database

Probability of Future Events

Since 1950, AEMA Division A has experienced tornadoes almost every year. Based on historic data, the annual probability for tornadoes is High throughout the division.

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)". 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 1950-2020, the number of reported occurrences of severe thunderstorm events is close to four hundred in the planning area. These severe weather events have occurred in all four counties of the planning area. Tables 3.19-3.21 provide past occurrence data for the 2000-2020 timeframe for severe thunderstorms, hail, and lightning.

Table 3.19 Division A Severe Thunderstorm Occurrences 2000-2020

Clarke County Unincorporated							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Dickinson	4/3/2000	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Choctaw Bluff	4/3/2000	Thunderstorm Wind	60 kts. E	0	0	$5,000.00	$0.00
Scyrene	11/8/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Suggsville	11/24/2001	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Barlow Bend	7/20/2002	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00
Carlton	12/24/2002	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Gainestown	5/3/2003	Thunderstorm Wind	55 kts. EG	0	0	$30,000.00	$0.00
Salipta	4/14/2007	Thunderstorm Wind	50 kts. EG	0	0	$40,000.00	$0.00
Nettleboro	7/23/2007	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Whatley	4/30/2005	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Walker Springs	1/31/2008	Thunderstorm Wind	50 kts. EG	0	0	$12,000.00	$0.00
Chilton	10/9/2009	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Rural	10/9/2009	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Rural	10/9/2009	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Winn	1/24/2010	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Salipta	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Whatley	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Whatley	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Alma	8/22/2011	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
McEntyre	1/30/2013	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Walker Springs	1/30/2013	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Talahatta	7/18/2013	Thunderstorm Wind	50 kts. EG	0	0	$40,000.00	$0.00
Chilton	4/28/2014	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Dickinson	6/10/2014	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
West Bend	6/13/2015	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Choctaw Bluff	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Bashi	3/31/2016	Thunderstorm Wind	61 kts. EG	0	0	$30,000.00	$0.00
Nettleboro	5/20/2016	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Dickinson	6/17/2016	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Alma	1/2/2017	Thunderstorm Wind	61 kts. EG	0	0	$20,000.00	$0.00
Morvin	1/21/2017	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Glendon	1/22/2017	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Morvin	3/1/2017	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Whatley	4/3/2017	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Manila	4/3/2017	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Gainestown	4/3/2017	Thunderstorm Wind	61 kts. EG	0	0	$10,000.00	$0.00
Dickinson	4/5/2017	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Whatley	6/16/2017	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Opine	6/10/2018	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Alma	6/10/2018	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00

Gainestown	3/3/2019	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Tallahatta Springs	10/5/2019	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Opine	10/5/2019	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Winn	11/27/2019	Thunderstorm Wind	61 kts. EG	0	0	$0.00	$0.00
Gosport	11/27/2019	Thunderstorm Wind	87 kts. EG	0	0	$0.00	$0.00
West Bend	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Salipta	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Walker Springs	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Barlow Bend	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Tallahatta Springs	2/6/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Peacock	2/10/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Allen	2/10/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Chilton	3/4/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Chilton	4/23/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Chilton	4/23/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Opine	5/27/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$331,000.00**	**$0.00**
Town of Coffeeville (Clarke County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Coffeeville	1/24/2010	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Coffeeville	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Coffeeville	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Coffeeville	5/6/2012	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Coffeeville	6/11/2012	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Coffeeville	7/3/2012	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Coffeeville	4/28/2014	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Coffeeville	7/9/2015	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Coffeeville	7/21/2015	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Coffeeville	12/28/2015	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Coffeeville	2/23/2016	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Coffeeville	2/23/2016	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Coffeeville	6/17/2016	Thunderstorm Wind	61 kts. EG	0	0	$10,000.00	$0.00
Coffeeville	7/5/2016	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Coffeeville	4/18/2019	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Coffeeville	6/27/2019	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Coffeeville	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Coffeeville	4/23/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Coffeeville	5/17/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$47,000.00**	**$0.00**
Town of Fulton (Clarke County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Fulton	11/9/2000	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Fulton	7/15/2002	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00

Fulton	9/6/2002	Thunderstorm Wind	50 kts. E	0	0	$4,000.00	$0.00
Fulton	2/22/2003	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Fulton	4/12/2009	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Fulton	6/4/2009	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Fulton	1/24/2010	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Fulton	10/24/2010	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Fulton	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$57,000.00**	**$0.00**
Town of Grove Hill (Clarke County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Grove Hill	12/16/2000	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00
Grove Hill	10/20/2002	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Grove Hill	12/23/2002	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Grove Hill	3/18/2003	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Grove Hill	4/7/2004	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Grove Hill	3/4/2008	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Grove Hill	5/3/2009	Thunderstorm Wind	52 kts. EG	0	0	$15,000.00	$0.00
Grove Hill	7/30/2009	Thunderstorm Wind	61 kts. EG	0	0	$25,000.00	$0.00
Grove Hill	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Grove Hill	7/3/2012	Thunderstorm Wind	61 kts. EG	0	0	$8,000.00	$0.00
Grove Hill	7/23/2013	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Grove Hill	7/23/2013	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Grove Hill	7/23/2013	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Grove Hill	9/24/2013	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Grove Hill	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Grove Hill	6/17/2016	Thunderstorm Wind	61 kts. EG	0	0	$10,000.00	$0.00
Grove Hill	6/28/2018	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Grove Hill	2/10/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$138,000.00**	**$0.00**
City of Jackson (Clarke County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Jackson	7/19/2000	Thunderstorm Wind	60 kts. E	0	0	$8,000.00	$0.00
Jackson	7/20/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Jackson	8/19/2001	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Jackson	10/13/2001	Thunderstorm Wind	50 kts. E	0	0	$10,000.00	$0.00
Jackson	10/13/2001	Thunderstorm Wind	60 kts. E	0	0	$15,000.00	$0.00
Jackson	5/3/2003	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Jackson	7/22/2003	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Jackson	6/27/2004	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Jackson	5/27/2009	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Jackson	7/30/2009	Thunderstorm Wind	61 kts. EG	0	0	$25,000.00	$0.00
Jackson	10/24/2010	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Jackson	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00

Jackson	4/15/2011	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Jackson	2/24/2012	Thunderstorm Wind	70 kts. EG	0	0	$20,000.00	$0.00
Jackson	2/24/2012	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Jackson	7/3/2012	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Jackson	7/3/2012	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Jackson	7/23/2013	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Jackson	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Jackson	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Jackson	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Jackson	2/23/2016	Thunderstorm Wind	52 kts. EG	0	0	$25,000.00	$0.00
Jackson	1/2/2017	Thunderstorm Wind	52 kts. EG	0	0	$15,000.00	$0.00
Jackson	1/2/2017	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Jackson	6/10/2018	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
			Totals	**0**	**0**	**$205,000.00**	**$0.00**
City of Thomasville (Clarke County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Thomasville	1/19/2001	Thunderstorm Wind	60 kts. E	0	0	$15,000.00	$0.00
Thomasville	6/14/2001	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Thomasville	6/14/2001	Thunderstorm Wind	60 kts. E	0	0	$15,000.00	$0.00
Thomasville	7/26/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Thomasville	7/27/2000	Thunderstorm Wind	60 kts. E	0	0	$7,000.00	$0.00
Thomasville	7/16/2004	Thunderstorm Wind	50 kts. EG	0	0	$8,000.00	$0.00
Thomasville	4/30/2005	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Thomasville	1/31/2008	Thunderstorm Wind	50 kts. EG	0	0	$75,000.00	$0.00
Thomasville	4/4/2008	Thunderstorm Wind	50 kts. EG	0	0	$12,000.00	$0.00
Thomasville	3/26/2009	Thunderstorm Wind	52 kts. EG	0	0	$15,000.00	$0.00
Thomasville	4/12/2009	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Thomasville	10/9/2009	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	10/24/2010	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Thomasville	5/26/2011	Thunderstorm Wind	60 kts. EG	0	0	$5,000.00	$0.00
Thomasville	8/22/2011	Thunderstorm Wind	52 kts. EG	0	0	$7,000.00	$0.00
Thomasville	5/29/2012	Thunderstorm Wind	61 kts. EG	0	0	$10,000.00	$0.00
Thomasville	6/11/2012	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	2/11/2013	Thunderstorm Wind	61 kts. EG	0	0	$10,000.00	$0.00
Thomasville	7/23/2013	Thunderstorm Wind	52 kts. EG	0	0	$4,000.00	$0.00
Thomasville	5/25/2014	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	6/10/2014	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Thomasville	10/13/2014	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Thomasville	7/4/2015	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Thomasville	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Thomasville	3/31/2016	Thunderstorm Wind	61 kts. EG	0	0	$30,000.00	$0.00
Thomasville	3/31/2016	Thunderstorm Wind	61 kts. EG	0	0	$30,000.00	$0.00
Thomasville	6/17/2016	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00

Thomasville	4/3/2017	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Thomasville	6/28/2018	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Thomasville	12/27/2018	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Thomasville	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	3/4/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	3/4/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Thomasville	3/31/2020	Thunderstorm Wind	61 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$320,000.00**	**$0.00**
Conecuh County Unincorporated							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Lenox	3/19/2000	Thunderstorm Wind	60 kts. E	0	0	$10,000.00	$0.00
Bermuda	8/10/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Nichburg	2/27/2001	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Belleville	11/24/2001	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Owassa	10/29/2002	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Paul	6/27/2004	Thunderstorm Wind	50 kts. EG	0	0	$8,000.00	$0.00
Belleville	7/16/2004	Thunderstorm Wind	50 kts. EG	0	0	$8,000.00	$0.00
Lenox	1/17/2006	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Range	2/17/2008	Thunderstorm Wind	50 kts. EG	0	0	$12,000.00	$0.00
Lenox	6/11/2011	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Lenox	1/21/2016	Thunderstorm Wind	61 kts. EG	0	0	$30,000.00	$0.00
Lenox	6/26/2016	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
China	1/21/2017	Thunderstorm Wind	61 kts. EG	0	0	$20,000.00	$0.00
Bowles	1/21/2017	Thunderstorm Wind	61 kts. EG	0	0	$8,000.00	$0.00
Lenox	4/3/2017	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Brownville	6/2/2018	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Owassa	2/12/2019	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Bowles	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Deer Range	4/12/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Owassa	4/19/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$165,000.00**	**$0.00**
Town of Castleberry (Conecuh County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Castleberry	1/10/2000	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Castleberry	3/19/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Castleberry	7/11/2000	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Castleberry	3/3/2001	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Castleberry	10/13/2001	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Castleberry	4/29/2002	Thunderstorm Wind	50 kts. E	0	0	$7,000.00	$0.00
Castleberry	6/14/2002	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00
Castleberry	7/23/2002	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00

Castleberry	12/24/2002	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Castleberry	4/14/2007	Thunderstorm Wind	70 kts. EG	0	0	$250,000.00	$0.00
Castleberry	4/7/2014	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Castleberry	3/24/2016	Thunderstorm Wind	78 kts. EG	0	0	$10,000.00	$0.00
			Totals	**0**	**0**	**$323,000.00**	**$0.00**
City of Evergreen (Conecuh County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Evergreen	8/19/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Evergreen	3/12/2001	Thunderstorm Wind	90 kts. E	0	1	$1,300,000.00	$0.00
Evergreen	5/27/2001	Thunderstorm Wind	50 kts. E	0	0	$3,000.00	$0.00
Evergreen	10/13/2001	Thunderstorm Wind	50 kts. E	0	0	$15,000.00	$0.00
Evergreen	7/6/2002	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00
Evergreen	7/20/2002	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00
Evergreen	5/3/2003	Thunderstorm Wind	55 kts. EG	0	0	$25,000.00	$0.00
Evergreen	7/16/2003	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Evergreen	6/12/2007	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Evergreen	1/31/2008	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Evergreen	5/4/2009	Thunderstorm Wind	51 kts. MG	0	0	$0.00	$0.00
Evergreen	6/16/2011	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Evergreen	6/21/2011	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Evergreen	6/14/2012	Thunderstorm Wind	51 kts. MG	0	0	$0.00	$0.00
Evergreen	6/17/2013	Thunderstorm Wind	56 kts. EG	0	0	$5,000.00	$0.00
Evergreen	6/28/2013	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Evergreen	4/7/2014	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Evergreen	7/21/2015	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Evergreen	7/10/2016	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Evergreen	4/3/2017	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Evergreen	4/3/2017	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Evergreen	4/3/2017	Thunderstorm Wind	61 kts. EG	0	0	$15,000.00	$0.00
Evergreen	6/2/2018	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Evergreen	6/28/2018	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Evergreen	7/12/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$1,452,000.00**	**$0.00**
Town of Repton (Conecuh County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Repton	12/16/2000	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Repton	10/13/2001	Thunderstorm Wind	60 kts. E	0	0	$10,000.00	$0.00
Repton	11/24/2001	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Repton	8/25/2002	Thunderstorm Wind	50 kts. E	0	0	$10,000.00	$0.00
Repton	1/21/2016	Thunderstorm Wind	61 kts. EG	0	0	$10,000.00	$0.00
Repton	4/18/2019	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
			Totals	**0**	**0**	**$47,000.00**	**$0.00**
Monroe County Unincorporated							

Location	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
Peterman	2/27/2001	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Uriah	3/12/2001	Thunderstorm Wind	85 kts. E	0	0	$100,000.00	$0.00
Goodway	10/13/2001	Thunderstorm Wind	50 kts. E	0	0	$20,000.00	$0.00
Claiborne	10/13/2001	Thunderstorm Wind	60 kts. E	0	0	$15,000.00	$0.00
Uriah	11/24/2001	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Tunnell Springs	12/24/2002	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Peterman	6/19/2003	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Claiborne	6/28/2004	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Perdue Hill	7/16/2004	Thunderstorm Wind	50 kts. EG	0	0	$8,000.00	$0.00
Tunnell Springs	10/19/2004	Thunderstorm Wind	50 kts. EG	0	0	$7,000.00	$0.00
Uriah	4/22/2005	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Megargel	5/9/2006	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Hybart	1/31/2008	Thunderstorm Wind	50 kts. EG	0	0	$20,000.00	$0.00
Uriah	5/15/2008	Thunderstorm Wind	50 kts. EG	0	0	$40,000.00	$0.00
Burnt Corn	6/23/2009	Thunderstorm Wind	52 kts. EG	0	0	$15,000.00	$0.00
Peterman	1/24/2010	Thunderstorm Wind	50 kts. EG	0	0	$0.00	$0.00
Ribver Ridge	8/2/2010	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Uriah	6/5/2011	Thunderstorm Wind	61 kts. EG	0	0	$20,000.00	$0.00
Uriah	6/7/2011	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Mexia	6/10/2011	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Uriah	4/7/2014	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Keith	4/28/2014	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Tunnell Springs	1/3/2015	Thunderstorm Wind	61 kts. EG	0	0	$2,000.00	$0.00
Mexboro	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Hybart	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Uriah	3/31/2016	Thunderstorm Wind	60 kts. EG	0	0	$5,000.00	$0.00
Tunnell Springs	1/2/2017	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Nadawah	1/22/2017	Thunderstorm Wind	70 kts. EG	0	0	$45,000.00	$0.00
Uriah	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Eliska	4/12/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Uriah	4/12/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Tunnell Springs	4/12/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Allene	4/19/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$399,000.00**	**$0.00**
Town of Beatrice (Monroe County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Beatrice	6/1/2010	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
			Totals	**0**	**0**	**$10,000.00**	**$0.00**
Town of Excel (Monroe County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Excel	8/3/2003	Thunderstorm Wind	50 kts. EG	0	0	$20,000.00	$0.00
Excel	7/15/2004	Thunderstorm Wind	50 kts. EG	0	0	$8,000.00	$0.00

Excel	5/31/2012	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Excel	7/3/2012	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Excel	4/25/2015	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Excel	6/16/2019	Thunderstorm Wind	61 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$43,000.00**	**$0.00**
Town of Frisco City (Monroe County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Frisco City	10/13/2001	Thunderstorm Wind	60 kts. E	0	0	$15,000.00	$0.00
Frisco City	6/12/2004	Thunderstorm Wind	50 kts. EG	0	0	$20,000.00	$0.00
Frisco City	6/26/2004	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Frisco City	6/28/2004	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Frisco City	2/6/2008	Thunderstorm Wind	50 kts. EG	0	0	$20,000.00	$0.00
Frisco City	5/3/2009	Thunderstorm Wind	52 kts. EG	0	0	$15,000.00	$0.00
Frisco City	6/21/2011	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Frisco City	6/8/2013	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Frisco City	7/23/2013	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Frisco City	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$97,000.00**	**$0.00**
City of Monroeville (Monroe County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Monroeville	1/19/2002	Thunderstorm Wind	60 kts. E	0	0	$25,000.00	$0.00
Monroeville	4/29/2002	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00
Monroeville	8/2/2002	Thunderstorm Wind	55 kts. E	0	0	$50,000.00	$0.00
Monroeville	12/19/2002	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Monroeville	7/22/2003	Thunderstorm Wind	58 kts. MG	0	0	$5,000.00	$0.00
Monroeville	8/27/2003	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Monroeville	4/30/2005	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Monroeville	11/15/2006	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Monroeville	11/15/2006	Thunderstorm Wind	50 kts. EG	0	0	$12,000.00	$0.00
Monroeville	1/7/2007	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Monroeville	4/14/2007	Thunderstorm Wind	87 kts. EG	0	0	$0.00	$1,000,000.00
Monroeville	12/24/2008	Thunderstorm Wind	61 kts. EG	0	0	$200,000.00	$0.00
Monroeville	5/3/2009	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Monroeville	4/15/2011	Thunderstorm Wind	50 kts. EG	0	0	$35,000.00	$0.00
Monroeville	6/10/2011	Thunderstorm Wind	60 kts. EG	0	0	$5,000.00	$0.00
Monroeville	5/29/2012	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00
Monroeville	6/10/2012	Thunderstorm Wind	52 kts. EG	0	1	$10,000.00	$0.00
Monroeville	7/23/2013	Thunderstorm Wind	52 kts. EG	0	0	$4,000.00	$0.00
Monroeville	4/28/2014	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Monroeville	1/3/2015	Thunderstorm Wind	52 kts. EG	0	0	$1,000.00	$0.00
Monroeville	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Monroeville	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Monroeville	6/28/2018	Thunderstorm Wind	61 kts. EG	0	0	$5,000.00	$0.00

Monroeville	11/1/2018	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Monroeville	3/31/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**1**	**$435,000.00**	**$1,000,000.00**
Town of Vredenburgh (Monroe County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Vredenburgh	4/23/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$0.00**	**$0.00**
Washington County Unincorporated							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Frankville	1/10/2000	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Fruitdale	3/3/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Dwight	3/3/2000	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Deer Park	4/3/2000	Thunderstorm Wind	60 kts. E	0	0	$8,000.00	$0.00
Fairford	4/3/2000	Thunderstorm Wind	60 kts. E	0	0	$5,000.00	$0.00
Leroy	7/11/2000	Thunderstorm Wind	60 kts. E	0	0	$15,000.00	$0.00
Wagarville	7/26/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Wagarville	7/30/2000	Thunderstorm Wind	60 kts. E	0	0	$5,000.00	$0.00
Wagarville	8/10/2000	Thunderstorm Wind	60 kts. E	0	0	$20,000.00	$0.00
Vinegar Bend	8/27/2000	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Deer Park	6/11/2001	Thunderstorm Wind	55 kts. E	0	0	$8,000.00	$0.00
Tibbie	6/22/2001	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Deer Park	8/20/2001	Thunderstorm Wind	50 kts. E	0	0	$5,000.00	$0.00
Vinegar Bend	10/13/2001	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Wagarville	10/13/2001	Thunderstorm Wind	50 kts. E	0	0	$15,000.00	$0.00
Tibbie	1/19/2002	Thunderstorm Wind	50 kts. E	0	0	$15,000.00	$0.00
Fairford	4/8/2002	Thunderstorm Wind	55 kts. E	0	0	$25,000.00	$0.00
Vinegar Bend	7/30/2002	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00
Sunflower	5/3/2003	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Malcolm	8/6/2003	Thunderstorm Wind	50 kts. EG	0	0	$5,000.00	$0.00
Yarbo	4/30/2005	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Yarbo	7/30/2006	Thunderstorm Wind	50 kts. EG	0	0	$8,000.00	$0.00
Yarbo	4/14/2007	Thunderstorm Wind	78 kts. EG	0	0	$500,000.00	$0.00
Vinegar Bend	1/31/2008	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Silas	4/11/2008	Thunderstorm Wind	50 kts. EG	0	0	$10,000.00	$0.00
Fruitdale	8/12/2008	Thunderstorm Wind	50 kts. EG	0	0	$12,000.00	$0.00
Topton	2/18/2009	Thunderstorm Wind	50 kts. EG	0	0	$15,000.00	$0.00
Frankville	8/3/2010	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Vinegar Bend	8/3/2010	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Fruitdale	6/7/2011	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Vinegar Bend	6/7/2011	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Deer Park	6/7/2011	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Bigbee	3/31/2013	Thunderstorm Wind	61 kts. EG	0	0	$4,000.00	$0.00
St Stephens	7/23/2013	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00

Frankville	7/23/2013	Thunderstorm Wind	52 kts. EG	0	0	$2,000.00	$0.00
Wagarville	4/28/2014	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Wagarville	6/21/2014	Thunderstorm Wind	52 kts. EG	0	0	$3,000.00	$0.00
Deer Park	4/25/2015	Thunderstorm Wind	52 kts. EG	0	0	$1,000.00	$0.00
Sunflower	7/4/2015	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Frankville	8/8/2015	Thunderstorm Wind	70 kts. EG	0	0	$200,000.00	$0.00
Yellow Pine	2/23/2016	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Frankville	6/16/2017	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Healing Springs	6/22/2018	Thunderstorm Wind	52 kts. EG	0	0	$4,000.00	$0.00
Topton	4/18/2019	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
Topton	6/27/2019	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Fairford	6/27/2019	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Fairford	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
St Stephens	1/11/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Loper	2/10/2020	Thunderstorm Wind	61 kts. EG	0	0	$0.00	$0.00
Healing Springs	4/12/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Summit	4/12/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Fairford	4/12/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Uniform	4/19/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Bigbee	4/23/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Jordan	5/27/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
Yarbo	5/27/2020	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$1,038,000.00**	**$0.00**
Town of Chatom (Washington County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Chatom	1/19/2001	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Chatom	6/14/2001	Thunderstorm Wind	55 kts. E	0	0	$5,000.00	$0.00
Chatom	4/8/2002	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Chatom	12/24/2002	Thunderstorm Wind	60 kts. E	0	0	$80,000.00	$0.00
Chatom	12/20/2007	Thunderstorm Wind	50 kts. EG	0	0	$12,000.00	$0.00
Chatom	1/31/2008	Thunderstorm Wind	50 kts. EG	0	0	$12,000.00	$0.00
Chatom	7/4/2015	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Chatom	2/15/2016	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
Chatom	7/12/2020	Thunderstorm Wind	60 kts. EG	0	0	$0.00	$0.00
			Totals	**0**	**0**	**$139,000.00**	**$0.00**
Town of McIntosh (Washington County)							
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
McIntosh	1/19/2001	Thunderstorm Wind	55 kts. E	0	0	$8,000.00	$0.00
McIntosh	3/12/2001	Thunderstorm Wind	75 kts. E	0	6	$1,000,000.00	$0.00
McIntosh	7/19/2002	Thunderstorm Wind	50 kts. E	0	0	$10,000.00	$0.00
McIntosh	7/4/2015	Thunderstorm Wind	52 kts. EG	0	0	$5,000.00	$0.00
McIntosh	8/8/2015	Thunderstorm Wind	61 kts. EG	0	0	$10,000.00	$0.00
McIntosh	6/7/2019	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00
McIntosh	6/27/2019	Thunderstorm Wind	52 kts. EG	0	0	$0.00	$0.00

				Totals	**0**	**6**	**$1,033,000.00**	**$0.00**
Town of Millry (Washington County)								
Location	**Date**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Millry	12/16/2000	Thunderstorm Wind	55 kts. E	0	0	$10,000.00	$0.00
Millry	8/17/2001	Thunderstorm Wind	50 kts. E	0	0	$8,000.00	$0.00
Millry	8/15/2006	Thunderstorm Wind	50 kts. EG	0	0	$8,000.00	$0.00
Millry	5/3/2009	Thunderstorm Wind	52 kts. EG	0	0	$10,000.00	$0.00
				Totals	**0**	**0**	**$36,000.00**	**$0.00**

Source: NOAA Storm Events Database

Table 3.20 Division A Hail Occurrences 2000-2020

Clarke County Unincorporated						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Alma	7/19/2000	0.88 in.	0	0	$0.00	$0.00
Opine	3/12/2001	0.88 in.	0	0	$0.00	$0.00
Bashi	6/19/2002	0.88 in.	0	0	$0.00	$0.00
Carlton	5/2/2003	0.75 in.	0	0	$0.00	$0.00
Carlton	5/3/2003	1.00 in.	0	0	$0.00	$0.00
Chance	5/3/2003	0.75 in.	0	0	$0.00	$0.00
Dickinson	5/10/2006	1.75 in.	0	0	$5,000.00	$0.00
West Bend	5/21/2010	1.75 in.	0	0	$0.00	$0.00
Cunningham	3/2/2012	1.00 in.	0	0	$0.00	$0.00
West Bend	5/21/2012	1.00 in.	0	0	$0.00	$0.00
Carlton	12/23/2014	1.00 in.	0	0	$0.00	$0.00
Gainestown	2/15/2016	1.00 in.	0	0	$0.00	$0.00
Tallahatta Springs	7/22/2018	1.00 in.	0	0	$0.00	$0.00
Chilton	7/22/2018	1.50 in.	0	0	$0.00	$0.00
		Totals	0	0	$5,000.00	$0.00
Town of Coffeeville (Clarke County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Coffeeville	3/26/2005	1.00 in.	0	0	$0.00	$0.00
Coffeeville	4/30/2005	1.00 in.	0	0	$0.00	$0.00
Coffeeville	12/24/2005	1.75 in.	0	0	$5,000.00	$0.00
Coffeeville	4/11/2008	0.88 in.	0	0	$0.00	$0.00
Coffeeville	5/27/2009	1.00 in.	0	0	$0.00	$0.00
Coffeeville	4/24/2010	0.88 in.	0	0	$0.00	$0.00
Coffeeville	4/24/2010	1.75 in.	0	0	$0.00	$0.00
Coffeeville	5/21/2010	1.00 in.	0	0	$0.00	$0.00
Coffeeville	2/10/2013	1.75 in.	0	0	$5,000.00	$0.00
		Totals	0	0	$10,000.00	$0.00
Town of Fulton (Clarke County)						

Location	Date	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
Fulton	3/13/2003	0.75 in.	0	0	$0.00	$0.00
Fulton	7/17/2003	0.75 in.	0	0	$0.00	$0.00
Fulton	7/17/2003	1.00 in.	0	0	$0.00	$0.00
Fulton	10/24/2010	0.88 in.	0	0	$0.00	$0.00
Fulton	10/24/2010	1.75 in.	0	0	$0.00	$0.00
Fulton	2/25/2014	0.88 in.	0	0	$0.00	$0.00
Fulton	5/25/2014	1.00 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
Town of Grove Hill (Clarke County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Grove Hill	3/13/2003	0.75 in.	0	0	$0.00	$0.00
Grove Hill	5/2/2003	0.75 in.	0	0	$0.00	$0.00
Grove Hill	4/7/2004	0.88 in.	0	0	$0.00	$0.00
Grove Hill	3/30/2005	1.00 in.	0	0	$0.00	$0.00
Grove Hill	2/3/2006	0.75 in.	0	0	$0.00	$0.00
Grove Hill	5/6/2009	0.88 in.	0	0	$0.00	$0.00
Grove Hill	7/30/2009	1.00 in.	0	0	$0.00	$0.00
Grove Hill	5/26/2011	1.00 in.	0	0	$0.00	$0.00
Grove Hill	5/26/2011	0.75 in.	0	0	$0.00	$0.00
Grove Hill	12/25/2012	1.00 in.	0	0	$0.00	$0.00
Grove Hill	7/22/2018	1.00 in.	0	0	$0.00	$0.00
Grove Hill	3/25/2019	1.00 in.	0	0	$0.00	$0.00
Grove Hill	6/23/2020	1.00 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
City of Jackson (Clarke County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Jackson	8/10/2000	0.75 in.	0	0	$0.00	$0.00
Jackson	5/27/2001	0.88 in.	0	0	$0.00	$0.00
Jackson	4/29/2002	1.75 in.	0	0	$0.00	$0.00
Jackson	3/13/2003	0.75 in.	0	0	$0.00	$0.00
Jackson	5/2/2003	0.75 in.	0	0	$0.00	$0.00
Jackson	3/31/2013	1.00 in.	0	0	$0.00	$0.00
Jackson	5/20/2015	0.88 in.	0	0	$0.00	$0.00
Jackson	2/15/2016	1.00 in.	0	0	$0.00	$0.00
Jackson	6/21/2014	0.88 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
City of Thomasville (Clarke County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**

Thomasville	5/2/2003	0.75 in.	0	0	$0.00	$0.00
Thomasville	12/24/2005	1.00 in.	0	0	$0.00	$0.00
Thomasville	5/10/2006	2.75 in.	0	0	$100,000.00	$0.00
Thomasville	4/11/2007	1.00 in.	0	0	$0.00	$0.00
Thomasville	4/12/2009	0.75 in.	0	0	$0.00	$0.00
Thomasville	10/24/2010	0.88 in.	0	0	$0.00	$0.00
Thomasville	4/4/2011	0.88 in.	0	0	$0.00	$0.00
		Totals	0	0	$100,000.00	$0.00
Conecuh County Unincorporated						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Owassa	3/12/2001	0.75 in.	0	0	$0.00	$0.00
Paul	6/19/2002	0.88 in.	0	0	$0.00	$0.00
Belleville	5/2/2003	0.75 in.	0	0	$0.00	$0.00
Lenox	4/24/2010	1.75 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
Town of Castleberry (Conecuh County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Castleberry	3/14/2003	0.75 in.	0	0	$0.00	$0.00
Castleberry	3/30/2017	1.00 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
City of Evergreen (Conecuh County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Evergreen	4/8/2004	1.00 in.	0	0	$0.00	$0.00
Evergreen	4/21/2005	0.75 in.	0	0	$0.00	$0.00
Evergreen	12/28/2007	0.75 in.	0	0	$0.00	$0.00
Evergreen	1/31/2008	0.88 in.	0	0	$0.00	$0.00
Evergreen	2/15/2016	0.75 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
Monroe County Unincorporated						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Peterman	2/27/2001	0.88 in.	0	0	$0.00	$0.00
Nadawah	5/27/2001	0.75 in.	0	0	$0.00	$0.00
Goodway	3/13/2003	0.75 in.	0	0	$0.00	$0.00
Finchburg	5/2/2003	1.75 in.	0	0	$0.00	$0.00
Uriah	5/2/2003	1.25 in.	0	0	$0.00	$0.00
Uriah	5/2/2003	1.00 in.	0	0	$0.00	$0.00
Hybart	5/3/2003	0.75 in.	0	0	$0.00	$0.00
Mexia	5/1/2004	1.00 in.	0	0	$0.00	$0.00
Uriah	8/30/2006	0.88 in.	0	0	$0.00	$0.00
Megargel	8/23/2007	0.75 in.	0	0	$0.00	$0.00

Peterman	12/20/2007	0.75 in.	0	0	$0.00	$0.00
Peterman	4/19/2009	0.88 in.	0	0	$0.00	$0.00
Buena Vista	4/15/2011	0.75 in.	0	0	$0.00	$0.00
Bun	4/15/2011	0.75 in.	0	0	$0.00	$0.00
Finchberry	4/15/2011	0.75 in.	0	0	$0.00	$0.00
Ura	6/7/2011	1.00 in.	0	0	$0.00	$0.00
Tunnell Springs	3/30/2017	1.00 in.	0	0	$0.00	$0.00
Uriah	8/21/2020	1.00 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
Town of Beatrice (Monroe County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Beatrice	10/19/2004	0.75 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
Town of Excel						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Excel	5/2/2007	1.25 in.	0	0	$0.00	$0.00
Excel	3/25/2019	1.00 in.	0	0	$0.00	$0.00
Excel	4/6/2019	1.00 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
Town of Frisco City (Monroe County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Frisco City	7/15/2004	0.75 in.	0	0	$0.00	$0.00
Frisco City	5/2/2007	0.88 in.	0	0	$0.00	$0.00
Frisco City	5/30/2012	1.00 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
City of Monroeville (Monroe County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Monroeville	7/16/2004	0.75 in.	0	0	$0.00	$0.00
Monroeville	3/26/2005	0.75 in.	0	0	$0.00	$0.00
Monroeville	4/21/2005	0.75 in.	0	0	$0.00	$0.00
Monroeville	6/2/2005	0.88 in.	0	0	$0.00	$0.00
Monroeville	5/10/2006	0.88 in.	0	0	$0.00	$0.00
Monroeville	1/10/2008	0.75 in.	0	0	$0.00	$0.00
Monroeville	2/26/2008	0.75 in.	0	0	$0.00	$0.00
		Totals	0	0	$0.00	$0.00
Washington County Unincorporated						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Deer Park	4/13/2000	0.75 in.	0	0	$0.00	$0.00
Wagarville	8/31/2000	0.75 in.	0	0	$0.00	$0.00
Sunflower	9/5/2000	0.75 in.	0	0	$0.00	$0.00

Sunflower	3/3/2001	0.75 in.	0	0	$0.00	$0.00
Vinegar Bend	3/12/2001	2.00 in.	0	0	$0.00	$0.00
Fruitdale	12/19/2002	0.75 in.	0	0	$0.00	$0.00
Fruitdale	3/13/2003	0.75 in.	0	0	$0.00	$0.00
Leroy	3/13/2003	0.75 in.	0	0	$0.00	$0.00
Fruitdale	4/25/2003	1.75 in.	0	0	$10,000.00	$0.00
Tibbie	4/25/2003	1.00 in.	0	0	$0.00	$0.00
Yarbo	5/2/2003	1.75 in.	0	0	$0.00	$0.00
Frankville	5/2/2003	0.75 in.	0	0	$0.00	$0.00
Leroy	5/2/2003	0.75 in.	0	0	$0.00	$0.00
Yellow Pine	5/3/2003	1.00 in.	0	0	$0.00	$0.00
Seaboard	5/3/2003	1.75 in.	0	0	$0.00	$0.00
Fruitdale	3/22/2005	0.75 in.	0	0	$0.00	$0.00
Tibbie	3/22/2005	0.75 in.	0	0	$0.00	$0.00
Malcolm	6/15/2005	0.75 in.	0	0	$0.00	$0.00
Hawthorn	5/8/2006	0.88 in.	0	0	$0.00	$0.00
Lerot	5/9/2006	1.00 in.	0	0	$0.00	$0.00
Topton	2/18/2009	2.00 in.	0	0	$0.00	$0.00
Sunflower	4/15/2011	1.75 in.	0	0	$0.00	$0.00
Topton	6/7/2011	1.00 in.	0	0	$0.00	$0.00
Leroy	3/31/2013	1.75 in.	0	0	$0.00	$0.00
Leroy	3/31/2013	1.75 in.	0	0	$0.00	$0.00
Frankville	3/22/2015	1.00 in.	0	0	$0.00	$0.00
Vinegar Bend	4/17/2015	1.00 in.	0	0	$0.00	$0.00
Yarbo	2/15/2016	1.00 in.	0	0	$0.00	$0.00
Yarbo	2/15/2016	1.00 in.	0	0	$0.00	$0.00
Yarbo	2/15/2016	1.00 in.	0	0	$0.00	$0.00
Yarbo	2/15/2016	1.00 in.	0	0	$0.00	$0.00
Copeland	1/21/2017	1.00 in.	0	0	$0.00	$0.00
Deer Park	3/30/2017	1.00 in.	0	0	$0.00	$0.00
		Totals	0	0	$10,000.00	$0.00
Town of Chatom (Washington County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Chatom	5/28/2001	0.75 in.	0	0	$0.00	$0.00
Chatom	6/19/2002	0.88 in.	0	0	$0.00	$0.00
Chatom	5/2/2003	2.50 in.	0	0	$1,400,000.00	$0.00
Chatom	5/3/2003	0.75 in.	0	0	$0.00	$0.00
Chatom	8/6/2003	0.88 in.	0	0	$0.00	$0.00
		Totals	0	0	$1,400,000.00	$0.00
Town of McIntosh (Washington County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
McIntosh	6/24/2004	0.75 in.	0	0	$0.00	$0.00

			Totals	0	0	$0.00	$0.00
Town of Millry (Washington County)						
Location	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Millry	3/3/2000	1.00 in.	0	0	$0.00	$0.00
Millry	4/4/2001	1.75 in.	0	0	$0.00	$0.00
Millry	7/21/2002	0.75 in.	0	0	$0.00	$0.00
Millry	8/2/2002	1.00 in.	0	0	$0.00	$0.00
Millry	11/27/2004	0.75 in.	0	0	$0.00	$0.00
Millry	5/9/2006	1.00 in.	0	0	$0.00	$0.00
Millry	4/15/2011	1.75 in.	0	0	$0.00	$0.00
			Totals	0	0	$0.00	$0.00

Source: NOAA Storm Events Database

Table 3.21 Division A Lightning Occurrences 2000-2020

Clarke County Unincorporated					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Gosport	8/2/2016	0	0	$5,000.00	$0.00
Whatley	7/7/2018	0	0	$2,000.00	$0.00
	Totals	0	0	$7,000.00	$0.00
Town of Grove Hill (Clarke County)					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Grove Hill	12/16/2000	0	0	$20,000.00	$0.00
Grove Hill	7/30/2007	0	0	$15,000.00	$0.00
Grove Hill	8/22/2011	0	0	$10,000.00	$0.00
Grove Hill	4/28/2014	0	0	$25,000.00	$0.00
Grove Hill	8/8/2014	0	0	$65,000.00	$0.00
Grove Hill	7/1/2020	0	0	$22,000.00	$0.00
	Totals	0	0	$157,000.00	$0.00
City of Jackson (Clarke County)					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Jackson	5/27/2009	0	0	$50,000.00	$0.00
Jackson	7/30/2009	0	0	$20,000.00	$0.00
Jackson	3/8/2011	0	0	$5,000.00	$0.00
Jackson	8/4/2012	0	0	$5,000.00	$0.00
	Totals	0	0	$80,000.00	$0.00
City of Thomasville (Clarke County)					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Thomasville	6/16/2003	0	0	$10,000.00	$0.00
Thomasville	7/26/2016	0	0	$60,000.00	$0.00

Thomasville	4/3/2017	0	0	$30,000.00	$0.00
	Totals	0	0	$100,000.00	$0.00
Conecuh County Unincorporated					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Redtown	6/2/2018	0	0	$2,000.00	$0.00
	Totals	0	0	$2,000.00	$0.00
Monroe County Unincorporated					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Franklin	8/7/2007	1	0	$0.00	$0.00
	Totals	0	0	$0.00	$0.00
Town of Beatrice (Monroe County)					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Beatrice	3/12/2001	0	0	$500,000.00	$0.00
	Totals	0	0	$500,000.00	$0.00
City of Monroeville (Monroe County)					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Monroeville	2/18/2012	0	0	$5,000.00	$0.00
	Totals	0	0	$5,000.00	$0.00
Washington County Unincorporated					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Tibbie	6/22/2001	0	1	$0.00	$0.00
St Stephens	7/15/2002	0	0	$40,000.00	$0.00
	Totals	0	0	$40,000.00	$0.00
Town of Chatom (Washington County)					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Chatom	2/6/2004	0	0	$50,000.00	$0.00
	Totals	0	0	$50,000.00	$0.00
Town of McIntosh (Washington County)					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
McIntosh	7/19/2002	0	0	$8,000.00	$0.00
	Totals	0	0	$8,000.00	$0.00
Town of Millry (Washington County)					
Location	**Date**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Millry	4/22/2005	0	0	$25,000.00	$0.00
	Totals	0	0	$25,000.00	$0.00

Source: NOAA Storm Events Database

Historical occurrences before 2000, can be accessed through the NOAA Storm Events Database site at https://www.ncdc.noaa.gov/stormevents/.

Probability of Future Events

Every jurisdiction in AEMA Division A 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 A to determine that there is a High probability of severe thunderstorm occurrences.

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

Figures 3.27-3.37 are maps of the planning area illustrating susceptibility to landslides. By examining the maps, one can see that the majority of the area 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 Educations do not have properties located in areas with a high susceptibility for landslides.

Figure 3.27
Clarke County
Landslide Susceptibility and Historical Occurrences

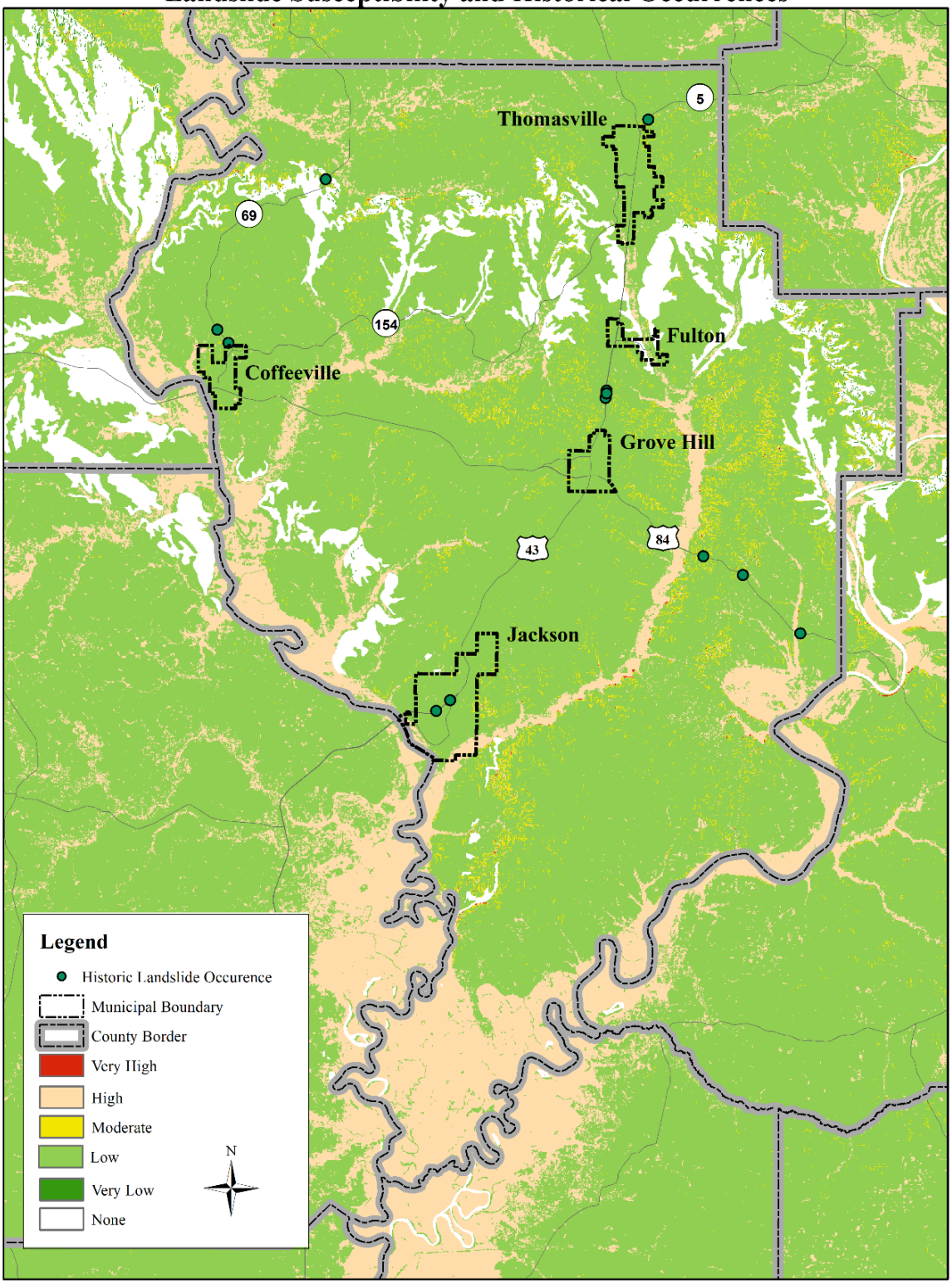


Figure 3.28
Town of Coffeeville & City of Jackson
Landslide Susceptibility and Historical Occurrences

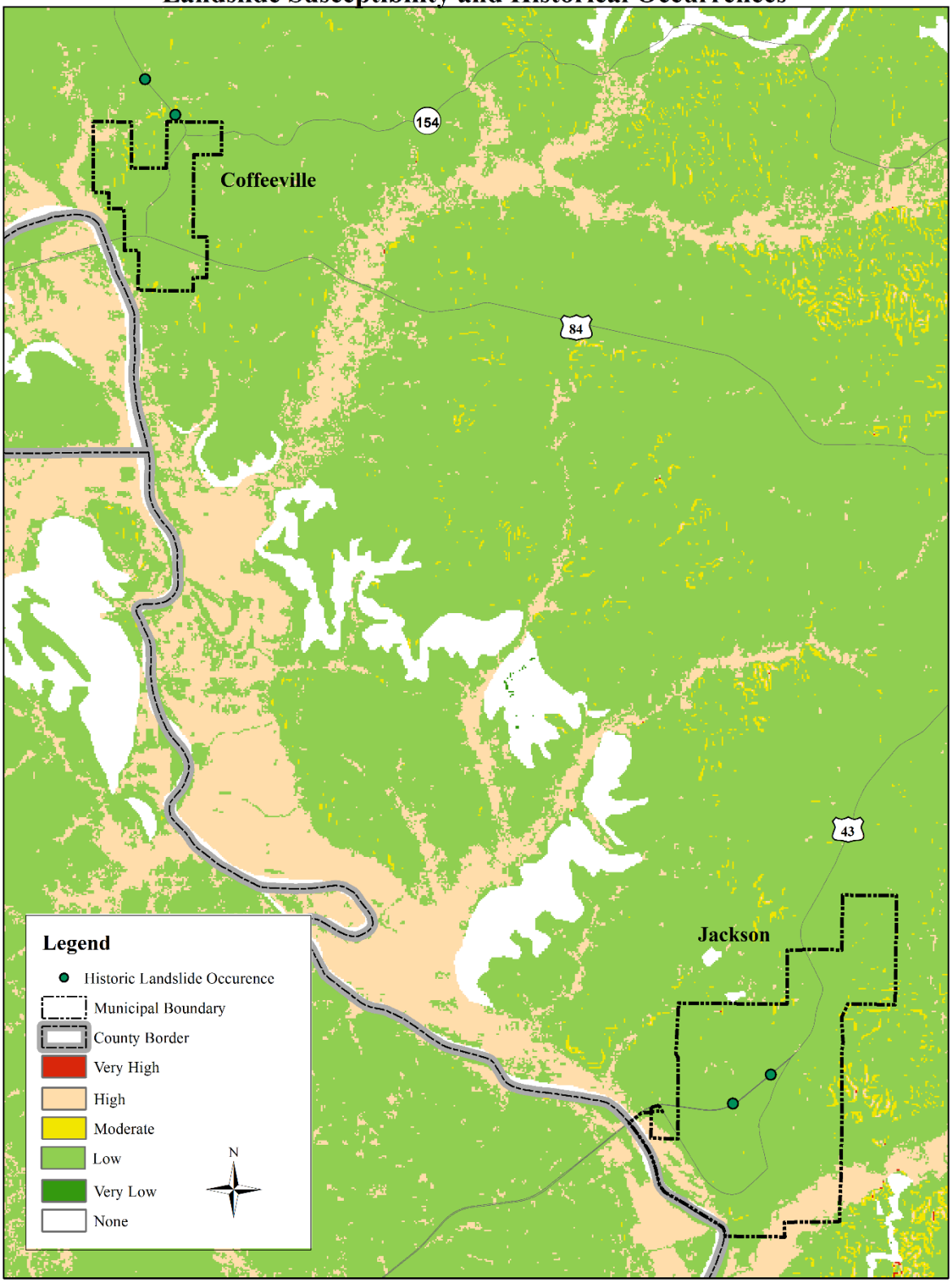


Figure 3.29
Town of Fulton, Town of Grove Hill, & City of Thomasville
Landslide Susceptibility and Historical Occurrences

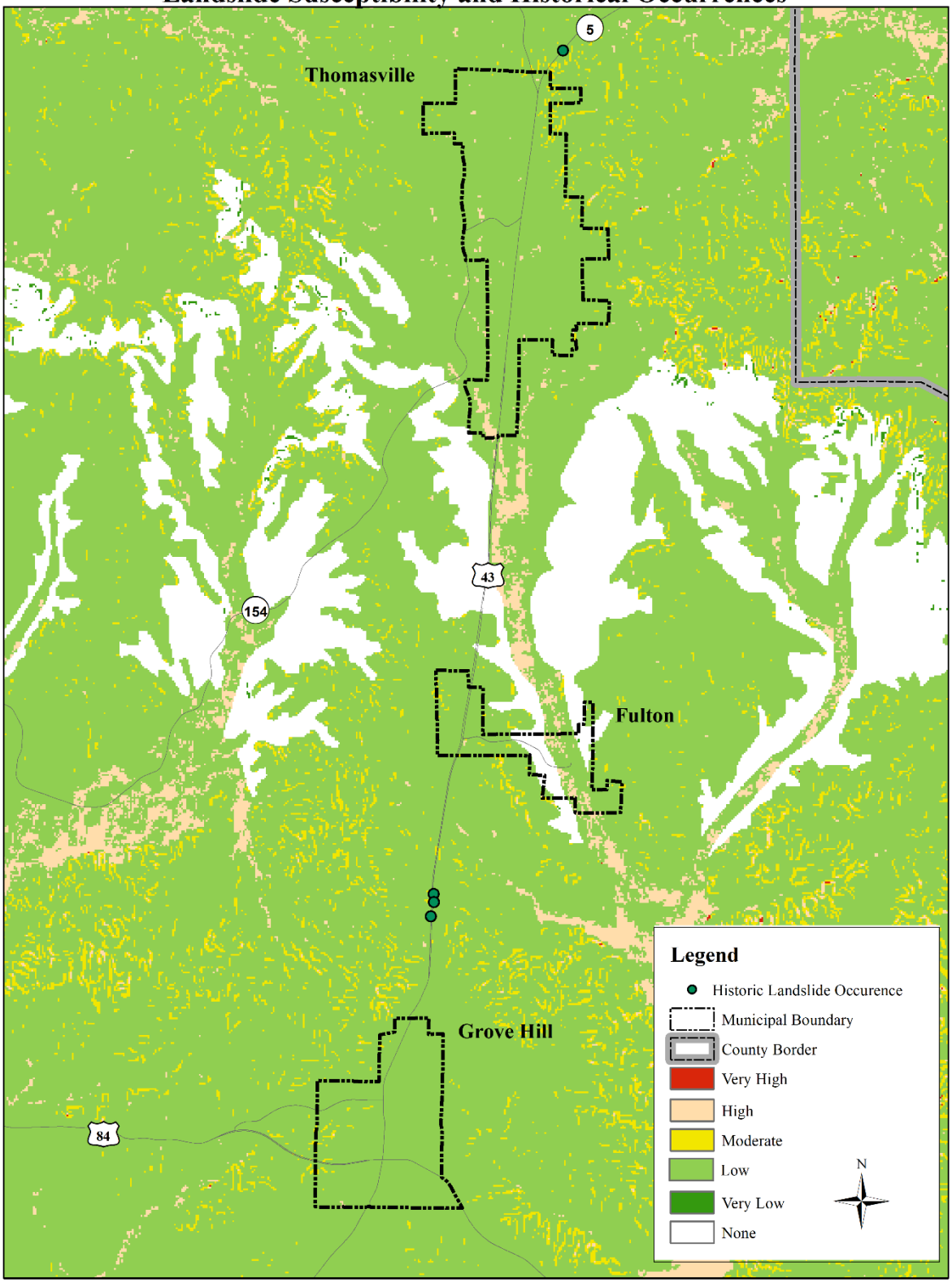


Figure 3.30
Conecuh County
Landslide Susceptibility and Historical Occurrences

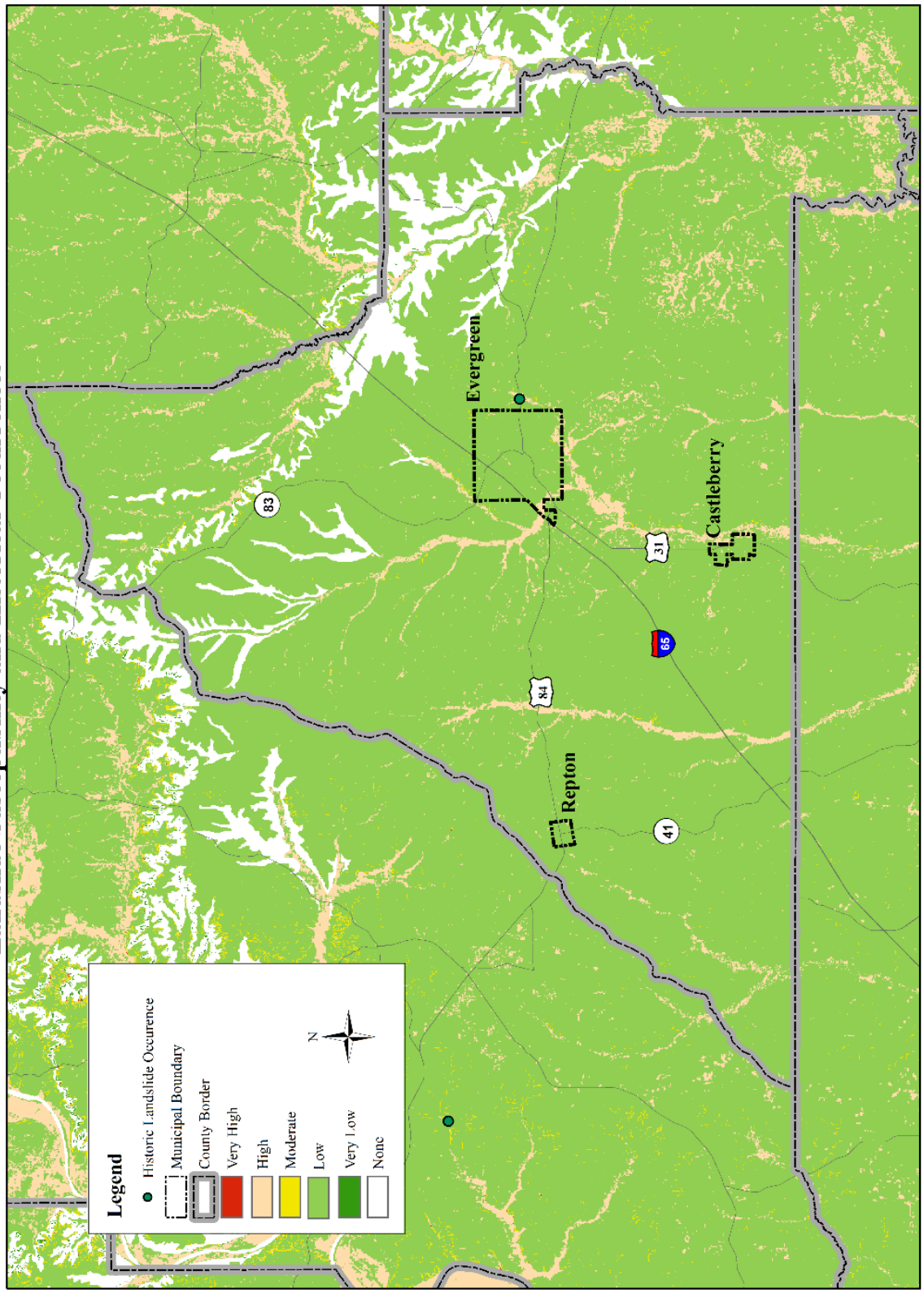


Figure 3.31
Town of Castleberry, City of Evergreen, & Town of Repton
Landslide Susceptibility and Historical Occurrences

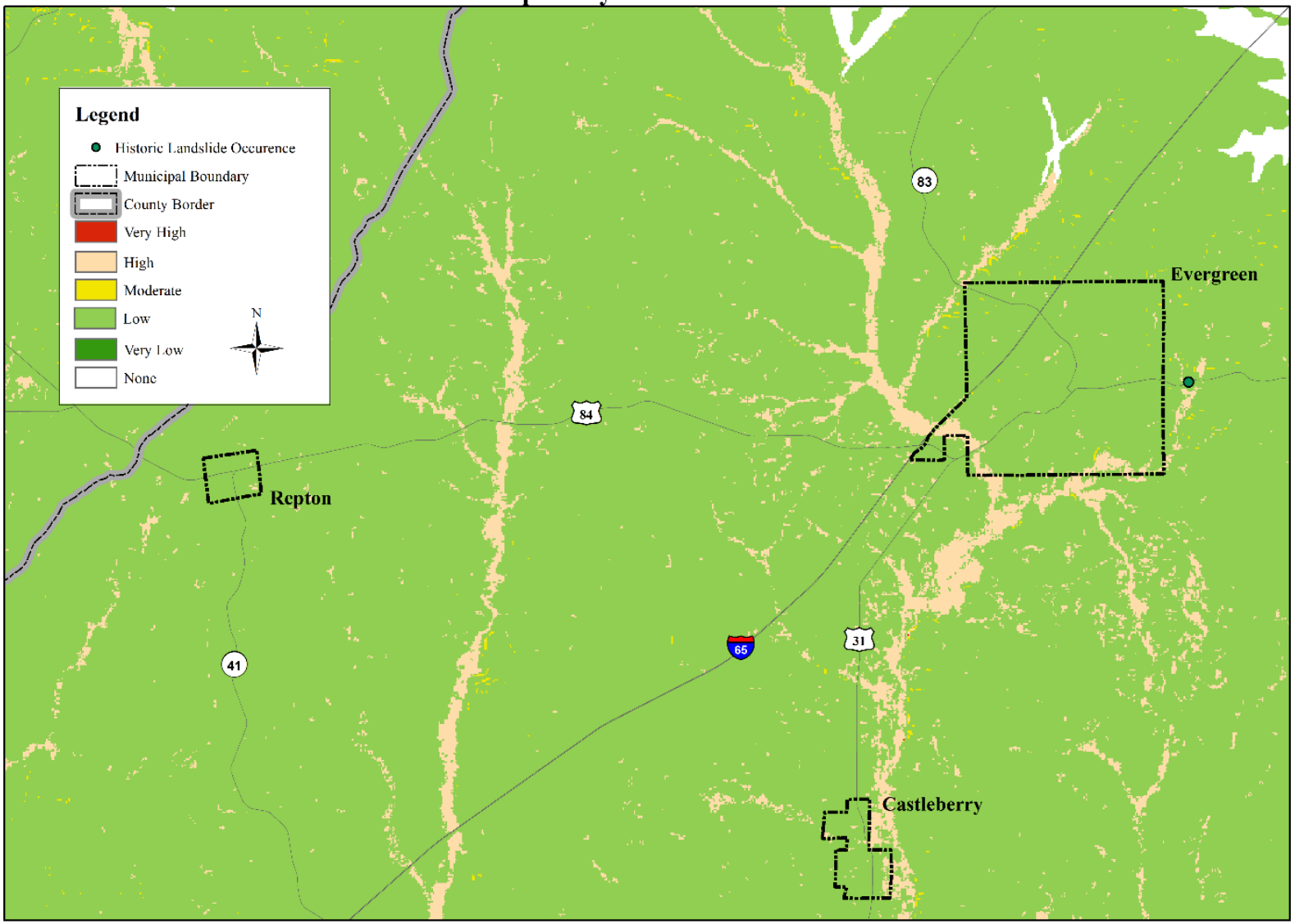


Figure 3.32

Monroe County
Landslide Susceptibility and Historical Occurrences

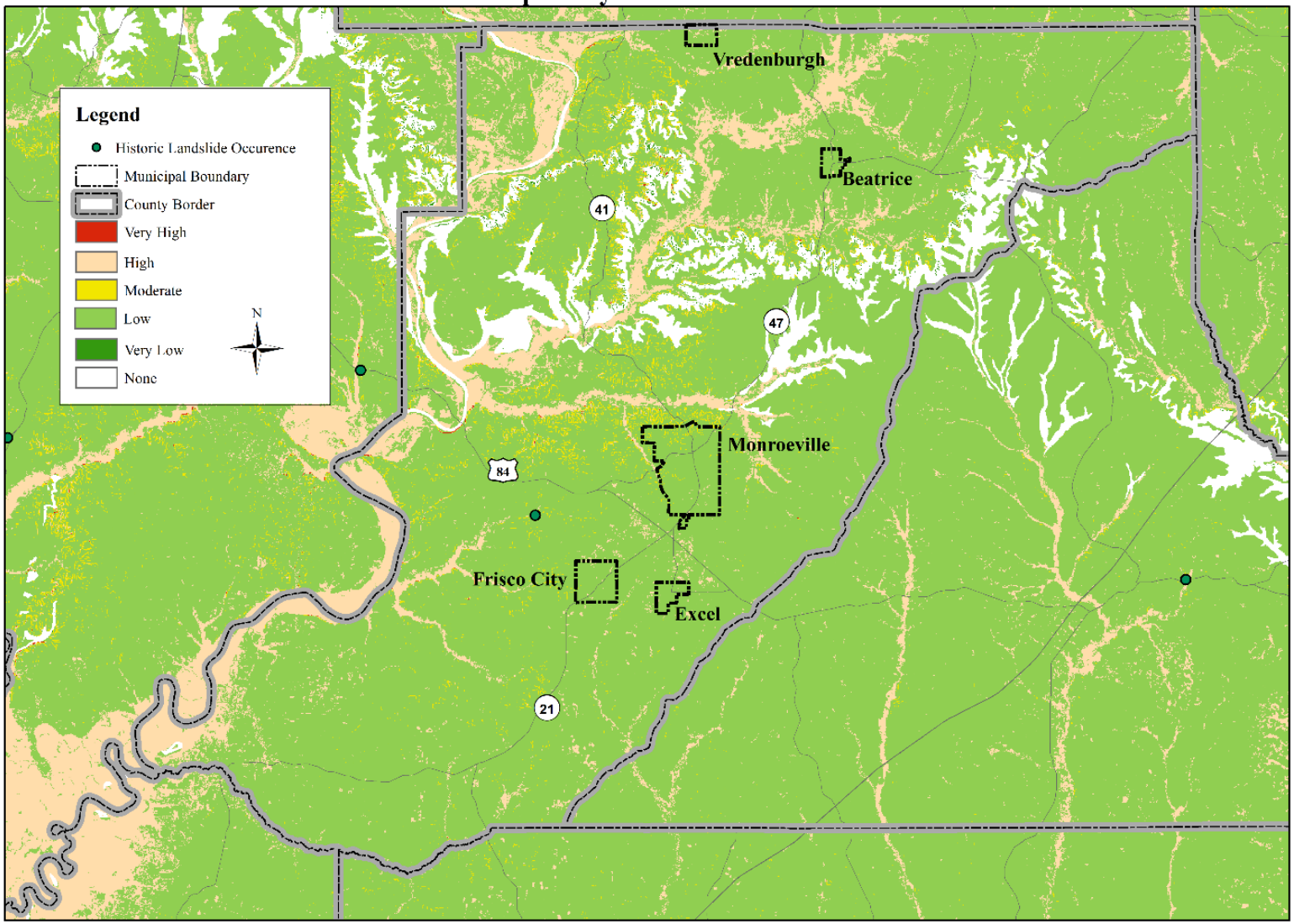


Figure 3.33

Town of Beatrice & Town of Vredenburgh
Landslide Susceptibility and Historical Occurrences

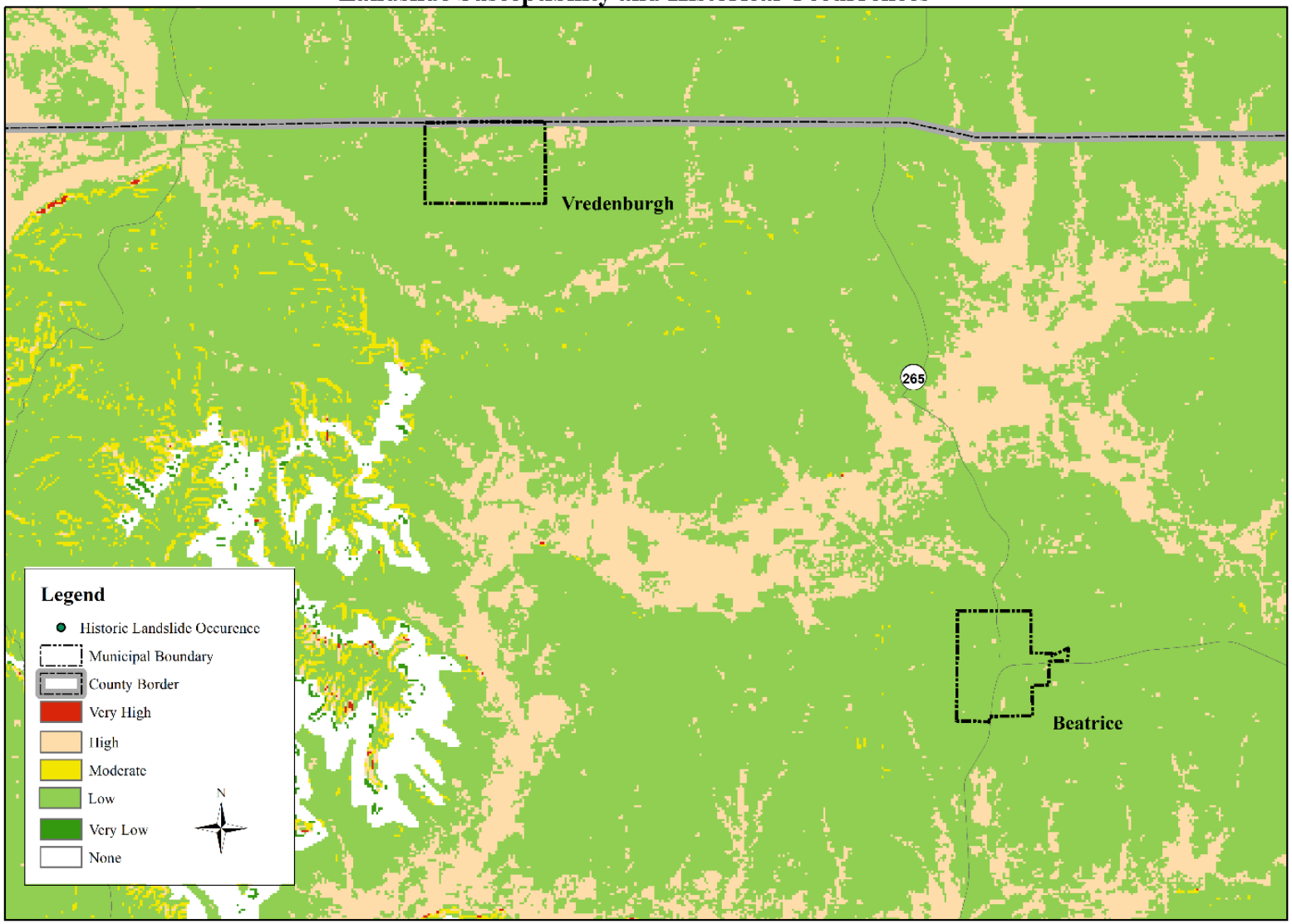


Figure 3.34
Town of Excel, Town of Frisco City, & City of Monroeville
Landslide Susceptibility and Historical Occurrences

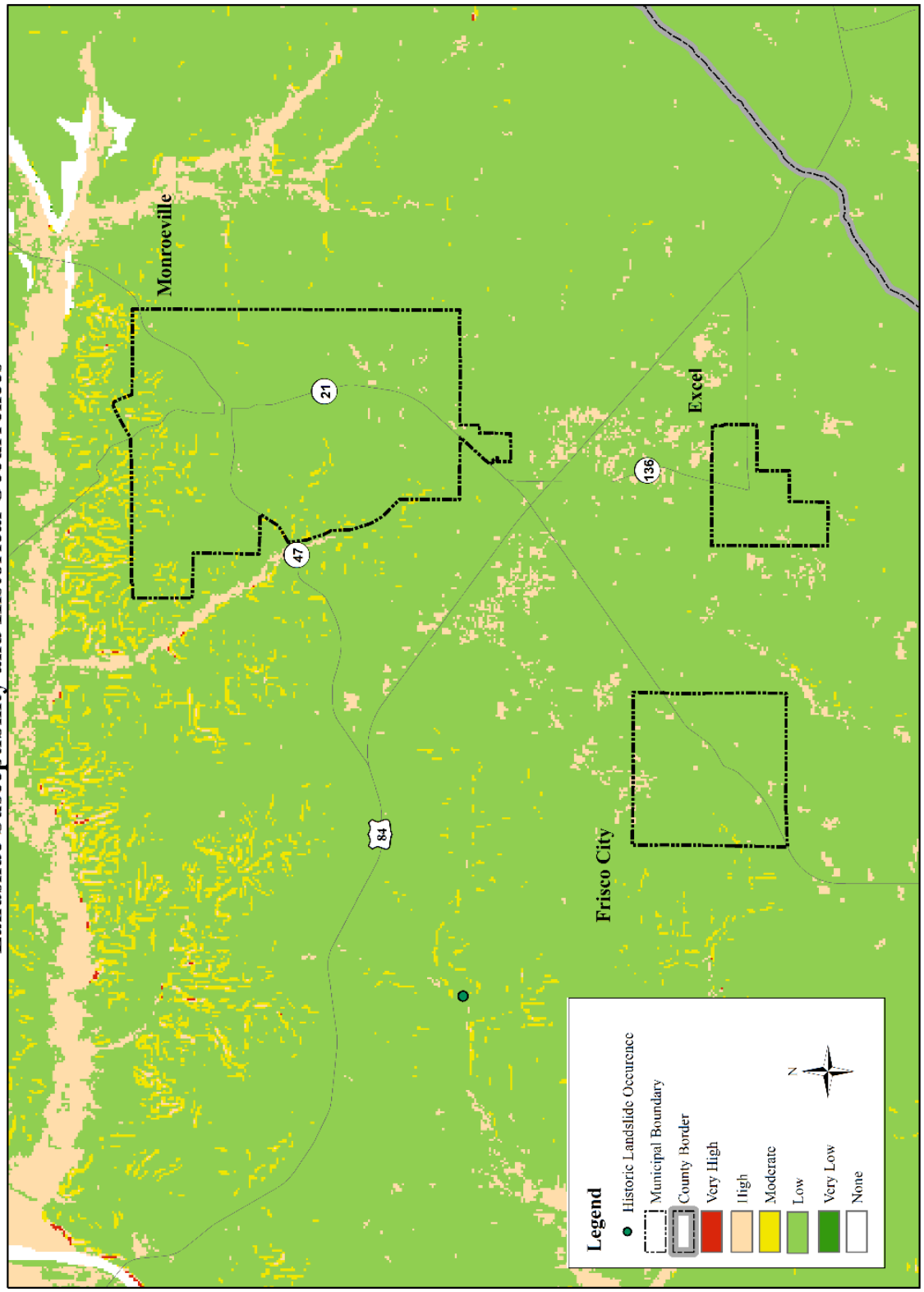


Figure 3.35

Washington County Landslide Susceptibility and Historical Occurrences

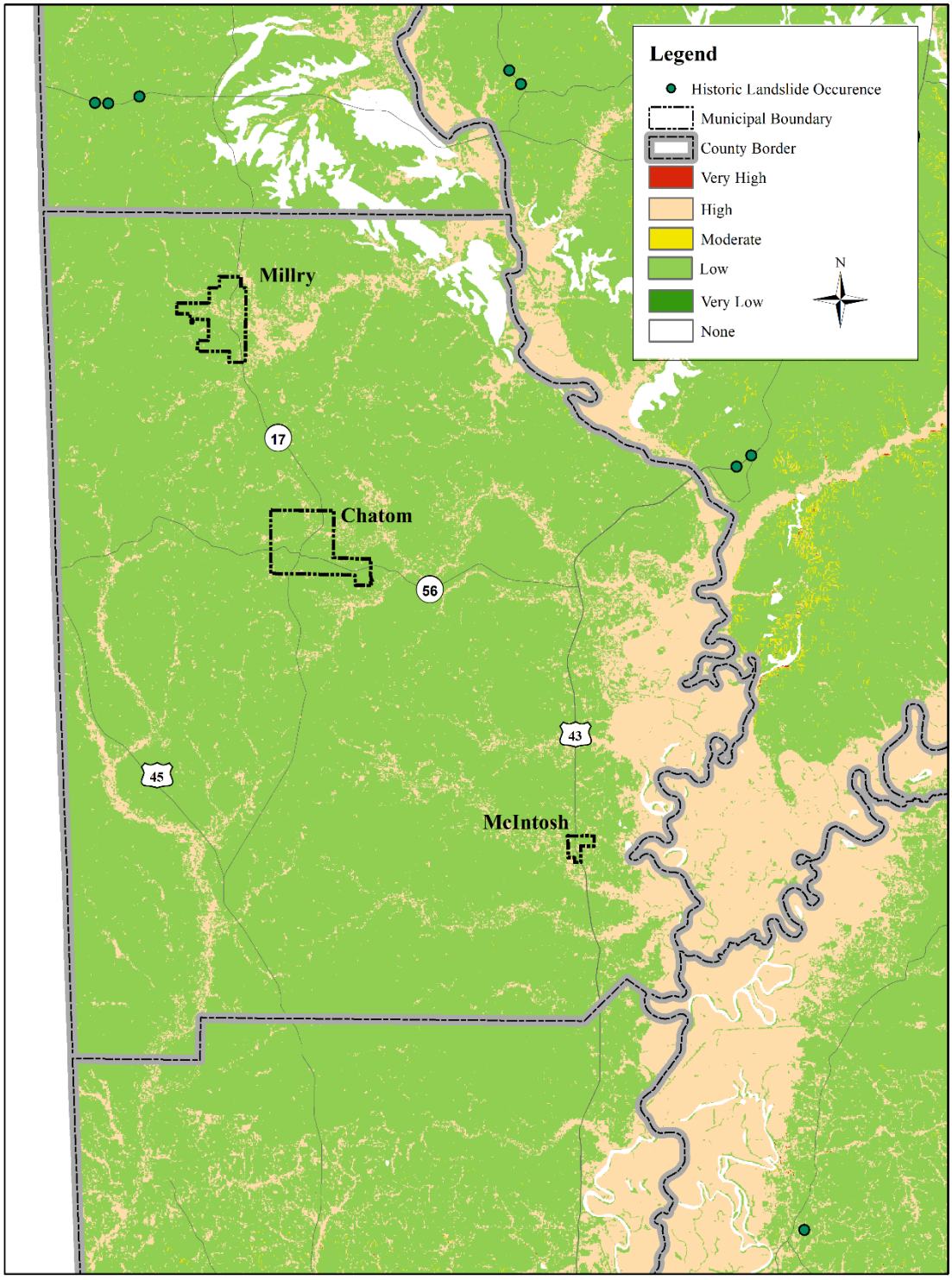


Figure 3.36
Town of McIntosh
Landslide Susceptibility and Historical Occurrences

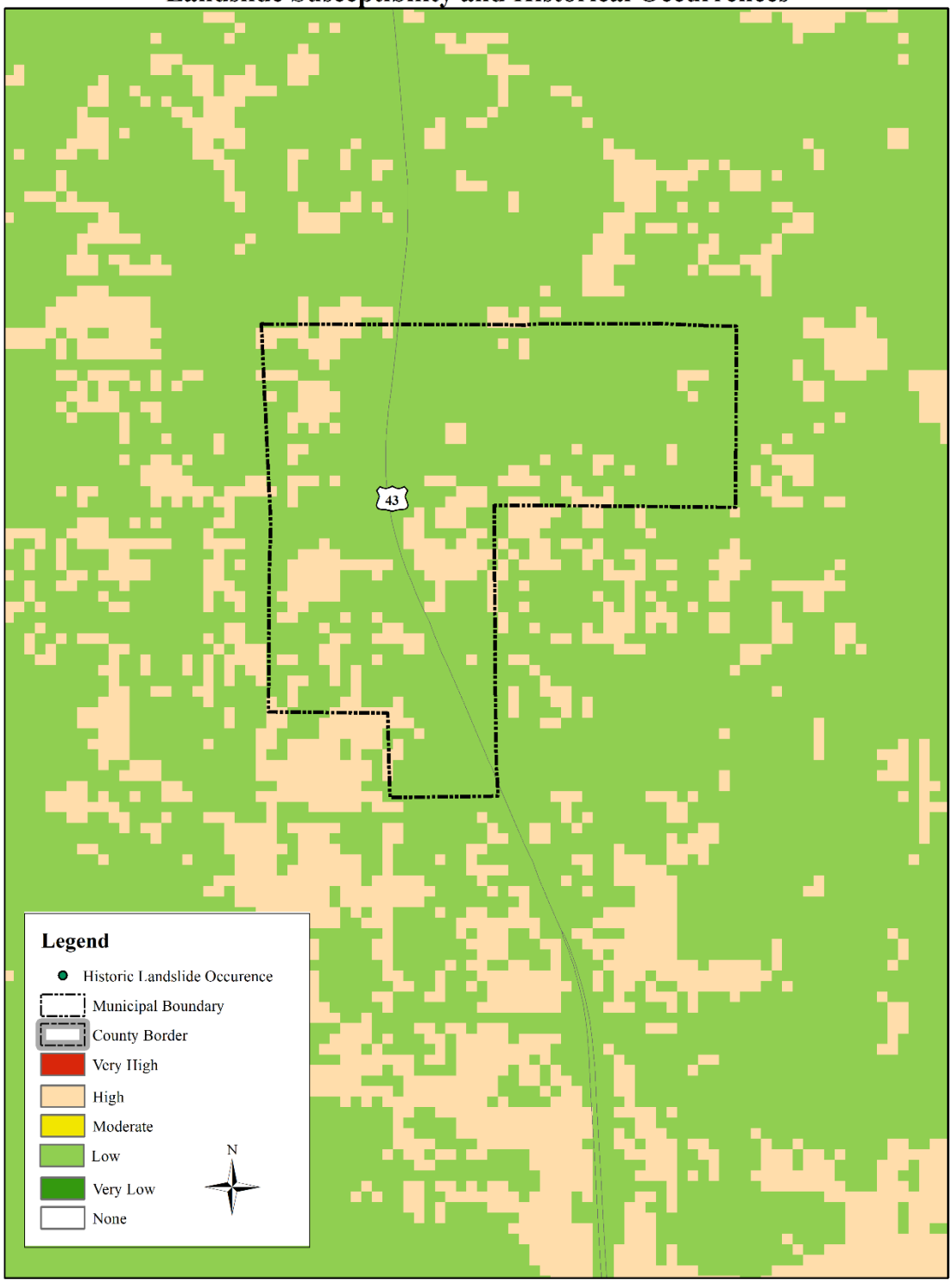
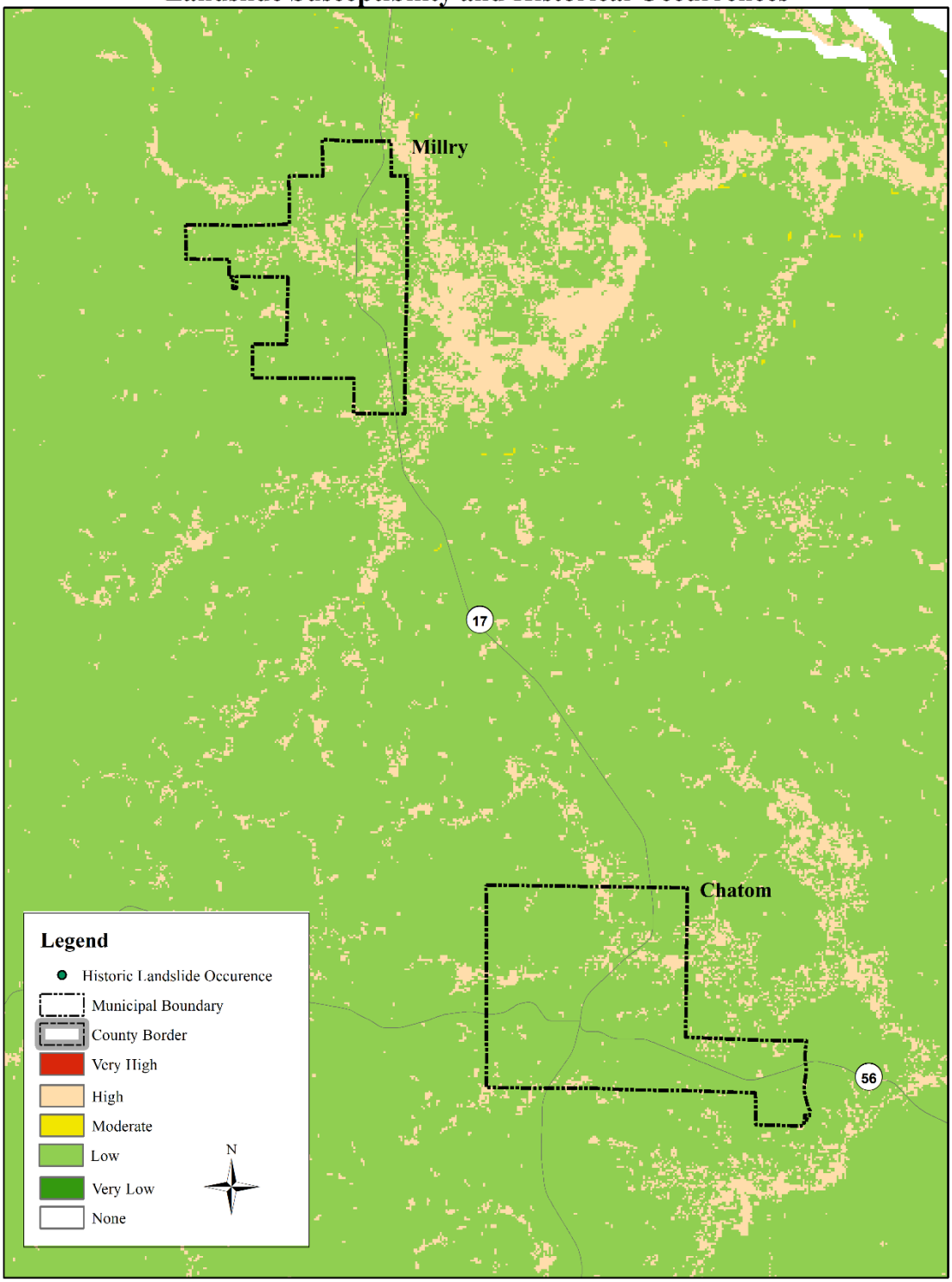


Figure 3.37
Town of Chatom & Town of Millry
Landslide Susceptibility and Historical Occurrences



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. Landslides in the planning area primarily occur along roadways and affect a limited area.

Historical Occurrences
Historic occurrence data from GSA is included in Figures 3.27-3.37. 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. Clarke, Conecuh, and Monroe 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
The entire planning region has low susceptibility to landslide incidences. Based on susceptibility and historical data, the assessed susceptibility to landslide events is low.

Table 3.22 Landslide Summary by Jurisdiction

Jurisdiction	Extent	Probability of Occurrence	Estimated Losses
Clarke County (unincorporated)	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Coffeeville	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Fulton	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Grove Hill	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
City of Jackson	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
City of Thomasville	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Conecuh County (unincorporated)	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Castleberry	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
City of Evergreen	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Repton	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Monroe County (unincorporated)	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Beatrice	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Excel	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*

Town of Frisco City	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
City of Monroeville	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Vredenburgh	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Washington County (unincorporated)	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Chatom	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of McIntosh	<2 acres affected per incidence, isolated damage to structures and infrastructure	Low	*
Town of Millry	<2 acres affected per incidence, 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.

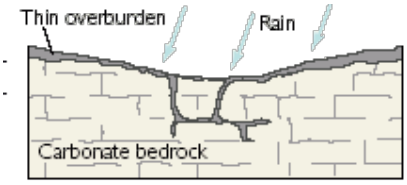
Sinkholes can form from a variety of causes including natural and man-made activities and include ground collapse related to:

- 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.

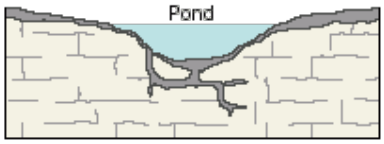
There are three types of sinkholes. A description and illustration (Figure 3.38) of each follow:

Figure 3.38 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.

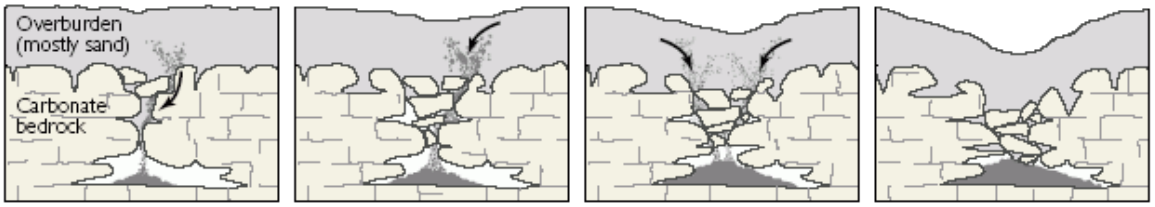
- Cover subsidence:

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

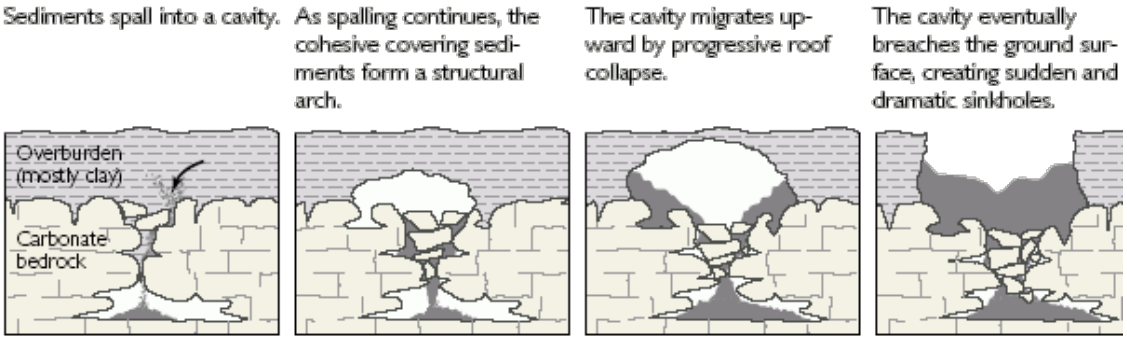
A column of overlying sediments settles into the vacated spaces (a process termed "piping").

Dissolution and infilling continue, forming a noticable 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



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 A. Figures 3.28-3.45 illustrates areas in the division 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.

Participating Boards of Educations do not have properties located in areas with a high risk for land subsidence.

Figure 3.39
Clarke County Areas Underlain By Soluble Rocks
with Potential for Karst or Pseudokarst Development

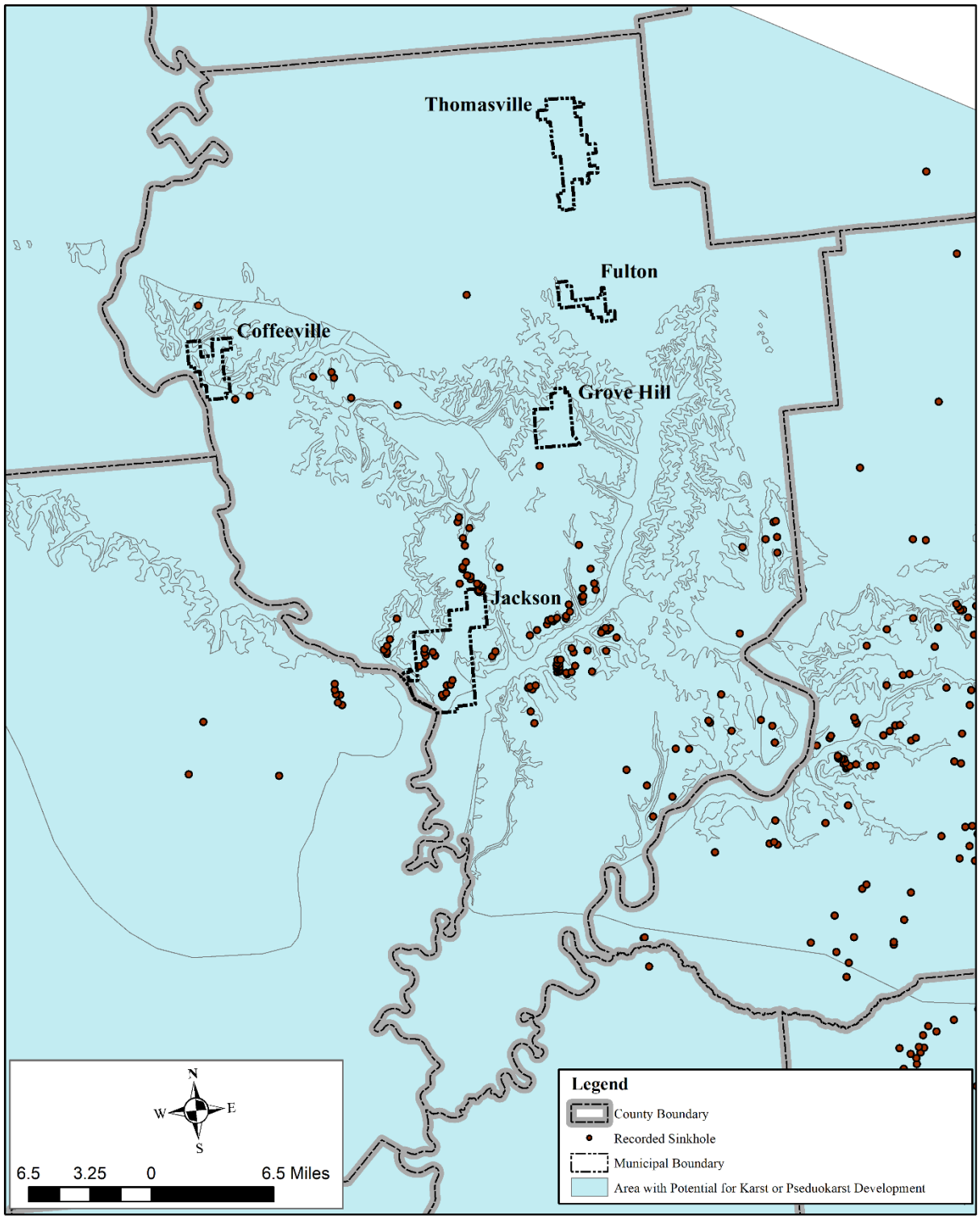


Figure 3.40
Town of Coffeeville Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

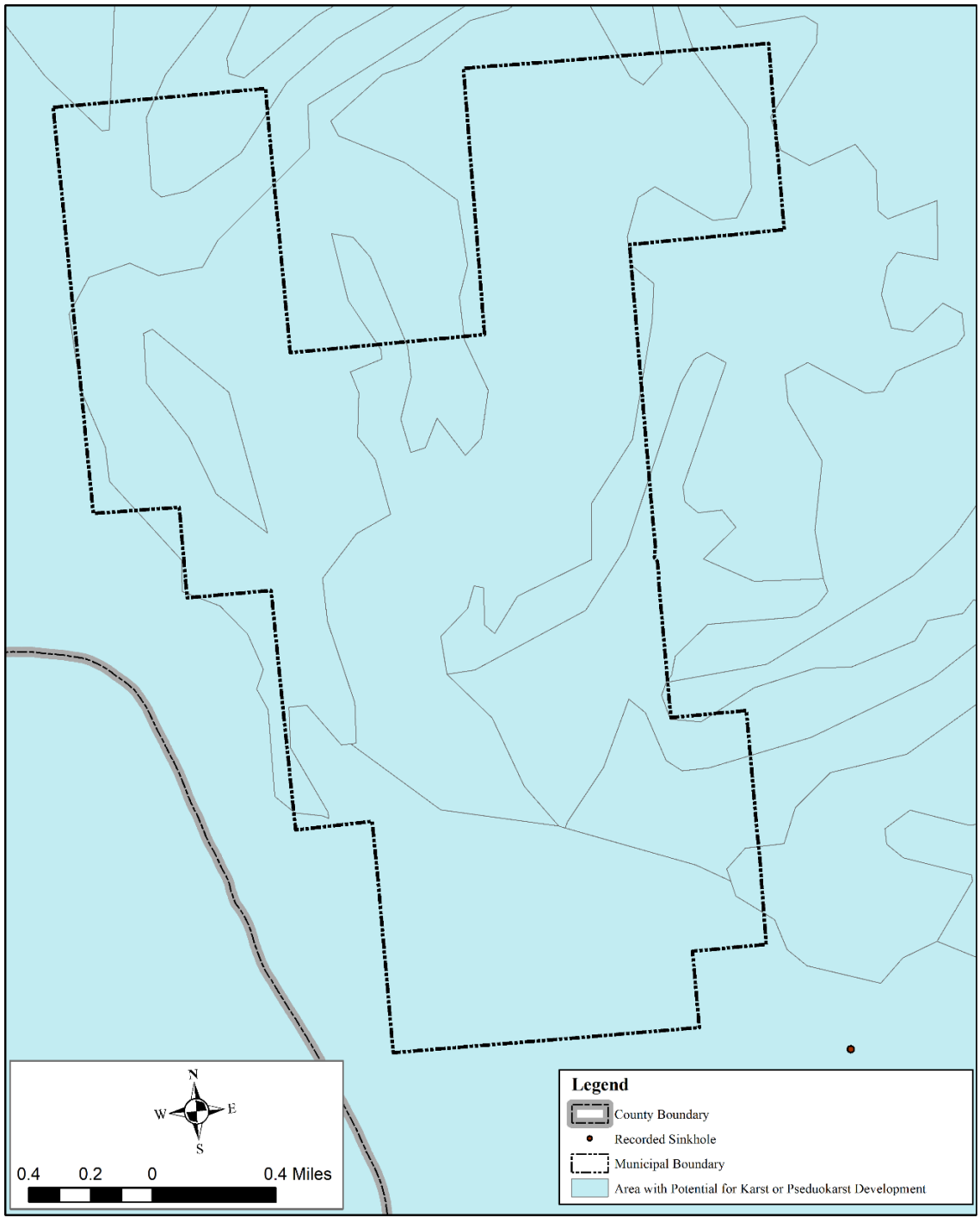


Figure 3.41
Town of Fulton Areas Underlain By Soluble Rocks
with Potential for Karst or Pseudokarst Development

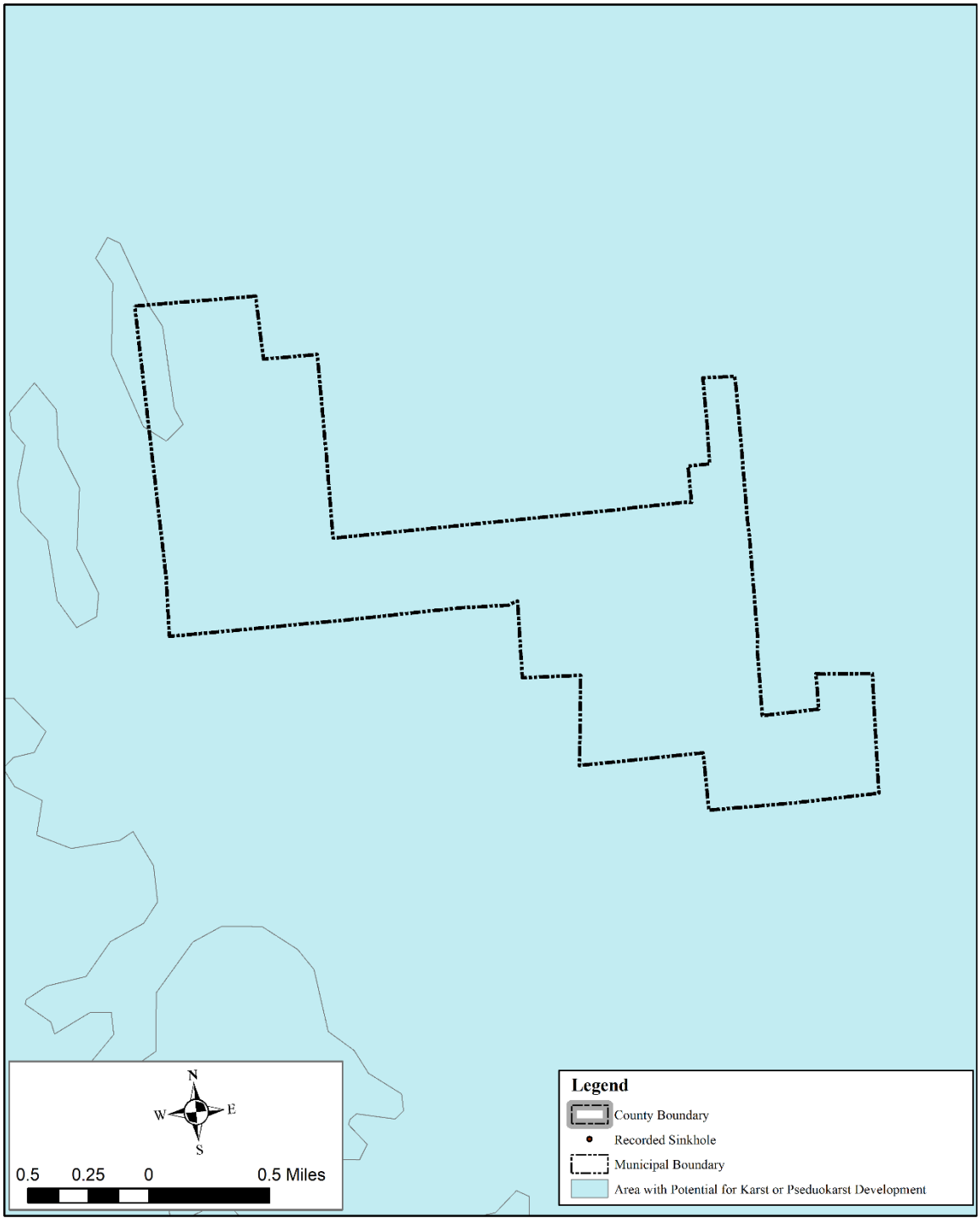


Figure 3.42
Town of Grove Hill Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

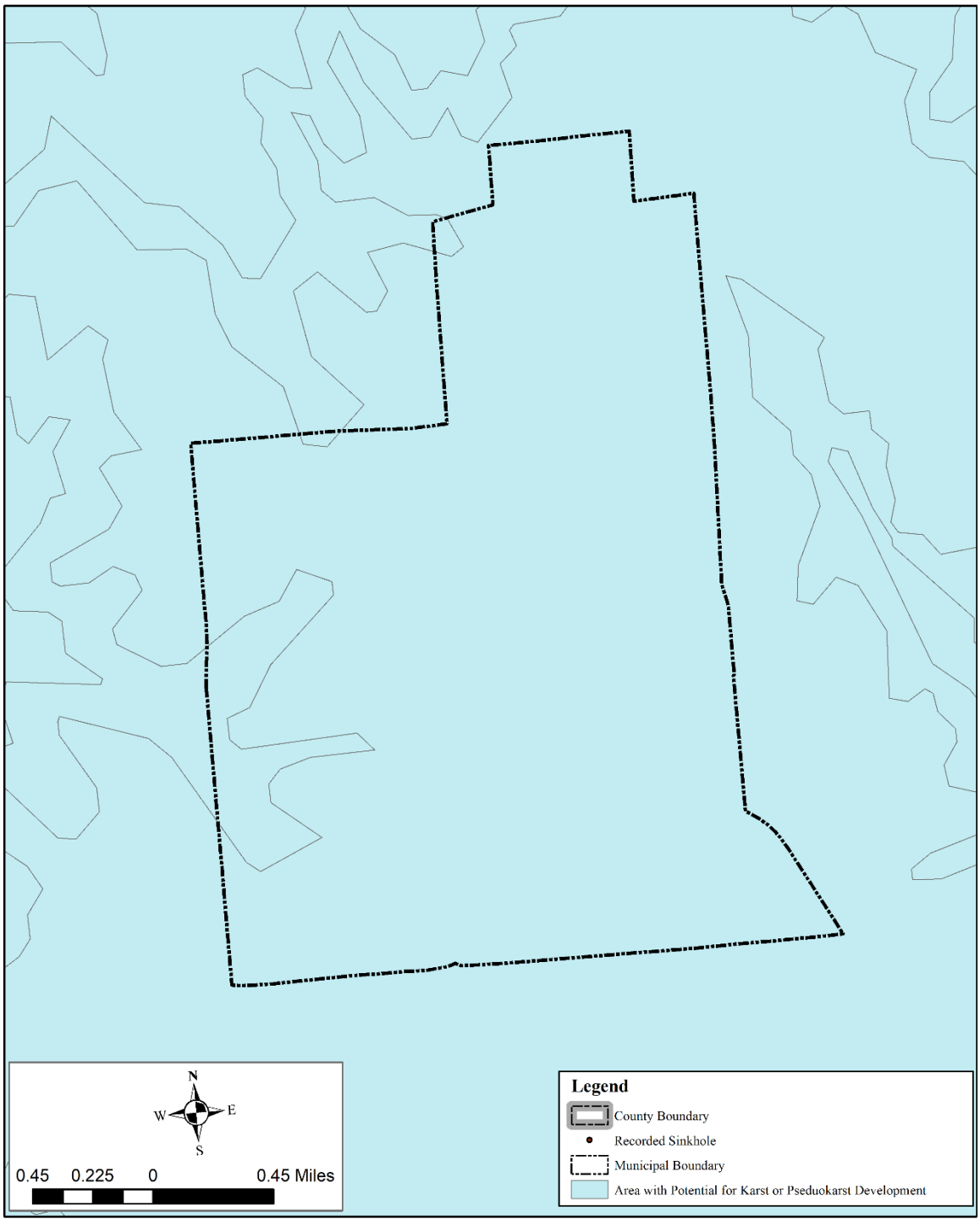


Figure 3.43
City of Jackson Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

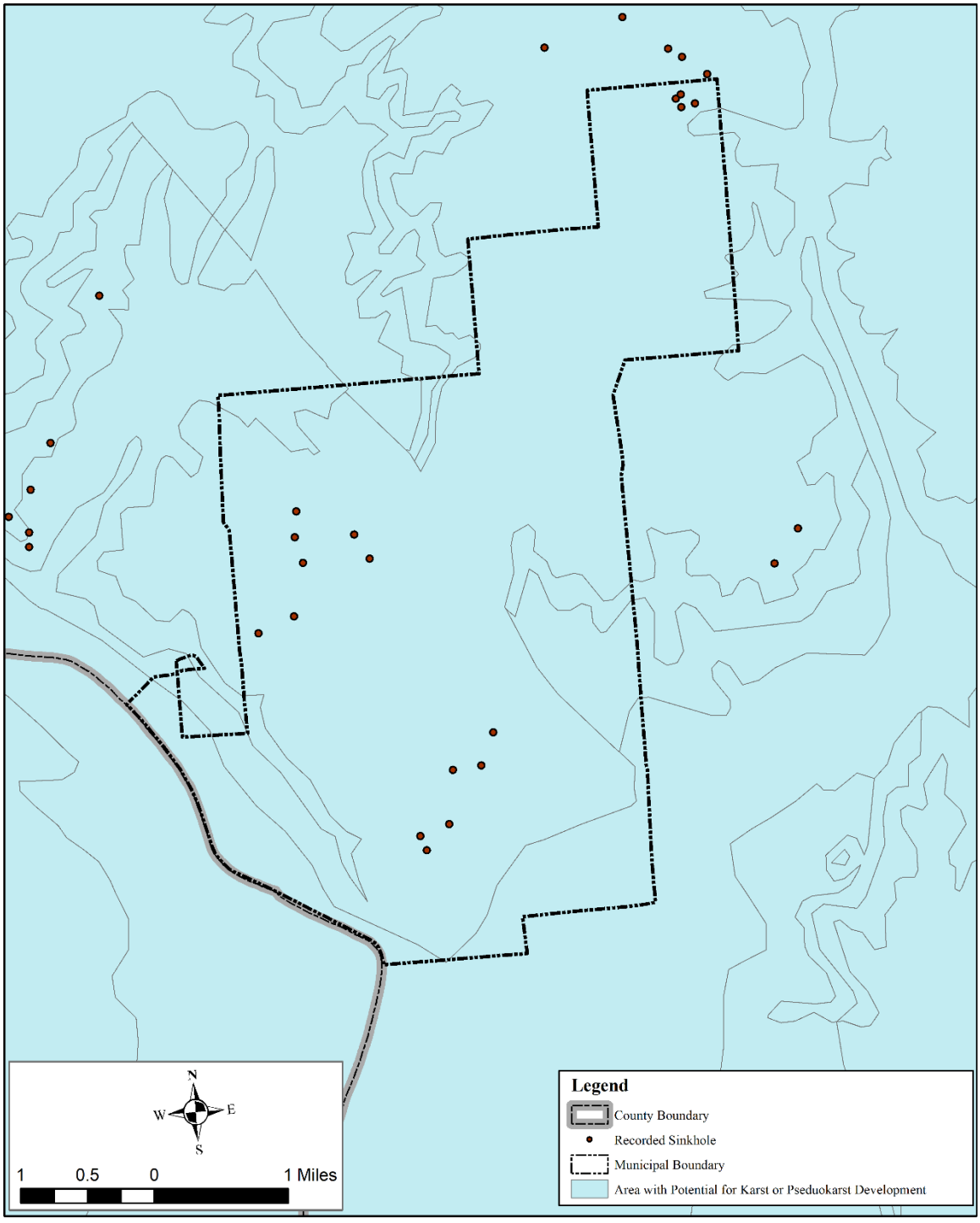


Figure 3.44
City of Thomasville Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

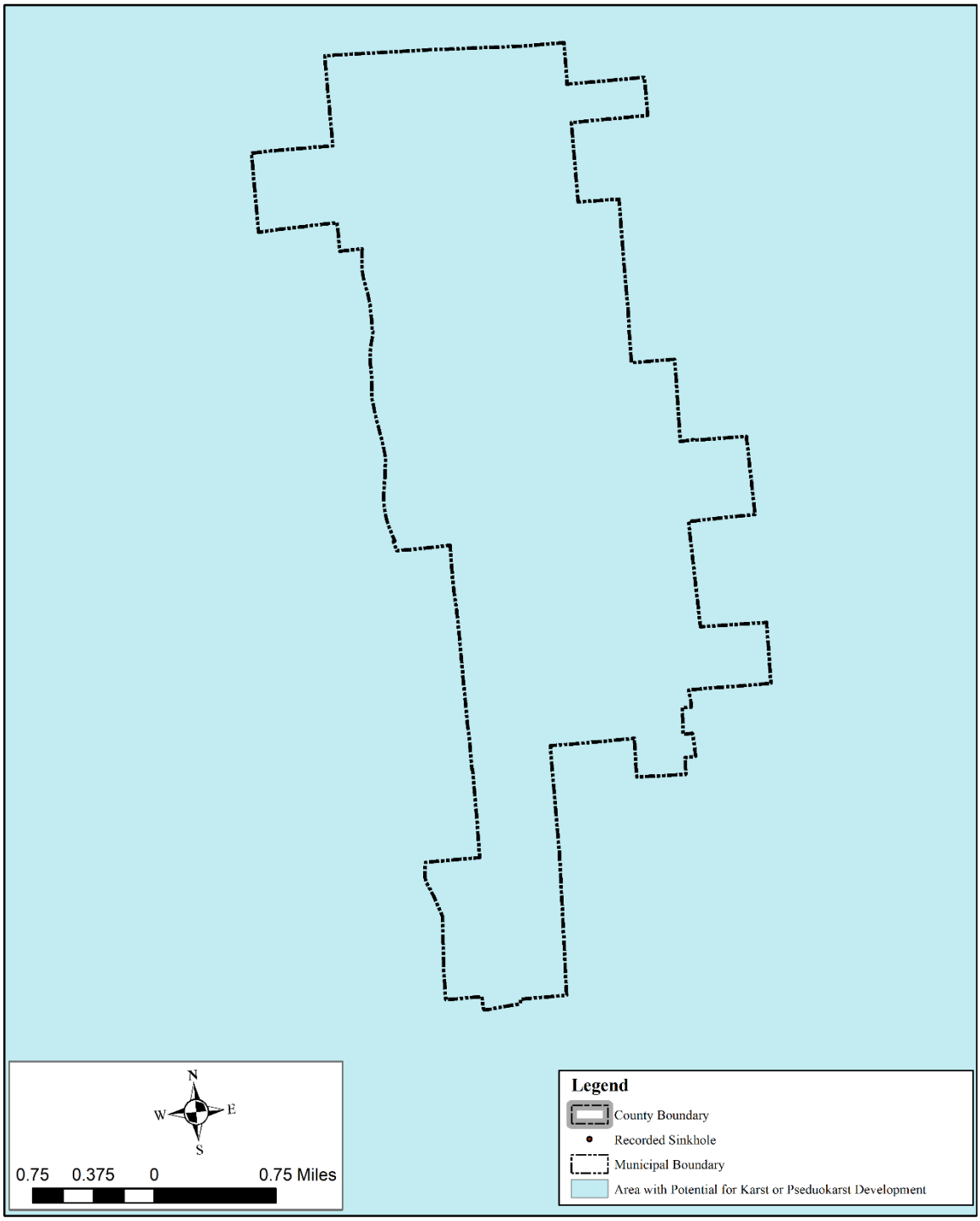


Figure 3.45
Conecuh County Areas Underlain By Soluble Rocks
with Potential for Karst or Pseudokarst Development

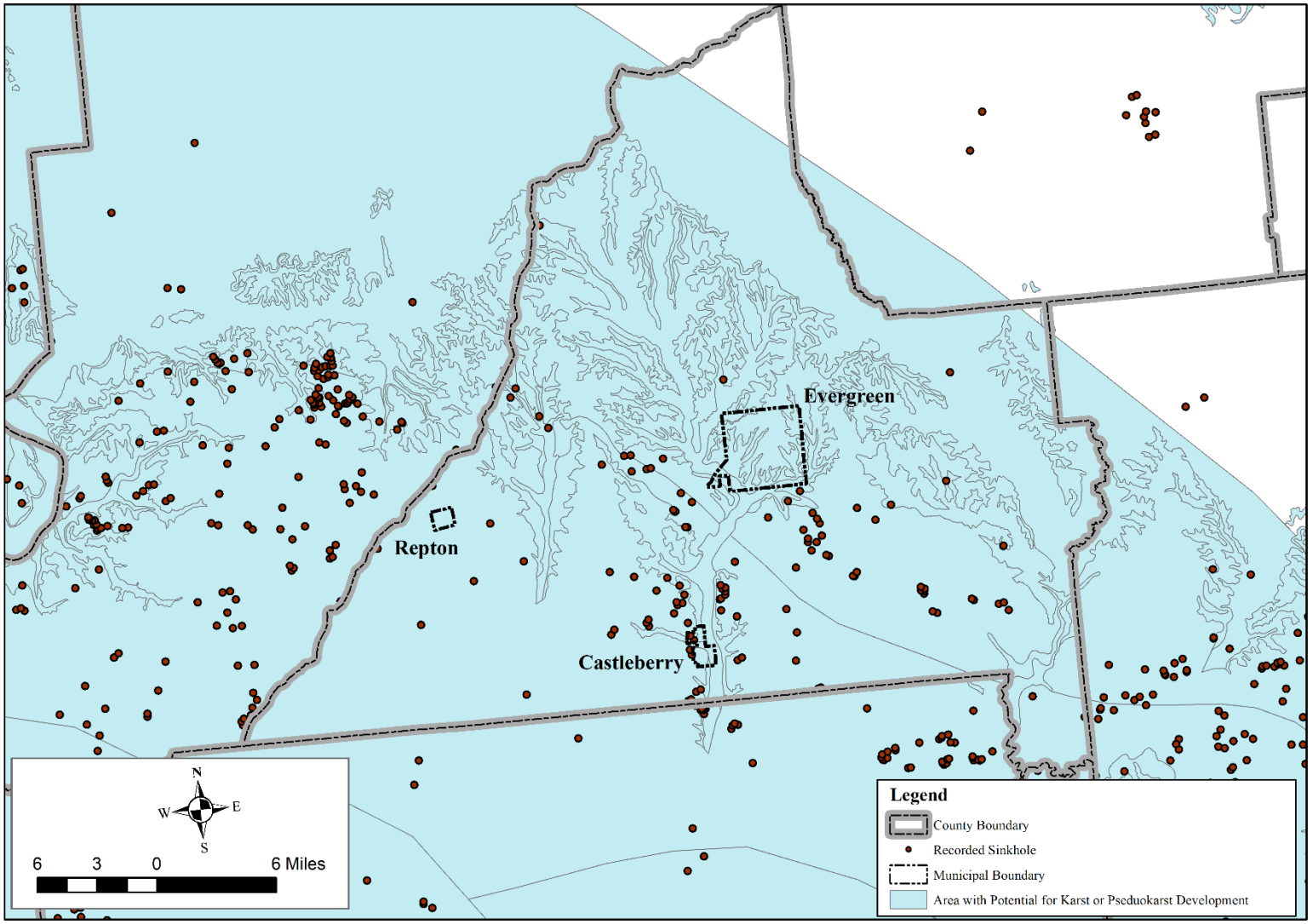


Figure 3.46
Town of Castleberry Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

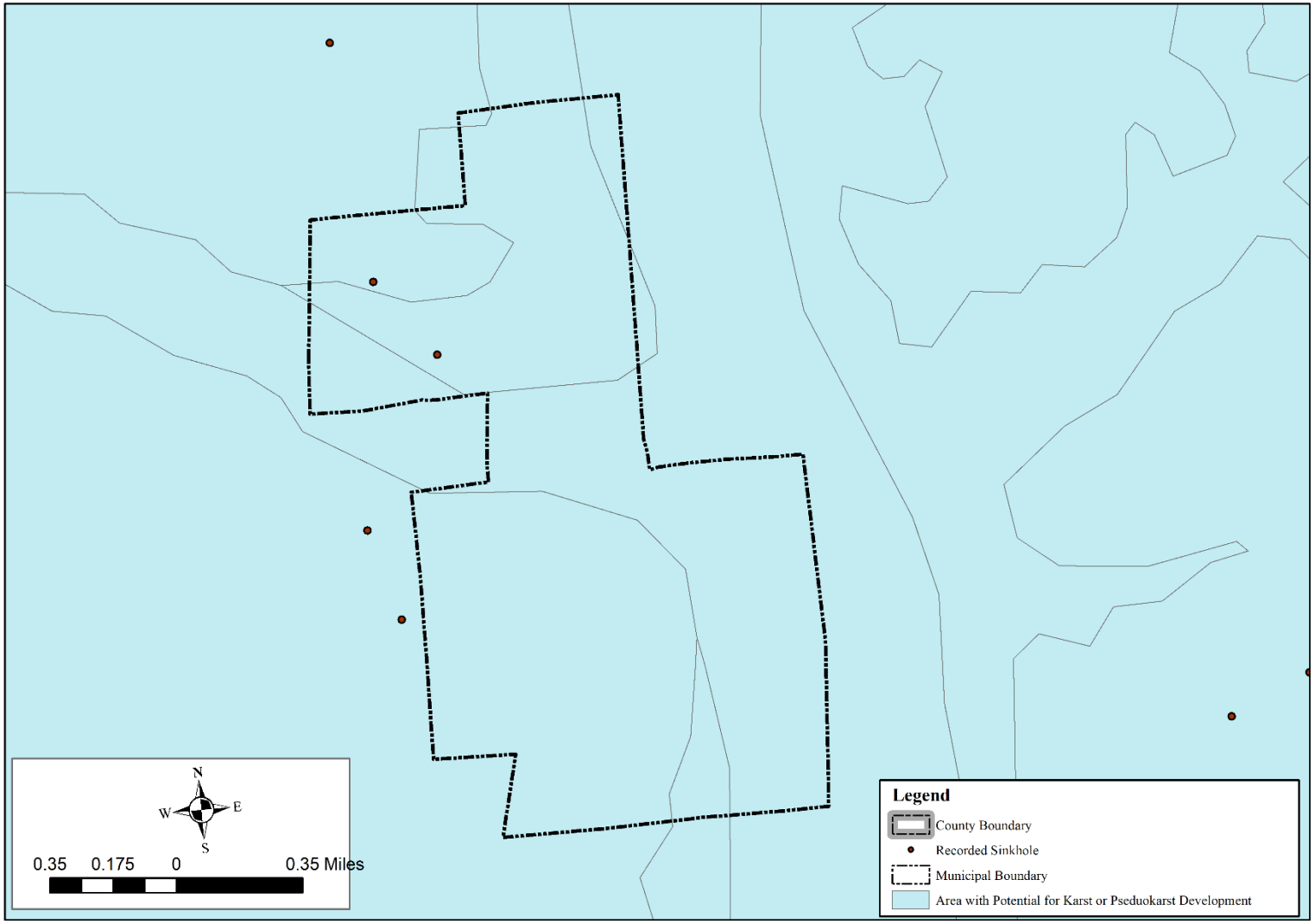


Figure 3.47
City of Evergreen Areas Underlain By Soluble Rocks
with Potential for Karst or Pseudokarst Development

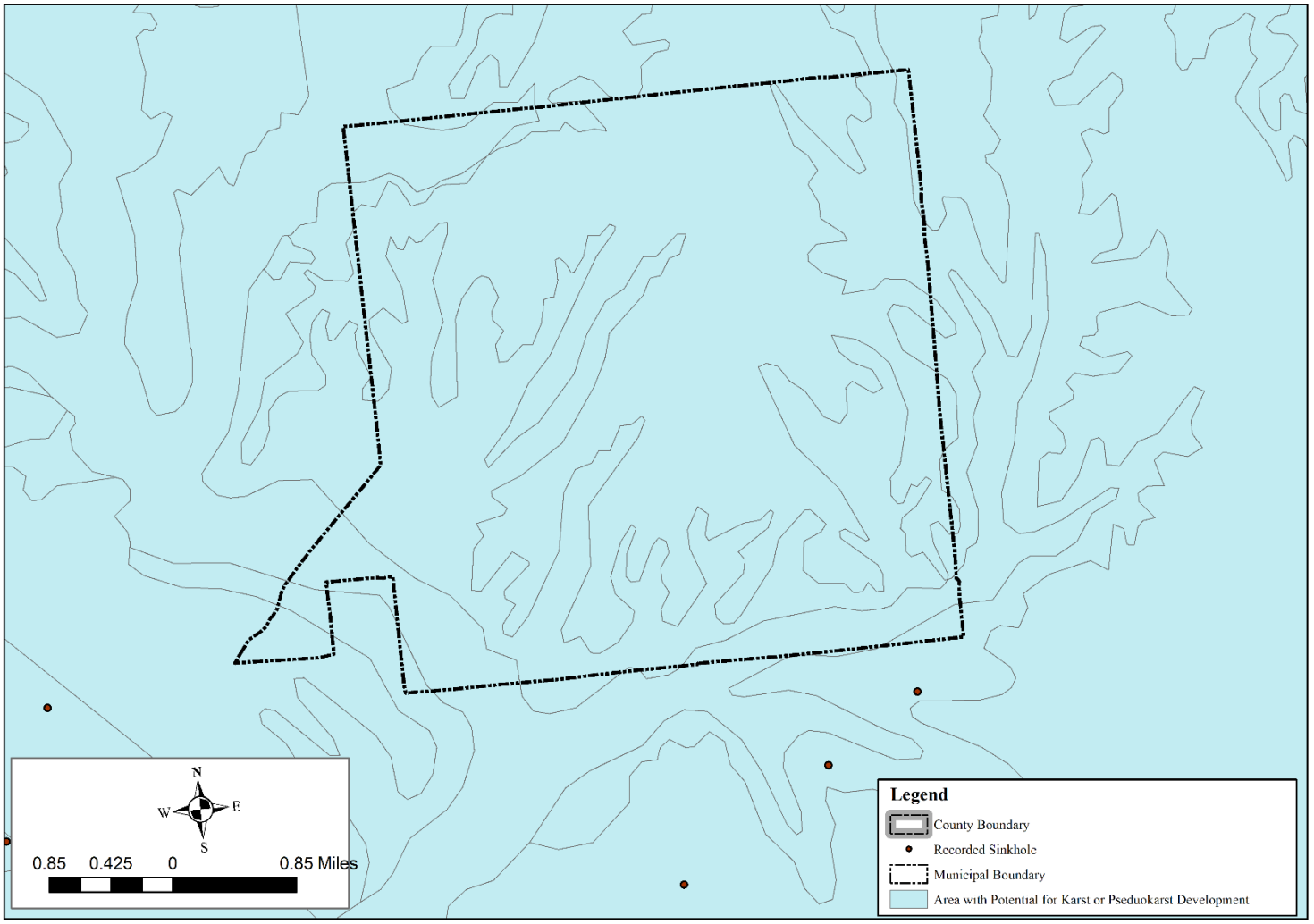


Figure 3.48
Town of Repton Areas Underlain By Soluble Rocks
with Potential for Karst or Pseudokarst Development

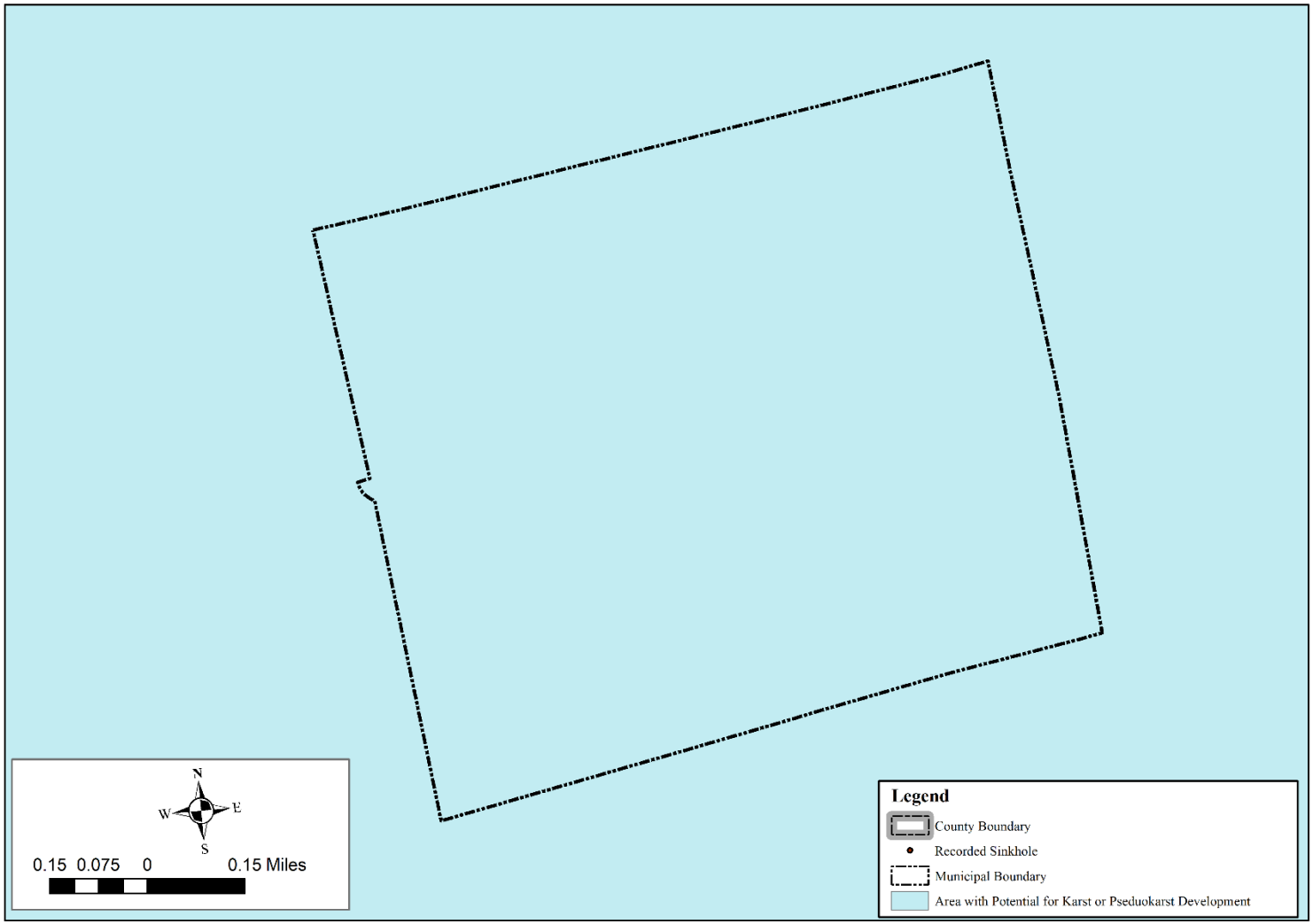


Figure 3.49
Monroe County Areas Underlain By Soluble Rocks
with Potential for Karst or Pseudokarst Development

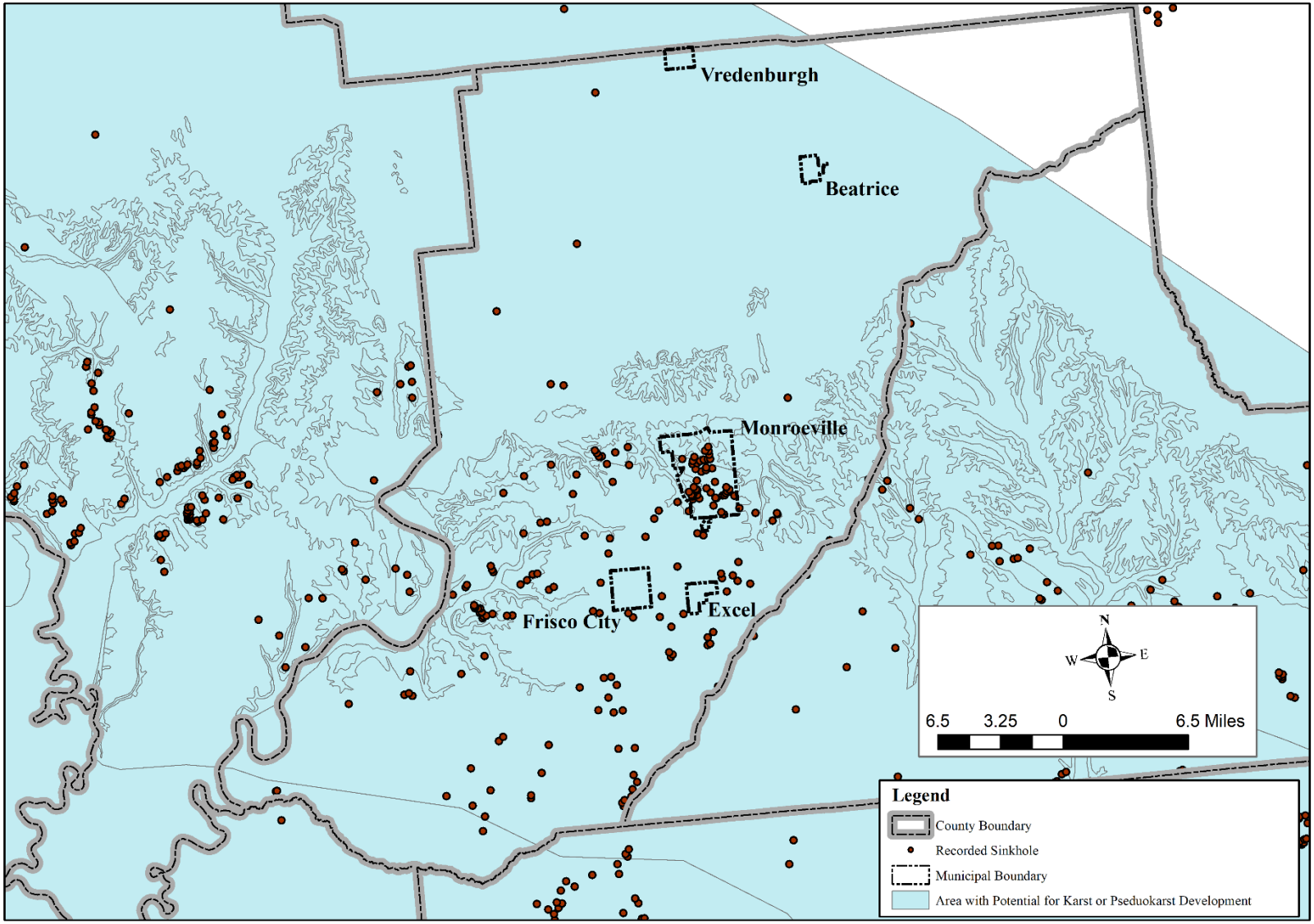


Figure 3.50
Town of Beatrice & Town of Vredenburgh Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

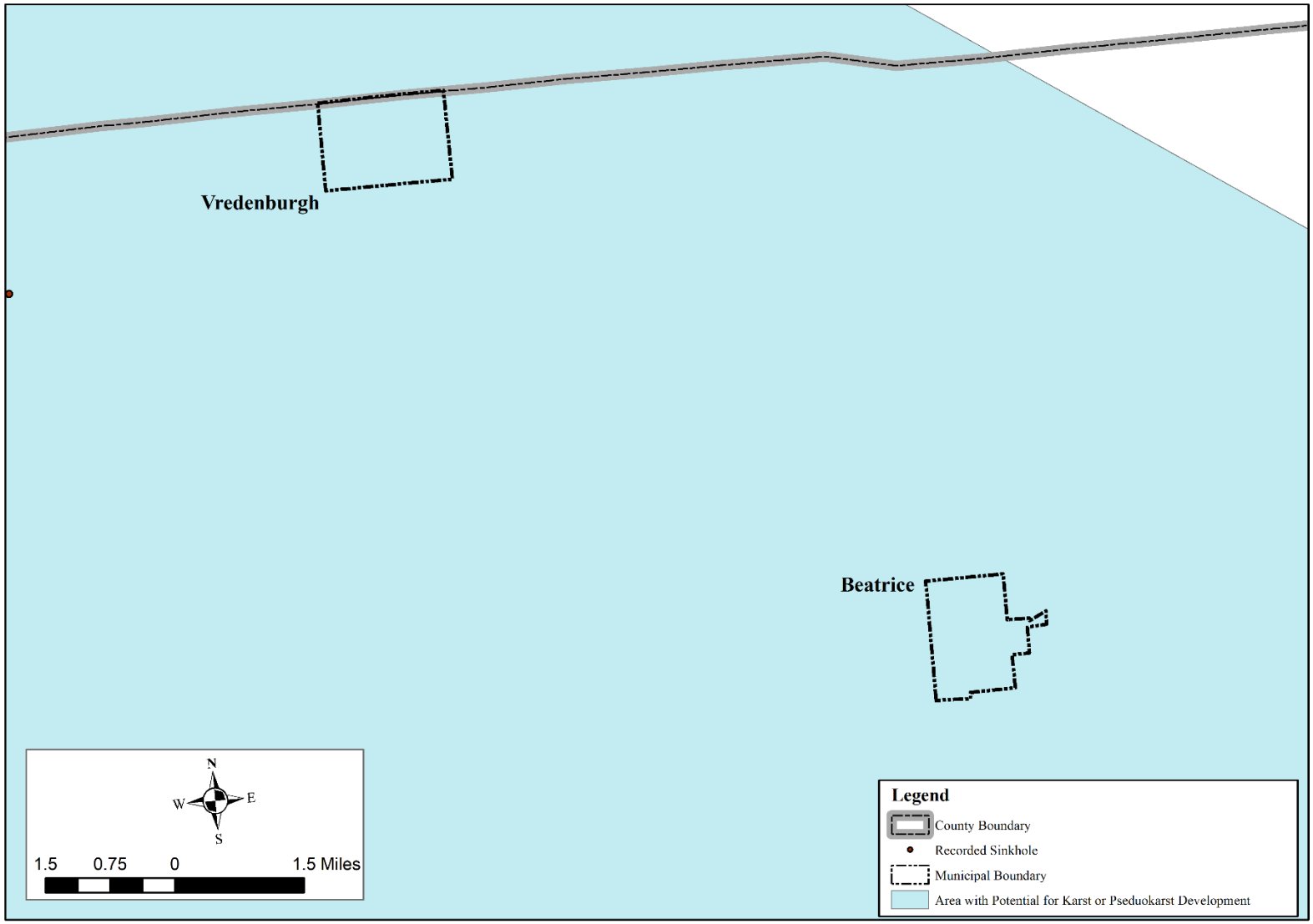


Figure 3.51
Town of Excel & Town of Frisco City Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

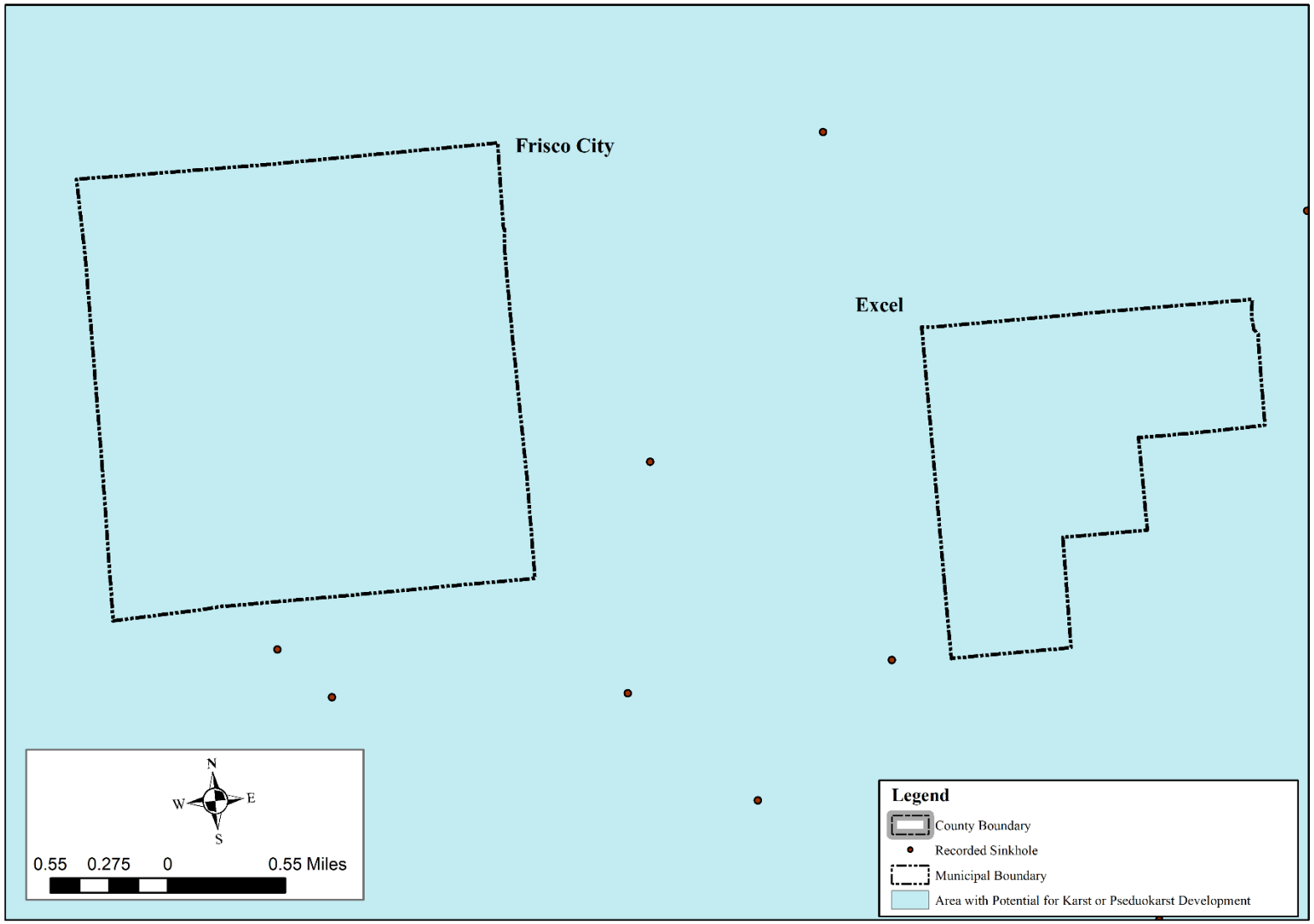


Figure 3.52

City of Monroeville Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

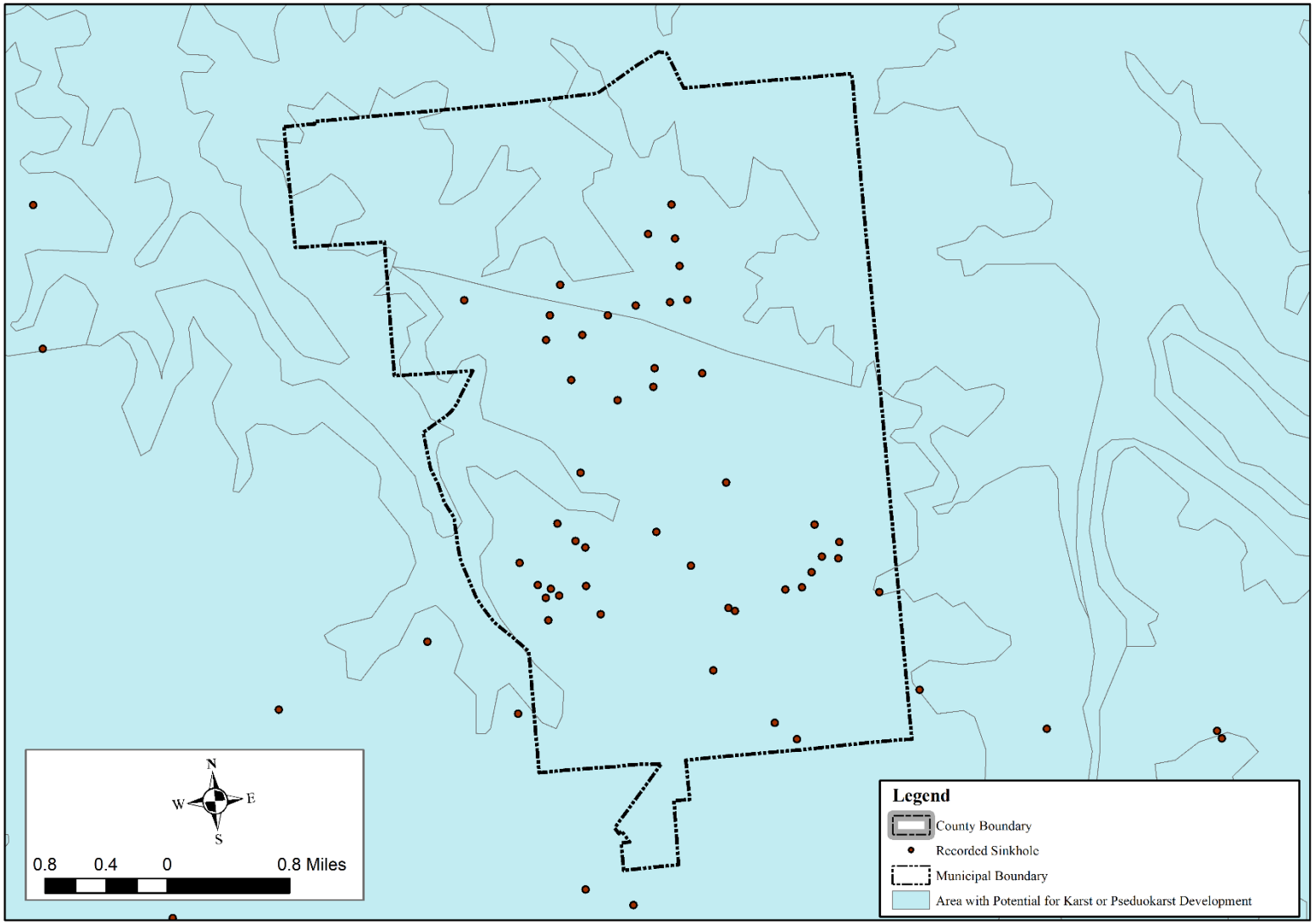


Figure 3.53
Washington County Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

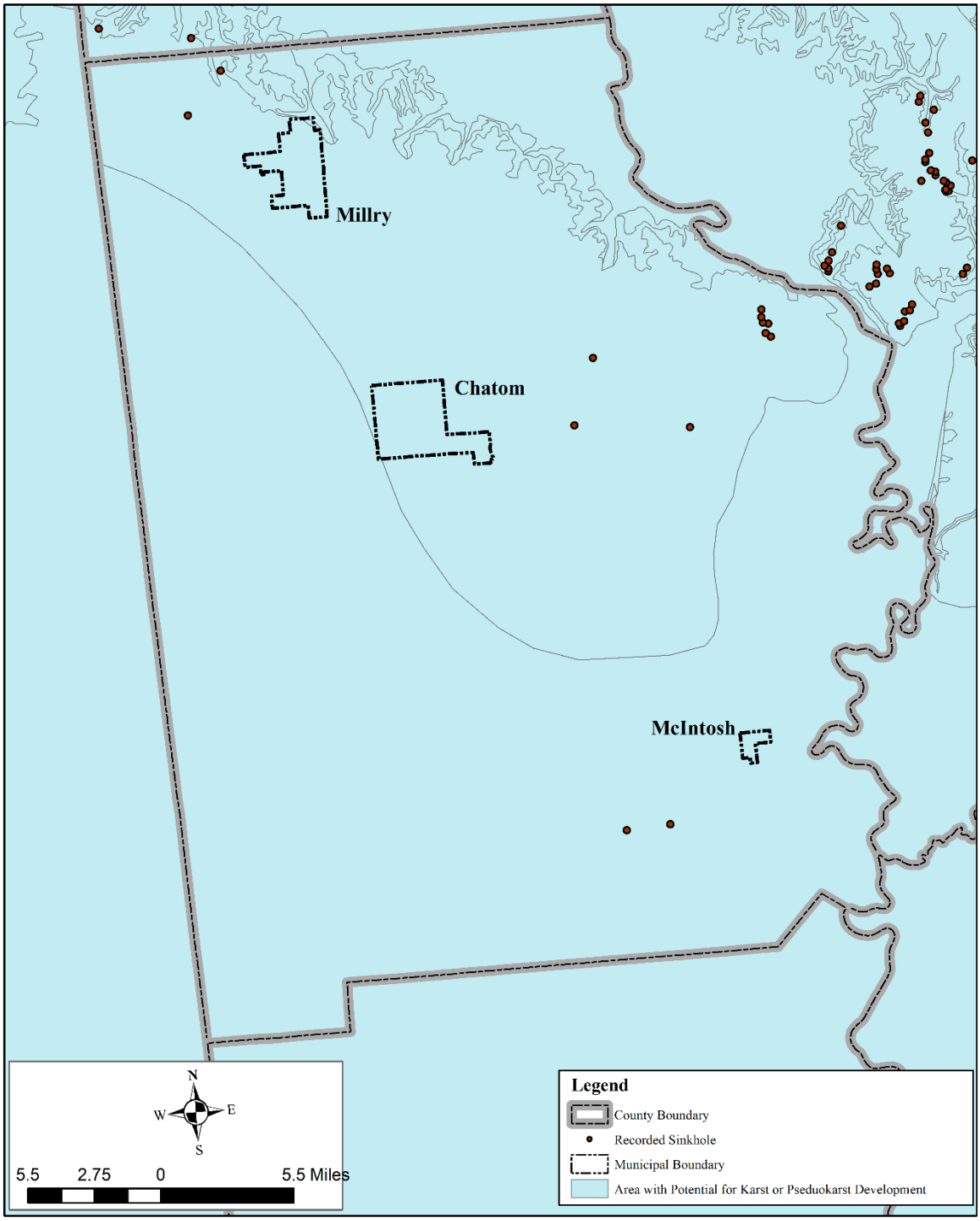


Figure 3.54
Town of Chatom Areas Underlain By Soluble Rocks
with Potential for Karst or Pseudokarst Development

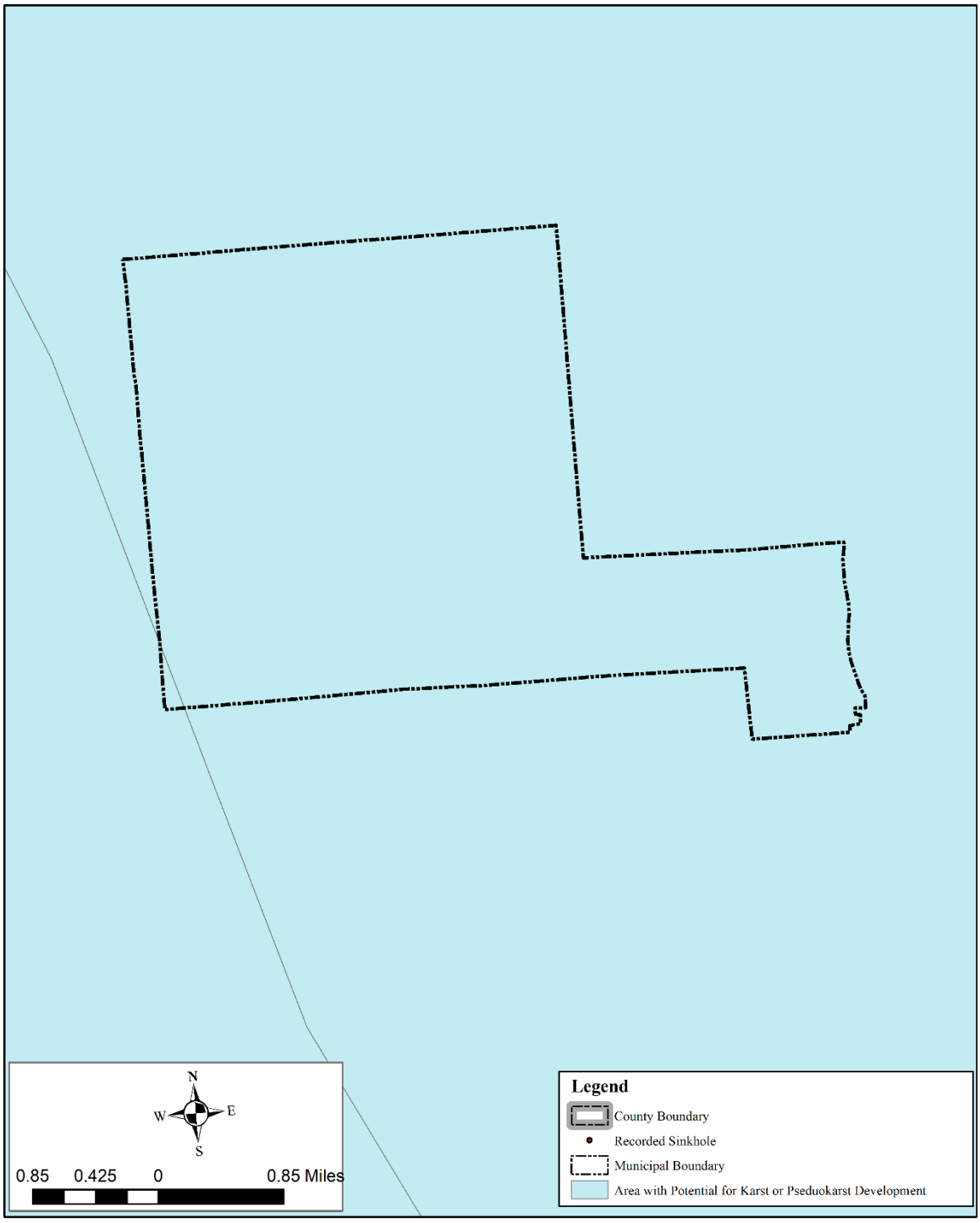


Figure 3.55
Town of McIntosh Areas Underlain By Soluble Rocks with Potential for Karst or Pseudokarst Development

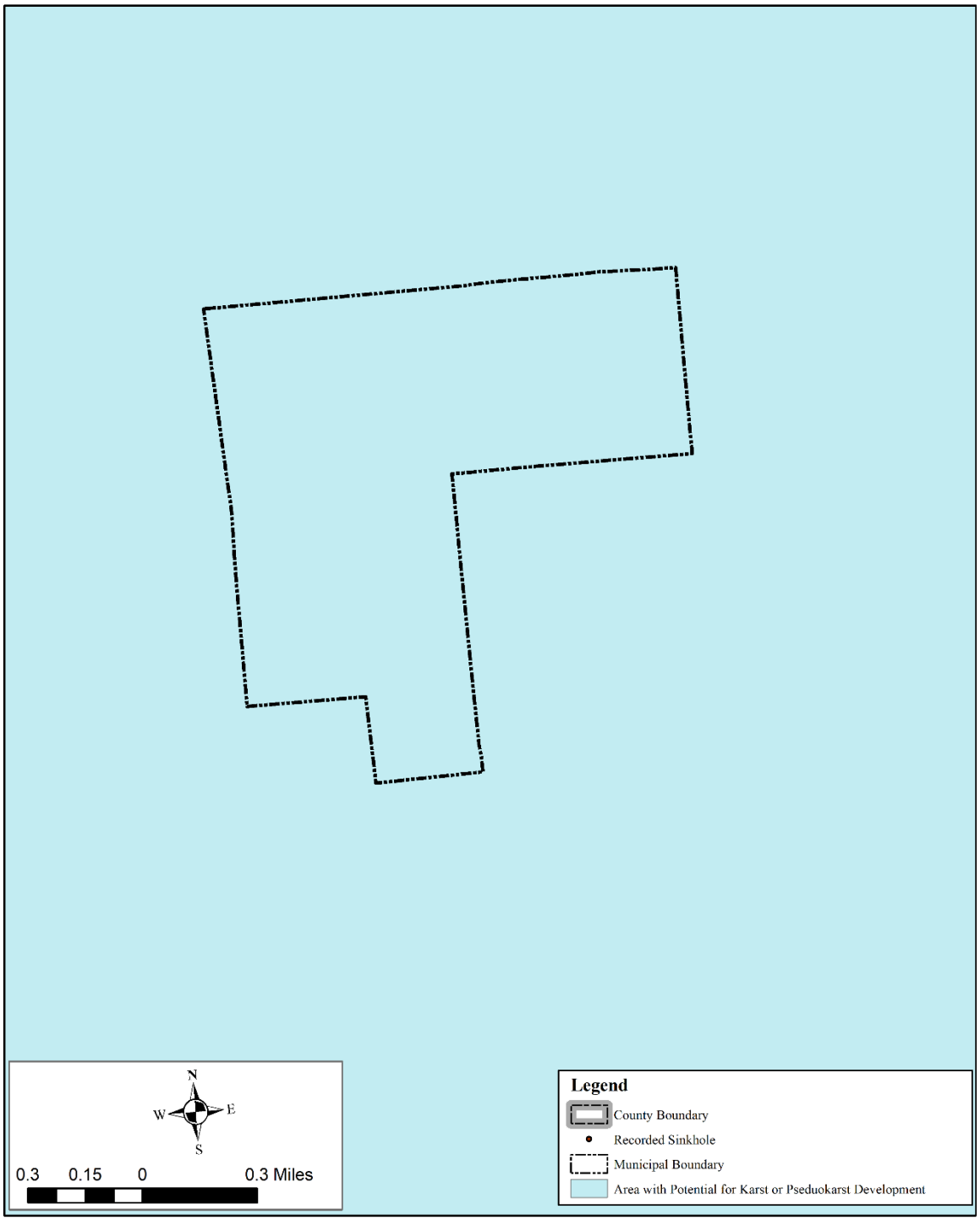
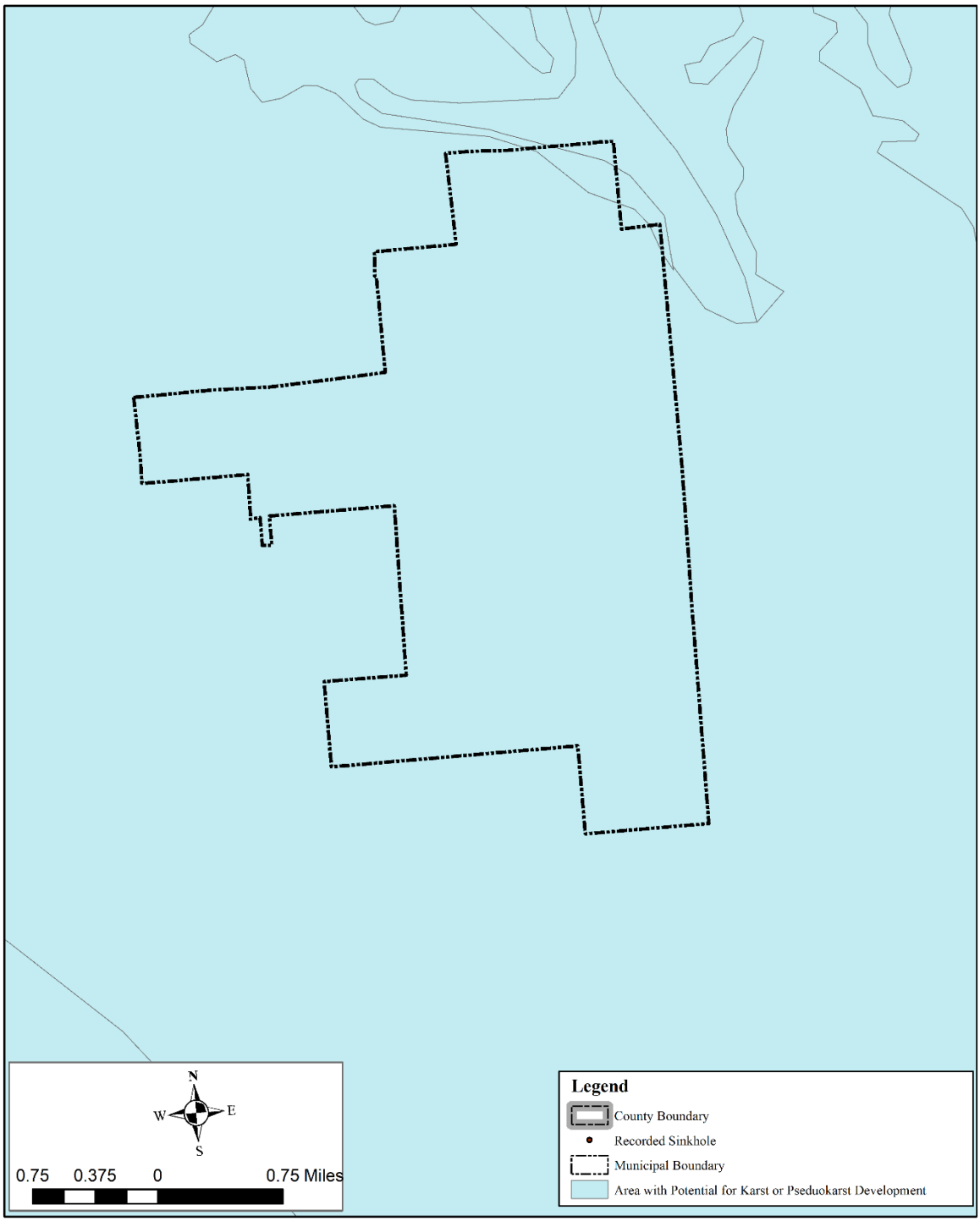


Figure 3.56
Town of Millry Areas Underlain By Soluble Rocks
with Potential for Karst or Pseudokarst Development



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 the planning area, the extent of these incidents in the area are estimated to be primarily isolated damages to structures and infrastructure. These incidences historically affect less than two acres.

Historical Occurrences

There are historical occurrences of subsidence in the planning area. The Geologic Survey of Alabama digitized historical topographic depression features on historical 1:24,000-scale topographic maps. Figure 3.9 includes 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 Events

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.

Table 3.23 provides a summary of extent, probability, and estimated losses by jurisdiction for land subsidence.

Table 3.23 Land Subsidence Summary by Jurisdiction

Jurisdiction	Extent	Probability of Occurrence	Estimated Losses
Clarke County (unincorporated)	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Coffeeville	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Fulton	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Grove Hill	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
City of Jackson	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
City of Thomasville	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Conecuh County (unincorporated)	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*

Town of Castleberry	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
City of Evergreen	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Repton	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Monroe County (unincorporated)	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Beatrice	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Excel	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Frisco City	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
City of Monroeville	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Vredenburgh	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Washington County (unincorporated)	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Chatom	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of McIntosh	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
Town of Millry	<2 acres affected per incidence, minor localized impacts to structures and infrastructure	Low	*
** Unable to provide due to lack of data*			

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 were development occurs near or within the vegetative cover.

Locations Affected

ATRC used the Southern Wildfire Risk Assessment Summary Report for the planning area to analyze the area's susceptibility to wildfires. Figures 3.57-3.60 illustrate 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. This is illustrated in these figures where areas around the most populous cities have the higher WUI. Table 3.24 shows that approximately 158,681 acres of the land area in the county is classified as experiencing moderate or above impacts from WUI fires. This is roughly 23% of the planning area.

Participating Boards of Educations do not have properties located in areas with higher risk for wildfires.

Figure 3.57

Clarke County-Wildland Urban Interface Risk Index

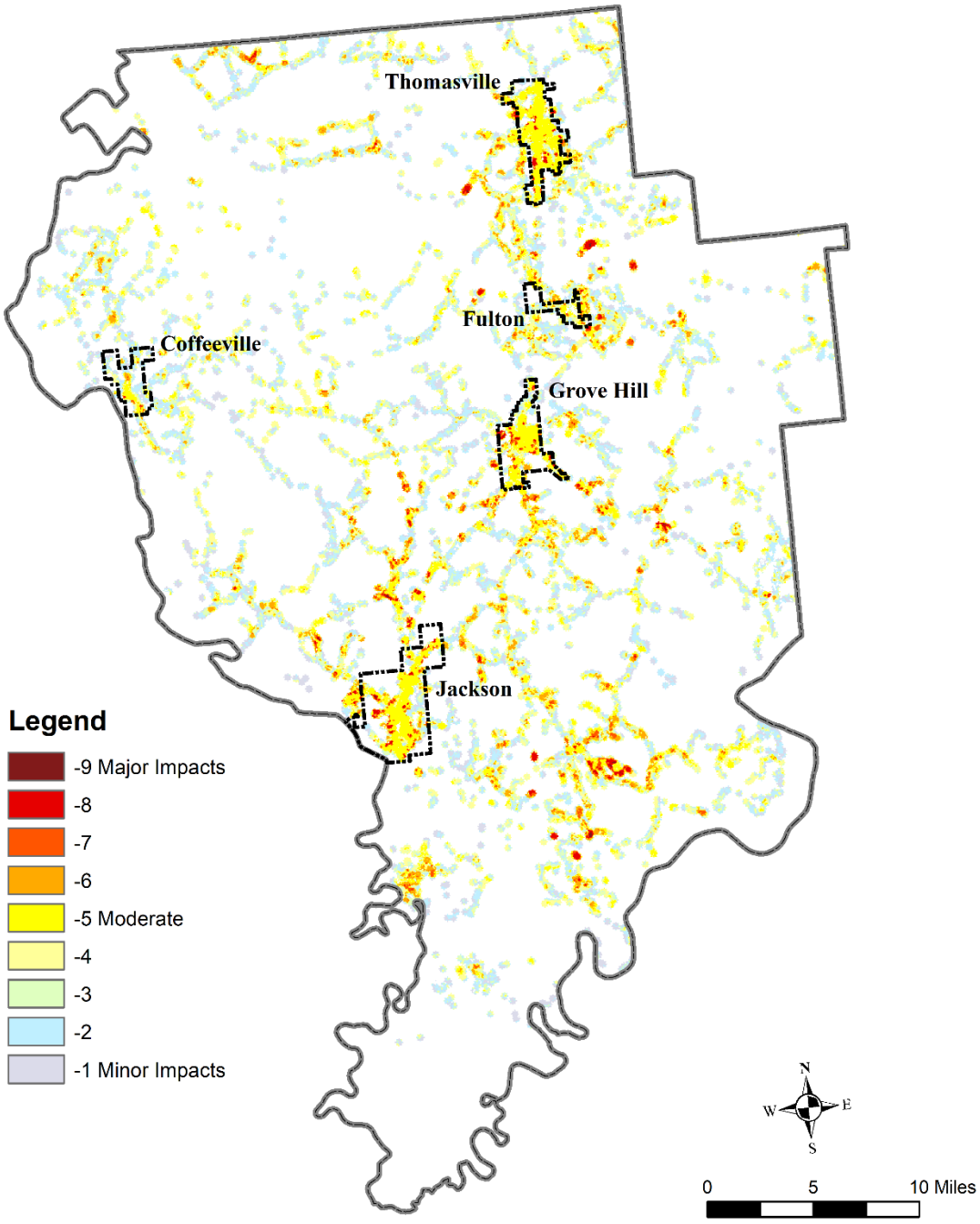


Figure 3.58

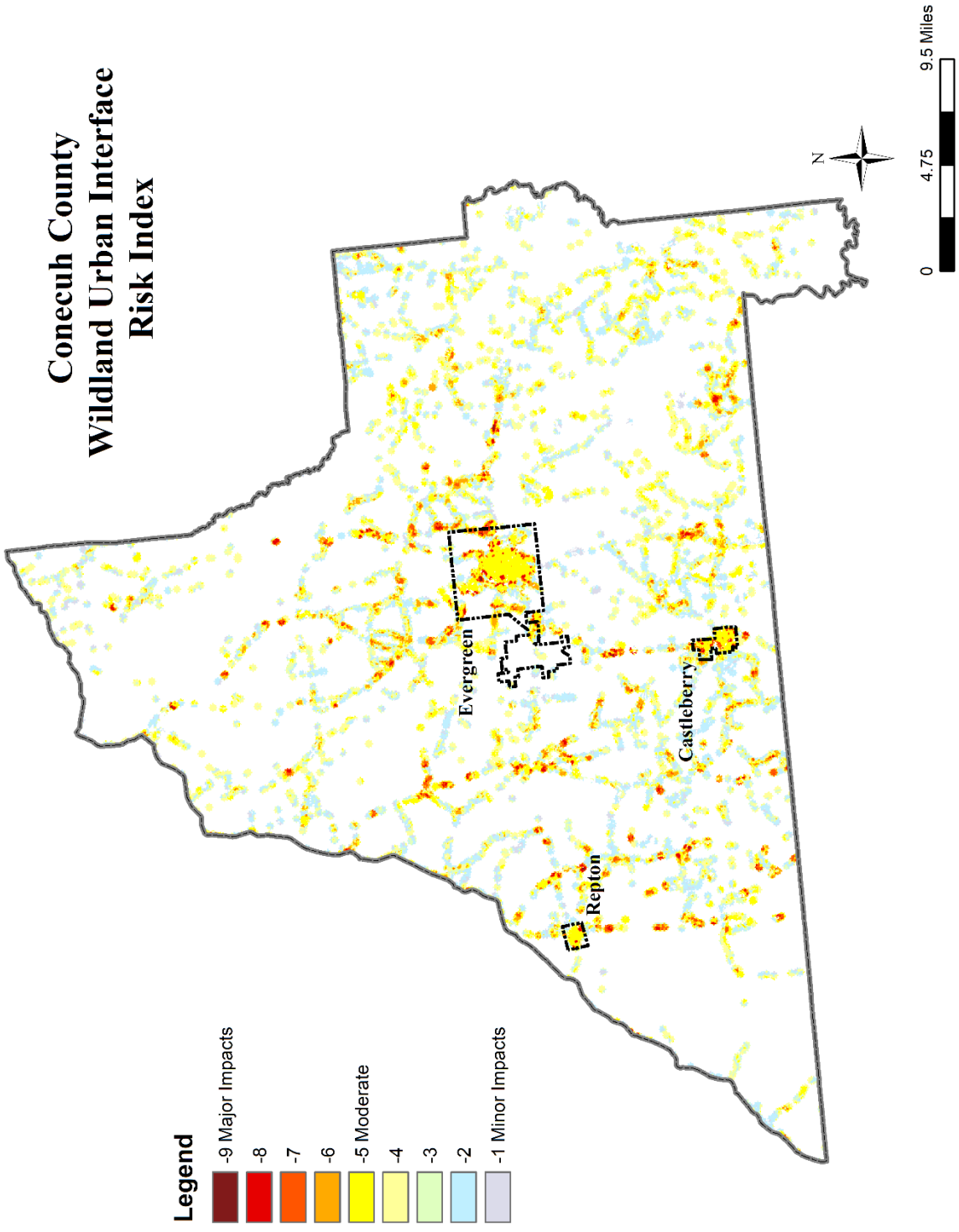

Conecuh County
Wildland Urban Interface
Risk Index
N
0
4.75
9.5 Miles
Evergreen
Castleberry
Repton
Legend
-9 Major Impacts
-8
-7
-6
-5 Moderate
-4
-3
-2
-1 Minor Impacts

Figure 3.59

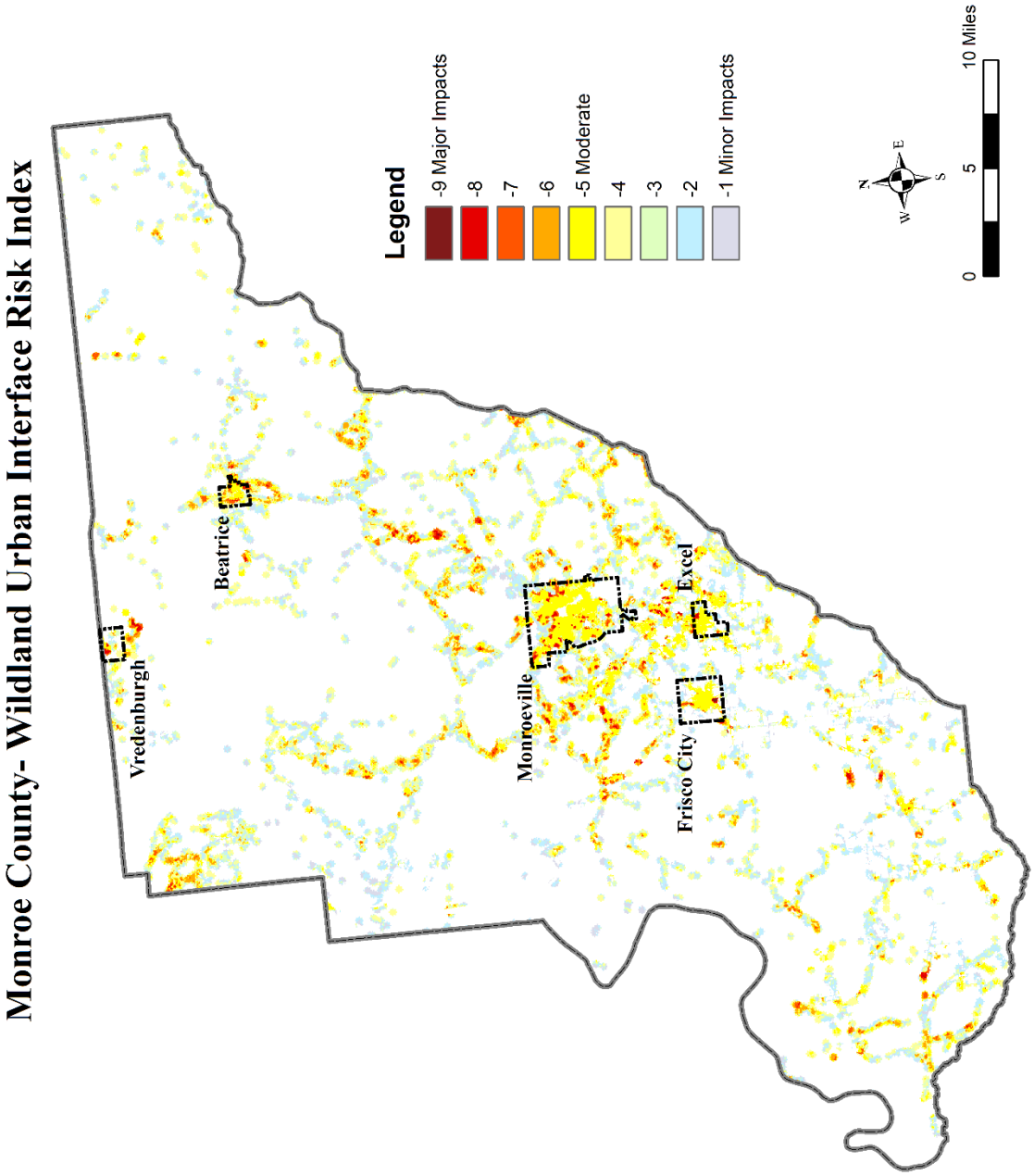

Monroe County- Wildland Urban Interface Risk Index
Legend
-9 Major Impacts
-8
-7
-6
-5 Moderate
-4
-3
-2
-1 Minor Impacts
N
E
S
W
0
5
10 Miles
Vredenburgh
Beatrice
Monroeville
Excel
Frisco City

Figure 3.60

Washington County-Wildland Urban Interface Risk Index

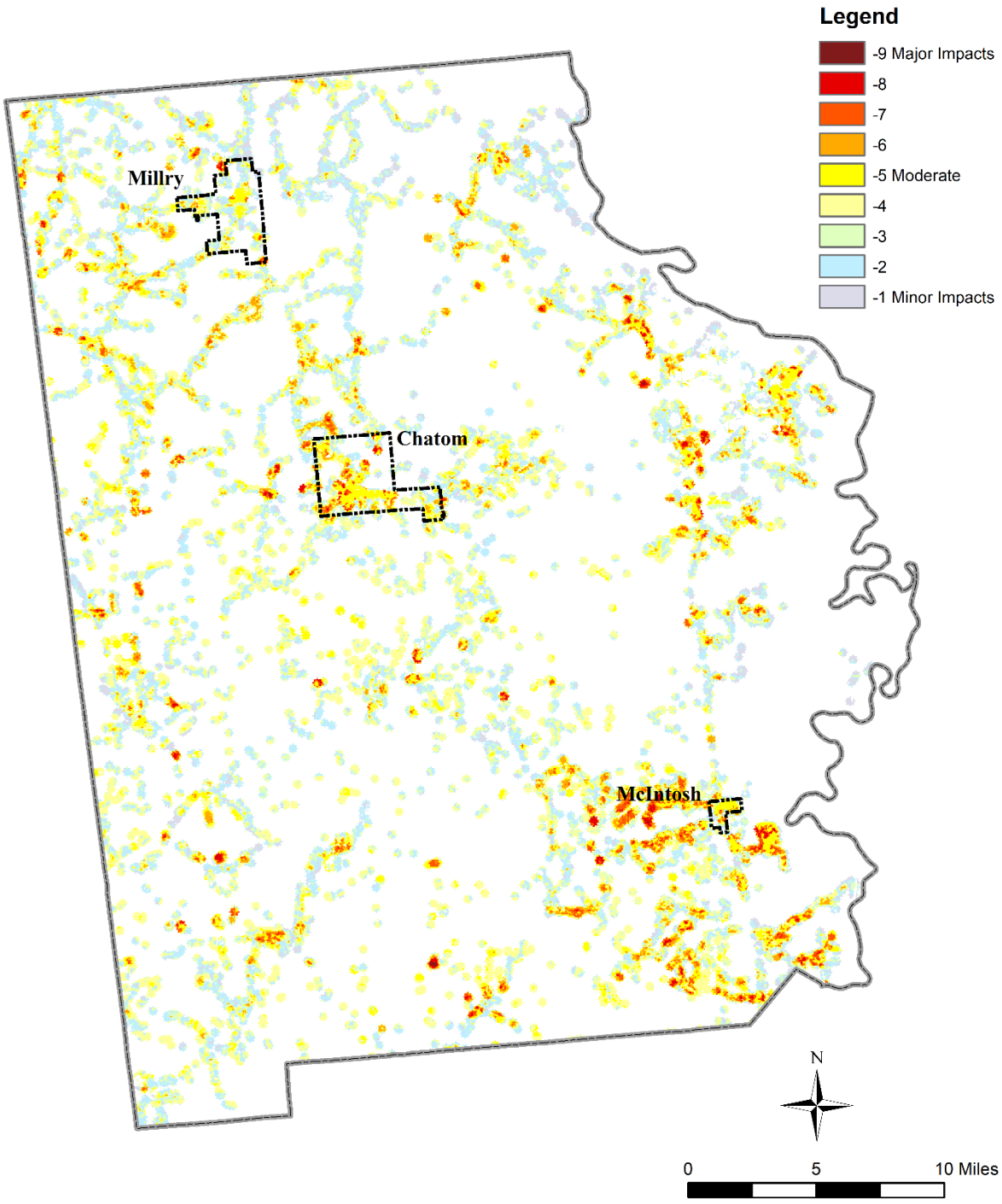


Table 3.24 Wildland Urban Interface Risk Index
For AEMA Division A-ATRC Planning Area

	Class	Acres	Percent
	-9 Major Impacts	229	0.0 %
	-8	5,827	0.9 %
	-7	20,694	3.0 %
	-6	35,018	5.2 %
	-5 Moderate	96,913	14.3 %
	-4	193,729	28.5 %
	-3	104,441	15.4 %
	-2	170,368	25.1 %
	-1 Minor Impacts	51,848	7.6 %
	Total	**679,067**	**100.0 %**

Source: Southern Wildfire Risk Assessment

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 the planning area, there are no land areas classified as having a risk higher than a 6. Figures 3.61-3.64 show the burn probability for the counties in the division. Table 3.25 provides the acreage and percent of the division which falls into each burn probability category.

Figure 3.61

Clarke County-Burn Probability

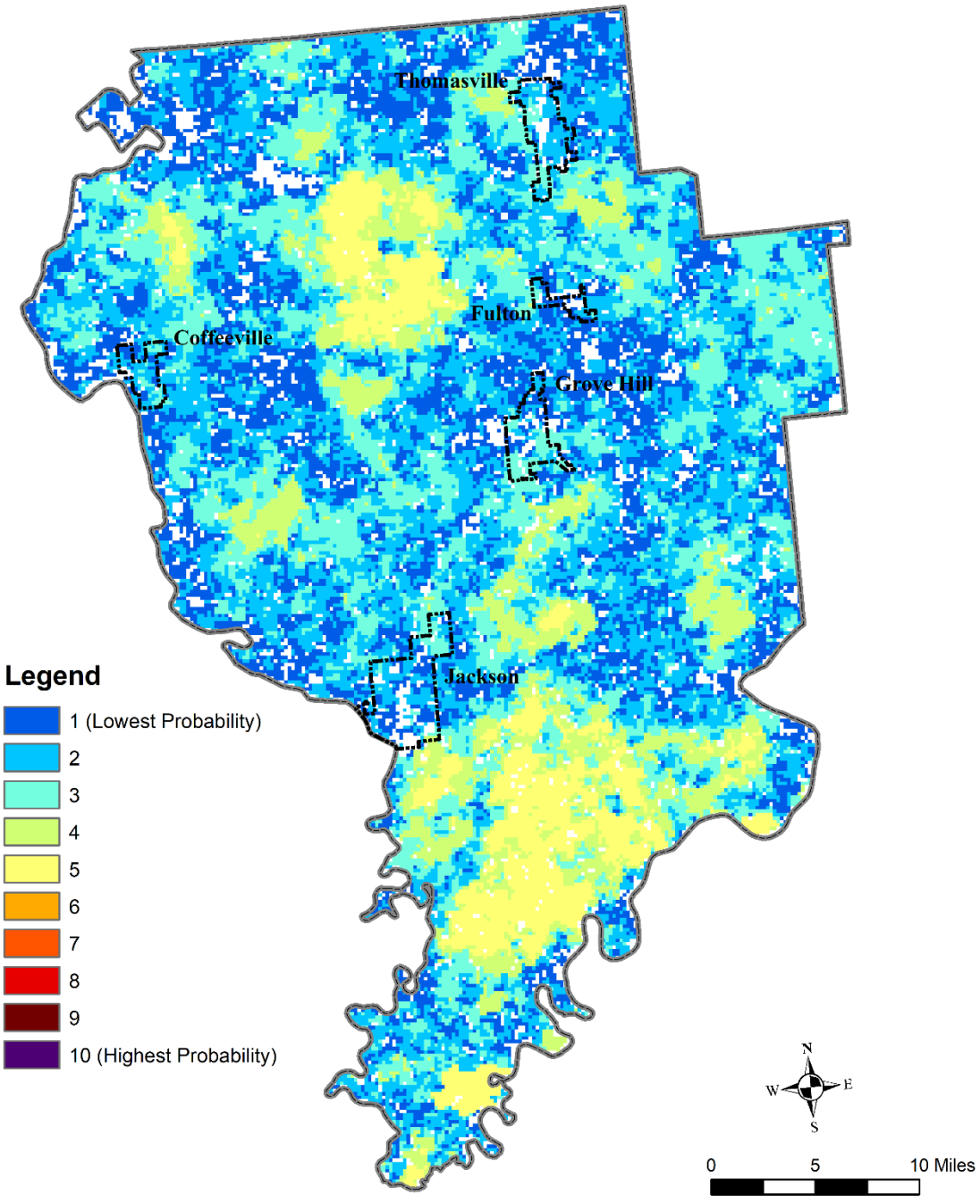


Figure 3.62

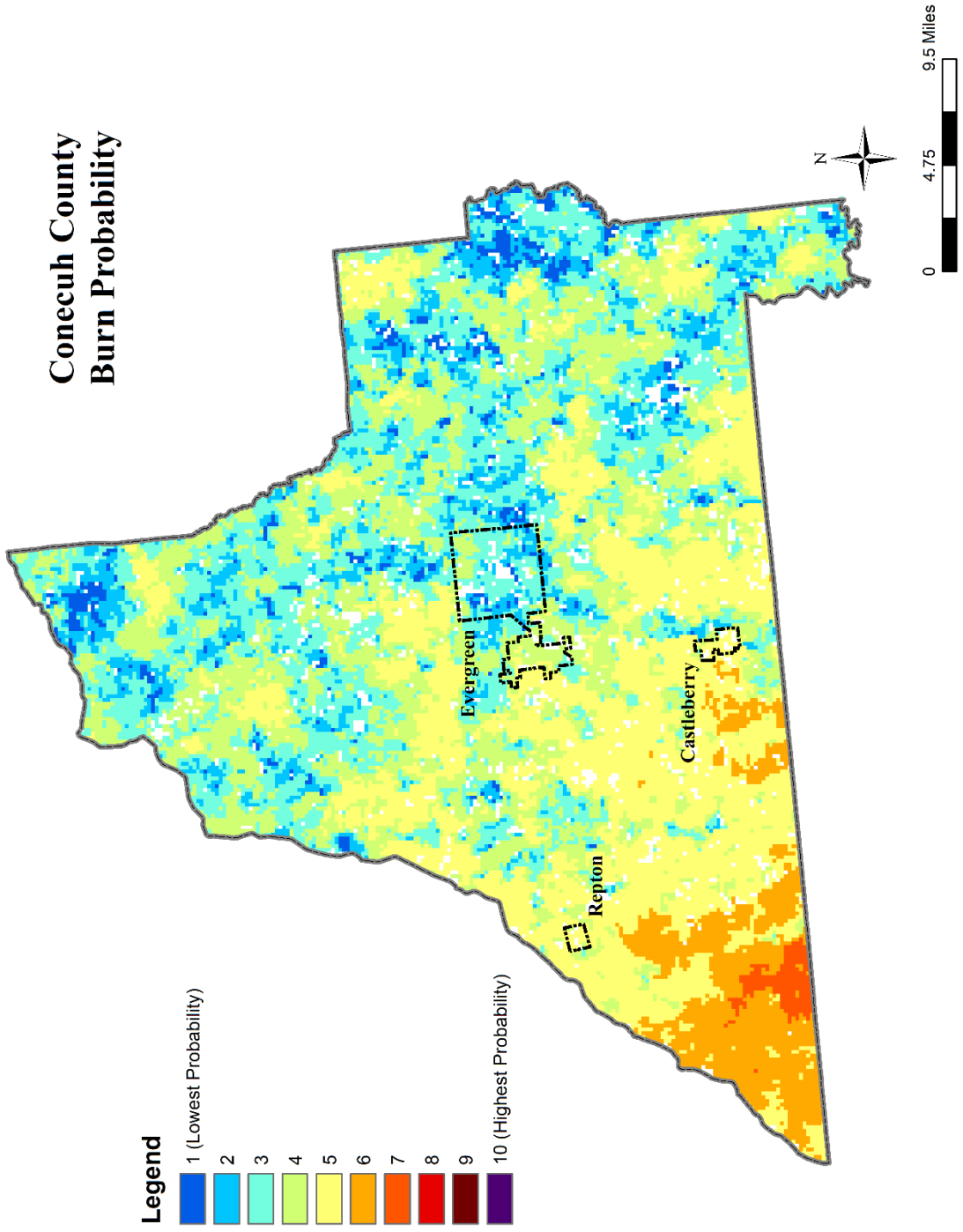

Conecuh County
Burn Probability
Legend
1 (Lowest Probability)
2
3
4
5
6
7
8
9
10 (Highest Probability)
Evergreen
Repton
Castleberry
N
0
4.75
9.5 Miles

Figure 3.63

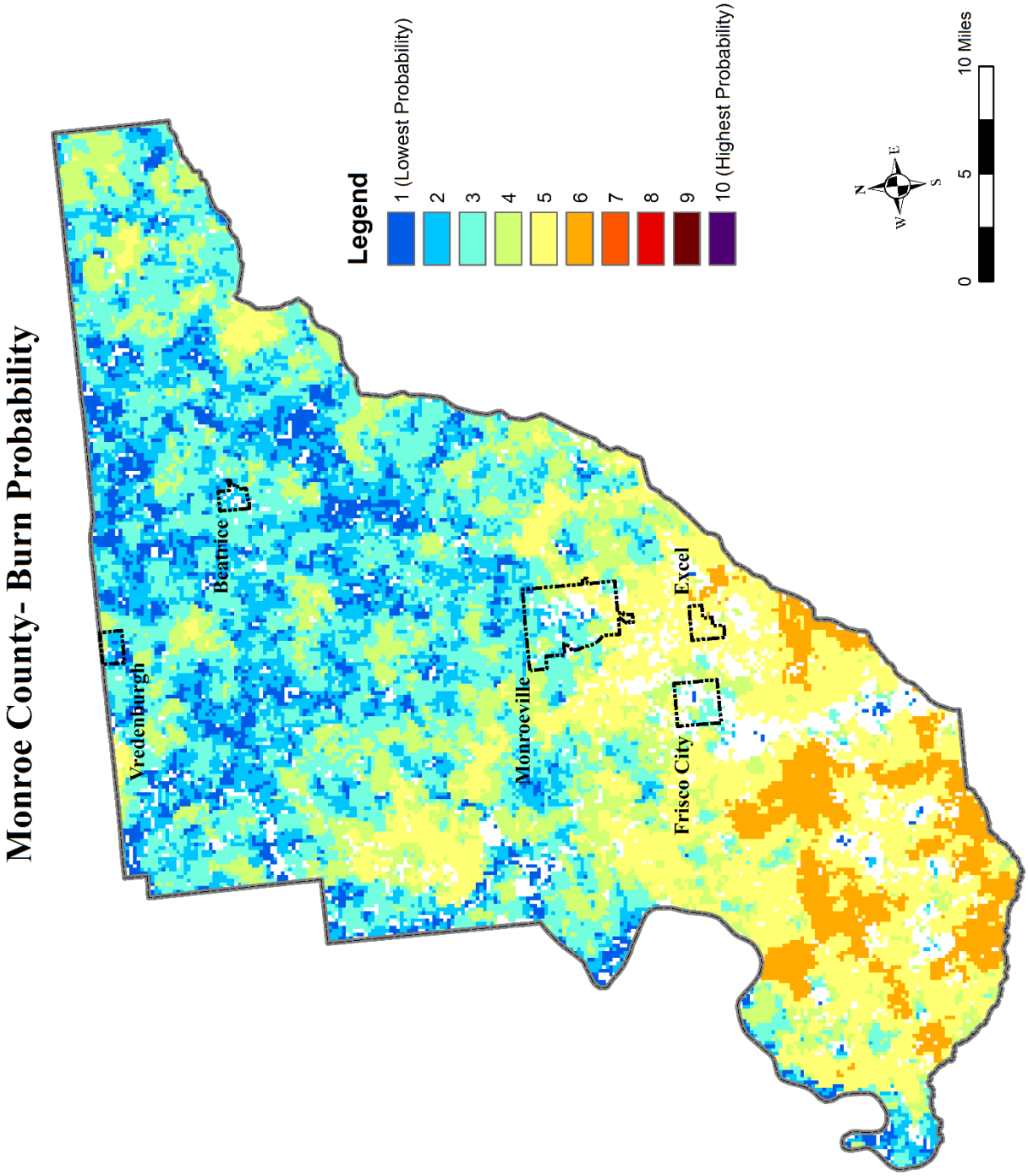

Monroe County- Burn Probability
Legend
1 (Lowest Probability)
2
3
4
5
6
7
8
9
10 (Highest Probability)
N
E
S
W
0
5
10 Miles
Vredenburgh
Beatrice
Monroeville
Excel
Frisco City

Figure 3.64

Washington County-Burn Probability

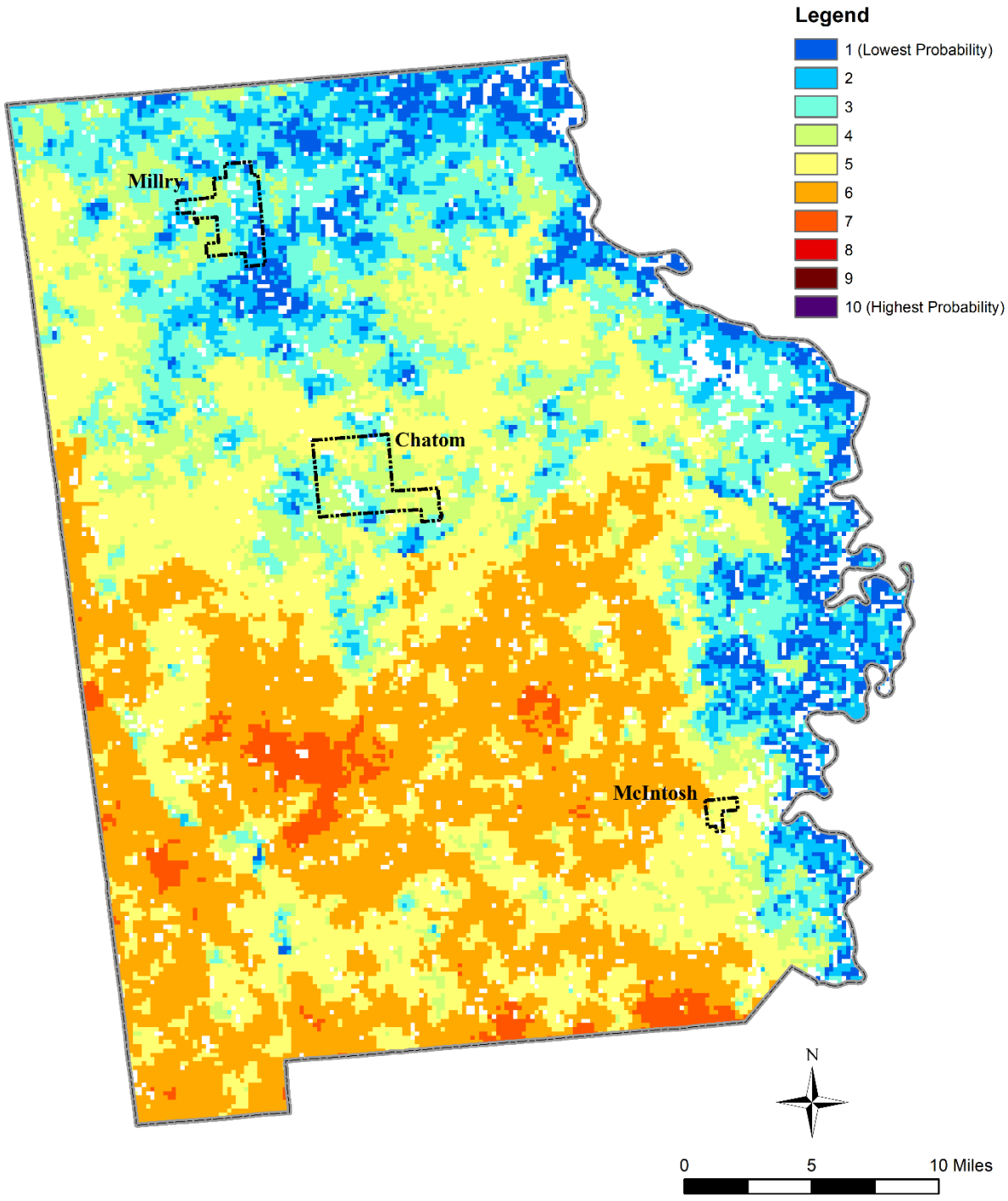


Table 3.25 Burn Probability for AEMA Division A- ATRC Planning Area

	Class	Acres	Percent
	1	762,945	15.4 %
	2	1,390,929	28.0 %
	3	1,513,046	30.4 %
	4	708,579	14.3 %
	5	545,120	11.0 %
	6	49,520	1.0 %
	7	0	0.0 %
	8	0	0.0 %
	9	0	0.0 %
	10	0	0.0 %
	Total	**4,970,139**	**100.0 %**

Source: Southern Wildfire Risk Assessment

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. As population and development increases in high growth areas, such as Thomasville, the wildland urban interface should be closely monitored for potential effects.

The Characteristic Fire Intensity Scale (FIS) can be used to illustrate wildfire extent. The FIS specifically identifies areas where significant fuel hazards and associated dangerous fire behavior potential exist based on a weighted average of four percentile weather categories.

- **Class 1, Very Low:** Very small, discontinuous flames, usually less than 1 foot in length; very low rate of spread; no spotting. Fires are typically easy to suppress by firefighters with basic training and non-specialized equipment.

- **Class 2, Low:** Small flames, usually less than two feet long; small amount of very short range spotting possible. Fires are easy to suppress by trained firefighters with protective equipment and specialized tools.

- **Class 3, Moderate:** Flames up to 8 feet in length; short-range spotting is possible. Trained firefighters will find these fires difficult to suppress without support from aircraft or engines, but dozer and plows are generally effective. Increasing potential for harm or damage to life and property.

- **Class 4, High:** Large Flames, up to 30 feet in length; short-range spotting common; medium range spotting possible. Direct attack by trained firefighters, engines, and dozers is generally ineffective, indirect attack may be effective. Significant potential for harm or damage to life and property.

- **Class 5, Very High:** Very large flames up to 150 feet in length; profuse short-range spotting, frequent long-range spotting; strong fire-induced winds. Indirect attack marginally effective at the head of the fire. Great potential for harm or damage to life and property.

Figures 3.65-3.68 illustrate the FUS for each county and jurisdiction.

Figure 3.65

Clarke County-Fire Intensity

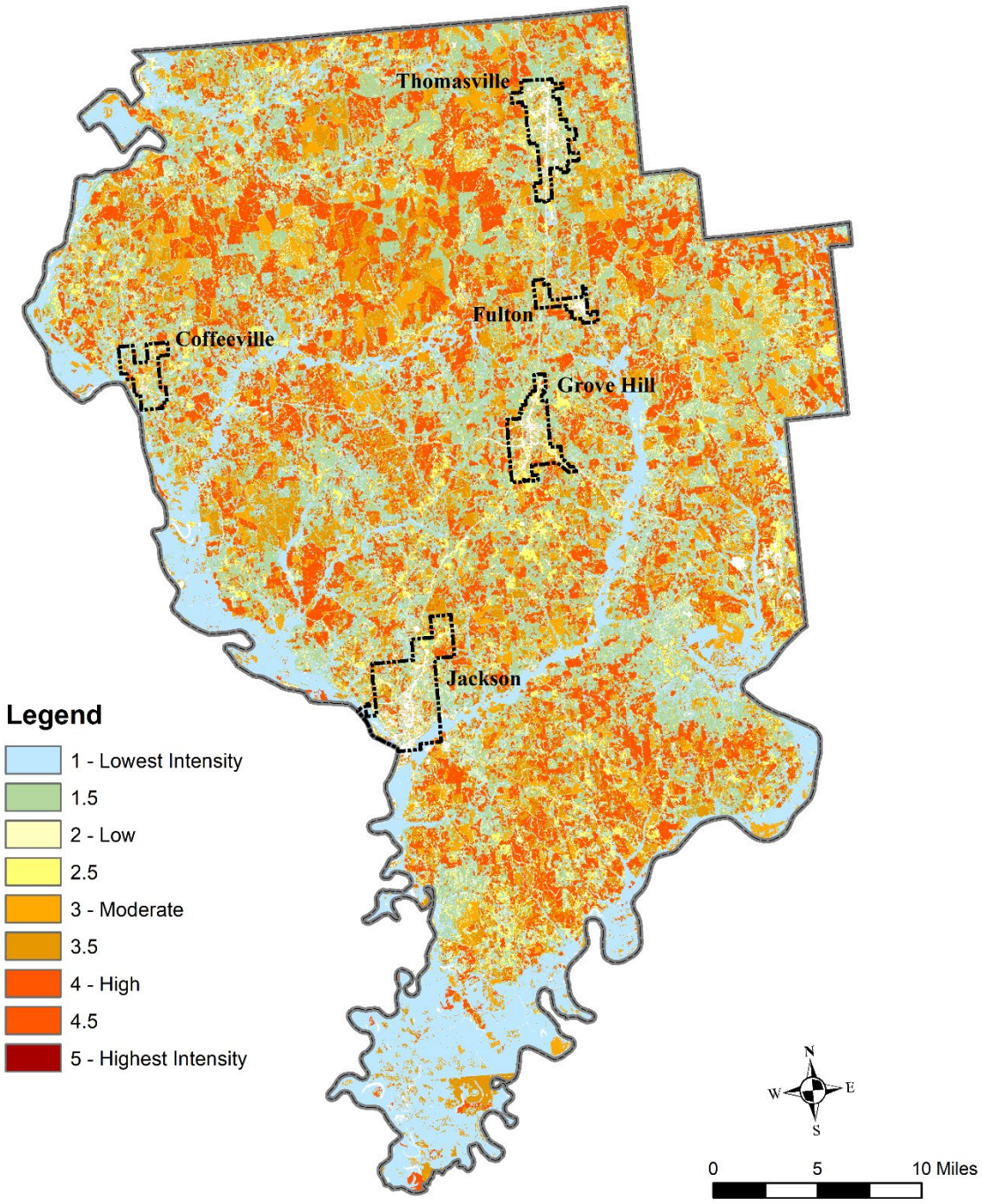


Figure 3.66

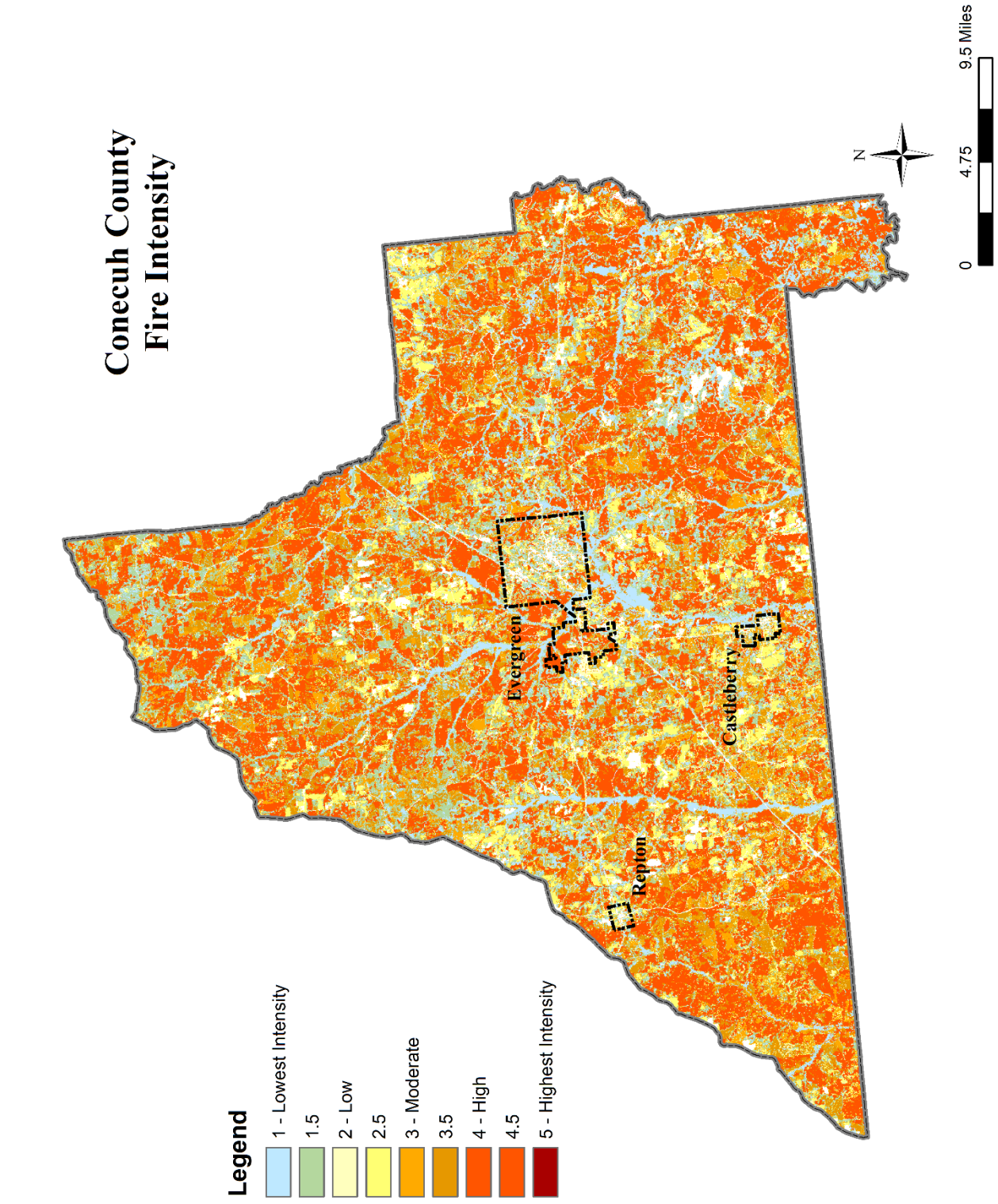

Conecuh County
Fire Intensity
Legend
1 - Lowest Intensity
1.5
2 - Low
2.5
3 - Moderate
3.5
4 - High
4.5
5 - Highest Intensity
Evergreen
Castleberry
Repton
N
0
4.75
9.5 Miles

Figure 3.67

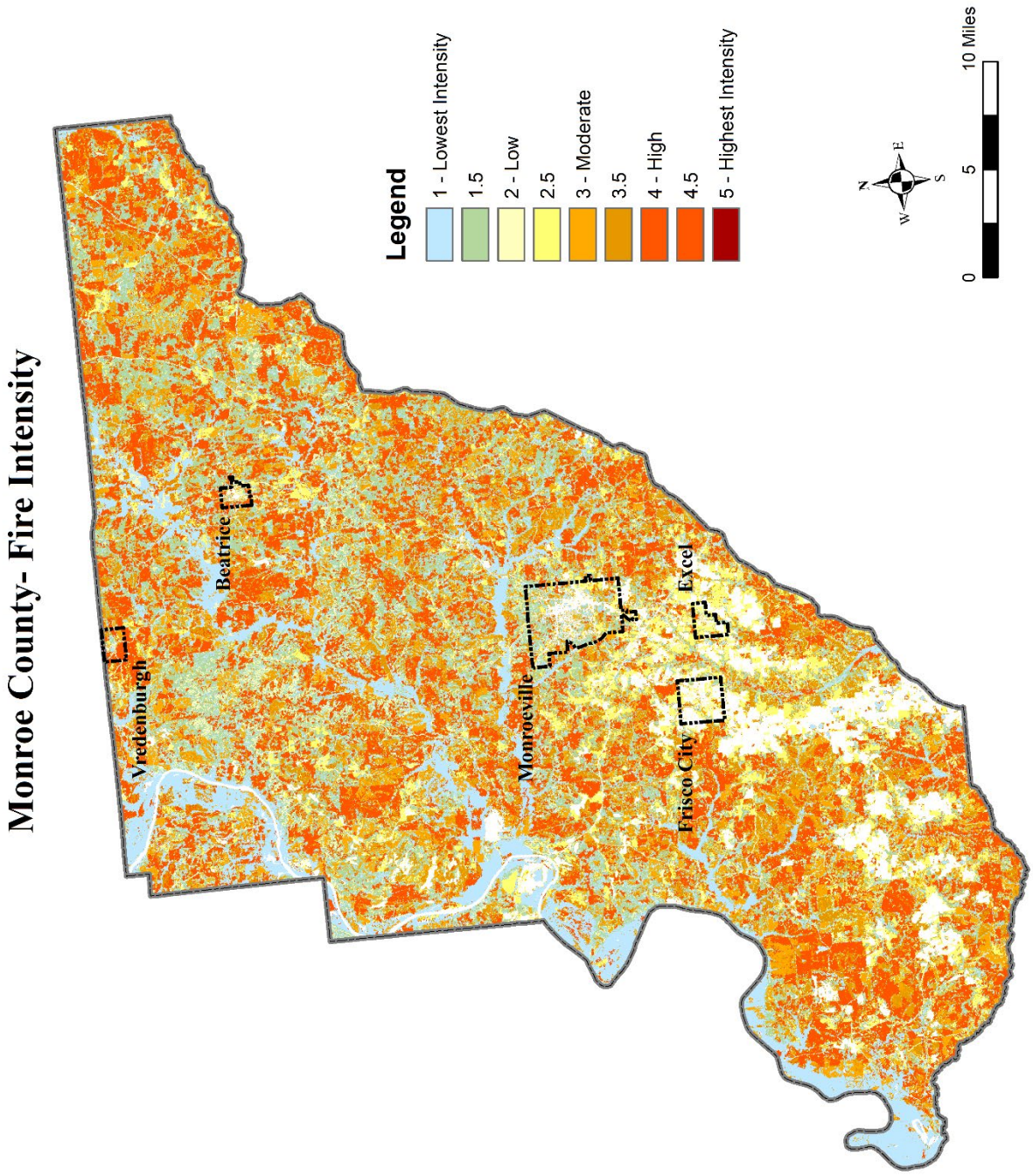
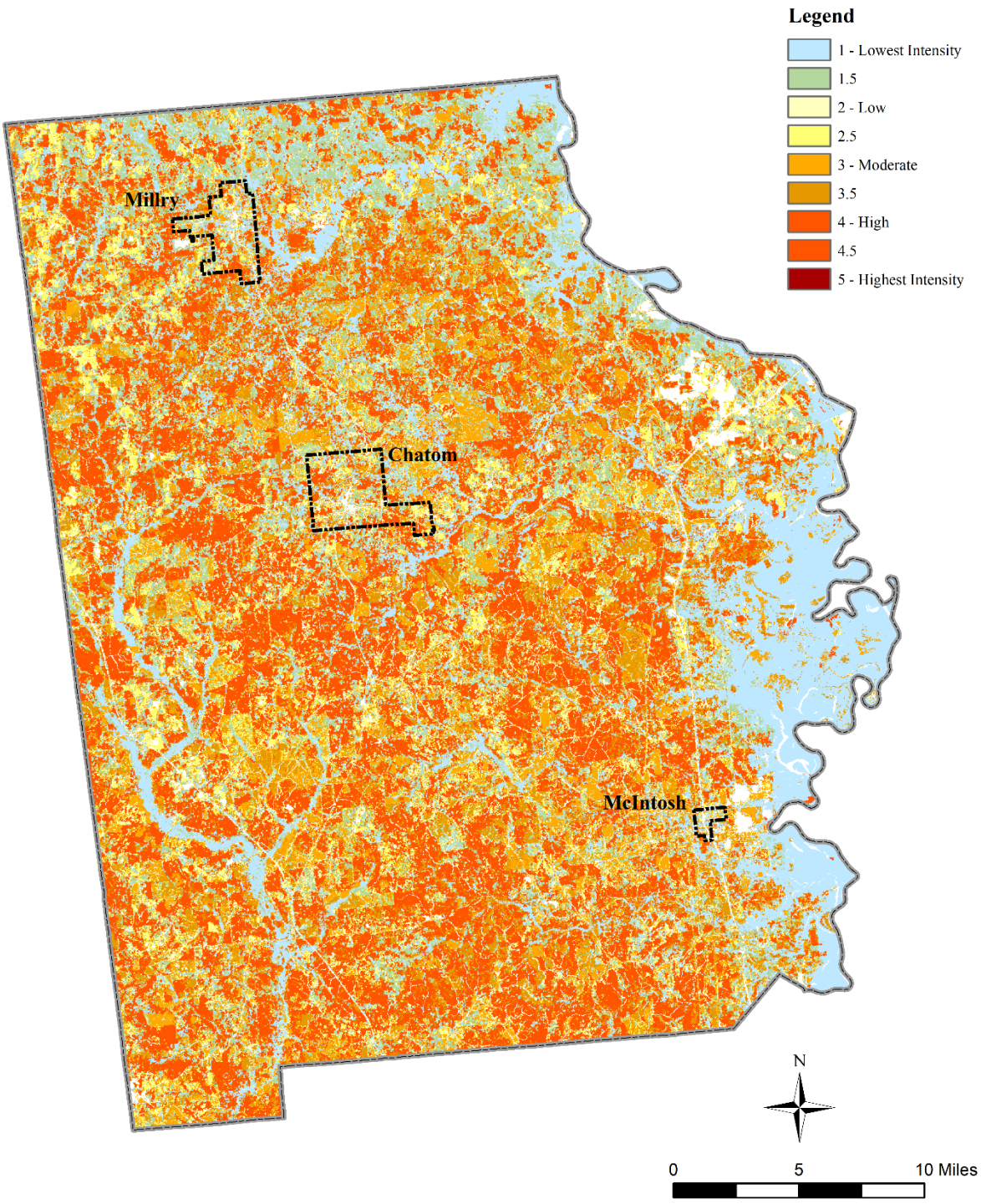

Monroe County- Fire Intensity
Legend
1 - Lowest Intensity
1.5
2 - Low
2.5
3 - Moderate
3.5
4 - High
4.5
5 - Highest Intensity
N
E
S
W
0
5
10 Miles
Vredenburgh
Beatrice
Monroeville
Excel
Frisco City

Figure 3.68

Washington County-Fire Intensity



Historical Occurrences

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. Table 3.26 provides wildfire data for each county from 2010-2019.

Table 3.26 Historic Wildfire Data

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Clarke										
# of fires	37	34	13	14	34	31	38	17	6	20
Total Acres Burned	259	739	102	231	164	268	207.2	119.55	169.9	90.95
Average Acres Burned per Fire	7.0	21.7	7.8	16.5	4.8	8.6	5.5	7.0	28.3	4.5
Conecuh										
# of fires	66	72	25	22	35	42	65	37	25	31
Total Acres Burned	741	1093	275	482	402	732	449.05	1139.85	114.6	279.15
Average Acres Burned per Fire	11.2	15.2	11.0	21.9	11.5	17.4	6.9	30.8	4.6	9.0
Monroe										
# of fires	46	52	22	21	12	27	11	24	10	18
Total Acres Burned	244	587	84	140	157	135	53.25	563.25	17.8	105.6
Average Acres Burned per Fire	5.3	11.3	3.8	6.7	13.1	5.0	4.8	23.5	1.8	5.9
Washington										
# of fires	132	78	36	46	106	72	94	25	19	31
Total Acres Burned	2012	1818	827	1296	1269	1706	1313.95	70	452.3	284.56
Average Acres Burned per Fire	15.2	23.3	23.0	28.2	12.0	23.7	14.0	2.8	23.8	9.2

Probability of Future Events

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. Based on the information in this profile, the entire planning area will be regarded to have a Medium probability for major damage from wildfire events.

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 the planning area, but when they do occur, they have a significant impact. Local governments have improved their response to winter storm events but they are unpredictable events. 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 2001 and 2010. Most recently, in January 2018, a system moved through that brought snow to Clarke and Washington Counties (Table 3.27). In Clarke County, storm total snow amounts of 3.5 inches in Thomasville, 3 inches in Bashi, 2.5 inches in Grove Hill, 2 inches in Jackson, 2 inches in Springfield and 1.5 inches in Chilton were reported. In Washington County, storm total snow amounts of 2.5 inches in McIntosh, 2 inches in Leroy, 1.75 in Vinegar Bend and 1.5 in Frankville. This system caused most normal operations to shut down for two days and caused some property damage due to falling trees and frozen pipes in the region.

Table 3.27 Division A- ATRC Counties Winter Storm Occurrences 2014-2019

County	Date	Deaths	Injuries	Property Damage	Crop Damage
Washington	1/16/2018	0	0	$0.00	$0.00
Clarke	1/16/2018	0	0	$0.00	$0.00
Totals		0	0	$0.00	$0.00

Source: NOAA Storms Events Database

Probability of Future Events

Winter storms in southwest Alabama are infrequent and generally short-term events; therefore, they have a low probability of causing major damage in the planning area.

3.3 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 at total value with a maximum score of 4.0.

Table 3.28 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 3.29 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 3.29 Summary of Regional Hazard Risk Impact

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

Clarke County

- With respect to vulnerable populations both Fulton and Jackson have over twenty-percent of their populations being over the age of 65. 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 jurisdictions have at least 20% of their population living below the poverty line with the exception of Thomasville.
- Around 21% of the housing stock in Fulton is mobile homes. These homes makes individuals more vulnerable to the effects of all hazards.

- In Clarke 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 Clarke County Jail, Crowne Healthcare-Thomasville, Jackson Healthcare, and the Meadows of Jackson.
- A number of factors influence jurisdiction's vulnerability to flooding and flash flooding. There are floodplain areas located throughout the county (refer to Figure 3.3). All jurisdictions participate in the NFIP. No jurisdiction has a certified floodplain manager. Flash flooding vulnerability exist throughout the county and 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 employers are wood products producers: Packaging Corporation of America, Boise-Cascade, Canfor, Scotch Plywood, and Louisiana Pacific.
- 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.
- Many areas in the county have limited cellphone service, many individuals depend on their phones to alert them to severe weather. The limited coverage makes these individuals more vulnerable to severe thunderstorms, flash flooding events, and tornadoes.

Conecuh County

- With respect to vulnerable populations the Town of Castleberry has 29.8% of its populations being over the age of 65. 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. Both Castleberry and Evergreen have over 30% of their population living below the poverty line. In Repton, over 20% of the population lives below the poverty level.
- Approximately 25% of the housing stock in Castleberry and 40% in Repton is mobile homes. These homes makes individuals more vulnerable to the effects of all hazards.
- In Conecuh 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 Conecuh County Jail, Evergreen Retirement Home, and Evergreen Nursing and Rehabilitation Center.
- A number of factors influence jurisdiction's vulnerability to flooding and flash flooding. There are floodplain areas located throughout the county (refer to Figure 3.4). All

jurisdictions participate in the NFIP. No jurisdiction has a certified floodplain manager. Flash flooding vulnerability exist throughout the county and 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.
- Many areas in the county have limited cellphone service, many individuals depend on their phones to alert them to severe weather. The limited coverage makes these individuals more vulnerable to severe thunderstorms, flash flooding events, and tornadoes.

Monroe County

- With respect to vulnerable populations the City of Monroeville and Frisco City have approximately 20% of their population being 65 years or older. 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. Beatrice, Frisco City, and Vredenburgh have over 30% of their population living below the poverty line. In Monroeville, 27% of the population lives below the poverty level.
- Approximately 79% of the housing stock in Vredenburgh and 46% in Beatrice is mobile homes. These homes makes individuals more vulnerable to the effects of all hazards.
- In Monroe 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 Monroe County Jail, Englewood Health Care Center, Monroe Manor Health and Rehabilitation Center, and the Meadows of Monroeville Assisted Living.
- A number of factors influence jurisdiction's vulnerability to flooding and flash flooding. There are floodplain areas located throughout the county (refer to Figure 3.5). Monroe County and the City of Monroeville participate in the NFIP. No jurisdiction has a certified floodplain manager. Flash flooding vulnerability exist throughout the county and 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.
- Many areas in the county have limited cellphone service, many individuals depend on their phones to alert them to severe weather. The limited coverage makes these individuals more vulnerable to severe thunderstorms, flash flooding events, and tornadoes.

Washington County

- With respect to vulnerable populations Chatom and Millry have over 20% of the population being over the age of 65. 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. Both Chatom and Millry have approximately 20% of their population living below the poverty line.
- Approximately 15% of the housing stock in Chatom is mobile homes. These homes makes individuals more vulnerable to the effects of all hazards.
- In Conecuh 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 Washington County Jail and Washington County Nursing Home.
- A number of factors influence jurisdiction's vulnerability to flooding and flash flooding. There are floodplain areas located throughout the county (refer to Figure 3.6). Washington County, Chatom, and Millry participate in the NFIP. No jurisdiction has a certified floodplain manager. Flash flooding vulnerability exist throughout the county and 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.
- Many areas in the county have limited cellphone service, many individuals depend on their phones to alert them to severe weather. The limited coverage makes these individuals more vulnerable to severe thunderstorms, flash flooding events, and tornadoes.

Vulnerability and Changes in Development

Overall, the population in the planning area 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 majority of development in the planning area is occurring in Clarke and Conecuh Counties. The City of Thomasville has seen a substantial amount of development in the last five years. Currently, the Westervelt Company is constructing a large sawmill just south of Thomasville that will employ 125. The Thomasville Regional Medical Center opened in February of 2020. The state of the art facility provides the city with its first hospital since 2009. In Conecuh County, there is substantial development occurring along the I-65 corridor at the Evergreen exits.

The increased development in Clarke and Conecuh 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.

3.4 Probability of Future Occurrences and Damage Estimates

Table 3.30 estimates the hazard event frequency of occurrences cumulatively for the planning area. These estimates were calculated from events recorded at different time periods, based on source data, which is described below. There is no guarantee the recorded level of hazard events will continue into the future at the same rate; however, the figures below provide a possible estimate of potential damages.

The period for each recorded hazard is listed below (when known and/or applicable) in Table 3.30:

Dam Failure: 1990 through March 2020
Drought/Extreme Heat: 1990 through March 2020
Flooding: 1990 through March 2020
High Winds: 1990 through March 2020
Landslides: Unknown
Land Subsidence/Sinkholes: Unknown
Wildfire: 2010-2019
Winter Storms: 1990 through March 2020

3.30 Natural Hazard Probability and Damage Estimates

Hazard	Occurrences	Time (Years)	Damages Recorded	Probability (Annual)	Estimated Future Damage (Annual)
Dam Failure	N/A	30	N/A	N/A	N/A
Drought/Extreme Heat	44	30	N/A	100%	N/A
Flooding	178	30	$460,000	100%	$15,333.00
High Winds	570	30	$25,370,000	100%	$845,667.00
Landslides	N/A	N/A	N/A	N/A	N/A
Land Subsidence/Sinkholes	N/A	N/A	N/A	N/A	N/A
Wildfire	1,549	9	N/A	100%	N/A
Winter Storms	26	30	$30,000	85%	$1,000.00

Sources: National Climatic Data Center (NCDC), Alabama Forestry Commission

Dam Failure: The risk of losses from dam failure cannot be calculated based on historic records due to lack of data. Even though dam failure is a rare occurrence and is mostly unprecedented in the planning area, an occurrence could cause critical damages downstream.

Drought/Extreme Heat: The risk of losses from drought and extreme heat cannot be calculated 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. The probability of drought and extreme heat occurring within the region is relatively high. The probability of an impactful drought or an extreme heat event occurring in the planning area is classified as medium (10-50 years).

Flooding: 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. There have been 178 occurrences of flooding in the past 30 years, with an estimated cost in damages of $460,000 dollars in damages. Flooding is the second highest damaging hazard in the division.

High Winds (Hurricanes, Tornadoes, and Severe Thunderstorms): Since 1950, AEMA Division A has experienced tornadoes almost every year. The planning area has had 570 occurrences of high wind events over the past 30 years. These occurrences have caused over $25 million in damages, making it the highest damaging hazard in the planning area.

Landslides: The 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 Clarke, Conecuh, and Monroe Counties there are no damage estimates attached to those events. Any landslide occurrence in the planning area would most likely be minor in impact due to the localized nature of these events.

Land Subsidence/Sinkholes: 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.

Wildfires: Though wildfires are the most likely hazard to occur in the planning area, the impact of wildfires have been very minor and localized in mostly undeveloped areas. Though historically, wildfires have only affected timber resources in the planning area, future development in wildland urban interface areas should be mindful of this potential hazard.

Winter Storms: There have been 26 winter storms over the past 30 years which has resulted in $30,000.00 in damages. These events normally have a short duration and have minor impacts, though the planning area is not especially prepared for a long duration event, if it would occur.

3.5 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 were 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 4.25 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 4.25 Critical Facilities Summary

Facilities	Clarke	Conecuh	Monroe	Washington
Continuity of Government	11	6	7	6
Hospital/Health Department	4	2	2	2
Public Safety	7	4	6	7
Schools	15	6	9	8

Source: Division A Steering Committee Members

3.6 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 3.32 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 67 dams listed in the National Inventory of Dams (NID) database for Division A. Of these dams, one is classified as a high hazard dam. 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 the planning region. 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 3.33 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 the planning area 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 the planning area, 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 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 3.34 Risk Impact Assessment for Flooding

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

Figures 3.7-3.26 provide floodplain areas for each jurisdiction in the planning area. 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 the planning area. 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 ATRC's GIS system. Therefore, analysis from the HAZUS-MH flood model will be incorporated in the next plan update. Information pertaining to historical insured flood losses and repetitive flooded properties are included to provide more detailed information of areal losses based from flooding.

Historical Insured Flood Losses

According to FEMA flood insurance policy records as of July 2019, there have been 11 flood losses reported through the NFIP since 1970 in the planning area, totaling $330,264.74 in claims payments. A summary of these figures is provided in Table 3.35. It should be noted that these loss numbers only include structures that were insured through NFIP and that were reported. It is likely that there are many other flood losses not reported, in uninsured structures, or denied payment.

Table 3.35 Historical Summary of Insured Flood Losses

Jurisdiction	Flood Losses	Claims Payments
Clarke County	-	-
Town of Coffeeville	-	-
Town of Fulton	6	$291,831.10
Town of Grove Hill	2	$6,646.15
City of Jackson	-	-
City of Thomasville	-	-
Conecuh County	-	-
Town of Castleberry	-	-
City of Evergreen	1	$0
Town of Repton	-	-
Monroe County	-	-
Town of Beatrice	-	-
Town of Excel	-	-
Town of Frisco City	-	-
City of Monroeville	-	-
Town of Vredenburgh	-	-

Washington County	-	-
Town of Chatom	-	-
Town of McIntosh	2	$31,787.49
Town of Millry	-	-

Community that is not participating in the National Flood Insurance Program.
Source: Federal Emergency Management Agency, National Flood Insurance Program

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). The following is a discussion of repetitive loss properties by county:

- Clarke: One repetitive loss property is listed for the Town of Fulton in Clarke County. It is a single family dwelling. The claims paid on the property total $6,646.
- Conecuh: No repetitive loss properties.
- Monroe: One repetitive loss property is listed for Monroe County. It is a single family dwelling. The claims paid on the property total $3,124.
- Washington: One repetitive loss property is listed for Washington County. It is a nonresidential property. The claims paid on the property total $8,891.

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 3.36 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 the planning area are vulnerable to this hazard and its impacts. The planning area is an inland location and will not receive the brunt of these storms, but the intensity of tropical systems affecting the Gulf Coast can remain high as these storms travel inland into the region.

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 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 damage. Another concern is the large amount of debris that results. Normally there are a few days of warnings before a tropical system impacts the planning area allowing for preparations.

The landscape of the counties within the planning area 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 3.37 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 the planning area 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 3.38 provides a county-by-county description of impact based on historical data.

Table 3.38 Potential Impact of Tornadic Events by County*
Division A

Clarke County	Devastating Damage: Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown, and large missiles generated.
Conecuh County	Considerable Damage: Roofs torn off frame houses; mobile homes demolished; boxcars overturned; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.
Monroe County	Devastating Damage: Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown, and large missiles generated.
Washington County	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.

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 3.39 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 the planning area. Clarke County has an 87 mph wind gust on record. Conecuh has a 78 mph gust on record. Monroe and Washington have 70 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 3.40 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 Figures 3.27-3.37 which provide areas with higher susceptibility. 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 3.41 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 Figures 3.39-3.56 which provide areas with karst topography and topographic depressions which leads to higher susceptibility. 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 3.42 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 the planning area, wildfires are a threat to all four counties. Potential risk by jurisdiction can be seen from examining Figures 3.57 and 3.64. 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.

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.

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 3.43 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 4- 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 A to practice becoming less vulnerable to the identified hazards in the Risk Assessment.

Section Contents

4.1 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.

4.2 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 A 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).

4.3 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 4.4 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 A-ATRC Planning Area is composed of thirteen 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 4.3 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 participate in the National Flood Insurance Program (NFIP) and maintain compliance with the applicable regulations (Table 4.3). 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 commission (ATRC) 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 2.2 of this plan.

Table 4.1 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 4.1 Statutory Authority and Resources

Division A Hazard Mitigation Action Plan: Capabilities Assessment	Authorized for…	Practiced by…	Proposed for…	Incorporated through…
Police power: Ability to regulate activities of individuals in the jurisdiction for purposes of health, safety, and public welfare	Municipalities, Counties	Clarke County: Clarke County Sheriff's Department, Town of Coffeeville, Town of Fulton, Town of Grove Hill, City of Jackson, City of Thomasville Conecuh County: Conecuh County Sheriff's Department, City of Evergreen, Town of Repton Monroe County: Monroe County Sheriff's Office, Town of Excel, Town of Frisco City, City of Monroeville Washington County: Washington County Sheriff's Office, Town of Chatom, Town of McIntosh, Town of Millry	All municipal jurisdictions	Council or Commission action to enact and enforce regulations
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

Table 4.1 Statutory Authority and Resources (continued)				
Division A Hazard Mitigation Action Plan: Capabilities Assessment	**Authorized for…**	**Practiced by…**	**Proposed for…**	**Incorporated through…**
Building code enforcement: Ability to enforce codes related to building materials and construction standards outside of flood hazard areas	Municipalities, Counties	Clarke County: Town of Grove Hill, City of Jackson, City of Thomasville Conecuh County: City of Evergreen Monroe County: City of Monroeville Washington County:		Council action to enact and enforce regulations
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
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 4.1 Statutory Authority and Resources (continued)				
Division A Hazard Mitigation Action Plan: Capabilities Assessment	**Authorized for…**	**Practiced by…**	**Proposed for…**	**Incorporated through…**
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
Zoning authority: Ability to divide political jurisdiction into districts for purposes of regulating buildings and their use (inside and outside of flood hazard areas)	Municipalities	Clarke County: Town of Grove Hill, City of Jackson, City of Thomasville Conecuh County: City of Evergreen Monroe County: City of Monroeville Washington County:		Council action to enact and enforce regulations
Subdivision regulations: A ability to control new developments involving new lot lines and infrastructure (inside and outside of flood hazard areas)	Municipalities, Counties	Clarke County: Town of Grove Hill, City of Jackson, City of Thomasville Conecuh County: City of Evergreen Monroe County: City of Monroeville Washington County:		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	Conecuh County: City of Evergreen		Council action to enact and enforce regulations

Table 4.2 below provides a summary of local plans, ordinances, and programs currently in place, or being developed within jurisdictions in Division A. 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 4.2 Relevant Plans, Ordinances, and Programs

Jurisdiction	Zoning Ordinance	Code Enforcement	Recent Master Plan	Certified Flood Manager	NFIP Participation
Clarke County					X
Town of Coffeeville					X
Town of Fulton					X
Town of Grove Hill	X	X	X		X
City of Jackson	X	X	X		X
City of Thomasville	X	X	X		X
Conecuh County					X
Town of Castleberry					X
City of Evergreen	X	X	X		X
Town of Repton					X
Monroe County					X
Town of Beatrice					
Town of Excel					
Town of Frisco City					
City of Monroeville	X	X			X
Town of Vredenburgh					
Washington County					X
Town of Chatom					X
Town of McIntosh					X
Town of Millry					X

Table 4.3 below summarizes NFIP participation and policy statistics for each jurisdiction in the planning area as of July1, 2020. More site-specific information on at-risk structures and repetitive loss properties is provided in Section 3.6 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 4.3 National Flood Insurance (NFIP) Status

Jurisdiction	Participation Status	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date
Clarke County	Participating	6/09/1978	10/16/2008	7/17/2012
Town of Coffeeville	Participating	-	10/16/2008	7/17/2012
Town of Fulton	Participating	7/18/1975	10/16/2008	7/17/2012
Town of Grove Hill	Participating	4/25/1975	9/4/1985	NSFHA
City of Jackson	Participating	6/27/1975	12/17/87	7/17/2012
City of Thomasville	Participating	8/1/1975	9/18/1985	7/17/2012
Conecuh County	Participating	7/7/1978	11/4/2009	11/4/2009
Town of Castleberry	Participating	4/4/1975	8/1/1987	11/4/2009
City of Evergreen	Participating	8/8/1975	9/4/1985	11/4/2009
Town of Repton	Participating	-	11/4/2009	NSFA
Monroe County	Participating	8/18/1978	6/4/1990	2/4/2009
Town of Beatrice	Sanctioned	-	2/4/2009	2/4/2009
Town of Excel				
Town of Frisco City				
City of Monroeville	Participating	-	2/4/2009	NSFA
Town of Vredenburgh				
Washington County	Participating	12/20/1974	8/1/1987	10/16/2012
Town of Chatom	Participating	10/20/1978	9/29/2006	10/16/2012
Town of McIntosh	Sanctioned	8/1/1987	10/16/2012	8/1/1988
Town of Millry	Participating	11/12/1976	9/29/2006	10/16/2012

Source: NFIP Community Status Book (07/01/2020)

4.5 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.

Jurisdiction Name	
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

Priority/Status	Participants prioritized the available mitigation measures and projects considering the following criteria: •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. •Social considerations including but not limited to environmental justice, neighborhood impact, community support, and impact on social and cultural resources. •Environmental considerations including but not limited to compliance with the National Environmental Policy Act (NEPA), state and local environmental regulations, and environmental conservation goals. •Administrative, legal, and political considerations including but not limited to staffing, maintenance, timing, legal authority, and political support. •Technical considerations including but not limited to technical feasibility. 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 Overall, the participating jurisdictions priorities have not changed since the previous planning cycle. There was an emphasis placed on identifying low cost, effective projects.

Benefit/Cost Score	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. **Low**: 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. **Moderate**: 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. **High**: 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.

4.5.1 ATRC 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	HMGP/Local Funds	High	High
1	ATCR will work to incorporate the counties of Monroe and Washington and their jurisdictions not part of this plan as their plans expire	All	ATRC	HMGP/Local Funds	High	High
1	ATRC will facilitate multi- jurisdiction collaboration by attending AEMA Division A meetings on at least an annual basis	All	ATRC	Local Funds	High	High
1	ATRC will incorporate HAZUS-MH and Risk MAP information in Risk Assessment for future plan updates	Flooding / High Winds	ATRC	HMGP/Local Funds	High	High

4.5.2 Clarke County Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	Clarke County Commission	Local Funds	High/Ongoing	High
2	Continue to clear debris from roads and drainage ways	All	Clarke County Road and Bridge Department	Local Funds	High/Ongoing	High
2,5	Continue to perform maintenance on roads, drainage culverts, creeks, and streams to mitigate the threat of floods	Flooding	Clarke County Road and Bridge Department	Local Funds	High/Ongoing	High
2	Continue to improve and maintain the county road system	All	Clarke County Road and Bridge Department	Local Funds	High/Ongoing	High
6	Provide the public information on actions to take during severe weather through newspaper, publications, social media, and radio announcements	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
4	Promotion of safe rooms/individual shelters in existing residences	Tornado, Severe Storms	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
6	Provide information to municipalities regarding natural hazards and general principles outlining procedures	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Contact utilities in the event of natural hazard so they can inspect their infrastructure for damage	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
2,3,4.5	Encourage jurisdictions to commit matches for grants dealing with mitigation	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
6	Educate local governments and groups on mitigation activities and grant funding	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
6	Provide information to the public through social media	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
6	Provide storm event data to the National Weather Service for events in Clarke County	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
5	Advocate for weather radar located closer to county	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
5	Replace generators at Clarke County EOC	All	Clarke County Commission	HMGP/Local Funds	Medium	Moderate
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	Clarke County Commission	HMGP/Local Funds	High	Moderate
5	Purchase generators for water and sewer systems	All	Clarke County EMA/Water and Sewer Systems	HMGP/Local Funds	Medium	Moderate
5	Purchase at least 2 emergency gas storage tanks	All	Clarke County Commission	Local Funds	Medium	Moderate

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Place fixed site generators at communications towers	All	Clarke County Commission	Local Funds	Medium	Moderate
1	Apply for funding to update mitigation plan as needed	All	Clarke County Commission	PDM/HMGP/Local Funds	High	High
5	Purchase generators for critical facilities and fire stations	All	Clarke County Commission	HMGP/Local Funds	Medium	Moderate
6	Continue to explore ways to use social media to provide information	All	Clarke County EMA Director and Staff	Local Funds	High	High
6	Continue to inform residents of flood hazards and NFIP requirements	Flooding	Clarke County EMA and Staff, Road and Bridge	Local Funds	High	High
4	Drainage projects in areas identified as being prone to flooding	Flooding	Clarke County Commission/ Road and Bridge Department	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects throughout county	Flooding	Clarke County Commission/ Road and Bridge Department	PDM/HMGP/CDBG Local Funds	Medium	Moderate
2	Retrofitting critical facilities	Wind events	Clarke County Commission	PDM/HMGP/CDBG Local Funds	Low	Low
5	Purchase of Tornado Sirens	Tornadoes	Clarke County Commission	HMGP/Local Funds	Low	Low
5	Purchase of NOAA weather radios for community residents	All	Clarke County Commission	HMGP/Local Funds	Medium	Low

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Research procedures for keeping historical storm data with location, magnitude, and loss values for each event	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
1	Begin maintaining an inventory of critical facilities with value and contact information	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High
5	Continue to offer shelter to individuals and families affected by natural hazards.	All	Clarke County EMA Director and Staff	Local Funds	High/Ongoing	High

4.5.2a Town of Coffeeville Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	Town of Coffeeville Town Council/Mayor	Local Funds	High/Ongoing	High
1	Continue to enforce flood ordinance	Flooding	Town of Coffeeville Town Council/Mayor	Local Funds	High/Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training	All	Town of Coffeeville Town Council, VFD	Local Funds	High/Ongoing	High
5	Continue to apply for grants to fund training and equipment for the Coffeeville Fire Department	All	Town of Coffeeville Town Council, VFD	Local Funds/Assistance to Firefighters/USDA	High/Ongoing	High
5	Purchase generators for Town Hall (Including PD and VFD)	All	Town of Coffeeville Town Council, VFD	HMGP/Local Funds	Medium	Moderate
3	Repair erosion damage	All	Town of Coffeeville Town Council/Mayor	Local Funds/PDM/HMGP/ NRCS	Low	Low
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	Town of Coffeeville Town Council/Mayor	Local Funds	High/Ongoing	High
6	Provide information to the public through social media	All	Town of Coffeeville Town Council/Mayor	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2,3,4,5	Maintain streets, culverts, and drainage infrastructure in town	Flooding	Town of Coffeeville Maintenance Employees	PDM/HMGP/CDBG Local Funds	High/Ongoing	High
5	Purchase generators for sewer system	All	Town of Coffeeville Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	Town of Coffeeville Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Drainage projects in areas identified as being prone to flooding	Flooding	Town of Coffeeville Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects	Flooding	Town of Coffeeville Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Retrofitting critical facilities	Wind events	Town of Coffeeville Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Low	Low
5	Purchase of Tornado Sirens	Tornadoes	Town of Coffeeville Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
6	Post extreme heat warnings with risks outlined in public areas	Extreme Heat	Town of Coffeeville Town Council/Mayor	Local Funds	High/Ongoing	High
6	Post drought notices in area businesses and Town Hall	Drought	Town of Coffeeville Town Council/Mayor	Local Funds	High/Ongoing	High
5	Purchase of NOAA weather radios for community residents	All	Town of Coffeeville Town Council/Mayor	HMGP/Local Funds	High/Ongoing	High

4.5.2b Town of Fulton Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	Town Council/Mayor	Local Funds	High/Ongoing	High
1	Continue to enforce flood ordinance	Flooding	Town Council	Local Funds	High/Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training	All	Town Council, VFD	Local Funds	High/Ongoing	High
5	Continue to apply for grants to fund training and equipment for the Fulton Fire Department	All	Town Council, VFD	Local Funds/Assistance to Firefighters/USDA	High/Ongoing	High
5	Purchase generators for Town Hall (Including PD and VFD)	All	Town Council, VFD	HMGP/Local Funds	Medium	Moderate
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	Town Council& Mayor	Local Funds	High/Ongoing	High
6	Provide information to the public through social media	All	Town Council& Mayor	Local Funds	High/Ongoing	High
2,3,4,5	Maintain streets, culverts, and drainage infrastructure in town	Flooding	Town Council	PDM/HMGP/ CDBG Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Purchase generators for sewer system	All	Town Council& Mayor	HMGP/Local Funds	Medium	Moderate
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	Town Council& Mayor	HMGP/Local Funds	Medium	Moderate
4	Drainage projects in areas identified as being prone to flooding	Flooding	Town Council& Mayor	PDM/HMGP/ CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects	Flooding	Town Council& Mayor	PDM/HMGP/ CDBG Local Funds	Medium	Moderate
4	Retrofitting critical facilities	Wind events	Town Council& Mayor	PDM/HMGP/ CDBG Local Funds	Low	Low
5	Purchase of Tornado Sirens	Tornadoes	Town Council& Mayor	HMGP/Local Funds	Medium	Moderate
6	Post extreme heat warnings with risks outlined in public areas	Extreme Heat	Town Clerk	Local Funds	High/Ongoing	High
6	Post drought notices in area businesses and Town Hall	Drought	Town Clerk	Local Funds	High/Ongoing	High
5	Purchase of NOAA weather radios for community residents	All	Town Council& Mayor	HMGP/Local Funds	High/Ongoing	High

Projects pursued: During this planning period, the Town of Fulton constructed a new fire station.

4.5.2c Town of Grove Hill Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	Town of Grove Hill Town Council/Mayor	Local Funds	High/Ongoing	High
1	Continue to enforce flood ordinance	Flooding	Town of Grove Hill Town Council/Mayor	Local Funds	High/Ongoing	High
1	Continue enforcing Town of Grove Hill Zoning Ordinance, Subdivision Regulations, & Building Codes	All	Town Building Inspector	Local Funds	High/Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training	All	Town of Grove Hill Town Council, VFD	Local Funds	High/Ongoing	High
5	Continue to apply for grants to fund training and equipment for the Grove Hill Fire Department	All	Town of Grove Hill, VFD	Local Funds/Assistance to Firefighters/USDA	High/Ongoing	High
5	Purchase generators for Town Hall (Including PD and VFD)	All	Town of Grove Hill Town Council, VFD	HMGP/Local Funds	Medium	Moderate
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	Town of Grove Hill Town Council/Mayor	Local Funds	High/Ongoing	High
4	Construct safe room in Grove Hill Senior Center	Tornado, Severe Storms	Town of Grove Hill Town Council/Mayor	HMGP/Local Funds	Medium	Moderate

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Provide information to the public through social media	All	Town of Grove Hill Town Council/Mayor	Local Funds	High/Ongoing	High
2,3,4,5	Maintain streets, culverts, and drainage infrastructure in town	Flooding	Town of Grove Hill Street Department	PDM/HMGP/CDBG Local Funds	High/Ongoing	High
5	Purchase generators for sewer system	All	Town of Grove Hill Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	Town of Grove Hill Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Drainage projects in areas identified as being prone to flooding	Flooding	Town of Grove Hill Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects	Flooding	Town of Grove Hill Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Retrofitting critical facilities	Wind events	Town of Grove Hill Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Low	Low
5	Purchase of Tornado Sirens	Tornadoes	Town of Grove Hill Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
5	Purchase of NOAA weather radios for residents	All	Town of Grove Hill Town Council/Mayor	PDM/HMGP/Local Funds	Low	Moderate
1	Prepare an Emergency Response Plan	All	Town of Grove Hill Town Council/Mayor	Local Funds	Low	Low

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Provide information regarding the emergency response system to the public in the form of a brochure or handout	All	Town of Grove Hill Town Council/Mayor	Local Funds	Low	Low

Projects pursued: During this planning period, the Town of Grove Hill updated their Comprehensive Plan.

4.5.2d City of Jackson Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	City of Jackson City Council/Mayor	Local Funds	High/Ongoing	High
1	Continue to enforce flood ordinance	Flooding	City of Jackson City Council/Mayor	Local Funds	High/Ongoing	High
1	Continue enforcing City of Jackson Zoning Ordinance, Subdivision Regulations, & Building Codes	All	City Building Inspector	Local Funds	High/Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training	All	City of Jackson City Council, VFD	Local Funds	High/Ongoing	High
5	Continue to research funding opportunities and apply for grants to fund training and equipment for the Jackson Fire Department and Police Department	All	City of Jackson City Council, VFD	Local Funds/Assistance to Firefighters/USDA	High/Ongoing	High
1	Continue to sponsor a community fire prevention program.	Wildfire	City of Jackson City Council, VFD	Local Funds	High/Ongoing	High
5	Purchase generators for City Hall (Including PD and VFD)	All	City of Jackson City Council, VFD	HMGP/Local Funds	Medium	Moderate
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	City of Jackson City Council/Mayor	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Construct safe room in Jackson Senior Center	Tornado, Severe Storms	City of Jackson City Council/Mayor	HMGP/Local Funds	Medium	Moderate
6	Provide information to the public through social media	All	City of Jackson City Council/Mayor	Local Funds	High/Ongoing	High
2,3,4,5	Maintain streets, culverts, and drainage infrastructure in City	Flooding	City of Jackson Street Department	PDM/HMGP/CDBG Local Funds	High/Ongoing	High
5	Purchase generators for water and sewer system	All	City of Jackson City Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	City of Jackson City Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Drainage projects in areas identified as being prone to flooding	Flooding	City of Jackson City Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects	Flooding	City of Jackson City Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Retrofitting critical facilities	Wind events	City of Jackson City Council/Mayor	PDM/HMGP/CDBG Local Funds	Low	Low
5	Purchase of Tornado Sirens	Tornadoes	City of Jackson City Council/Mayor	HMGP/Local Funds	Medium	Moderate
5	Purchase of NOAA weather radios for residents	All	City of Jackson City Council/Mayor	PDM/HMGP/Local Funds	Low	Moderate

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Post extreme heat warnings with risks outlined in public areas	Extreme Heat	City of Jackson City Council/Mayor	Local Funds	High/Ongoing	High
4	Construct a Community Shelter at the Municipal Complex	All	City of Jackson City Council/Mayor	HMGP/PDM/Local Funds	Medium	Moderate
2	Raw water intake structure: replace and stabilize riverbank, raise access roads	Flooding	City of Jackson Water Works	State Revolving Loan Fund/HMGP/PDM/Local Funds	High	High
3	Identify areas of soil erosion and techniques that can be used to correct the problem.	Flooding	City of Jackson City Council/Mayor	HMGP/PDM/Local Funds	Medium	Moderate

Projects pursued: During this planning period, the City of Jackson updated their Zoning Ordinance, completed a drainage project in the Miller/McGowin Area, and was awarded funding to undertake a drainage project in the Walnut Street Area.

4.5.2e City of Thomasville Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	City of Thomasville City Council/Mayor	Local Funds	High/Ongoing	High
1	Continue to enforce flood ordinance	Flooding	City of Thomasville City Council/Mayor	Local Funds	High/Ongoing	High
1	Continue enforcing City of Thomasville Zoning Ordinance, Subdivision Regulations, & Building Codes	All	City Building Inspector	Local Funds	High/Ongoing	High
1	Continue to send building inspector to building code related workshops and training	All	City of Thomasville City Council/Mayor	Local Funds	High/Ongoing	High
3	Continue to maintain permanent open space as parks	All	City of Thomasville Public Works	Local Funds	High/Ongoing	High
2	Continue drainage maintenance and cleaning program	All	City of Thomasville Public Works	Local Funds	High/Ongoing	High
1	Continue utility right of way permitting, considering emergency vehicle access	All	City of Thomasville Public Works	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2	Continue the road repair/construction program considering evacuation and natural hazard response (includes repaving of city streets)	All	City of Thomasville Public Works	Local Funds	High/Ongoing	High
4	Downtown revitalization including streets, drainage, and restoring older buildings	All	City of Thomasville Public Works	Local Funds, Private Investment	High/Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training including hazardous materials training	All	City of Thomasville City Council, VFD	Local Funds	High/Ongoing	High
5	Continue to research funding opportunities and apply for grants to fund training and equipment for the Thomasville Fire Department and Police Department	All	City of Thomasville City Council, VFD	Local Funds/Assistance to Firefighters/USDA	High/Ongoing	High
1	Continue to sponsor a community fire prevention program.	Wildfire	City of Thomasville City Council, VFD	Local Funds	High/Ongoing	High
5	Purchase generators for City Hall (Including PD and Fire Stations)	All	City of Thomasville City Council, VFD	HMGP/Local Funds	Medium	Moderate
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	City of Thomasville City Council/Mayor	Local Funds	High/Ongoing	High
4	Promote the use of voluntary standards for single family residences to exceed minimal building code requirements for wind design	Tornado, Severe Storms	City of Thomasville City Council/Mayor	Local Funds	High/Ongoing	High
6	Provide information to the public through social media	All	City of Thomasville City Council/Mayor	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2,3,4,5	Maintain streets, culverts, and drainage infrastructure in City	Flooding	City of Thomasville Street Department	PDM/HMGP/CDBG Local Funds	High/Ongoing	High
5	Purchase generators for critical facilities	All	City of Thomasville City Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	City of Thomasville City Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Drainage projects in areas identified as being prone to flooding	Flooding	City of Thomasville City Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects	Flooding	City of Thomasville City Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Retrofitting critical facilities	Wind events	City of Thomasville City Council/Mayor	PDM/HMGP/CDBG Local Funds	Low	Low
5	Purchase of Tornado Sirens	Tornadoes	City of Thomasville City Council/Mayor	HMGP/Local Funds	Medium	Moderate
5	Purchase of NOAA weather radios for residents	All	City of Thomasville City Council/Mayor	PDM/HMGP/Local Funds	Low	Moderate

Projects pursued: During this planning period, the City of Thomasville completed sidewalks and drainage along Old Highway 5 in Thomasville an Martin Luther King, Jr. Street. This action was listed on page 140 of the previous mitigation plan.

4.5.2f Clarke 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	All	Clarke County School System Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
5	Purchase Generators for critical facilities	All	Clarke County School System Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
4	Retrofitting of schools and critical facilities	Wind Events	Clarke County School System Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
4	Correct storm water management/drainage issues on school grounds	Flood	Clarke County School System Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
6	Train and exercise regarding all hazards	All	Clarke County School System Board/Superintendent	HMGP/PDM/Local Funds	Ongoing/ High	High

The Clarke County School System installed surveillance systems on their campuses during this planning period. The School System is also constructing a storm shelter at its new workforce development facility.

4.5.2g Thomasville City School System Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Provide storm shelters at schools	All	Thomasville City School Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
5	Purchase Generators for critical facilities	All	Thomasville City School Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
4	Retrofitting of schools and critical facilities	Wind Events	Thomasville City School Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
4	Correct storm water management/drainage issues on school grounds	Flood	Thomasville City School Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
6	Train and exercise regarding all hazards	All	Thomasville City School Board/Superintendent	HMGP/PDM/Local Funds	Ongoing/ High	High

The Thomasville City School System installed surveillance systems on their campuses during this planning period.

4.5.3 Conecuh County Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program and enforce flood ordinance	Flooding	Conecuh County Commission	Local Funds	High/Ongoing	High
2	Continue to clear debris from roads and drainage ways	All	Conecuh County Road and Bridge Department	Local Funds	High/Ongoing	High
2,5	Continue to perform maintenance on roads, drainage culverts, creeks, and streams to mitigate the threat of floods	Flooding	Conecuh County Road and Bridge Department	Local Funds	High/Ongoing	High
2	Continue to improve and maintain the county road system	All	Conecuh County Road and Bridge Department	Local Funds	High/Ongoing	High
6	Provide the public information on actions to take during severe weather through newspaper, publications, social media, and radio announcements	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
4	Promotion of safe rooms/individual shelters in existing residences	Tornado, Severe Storms	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
6	Provide information to municipalities regarding natural hazards and general principles outlining procedures	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Contact utilities in the event of natural hazard so they can inspect their infrastructure for damage	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
2,3,4.5	Encourage jurisdictions to commit matches for grants dealing with mitigation	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
6	Educate local governments and groups on mitigation activities and grant funding	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
6	Provide information to the public through social media	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
6	Provide storm event data to the National Weather Service for events in Conecuh County	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	Conecuh County Commission	HMGP/Local Funds	High	Moderate
5	Purchase generators for water and sewer systems	All	Conecuh County EMA/Water and Sewer Systems	HMGP/Local Funds	Medium	Moderate
1	Apply for funding to update mitigation plan as needed	All	Conecuh County Commission	PDM/HMGP/Local Funds	High	High
5	Purchase generators for critical facilities and fire stations	All	Conecuh County Commission	HMGP/Local Funds	Medium	Moderate
6	Continue to explore ways to use social media to provide information	All	Conecuh County EMA Director and Staff	Local Funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Continue to inform residents of flood hazards and NFIP requirements	Flooding	Conecuh County EMA and Staff, Road and Bridge	Local Funds	High	High
4	Drainage projects in areas identified as being prone to flooding	Flooding	Conecuh County Commission/ Road and Bridge Department	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects throughout county	Flooding	Conecuh County Commission/ Road and Bridge Department	PDM/HMGP/CDBG Local Funds	Medium	Moderate
2	Retrofitting critical facilities	Wind events	Conecuh County Commission	PDM/HMGP/CDBG Local Funds	Low	Low
5	Purchase of Tornado Sirens	Tornadoes	Conecuh County Commission	HMGP/Local Funds	Low	Low
5	Purchase of NOAA weather radios for community residents	All	Conecuh County Commission	HMGP/Local Funds	Medium	Low
6	Research procedures for keeping historical storm data with location, magnitude, and loss values for each event	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
1	Begin maintaining an inventory of critical facilities with value and contact information	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High
5	Continue to offer shelter to individuals and families affected by natural hazards.	All	Conecuh County EMA Director and Staff	Local Funds	High/Ongoing	High

4.5.3a Town of Castleberry Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	Town of Castleberry Town Council/Mayor	Local Funds	High/Ongoing	High
1	Continue to enforce flood ordinance	Flooding	Town of Castleberry Town Council/Mayor	Local Funds	High/Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training	All	Town of Castleberry Town Council, VFD	Local Funds	High/Ongoing	High
5	Continue to apply for grants to fund training and equipment for the Castleberry Fire Department	All	Town of Castleberry Town Council, VFD	Local Funds/Assistance to Firefighters/USDA	High/Ongoing	High
5	Purchase generators for Town Hall (Including PD and VFD)	All	Town of Castleberry Town Council, VFD	HMGP/Local Funds	Medium	Moderate
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	Town of Castleberry Town Council/Mayor	Local Funds	High/Ongoing	High
6	Provide information to the public through social media	All	Town of Castleberry Town Council/Mayor	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2,3,4,5	Maintain streets, culverts, and drainage infrastructure in town	Flooding	Town of Castleberry Maintenance Employees	PDM/HMGP/CDBG Local Funds	High/Ongoing	High
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	Town of Castleberry Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Drainage projects in areas identified as being prone to flooding	Flooding	Town of Castleberry Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects	Flooding	Town of Castleberry Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Retrofitting critical facilities	Wind events	Town of Castleberry Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Low	Low
6	Provide information regarding the Emergency Response System to the public in the form of a handout or brochure	All	Town of Castleberry Town Council/Mayor	Local Funds	Low	High

The Town of Castleberry has purchased generators for its water system, this project was listed in the last Conecuh County Hazard Mitigation Plan on page 123. The Town has also eliminated three actions concerning enforcement of zoning ordinances, building codes, and subdivision regulations, these were eliminated due to the town does not have these items in place at this time. These actions were on page 121 of the previous plan.

4.5.3b City of Evergreen Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	Town of Evergreen City Council/Mayor	Local Funds	High/Ongoing	High
1	Continue to enforce flood ordinance	Flooding	City of Evergreen City Council/Mayor	Local Funds	High/Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training	All	City of Evergreen City Council, VFD	Local Funds	High/Ongoing	High
5	Continue to apply for grants to fund training and equipment for the Evergreen Fire Department	All	City of Evergreen City Council, VFD	Local Funds/Assistance to Firefighters/USDA	High/Ongoing	High
5	Purchase generators for 2 water system pumps	All	City of Evergreen, Evergreen Water Works Board	HMGP/PDM/Local Funds	Medium	Moderate
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	City of Evergreen City Council/Mayor	Local Funds	High/Ongoing	High
6	Provide information to the public through social media	All	City of Evergreen City Council/Mayor	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2,3,4,5	Maintain streets, culverts, and drainage infrastructure in City	Flooding	City of Evergreen Maintenance Employees	PDM/HMGP/CDBG Local Funds	High/Ongoing	High
4	Drainage projects in areas identified as being prone to flooding	Flooding	City of Evergreen City Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects	Flooding	City of Evergreen City Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Retrofitting critical facilities	Wind events	City of Evergreen City Council/Mayor	PDM/HMGP/CDBG Local Funds	Low	Low
6	Post extreme heat warnings with risks outlined in public areas	Extreme Heat	City of Evergreen City Council/Mayor	Local Funds	High/Ongoing	High
6	Post drought notices in area businesses and Town Hall	Drought	City of Evergreen City Council/Mayor	Local Funds	High/Ongoing	High
5	Portable Generators	All	City of Evergreen City Council/Mayor	PDM/HMGP/ Local Funds	Low	Low
5	Purchase generators for City Hall	All	City of Evergreen City Council/Mayor	PDM/HMGP/ Local Funds	High	High
5,6	Purchase of NOAA weather radios	All	City of Evergreen City Council/Mayor	PDM/HMGP/ Local Funds	Low	High
5	Purchase of tornado sirens	Tornadoes	City of Evergreen City Council/Mayor	PDM/HMGP/ Local Funds	Low	Medium

The City of Evergreen has constructed a community storm shelter during this planning period. They have also compiled a priority and secondary road clearing plan for storm events in addition to their disaster debris removal contracts.

4.5.3c Town of Repton Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Continue to participate in the National Flood Insurance Program	Flooding	Town of Repton Town Council/Mayor	Local Funds	High/Ongoing	High
1	Continue to enforce flood ordinance	Flooding	Town of Repton Town Council/Mayor	Local Funds	High/Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training	All	Town of Repton Town Council, VFD	Local Funds	High/Ongoing	High
5	Continue to apply for grants to fund training and equipment for the Repton Fire Department	All	Town of Repton Town Council, VFD	Local Funds/Assistance to Firefighters/USDA	High/Ongoing	High
5	Purchase generators for Town Hall, PD, VFD, and public utilties	All	Town of Repton Town Council, VFD	HMGP/Local Funds	Medium	Moderate
4	Promotion of safe rooms in new residences	Tornado, Severe Storms	Town of Repton Town Council/Mayor	Local Funds	High/Ongoing	High
6	Provide information to the public through social media	All	Town of Repton Town Council/Mayor	Local Funds	High/Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2,3,4,5	Maintain streets, culverts, and drainage infrastructure in town	Flooding	Town of Repton Maintenance Employees	PDM/HMGP/CDBG Local Funds	High/Ongoing	High
4	Community Storm Shelters/multi-purpose buildings and individual storm shelters	All	Town of Repton Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
4	Drainage projects in areas identified as being prone to flooding	Flooding	Town of Repton Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Storm Water Management Projects	Flooding	Town of Repton Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Medium	Moderate
4	Retrofitting critical facilities	Wind Events	Town of Repton Town Council/Mayor	PDM/HMGP/CDBG Local Funds	Low	Low
5	Purchase of Tornado Sirens	Tornadoes	Town of Repton Town Council/Mayor	HMGP/Local Funds	Medium	Moderate
6	Post extreme heat warnings with risks outlined in public areas	Extreme Heat	Town of Repton Town Council/Mayor	Local Funds	High/Ongoing	High
5	Purchase of NOAA weather radios for community residents	All	Town of Repton Town Council/Mayor	HMGP/Local Funds	High/Ongoing	High

The Town of Repton has been awarded CDBG funds to complete a drainage/street improvement project.

4.5.3d Conecuh 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	All	Conecuh County School Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
5	Purchase Generators for critical facilities	All	Conecuh County School Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
4	Retrofitting of schools and critical facilities	Wind Events	Conecuh County School Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
4	Correct storm water management/drainage issues on school grounds	Flood	Conecuh County School Board/Superintendent	HMGP/PDM/Local Funds	Medium	Moderate
6	Train and exercise regarding all hazards	All	Conecuh County School Board/Superintendent	HMGP/PDM/Local Funds	Ongoing/ High	High

4.5.4 Monroe County Commission Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	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, etc.	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Monroe County EMA	HMGP, Local Money	Low	Low
2	Continue to participate in the NFIP and enforce floodplain regulations	Flood	Monroe County Commission	Local funds	Ongoing	High
6	Maintain a library of technical assistance and guidance materials for local floodplain managers	Flood	Monroe County EMA	Local funds	High	High
1	Prepare and adopt a comprehensive plan	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Monroe County Commission	Local funds, CDBG	High	High
4	Promote the construction of Safe Rooms in new public buildings	High Winds	Monroe County EMA	Local funds	Ongoing	High
4	Construct free- standing public Safe Rooms in existing vulnerable locations	High Winds	Monroe County EMA	Local funds, HMGP, PDM, CDBG	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Apply for funding to update/revise mitigation plan when needed- continue participation in regional mitigation plans	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Monroe County Commission	Local funds, HMGP, PDM	High	High
4	Encourage retrofits of older homes constructed before the enactment of floodplain regulations	Flood	Monroe County EMA	Local funds	Ongoing	High
2	Maintain insurance riders on existing properties	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Monroe County Commission	Local funds	Ongoing	High
5	Purchase emergency generators for backup power for all critical facilities including Volunteer Fire Departments, Monroe County Courthouse, and all water and sewer facilities throughout Monroe County.	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Monroe County Commission, Volunteer Fire Departments, Utility Providers	Local funds, PDM, HMGO	Ongoing	High
4	Promote good construction practices and proper code enforcement to eliminate most structural problems during natural hazard events	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Monroe County Commission	Local funds	Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Encourage the construction of safe rooms within new and existing public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	High Winds	Monroe County EMA	Local Funds	Ongoing	High
4	Retrofit public schools with community Safe Rooms.	High Winds	Monroe County BOE	Local funds, PDM, HMGP	Medium	Moderate
1	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.	Flooding	Monroe County Commission	Local funds	Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Monroe County Commission	Local funds	Ongoing	High
1	Install and maintain water infrastructure and fire hydrants in rural areas	Wildfire	Local water systems/ Monroe County Commission	Local funds, CDBG, DRA	Medium	Moderate
6	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Monroe County Commission, Monroe County EMA, Monroe County Road & Bridge Department	Local funds	Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Conduct regular public meetings on hazards and mitigation measures	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Monroe County EMA	Local funds	Ongoing	High
2	Encourage land acquisition programs to acquire habitat throughout Monroe County	Flood	Monroe County Commission, Monroe County EMA	Local funds	Ongoing	High
3	Improve maintenance programs for streams and drainage ways	Flood	Monroe County Road & Bridge Department	Local funds	High	High
3	Implement drainage improvement in watersheds throughout Monroe County	Flood	Monroe County Road & Bridge Department	Local funds, CDBG, HMGP, PDM	Medium	Moderate
2	Clear debris from roads and drainage ways	High Winds, Winter Storms, Flood	Monroe County Road & Bridge Department	Local funds	Ongoing	High
2	Improve and maintain county road system	High Winds, Winter Storms, Flood	Monroe County Road & Bridge Department	Local funds, state funds, CDBG	Ongoing	High
2	Continue to perform maintenance on roads, drainage culverts, creeks, and streams to mitigate the threat of floods	Flood	Monroe County Road & Bridge Department	Local funds	Ongoing	High
3	Prepare and implement standard operation procedures for drainage system maintenance	Flood	Monroe County Road & Bridge Department	Local funds	Medium	Moderate

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Improve and maintain public warning systems	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Monroe County Commission	Local funds, HMGP, PDM	High	Moderate
5	Improve public access to weather alerts	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Monroe County EMA	Local funds, HMGP, PDM	High	Moderate
6	Use social media to provide information to the publ i c about dangerous weather	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Monroe County EMA	Local funds	Ongoing	High
5	Install an automated weather monitoring system t h at t r an sm i t data to the County EMA and the NWS, including all-weather stations, precipitation gauges, wind gauges, and temperature gauges	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Monroe County EMA	Local funds, HMGP, PDM	Medium	Moderate
5	Promote the use of weather radios in households and businesses.	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Monroe County EMA	Local funds	Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Upgrade Critical Communication Infrastructure	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Monroe County Commission	Local funds, state funds, federal funds	High	Moderate
4	Drainage projects in areas that are flood prone	Flooding	Monroe County Road and Bridge Dept.	Local/HMA/ CDBG	Medium	Moderate
4	Storm Water Management Project throughout the County	Flooding	Monroe County Road and Bridge Dept.	Local/HMA/ CDBG	Medium	Moderate
2,3	Effectively administer and enforce local floodplain management regulations	Flooding	Monroe County Commission	Local funds	Ongoing	High
2,3	Train local floodplain managers through programs offered at the State and Federal level.	Flooding	Monroe County EMA	Local funds	Medium	Moderate
2,3	Promote adoption of uniform flood hazard prevention ordinance among all the NFIP communities in Monroe County.	Flooding	Monroe County EMA	Local funds	Medium	Moderate
1	Enact and enforce dumping regulations	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Monroe County Commission	Local funds	Medium	Moderate
1,3	Enact and enforce erosion and sedimentation control regulations	Flooding	Monroe County Commission	Local funds	Medium	Moderate
1,3	Seek technical assistance through the Alabama Cooperative Extension System with Best Management Practices (BMP) for channel and drainage system maintenance	Flooding	Monroe County Commission	Local funds	Medium	Moderate

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,3	Maintain a healthy forest that can help mitigation the damaging impacts of flooding, erosion, landslides, and wildfires within urban and rural areas		Monroe County Commission	Local funds	Ongoing	High
5	Advocate for and pursue funding for weather radar located closer to county		Monroe County Commission	Local funds, federal funds, PDM, HMGP	Ongoing	High

The following actions were deleted from the previous county plan:

7 (duplication of action 1), 12 (action is not feasible), 25 (flood maps are readily available online), 31 (duplication of action 28)

4.5.4a Town of Beatrice Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,2	Research the adoption of local floodplain management regulations	Floods	Town of Beatrice/Beatrice Town Council	Local funds	High	High
1,2,3	Join the National Flood Insurance Program	Floods	Town of Beatrice/Beatrice Town Council	Local funds	Medium	Moderate
1,2, 3,6	Prepare and adopt a comprehensive plan	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Beatrice/Beatrice Town Council	Local funds	Medium	Moderate
1,6	Encourage the construction of Safe Rooms in new public buildings	High Winds	Town of Beatrice/Beatrice Town Council	Local funds	High	High
1,6	Construct free- standing public Safe Rooms in existing vulnerable locations	High Winds	Town of Beatrice/Beatrice Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,3,6	Participate in the update/revision of mitigation plan when needed	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Beatrice/Beatrice Town Council	Local funds, HMGP, PDM	High	High
2	Maintain insurance riders on the Town's properties	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Beatrice/Beatrice Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Provide back-up power for critical facilities and fire stations	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Beatrice/Beatrice Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,4	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 Beatrice/Beatrice Town Council	Local funds	High	High
1,4	Retrofit public schools with community Safe Rooms.	High Winds	Town of Beatrice/Beatrice Town Council	Local funds, HMGP, PDM	Medium	Moderate
5	Continue to send law enforcement and fire personnel to emergency response training	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Beatrice/Beatrice Town Council	Local funds	High	High
1,2	Install and maintain water infrastructure and fire hydrants in rural areas	Wildfire	Town of Beatrice/Beatrice Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,4	Encourage the construction of safe rooms in new and existing construction.	High Winds	Town of Beatrice/Beatrice Town Council	Local funds	High	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.	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Beatrice/Beatrice Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,6	Participate in regular public meetings of hazards and mitigation measures	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Beatrice/Beatrice Town Council	Local funds	High	High
1,2, 3,4	Implement drainage improvements in Beatrice	Floods	Town of Beatrice/Beatrice Town Council	Local funds, HMGP, PDM	High	High
1,2	Continue to clear debris from roads and drainage ways	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Beatrice/Beatrice Town Council	Local funds	High	High
1,2	Continue to improve and maintain town road system	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Beatrice/Beatrice Town Council	Local funds	High	High
1,2	Prepare and implement standard operation procedures for drainage system maintenance	Floods	Town of Beatrice/Beatrice Town Council	Local funds	Medium	Moderate
5,6	Improve and maintain public warning systems	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Beatrice/Beatrice Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5,6	Improve public access to weather alerts	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Beatrice/Beatrice Town Council	Local funds	High	High
1,6	Use social media to provide information about the public about dangerous weather	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Beatrice/Beatrice Town Council	Local funds	High	High
5	Purchase and maintain emergency generators for post- disaster mitigation as needed including for water	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Beatrice/Beatrice Town Council	Local funds, HMGP, PDM	Medium	Moderate
6	Promote the use of weather radios in households and businesses.	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Beatrice/Beatrice Town Council	Local funds, HMGP, PDM	High	High
5	Provide back-up power for emergency medical needs	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Beatrice/Beatrice Town Council	Local funds, HMGP, PDM	Medium	Moderate

1,5,6,16,27,28,29,30,31,32,33,42,44 (projects that Monroe County would spearhead, and Beatrice would support and participate), 7, 12 (town does not have the capability), 3, 13,19, 20, 25 (town is sanctioned by NFIP).

4.5.4b Town of Excel Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,2	Research the adoption of local floodplain management regulations	Floods	Town of Excel/Excel Town Council	Local funds	High	High
1,2,3	Join the National Flood Insurance Program	Floods	Town of Excel/Excel Town Council	Local funds	Medium	Moderate
1,2, 3,6	Prepare and adopt a comprehensive plan	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Excel/Excel Town Council	Local funds	Medium	Moderate
1,6	Encourage the construction of Safe Rooms in new public buildings	High Winds	Town of Excel/Excel Town Council	Local funds	High	High
1,6	Construct free- standing public Safe Rooms in existing vulnerable locations	High Winds	Town of Excel/Excel Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,3,6	Participate in the update/revision of mitigation plan when needed	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Excel/Excel Town Council	Local funds, HMGP, PDM	High	High
2	Maintain insurance riders on the Town's properties	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Excel/Excel Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Provide back-up power for critical facilities and fire stations	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Excel/Excel Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,4	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 Excel/Excel Town Council	Local funds	High	High
1,4	Retrofit public schools with community Safe Rooms.	High Winds	Town of Excel/Excel Town Council	Local funds, HMGP, PDM	Medium	Moderate
5	Continue to send law enforcement and fire personnel to emergency response training	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Excel/Excel Town Council	Local funds	High	High
1,2	Install and maintain water infrastructure and fire hydrants in rural areas	Wildfire	Town of Excel/Excel Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,4	Encourage the construction of safe rooms in new and existing construction.	High Winds	Town of Excel/Excel Town Council	Local funds	High	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.	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Excel/Excel Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,6	Participate in regular public meetings of hazards and mitigation measures	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Excel/Excel Town Council	Local funds	High	High
1,2, 3,4	Implement drainage improvements in Excel	Flood	Town of Excel/Excel Town Council	Local funds, HMGP, PDM	High	High
1,2	Continue to clear debris from roads and drainage ways	Flood	Town of Excel/Excel Town Council	Local funds	High	High
1,2	Continue to improve and maintain town road system	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Excel/Excel Town Council	Local funds	High	High
1,2	Prepare and implement standard operation procedures for drainage system maintenance	Floods	Town of Excel/Excel Town Council	Local funds	Medium	Moderate
5,6	Improve and maintain public warning systems	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Excel/Excel Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5,6	Improve public access to weather alerts	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Excel/Excel Town Council	Local funds	High	High
1,6	Use social media to provide information about the public about dangerous weather	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Excel/Excel Town Council	Local funds	High	High
5	Purchase and maintain emergency generators for post- disaster mitigation as needed including for water	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Excel/Excel Town Council	Local funds, HMGP, PDM	Medium	Moderate
6	Promote the use of weather radios in households and businesses.	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Excel/Excel Town Council	Local funds, HMGP, PDM	High	High
5	Provide back-up power for emergency medical needs	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Excel/Excel Town Council	Local funds, HMGP, PDM	Medium	Moderate

The following actions were deleted from the previous county plan:

1,5,6,16,27,28,29,30,31,32,33,42,44 (projects that Monroe County would spearhead, and Excel would support and participate), 7, 12 (town does not have the capability), 3, 13,19, 20, 25 (town is not a member of the NFIP).

4.5.4c Town of Frisco City Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,2	Research the adoption of local floodplain management regulations	Floods	Town of Frisco City/Frisco City Town Council	Local funds	High	High
1,2,3	Join the National Flood Insurance Program	Floods	Town of Frisco City/Frisco City Town Council	Local funds	Medium	Moderate
1,2, 3,6	Prepare and adopt a comprehensive plan	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Frisco City/Frisco City Town Council	Local funds	Medium	Moderate
1,6	Encourage the construction of Safe Rooms in new public buildings	High Winds	Town of Frisco City/Frisco City Town Council	Local funds	High	High
1,6	Construct free- standing public Safe Rooms in existing vulnerable locations	High Winds	Town of Frisco City/Frisco City Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,3,6	Participate in the update/revision of mitigation plan when needed	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Frisco City/Frisco City Town Council	Local funds, HMGP, PDM	High	High
2	Maintain insurance riders on the Town's properties	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Frisco City/Frisco City Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Provide back-up power for critical facilities and fire stations	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Frisco City/Frisco City Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,4	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 Frisco City/Frisco City Town Council	Local funds	High	High
1,4	Retrofit public schools with community Safe Rooms.	High Winds	Town of Frisco City/Frisco City Town Council	Local funds, HMGP, PDM	Medium	Moderate
5	Continue to send law enforcement and fire personnel to emergency response training	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Frisco City/Frisco City Town Council	Local funds	High	High
1,2	Install and maintain water infrastructure and fire hydrants in rural areas	Wildfire	Town of Frisco City/Frisco City Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,4	Encourage the construction of safe rooms in new and existing construction.	High Winds	Town of Frisco City/Frisco City Town Council	Local funds	High	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.	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Frisco City/Frisco City Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,6	Participate in regular public meetings of hazards and mitigation measures	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Frisco City/Frisco City Town Council	Local funds	High	High
1,2, 3,4	Implement drainage improvements in Frisco City	Floods	Town of Frisco City/Frisco City Town Council	Local funds, HMGP, PDM	High	High
1,2	Continue to clear debris from roads and drainage ways	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Frisco City/Frisco City Town Council	Local funds	High	High
1,2	Continue to improve and maintain town road system	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Frisco City/Frisco City Town Council	Local funds	High	High
1,2	Prepare and implement standard operation procedures for drainage system maintenance	Floods	Town of Frisco City/Frisco City Town Council	Local funds	Medium	Moderate
5,6	Improve and maintain public warning systems	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Frisco City/Frisco City Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5,6	Improve public access to weather alerts	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Frisco City/Frisco City Town Council	Local funds	High	High
1,6	Use social media to provide information about the public about dangerous weather	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Frisco City/Frisco City Town Council	Local funds	High	High
5	Purchase and maintain emergency generators for post- disaster mitigation as needed including for water	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Frisco City/Frisco City Town Council	Local funds, HMGP, PDM	Medium	Moderate
6	Promote the use of weather radios in households and businesses.	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Frisco City/Frisco City Town Council	Local funds, HMGP, PDM	High	High
5	Provide back-up power for emergency medical needs	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Frisco City/Frisco City Town Council	Local funds, HMGP, PDM	Medium	Moderate

The following actions were deleted from the previous county plan:

1,5,6,16,27,28,29,30,31,32,33,42,44 (projects that Monroe County would spearhead, and Excel would support and participate), 7, 12 (town does not have the capability), 3, 13,19, 20, 25 (town is not a member of the NFIP).

4.5.4d City of Monroeville Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,2	Research the adoption of local floodplain management regulations	Floods	City of Monroeville/Monroeville City Council	Local funds	High	High
1,2,3	Join the National Flood Insurance Program	Floods	City of Monroeville/Monroeville City Council	Local funds	Medium	Moderate
1,2, 3,6	Prepare and adopt a comprehensive plan	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	City of Monroeville/Monroeville City Council	Local funds	Medium	Moderate
1,6	Encourage the construction of Safe Rooms in new public buildings	High Winds	City of Monroeville/Monroeville City Council	Local funds	High	High
1,6	Construct free- standing public Safe Rooms in existing vulnerable locations	High Winds	City of Monroeville/Monroeville City Council	Local funds, HMGP, PDM	Medium	Moderate
1,3,6	Participate in the update/revision of mitigation plan when needed	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	City of Monroeville/Monroeville City Council	Local funds, HMGP, PDM	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2	Maintain insurance riders on the Town's properties	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	City of Monroeville/Monroeville City Council	Local funds	High	High
5	Provide back-up power for critical facilities and fire stations	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	City of Monroeville/Monroeville City Council	Local funds, HMGP, PDM	Medium	Moderate
1,4	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 Monroeville/Monroeville City Council	Local funds	High	High
1,4	Retrofit public schools with community Safe Rooms.	High Winds	City of Monroeville/Monroeville City Council	Local funds, HMGP, PDM	Medium	Moderate
5	Continue to send law enforcement and fire personnel to emergency response training	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	City of Monroeville/Monroeville City Council	Local funds	High	High
1,2	Install and maintain water infrastructure and fire hydrants in rural areas	Wildfire	City of Monroeville/Monroeville City Council	Local funds, HMGP, PDM	Medium	Moderate

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,4	Encourage the construction of safe rooms in new and existing construction.	High Winds	City of Monroeville/Monroeville City Council	Local funds	High	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.	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	City of Monroeville/Monroeville City Council	Local funds	High	High
1,6	Participate in regular public meetings of hazards and mitigation measures	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	City of Monroeville/Monroeville City Council	Local funds	High	High
1,2, 3,4	Implement drainage improvements	Floods	City of Monroeville/Monroeville City Council	Local funds, HMGP, PDM	High	High
1,2	Continue to clear debris from roads and drainage ways	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	City of Monroeville/Monroeville City Council	Local funds	High	High
1,2	Continue to improve and maintain town road system	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	City of Monroeville/Monroeville City Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,2	Prepare and implement standard operation procedures for drainage system maintenance	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	City of Monroeville/Monroeville City Council	Local funds	Medium	Moderate
5,6	Improve and maintain public warning systems	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	City of Monroeville/Monroeville City Council	Local funds	High	High
5,6	Improve public access to weather alerts	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	City of Monroeville/Monroeville City Council	Local funds	High	High
1,6	Use social media to provide information about the public about dangerous weather	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	City of Monroeville/Monroeville City Council	Local funds	High	High
5	Purchase and maintain emergency generators for post- disaster mitigation as needed including for water	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	City of Monroeville/Monroeville City Council	Local funds, HMGP, PDM	Medium	Moderate

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Promote the use of weather radios in households and businesses.	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	City of Monroeville/Monroeville City Council	Local funds, HMGP, PDM	High	High
5	Provide back-up power for emergency medical needs	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	City of Monroeville/Monroeville City Council	Local funds, HMGP, PDM	Medium	Moderate

The following actions were deleted from the previous county plan:

1,5,6,16,27,28,29,30,31,32,33,42,44 (projects that Monroe County would spearhead, and Excel would support and participate), 7, 12 (town does not have the capability), 3, 13,19, 20, 25 (town is not a member of the NFIP).

4.5.4e Town of Vredenburgh Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,2	Research the adoption of local floodplain management regulations	Floods	Town of Vredenburgh/Vredenburgh Town Council	Local funds	High	High
1,2,3	Join the National Flood Insurance Program	Floods	Town of Vredenburgh/Vredenburgh Town Council	Local funds	Medium	Moderate
1,2, 3,6	Prepare and adopt a comprehensive plan	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Vredenburgh/Vredenburgh Town Council	Local funds	Medium	Moderate
1,6	Encourage the construction of Safe Rooms in new public buildings	High Winds	Town of Vredenburgh/Vredenburgh Town Council	Local funds	High	High
1,6	Construct free- standing public Safe Rooms in existing vulnerable locations	High Winds	Town of Vredenburgh/Vredenburgh Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,3,6	Participate in the update/revision of mitigation plan when needed	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Vredenburgh/Vredenburgh Town Council	Local funds, HMGP, PDM	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2	Maintain insurance riders on the Town's properties	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Vredenburgh/Vredenburgh Town Council	Local funds	High	High
5	Provide back-up power for critical facilities and fire stations	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Vredenburgh/Vredenburgh Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,4	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 Vredenburgh/Vredenburgh Town Council	Local funds	High	High
1,4	Retrofit public schools with community Safe Rooms.	High Winds	Town of Vredenburgh/Vredenburgh Town Council	Local funds, HMGP, PDM	Medium	Moderate
5	Continue to send law enforcement and fire personnel to emergency response training	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Vredenburgh/Vredenburgh Town Council	Local funds	High	High
1,2	Install and maintain water infrastructure and fire hydrants in rural areas	Wildfire	Town of Vredenburgh/Vredenburgh Town Council	Local funds, HMGP, PDM	Medium	Moderate

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,4	Encourage the construction of safe rooms in new and existing construction.	High Winds	Town of Vredenburgh/Vredenburgh Town Council	Local funds	High	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.	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Vredenburgh/Vredenburgh Town Council	Local funds	High	High
1,6	Participate in regular public meetings of hazards and mitigation measures	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Vredenburgh/Vredenburgh Town Council	Local funds	High	High
1,2, 3,4	Implement drainage improvements in Vredenburgh	Floods	Town of Vredenburgh/Vredenburgh Town Council	Local funds, HMGP, PDM	High	High
1,2	Continue to clear debris from roads and drainage ways	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Vredenburgh/Vredenburgh Town Council	Local funds	High	High
1,2	Continue to improve and maintain town road system	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Vredenburgh/Vredenburgh Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,2	Prepare and implement standard operation procedures for drainage system maintenance	Floods	Town of Vredenburgh/Vredenburgh Town Council	Local funds	Medium	Moderate
5,6	Improve and maintain public warning systems	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Vredenburgh/Vredenburgh Town Council	Local funds	High	High
5,6	Improve public access to weather alerts	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Vredenburgh/Vredenburgh Town Council	Local funds	High	High
1,6	Use social media to provide information about the public about dangerous weather	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Vredenburgh/Vredenburgh Town Council	Local funds	High	High
5	Purchase and maintain emergency generators for post- disaster mitigation as needed including for water	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Vredenburgh/Vredenburgh Town Council	Local funds, HMGP, PDM	Medium	Moderate

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Promote the use of weather radios in households and businesses.	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Vredenburgh/Vredenburgh Town Council	Local funds, HMGP, PDM	High	High
5	Provide back-up power for emergency medical needs	High Winds, Flood, Severe Storms, Winter Storms, Wildfire, Dam Failure	Town of Vredenburgh/Vredenburgh Town Council	Local funds, HMGP, PDM	Medium	Moderate

4.5.5 Washington County Commission Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	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, etc. (3.1.1)	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Washington County EMA	HMGP, Local Money	Low	Low
2	Continue to participate in the NFIP and enforce floodplain regulations (1.1.1)	Flood	Washington County Commission	Local funds	Ongoing	High
6	Maintain a library of technical assistance and guidance materials for local floodplain managers (3.3.1)	Flood	Washington County EMA	Local funds	High	High
1	Prepare and adopt a comprehensive plan	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Washington County Commission	Local funds, CDBG	High	High
4	Promote the construction of Safe Rooms in new public buildings	High Winds	Washington County EMA	Local funds	Ongoing	High
4	Construct free- standing public Safe Rooms in existing vulnerable locations (1.3.1)	High Winds	Washington County EMA	Local funds, HMGP, PDM, CDBG	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Apply for funding to update/revise mitigation plan when needed- continue participation in regional mitigation plans	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Washington County Commission	Local funds, HMGP, PDM	High	High
4	Encourage retrofits of older homes constructed before the enactment of floodplain regulations	Flood	Washington County EMA	Local funds	Ongoing	High
2	Maintain insurance riders on existing properties (2.2.1)	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Washington County Commission	Local funds	Ongoing	High
5	Purchase emergency generators for backup power for all critical facilities including Volunteer Fire Departments, Washington County Courthouse, and all water and sewer facilities throughout Washington County.	High Winds, Winter Storms	Washington County Commission, Volunteer Fire Departments, Utility Providers	Local funds, PDM, HMGO	Ongoing	High
4	Promote good construction practices and proper code enforcement to eliminate most structural problems during natural hazard events	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Washington County Commission	Local funds	Ongoing	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
4	Encourage the construction of safe rooms within new and existing public buildings, such as new schools, libraries, community centers, and other public buildings where feasible. (1.3.1)	High Winds	Washington County EMA	Local Funds	Ongoing	High
4	Retrofit public schools and other public buildings with community Safe Rooms. (2.1.1)	High Winds	Washington County BOE	Local funds, PDM, HMGP	Medium	Moderate
1	Promote the purchase of flood insurance coverage by property owners and renters in high-risk flooding areas.	Flooding	Washington County Commission	Local funds	Ongoing	High
5	Continue to send law enforcement and fire personnel to emergency response training	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Washington County Commission	Local funds	Ongoing	High
6	Outreach projects including environmental education and urban forestry (3.2.1, 3.4.1)	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Washington County Commission	Local funds	Ongoing	Moderate
1	Install and maintain water infrastructure and fire hydrants in rural areas	Wildfire	Local water systems/ Washington County Commission	Local funds, CDBG, DRA	Medium	Moderate

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Washington County Commission, Washington County EMA, Washington County Road & Bridge Department	Local funds	Ongoing	High
3	Improve maintenance programs for streams and drainage ways	Flood	Washington County Road & Bridge Department	Local funds	High	High
3	Implement drainage improvement in watersheds throughout Washington County (6.1.1)	Flood	Washington County Road & Bridge Department	Local funds, CDBG, HMGP, PDM	Medium	Moderate
2	Clear debris from roads and drainage ways	High Winds, Winter Storms, Flood	Washington County Road & Bridge Department	Local funds	Ongoing	High
2	Improve and maintain county road system	High Winds, Winter Storms, Flood	Washington County Road & Bridge Department	Local funds, state funds, CDBG	Ongoing	High
2	Continue to perform maintenance on roads, drainage culverts, creeks, and streams to mitigate the threat of floods	Flood	Washington County Road & Bridge Department	Local funds	Ongoing	High
3	Prepare and implement standard operation procedures for drainage system maintenance	Flood	Washington County Road & Bridge Department	Local funds	Medium	Moderate
5	Improve and maintain public warning systems	High Winds, Winter Storms, Flood	Washington County Commission	Local funds, HMGP, PDM	High	Moderate
5	Improve public access to weather alerts	High Winds, Winter Storms, Flood	Washington County EMA	Local funds, HMGP, PDM	High	Moderate

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Use social media to provide information to the publ i c about dangerous weather	High Winds, Winter Storms, Flood	Washington County EMA	Local funds	Ongoing	High
5	Promote the use of weather radios in households and businesses.	High Winds, Winter Storms, Flood	Washington County EMA	Local funds	Ongoing	High
5	Advocate for and pursue funding for weather radar located closer to county	All	Washington County Commission	Local funds, federal funds, PDM, HMGP	Ongoing	High

Actions 1.1.2 & 1.1.3 were deleted due to being duplicates of 1.1.1. Actions 1.3.2, 1.3.3, and 1.3.4 were deleted due to being duplicates of 1.3.1. Action 5.2.2 deleted due to being a duplicate of 5.1.1)

4.5.5a Town of Chatom Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,2	Research the adoption of local floodplain management regulations	Flooding	Town of Chatom/Chatom Town Council	Local funds	High	High
1,2,3	Join the National Flood Insurance Program	Flooding	Town of Chatom/Chatom Town Council	Local funds	Medium	Moderate
1,2, 3,6	Prepare and adopt a comprehensive plan	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Chatom/Chatom Town Council	Local funds	Medium	Moderate
1,6	Encourage the construction of Safe Rooms in new public buildings	Wind events	Town of Chatom/Chatom Town Council	Local funds	High	High
1,6	Construct free- standing public Safe Rooms in existing vulnerable locations	Wind events	Town of Chatom/Chatom Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,3,6	Participate in the update/revision of mitigation plan when needed	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Chatom/Chatom Town Council	Local funds, HMGP, PDM	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
2	Maintain insurance riders on the Town's properties	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Chatom/Chatom Town Council	Local funds	High	High
5	Provide back-up power for critical facilities and fire stations	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Chatom/Chatom Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,4	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	Wind events	Town of Chatom/Chatom Town Council	Local funds	High	High
1,4	Retrofit public schools with community Safe Rooms.	Wind events	Town of Chatom/Chatom Town Council	Local funds, HMGP, PDM	Medium	Moderate
5	Continue to send law enforcement and fire personnel to emergency response training	All	Town of Chatom/Chatom Town Council	Local funds	High	High
1,2	Install and maintain water infrastructure and fire hydrants in rural areas	Wildfires	Town of Chatom/Chatom Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,4	Encourage the construction of safe rooms in new and existing construction.	Wind events	Town of Chatom/Chatom Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Chatom/Chatom Town Council	Local funds	High	High
1,6	Participate in regular public meetings of hazards and mitigation measures	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Chatom/Chatom Town Council	Local funds	High	High
1,2, 3,4	Implement drainage improvements in Chatom	Flooding	Town of Chatom/Chatom Town Council	Local funds, HMGP, PDM	High	High
1,2	Continue to clear debris from roads and drainage ways	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Chatom/Chatom Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,2	Continue to improve and maintain town road system	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Chatom/Chatom Town Council	Local funds	High	High
1,2	Prepare and implement standard operation procedures for drainage system maintenance	Flooding	Town of Chatom/Chatom Town Council	Local funds	Medium	Moderate
5,6	Improve and maintain public warning systems	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Chatom/Chatom Town Council	Local funds	High	High
5,6	Improve public access to weather alerts	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Chatom/Chatom Town Council	Local funds	High	High
1,6	Use social media to provide information about the public about dangerous weather	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Chatom/Chatom Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Purchase and maintain emergency generators for post- disaster mitigation as needed including for water	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Chatom/Chatom Town Council	Local funds, HMGP, PDM	Medium	Moderate
6	Promote the use of weather radios in households and businesses.	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Chatom/Chatom Town Council	Local funds, HMGP, PDM	High	High
5	Provide back-up power for emergency medical needs	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Chatom/Chatom Town Council	Local funds, HMGP, PDM	Medium	Moderate

Actions 1.1.2 & 1.1.3 were deleted due to being duplicates of 1.1.1. Actions 1.3.2, 1.3.3, and 1.3.4 were deleted due to being duplicates of 1.3.1. Action 5.2.2 deleted due to being a duplicate of 5.1.1)

4.5.5b Town of McIntosh Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,2	Research the adoption of local floodplain management regulations	Floods	Town of McIntosh/McIntosh Town Council	Local funds	High	High
1,2,3	Join the National Flood Insurance Program	Floods	Town of McIntosh/McIntosh Town Council	Local funds	Medium	Moderate
1,2, 3,6	Prepare and adopt a comprehensive plan	All	Town of McIntosh/McIntosh Town Council	Local funds	Medium	Moderate
1,6	Encourage the construction of Safe Rooms in new public buildings	Wind events	Town of McIntosh/McIntosh Town Council	Local funds	High	High
1,6	Construct free- standing public Safe Rooms in existing vulnerable locations	Wind events	Town of McIntosh/McIntosh Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,3,6	Participate in the update/revision of mitigation plan when needed	All	Town of McIntosh/McIntosh Town Council	Local funds, HMGP, PDM	High	High
2	Maintain insurance riders on the Town's properties	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of McIntosh/McIntosh Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Provide back-up power for critical facilities and fire stations	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of McIntosh/McIntosh Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,4	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	Wind events	Town of McIntosh/McIntosh Town Council	Local funds	High	High
1,4	Retrofit public schools with community Safe Rooms.	Wind events	Town of McIntosh/McIntosh Town Council	Local funds, HMGP, PDM	Medium	Moderate
5	Continue to send law enforcement and fire personnel to emergency response training	All	Town of McIntosh/McIntosh Town Council	Local funds	High	High
1,2	Install and maintain water infrastructure and fire hydrants in rural areas	Wildfire	Town of McIntosh/McIntosh Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,4	Encourage the construction of safe rooms in new and existing construction.	Wind events	Town of McIntosh/McIntosh Town Council	Local funds	High	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.	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of McIntosh/McIntosh Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,6	Participate in regular public meetings of hazards and mitigation measures	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of McIntosh/McIntosh Town Council	Local funds	High	High
1,2, 3,4	Implement drainage improvements in McIntosh	Floods	Town of McIntosh/McIntosh Town Council	Local funds, HMGP, PDM	High	High
1,2	Continue to clear debris from roads and drainage ways	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of McIntosh/McIntosh Town Council	Local funds	High	High
1,2	Continue to improve and maintain town road system	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of McIntosh/McIntosh Town Council	Local funds	High	High
1,2	Prepare and implement standard operation procedures for drainage system maintenance	Floods	Town of McIntosh/McIntosh Town Council	Local funds	Medium	Moderate
5,6	Improve and maintain public warning systems	Severe Storms	Town of McIntosh/McIntosh Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5,6	Improve public access to weather alerts	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of McIntosh/McIntosh Town Council	Local funds	High	High
1,6	Use social media to provide information about the public about dangerous weather	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of McIntosh/McIntosh Town Council	Local funds	High	High
5	Purchase and maintain emergency generators for post- disaster mitigation as needed including for water	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of McIntosh/McIntosh Town Council	Local funds, HMGP, PDM	Medium	Moderate
6	Promote the use of weather radios in households and businesses.	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of McIntosh/McIntosh Town Council	Local funds, HMGP, PDM	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Provide back-up power for emergency medical needs	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of McIntosh/McIntosh Town Council	Local funds, HMGP, PDM	Medium	Moderate

Actions 1.1.2 & 1.1.3 were deleted due to being duplicates of 1.1.1. Actions 1.3.2, 1.3.3, and 1.3.4 were deleted due to being duplicates of 1.3.1. Action 5.2.2 deleted due to being a duplicate of 5.1.1)

4.5.5c Town of Millry Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,2	Research the adoption of local floodplain management regulations	Floods	Town of Millry/Millry Town Council	Local funds	High	High
1,2,3	Join the National Flood Insurance Program	Floods	Town of Millry/Millry Town Council	Local funds	Medium	Moderate
1,2, 3,6	Prepare and adopt a comprehensive plan	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Millry/Millry Town Council	Local funds	Medium	Moderate
1,6	Encourage the construction of Safe Rooms in new public buildings	Wind Events	Town of Millry/Millry Town Council	Local funds	High	High
1,6	Construct free- standing public Safe Rooms in existing vulnerable locations	Wind Events	Town of Millry/Millry Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,3,6	Participate in the update/revision of mitigation plan when needed	All	Town of Millry/Millry Town Council	Local funds, HMGP, PDM	High	High
2	Maintain insurance riders on the Town's properties	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Millry/Millry Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
5	Provide back-up power for critical facilities and fire stations	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Millry/Millry Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,4	Encourage the construction of safe rooms within new public buildings, such as new schools, libraries, community centers, and other public buildings where feasible.	Wind events	Town of Millry/Millry Town Council	Local funds	High	High
1,4	Retrofit public schools with community Safe Rooms.	Wind Events	Town of Millry/Millry Town Council	Local funds, HMGP, PDM	Medium	Moderate
5	Continue to send law enforcement and fire personnel to emergency response training	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Millry/Millry Town Council	Local funds	High	High
1,2	Install and maintain water infrastructure and fire hydrants in rural areas	Wildfire	Town of Millry/Millry Town Council	Local funds, HMGP, PDM	Medium	Moderate
1,4	Encourage the construction of safe rooms in new and existing construction.	Wind Events	Town of Millry/Millry Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Maintain appropriate media relationships to ensure the public is informed of hazard threats and means to mitigate property damages and loss of life.	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Millry/Millry Town Council	Local funds	High	High
1,6	Participate in regular public meetings of hazards and mitigation measures	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Millry/Millry Town Council	Local funds	High	High
1,2, 3,4	Implement drainage improvements in Millry	Floods	Town of Millry/Millry Town Council	Local funds, HMGP, PDM	High	High
1,2	Continue to clear debris from roads and drainage ways	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Millry/Millry Town Council	Local funds	High	High
1,2	Continue to improve and maintain town road system	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Millry/Millry Town Council	Local funds	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,2	Prepare and implement standard operation procedures for drainage system maintenance	Floods	Town of Millry/Millry Town Council	Local funds	Medium	Moderate
5,6	Improve and maintain public warning systems	Severe Storms	Town of Millry/Millry Town Council	Local funds	High	High
5,6	Improve public access to weather alerts	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Millry/Millry Town Council	Local funds	High	High
1,6	Use social media to provide information about the public about dangerous weather	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Millry/Millry Town Council	Local funds	High	High
5	Purchase and maintain emergency generators for post- disaster mitigation as needed including for water	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Millry/Millry Town Council	Local funds, HMGP, PDM	Medium	Moderate

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
6	Promote the use of weather radios in households and businesses.	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Millry/Millry Town Council	Local funds, HMGP, PDM	High	High
5	Provide back-up power for emergency medical needs	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Town of Millry/Millry Town Council	Local funds, HMGP, PDM	Medium	Moderate

Actions 1.1.2 & 1.1.3 were deleted due to being duplicates of 1.1.1. Actions 1.3.2, 1.3.3, and 1.3.4 were deleted due to being duplicates of 1.3.1. Action 5.2.2 deleted due to being a duplicate of 5.1.1)

4.5.5d Washington County School System Mitigation Action Plan

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1,4	Provide storm shelters at all county schools	Wind	Washington County School System	Local funds, HMGP, PDM	High	High
5	Purchase generators for each school	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold	Washington County School System	Local funds, HMGP, PDM	High	High
1,2	Retrofitting of schools	Wind	Washington County School System	Local funds, HMGP, PDM	High	High
6	Train all staff in hazard safety	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Washington County School System	Local funds, HMGP, PDM	Medium	Moderate
6	Provide hazard information to students	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Washington County School System	Local funds, HMGP, PDM	High	High

Goal	Action Description	Hazards Addressed	Lead Agency	Funding Source	Priority / Status	Benefit / Cost Score
1	Install security surveillance and other notification technologies at all schools	Severe Storms, Winter Storms, Wind Events, Floods, Excessive Heat/Cold, Wildfires	Washington County School System	Local funds, HMGP, PDM	Medium	Moderate

Section 5- Plan Maintenance Process

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

Section Contents

5.1 Hazard Mitigation Plan Monitoring, Evaluation, and Update Process

The Alabama Tombigbee Regional Commission (ATRC) awill 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 will facilitate the annual update process at the regional level. During the fourth quarter of each calendar year, ATRC will convene a meeting of all EMA directors in ATRC's planning area 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 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 A 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.

5.2 Hazard Mitigation Plan Incorporation

The AEMA Division A 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 A 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 A 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 South Alabama Regional Planning and Development Commission (SARPDC), as well as local economic development councils, for consistency with other regional planning and economic development activities.

5.3 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 A 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 SARPC). ATRC, SARPC, 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 SARPC 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.

Appendix A: ATRC Participation Items

Clarke County

Public Notice

The Clarke County Hazard Mitigation Planning Committee will meet on January 7, 2020 at 1:00 p.m. at the Clarke County Courthouse located at 114 Court St, Grove Hill AL 36451. The purpose of the meeting will be to discuss local hazard mitigation issues and to provide input for the Division A Hazard Mitigation Plan that includes Clarke County and its municipal jurisdictions. The public is invited to attend and participate. Those persons needing information or requiring assistance to participate should contact Roy Waite, Clarke County EMA Director at (251)275-8775 at least 24 hours in advance of the meeting.

This notice was posted at the following locations as well as being published in the Clarke County Democrat:
Clarke County Courthouse
Coffeeville Town Hall
Fulton Town Hall
Grove Hill Town Hall
Jackson City Hall
Thomasville City Hall

2020 Update to Clarke County Hazard Mitigation Plan

7 January 2020 13:00 hours CST

Location: Clarke County EMA

NAME	AGENCY	PHONE	EMAIL
Brian Wilkerson	Clarke Co. EMA	251-275-8775	bwilkerson@clarkecountyal.com
Johnnie Jones	C/O Line Water	251-749-1172	JohnnieEJones@YAHOO.COM
Jamey Sullivan	Jackson Water	251-769-1209 251-246-2900	jamey9sullivan@yahoo.com
MAC HENLEY	SANITAT ED	251 28a 0332	SANDRA@SKIPPERTNS.COM
Doug Bradford	Clarke Prep	334-357-3684	dougbradford@cpsgators.com
Paul Stanley	CCBOE	251-589-2767	pstanley@clarkecountyschools.com
Joe Jones	Jackson Academy	251-246-5552	jjones@jeagles.com
Kiki Moore	Coastal AL	334-637-3150	kiki.moore@coastalalabama.edu
Keith Harrell	Antioch Fire Dept	251-387-3860	KHarrell@cmc-gas.com
Mary Zimmerman	ATRC	334-1082-1032	mary.zimmerman@atrc.net
Brandy Wilkerson	ATRC	334-682-4234	brandy.wilkerson@atrc.net
Roy Waite	Clarke Co EMA	251 275 9775	~~Boatkeys~~ rwaite@clarkecountyal.com
Jake Bailey	Clarke Co. Road & Bridge	251-275-3366	jbailey@clarkecountyal.com
Kevin Hearnsill	City of Thomasville	(334) 830-1264	khearnsill@thomasvilleal.com
Cynthia Jackson	Town of Grove Hill	251-589-0504	mayorjackson@grovehilltownhall.com

2020 Update to Clarke County Hazard Mitigation Plan

7 January 2020 13:00 hours CST

Location: Clarke County EMA

NAME	AGENCY	PHONE	EMAIL
Judith G. Reeves	Jackson Med Center	251-246-1145	j.reeves@jmc.org
Teresa Napper	Jackson Medical Center	251-246-1135	t.napper@jmc.org
JASON THOMAS	JACKSON FD/FIRE	251-246-4484	JASONTHOMAS167@YAHOO.COM
Keith Harrell	CLARKE-MOBILE GAS	251-246-2468	kharrell@cmgas.com

T. Taite

283

Coffeeville Nutrition Center, Coffeeville, AL
March 04, 2020

1. Billy Robinson
2. Charlotte Duncan
3. Roy Dunglas
4. Wayne Bedwell
5. Faye Hudson
6. Elaine Jones
7. [illegible]
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17.
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19.
20.

Public Meeting

Grove Hill, AL • January 30, 2020 • 10:00AM

SIGN-IN SHEET

NAME	ORGANIZATION	PHONE NUMBER	E-MAIL
Carolyn Jones			
Callie Hutto			
Elois Pickard			
Reba Vann			
E. Mafenie Larsen			
Robert Armstead			
Ruth Barfield Mg.			
Bobby Joe Hicks			
Christine Dickerson			

Jackson, Alabama 11:00am

Public Meeting

Wed Jan 29 2020

(49) 1. Daisy Juanita Dukes
(48) 2. Charles Dubose
(47) 3. Sherry Moseley
(46) 4. Mary F. Davis
(45) 5. Edna Anderson
(44) 6. Mapine Thomas
(43) 7. Stanley Earnest
(42) 8. Marilyn Jordan
(41) 9. Buddy Bark
(40) 10. Sue T.
(39) 11. Carolyn Slayton
(38) 12. Johnnie Washington
(37) 13. Anna White
(36) 14. Pam Hoven
(35) 15. Jackie Howell
(34) 16. J. Oleleergen
(33) 17. Nina Bowerman
(32) 18. Minnie Crosby
(31) 19. Joyce Sheffield
(30) 20. Dorothy Howze
(29) 21. Mark Gollinger
(28) 22. Wilma McNeil x
(27) 23. Gertrude Dorsett
(26) 24. Lamar Mott
(25) 25. Angie Mott
(24) 26. Walter Looper
(23) 27. Dorothy Donald
(22) 28. Nelson Litton
(21) 29. Marilyn Smith
(20) 30. Marvin Campbell
(19) 31. Linda B. Chastain
(18) 32. Mel Johnson
(17) 33. Lois
(16) 34. Loneillo Marengo
(15) 35. Woodrow
(14) 36. Daley
(13) 37. Lillie M Smith
(12) 38. Rush Fuford
(11) 39. Mary Gilman
(10) 40. Billy Hammond x
(9) 41. Gary Greene
(8) 42. Joan James
(7) 43.
(6) 44.
(5) 45.
(4) 46.
(3) 47.
(2) 48.
(1) 49.
50.
51.
52.

Thomasville 02/06/2025
Evette Moody

21. Mar[illegible] Smith
22. Diane Smith
23. Grace Olivier
24. Richard Martindale
25. Roseann Martindale
26. James McKinley
27. Mary McKinley
28. Marie Newton
29. Ramon Newton
30. Samuel E. Olivier
31. [illegible]
32. Yvonne Thickston
33. Linda Hunt
34. Jack Hunt
35. Nancy Odom
36. Dot Champion

Thomasville 287 02/06/21
& Vitta Woods

37. Wilma Odom
38.
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Conecuh County

Public Notice

The Conecuh County Hazard Mitigation Planning Committee will meet on January 13, 2020 at 1:00 p.m. at the Conecuh County EMA Office located at 102 County Shop Road, Evergreen, AL 36401. The purpose of the meeting will be to discuss local hazard mitigation issues and to provide input for the Division A Hazard Mitigation Plan that includes Conecuh County and its municipal jurisdictions. The public is invited to attend and participate. Those persons needing information or requiring assistance to participate should contact Johnny Brock, Conecuh County EMA Director at (251)578-1921 at least 24 hours in advance of the meeting.

This notice was posted at the following locations as well as being published in the Evergreen Courant:
Conecuh County Courthouse
Evergreen Post Office
Evergreen City Hall
Castleberry Town Hall
Repton Town Hall

This week marks a somewhat interesting anniversary for Evergreen and Conecuh County. It's the 114th anniversary of the day that Richmond Pearson Hobson, the "Hero of the Merrimac," delivered a public lecture at the Conecuh County Courthouse in Evergreen.

This lecture, which was delivered on Jan. 1, 1906, came about seven and a half years after Hobson became a naval hero and received the Medal of Honor for intentionally sinking his own ship, the USS Merrimac, on June 3, 1898 during the Spanish-American War.

Many of you will remember from your high school American History classes that this short war between the U.S. and Spain lasted just over three months and resulted in an American victory. Hobson's role in the war began when he arrived in Santiago, a major Cuban port, on June 1, 1898. The Spanish squadron of Admiral Pascual Cervera was at Santiago, and Hobson hatched a plan that many called a suicide mission. He and a crew of six prisoner, and Hobson was eventually released during a prisoner exchange on July 6. Later, he was presented with the Medal of Honor, and his official citation read as follows – "In connection with the sinking of the U.S.S. Merrimac at the entrance to the fortified harbor of Santiago de Cuba, 3 June 1898. Despite persistent fire from the enemy fleet and fortifications on shore, Lt. Hobson distinguished himself by extraordinary courage and carried out this operation at the risk of his own personal safety."

Hobson, who was born in Greensboro in 1870, resigned from the Navy in 1903 and launched a political career. He went on to serve as a member of the U.S. House of Representatives for Alabama's Sixth Congressional District from May 4, 1907 to March 3, 1915.

During this time, he made at least one more trip to Evergreen. According to local newspaper reports, Hobson visited Conecuh County on March 31, 1914 and "spoke before a large crowd" at the Conecuh County Courthouse in Evergreen. Many in this "large crowd" may have been local ladies.

According to one article I

PUBLIC NOTICE

The Conecuh County Hazard Mitigation Planning Committee will meet on January 13, 2020 at 1:00 p.m. at the Conecuh County EMA Office located at 102 County Shop Road, Evergreen, AL 36401. The purpose of the meeting will be to discuss local hazard mitigation issues and to provide input for the Division A Hazard Mitigation Plan that includes Conecuh County and its municipal jurisdictions. The public is invited to attend and participate. Those persons needing information or requiring assistance to participate should contact Johnny Brock, Conecuh County EMA Director at (251)578-1921at least 24 hours in advance of the meeting.

age 66 on March 16, 1937. He w buried in Arlington Nation Cemetery in Arlington, Va., n far from the nation's capital Washington, D.C.

News Flashback

Compiled by Lee Peacock

13 YEARS AGO
JAN. 4, 2007

Friends and busine acquaintances of Gerald Bc den stopped by South Alaban Gas last Thursday afternoon bid Borden good wishes on h retirement as the general ma ager of the company. Bord will remain with SAG on a co sulting basis for the next ye to help new manager, Ma Burgess, assume his ne duties.

Tears and laughter filled t conference room at Schneid National Trucking Dec. 14 former employees and curre employees said goodbye to ea other as the company official closed the Evergreen termin Among those present for t reception was Walter Pool who started Poole Truck Lir which later became Schneid National.

Total rainfall for the mon of December was 4.33 inch Total rainfall for 2006 was 43. inches.

The City of Evergreen mo than doubled their base sew rates and almost doubled the base water rates Tuesd night. The Evergreen Ci Council voted unanimously raise the base sewer rate in t city from $5 per month to $

Division A Regional Hazard Mitigation Plan Conecuh County Public Meeting #1

Evergreen, AL • January 013, 2020 • 1:00PM

SIGN-IN SHEET

NAME	ORGANIZATION	PHONE NUMBER	E-MAIL
Mary Zimmerman	ATRC	334-682-0132	mary.zimmerman@atrc.net
Johnny Brock	EMA	251-578-1971	jbrock@conecuhcounty.us
Henry Kirksey	TOC	251-966-2141	henrykirksey@yahoo.com
Jeff Sullivan	City of Evergreen	251-369-0394	jsull.van@evergreenal.org
Daryl Knowles	Repton Police Dept	251-593-6270	townofrepton@frontiernet.net, dKauto2002@yahoo.com
J.A-S	Evergreen P.D.	251-578-1111	

Evergreen Evette Woods
2-19-2020

1. Brenda L. Macks
2. Troy Smith
3. Julia Odom
4. Glenda Colvin
5. Phyllis Bowman
6. Charilyn Barnett
7. Shirley Riley
8. Lucille Lynch
9. Dane Junta
10. Troy Smith
11. Eric Finley
12. LARRY WILLIAMS
13. ERNEST WOODS
14. Ella Mae
15. Ellie Mae
16. Chris C Thomas
17. Essie Mae
18.
19.
20.

Monroe County

Approval of Mitigation Strategies Being Submitted by Participant

Division A Multi-Jurisdictional Regional Hazard Mitigation Plan

Entity	Signature	Title	Date
Monroe County Commission		Chairman of Monroe County Commission	4-29-22
Town of Beatrice	Annie M. Shelton	Mayor	4/29/2022
Town of Excel		Mayor	4/29/2022
Town of Frisco City		Mayor	4/29/2022
City of Monroeville		Mayor	4/29/2022

TOWN OF VREDENBURGH

Post Office Box 285
Vredenburgh, AL 36481

Phone: 334-337-4587 **Calvert Wright, Mayor**

April 29, 2022

Mr. Charles R. Downing
Monroe County Commission EMA
65 N Alabama Avenue
Monroeville, AL 36460

Dear Mr. Downing,

The Town of Vredenburgh would like to be included in the hazard mitigation plan. We have reviewed strategies and have compiled the attached mitigation strategies list for the Town of Vredenburgh. Please include this in the mitigation plan.

If you should have any questions, please contact my office.

Sincerely,

Calvert Wright

Calvert Wright
Mayor

HAZARD MITIGATION PLAN AVAILABLE FOR REVIEW

A draft of the Division A Regional Hazard Mitigation Plan, which includes Monroe County, is available for review and public comment. The plan can be accessed at www.atrcdevelopment.net.

Please submit comments to brandy.wilkerson@atrc.net or by mail to 107 Broad Street Camden, AL 36726 by 6/15/22. If you should have any questions, please contact ATRC at the email listed above.

Posted at the following locations on 5/20/2022: Monroe County Courthouse, Monroeville City Hall, Frisco City Ton Hall, Excel Town Hall, Vredenburgh Town Hall, Beatrice Town Hall

Monroe County Stakeholders

Monroe County Hospital

Beatrice Water System

Excel Water System

Mexia Water System

Monroeville Water Works

Southwest Alabama Water Authority

Uruah Water System

Coastal Alabama Community College

Beatrice VFD

Excel VFD

Finchburg VFD

Franklin VFD

Frisco City VFD

Goodway VFD

Mexia VFD

Monroeville VFD

North Baldwin0South Monroe Beat 1 VFD

Packers Bend VFD

Peterman VFD

Rocky Hill VFD

Uriah VFD

Vredenburgh VFD

Bermuda VFD

Burnt Corn VFD

Pine Orchard VFD

Entered 2-18-20

2-14-20 Excel Senior Center

ATRC Area Agency on Aging **Hazard Mitigation Meeting**

1. June Burt
2. James Davis
3. Ann Sheffield
4. Linda Stokes
5. Bill McDonald
6. [illegible]
7.
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Montreville 2/13/2020

ATRC Area Agency on Aging **Hazard Mitigation Meeting**

1. Ruby Floyd
2. Faye Nettles
3. Jean Booker
4. Charlotte Addison
5. Van W. Whiting
6. Faye M. Rowell
7. Vicki Johnson
8. Emma L. Crumpton
9. Cora Johnson Barkley
10. Robert Dickerson
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Entered 2-18-20

2-14-20 Frisco City Senior Center

ATRC Area Agency on Aging **Hazard Mitigation Meeting**

1. Sally Weatherford
2. Betty Weaver
3. Doris Burkett
4. Dell Crabtree
5. William Davis
6. Debbie Martin
7. Donya Wiseman
8. Faye Mullins
9. Edith Harrison
10. Lenora Braston
11. M E Griffin
12. Carl King
13. Wesley Nail
14. Megan Cox
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2/25/20

Vredenburg Senior Center

ATRC Area Agency on Aging **Hazard Mitigation Meeting**

1. Mable Carroll
2. Earline Watson
3. Rosetta Lyman
4. Sqaline McIntyre
5. Martha Dortch
6. Dorothy Sheppard
7. Ross Williams
8. Mary Young
9. Willie Carstarphen
10. Charles Burnell
11. Sarah S.
12. Eakleen Watley
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Washington County

Approval of Mitigation Strategies Being Submitted by Participant

Division A Multi-Jurisdictional Regional Hazard Mitigation Plan

Entity	Signature	Title	Date
Washington County Commission	Allen Baily	Chairman	7-8-2022
Town of Chatom	Harold Crook	Mayor	7-8-2022
Town of McIntosh			
Town of Millry		Mayor	7-28-2022
Washington County Schools			

HAZARD MITIGATION PLAN AVAILABLE FOR REVIEW

A draft of the Division A Regional Hazard Mitigation Plan, which includes Washington County, is available for review and public comment. The plan can be accessed at www.atrcdevelopment.net.

Please submit comments to brandy.wilkerson@atrc.net or by mail to 107 Broad Street Camden, AL 36726 by 6/15/22. If you should have any questions, please contact ATRC at the email listed above.

Posted at the following locations on 5/23/2022: Washington County Courthouse, Chatom Town Hall, McIntosh Town Hall, Millry Town Hall

Washington County Stakeholders

Clarke Washington Electric Cooperative
Washington County Hospital and Nursing Home
Charity Chapel VFD
Chatom VFD
Copeland VFD
Deer Park/Shiloh VFD
Epworth VFD
Fairford VFD
Frankville VFD
Fruitdale/ Yellow Pine VFD
Hobson VFD
Laton Hill
Leroy VFD
McIntosh VFD
Millry VFD
North Oak Grove VFD
Red Creek VFD
St. Stephens VFD
Tibbie VFD
Wagarville VFD
Yarbo VFD
Chatom Utilities Board
Deer-Park Vinegar Bend Water
Fruitdale Water
Hobson Water
Leroy Water Authority
McIntosh Water
Millry Water
St Stephens
Tibbie Water
Washington County Water Authority

St. Stephens Senior Center
2-27-20

ATRC Area Agency on Aging **Hazard Mitigation Meeting**

1. Lesley Griffith
2. [illegible]
3. Glen Griffith
4. [illegible]
5. [illegible]
6. Edward Faith
7. [illegible]
8. Juanita Elmore
9. Linda McKinley
10. Michael McKinley
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